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**First two pages of my comment letter  
The remainder can be seen on [Regulations.gov](https://www.regulations.gov)**

To: Department of Homeland Security  
U.S. Coast Guard

**Reference: Docket No. USCG-2010-0164  
National Boating Safety Advisory Council**

**Subject: Recent Propeller Injuries & Discussion of Potential Mitigation Strategies**

**Please distribute this document to the Council members.**

Thank you for the opportunity to comment.

I see Mr. Phil Cappel is to speak on “Recent Propeller Injuries & Discussion of Potential Mitigation Strategies” at NBSAC96 in October 2016.

I would like to make sure the following three accident scenarios are discussed during NBSAC96.

- 1. Pontoon boat “over the bow” propeller strikes.**
- 2. Circle of Death bass boat propeller strikes.**
- 3. Large outboard motor strikes submerged object, outboard motor breaks off, and flips into the boat propeller strikes. These often involve bass boats.**

I developed lists of these three types of accidents. All three have practical, economical mitigation strategies that are not being applied / deployed. All three continue to occur.

Each accident scenario listed above is expounded on the following pages.

## 1. Pontoon boat “over the bow” propeller strikes

Several pontoon boat over the bow propeller accidents were reported in the media in late July and early August 2016. I forwarded our post noting we had seen six of them in 8 days to USCG

<http://www.propellersafety.com/12283/propeller-statistics/pontoon-boat-propeller-accident-cluster/>

Then we saw another child fatality about ten days later.

We have identified approximately 150 over the bow pontoon boat propeller accidents. Many of them involve children.

<http://www.propellersafety.com/wordpress/wp-content/uploads/pontoon-boat-bow-riding-accidents-list.pdf>

Cities are using defensive / hostile architecture to make it uncomfortable for homeless people to sit or lie down in certain areas. Why not follow their example and make it very uncomfortable to sit on the bow in front of the fence of a pontoon boat, and especially uncomfortable to dangle your legs over the bow?

One obvious way to accomplish this is to extend the front fence to the front of the bow and to block the ability to put your legs through the lower portion of the front fence. If a bow extension forward of the fence is necessary, one of our posts identifies potential mitigations:

“Existing pontoon boats with the bow extending past the fence, or new pontoon boats that needed the bow to extend beyond the fence for some purpose could be designed or retrofitted to make it very uncomfortable to sit there and ESPECIALLY uncomfortable to dangle your legs over the edge. One way is to remove the deck covering in the area in front of the fence. Change the deck floor to expanded metal, perforated metal, or metal safety grating that gets very hot in the sun and is very uncomfortable to sit on. Material selection would need to consider the marine environment, slipping, and corrosion issues.

One possible deck material for pontoon boat bow extensions is Grip Strut safety grating. Commonly used for industrial stair treads, walkways, and catwalks, Grip Strut grating is very uncomfortable to sit on, especially when in swimming or boating attire. It is also very uncomfortable to walk on barefoot (bow riders want to hang their bare feet over the bow). Grip Strut grating is available in a wide range of materials, designs, and sizes from many sources.

One way to prevent bow riders from dangling their legs over the bow uses a piece of angle iron attached to the leading edge of the front deck with one “leg” of the angle iron sticking straight up, creating a “lip” or “toeboard” around the front deck. Some versions of Grip Strut grating come with a toeboard. Hanging your legs over a toeboard is very uncomfortable. However, some bow riders might try to brace themselves with their back against the front fence and their feet against the toeboard. Designers would need to make that position impossible or very uncomfortable.

Expanded metal / perforated metal manufacturers could probably offer additional “uncomfortable” formats.”