Workplace Fatalities in Alaska

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Since fatalities census began, numbers have been declining

Alaska recorded 42 workplace fatalities in 2002. The previous year 64 workers were fatally injured. Since 1992, the year the Census of Fatal Occupational Injury (CFOI) program began, 653 workers have lost their lives in Alaska's workplaces, an average of one every six days. In more recent years, the number of fatalities has declined. From 1992 to 1996, Alaska averaged nearly 72 fatalities a year. From 1997 to 2002, that average has decreased to about 49 deaths annually. (See Exhibit 1.)

Nationally, 5,524 workers lost their lives on the job in 2002. This was down 6.6 percent from 2001 when 5,915 workers died of workplace-related injuries across the U.S. The 2001 national figure did not report the 2,886 workers who lost their lives from the terrorist events of September 11, 2001 in New York City, Washington, D.C. and Pennsylvania. (See Exhibit 2.)

Tracking workplace fatalities is important. Safety and health officials, employers, and researchers make extensive use of data to identify potential risks to workers, and facilitate efforts to prevent future fatalities.

CFOI reports inform workers of potential life-threatening hazards associated with various jobs. Enhanced job safety training promotes safer work practices. CFOI information can also be used to assess and improve workplace safety standards and identify new areas of safety research. Information gathered can be particularly useful to individual states in gauging progress over time towards the goal of reducing workplace fatalities in all industries.

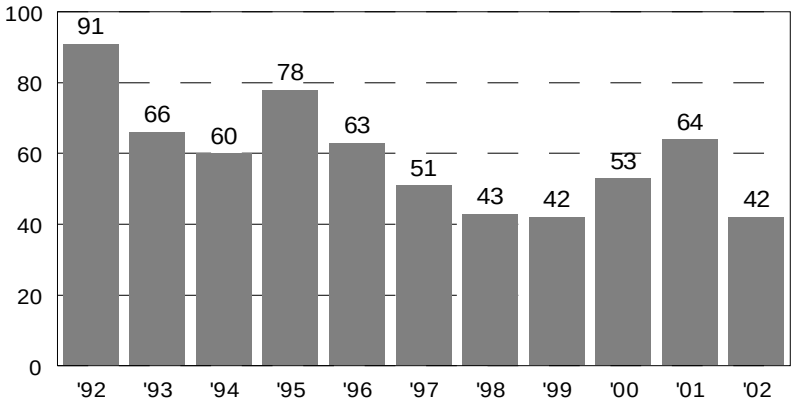
CFOI relies primarily on information found on death certificates, newspaper articles, and workers' compensation reports. The objective is to gather information about job-related fatalities (e.g., falls, transportation incidents) and illnesses that result in fatalities (e.g., asbestosis, some types of cancer). It includes any job-related death that occurs in Alaska, even if the individual involved was not a resident of the state or working for an Alaska company. All information identifiable with an individual is kept confidential.

Fatality rates higher in Alaska than U.S. overall

Although the annual number of workplace fatalities in Alaska is small when compared to the national number, the fatality rate, or number of cases per 100,000 workers, in 2002 was approximately three times higher than the national rate. The

Workplace Fatalities Decline 1992–2002

Census of Fatal Occupational Injuries



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

national fatality rate has remained steady at about five fatal work injuries per 100,000 workers for much of the past decade. In 2002, however, the rate fell to its lowest ever at 4.0 fatalities per 100,000 workers. Alaska's workplace fatality rate in 2002 was 12.8 fatalities per 100,000 workers.

Alaska's fatality rate is the highest of the 50 states, but the rate has declined steadily between 1992 and 2002. To illustrate this, a regression of the fatality rates since 1992 presents a trend line sloping downward from 25 to about 13 cases per 100,000 workers. It's also worth noting how stable the U.S. rate of fatal injuries has been since 1992. (See Exhibit 4.)

The data presented in Exhibit 5 show that Alaska's workplace fatality rate is falling faster than the rates in most other states. A comparison of the 2002 incidence rates to the average rates for the period 1997 to 2001 places Alaska in eighth position among the states in the rate of improvement in reducing the workplace fatality rate.

An important consideration to keep in mind when interpreting individual state fatality rates is that fatal work injuries (the numerator in computing the rate) are based on the fatal work injury location, but employment (the denominator) is based on the state of residency.

While most workers live and work in the same state, some do not. Caution must be used in making universal assumptions that worker fatalities accurately reflect safety conditions in the states where the workplace injury occurs. For example, non-residents (those who legally reside outside of Alaska) who are fatally injured while working in Alaska could, in fact, drive up the state's fatality rate, as their numbers would not be captured in the employment estimated by the survey.

2 Workplace Fatality Counts
Alaska and U.S.

Year	Alaska	U.S.
2002	42	5,524
2001*	64	5,915
2000	53	5,920
1999	42	6,054
1998	43	6,055
1997	51	6,238
1996	63	6,202
1995	78	6,275
1994	60	6,632
1993	66	6,331
1992	91	6,217

* Excludes fatalities from September 11 attacks

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

3 Fatalities by Type of Event
Census of Fatal Occupational Injuries (CFOI) Alaska and U.S.

	Alaska										Alaska		U.S.	
	1992	1993	'94	1995	1996	1997	1998	1999	2000	2001	2002		2002	
Total	91	66	60	78	63	51	43	42	53	64	42	100%	5,524	100%
Transportation incidents	69	47	30	67	51	33	30	31	39	48	30	71%	2,381	43%
Highway incident	—	—	—	6	—	4	—	3	6	4	3	7%	1,372	25%
Water vehicle incident	39	21	14	22	29	8	14	16	12	25	18	43%	71	1%
Aircraft incident	26	22	10	34	16	19	13	10	19	18	8	19%	192	3%
Assaults and violent acts	4	12	6	3	6	6	7		3	5	—	—	840	15%
Contact with objects and equipment	10	4	9	4	4	6	—	5	8	5	6	14%	873	16%
Exposure to harmful substances or environments	3	—	7	—	—	3	—	—	—	4	—	—	538	10%

Event grouping is coded using the Bureau of Labor Statistics Occupational Injury and Illness classification structure. This is a select list and the parts will not sum to the total.

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

Profile by type of incident or event and mode of travel

Transportation incidents were the most frequent type of event for worker deaths both in the U.S. and Alaska in 2002. On a nationwide basis, fatal highway accidents claimed the most individuals in work status, while in Alaska, water transportation and aircraft fatalities were most prevalent. In fact, there have been several years when the number of work-related highway fatalities in Alaska was too low to publish without jeopardizing confidentiality. Because of Alaska's remoteness and the lack of a road system in so many areas of the state, Alaska's workers travel by boat and airplane far more frequently than the workforce nationally. (See Exhibits 3 and 6.)

The second-leading cause of workplace fatalities nationally (third-leading cause in Alaska) was contact with objects and equipment (struck by falling object, caught in equipment or collapsing structure or materials). This type of fatality accounted for 16 percent of the worker fatalities nationally and 14 percent in Alaska.

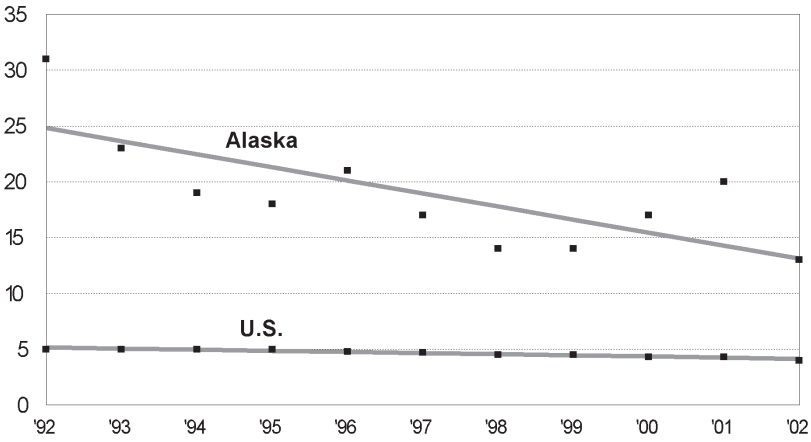
While assaults and other violent acts have decreased recently, they still represent a significant number of workplace deaths across the nation at about 15 percent. In Alaska's workplaces, fatal violent acts are far less common. (See Exhibit 3.)

Profile of fatal work injuries by industry

Throughout the period covered by the CFOI, the highest fatality counts have been in commercial fishing and air transportation. Exhibit 7 shows the broad industry groups which include these two industries.

Commercial fishing has been a leading source of work-related deaths in Alaska since CFOI's inception in 1992. Over that period, the fishing industry has accounted for 203 deaths, representing 31 percent of the CFOI total. While the number of deaths in fishing has varied widely from year to year, the trend since 1992 has been one of declining numbers. (See Exhibit 8.) Commercial fishing fatalities have gone from 35

Workplace Fatality Rates 4
11-year trend lines, Alaska & U.S.



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

Workplace Fatality Rates 5
By state, 2002 and 1997–2001

State	2002	1997-2001	State	2002	1997-2001
Massachusetts	1.4	2.0	North Carolina	4.3	5.5
Rhode Island	1.5	2.4	Utah	4.4	5.9
Connecticut	2.3	2.7	Florida	4.5	5.0
District of Columbia	2.5	5.7	Indiana	4.5	5.5
Delaware	2.7	3.3	Maine	4.6	3.9
California	2.8	3.6	Georgia	4.8	5.4
New Hampshire	2.8	2.5	Tennessee	5.0	5.7
Minnesota	2.9	2.8	Alabama	5.1	6.0
Washington	2.9	3.4	Colorado	5.3	5.0
New York City	3.0	3.2	West Virginia	5.3	7.2
New Jersey	3.1	2.7	Louisiana	5.5	7.2
Pennsylvania	3.1	3.9	Oklahoma	5.6	5.9
Wisconsin	3.1	3.7	South Carolina	5.8	6.2
Illinois	3.2	3.6	Idaho	6.1	7.1
Michigan	3.2	3.5	Missouri	6.2	5.1
Vermont	3.3	3.7	Arkansas	6.4	7.5
Iowa	3.5	4.7	Kansas	6.7	6.7
Hawaii	3.6	3.8	New Mexico	7.3	5.9
Maryland	3.6	2.9	North Dakota	7.6	8.3
Ohio	3.6	3.6	Mississippi	7.7	9.5
Oregon	3.7	3.8	Kentucky	7.8	6.4
Arizona	3.9	3.4	South Dakota	8.1	8.3
Virginia	3.9	4.4	Nebraska	9.0	6.4
U.S. Average	**4.0**	**N/A**	Montana	11.6	11.3
Texas	4.1	5.2	Wyoming	12.0	13.3
Nevada	4.3	5.3	**Alaska**	**12.8**	**16.7**

Source: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries

2002 Accident Investigations by Alaska Occupational Safety and Health

Construction

A welder was struck in the head by a dislodged plug while working on a pressurized pipe.

Logging

A logger was pinched between an uprooted tree and a broken chunk of log on the ground.

Retail

A fast food employee was crushed in a trash compactor.

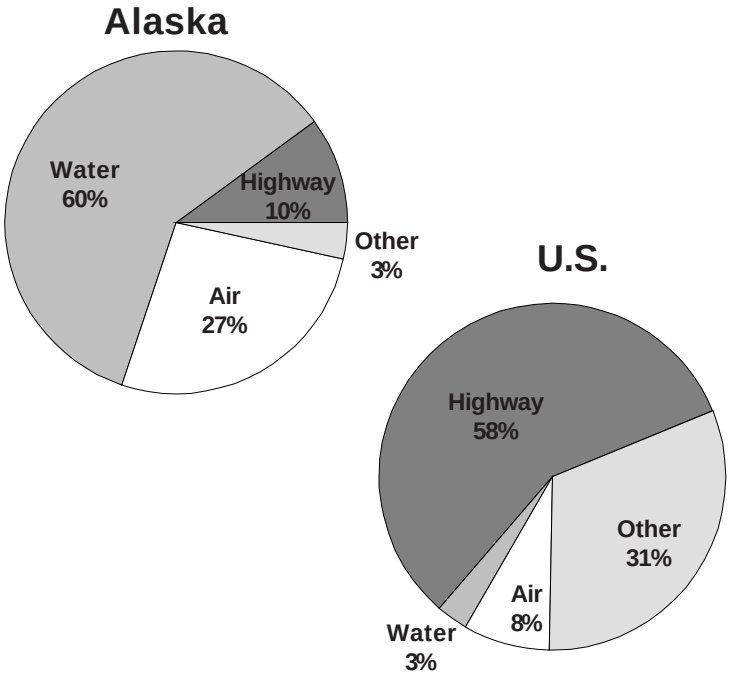
Trucking/Transportation

A trailer rolled over an employee who was trying to free up the trailer's frozen brakes. The employee was behind the tractor and trailer on a slope attempting to free the brakes. When the brakes released, the worker was run over.

An employee was crushed when a flatbed trailer fell on him. The worker was disconnecting two flatbed trailers stacked on top of each other and got in between them to untie a chain. When the chain was loosened, the top trailer slid and crushed him between the two trailers.

Source: Alaska Department of Labor and Workforce Development, Occupational Safety and Health

6 Transportation Fatalities
By mode of travel, 2002



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

in 1992 to 13 in 2002. Many of these deaths occur when several crewmembers are killed in a single vessel incident. Such an event occurred in 2001 when the F/V Arctic Rose sank off the west coast of Alaska and all 15 crewmembers perished.

The Commercial Fishing Industry Vessel Safety Act appears to be succeeding in decreasing fishing fatalities in Alaska. Nevertheless, commercial fishing continues to be one of the most hazardous industries in the state and nationwide.

Since the census began, aircraft crashes have been a principal cause of work-related fatalities in Alaska. Air transportation, which includes commercial air taxi and helicopter services, accounted for a 9.5 percent share of all worker fatalities in the state in 2002, and 36.4 percent of fatalities in the transportation industry.

In 2002 aviation fatalities reached their lowest number since the CFOI began, and the general trend toward fewer fatalities continues. (See Exhibit 9.) There were eight aircraft-related fatalities that year, four of which were in the air transportation industry. While the numbers are significant, this is far fewer than the high of 34 aviation-related fatalities in 1995.

A study done by the National Transportation Safety Board (NTSB) in 1980 identified three major factors in Alaska's high aircraft accident rates. These factors were inadequate airport facilities, insufficient ground navigational aids, and what it called "the bush syndrome" — pilots taking unwarranted risks in order to complete a flight.

The Federal Aviation Administration (FAA) has instituted several programs to improve Alaska's air safety. One voluntary program is the Medallion Foundation, where airlines are awarded "Medallion Status" by meeting standards that exceed the federal regulatory minimums. The FAA also created a "Circle of Safety" program that educates rural citizens on flight safety so that they can ensure stricter standards are met. Rural residents frequently commute by air between

communities. The FAA hopes that proper education will enable rural and bush residents to cope with air safety concerns that may arise.

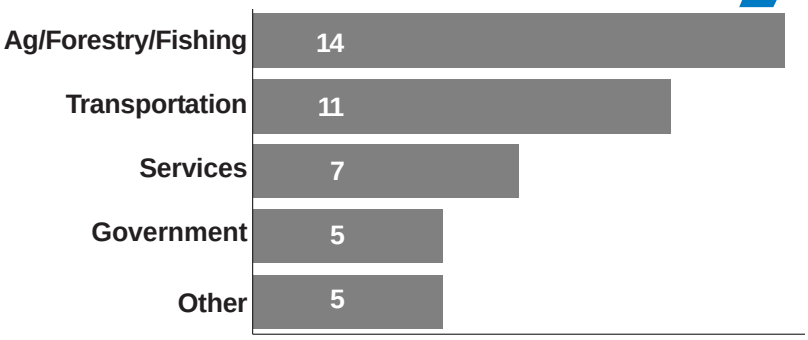
Perhaps the greatest hope of improving air travel safety in Alaska is the *Capstone Program.* This collaborative project involving the FAA, the NTSB, the National Weather Service, and the National Institute of Occupational Safety and Health began in 1998 in western rural Alaska. Capstone utilizes new technologies to better inform pilots of terrain, weather, and traffic in an aircraft's vicinity. By providing surveillance capabilities normally reserved for commercial airlines and higher performance aircraft, the FAA hopes to reduce aircraft accidents in Alaska. Considered a testing ground for the rest of the nation, Alaska was chosen to be the first area to experiment with these new technologies due to its high accident rates. The new technologies include global positioning system (GPS) data to transmit air traffic information, graphical and textual depictions of weather systems, and information broadcasting devices designed to inform pilots of nearby terrain conditions.

Fatal work injuries by occupation

All states reported fatal occupational injuries in 2002. In Alaska, fatal work injuries were more prevalent among workers who performed manual work than those who didn't. Farming, fishing, & forestry workers accounted for nearly forty percent of workplace fatalities despite making up less than one percent of the total workforce, self-employment included. All but one of the 15 fatalities in this occupational group were the result of commercial fishing related incidents. (See Exhibit 10.)

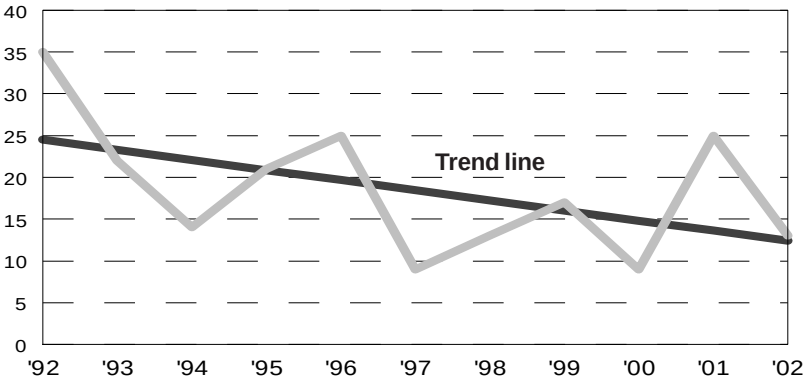
Falling or being struck by falling objects, drowning, and being crushed in confined areas are examples of hazards encountered by workers in Alaska. Climate and topography (e.g., extreme cold weather, water, slopes, sinkholes and other obstacles) also contribute to the occupational hazards.

Workplace Fatalities by Industry 7
Alaska 2002



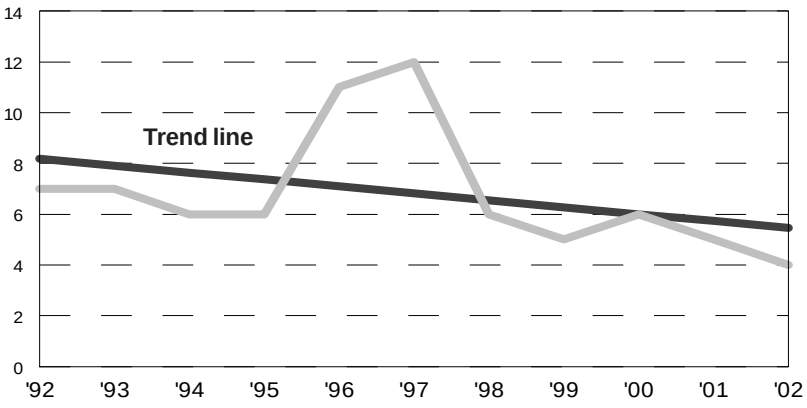
Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, U.S. Bureau of Labor Statistics

Commercial Fishing Fatalities 8
Trend is declining



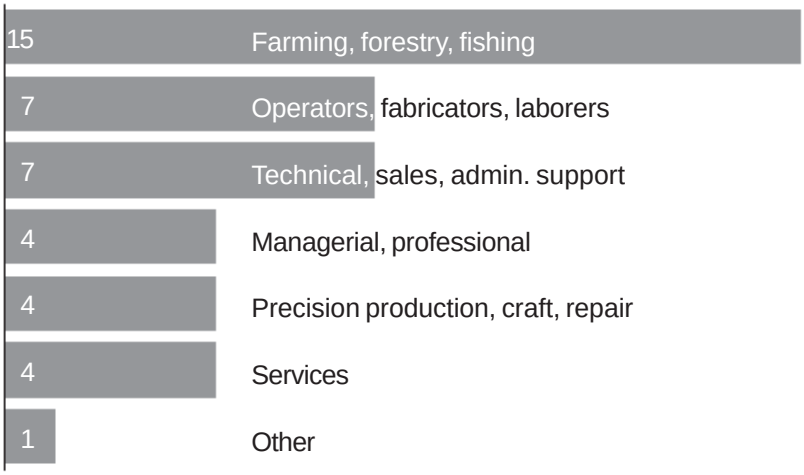
Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, U.S. Bureau of Labor Statistics

Air Transportation Fatalities 9
Trend is declining



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

10 Alaska Workplace Fatalities
By occupation, 2002



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

11 Worker Characteristics
Of Alaska's fatally injured, 2002

	Number	Percent
Total	42	100%
Employee Status		
Wage and Salary Workers [1]	30	71.4%
Self-employed [2]	12	28.6%
Sex		
Men	41	97.6%
Women	—	—
Age		
Under 16 years	—	—
16 to 17 years	—	—
18 to 19 years	—	—
20 to 24 years	4	9.5%
25 to 34 years	8	19.0%
35 to 44 years	12	28.6%
45 to 54 years	9	21.4%
55 to 64 years	3	7.1%
65 years and over	—	—
Race or Ethnic Origin		
White, non-Hispanic [3]	30	71.4%
Black, non-Hispanic [3]	—	—
Hispanic or Latino [3]	—	—
American Indian or Alaska Native	6	14.3%
Asian or Pacific Islander	—	—
Asian	—	—
Native Hawaiian or Pacific Islander	—	—

[1] May include volunteers and other workers receiving compensation.
[2] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[3] For years prior to 2000, the race categories White and Black include Hispanic workers. For years 2000 and later, White and Black exclude Hispanic workers.

Totals for major categories may include subcategories not shown separately.
Percentages may not add to totals because of rounding.
Dashes indicate no data reported or data that do not meet publication criteria.

Sources: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries

Profile of fatal work injuries by demographic characteristics

Men are more frequently employed in the more dangerous industries of aviation and fishing than women. The overwhelming majority of workplace fatalities in Alaska since 1992 have befallen white non-Hispanic males, and 2002 was no exception. White non-Hispanics accounted for 71.4 percent of the workplace fatalities. American Indian or Alaska Native accounted for an additional 14.3 percent. Of the 42 worker deaths reported in 2002, 41 were male. Since the CFOI program began, 96 percent of all CFOI victims have been male.

The age group with the most deaths was 35-44 with 12 fatalities, followed by those aged 45-54 with nine fatalities. Those aged 25-54 accounted for nearly 70 percent of Alaska's work related deaths in 2002. The majority of Alaska's fatalities occur to wage and salary employees, but 12 of the 42 deaths were self-employed workers. This relatively high number can be explained by the fact that fishermen are typically considered self-employed for purposes of the program. (See Exhibit 11.)

The workplace fatality census for 2003 is scheduled for release in late 2004.