# ALASKA COMMERCIAL FISHING FATALITIES BY FISHERY JANUARY 1991 THROUGH SEPTEMBER 1992

*By LT Richard D. Kennedy, USPHS*

Ms. Bernice W. Carmon: The last speaker for Session Three is LT Richard Kennedy, whose presentation is entitled *Alaska Commercial Fishing Fatality by Fishery, January 1991 through 1992*. Richard is a statistician with the U.S. Public Health Service serving with the Centers for Disease Control, National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research, Alaska Activity, in Anchorage, Alaska. Richard obtained his Master's degree in biostatistics from the University of Oklahoma in 1990. From June 1990 to August 1991, Richard served with the Division of Respiratory Disease Studies, NIOSH, in Morgantown, WV. Richard's research interests include statistical modelling, epidemiology of injuries, and graphical computing.
LT Richard Kennedy:

The fatality data for this presentation was collected by the National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), Alaska Activity from January 1991 through September 1992. Fatality rates were calculated by enumerating known worker fatalities divided by employment estimates by industry for the same period. Fatality rates are expressed per 100,000 full-time equivalents (FTEs).

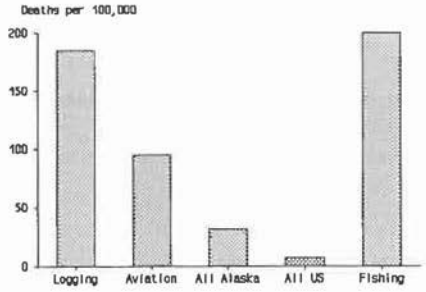


**Figure 1.** Occupational Fatalities by Industry Sector, Alaska, 1991.

For the year 1991, the occupational fatality rate for all industry divisions in Alaska was 32 per 100,000. This figure represents 84 workers killed and ranks the state as having the nation's highest risk of worker fatality — nearly five times the national average of 7 per 100,000 for the period 1980 to 1989. The Alaska industry sector having the highest worker fatality rate is commercial fishing with 200 fatalities per 100,000 workers. Logging was a close second at 185 per 100,000, followed by aviation at 95 per 100,000 (Figure 1).

Fatality information was obtained by the Fatality Assessment and Control Evaluation (FACE) program. FACE utilizes a surveillance component that attempts to capture all known occupational fatalities through a notification system by those responsible jurisdictional agencies such as the U.S. Coast Guard, the National Transportation Safety Board, or local public safety officials. Detailed information about the nature and circumstances surrounding the fatality is then collected and filed electronically for further analysis.

The number of workers at risk or the workforce in a given industry is usually obtained from the Alaska Department of Labor (AKDOL).

However, the last published employment statistics by AKDOL were for the year 1984. Later and more detailed commercial fishing employment statistics became available in May of 1989, as the result of the Alaska Seafood Study Commission (ASSC).

In 1988, the ASSC selected the McDowell Corporation to quantify the impact of the seafood industry (commercial fishing and seafood processing) on the state's economy. The McDowell Corporation, Alaskan economic and market consultants, produced the *Alaska Seafood Industry Study: A Technical Report*, and published it the following summer. The Technical Report contains, among other information such as statements of earnings, detailed employment estimates for the five major Alaskan fisheries: salmon, halibut, groundfish, herring, and shellfish.

The employment statistics by fishery from the McDowell Report served as a baseline for the 1991 and 1992 commercial fishing employment estimates produced by the Alaska Activity. In updating these figures a number of sources were contacted and requested to supply information, such as the amount of total catch or the number of vessels participating during a specific season, to approximate the employment figures. Table I depicts the state and federal agencies that contributed to these efforts.

For the 21-month period (January 1991 through September 1992) a total of 60 fishers died on the job. Using fatality information from the FACE program, the number of fatalities that, occurred in each of the five fisheries was then tabulated. Annualized full-time employment data were used to calculate occupational fatality rates for each fishery on a yearly basis. Table II summarizes these results.

Harvesting activities in the shellfish fishery are predominately crabbing. Major shellfish sub-fisheries are red and blue king crab in the

**Table I.** Agencies That Contributed Information in the Updating of Employment Statistics in the Alaska Commercial Fishing Industry by Fishery Type.

| Agency | Fishery |
|---|---|
| North Pacific Fishery Management Council | Groundfish, catcher/ processors |
| Commercial Fisheries Entry Commission | All, especially salmon and herring |
| Shellfish Observer Program | Shellfish |
| Alaska Department of Fish and Game | All, fishery openings/closings |
| National Marine Fisheries Service | Groundfish, shellfish |
| University of Alaska Anchorage, Institute for Social and Economic Research | All |
| International Pacific Halibut Commission | Halibut |

**Table II.** Occupational Fatality Rates by Fishery for Alaska Commercial Fishing Industry, January 1991–September 1992, (Annualized).

| Fishery | Fatalities | Employment | Fatality Rate (per 100,000/yr.) |
|---|---|---|---|
| Salmon | 14 | 7,500 | 110 |
| Herring | 0 | 500 | 0 |
| Shellfish | 30 | 3,600 | 480 |
| Groundfish | 8 | 4,600 | 100 |
| Halibut | 8 | 1,500 | 305 |
| Miscellaneous or unknown | 2 | 300 | — |
| **Total** | **62** | **18,000** | **200** |

Bristol Bay/Bering Sea areas; tanner and dungeness in most Alaskan waters except the colder waters north of the Pribilofs; and a much smaller portion of shrimp and scallops. The groundfish industry is primarily made up of sablefish and Pacific cod.

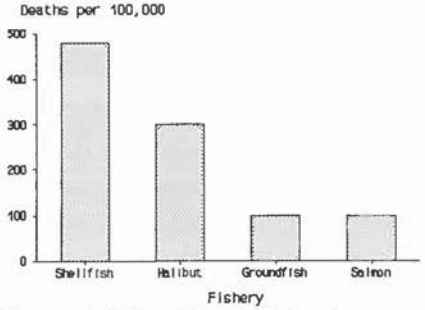


**Figure 2.** Fisher Fatality Rates by Fishery, Alaska, 1/1/91–9/30/92.

The halibut fishery has the largest number of fisher participation at any one time due to very short season (hours) management. This fishery also attracts a rather large percentage of part-time or recreational fishers who often have another main source of employment, but who hold commercial fishing licenses.

The average yearly fatality rate for all Alaskan fishers is 200 per 100,000. The primary cause of death among all fishers is drowned or presumed drowned. Of the five major Alaskan fisheries, the shellfish fishery has the highest fatality rate, 480 per 100,000 or nearly 5 per 1,000. The halibut fishery also has a markedly high fatality rate at 300 per 100,000. The salmon and groundfish fisheries are approximately 100 per 100,000 each or about one-fifth as hazardous as shellfish. Figure 2 shows the relationship of fatality rates by fishery for Alaska.

The substantially elevated fatality rate in the shellfish industry is due to a disproportionately high number of multiple fatalities occurring primarily in the Bering Sea during the months from November through February. Over the 11-month period from February 1991 through January 1992, the crabbing vessels *Barbarossa* and *St. George* vanished with six crewmembers each.

In November of 1991, the *Harvey-G* also vanished in approximately the same area with a

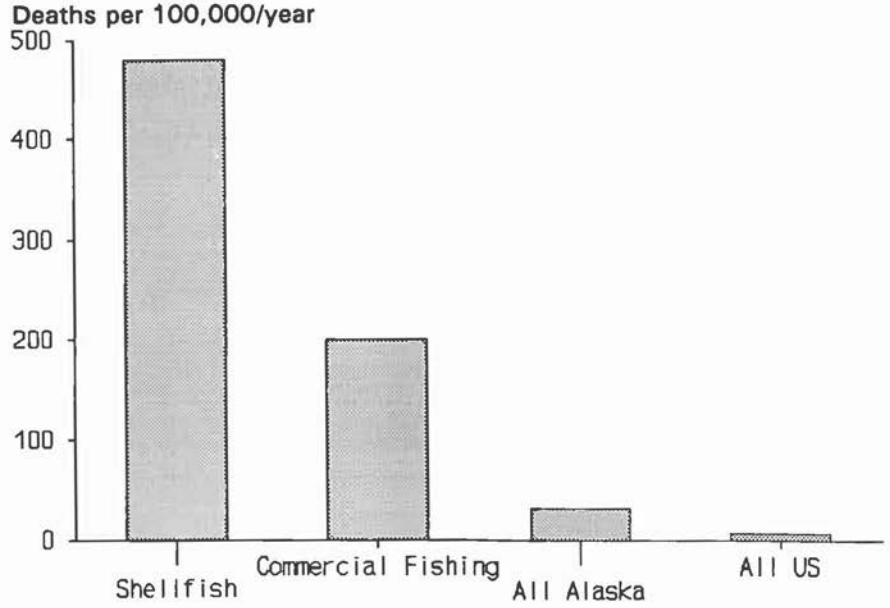


**Figure 3.** Occupational Fatality Rate Comparison Between Specific Cohorts.

crew of four. Crabbers also died on deck during harvesting operations. Two persons died due to crushing involving crab pot launchers and falling crab pots. There have been four (Five in southeast Alaska) halibut opening over the last two years. Two halibut fishers died in 1991 and six died in 1992, including five on September 9, 1992, during a 24-hour season.

The risk of fatality to Alaskan fishers and specifically those working in the crabbing fishery, can be put into perspective to other Alaskan industries and to the average U.S. industry with the use of Figure 3. Overall, Alaskan workers experience nearly five times the risk of dying on the job than the average U.S. worker.

The commercial fishing industry sector has over six times the fatality rate of the average Alaskan worker and 30 times that of the average U.S. worker. Alaska shellfish harvesting is the most hazardous fishery in the commercial fishing industry and probably the riskiest industry in the country.□

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**Publication Dissemination, DSDTT**
**National Institute for Occupational Safety and Health**
**4676 Columbia Parkway**
**Cincinnati, Ohio 45226**
**FAX (513) 533-8573**

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