

Trim and Stability Awareness

There are many types of research operations conducted from small boats that can be conducted from boats that are generally built by recreational boat builders for recreational purposes. So the question which arises is,

"When should I be concerned about my boat becoming marginally stable?"

Here are some basic "rules of thumb" which have been developed from encounters in the field:

1. If you can load and deploy the instrument by hand, i.e. the operation is very similar to the loads that could be expected while recreationally fishing, then your boat is probably OK.
2. If there is some sort of mechanical power or mechanical advantage (hydraulic crane, electric winch, block and tackle) required to handle the weight, and the boat was not originally designed or built to deploy weights using mechanical power, then you should be concerned.
3. If you drag gear such as dredges or nets along the bottom and; 1, operations are conducted in areas prone to fast currents or rough seas, or 2, you tow the gear from a boat that was not originally intended to tow bottom gear, then you should be concerned.
4. If you have never estimated or calculated if your gear and personnel required to accomplish a task at sea is within the rated capacity of a boat, then you should be concerned.
5. If you've ever carried large aquaria, tanks, or barrels containing water or other liquids on board a boat, then you should be concerned.

Concern over stability is the first step toward avoiding a potentially deadly accident. If you have concerns, and your boat has a trim and stability booklet or other documentation relating to safe loading limits, then the matter of ensuring adequate stability is quite simple since the documentation should explain the steps required to evaluate the condition of the boat as loaded or as proposed to be loaded.

If there is no documentation, then the matter becomes a little complex. For assistance in determining whether or not you have a genuine stability and loading hazard or if you need to get stability information for your boat, contact the [Jeff Kingrey, the SBP Small Boat Engineer](#) for assistance.

Additional Guidance and Future Directions

There may be justification for the development of a web-based training course designed specifically to meet the needs of the NOAA small boat community. The justification will depend on the availability, applicability, and cost of existing stability training available through maritime schools, combined with feedback from the small boat user community. Please forward your comments and thoughts relating to this topic to the [SBP Manager](#).