



Figure 1. Lobsterman hauling a single lobster trap. *Photograph by Earl Dotter.*

of Public Health and the National Institute for Occupational Safety and Health (NIOSH) recently surveyed lobstermen to

- gather data on the number of entanglements lobstermen had experienced,
- identify work practices during which entanglement is most likely to occur, and
- identify work practices and engineering controls to accomplish the following:
 - (1) reduce the risk of entanglement in line
 - (2) help lobstermen escape from an entanglement
 - (3) help lobstermen reboard the vessel if pulled overboard

To obtain information for the survey, an interview guide was developed, and 103 lobstermen

were interviewed during 1999–2000. Nearly 73% of those interviewed responded “yes” to the question, “Have you ever been caught in trap line where you lost clothing, were pulled to the stern, or pulled overboard?” Forty-four percent had been entangled within the last 5 years, some more than once. Most lobstermen stated that entanglements occurred mainly when setting or moving gear. This is also the time when the most line is on the deck (Figure 1).

Controls

The survey found several key work practices and engineering controls to prevent entanglement injuries and fatalities:

1. Reduce the risk of entanglement in line by controlling the deck environment. Keep the deck free of loose lines:
 - a. **Fairleads:** Install an upright, removable pole through the washboard to the deck,

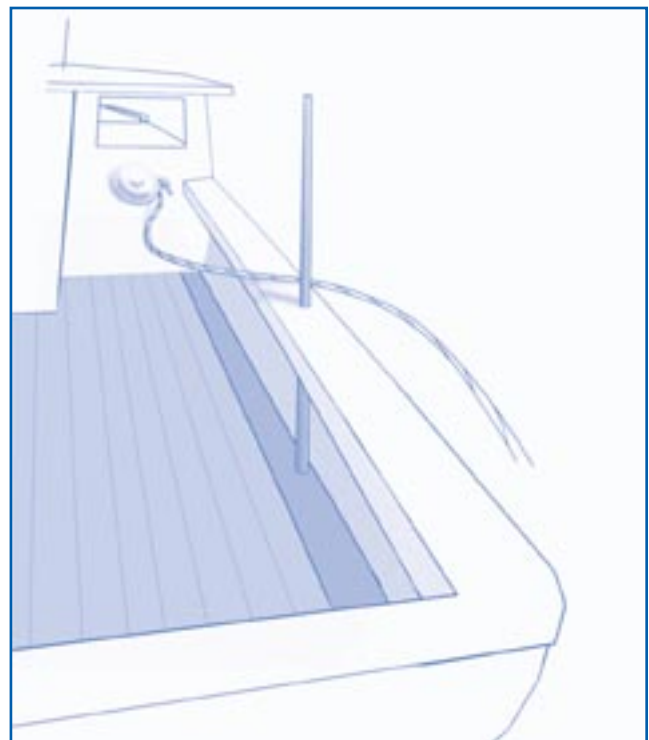


Figure 2. A fairlead mounted into the deck that “leads” line out of the boat and minimizes the area where line could be a hazard. *Illustration by Media Stream.*



Figure 3. Line bin made of plywood with a piano hinge that allows it to drop open and accept trap rope from the pot hauler. *Illustration by Media Stream.*

and pass the line in front of the pole to lead the line out of the vessel (Figure 2).

- b. **Line bins:** Mount a hinged panel under the pot hauler to catch line while working the lobster traps (Figure 3).
 - c. **Line lockers:** Build a locker under the deck below the pot hauler to capture the line so that it is not on the deck.
2. Help lobstermen escape an entanglement by stopping the engine and untying or cutting the line:
- a. **Sternman:** Have a sternman on board to shut off the engine in case of entanglement and help untangle the line.
 - b. **Gagline:** Connect a cable to an engine shutoff switch and run it under the washboard and across the stern so a lobsterman can cut the engine if he is pulled away from the controls (Figure 4).

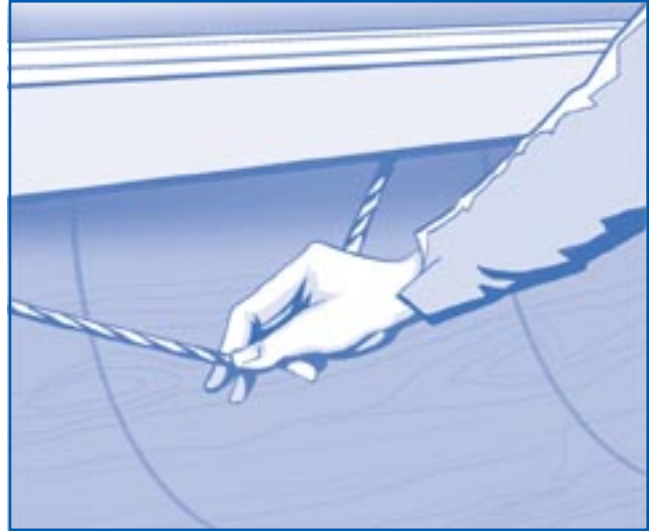


Figure 4. Gagline or kill switch for remote engine shut-off. *Illustration by Media Stream.*

- c. **Personal knife:** Keep a knife in a sheath taped upside down on suspenders to cut the line.
 - d. **Transom-mounted knife:** Keep knives at the stern, port, and starboard washboards to cut the line.
3. Help the lobstermen reboard the vessel if pulled overboard:
- a. **Personal flotation device (PFD):** Wear a life jacket or inflatable vest. The best PFD is the one that is worn!
 - b. **Sternman:** Have a sternman on board to aid in rescue.
 - c. **Ladders:** Have ladder or scuppers for footholds to reboard vessels.

Acknowledgments

The principal contributors to this publication were Ann Backus, Thomas Smith, and Paul Brochu, Education and Research Center, Harvard School of Public Health and Jennifer Lincoln, National Institute for Occupational Safety and Health. The illustrations by Media Stream, Manchester, NH were used with permission from the Education and Research Center at the Harvard School of Public Health.

References

Backus A, Smith T, Brochu P, Lincoln J, Conway G, Bensyl D, Ciampa J [2001]. Understanding and preventing lobsterman entanglement: a preliminary survey. Proceedings of the Marine Safety Council, April–June:50–53.

U.S. Coast Guard. Fatality Files, Marine Safety Office, Portland, Maine.

NIOSH has published many research documents about hazards in the commercial fishing industry. These can be found at www.cdc.gov/niosh/injury/traumafish.html.

For More Information

To receive documents or other information about occupational safety and health topics, contact NIOSH at

NIOSH Publications
4676 Columbia Parkway
Cincinnati, OH 45226–1998

Telephone: 1–800–35–NIOSH (1–800–356–4674)
Fax: 513–533–8345 ■ **E-mail:** pubstaft@cdc.gov

or visit the NIOSH Web site at www.cdc.gov/niosh

For a monthly update on news at NIOSH, subscribe to NIOSH eNews by visiting www.cdc.gov/niosh/eNews.

Mention of any company or product does not constitute endorsement by NIOSH. In addition, citations to Web sites external to NIOSH do not constitute NIOSH endorsement of

Dangers of Entanglement during Lobstering

• the sponsoring organizations or their programs or products.
• Furthermore, NIOSH is not responsible for the content of these Web sites.

• This document is in the public domain and may be freely copied or reprinted. NIOSH encourages all readers of the *Workplace Solutions* to make them available to all interested employers and workers.

• As part of the Centers for Disease Control and Prevention, NIOSH is the Federal agency responsible for conducting research and making recommendations for preventing work-related illnesses and injuries. All *Workplace Solutions* are based on research studies that show how worker exposures to hazardous agents or activities can be significantly reduced.

■ **DHHS (NIOSH) Publication No. 2005–137**

SAFER • HEALTHIER • PEOPLE™

August 2005

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health
4676 Columbia Parkway
Cincinnati, OH 45226–1998

