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NOAA: 'Funding issues' left survey ship vulnerable to spills

Emily Yehle, E&E reporter

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NOAA Ship Rainier set out to map the ocean floor in April 2013, working on a tight budget as Congress argued over the national debt and slashed agency budgets under sequestration.

Rainier is known for accomplishing its missions, which provide important data for navigation maps off the Pacific Coast and in Alaskan waters. But while its survey capabilities are among the most modern, a chronic lack of maintenance funding left a long list of repairs and updates undone.

One result: a fuel spill in a picturesque Alaskan bay.

A recent report from the Commerce Department's inspector general described myriad problems on the Rainier, including a "careless" attitude among its engineering staff. The crew also was found to have made illegal—and intentional—discharges of oily bilge water into coastal areas (***Greenwire***, Sept. 4).

But investigators also found a ship that had a lot of "workarounds" to meet environmental and safety requirements.

"The crew complained of frequent occasions where repairs or other work was delayed due to funding issues," IG investigators wrote. "The fuel spill illustrates the potential environmental impacts created by a lack of maintenance."

Rainier is among 16 ships that the National Oceanic and Atmospheric Administration uses to map the ocean bottom, perform oceanographic research and collect fishery data. As of this April, they collectively suffered from $22.7 million in deferred maintenance. The agency asked Congress for $11.7 million this year to repair ships; the recent continuing resolution appropriates $6 million.

NOAA isn't alone. When budgets are tight, maintenance is the first to suffer.

As Congress continues to fund the government under sequestration—a policy that requires across-the-board budget cuts—several agencies struggle with deferred repairs. The National Park Service has an $11.5 billion backlog, for example, and the Fish and Wildlife Service faces more than $2 billion in delayed maintenance for its wildlife refuges.

At NOAA, officials have repeatedly sounded the warning that their ships are aging fast. By 2028, eight of its 16 vessels will likely remain. Congress has so far resisted appropriating $147 million for a new ocean survey vessel.

In the meantime, NOAA is in the awkward position of using ships that could be hurting the same marine ecosystems it aims to protect.

The story of NOAA Ship Rainier—as told through the IG report and internal documents—sheds some light on the consequences of delaying needed maintenance.

Staying on schedule

Andrei Lagergren's tenure aboard Rainier was turbulent. He was hired in February 2013 as a third assistant engineer, and NOAA fired him in June, citing misconduct and "performance deficiencies."

The Commerce IG rejected Lagergren's assertion that he suffered reprisal for being a whistleblower. Indeed, he was written up for various mistakes he does not deny, though he contends he was not properly trained by the ship's staff.

To IG investigators, he became a liability. Their report accuses him of pursuing a "retaliatory e-mail campaign," sending dozens of messages to government officials, journalists and witnesses. He sent *Greenwire* more than 90 emails on the case, many of which were repeats or only tangentially relevant.

But it was Lagergren who blew the whistle on the illegal discharge—and it was one of his acts of misconduct that helped the IG's case.

As Lagergren tells it, he objected to the illegal discharge of the bilge water. So one day in May 2013, he closed off a valve before another employee could pump the bilges. That temporarily prevented the untreated water from going into the ocean—but it also created a "water hammer" that could have damaged the pipes.

"I didn't want anyone pumping out anything without me knowing it," Lagergren said in an interview. "At least if I'm going to be committing a crime, I'm going to know I'm doing it."

In a write-up of the incident, Lagergren's supervisor called the bilge pumping a "process which is done frequently." The aim was to show that Lagergren should have known to not close the valve; instead, it served to prove that the engineering staff was actually trained to perform an illegal act.

In fact, IG investigators found the ship's engineering staff had been illegally dumping bilge water for years and lying about it in the ship's records. Pumping the bilge is usually an occasional chore, as it fills with seawater and fluids because of leakage from pipes, valves and machinery.

On the 48-year-old Rainier, the bilge was pumped an average of every six days. At one point, the engineering staff planned to use buckets to move the bilge water to another area of the ship for treatment. But according to the IG report, that procedure wasn't followed and employees took the easier option: dumping it overboard less than 3 miles from shore.

Why that was the routine for so long is hard to explain. But in a June 2013 email, a NOAA employee "focused on how expensive it was to reconfigure the ship related to handling the aft steering bilgewater," according to the IG report.

That fear appears to have been unfounded. In the end, NOAA spent less than $6,000 to pipe water from aft steering into the engine room bilge, where an oily water separator could treat it.

In an email, an NOAA spokesman emphasized that the agency's entire fleet was "sufficiently funded to meet its mission requirements" in 2013. But the threat of a government shutdown and the need to stay within the mission's budget overshadowed the 2013 trip, according to Lagergren.

"From the moment we got underway, it played into everything," he said. "It aggravated the whole bilge water situation."

Surprise spill

By September 2013, the bilge water situation had been resolved. But one year later, Rainier was in trouble again: Its fuel tank had dumped as much as 1,600 gallons into Womens Bay in Kodiak, Alaska.

Personnel from the fuel dock noticed an oily substance on the afternoon of Sept. 8, according to internal documents NOAA released in response to a Freedom of Information Act request from **Public Employees for Environmental Responsibility**. But over the next few hours, those on the scene could not find the source; several thought it smelled like paint.

"At the end of the day it was determined that a source from beyond the pier or outside the bay was the cause and the substance would eventually leave the area overnight," an official said in a statement on the event.

Early the next morning, "the area smelled of diesel fuel," according to another employee's statement.

"[I]t was still dark out to see anything but as it got light out the area around the ships was still covered in fuel," the employee wrote in the statement.

The Coast Guard realized it was the Rainier, boomed off the ship and began the cleanup. Ship staff originally blamed the disintegration of a rubber seal on a diverter valve. But IG investigators dismissed that theory, finding that the valve had no valve handle and was not properly maintained.

The IG report also lists a lack of inspections, poor design and poor maintenance as contributing factors. A corrosive hole allowed hundreds of gallons of fuel to leak into the graywater tank, which was subsequently dumped into the bay.

Someone on the ship had sought repairs on the failed tank that year, but it was postponed "as a result of funding issues," according to the report.

Rainier isn't the only ship that has inadvertently polluted waters. Earlier this year, the Ferdinand R. Hassler, one of its coastal mapping vessels, released oil into the Piscataqua River in New Hampshire. NOAA has said the effects to the environment were minor.

The Coast Guard is still investigating the cause. When asked whether deferred maintenance played a role, a Coast Guard official declined to comment, citing an ongoing investigation.

All of NOAA's vessels will soon get a second look from the Coast Guard. Thanks to the Rainier's deficiencies, NOAA has asked for a fleetwide audit that will include onboard inspections, reviews of environmental procedures, interviews with personnel and the "identification of any mechanical deficiencies," according to NOAA spokesman Scott Smullen.

"The intent is to have an independent third party review of our efforts to manage, record and appropriately report all activities related to waste generated by our vessels," Smullen said in an email. "In general, the audits being conducted by the Coast Guard are encompassing of all aspects of environmental compliance."

Whether Congress will pay for any needed repairs remains to be seen.