

ALASKA ECONOMIC

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October 2003

The Global Salmon Industry

Alaska Department of Labor
and Workforce Development

Frank H. Murkowski
Governor of Alaska

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The Global Salmon Industry

by
Neal Gilbertsen
Labor Economist

And its impacts in Alaska

On September 5, 2000, the Marine Stewardship Council certified Alaska's statewide commercial salmon fisheries program as well managed and sustainable. Alaska's was the only salmon fishery in the world to meet the council's rigorous environmental standards and earn this distinction. Yet even as Alaska's preeminence in biological management was being recognized, Alaska's salmon fishermen had fallen on hard times.

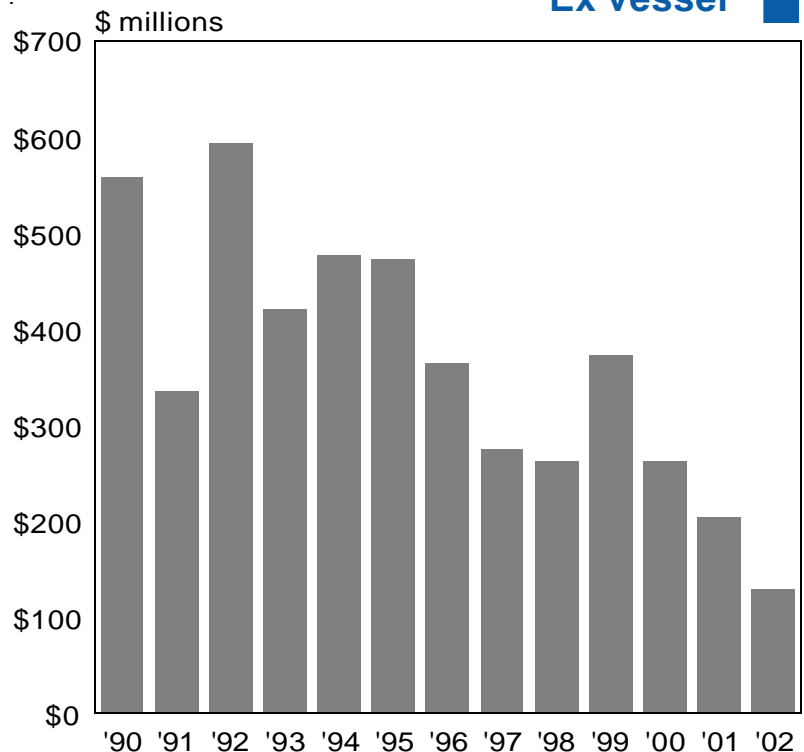
Catches remain high through 2003 when measured against historical levels, but the value of the salmon harvest has plummeted. Fishermen have seen the value of their permits and vessels collapse along with the prices they receive for their product. The number of fishermen participating in the salmon fisheries has declined by 37 percent from 1990 to 2002, and many of those remaining are facing economic difficulties. In 2003, it is clear that while the fishery is biologically sustainable, it is no longer economically viable for a large number of Alaska's fishermen.

While perhaps unavoidable, this economic crisis was predictable under the laws of supply and demand. Farmed salmon created a major new source of supply on the world market. As the global supply of farmed salmon increased, prices fell. Alaska's relative share of the world production declined and its ability to influence prices retreated. By the late 1990s, the Alaska salmon industry lacked both the supply and market demand to significantly affect prices.

What happened?

In terms of employment, salmon is by far Alaska's largest fishery. In 1990, according to the Commercial Fisheries Entry Commission (CFEC), 72 percent of the 14,587 individuals who owned and fished monitored permits fished for salmon. By 2002, only 8,823 individuals were still actively fishing permits, but 74 percent were still fishing for salmon. While many participated in other

Value of Alaska Salmon Harvest Ex vessel



Source: Commercial Fisheries Entry Commission (CFEC)

2 Ex-Vessel Prices Collapse 1988 to 2002

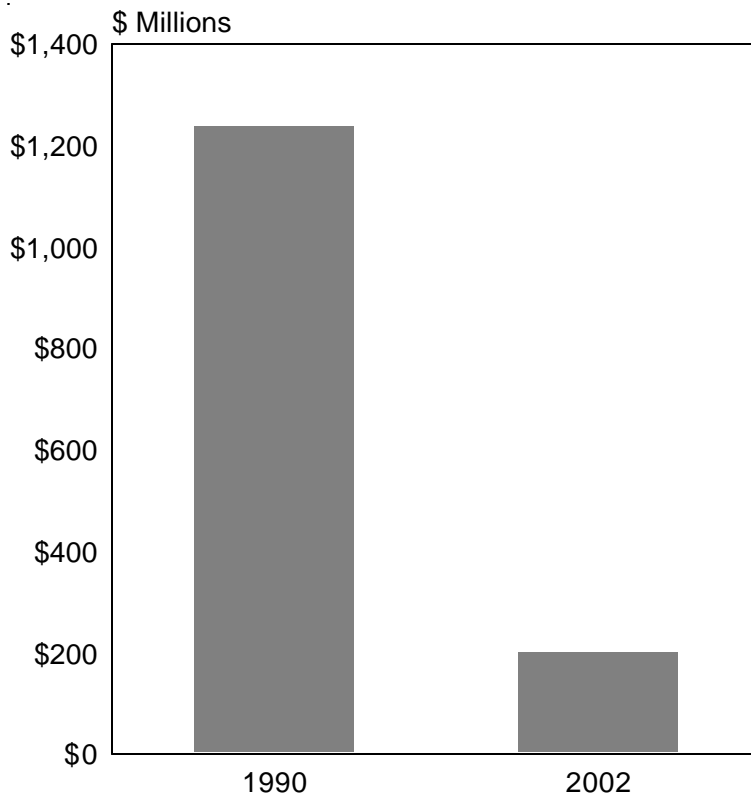
	1988 prices nominal \$	1988 prices in 2002 CPI adjusted \$	2002 prices nominal \$	% Decline '88-'02 nominal value	% Decline '88-'02 adj. value
Pink	\$.79	\$1.20	\$.06	-92%	-95%
Sockeye	2.37	3.60	.55	-77%	-85%
Chum	.86	1.31	.16	-81%	-88%
Coho	1.72	2.62	.37	-78%	-86%
King	2.69	4.09	1.23	-54%	-70%

Source: Alaska Department of Fish and Game

fisheries, salmon was usually considered the mainstay, and other fisheries were often merely off-season supplements to income. In recent years, this relationship has been changing. (It should be noted that these data do not include crew, but rather represent the number of fishing endeavors. In other words, the number of people affected is larger than the number of permits.)

In 1990, the Alaska wild salmon harvest yielded 302,600 metric tons, with fishermen receiving \$559 million for their catch. By 2002, the volume of the harvest was lower at 238,000 metric tons, but the value had fallen to \$130 million. The 21 percent decline in volume did not approach the much larger decline in value. Processors, in an attempt to remain competitive with farmed fish on world markets, lowered wholesale prices, which translated into lower prices for fishermen. (See Exhibit 1.)

3 Alaska Salmon Permits Market value



Source: Commercial Fisheries Entry Commission (CFEC)

Over the last decade and a half, the ex-vessel prices (the prices fishermen receive) paid to Alaska fishermen have fallen from record highs in 1988 to record lows in 2002. This decline is even more dramatic if inflation is taken into account. As operating costs continued to rise, real prices (adjusted for inflation) fell on the order of 85 percent or more. (See Exhibit 2.)

As the prices paid for fish collapsed, the value of fishermen's investments in vessels and gear followed a similar trajectory. In 1990, CFEC estimated the market value of the 12,084 valid salmon limited entry permits at \$1.247 billion. By 2002, estimates placed the value of the remaining 11,421 permits at \$204 million. (See Exhibit 3.) This billion-dollar decline in asset valuation amounted to 84 percent, and was probably matched by a similar trend in vessel valuation. The value of salmon permits varies and these losses impacted some fisheries more severely than others; still, the average decline in value of a generic salmon permit amounted to \$91,347. This loss of equity, which for self-employed fishermen is equivalent to retirement accounts, will continue to reverberate throughout the Alaska economy in coming years.

The low prices paid for salmon caused fishing incomes to drop and many fishermen were forced out of the industry, while others left voluntarily. In 1990, 10,487 individual permit holders fished for salmon in Alaska. By 2001, statewide participation in the fisheries had declined to 6,567 permit holders. This 37 percent decline in fishing effort resulted in fewer fishing opportunities for crew members, thus fewer jobs for Alaska's coastal communities. The Alaska Department of Fish and Game reports that the 1990 sale of unduplicated crew licenses amounted to 31,607. By 2002, only 16,995 unduplicated licenses were issued. While there are other reasons that partially explain this decline, reductions in the number of vessels fishing for salmon and reduced earnings in the fishery are clearly linked to this trend.

Seafood processors have also sought greater efficiencies through consolidation of operations, plant closings, reductions in fleet size and "just in time" hiring. As a result, many salmon fishermen have lost markets and Alaska's average monthly seafood processing employment has declined from 11,200 in 1992 to 7,400 in 2002. This 22 percent decline would have been greater, had not the Bering Sea groundfish industry partially offset the jobs lost in the salmon industry. (See Exhibit 4.)

Some multinational firms, like George Weston Ltd. (Nelbro) left the Alaska salmon fisheries to invest in Chilean and Canadian farms. Others like Nichiro (Peter Pan) retained Alaska operations but also invested in Chilean farmed production. Smaller processors, perhaps lacking the financial resources of their multinational competition, struggled to find niche markets or closed their doors. Wards Cove Packing Company, one of the largest and longest operating firms in the state, announced its decision to cease all Alaska salmon operations in 2002.

Why it happened

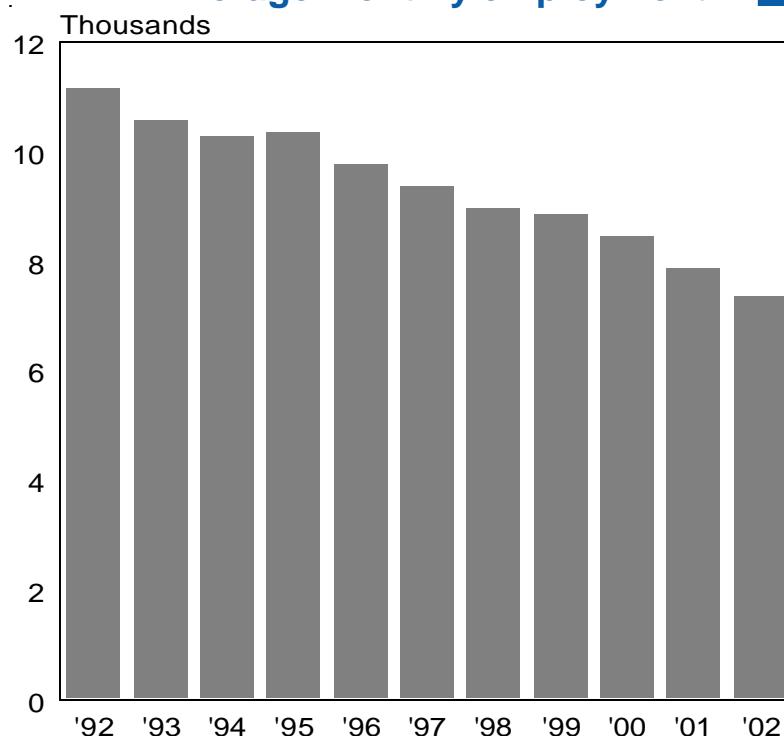
Farmed salmon enjoys a number of competitive advantages. Unlike seasonal wild harvests, pen reared salmon are available fresh on a year round

basis. Quality control is enhanced when salmon are harvested and processed at the more leisurely pace farms allow. Most importantly, the supply of farmed salmon is predictable, and production can be planned to meet anticipated demand.

The two major suppliers of farmed salmon to the U.S. market are Canada and Chile. Canadian farms benefit from their proximity to U.S. population centers and a well-developed transportation network. In addition, Canada is a partner in the North American Free Trade Agreement (NAFTA), which has removed many trade barriers to their products.

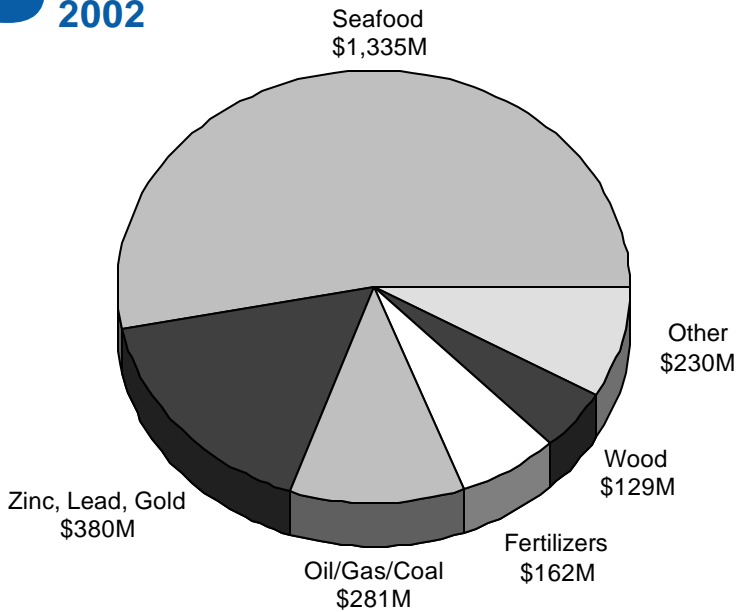
The competitive advantage Chilean farmed salmon enjoys is largely based on less stringent environmental regulation and the low cost of labor. Over 90 percent of Chile's salmon industry is located in The Region of the Lakes, one of the poorest areas in the country. In 2001, the average wage paid to Chilean workers in the salmon industry was \$199 U.S. per month, with 80 percent

Alaska Seafood Processing **4** Average monthly employment



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

5 Alaska Exports to Foreign Countries 2002



Source: U.S. Census Bureau

of the workers averaging \$133. In the same year the Chilean government's poverty level for a family of four was \$240. Alaska seafood processing workers, protected by minimum wage laws, earned an average monthly salary in excess of \$2,100 in 2001.

Seafood is important to Alaska

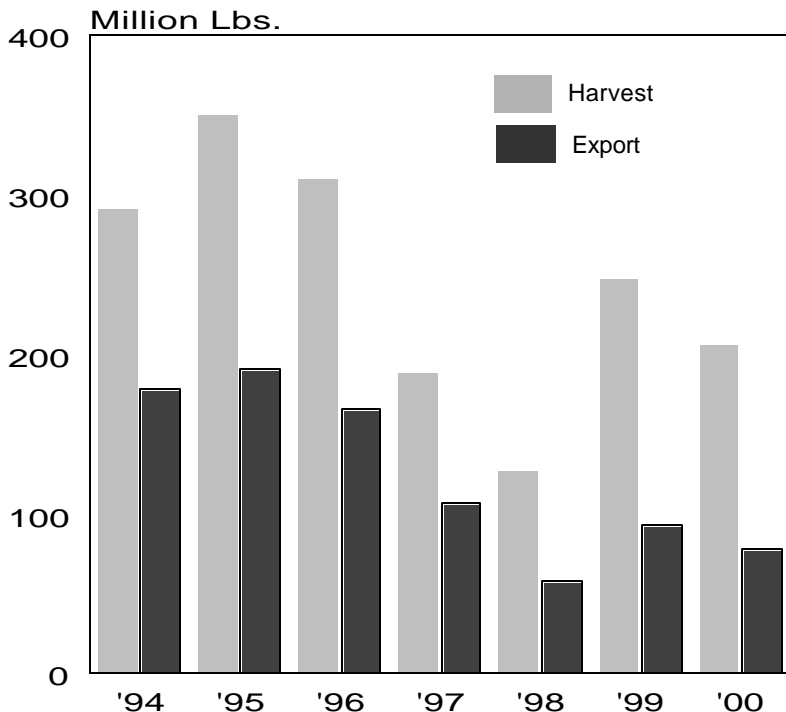
Of Alaska's direct foreign exports, seafood accounted for \$1.33 billion in 2002, or 53 percent of Alaska's \$2.5 billion export market. (See Exhibit 5.) Though large, this number understates the importance of the industry, due to the way in which the U.S. Census Bureau monitors exports. Unlike Alaska's mineral and timber resources, which are for the most part shipped directly from Alaska ports, much of Alaska's seafood harvest, including most canned and frozen salmon, is first transported to Seattle and other Puget Sound area cities before being shipped to foreign countries. As a result, these products of Alaska origin are counted as Washington exports. U.S. Census Bureau data show that the port of Seattle alone exported \$930 million of fishery products in 2001. Much of this (including \$142 million of frozen and \$150 million of canned salmon) was most likely of Alaska origin.

The Japanese connection

In 2002, Japan provided a market for 53 percent of Alaska's seafood exports. This was down from 69 percent in 2000. Much of this was processed by Alaskan affiliates of Japanese firms. These included Marubini-owned North Pacific Processors, Maruha-owned Western Alaska Seafoods, Nippon Suisan-owned Unisea, and Nichiro-owned Peter Pan. The foreign direct investment of such companies, which is another aspect of globalization, results in processing jobs for Alaskans as well as markets for Alaska fishermen.

In 2002, Alaska direct seafood sales to Japan amounted to \$707.8 million. While this is an impressive figure, it was down considerably from the 1990-1995 period when annual sales were

6 Sockeye Harvests and Exports Japan accounts for 90%+ of exports



Source: Alaska Department of Community and Economic Development

consistently above the \$1 billion mark. The peak year was 1992, when direct seafood sales to Japan reached \$1.56 billion. Since that time annual sales have declined 55 percent in value. This decline is largely explained by the globalization of the salmon industry, and the displacement of Alaska's exports of salmon.

In the early 1990s significant quantities of fresh and frozen sockeye salmon were shipped directly from Alaska to Japan, and thus contributed to Alaska's export total. Indeed, U.S. exports of fresh/frozen sockeye salmon slipped from 61 percent of the total 1994 harvest of nearly 292 million pounds, to only 38 percent of the much smaller 2000 harvest of 206 million pounds. (See Exhibits 6 and 7.)

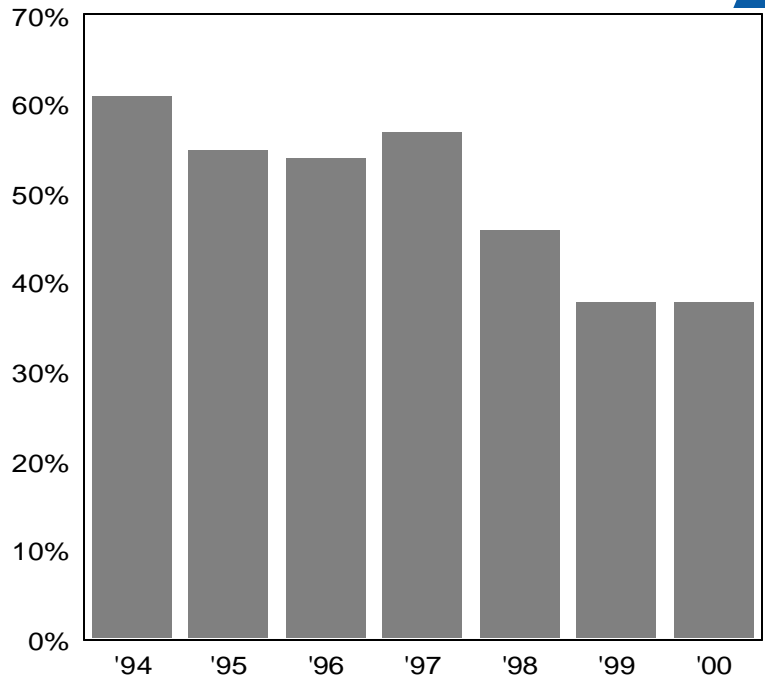
This was also a period before the Japanese recession had established a firm hold on the economy, and the yen was stronger in relation to the dollar. Holding a near monopoly on both production and the tastes of the Japanese consumer, Alaska sockeye commanded premium prices. But this was also the period when imports of pen-reared salmon began making inroads in the increasingly budget conscious Japanese diet. The salmon industry was being globalized!

Globalization of the salmon industry

In the 1970s and 1980s, Alaska enjoyed a dominant position in the world salmon market. Siberian runs, the only real rival in terms of wild stock harvests, were safely behind the iron curtain, and not available on free world markets. Japanese high seas interceptions of Alaska salmon had been largely eliminated. Wild Atlantic harvests were miniscule, and techniques of pen rearing had not yet been perfected.

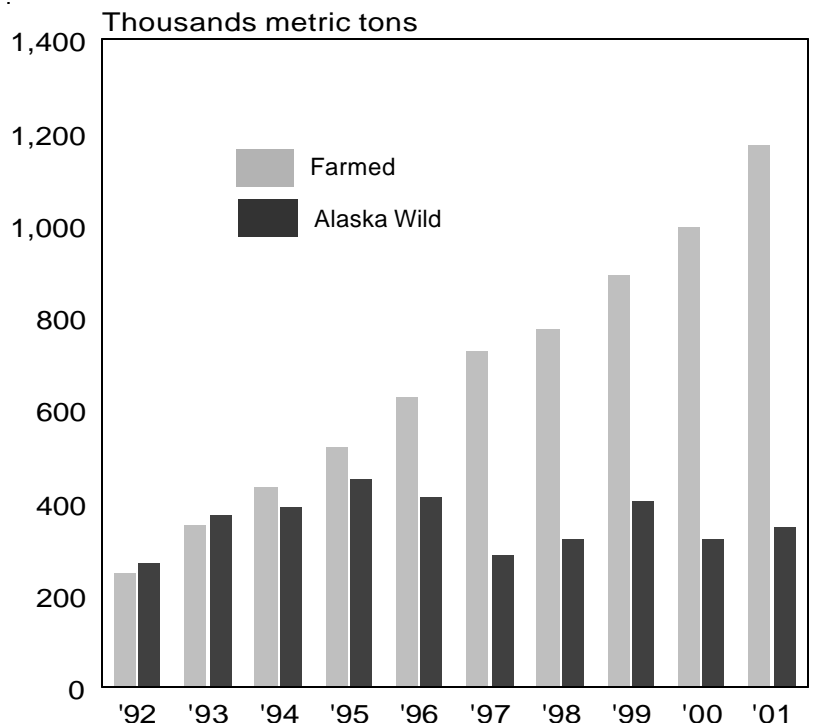
In this period when wild salmon harvests dominated world markets, years of large harvests led to lower unit prices, while years of low harvests resulted in higher prices to fishermen. Variations in catches were at least partially offset by variations in unit value.

Sockeye Exported Fresh/Frozen Percent of Harvest



Source: Alaska Department of Community and Economic Development

Farmed Atlantic & Coho vs. Alaska wild salmon harvest



Sources: F.A.O. and Alaska Department of Fish and Game

In 1980, farmed salmon amounted to only one percent of the world's salmon production. By 1991, the output of pen reared salmon exceeded the entire wild stock harvest of the United States. By 1992, it accounted for 32 percent of the world's production, and by 2002 it accounted for over 60 percent of the global supply of salmon. (See Exhibits 8 and 9.)

Because farmed salmon has the economic advantage of predictability, it allows for planned levels of harvest. These levels are based upon anticipated demand, and are of such scale as to dominate world supplies. This effectively sets the world price for salmon.

Alaska's shrinking market share

In the course of two decades, Alaska has fallen from world leadership in salmon production to a

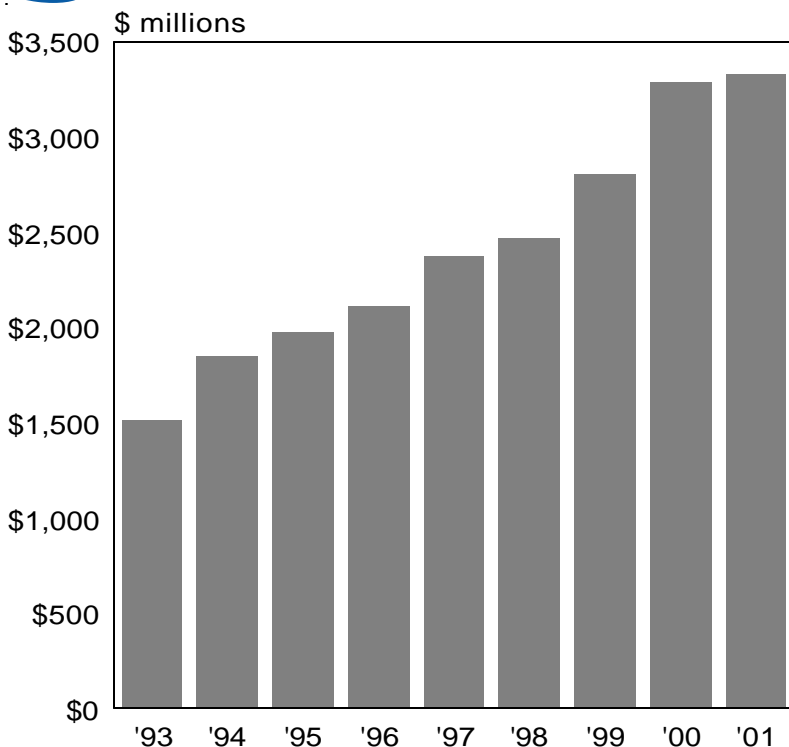
marginal position. In 1990, Norwegian farmed salmon had begun to make inroads into what had been the traditional domestic markets for the Alaska harvest. In September of that year, the U.S. Department of Commerce imposed a 2.96 percent anti-dumping duty on fresh and chilled Atlantic salmon from Norway. It later imposed company specific dumping margins ranging from 15.65 percent to 32.8 percent. As a result, U.S. imports of Norwegian farmed salmon plummeted from 9,450 metric tons in 1990 to 1,320 metric tons in 1991. On a broader scale, however, these measures proved ineffective, as Norwegian firms shifted production to other countries and U.S. imports of farmed salmon continued to grow.

Domestic market

In 2002, the United States imported 213,674 metric tons of processed and semi-processed salmon valued at \$920 million. This compared with a total Alaska round weight harvest of 146,800 metric tons (excluding pink salmon, which is mostly canned and does not directly compete with farmed salmon). In comparing these volumes, it should be remembered that round weights should be adjusted downward by at least 25 percent in order to account for weight losses due to heading and gutting. Moreover, much of the imported salmon was in fillet form, which involves far greater weight losses.

By far the greatest part of the U.S. imports, 187,357 metric tons, was Atlantic pen reared salmon, valued at \$818 million. Canada and Chile accounted for 94 percent of the total, with Chile garnering \$384.4 million in revenue, compared to Canada's \$373.4 million. Ironically, Norwegian firms who had seen their Scandinavian salmon forced off the U.S. market controlled a significant amount of both countries' production. The fact that Canada is a NAFTA partner, and that the U.S. has just approved a bilateral free trade agreement with Chile, would seem to indicate that these imports will continue to grow. (See Exhibit 10.)

9 Farmed Atlantic & Coho Salmon Value of world production



Source: F.A.O.

As mentioned above, lower priced pink salmon are usually canned and are less directly impacted by pen-raised imports. That is not to say, however, that Alaska pink salmon does not have competition on the world market. Low cost canned Siberian pink salmon is becoming more available on European markets. In addition, Alaska pinks must compete with a sea of low priced canned tuna, mostly from Thailand. While not directly comparable, there is considerable product substitution, with consumers buying two or three cans of tuna rather than a single can of more expensive salmon. In 2002, the United States imported 171,500 metric tons of canned tuna valued at \$399 million. U.S. canned salmon exports in the same year amounted to 41,800 metric tons valued at \$133 million.

Export market

Just as Alaska salmon has been displaced from its traditional domestic market, it has suffered severe setbacks in the Japanese market. In 1990, Chile was a minor player harvesting only 23,313 metric tons of farmed salmon. By 2001, the Chilean farmed salmon industry had grown to rival that of Norway, harvesting 404,550 metric tons round weight compared to Norway's 426,000. Not only was it the largest supplier of fresh Atlantic salmon to the United States, it had made major inroads into the Japanese market where inexpensive farm raised coho displaced Alaska sockeye salmon.

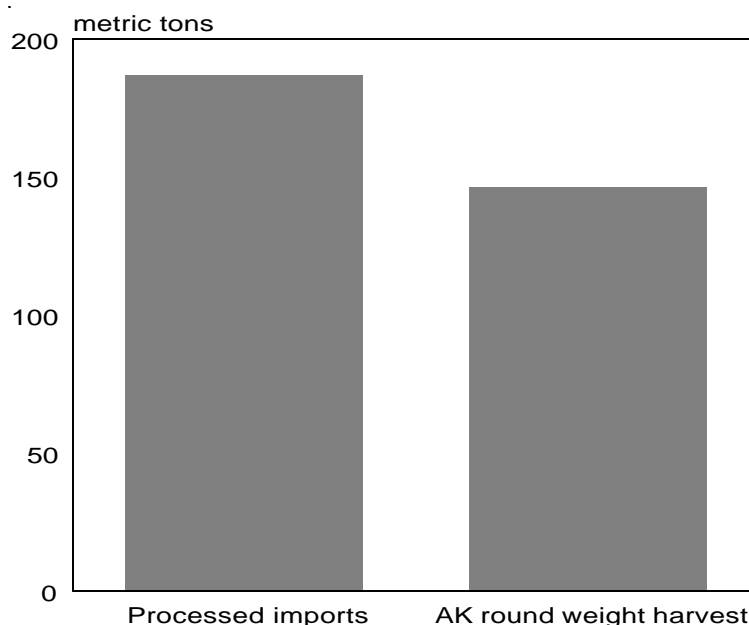
At one time, Alaska supplied 90 percent of the salmon consumed in Japan. By 2001, Chile was selling more than 160,000 metric tons to Japan and had captured 70 percent of the market. In that year, Japan imported 45 percent of Chile's farmed salmon production valued at \$435 million, while the United States imported 38 percent of the country's output valued at \$364 million. This accounted for 47 percent of the total U.S. imports of farmed salmon valued at \$767 million, and matched the value of farmed salmon imported from neighboring Canada. (See Exhibit 11.)

Over the same period, U.S. exports of salmon (mostly of Alaska origin) declined significantly in value. In 1990, U.S. salmon exports totaled 171,000 metric tons valued at \$859 million. Japan was by far the largest consumer, importing 118,000 metric tons valued at \$644.5 million. By 2001, total U.S. exports of salmon had fallen to 152,000 metric tons valued at \$547 million, while Japanese consumption had fallen to 41,800 metric tons valued at \$228.7 million.

Companies are international

Multinational companies often have facilities in several countries, and base decisions concerning production on overall corporate profits. Norwegian firms such as Stolt Seafarms, Cermaq and Fjord Seafood control 40 percent of Chile's salmon production. European companies like Marine Harvest as well as Japanese and North American firms also control a significant percentage.

U.S. Imports of Atlantic Salmon¹⁰ And Alaska round weight harvest



Source: National Marine Fisheries Service and Alaska Department of Fish and Game

The growth of the farmed salmon industry and the resulting competition for markets has also led to transnational consolidations. Four large companies, Stolt Sea Farms A/S, Pan Fish ASA, Marine Harvest and Heritage Salmon now produce more than half the farmed salmon sold in North America. All four have pen-rearing operations in Europe and Canada, and all except Pan Fish, (which owns all the farms in Washington state), own farms in Chile.

Marine Harvest, the largest, is a subsidiary of the Dutch giant Nutreco which operates over 200 salmon farms in Norway, Scotland, Ireland, Chile, Canada, and Australia. By various estimates, it accounts for between 16 and 20 percent of global farmed salmon production. Its corporate parent, Nutreco also supplies approximately 40 percent of the world's salmon feed. More ominously for Alaska's other fisheries, the company has begun operations involving pen reared halibut and cod, while others have instigated projects involving sablefish.

Heritage Salmon, another of the four dominant companies, is a division of George Weston Ltd., a giant Canadian food company that once dominated the Canadian wild salmon industry with its subsidiary B.C. Packers. The company also operated in Alaska under the name Nelbro. Weston has since divested itself of its wild salmon ties, and has instead invested in large scale salmon farming in Maine, New Brunswick, British Columbia and Chile. With the moratorium on British Columbia pen rearing sites being lifted, it is expected that Heritage and other B.C. farms will soon expand these operations.

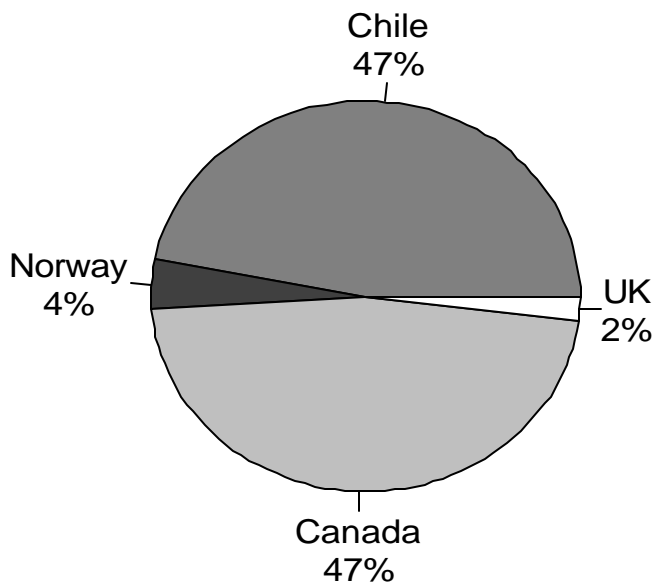
Alaska resists a global trend

For a variety of political as well as biological and environmental reasons, Alaska has adopted legislation that prohibits salmon farming. While there remains considerable debate over the environmental hazards and health risks posed by farmed salmon, there is no longer any doubt about its economic success. With or without Alaska's participation, the industry will continue to grow, and farmed salmon will continue to dominate both world markets and prices.

Canada does not

Unlike Alaska, Canada has adopted policies fostering farms. The economic displacement of Canadian salmon fishermen has, however, been somewhat mitigated by a buy-back program commonly known as the Mifflin Plan. This involved the elimination of licenses as well as cash incentives for salmon fishermen to leave the fisheries. While environmental groups, First Nations and neighboring Alaska continue to object, the B.C. Provincial government as well as the Canadian national government are pursuing policies intended to enhance salmon farming opportunities and increase production, especially in northern B.C. These farms are not only economic rivals to the Alaska industry, but according to the Alaska Department of Fish and Game, may pose a biological risk to healthy wild stocks in the Province as well as Alaska.

11 Imports of Farmed Salmon Market share by value



Source: U.S. Department of Commerce, Seafood Market Analyst

Can pollock take the place of salmon?

While the recent investment strategies of transnational corporations have resulted in major displacements in Alaska's salmon industry, they have also contributed to the Alaska economy by developing the Bering Sea pollock fishery. This is now the largest single species food fishery in the world in terms of volume, and the largest fishery in the state in terms of value. The collapse of the Atlantic cod fishery played a major role in allowing market opportunities that the industry has exploited and filled. Both Norwegian and Japanese firms were instrumental in the development of this fishery, and the latter continue to play an important role in onshore processing.

While the volume of the pollock harvest is many times that of the salmon fishery, the employment opportunities in the harvest sector are far more limited. Unlike the salmon fishery, which has traditionally relied on a large number of small boats, the pollock fishery involves a relatively small number of large vessels. In 2002, only 262 individual vessel operators made landings in the Bering Sea trawl fishery, which amounted to an astounding 2.7 billion pounds. If one assumes a crew of six aboard each of these trawl vessels, total harvesting employment would have ranged between 1,500 and 1,600. This number is an order of magnitude smaller than the jobs generated by the 6,567 salmon permits now remaining. Still, the volume of the pollock catch creates a large number of processing jobs.

The economic returns from the salmon fishery are widely distributed among the small fishing ports of Alaska. The pollock fishery, by contrast, is concentrated in Dutch Harbor, which consistently leads the nation in terms of volume of fisheries landings. Most of the vessels are Seattle based, as are most of the processors.

Although the pollock fishery does not touch as many Alaskans as the salmon fishery, there have been winners. The Community Development

Quota (CDQ) program, which allocates harvest shares of crab as well as groundfish, has produced significant economic benefits for Western Alaska villages bordering the Bering Sea. Not only does the CDQ program bring direct funds to the community, it provides employment opportunities in both harvesting and processing. This is especially important to these rural communities, as the traditional salmon fisheries become less profitable.

Conclusion

The world salmon industry is only one example of the ongoing process of globalization. While Alaska has suffered an economic shock in this particular case, it has also profited from foreign direct investments in its other industries. Whether globalization will ultimately be beneficial or detrimental to Alaska remains an open question. Whether it will continue to play an ever-larger role in the state's economy, does not. Alaska and Alaskans have little choice but to adapt to this reality, and to carve out a place for themselves in this new global economy.

Occupational Injury and Illness

by Kevin Virden and
Dean Rasmussen
Labor Economists

A report on safety in Alaska's workplaces

A total of 15,500 nonfatal injuries and illnesses occurred in the workplace in Alaska's private sector in 2001. This is an injury and illness rate of 8.5 cases per 100 full-time equivalent workers. Injuries were responsible for 14,600 (94 percent) of the cases, and the remaining 900 (6 percent) involved illnesses.

Of the total, 7,500 (48 percent) were lost workday cases, that is, they required recuperation away from work or restricted duties at work, or both. The remaining 8,000 (52 percent) estimated injuries and illnesses did not involve lost workdays.

Nationally, about 5.2 million nonfatal injuries and illnesses occurred in the private sector workplace in 2001. The incident rate across all industries nationally was 5.7 cases per 100 full-time equivalent workers.

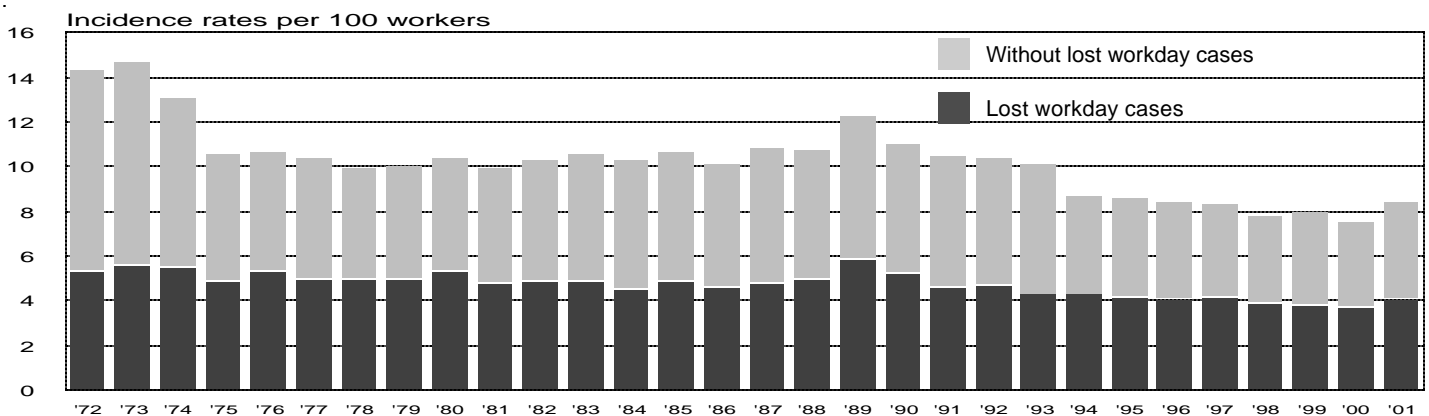
An occupational injury can be the result of a cut, fracture, sprain, amputation, etc., which results

from a work accident, or from exposure from a single, or instantaneous, event in the work environment. An illness is any abnormal condition or disorder, other than one resulting from an occupational injury, caused by prolonged exposure to environmental factors associated with employment. It includes acute and chronic illnesses or diseases that may be caused by inhalation, absorption, ingestion, or direct contact.

Historical look at state injury and illness rates

Alaska's injury and illness rates dropped abruptly soon after the passage of the Occupational Safety and Health Act (OSHA) of 1972. The 1970s was also the decade the Trans-Alaska Pipeline was constructed. After a high of 14.7 of recordable injury and illness cases per 100 workers in 1973, the rate dropped to about 10 cases from 1975-1988. In 1989 the Exxon Valdez grounded and spilled 257,000 barrels of oil in Prince William Sound. The massive cleanup response appears to

Occupational Injury and Illness Rates Alaska private sector 1972-2001



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

have directly increased the rate of injuries and illnesses following the spill. Rates remained above 10 incidents per 100 workers through 1993. The drop in 1994 to the current average of about 8 cases per 100 workers was largely due to decreasing injury and illness rates in the construction and service industries, which have maintained lower incident rates since. (See Exhibit 1.)

In 2001 Alaska's private sector injury and illness rate rose to 8.5 per 100 workers, up from a record low of 7.6 in 2000. The rate was fairly steady at about 8.5 cases per 100 workers from 1994 to 1997, and 8 cases or fewer from 1998 to 2000.

The national private sector injury and illness rate of 5.7 cases per 100 workers in 2001 was a historic low. Since 1992, the national injury and illness rate has steadily declined while Alaska's has tracked relatively flat. Alaska's public sector, that includes local and state government, showed little change over the past six years. (See Exhibit 2.) Federal government injury and illness statistics were not collected in this study.

All recordable injuries and illnesses, whether with or without lost workdays, entail one or more of the following criteria: medical treatment beyond first aid, loss of consciousness, days away from work, restricted work activity or job transfer. Injuries and illnesses are also recordable if work-related and deemed "significant," as defined by the Occupational Safety and Health Administration, the federal agency created to prevent work-related injuries, illnesses, and deaths.

Injuries and illnesses are costly to Alaska employers

Workplace safety is an important issue for employers. In a competitive economy, it costs a great deal of money to attract and retain a skilled employee. It is costly for the employee to miss work due to a preventable illness or injury. If a worker is injured on the job a worker's com-

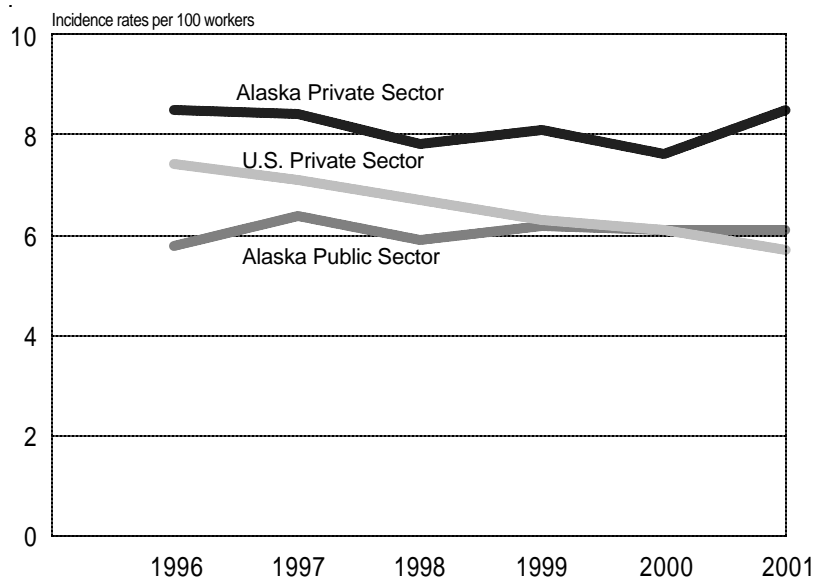
pensation claim will be filed against the employer.

During the 2001 calendar year, a total of \$192.7 million was paid in workers' compensation benefits. This includes payments for medical, disability, and rehabilitation costs. This is an increase of 16.4 percent over 2000's total of \$165.6 million, and compares to \$149.2 million in 1999, \$140.5 million in 1998, and \$144.7 million in 1997. (See Exhibit 3.)

Financing for workers' compensation programs comes from employers. The premiums paid by employers are based on their industry classification and the occupational classifications of their workers. Most large employers are also "experience rated," which results in higher or lower premiums for employers whose past experience demonstrates that their workers are at greater or lesser risk of occupational injuries or disease than are workers for similar employers in the same industry.

Alaska and U.S. Incidence Rates

Occupational injuries and illnesses 1996-2001



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

Injury and illness rates vary by industry

Injury and illness rates are typically analyzed by the industry in which they occurred. For this survey, the Standard Industrial Classification, better known as the SIC, was used to report incidence rates. (See Exhibit 4.) The SIC provides several broad industry divisions, as well as subdivision levels, in which work activity occurs. The major SIC industries in this analysis are Mining; Construction; Manufacturing; Transportation, Communication & Utilities; Wholesale & Retail trade; Finance, Insurance, & Real Estate; and Services.

Mining showed the lowest injury and illness rate of all major industries in Alaska in 2001. In fact, mining, which includes oil and gas extraction, was the only major Alaska industrial sector that had an injury and illness rate below that of the national average. Stringent safety policies in Alaska's metal mining and oil extraction industries appear to have helped create a lower incidence rate in the state. Oil companies actively promote safety programs

and provide safety training opportunities for their workers. Nationally, mining injury/illness rates have declined the last few years, but remain higher than Alaska's.

Manufacturing and construction

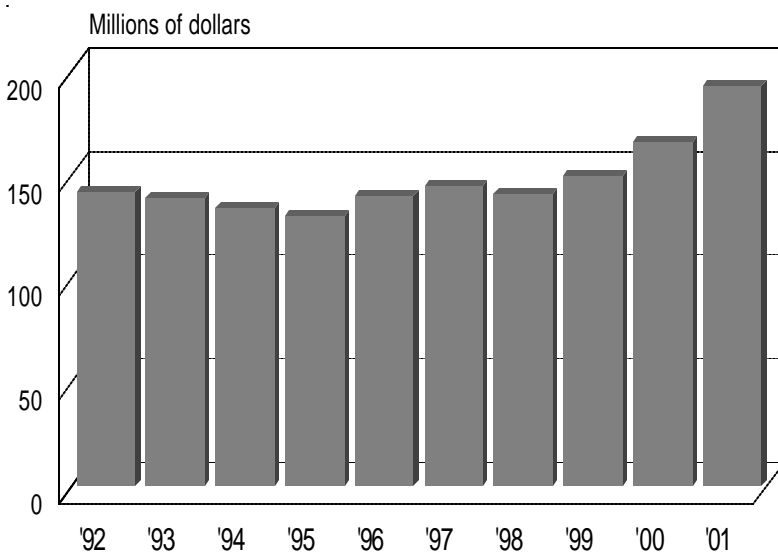
Injury and illness incidence rates in manufacturing, at 17.7 per 100 workers in Alaska, were twice as high as nationwide, a fact related to the nature of Alaska's manufacturing sector, which is composed largely of seafood and wood processing. The risks to employees in these industries are greater than in typical manufacturing sectors in the lower 48, where controlled environments and assembly lines are the norm.

In Alaska's seafood processing and wood processing industries, many worker tasks involve extensive manual labor. Employees work long hours and routinely handle sharp objects such as knives and machines with cutting edges. Work areas are often wet and slippery, sometimes cold, and frequently noisy.

Construction had the second highest incidence rate of injuries and illnesses with 12.5 cases per 100 workers in 2001 in Alaska. This rate was up from 11.1 in 2000, a reversal of the recent five-year trend of declining rates in construction. The increase in 2001 was mainly distributed across general building contractors and special trade contractors, with heavy construction and residential building the only subsectors that saw a rate decline since 1996. Alaska's incidence rate for construction remains above the national average of 7.9 cases per 100 workers for 2001. While the state's heavy construction injury and illness rates are close to the national rate, incidence rates in general building and special trade contractors raise the industry's overall rate to above the national level.

Alaska's 2001 incidence rate in transportation, communication and utilities was 10.7 per 100 workers. This compared with a national rate of 6.9 cases. Although the state rate was up slightly from the previous few years, the industry's overall injury and illness rate has remained relatively unchanged since 1996. At the sub-industry level, Alaska's

3 Workers' Compensation Total Alaska payments 1992–2001



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

scheduled air transportation rate is slightly higher than the equivalent national rate. Nonscheduled air transportation shows a greater disparity between state and national injury and illness rates. Alaska's injury and illness rates in trucking and water transportation were twice the national rates.

Wholesale and retail trade injury and illness rates rose to 8.2 in 2001 after reaching a low of 7.1 cases per 100 workers in 2000. This increase was largely due to increases in department stores and eating and drinking places. While department stores have remained relatively unchanged since 1996, eating and drinking places have displayed an upward trend in rates during that period. Wholesale trade has actually had a declining injury and illness rate since 1996, but these declines were more than offset by increases in the retail sector. The national rate of 5.6 for wholesale and retail trade reflects several consecutive years of rate declines. Both injury and illness rates for wholesale and retail at the national level remain substantially lower than Alaska's. Trade had the highest number of injury and illness incidents in Alaska, with approximately 3,900 total cases.

Finance, insurance, & real estate did not see a big change in 2001, but injury and illness rates have decreased slightly since 1996. Holding and other investment office rates decreased slightly, but this was partially offset by small rate increases in real estate firms. Alaska's rate of 4.0 injuries and illnesses per 100 workers is more than twice the national average of 1.8 cases for finance, insurance, and real estate firms. Real estate firms in particular, have a much higher rate in Alaska than the rest of the nation.

Services, with the most employment of all the major industries, showed an increase from its low of 5.0 cases per 100 workers in 1998 to 6.6 in 2001. Still, the 2001 rate is only slightly above the 1996 figure of 6.3. The majority of the increase is due to higher injury and illness rates in hotels and other lodging places.

The national average for services was 4.6, but the relatively high employment numbers in hotels and other lodging places may account for Alaska's higher rates. Hotels and other lodging places have historically had higher injury and illness rates than other forms of services.

Incidence Rates¹ by Industry

Occupational injury and illness

Alaska and U.S.

Industry	Alaska						U.S.
	1996	1997	1998	1999	2000	2001	2001
Private Industry ²	8.5	8.4	7.8	8.1	7.6	8.5	5.7
Mining ³	5.8	4.2	3.2	4.3	3.8	2.7	4.0
Metal mining	5.8	4.9	3.9	3.3	4.3	3.7	4.2
Oil and gas extraction	5.8	4.1	3.2	4.4	3.8	2.6	3.3
Construction	11.9	11.5	11.8	11.0	11.1	12.5	7.9
Manufacturing	16.4	18.8	17.7	15.3	14.8	17.7	8.1
Lumber and wood products	24.9	21.0	16.9	19.5	26.9	21.0	10.6
Food and kindred products	17.3	21.7	21.4	17.4	14.7	19.3	10.9
Canned and cured seafood	*	15.3	13.4	15.7	17.5	13.5	*
Fresh or frozen prepared fish	18.1	24.0	23.9	17.8	14.3	21.6	10.4
Transportation, comm & utilities	10.3	10.2	9.8	9.3	9.5	10.7	6.9
Trucking and warehousing	15.6	13.9	13.6	15.9	17.8	16.3	8.4
Water transportation	13.9	10.7	12.4	9.2	12.1	14.6	6.0
Air transportation, scheduled	16.2	16.3	16.9	14.3	15.8	15.5	14.4
Air transportation, nonscheduled	*	*	*	3.4	6.2	6.9	4.2
Communications	3.2	4.8	3.3	5.3	3.0	5.0	2.9
Wholesale and retail trade	7.6	8.1	7.6	8.0	7.1	8.2	5.6
Wholesale trade	8.4	8.4	7.4	9.3	7.0	7.4	5.3
Retail trade	7.4	8.0	7.6	7.7	7.1	8.4	5.7
General merchandise stores	10.1	9.6	8.8	8.5	7.8	9.6	7.8
Food stores	9.5	10.8	10.6	8.2	9.7	8.9	7.5
Eating and drinking places	5.0	6.8	6.6	7.6	5.5	7.4	5.3
Finance, insurance, and real estate	4.5	3.4	4.0	3.7	3.9	4.0	1.8
Services	6.3	5.5	5.0	6.6	6.0	6.6	4.6
Hotels and other lodging places	8.2	7.7	7.4	9.5	8.1	9.5	7.2
Health services	9.5	7.0	7.8	8.6	*	7.8	7.2

¹ Injury and illness cases per 100 full-time workers

² Totals include data for industries not shown separately.

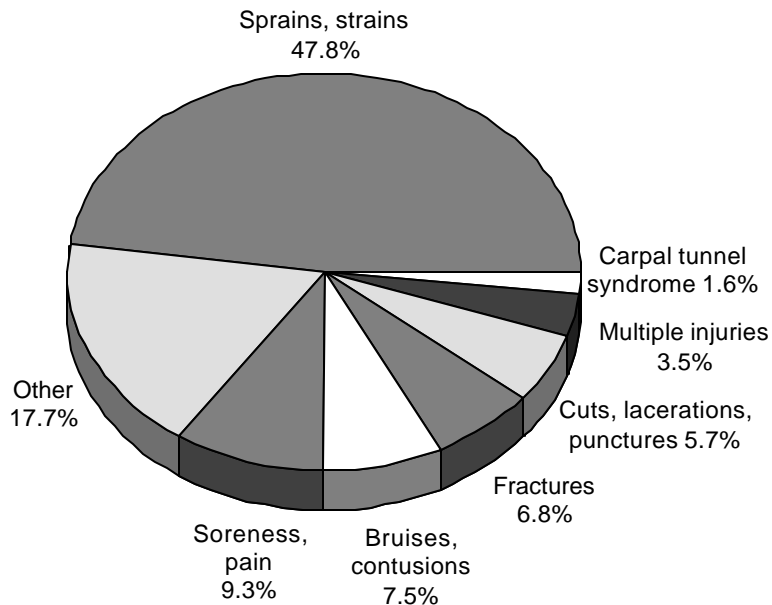
³ Data from Mine Safety and Health Administration, U.S. Department of Labor.

* Not publishable

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

5 Days Away from Work Cases By nature of injury or illness

Alaska private sector 2001



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

Studying injuries and illnesses in different ways

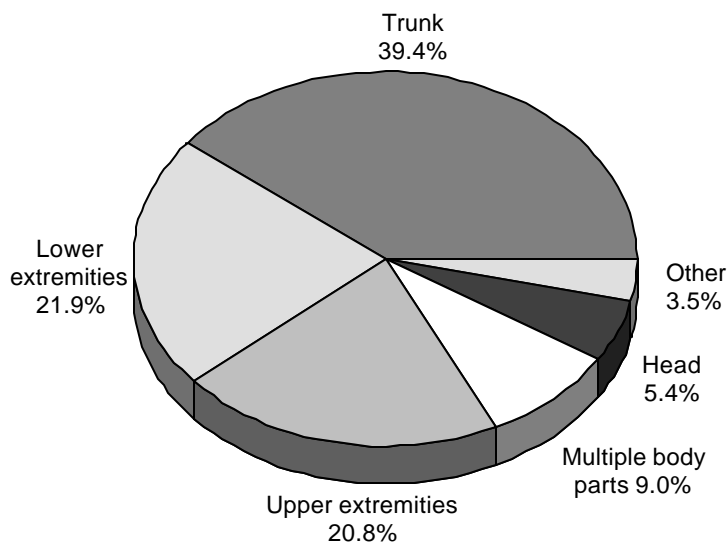
To learn more about workplace injuries and illnesses, the OSH survey uses four main characteristics to study an injury or illness case that results in days away from work, restricted duties at work, or both. These are

- 1) nature of injury or illness;
- 2) part of body affected;
- 3) event or exposure; and
- 4) source of injury or illness.

The nature identifies the physical characteristics of an injury or illness. A strained muscle or punctured skin are examples of the nature of an injury. Carpal tunnel syndrome would be the nature of an illness. Sprains, strains, and tears were the most common nature identified, accounting for 47.8 percent of all injuries and illnesses. This type of injury was most prominent in the services and retail divisions, although manufacturing and construction also had substantial numbers. (See Exhibit 5). The next highest nature was soreness and pain, representing 9.3 percent of the total natures. Sprains, strains, and tears resulted in an average of five days away from work, while soreness and pain had an average of six days away from work.

6 Days Away from Work Cases By part of the body affected

Alaska private sector 2001



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

The part of body identifies the location of the most serious area of injury. Injuries can occur to a part of the body such as a finger, toe, or wrist. In some instances, more than one part of the body is affected. The trunk, or main part of the body, was the most frequently affected by injury, with over 67 percent of all trunk injuries involving the back. (See Exhibit 6). The second most commonly affected body area was the lower extremities, including feet, knees, and legs. The upper extremities, hands, elbows, and arms, followed.

The event or exposure is coded to describe what happened. Did the victim fall down or did a moving object strike him? These questions would be answered by the event characteristics. The most frequently occurring injury and illness event

for 2001 was overexertion, followed by contact with objects and equipment, and third, falls. (See Exhibit 7.) Overexertion involves activities such as lifting, pulling or pushing, throwing, and carrying objects. These injuries are most common in the retail, transportation, and manufacturing sectors. Injuries where contact with objects and equipment were listed as the event most often occurred when victims were struck by falling, flying, or swinging objects or by being caught in, or compressed by, equipment. Most falls involved injury from falling onto the surface that had been supporting the worker. An example is a worker stumbling and falling to the floor when carrying a box or crate. In a smaller number of falls the victim landed on a lower level, such as a carpenter falling off a ladder onto the ground.

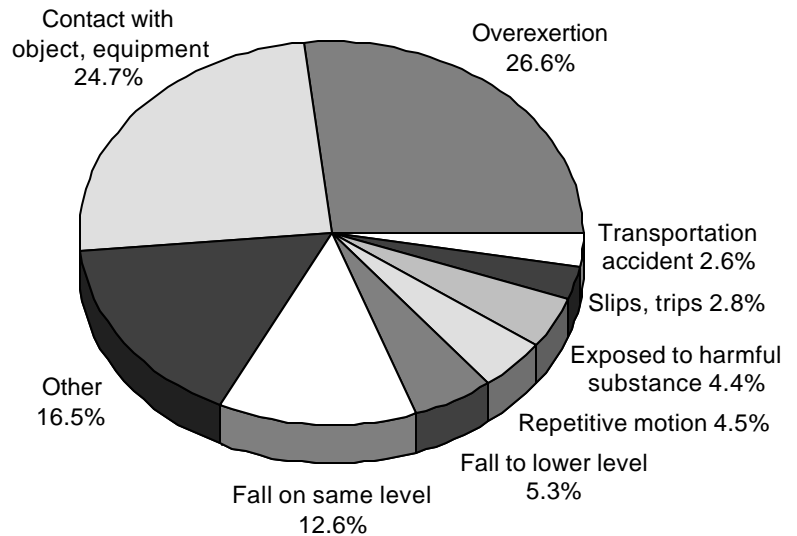
Finally, the source of an injury or illness is the object or substance that directly harmed the worker. If a forklift struck a worker and caused the injury, then the forklift would be listed as the source of the injury. The most numerous source of injuries in 2001 involved floors, walkways and ground surfaces, representing 19.2 percent of all sources, which reflects the relatively high number of falls. (See Exhibit 8). The second highest source of injury was containers; more than 1,000 of the 6,378 total cases cited containers as the source that directly caused the injury. These, for example, can be found in air cargo and seafood processing operations. There were also a high number of cases where the injured worker was actually the source of the injury. This most often occurs when the actual position or motion of the injured worker causes the injury, such as in cases where reaching, twisting, slipping, or walking is involved. The injured worker was cited as the source in 15.4 percent of the cases. Carpal tunnel syndrome, which is considered an illness for purposes of the survey, would also be counted in this category.

Occupations at risk

The occupation with the highest number of injuries and illnesses in 2001 for Alaska involving days away from work was hand packers and packagers at 623 incidents. The vast majority of these

Days Away from Work Cases By event or exposure

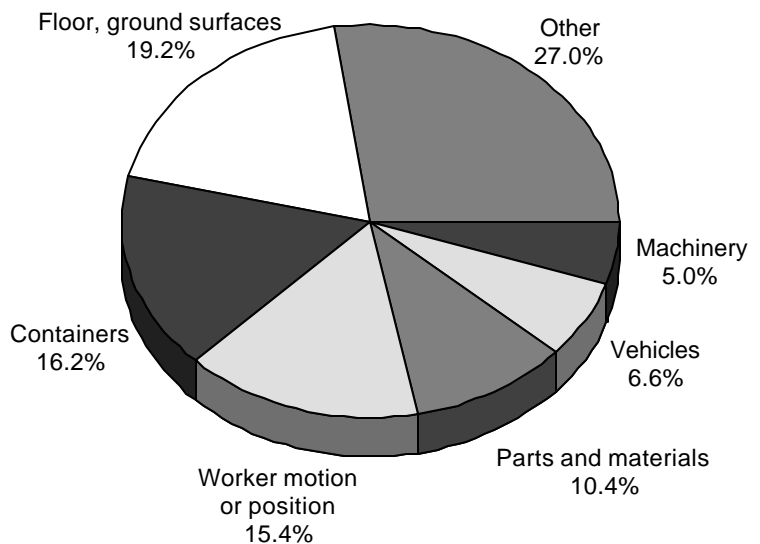
Alaska private sector 2001



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

Days Away from Work Cases By source of injury or illness

Alaska private sector 2001



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

9 Worker Characteristics, Occupational Injuries and Illnesses Involving days away from work¹

Alaska private industry 2001

	Goods producing					Service producing				
	Private industry ²	Ag forestry and fishing ²	Mining ³	Const.	Mfg.	Trans comm and utilities ⁴	Wholesale trade	Retail trade	Finance insurance and real estate	Services
Total	6,378	44	88	787	993	1,181	283	1,303	140	1,559
Sex:										
Men	4,382	38	84	752	873	921	246	690	88	691
Women	1,962	6	—	35	120	240	38	612	52	854
Age:										
14 to 15	—	—	—	—	—	—	—	—	—	—
16 to 19	215	—	—	40	31	36	10	57	—	33
20 to 24	773	6	6	65	152	234	32	170	—	105
25 to 34	1,514	6	17	227	303	266	82	268	20	324
35 to 44	1,884	16	23	255	309	266	70	388	64	493
45 to 54	1,399	9	30	140	167	261	67	277	28	421
55 to 64	484	—	12	55	25	106	19	125	14	126
65 and over	96	—	—	6	6	12	—	17	6	44
Occupation:										
Managerial and professional	469	12	—	8	20	22	20	65	21	301
Technical, sales, admin support	1,294	—	—	9	24	462	53	515	42	184
Service	1,011	13	—	—	7	66	8	277	7	633
Farming, forestry, and fishing	103	17	—	—	61	5	—	9	—	—
Precision production, craft, repair	1,192	—	52	511	82	202	33	77	53	181
Operators, fabricators, laborers	2,295	—	33	259	800	424	163	360	16	241
Length of service with employer:										
Less than 3 months	1,302	7	9	172	530	91	39	199	30	226
3 to 11 months	1,301	11	22	209	205	155	62	367	25	246
1 to 5 years	1,758	6	23	185	149	267	109	377	38	604
More than 5 years	1,037	11	17	107	94	222	67	245	36	240
Not reported	980	10	18	115	15	446	7	115	10	244
Race or ethnic origin:										
White, non-Hispanic	3,070	13	41	519	465	385	169	627	68	785
Black, non-Hispanic	224	—	—	10	60	28	9	52	—	63
Hispanic	215	—	—	7	101	11	—	34	—	53
Asian or Pacific Islander	248	—	—	—	54	26	6	64	5	89
American Indian or Alaska Native	302	—	—	46	52	24	8	49	26	97
Not reported	2,318	32	46	201	262	707	88	477	33	473

¹ Days-away-from-work cases include those which result in days away from work or restricted work activity.

² Excludes farms with fewer than 11 employees.

³ Data conforming to OSHA definitions for mining operators in coal, metal and nonmetal provided to BLS by the Mine Safety and Health Administration, U.S. Dept. of Labor. Mining contractors are excluded from the coal, metal and nonmetal mining industries. Data include oil and gas extraction.

⁴ Data conforming to OSHA definitions for employers in railroad transportation are provided to BLS by the Federal Railroad Administration, U.S. Dept. of Transportation.

--Dashes indicate data that are not available. Because of rounding and exclusion of nonclassifiable responses, data may not sum to totals.

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

incidents, 612 of the 623 cases, were in manufacturing. Truck drivers had the second highest count, with 387 injuries and illnesses, followed by carpenters with 294. However, the average days away from work for hand packers and packagers was four, while truck drivers lost an average of 10 days away from work. This would indicate that injuries to truck drivers were generally more severe. Carpenter injuries and illnesses were slightly more severe than truck drivers, with an average of 11 days away from work. Nationally, truck drivers had the highest number of lost work day injuries and illnesses, followed by nursing aides and non-construction laborers.

Who are Alaska's injured workers?

A look at the demographic data for cases with days away from work reveals which segments of the population are most affected by workplace injuries and illnesses. While men comprise 60 percent of Alaska's workforce, they were injured more than women at a ratio of more than 2-to-1, with the highest numbers occurring in the manufacturing, construction, and transportation industries. In mining, all 84 injuries and illnesses where gender was reported were men. The only private industry sector where women had a higher number of injuries and illnesses was services. In services, it was estimated that 854 women had days away from work compared to 691 men. In general, however, most industries had far more male incidents than female. (See Exhibit 9.)

The 35-44 age group had the most days away from work cases. Next was the 25-34 age group. The 45-54 age bracket followed. Together, these three groups accounted for more than 75 percent of all days away from work cases.

Of race and ethnicity groups reported, the White, non-Hispanic category accounted for about three-of-four injury and illness cases that involved days away from work. Black, non-Hispanic workers accounted for an additional six percent as did Asian or Pacific Islander and American Indian or Alaska Native. Hispanic worker injuries and illnesses accounted for five percent of the total reported.

Length of service statistics may indicate the importance of job training and job familiarity. Nearly 70 percent of days away from work involved workers with less than five years of service with an employer. Of that group, 60 percent of the days away from work involved workers employed for less than one year.

Additional workplace injury and illness information is available. Interested individuals are encouraged to contact the Research and Analysis Section of the Alaska Department of Labor and Workforce Development.

Information in this article is derived from the Annual Survey of Occupational Injuries and Illnesses, conducted cooperatively by the Alaska Department of Labor and Workforce Development, Research and Analysis Section, and the U.S. Department of Labor, Bureau of Labor Statistics. The survey provides information annually on the number and frequency of nonfatal injuries and illnesses occurring in the workplace. The survey also collects information on the case characteristics and demographics for the more serious incidents. The data are used to help develop safety and health standards, to control work hazards, and to allocate resources for inspection, training, and consultation activities.

Exports and Exchange Rates

by
Neal Gilbertsen
Labor Economist

The international see-saw

As any tourist knows, a weak dollar makes foreign travel more expensive. It also makes American goods less expensive for foreign buyers. Theoretically, a weak dollar should result in fewer Americans traveling, and more U.S. goods being sold abroad.

Over the last year, the dollar has weakened against most major foreign currencies. While the causes may be complex, the results are relatively simple: the same amount of euros or Canadian dollars in 2003 will purchase more U.S. goods than they would have a year ago. Because American goods are less expensive, foreign consumers are more likely to purchase them and sales should increase.

Normally a weakening dollar would mean increased earnings for Alaska exporters, as

shipments of fish, timber and minerals benefit from favorable exchange rates. Unfortunately, this does not seem to be happening. As pointed out in the preceding article on The Global Salmon Industry, two-thirds of Alaska's exports are shipped to Asia, and the major Asian currencies have not experienced much realignment with respect to the dollar.

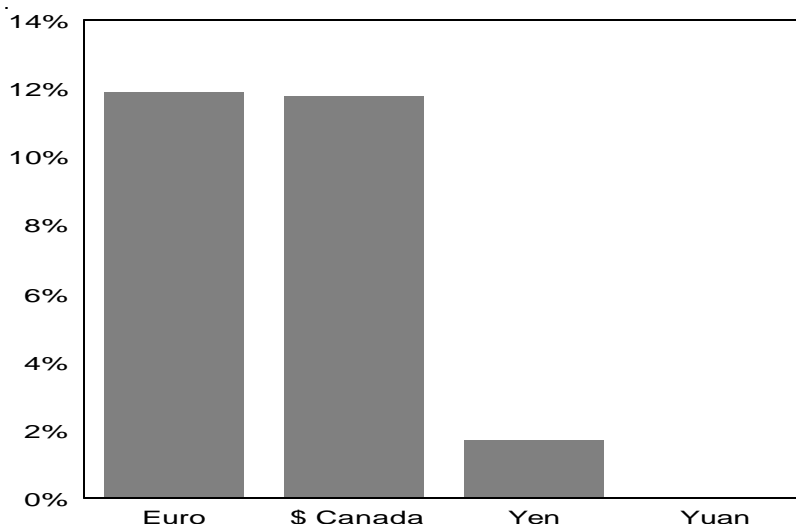
The Chinese yuan is not a free-floating currency but rather is pegged to the U.S. dollar. While this fixed-rate exchange is a matter of some concern to U.S. negotiators who feel the yuan is undervalued, the situation is not expected to change in the immediate future. As a result, Chinese exports to the U.S. will retain their competitive advantage, and U.S. exports will remain expensive on the Chinese market.

The Japanese yen is in theory a free-floating currency, but the Japanese government, through the Bank of Japan, has intervened heavily in recent months, spending trillions of yen buying dollars. The purpose of the intervention has been to keep the yen artificially weak in relation to the dollar. This makes Japanese-made cars less expensive to American consumers, but causes Alaska salmon to be more expensive in Japan.

While interventions to maintain a currency's strength are rarely successful, Japan's strategy to maintain an artificially weak yen seems to be working. This is good news for Japanese exporters and may help the Japanese economic recovery, which would be good for Alaska in the long run. In the meantime, Alaska's exports to Asia are not likely to benefit from the overall weakening of the dollar.

1 Percent Gain Against U.S. Dollar Selected foreign currencies

Aug 26, 2002 – Aug 26, 2003



Source: Federal Reserve Bank, New York

Employment Warms in July

Seasonal industries lift July's numbers

With employment numbers nearing their yearly peak, 2003's economic performance is beginning to take shape. July employment estimates suggest that Alaska's seasonal industries have performed as expected so far in 2003. In particular, the fishing, construction, and visitor industries all added a significant number of summer jobs. These industries also helped lift employment in a number of other categories, including eating establishments, air carriers, and retailers. Total employment in July grew by 8,200 jobs, with seafood processing contributing most to the monthly increase, adding 6,200 jobs.

Seafood down

Salmon harvests nearly always crest in July, and this year was no different. The difference is that seafood-processing employment climbed to just 13,600 in July, 500 lower than July 2002's level. This marks the fourth consecutive year-to-year decline in July's seafood processing jobs, despite a stronger harvest this year than in 2002.

Lower employment levels came as no surprise, considering that the list of processing plant closures continues to grow. The most recent closure took place in July, when True World Foods of Kodiak closed its doors. On a more upbeat note, Bristol Bay's sockeye harvest, the largest in the state, came in a bit higher this year and Southwest

Alaska's seafood processing employment reached the same level as in July 2002. Sockeye catches also came in stronger in Cook Inlet and pink catches were hearty in Prince William Sound and Southeast Alaska. Prices for the fish, however, remain close to last year's low levels.

Visitor industry murky

The current status of the visitor industry, one of the state's other big seasonal employers, is much less clear. With firm numbers such as bed tax collections not yet available, the informal consensus is that 2003 will be another soft year. Some participants in the industry say that the season began slowly but has picked up steam in recent months. Cruise ship passenger counts are near last year's numbers, but because deep discounting was necessary to fill the ships, some industry watchers believe that the passengers are spending less than in past years on land-based activities and in retail shops.

Denali National Park visitation for the first half of 2003 was down 7.5 percent. In July the Fairbanks Convention and Visitors Bureau surveyed its members about May and June activity and expectations for July, August, and September. Overall the members were cautiously optimistic. Most felt that activity was up for May and June but were concerned that by August some of these gains would slip away because of weaker advance bookings.

Employment is up over the year in some of the industry segments that cater to summer visitors. In the Leisure & Hospitality sector, which largely consists of accommodations and food services, employment is running slightly ahead of year-ago levels. (See Exhibit 2.) This does not necessarily mean that the visitor industry is growing, since some of the demand for these services is local and some is from business travelers. Also, a number of eating and drinking establishments and hotels opened either late last year or earlier this year, and required staffing.

Air transportation activity often sheds light on the health of the visitor industry, and its July employment was running even with year-ago levels. The overall assessment appears to be that conditions could be better for the visitor industry, but they also could be much worse.

Construction strong

The news is unabashedly upbeat for construction, the other big seasonal player. This could almost be characterized as an old story since the industry has enjoyed steady growth for over a decade, growing approximately four percent a year on average. July construction employment reached 19,600, which was 500 higher than a year ago. Federally funded activity is the dominant force in 2003, headed up by massive military construction activity in the Interior Region, including the Missile Defense project at Fort Greely. Highway construction is providing an additional boost, as are a variety of other public construction projects. Residential construction also remains strong. Only the Northern Region is employing fewer construction crews this year than in 2002. This reflects the slowdown in oil industry activity on the North Slope.

Lots of different income pictures around the state

Recently the U.S. Bureau of Economic Analysis released 2001 personal income figures for the

state's 27 boroughs and census areas. These figures are calculated by dividing an area's total personal income by its resident population. The figures are dated, but still useful. One of their weaknesses, however, is that they reveal nothing about income distribution. Demographics also influence the numbers. Family size, age, or the presence of a big university student population all affect per capita income. Despite these caveats, the data still effectively reveal different levels of economic wellbeing around the state.

The urban–rural difference

One of the most obvious differences is between rural and urban Alaska. Eight of the nine areas with per capita incomes of 75 percent or less of the statewide and national averages were in rural Alaska. (See Exhibit 1.) Included in this group were the following boroughs and census areas: Aleutians West, Bethel, Lake and Peninsula, Nome, Northwest Arctic, Prince of Wales-Outer Ketchikan, Wade Hampton, and Yukon-Koyukuk. Although a number of these areas are home to regional population centers, such as the cities of Bethel, Dillingham, and Nome, they also include small communities with few economic opportunities.

The Bethel Census Area, for example, includes 37 small communities in addition to the city of Bethel. Without the boost from regional centers such as Bethel, incomes would be even lower in these areas. Wade Hampton lacks a regional center and is thus a good proxy for "village Alaska." Its per capita income of \$15,004 was less than half Alaska's statewide figure. Income figures for these areas would drop even lower without government contributions. In the Wade Hampton Census Area, 52 percent of all income comes in the form of government transfer payments. It is important to note, however, that many of these communities rely on subsistence hunting and fishing to meet basic needs, and these statistics do not account for the value of subsistence goods.

Not all of rural Alaska has a low per capita income.

Exceptions include the Denali, Haines, Bristol Bay, and North Slope boroughs. These areas' common feature is a sizable private sector source of employment, such as coal mining, tourism, fishing, oil production, and power generation. In Haines, retirement income may also be important.

Conversely, not all urban areas enjoy above average incomes. In Fairbanks, the state's second largest city, per capita income actually came in slightly below the statewide average, due partly to large student and military populations. The Mat-Su Borough's very low per capita income—65 percent of the statewide average—is suspect and may be due partly to data collection problems rather than real economic differences. Other income measures confirm that the Mat-Su Borough's income usually falls below the statewide average, but not to the extent reported by these data. More than a third of the Mat-Su Valley's labor force works in Anchorage and elsewhere, and the Bureau of Economic Analysis appears to be having difficulty capturing that income.

Per capita income tracks the fate of industries

The data illustrates some noteworthy year-to-year trends. For example, in every area where per capita income either fell or saw little change, either timber or fishing was a significant part of the local economy. All of the boroughs and census areas in the Bristol Bay

(continued on page 26)

Per Capita Income Alaska Boroughs and Census Areas 2000–2001

	2000	2001	Percent Growth '00-'01	Percent of U.S. 2001	Percent of Alaska 2001
United States	\$29,760	\$30,413	2.2%	100%	98%
Alaska	\$29,960	\$31,027	3.6%	102%	100%
Aleutians East Borough	21,437	27,595	28.7%	91%	89%
Aleutians West Census Area	20,475	19,192	-6.3%	63%	62%
Anchorage, Municipality of	35,307	36,949	4.7%	121%	119%
Bethel Census Area	19,043	20,122	5.7%	66%	65%
Bristol Bay Borough	42,066	42,401	0.8%	139%	137%
Denali Borough	36,536	38,028	4.1%	125%	123%
Dillingham Census Area	25,778	25,534	-0.9%	84%	82%
Fairbanks North Star Borough	28,374	29,307	3.3%	96%	94%
Haines Borough	31,930	32,971	3.3%	108%	106%
Juneau Borough	34,113	34,487	1.1%	113%	111%
Kenai Peninsula Borough	27,867	28,506	2.3%	94%	92%
Ketchikan Gateway Borough	33,438	34,040	1.8%	112%	110%
Kodiak Island Borough	27,094	27,726	2.3%	91%	89%
Lake and Peninsula Borough	20,718	20,745	0.1%	68%	67%
Matanuska-Susitna Borough	19,943	20,261	1.6%	67%	65%
Nome Census Area	21,352	21,484	0.6%	71%	69%
North Slope Borough	29,827	33,571	12.6%	110%	108%
Northwest Arctic Borough	21,178	22,901	8.1%	75%	74%
Prince of Wales-Outer Ketchikan C.A.	21,013	19,936	-5.1%	66%	64%
Sitka Census Area	29,189	29,734	1.9%	98%	96%
Skagway-Hoonah-Angoon C.A.	28,023	29,323	4.6%	96%	95%
Southeast Fairbanks Census Area	22,750	24,089	5.9%	79%	78%
Valdez-Cordova Census Area	30,142	29,728	-1.4%	98%	96%
Wade Hampton Census Area	14,141	15,004	6.1%	49%	48%
Wrangell-Petersburg Census Area	29,241	28,967	-0.9%	95%	93%
Yakutat Borough	27,792	27,414	-1.4%	90%	88%
Yukon-Koyukuk Census Area	19,763	21,216	7.4%	70%	68%

Source: U.S. Department of Commerce, Bureau of Economic Analysis

2 Nonfarm Wage and Salary Employment

By place of work

Alaska	preliminary revised		Changes from:			Municipality of Anchorage	preliminary revised		Changes from:		
	7/03	6/03	7/02	6/03	7/02		7/03	6/03	7/02	6/03	7/02
Total Nonfarm Wage & Salary¹	319,400	311,200	317,100	8,200	2,300	Total Nonfarm Wage & Salary¹	148,000	147,400	145,600	600	2,400
Goods Producing	47,500	40,500	48,900	7,000	-1,400	Goods Producing	14,300	14,000	14,500	300	-200
Services Providing	272,000	270,700	268,200	1,300	3,800	Services Providing	133,700	133,500	131,000	200	2,700
Natural Resources & Mining	10,300	10,300	11,400	0	-1,100	Natural Resources & Mining	2,500	2,600	2,900	-100	-400
Logging	800	600	700	200	100	Mining	2,400	2,500	2,800	-100	-400
Mining	10,100	9,900	10,700	200	-600	Oil & Gas Extraction	2,300	2,400	2,700	-100	-400
Oil & Gas Extraction	8,000	8,000	9,000	0	-1,000	Construction	9,800	9,500	9,500	300	300
Construction	19,600	18,800	19,100	800	500	Manufacturing	2,000	1,900	2,100	100	-100
Manufacturing	17,600	11,400	18,300	6,200	-700	Trade, Transportation, Utilities	33,200	32,800	33,200	400	0
Wood Products Manufacturing	400	300	400	100	0	Wholesale Trade	4,700	4,700	4,800	0	-100
Seafood Processing	13,600	7,400	14,100	6,200	-500	Retail Trade	17,600	17,400	17,300	200	300
Trade, Transportation, Utilities	65,200	64,000	65,800	1,200	-600	Food & Beverage Stores	2,500	2,500	2,400	0	100
Wholesale Trade	6,600	6,200	7,000	400	-400	General Merchandise Stores	4,200	4,100	4,500	100	-300
Retail Trade	35,900	35,500	35,800	400	100	Trans/Warehousing/Utilities	10,800	10,700	11,100	100	-300
Food & Beverage Stores	6,200	6,100	6,100	100	100	Air Transportation	3,500	3,600	3,400	-100	100
General Merchandise Stores	9,300	9,000	9,600	300	-300	Information	4,800	4,700	4,800	100	0
Trans/Warehousing/Utilities	22,700	22,300	23,000	400	-300	Telecommunications	2,700	2,600	2,900	100	-200
Air Transportation	6,900	6,800	6,900	100	0	Financial Activities	8,700	8,600	8,500	100	200
Truck Transportation	3,100	3,000	3,000	100	100	Professional & Business Svcs	18,100	17,500	17,700	600	400
Information	7,200	7,000	7,500	200	-300	Educational & Health Services	17,300	17,200	16,400	100	900
Telecommunications	4,200	4,000	4,400	200	-200	Health Care/Social Assistance	15,900	15,800	15,200	100	700
Financial Activities	14,600	14,100	14,100	500	500	Ambulatory Health Care	6,800	6,900	6,300	-100	500
Professional & Business Svcs	25,500	24,600	24,800	900	700	Hospitals	4,900	4,800	4,600	100	300
Educational & Health Services	32,200	32,300	30,600	-100	1,600	Leisure & Hospitality	16,000	16,200	15,500	-200	500
Health Care/Social Assistance	30,100	30,100	28,600	0	1,500	Accommodation	3,600	3,500	3,400	100	200
Ambulatory Health Care	13,100	13,200	12,200	-100	900	Food Svcs & Drinking Places	10,700	10,800	10,300	-100	400
Hospitals	7,800	7,800	7,600	0	200	Other Services	6,400	6,100	6,200	300	200
Leisure & Hospitality	35,600	34,900	35,100	700	500	Government²	29,200	30,300	28,600	-1,100	600
Accommodation	10,600	9,800	10,400	800	200	Federal Government ³	9,900	9,800	9,700	100	200
Food Svcs & Drinking Places	20,400	20,300	20,000	100	400	State Government	9,300	9,400	9,100	-100	200
Other Services	13,000	12,500	12,700	500	300	Local Government	10,000	11,100	9,800	-1,100	200
Government²	78,800	81,300	77,600	-2,500	1,200	Tribal Government	300	300	300	0	0
Federal Government ³	17,800	17,500	17,500	300	300						
State Government	23,400	24,100	23,000	-700	400						
Local Government	37,700	39,700	37,100	-2,000	600						
Tribal Government	3,700	3,500	4,000	200	-300						

Notes to Exhibits 2, 3, 4, & 6—¹Nonfarm excludes self-employed workers, fishermen, domestics, and unpaid family workers as well as agricultural workers. ²Includes employees of public school systems and the University of Alaska. ³Excludes uniformed military. Exhibits 2 & 3—Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics. Exhibits 4 & 6—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 7/03	revised 6/03	revised 7/02	preliminary 7/03	revised 6/03	revised 7/02	preliminary 7/03	revised 6/03	revised 7/02
Mining	\$1,313.17	\$1,296.87	\$1,372.84	42.9	41.7	49.1	\$30.61	\$31.10	\$27.96
Construction	1,301.61	1,276.05	1134.20	43.0	43.3	42.8	30.27	29.47	26.50
Manufacturing	553.83	505.38	526.40	44.2	39.7	40.0	12.53	12.73	13.16
Seafood Processing	651.66	491.04	418.15	54.9	44.0	39.9	11.87	11.16	10.48
Trade, Transportation, Utilities	543.39	546.98	545.60	34.9	36.2	34.1	15.57	15.11	16.00
Retail Trade	451.10	462.35	478.88	34.7	35.0	32.8	13.00	13.21	14.60
Financial Activities	664.52	696.00	650.31	37.0	38.2	31.8	17.96	18.22	20.45

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 2002

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

4 Nonfarm Wage and Salary Employment

By place of work

	preliminary revised		Changes from:		
	7/03	6/03	7/02	6/03	7/02
Fairbanks North Star Borough					
Total Nonfarm Wage & Salary¹	37,800	37,450	37,150	350	650
Goods Producing	4,500	4,200	4,600	300	-100
Services Providing	33,300	33,250	32,550	50	750
Natural Resources & Mining	950	900	1,050	50	-100
Mining	950	900	1,050	50	-100
Construction	2,950	2,700	2,950	250	0
Manufacturing	650	600	600	50	50
Trade, Transportation, Utilities	7,550	7,500	7,700	50	-150
Retail Trade	4,200	4,200	4,250	0	-50
General Merchandise Stores	950	950	1,150	0	-200
Trans/Warehousing/Utilities	2,850	2,750	2,900	100	-50
Air Transportation	850	850	900	0	-50
Information	650	650	650	0	0
Financial Activities	1,400	1,350	1,300	50	100
Professional & Business Svcs	2,200	2,150	2,050	50	150
Educational & Health Services	3,700	3,750	3,500	-50	200
Health Care/Social Assistance	3,450	3,450	3,250	0	200
Leisure & Hospitality	4,850	4,700	4,600	150	250
Accommodation	1,550	1,500	1,550	50	0
Food Svcs & Drinking Places	2,750	2,700	2,550	50	200
Other Services	2,200	2,000	2,150	200	50
Government²	10,800	11,200	10,600	-400	200
Federal Government ³	3,500	3,500	3,450	0	50
State Government	4,700	5,050	4,600	-350	100
Local Government	2,600	2,650	2,550	-50	50
Tribal Government	0	0	0	0	0

Southeast Region

Total Nonfarm Wage & Salary¹	41,000	38,450	41,300	2,550	-300
Goods Producing	6,150	4,200	6,200	1,950	-50
Services Providing	34,800	34,250	35,100	550	-300
Natural Resources & Mining	900	750	800	150	100
Logging	550	400	500	150	50
Mining	300	300	300	0	0
Construction	2,000	1,900	1,850	100	150
Manufacturing	3,300	1,600	3,550	1,700	-250
Wood Products Mfg.	150	150	200	0	-50
Seafood Processing	2,850	1,150	3,050	1,700	-200
Trade, Transportation, Utilities	8,300	7,950	8,700	350	-400
Retail Trade	4,950	4,800	5,050	150	-100
Trans/Warehousing/Utilities	2,800	2,750	2,950	50	-150
Information	500	500	500	0	0
Financial Activities	1,350	1,300	1,350	50	0
Professional & Business Svcs	1,550	1,500	1,600	50	-50
Educational & Health Services	3,600	3,550	3,450	50	150
Health Care/Social Assistance	3,350	3,350	3,250	0	100
Leisure & Hospitality	5,000	4,800	5,050	200	-50
Accommodation	1,900	1,800	1,950	100	-50
Food Svcs & Drinking Places	1,950	1,900	2,000	50	-50
Other Services	1,100	1,100	1,150	0	-50
Government²	13,450	13,550	13,300	-100	150
Federal Government ³	2,050	2,000	2,100	50	-50
State Government	5,600	5,650	5,550	-50	50
Local Government	5,800	5,850	5,650	-50	150
Tribal Government	650	600	650	50	0

	preliminary revised		Changes from:		
	7/03	6/03	7/02	6/03	7/02
Interior Region					
Total Nonfarm Wage & Salary¹	45,100	44,850	44,400	250	700
Goods Producing	5,000	4,650	5,050	350	-50
Services Providing	40,100	40,250	39,350	-150	750
Natural Resources & Mining	1,100	1,000	1,200	100	-100
Mining	1,050	1,000	1,200	50	-150
Construction	3,250	2,950	3,200	300	50
Manufacturing	700	650	700	50	0
Trade, Transportation, Utilities	9,050	9,000	9,150	50	-100
Information	850	850	850	0	0
Financial Activities	1,450	1,450	1,400	0	50
Professional & Business Svcs	2,350	2,300	2,200	50	150
Educational & Health Services	3,850	3,900	3,650	-50	200
Leisure & Hospitality	6,900	6,700	6,650	200	250
Accommodation	2,550	2,150	2,500	400	50
Food Svcs & Drinking Places	3,850	3,700	3,650	150	200
Other Services	2,450	2,250	2,400	200	50
Government²	13,200	13,850	13,050	-650	150
Federal Government ³	4,050	4,150	4,050	-100	0
State Government	5,000	5,300	4,900	-300	100
Local Government	4,150	4,400	4,100	-250	50
Tribal Government	300	250	300	50	0

Anchorage/Mat-Su Region

Total Nonfarm Wage & Salary¹	164,000	163,100	160,550	900	3,450
Goods Producing	16,500	16,050	16,550	450	-50
Services Providing	147,550	147,050	144,000	500	3,550
Natural Resources & Mining	2,550	2,650	2,950	-100	-400
Construction	11,650	11,250	11,300	400	350
Manufacturing	2,250	2,100	2,300	150	-50
Trade, Transportation, Utilities	37,000	36,700	36,750	300	250
Information	5,150	5,100	5,350	50	-200
Financial Activities	9,400	9,300	9,050	100	350
Professional & Business Svcs	19,000	18,300	18,450	700	550
Educational & Health Services	19,300	19,250	18,400	50	900
Leisure & Hospitality	17,800	17,750	17,200	50	600
Other Services	6,950	6,650	6,800	300	150
Government²	32,950	34,100	32,000	-1,150	950
Federal Government ³	10,050	10,000	9,850	50	200
State Government	10,350	10,500	10,050	-150	300
Local Government	12,550	13,550	12,100	-1,000	450
Tribal Government	350	350	350	0	0

Gulf Coast Region

Total Nonfarm Wage & Salary¹	32,350	30,600	32,750	1,750	-400
Goods Producing	8,200	6,400	8,400	1,800	-200
Services Providing	24,150	24,250	24,350	-100	-200
Natural Resources & Mining	1,350	1,350	1,450	0	-100
Oil & Gas Extraction	1,200	1,200	1,300	0	-100
Construction	1,950	1,900	1,950	50	0
Manufacturing	4,850	3,100	5,000	1,750	-150
Seafood Processing	4,200	2,500	4,250	1,700	-50
Trade, Transportation, Utilities	6,350	6,200	6,800	150	-450
Retail Trade	3,700	3,700	3,800	0	-100
Trans/Warehousing/Utilities	2,300	2,250	2,300	50	0
Information	450	450	450	0	0
Financial Activities	900	900	900	0	0
Professional & Business Svcs	1,500	1,450	1,550	50	-50
Educational & Health Services	1,900	1,900	1,800	0	100
Health Care/Social Assistance	1,800	1,800	1,750	0	50
Leisure & Hospitality	4,400	4,200	4,350	200	50
Accommodation	1,750	1,750	1,700	0	50
Food Svcs & Drinking Places	2,300	2,200	2,300	100	0
Other Services	1,550	1,450	1,450	100	100
Government²	7,100	7,650	7,000	-550	100
Federal Government ³	1,000	950	950	50	50
State Government	1,550	1,600	1,550	-50	0
Local Government	4,550	5,100	4,500	-550	50
Tribal Government	400	400	350	0	50

5 Unemployment Rates

By region and census area

(continued from page 23)

Not Seasonally Adjusted	preliminary		revised
	07/03	06/03	07/02
Alaska Statewide	6.9	7.4	6.9
Anchorage/Mat-Su Region	5.7	6.0	5.8
Municipality of Anchorage	5.2	5.4	5.2
Mat-Su Borough	8.0	8.5	8.3
Gulf Coast Region	8.3	9.9	8.6
Kenai Peninsula Borough	9.6	10.2	9.5
Kodiak Island Borough	5.9	10.0	5.6
Valdez-Cordova	6.0	8.1	8.4
Interior Region	6.3	7.0	6.5
Denali Borough	3.7	4.2	3.7
Fairbanks North Star Borough	5.8	6.5	5.9
Southeast Fairbanks	8.5	9.1	10.8
Yukon-Koyukuk	14.4	15.6	15.5
Northern Region	17.9	17.7	15.4
Nome	17.0	16.8	14.5
North Slope Borough	14.9	14.6	12.6
Northwest Arctic Borough	23.1	23.1	20.7
Southeast Region	6.4	7.1	6.7
Haines Borough	7.4	7.8	7.1
Juneau Borough	5.5	5.8	5.3
Ketchikan Gateway Borough	6.6	8.0	7.6
Prince of Wales-Outer Ketchikan	11.3	11.2	13.6
Sitka Borough	4.8	5.8	4.8
Skagway-Hoonah-Angoon	7.3	6.8	7.7
Wrangell-Petersburg	7.2	9.2	7.7
Yakutat Borough	11.8	14.9	12.5
Southwest Region	13.0	15.9	12.6
Aleutians East Borough	3.4	4.7	2.3
Aleutians West	7.4	12.9	8.8
Bethel	14.7	17.5	13.9
Bristol Bay Borough	8.4	11.4	7.1
Dillingham	9.2	12.1	9.8
Lake & Peninsula Borough	10.9	13.2	10.2
Wade Hampton	25.9	27.7	24.6
Seasonally Adjusted			
United States	6.2	6.4	5.8
Alaska Statewide	7.9	7.9	8.0

2002 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

region (Lake and Peninsula Borough, Dillingham Census Area, and Bristol Bay Borough) experienced declines in per capita income, along with a number of areas in Southeast Alaska. In most of Alaska, however, per capita income grew more robustly than in the United States as a whole. Preliminary data suggest this was also true in 2002.

6 Nonfarm Wage/Salary Employment

By place of work

Northern Region	preliminary		revised	Changes from:	
	7/03	6/03	7/02	6/03	7/02
Total Nonfarm Wage & Salary¹	15,350	15,450	16,350	-100	-1,000
Goods Producing	4,900	4,900	5,700	0	-800
Services Providing	10,450	10,550	10,650	-100	-200
Oil & Gas Extraction	3,900	3,900	4,500	0	-600
Government²	4,850	4,900	5,000	-50	-150
Federal Government ³	200	200	200	0	0
State Government	350	350	350	0	0
Local Government	4,350	4,350	4,500	0	-150
Tribal Government	600	550	650	50	-50
Total Nonfarm Wage & Salary¹	21,550	18,600	21,550	2,950	0
Goods Producing	6,700	4,000	6,950	2,700	-250
Services Providing	14,850	14,600	14,650	250	200
Seafood Processing	6,500	3,800	6,700	2,700	-200
Government²	7,300	7,400	7,300	-100	0
Federal Government ³	450	450	400	0	50
State Government	600	600	600	0	0
Local Government	6,300	6,400	6,300	-100	0
Tribal Government	1,450	1,450	1,750	0	-300

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

Employer Resources

If your company is facing possible layoffs due to imports from another country, you and your employees may be eligible for Trade Adjustment Assistance (TAA) benefits. Benefits could include reemployment services, training, job search allowance, relocation allowance, or Trade Readjustment Allowance (TRA), a weekly benefit much like unemployment insurance. Visit the TAA website by going to: <http://www.labor.state.ak.us/>, clicking on "Job Seekers" at the top, then clicking on "Trade Adjustment Assistance", or directly to: <http://www.jobs.state.ak.us/taa/>.

