Lesson from NEPTUNE Canada: Trawler hit may cost $1 million

In light of fishermen’s ongoing concerns over the siting of the National Science Foundation’s Pioneer Array in the Mid-Atlantic Bight, CFN contributor Joyce Rouleau examines how similar situations have been handled elsewhere in Canada and on the West Coast.

— Editor

VICTORIA, BRITISH COLUMBIA—NEPTUNE Canada, the Canadian ocean observatory that has been up and running for three years, has found what New England fishermen have been saying for nearly a year to be true—sea floor observatories pose a real hazard to fishermen and an agreement is needed to address gear entanglement concerns.

At 1:32 am on Feb. 19, data transmissions stopped from a portion of NEPTUNE Canada at Barkley Canyon off the coast of British Columbia. As of mid-June, they had yet to resume.

The extent of the damage to the array of scientific instruments was unknown since weather will prevent the use of a remote vehicle to assess the situation and begin repairs until some time in July.

What project administrators did know was that a fishing vessel was the likely culprit. Array sensors relayed a general image of a trawl net before it went down, and the sequence of the outrages on all sensors lined up with the direction the trawler was heading.

Still, NEPTUNE Canada Director Chris Barnes was hoping for the best—that the instruments at the end of the cable were merely pulled out and not carried off or destroyed.

Just plugging them back in with perhaps minor repairs will cost about $700,000. The cost of deploying the specialized vessel to assess the damage is $70,000 per day.

“The worst case scenario is if the trawl gear plowed over the whole lot and damaged it beyond repair,” said Barnes.

The cost to replace missing or destroyed components will be much greater—in the $1.7 million range.

Several steps were taken to ensure this kind of event did not happen. NEPTUNE Canada equipment was recorded on navigational charts and marked by buoys. Canada’s Department of Fisheries and Oceans at-sea observers distributed information about NEPTUNE Canada locations to all vessels, according to Barnes.

The only array component located in a known trawler fishing area was designed to be “trawler resistant.” The 13.5-meter-ton steel node itself was not involved in the accident. Two heavy cables ran out 6.25 miles from this node. At the end of each cable was a cage and junction box into which instruments were plugged for power. The trawler hit the end of the cable northwest of the node at a depth of about 1,320’ or 220 fathoms.

NEPTUNE is the acronym for North-East Pacific Time Series Underwater Networked Experiments. According to the project website, it is the world’s first regional-scale cabled observatory network. Located off the west coast of Vancouver Island, the network extends across the Juan de Fuca plate, gathers live data from instruments deployed in a variety of undersea environments, and transmits that data via high-speed fiber optic cables to a data archiving system at the University of Victoria.

Access to the information, both live and archived, is free to anyone with Internet access. Construction began in 2007 and the project was up and running the following year.

Fishermen’s agreement

As further mitigation, the NEPTUNE sponsors tried to arrive at an agreement that would encourage fishing vessels to drop their gear rather than damage or destroy the instruments if snagged.

Barnes met with the British Columbia Seafood Alliance, which represents eight different fishing associations, and tried to come to an arrangement similar to that reached between the Oregon Fishermen’s Cable Committee (OFCC) and telecommunication companies. But because of the expenses involved, NEPTUNE hoped to convince fishermen to accept partial responsibility for any accidents.

“Unlike telecom with commercial backing, we’re a research organization. We don’t have that capability,” Barnes said, regarding payout for lost gear.

“We tried to have some middle ground where they could pay part of an entanglement.”

However, the fishermen—trawlers in particular—didn’t want to pay for any part of the costs. They were concerned
about compensation for the down time of steaming back to port and finding and paying for new gear.

As NEPTUNE Canada eventually realized, the cost of compensating fishermen may have been small in comparison to that of making repairs to a damaged node. In the end, NEPTUNE Canada did not have a standing agreement with any fisheries group.

Oregon experience

The OFCC was formed in 1999 by a group of Oregon trawl fishermen who negotiated a cooperative agreement with several telecommunications companies to keep from being shut out of their fishing grounds.

Participating cable companies agree to pay for replacement gear for fishermen who opt in, follow agreement protocol in the case of a snag, and get authorization to cut their gear rather than damaging the cable.

The OFCC board of directors, comprised of fishermen and cable company representatives, reviews claims for gear loss to ensure they are legitimate. It looks like everybody wins.

“The Oregon Fishermen’s Agreement is founded upon a belief that a fisherman who has possibly snagged a cable is less likely to continue hauling and jeopardizing the cable if the fisherman is immediately compensated for the sacrificed gear and released from civil liability for ordinary negligence,” the OFCC explains on its website. “A cooperative approach appears to be more likely to prevent damage to the fiber optic cable than the threat of harsh civil and criminal penalties.”

According to OFCC Executive Director Scott McMullen, there have been only six incidents since 1999.

A former salmon trawler himself, McMullen also provides refresher courses on the protocol that must be followed in the event of a cable snag. Fishermen have a phone number to call available 24 hours a day, seven days a week if they believe they have snagged a cable. The person at the helm must know the protocol and have authority to act for the vessel. Likewise, the cable company person taking the call must have authority to give permission to cut gear if needed.

OFCC worked with Oregon State University to coordinate the siting of deepwater regional scale nodes and cables that run to the Oregon branch of the Endurance Array, which is set up like the Pioneer Array and is part of the National Science Foundation’s Ocean Observatories Initiative (OOI).

As a result, the Consortium for Ocean Leadership, which is coordinating and managing the OOI, signed an agreement with the OFCC to protect fishermen and array equipment in the event that a trawler pulls up a project cable. The consortium, which will own all arrays and cables, entered into the agreement voluntarily as part of its Oregon Parks and Recreation Department seafloor cable permit.

OFCC’s McMullen said that the Consortium for Ocean Leadership will contribute to the gear-loss fund through its operating budget. A copy of the OFCC standard fishermen agreement for telecommunication cable is available on OFCC’s website at <www.ofcc.com>.

Any commercial fisherman can enter into the OFCC agreement to file claims in the gear-loss fund. About 90% of the Oregon trawlers and 75% of the West Coast trawlers have signed on, according to McMullen.

Lessons

New England fishermen may benefit from the experiences of NEPTUNE Canada and the OFCC, perhaps exploring the idea of forming a coalition similar to the OFCC, not only for the Pioneer Array, which will be installed in the Mid-Atlantic Bight, but also for offshore wind farm cables as well.

The cables will be regulated in part by the Bureau of Ocean Energy, Management, Regulations, and Enforcement (BOEMRE) in federal waters and by the Massachusetts Office of Coastal Zone Management (CZM) under the Massachusetts Ocean Plan in state waters (see CFN June 2011). Similarly, in Rhode Island, Rhode Island CZM will regulate cable locations.

As the National Ocean Plan gears up, the fishing industry has the opportunity to head off these kinds of conflicts. However, to date, no member of a fishery management council has been named to the Northeast Regional Ocean Council, despite repeated requests from the New England and other fishery management councils.

Joyce Rowley