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# Shoaling Hinders ICW Navigation

By Capt. Bill Brogdon

This is a crucial time for the Intracoastal Waterway.
The primary inshore route from Norfolk, Va., to Florida, the Atlantic Intracoastal Waterway is a mostly protected waterway used by both recreational and commercial vessels, including towboats and barges. And it has been an important segment of our coastal transportation system since it was dug in the 1920s.

Transporting cargo along the ICW is efficient and inexpensive. The Environmental Protection Agency, for example, estimates that a towboat/barge combination produces about 1/3 the pollution of a train, and about 1/5 to 1/20 the pollution of an 18-wheel tractor/trailer, carrying the same amount of cargo. And as many boaters know, the ICW is extremely popular for recreational vessels transiting the East Coast without risking outside passages.

But while its popularity among recreational boaters is on the rise, funding to maintain waterway — including much-needed dredging — has fallen during the past few years. Annual budget reductions are compounding each year to put the waterway in dire straits, according to industry groups.

“Unless Congress begins to address the serious backlog of maintenance projects in the Intracoastal Waterway, we will not have an Intracoastal Waterway in about 10 years,” says Rosemary Lynch, executive director of the Atlantic Intracoastal Waterway Association, formed in 1999 to ensure the ICW receives the attention it needs. “The fact is there has been nobody out there advocating for the Atlantic Intracoastal Waterway until this group came along,” says Lynch.

The problem of controlling water depths due to shoaling is worsening. Along with groups such as BoatU.S., the AIWA, composed of commercial, recreational, communications, and government members or observers, is working to drum up support for keeping the ICW clear for those who use this important waterway.

Soundings

The ICW has a project depth of 12 feet from Norfolk to Fort Pierce, Fla., then 10 feet to Miami. Its width is usually 90 feet in reaches through shallow water and in many land

cuts, though in some areas the ICW can be as wide as 300 feet. Outside of the authorized channel width, the bottom usually rises 1 foot for each 3 feet of width up to the natural water depth.

Of course, many areas of the natural waterway are wider and deeper than the project width and depth. But there also are many stretches of the dredged portion of the ICW that are limited to a depth of 8 feet or less, and still other areas where a shoal, though not extending completely across the waterway, may be quite shallow within the channel limits. Boaters are sometimes surprised, thinking they're in a 12-foot-deep channel, when they suddenly bump to a stop in 4 feet of water.

"Every year, starting in about September, BoatU.S. members start calling us to complain about shoaling on the ICW," says Ryck Lydecker, who is handling the ICW issue for BoatU.S. "This is a huge problem for commercial operators, but it's also a serious problem for recreational boaters. Boats with draft as shallow as 3 or 4 feet are running aground where there should be 10 or 12 feet of water."

Lydecker adds that even if a recreational vessel doesn't actually run aground, any time a tug and barge fetches up on a shoal that shouldn't be there, it creates a safety problem for everybody.

"Smaller vessels may be forced out of the channel to get around the grounded commercial vessel," he says.

According to an AIWA member survey, one tow company estimates it responds to at least one grounding every 24 hours. Another tow company reports that annual repairs due to damage caused by improper depths cost an average of $287,000 a year.

The funding squeeze

The Army Corps of Engineers' budget funds various projects, such as rivers, inlets and the Intracoastal Waterway. Removing shoals from a waterway is an industrial process, with costs directly related to the amount of spoil material (in cubic yards) removed.
As of late October, the five Corps of Engineers districts involved with maintaining the ICW from Jacksonville, Fla., to Norfolk were budgeted to receive $11.6 million to maintain that section of waterway, according to AIWA. That's about half the amount of the previous year, clearly inadequate to maintain a usable waterway, according to ICW advocates. While the 2002 budget was still pending as of Oct. 26, the 2003 budget will be even smaller — "seriously smaller, according to the rumors I hear," says Lynch, whose duties include lobbying federal legislators for increased ICW funding.
The funds for inlet dredging also fall short.

The last year the Engineers received what it reportedly needed to maintain the waterway was 1996, according to the AIWA. The association says in 1997 the Engineers reported $16.4 million was needed to maintain the waterway, but only $8 million was budgeted; $17.1 million was requested in 1998, while $6.5 million was budgeted; $10 million was asked for in 1999, while $4.9 million was budgeted; and $10.9 million was sought in 2000, while $6.4 million was budgeted.

Unless Congress restores a significant portion of that money, the Engineers simply will be unable to do the work necessary to ensure the safe passage of vessel traffic, according to AIWA.

“The bottom line with the inland waterways is they have not been funded anywhere near where they need to be funded for the past few years,” says Lynch. “You keep adding that backlog on and you can see how devastating its going to be to the Intracoastal Waterway.”

Lynch says the funding squeeze can be attributed to several factors, including the following:

• The ICW was initially authorized in 1919 for commercial vessels, and that status has never changed. So while recreational boating on the ICW is steadily rising, pleasure boaters are not counted in the Engineers’ ICW traffic studies. Legislators tend to focus on the commercial traffic, which is on the decline, Lynch says.

• The Inland Waterways Revenue Act of 1978 was created to raise funding for construction and rehabilitation expenditures for navigation on the inland and coastal waterways of the United States. The money is raised through a 24-cents-per-gallon fuel tax for the tugs, towboats and other commercial vessels that use the waterway. But because the money raised by the act is used only for waterways with locks and dams, none of the money has ever gone to ICW projects. Lynch says changing the laws regarding these two “oversights” is a top priority of the AIWA.

Wet dirt

Dredging involves moving large quantities of material from the channel bottoms. For example, to deepen a 90-foot-wide channel and its side slopes by 1 foot over a mile, a dredge must move about 33,800 cubic yards of spoil. A cubic yard is a lot of wet dirt, weighing about 1-1/2 tons.

The amount of spoil that must be removed, the distance it must be transported, and the associated costs have increased in recent years. It is now necessary to move the spoil material longer distances to acceptable disposal sites to minimize environmental

impact.

Here's an example: The Engineers recently dredged the entrance channel to Peletier Creek, west of Morehead City, N.C. This 4-foot-deep channel is about 500 yards long, but the Engineers had to pump the sand to Radio Island for disposal — about 4-1/2 miles east and on the other side of a major ship channel — significantly increasing the cost.

"There's a big problem in getting the job done because you don't have anywhere to put that material," says Lynch.

In some instances, dredge spoils have been used to create islands, which are graded and planted with marsh and dune grasses to become wildlife habitats.

Waterway information

ICW advocates say there is a rather outdated system of providing information about the waterway to the public. The Engineers surveys the depths before and after dredging. They send reports to the Coast Guard, which in turn issues the Local Notice to Mariners. The Coast Guard then often has to shift buoys to mark new shoals. The National Ocean Survey updates nautical charts to reflect the data from the Engineers and Coast Guard. It has been done this way for many years.

The information flow in the other direction is even less organized. The Coast Guard asks skippers to report damaged or missing aids to navigation by radio to the nearest Coast Guard unit. There is no specific formal system to collect other important information from ICW users by any of the three government agencies.

AIWA hopes to supplement this by getting reports of hazardous conditions from all people who use the waterway. In addition, BoatU.S. has started an initiative to collect data on problem spots.

BoatU.S. is asking skippers to report problems with shoaling in dredged channels, inaccurate chart depths, bridge malfunctions, and damaged or missing markers on the ICW. (ICW condition reports can be reported at *www.BoatUS.com/ICW.)* Some regional U.S. Power Squadrons also are using depth sounders around their local waters to ensure accurate depth markings.

Future directions

The Engineers has recently initiated some programs to improve the ICW situation for mariners.

The Wilmington (N.C.) District now publishes its survey sheets at *www.saw.usace.army.mil* in a format that anyone with the free Acrobat Reader program can see and print. They are providing aids to navigation positions in latitude and longitude, as well as the usual State Plane system. This is especially beneficial for navigators using either differential or WAAS GPS receivers. The positions are in degrees and fractions (multiply the fraction by 60 to get minutes and fractions of minutes).

The Wilmington District also has developed a pilot Geographic Information System to make it easier to manage the work of waterway maintenance. The Corps of Engineers' regional waterway manager, Albert Bjorkquist, described the goal of providing an electronic chart system of the ICW that users could download. There have been some pilot programs for the Gulf Intracoastal Waterway, and it could be the future of information flow. Imagine a laptop computer screen that shows the channel wide enough to see the details, along with boat position from DGPS or WAAS. Existing charts are not accurate enough or at a small enough scale to allow a navigator to see the detail available from the surveys. The Coast Guard and Engineers are working together to develop this idea as the proposed Inland Electronic Navigation Chart system. The key lies in using the DGPS positions of the Engineers' surveys to construct the sounding map. This removes the error that has plagued mariners in the past: using different positioning systems to plot the chart and navigate.

The Coast Guard also is working to make its Local Notice to Mariners more useful. In addition to sending out print versions, it posts the various Local Notice to Mariners at *www.navcen.uscg.gov.* But the electronic postings are identical to the printed notices, and mariners cannot search for a particular section of waterway.

Commander Michael Husak, head of the Short Range Aids to Navigation Division at Coast Guard Headquarters in Washington, says the Coast Guard is developing a searchable database for the notices, expected to be online in 2003. The system will make it possible for a navigator to find information on a specific waterway without searching through months of notices.

ICW advocates say these projects won't mean much unless Congress budgets enough money for the Engineers to do an adequate job of dredging.

Groups like AIWA and BoatU.S. say it's time for those who use the Intracoastal Waterway to make their voices heard. These advocates are urging their members to write their legislators and support organizations working to preserve the ICW. Boaters also are being urged to report improperly marked channels and other aids to navigation

problems to the Coast Guard. ICW advocates say such action is necessary to keep the waterway serviceable over the next few years.

“It’s a tough battle. We’re the little guys,” says AIWA’s Lynch. “I call the ICW the orphan waterway. But we’re very hopeful. We just need to keep plugging ahead.”

Contact the AIWA, 643 South Washington St., Alexandria, VA 22314. Phone: (703) 837-9629; fax: (703) 518-8490. *www.atlintracoastal.org*

*Associate editor Rich Armstrong contributed to this story.*