

National Institute for Occupational Safety and Health (NIOSH)
Report to the
North Pacific Fishery Management Council

April 2022

INTRODUCTION

The National Institute for Occupational Safety and Health (NIOSH) is a federal agency that conducts scientific research and makes prevention recommendations to improve the safety and health of our Nation's workforce. NIOSH operates within the Centers for Disease Control and Prevention under the US Department of Health and Human Services. NIOSH does not have regulatory or enforcement authority. While NIOSH, the Occupational Safety and Health Administration (OSHA), and the US Coast Guard (USCG) each play a role in protecting commercial fishermen, they have different functions, responsibilities, and authorities.



NIOSH has conducted research on safety and health issues in the commercial fishing industry since the 1990s, focusing first on Alaska then expanding nationwide in 2007. Based on the success of its commercial fishing safety research, NIOSH created the Center for Maritime Safety and Health Studies (CMSHS) in 2015 and now conducts and supports research across a variety of maritime industries, including seafood processing, marine transportation, and shipbuilding.

COVID-19 RESOURCES

CDC/NIOSH continues to develop COVID-19 resources to protect workers and the public during the ongoing pandemic:

- [Vaccines for COVID-19](#)
- [Testing for COVID-19](#)
- [Quarantine & Isolation Guidance](#)
- [COVID-19 Guidance for Workplaces and Businesses](#)
- [Interim Guidance for Ships on Managing Suspected or Confirmed Cases of COVID-19](#)

WHAT'S NEW?

- NIOSH recently published an updated [Seafood Processing webpage](#), with information on ergonomic hazards, language barriers, fatigue hazards, and publications.
- NIOSH researchers and partners have published several journal articles related to safety and health in commercial fishermen and mariners:
 - **U.S. maritime workers are more likely to experience heavy drinking and smoking, among other health conditions.** Evoy, R., Case, S. (2021) [Prevalence of Adverse Health Behaviors and Conditions Among Maritime Workers, BRFSS 2014-2018, 38 States](#). Journal of Occupational and Environmental Medicine.
 - **Study describes important indicators of health status among U.S. commercial fishermen, including high rates of musculoskeletal disorders.** Doza, S., Bovbjerg, V.E., Vaughan, A., Case, S., Kincl, L.D. (2021). [Health-related exposures and conditions among US fishing workers](#). Journal of Agromedicine.
 - **Using multiple data sources can help better identify injury hazards.** Nahorniak, J., Bovbjerg, V., Case, S., Kincl, L. (2021). [Application of data linkage techniques to Pacific Northwest commercial fishing injury and fatality data](#). Injury Epidemiology.
- Citing the continued loss of life in the fishing industry, such as the tragic sinkings of the *F/V Scandies Rose*, *F/V Destination*, and *F/V Emmy Rose*, the National Transportation Safety Board (NTSB) added improving commercial fishing vessel safety to their [2021-2022 Most Wanted List](#). NIOSH researchers participated in a virtual roundtable event in October 2021 to discuss the most pressing safety issues facing the industry. The roundtable can be viewed [here](#).
- NIOSH and U.S. Coast Guard Commercial Fishing Safety Research and Training Grants:
 - In 2021, NIOSH and the U.S. Coast Guard awarded \$4.1 million for five projects:
 - Research:
 - **Development and Testing a Field-Based Hazard/Near-Miss Sharing System for Commercial Fishing Vessels** - American Bureau of Shipping
 - **Development, Testing, and Deployment of Simulation-Based Stability Training Tools for Commercial Fishing Vessels** - American Bureau of Shipping
 - **Improving Dungeness Crab Vessel Equipment: An Ergonomic Intervention to Reduce Risk for Musculoskeletal Injuries and Falls Overboard** - Oregon State University
 - Training:
 - **Community-Based Safety Training for the Mid-Atlantic Fishing Industry** - Fishing Partnership Health Plan
 - **Community-Based Safety Training for the New England Fishing Industry** - Fishing Partnership Health Plan
 - NIOSH and the U.S. Coast Guard partnered for another round of Commercial Fishing Safety Research and Training Grants for 2022, announcing \$3 million in extramural grant funding. Grant applications were due in January and are currently under review.
 - More information on the grants, including project descriptions, can be found [here](#).

UPDATES FROM PARTNERS

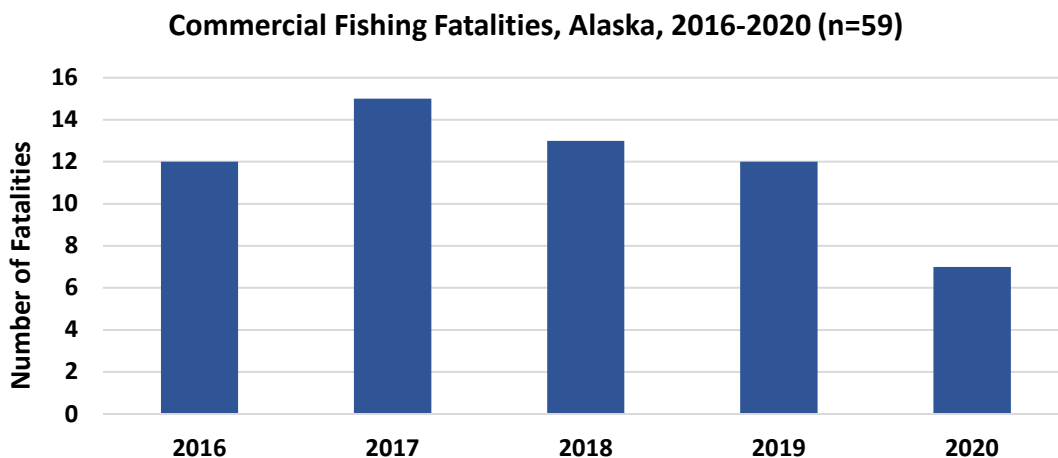
- **New research to prevent the spread of infectious diseases in seafood and other processing workplaces.** With support from CDC and technical assistance from NIOSH's Occupational Health Equity Program, Centro de los Derechos del Migrante, Inc. (CDM) is coordinating the Protein Processing Worker Project through a 5-year Cooperative Agreement. The project aims to control the spread of infectious diseases among poultry, seafood, pork, and beef processing (i.e., "protein processing") worker communities through a comprehensive communications and outreach campaign. To implement the project's diverse activities, CDM is convening a coalition of community-based partners who are deeply connected with workers employed in protein processing industries, especially immigrant and migrant workers. To date, the project has published a [2020-2021 Impact Report](#) and a [report highlighting the rapid assessment of workers' experiences during the COVID-19 pandemic](#) in Delaware, Maryland, and Virginia.
- **Podcast explores health and wellness topics for commercial fishermen.** [Fishing Forward](#) is a new podcast inspired by fishermen, for fishermen, focusing on health, safety, and well-being. Listen in as fishermen, researchers, and others talk about nutrition, hydration, sleep, mental health, and more. Fishing Forward is produced by Coastal Routes Radio at the University of Guelph and funded by the Northeast Center for Occupational Health and Safety.
 - **Calling all fishermen, fishing families, and advocates:** What topics would you like to hear about? Do you have any tips and tricks for staying well at sea? For more information or to contribute to the podcast:
Email: fishing@necenter.org
Phone: 607-224-4448 (leave a message)
Website: <https://coastalroutes.org/fishingforwardpod>
- **Study examines the effects of fishery management programs on decision-making and risk-taking behavior.** Led by Dr. Lisa Pfeiffer (NOAA), the study revealed [that risk-taking behavior generally decreases under IFQs](#), but can vary by fishery. Eight fisheries were studied, including Bristol Bay red king crab and Bering Sea-Aleutian Island snow and tanner crab.
 - Pfeiffer, L., Petesch, T., Vasan, T. (2022). [A Safer Catch? The Role of Fisheries Management in Fishing Safety](#). Marine Resource Economics.

FATALITY UPDATE

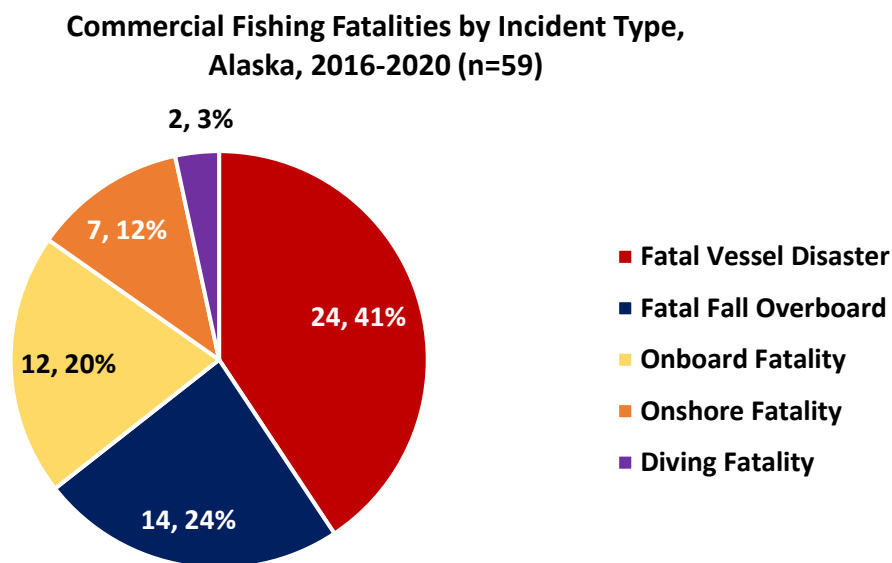
NIOSH developed the Commercial Fishing Incident Database (CFID) to track fatalities in the U.S. commercial fishing industry. CFID contains information for each fatal event, including characteristics of the crewmembers and vessels involved. Much of the data are abstracted from US Coast Guard investigative reports. Data from CFID have allowed NIOSH and stakeholders to identify fishery- and region-specific risks and develop relevant prevention strategies.

Five-Year Review of Fatalities

During the five-year period 2016-2020, 59 fatalities occurred in Alaska’s fishing industry, averaging nearly 12 deaths per year. This is higher than the previous five-year period (2011-2015), which averaged about 9 deaths annually (n=46). This increase has been driven, in part, by the tragic losses associated with the sinkings of the *F/V Destination* and *F/V Scandies Rose*. However, the annual number of fatalities has decreased since 2017.



Most fatalities resulted from vessel disasters (41%) or falls overboard (24%). Onboard fatalities were the third leading incident type. Of the 12 onboard fatalities, 10 were non-operational deaths, including suicides, homicides, and unintentional overdoses.



Forty-four percent of fatalities were attributed to four fisheries: pot cod (7 deaths), salmon tender (7 deaths), Bering Sea/Aleutian Island crab (6 deaths), and salmon drift gillnet (6 deaths). Most fatalities in the pot cod and BSAI crab fisheries were associated with two vessel disasters. Deaths in the salmon fisheries were most often drownings after falls overboard.

Recent Fatalities in Alaska’s Fishing Industry

In 2021¹, two commercial fishing fatalities occurred in Alaska:

Incident Type	Number of Fatalities
Fatal Vessel Disaster	1
Fatal Fall Overboard	0
Onboard Fatality	1
Onshore Fatality	0
Diving Fatality	0

CONTACT

Prepared by:

Samantha Case, MPH
 Epidemiologist
 National Institute for Occupational Safety and Health
 (907) -271-1569
scase@cdc.gov

Relevant Links:

[NIOSH Commercial Fishing Safety](#)

[NIOSH Center for Maritime Safety and Health Studies](#)

[COVID-19 Information for the Workplace](#)

The findings and conclusions in this report are those of the author and do not necessarily represent the official position of the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. Mention of any commercial product in linked sources does not imply endorsement of the product by NIOSH.

¹ 2021 fatality data are preliminary, pending validation with state and federal partners.