

Bay-class breakers keep

PA3 Christopher T. O'Neill
Lant Area Public Affairs

The North River, more commonly known as the Hudson River, has long served as a lifeline for the cities that dot its banks. Since the founding of trading posts in Rondout and Fort Nassau, N.Y. in 1614, the Hudson has been the lifeblood of the communities and the people who reside in the Hudson River Valley. The Hudson has played an integral role in the development of this part of the Northeast, providing an inexpensive means to transport goods to and from the port of New York.

Today an average of over 20 million tons of goods are shipped up and down the Hudson River each year. Everything from molasses to corn to fuel oil makes the 155-mile journey from the port of New York to the locks near Troy, N.Y. Over 2 million tons of fuel oil used to heat homes and businesses upriver are delivered by tug and barge. Northern cities such as Albany could not easily survive the winter if it were not for the supplies shipped via the Hudson.

Keeping the river open for traffic during the frigid months is the job of Cutter *Penobscot Bay* (WTGB-107). Working with three 65-foot harbor tugs and one other bay—class ice breaker, *Penobscot Bay* helps keep this vital artery open, allowing its lifeblood of goods and supplies to reach their destinations.

Keeping this tidal river open for vessel traffic in the winter is a demanding job. Each member of the crew has specific duties that enable the ship to function properly. From the commanding officer to the most junior seaman apprentice, each crewman works to keep the cutter ready to face the rigors of ice breaking on the Hudson.

Winters on the Hudson River are often harsh. Temperatures in the teens are not uncommon. Winds hurtle

downriver, making it feel even colder. Snowfalls are frequent, averaging six or more inches a storm. All of these elements conspire to make the simplest of seagoing duties extremely difficult.

"Heaving around frozen lines is the most physically demanding part of my job," said SA Thor E. Nudson, a third-generation Coast Guardsman. "They get so stiff, it's hard to get them through the chocks. You can't easily manipulate them. Our BM1 calls frozen lines 'Chernobyl Pasta' because they're like freak spaghetti." Once the crew has heaved the stiffened lines aboard, the lines are taken below to the anchor handling and paint locker spaces to thaw while the cutter is underway.

Navigating the Hudson requires skilled piloting. Breaking ice on the Hudson is even more demanding. The worst ice is often encountered in the river's bends, where maneuvering is hard enough without ice. To free the ice and get it moving downriver, *Penobscot Bay* makes frequent passes along the shore.

The bridge of the *Penobscot Bay* runs like a well-oiled machine, each person performing a specific task, meshing like sprockets. Proper execution of helm commands is paramount if the cutter is to avoid danger. Standing helm watches is what Nudson considers the most mentally challenging part of his job:

"Taking the helm watch on the river, especially when we're doing figure eights or sallying the rudder, can be kind of tense. If you are a few degrees off on the river, doing these icebreaking maneuvers, your mistake can cause some damage."

This attitude of personal responsibility runs throughout the *Penobscot Bay* crew. The very nature of their work demands it.

"One thing I think is really special about the *Penobscot Bay* is the amount of responsibility given to each individual," said QM1 Jon R. Frederick. "We

only have 18 members on board, a lot of responsibility is dished out to everyone. I started driving this vessel when I was 22. There was a lot on my shoulders, knowing I was so young, being expected to drive and to keep it and everyone on board safe." Frederick's outlook is indicative of the confidence the cutter's captain has in his crew.

"These guys are the proudest bunch of sailors that I've ever sailed with," said LT Mark J. Faller, commanding officer of the *Penobscot Bay*. "They're out here because they want to be. They put forth a tremendous effort at all times."

Indeed the crew does put forth an effort all the time, for there is rarely a moment when there isn't some type of activity. From the deck department, to the engineers, to the ship's cook, the underway routine seems a continuous flurry.

"Every day I get up about two hours before the crew," said SS2 Ron L. Wentzler, "and I usually don't get off duty until six or seven at night. Underway I serve breakfast, lunch and dinner. I think it's pretty easy to cook for a crew of 18, since I used to cook for 180 when I was assigned to a 378 [cutter] on the West Coast. I pretty much help out throughout the ship when I'm not cooking. I do things like operating the boom when we lower the small boat."

While Wentzler is busy in the galley, the engineers are busy making sure the ship's power plants are ready to meet the challenges that lie upriver.

"What we basically do in the Engineering Control Center (ECC) is monitor the various gauges for the main diesel engines, the generators and the main motors, to make sure everything is running at their proper levels," said MK1 Stan G. Karamanis. "While we're underway I'm the Engineer of the Watch. I'm responsible for letting the bridge know what the status is of the power plant. While we're in port I'm responsible for running the preventive

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maintenance schedule, setting up watch schedules, ordering parts and supplies, and seeing that all of my personnel are getting their job satisfaction."

Many of the crew find satisfaction not so much in the work they do as individuals, but rather in the work they do as a crew. They have an appreciation for the importance of the work they do. BM1 Bernie J. Sandy has perhaps the best understanding of just how important their mission is. Sandy is a native of Highland, N.Y.

"I enjoy the operations that we do," said Sandy. "We provide a valuable service to the Hudson River Valley, and to New York State in general. The reality of it is there is no way these tugs could be getting through in the winter, especially now. If we weren't here breaking ice, the fuel oil wouldn't be making it to Albany. It's really important."

Frederick echoed Sandy's sentiments. "Breaking ice is a real thrill for me. I really enjoy it. It's nice being able to see the ice moving downriver, knowing that you've done a good job clearing it out, and knowing that you've opened things up for commerce."

The *Penobscot Bay* is well equipped to handle ice breaking on the Hudson. Its very design makes it extremely effective. According to Faller, the combination of the ship's tremendous wake, its 700-ton displacement, the rake of the bow and flare of the hull allow the cutter to ride up and crush down on the ice. These characteristics, coupled with a device called the hull air lubrication system, make the 140-foot WTGB a most effective icebreaker.

However, keeping the upriver lifeblood pumping through the Hudson artery requires more than just bashing through ice. It requires specialized techniques and a philosophy that Faller refers to as "Ice Management."

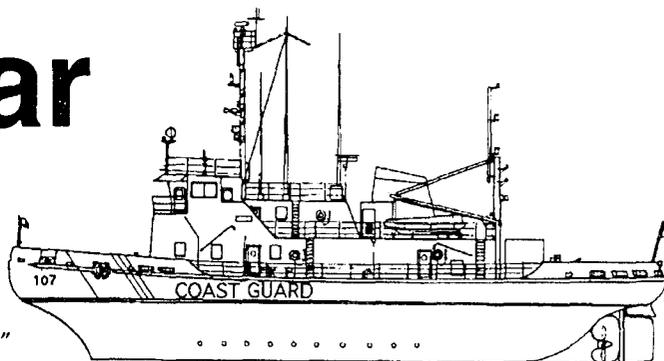
"With the way the currents run in

the river and with traffic breaking up the ice, the biggest problem we have is with re-frozen brash ice," said Faller. "You can find anywhere from one- to two-and-a-half foot thick re-frozen brash caught up in the bends or choke points of the river. Ice like that, once it re-freezes, will stop an under-powered tug, especially if it's towing a light barge astern. That's why we try to concentrate our efforts in these choke points."

According to Faller, brash ice tends to pile up during ebb tide in a bend of the river known as Crum Elbow. To keep this particular area clear, the *Penobscot Bay* performs a series of overlapping figure-eights. Since the water is deep from bank to bank, it's important that the ice is not fast to the shore. The figure-eights are made at high speed, with the turns, at oblique angles, close to the banks to break up as much of the ice as possible. Faller calls this "flushing the elbow." The figure eights are done at maximum ebb tide, to help get the ice moving downriver.

The next point in the river that demonstrates the philosophy of ice management is another bend, Esopus Meadow. In this part of the river, there is shoal water on either side of the channel. According to Faller, the key to success here is leaving the ice that forms in the shoal waters as intact as possible, while breaking up the ice in the channel. *Penobscot Bay* accomplishes this by "grooming" a track for mariners to follow. The track is made by passing through the bend at a lower speed, using about five degrees of rudder, Faller said.

While "managing the ice" on the Hudson would seem a big enough task for most, Faller said there are other aspects of being the commanding officer of the *Penobscot Bay* he finds more challenging.



"I think the most challenging aspect of this job is the leadership that's required to keep this crew together," said Faller. "It's an ever-changing job, there's a myriad of missions we perform. I enjoy the responsibility of balancing our taskings while ensuring crew morale remains high."

"We get involved in aids-to-navigation," said Faller, "such as re-lighting buoys, confirming the positions of buoys that may be off station and helping the buoy tenders in any way possible. In the summertime we do search and rescue and law enforcement, both fisheries and counter-narcotics, from the New York Bight to the Gulf of Maine. We now do cadet training, too, a relatively new mission for the 140s. We also get involved in fire fighting and pollution response..."

While all of the *Penobscot Bay's* missions are important, its role as an ice breaker is perhaps the most important and most visible to the residents of the Hudson River Valley, for transiting the Hudson river was not always as easy as it is now. Arthur G. Adams' book *The Hudson Through the Years* tells of a river crossing in the 18th century.

On one crossing in 1784, seven passengers were forced to abandon a ferryboat crushed by the ice, and to climb on the floating floe, which carried them down to the Narrows before a rescue party could reach them.

While technology and shipbuilding improvements have all but eliminated such adventures, the Hudson ice still proves a formidable opponent to river traffic. As long as the northern winters continue to threaten choking the Hudson off, the *Penobscot Bay* will be a comforting sight to people who live and work along the North River. J