

U.S. Department of  
Homeland Security

United States  
Coast Guard



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The Honorable James L. Oberstar  
House of Representatives  
Washington, DC 20515-2308

Dear Representative Oberstar:

Thank you for your letter of November 9, 2005 concerning propeller strike injuries and deaths from recreational boats. The Coast Guard recognizes the tragedy of these incidents, but has not yet been able to identify an effective solution that reduces injury or death without significant economic impact to the boating public and industry. A significant factor has been the large variety of boat and propulsion designs currently in use. As described below, the CG continues its efforts to educate the public and work with industry to identify affordable solutions to this issue.

Propeller injuries have been an issue of concern to the Coast Guard for many years. In 1988, our National Boating Safety Advisory Council (NBSAC) appointed a Propeller Guard Subcommittee to examine the feasibility and safety of requiring propeller guards on recreational boats. After an extensive review of data and testimony, the Subcommittee determined that the incidence of injuries or fatalities caused by persons coming into contact with propellers was relatively small. The Subcommittee also found that propeller guards adversely affected the operation of boats at certain speeds and that such devices could create additional and more severe hazards. The Subcommittee concluded:

"Since there are hundreds of propulsion unit models now in existence, and thousands of hull designs, the possible hull/propulsion unit combinations are extremely high. No simple universal design suitable for all boats and motors in existence has been described or demonstrated to be technologically or economically feasible. To retrofit the some 10,000,000 to 15,000,000 existing boats would thus require a vast number of guard models at prohibitive cost."

The Subcommittee recommended then that the Coast Guard "should take no regulatory action to require propeller guards."

In May 1995, after several high profile propeller strike injuries, the Coast Guard published a Request for Comments in the Federal Register on various aspects of propeller accident avoidance aboard houseboats and other displacement-type vessels. That request resulted in voluminous comments, but they were too general to be helpful. Because of the large number of comments received from the initial request, the Coast Guard published an Advance Notice of Proposed Rulemaking in March 1996 to gather current, specific, and accurate information about the

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injuries involving propeller strikes and rented boats. This effort included five public meetings throughout the country. However, it once again produced information of little or no value for use in rulemaking.

To gain further information regarding propeller injury protection, the Coast Guard awarded a grant that resulted in a September 1997 report titled "An Evaluation of the State of the Art of Recreational Watercraft Propulsion Systems." The report contained information on the latest propeller injury protection devices and interventions on the market. The Coast Guard then tested the most promising of these devices and published the results of those tests in a March 1999 report, "Propeller Injury Protection – An Evaluation of Commercially Available Protection Devices." The test results showed there were pros and cons to each type of device, but there was no simple universal design suitable for all boats.

In December 2001, the Coast Guard published a Notice of Proposed Rulemaking to require houseboat owners to install a propeller guard or a jet drive, or several other propeller injury protection interventions. The Notice met with great resistance from the houseboat rental companies and the Small Business Administration based on the cost of the interventions versus the benefits to be gained. The Coast Guard could not satisfactorily resolve these comments.

In October 2003, the Coast Guard held the first semi-annual Propeller Injury Protection workshop (latest workshop held October 2005) to provide a forum for interested parties to discuss the problems and possible solutions of propeller injuries. The interest in propeller injury protection in the boating industry generated by these workshops has led to the development of several voluntary options, including new styles of propeller guards, additional models of jet drive outboards, a swim ladder/gate interlock system, an ignition delay and alarm system, a wireless "kill switch" for the operator and all passengers, and prototype laser detection and alarm system. Several boat manufacturers and houseboat rental companies are currently testing various propeller guards, jet drives and other interventions.

The topic of propeller injury protection remains a significant issue and has been a recurring discussion item at NBSAC meetings. The Coast Guard has placed information on propeller injury protection devices and interventions on our Boating Safety website ([www.uscgboating.org](http://www.uscgboating.org)), has awarded a 2005 grant to evaluate the current state of the art in propeller injury protection devices and interventions, and is developing a propeller hazard awareness brochure and outreach campaign. Our Office of Boating Safety is performing additional in-depth research of propeller strike statistics to determine whether there is justification to move forward with a rulemaking action. In an effort to highlight reported propeller strikes, we will include summary information similar to the attached in our annual Boating Statistics publication.

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At its most recent meeting in November 2005, NBSAC recommended the establishment of a working group to address propeller strike avoidance issues. In particular, NBSAC suggested the working group examine development of educational formats, review of technologies, risk management techniques, accident scenarios, cost-benefit analysis factors, and the definition and determination of high-risk boats.

With these on-going efforts, we are optimistic that this issue will be effectively addressed. The Coast Guard is committed to this effort, even with the awareness that the complexity of the issue and the costs to implement select strategies, as compared to the benefits (public's "willingness-to-pay" factor), continues to present substantial hurdles to further progress.

Enclosure (1) contains information consolidated from our annual Boating Statistics on the distribution by age of fatal injuries from 1998 through 2004 where "struck by motor/propeller" was reported as the first, second, or third event in the accident sequence. During this 7-year period, the total number of fatal injuries as a result of a motor/propeller strike was 242, of which 49 victims (20.2%) were ages 18 and under. Below the fatal injury information is a table showing distribution by age of non-fatal injuries as a result of a motor/propeller strike from 1998 through 2002 (2003 and 2004 are still being reviewed). During this 5-year period, the total number of non-fatal injuries as a result of a motor/propeller strike was 812, of which 255 victims (31.4%) were ages 18 and under. Fatal and non-fatal injuries (all ages) from motor/propeller strikes represented 4.8% and 3.8%, respectively, of all fatalities and injuries for the years reviewed.

Concerning exposure levels for boating participants, data is currently available only for adults age 16 and over (number of adult boating participants and number of days that they participated). Therefore, we are unable to calculate the number of victims age 18 or under in propeller-related injuries and fatalities as compared to volume of exposure. A future boating survey, currently being developed, will capture this information.

I hope this information is of assistance. I am happy to answer any further questions you may have, or your staff may contact my House Liaison Office at (202) 225-4775.

Sincerely,



THOMAS H. COLLINS  
Admiral, U.S. Coast Guard  
Commandant

Encl: (1) Distribution by age of fatalities and injuries from 1998 to 2004