November 19, 2024 MIR-24-36

Contact of Yacht *Atlantis* with Floating Dredge Pipe Pump-Out Cube

On May 25, 2024, about 1130 local time, the yacht *Atlantis* was transiting north in the Atlantic Ocean about 1.5 miles east of St. Augustine Beach, Florida, when the vessel struck a floating dredge pipe pump-out cube associated with a beach renourishment project (see figure 1 and figure 2).[1] The contact compromised the hull, causing the yacht to flood and eventually sink. There was one minor injury, and no pollution was reported. The damage to the pump-out cube was estimated at $20,000. The *Atlantis*, with an estimated value of $2 million, was declared a total loss.

Figure 1. *Atlantis* following the contact on May 25, 2024. (Source: Florida Fish and Wildlife Conservation Commission)

[1] (a) In this report, all times are eastern daylight time, and all miles are statute miles. (b) Visit ntsb.gov to find additional information in the public docket for this NTSB investigation (case no. DCA24FM042). Use the CAROL Query to search investigations.

Casualty Summary

Casualty type	Contact
Location	Atlantic Ocean, about 1.5 miles east of St. Augustine Beach, Florida 29°51.48' N, 081°14.15' W
Date	May 25, 2024
Time	1130 eastern daylight time (coordinated universal time –4 hrs)
Persons on board	2
Injuries	1 minor
Property damage	$2 million est.
Environmental damage	None
Weather	Visibility 10 mi, clear skies, winds west 6 mph, seas calm, air temperature 88°F, water temperature 80°F
Waterway information	Ocean, depth 48 ft at casualty site

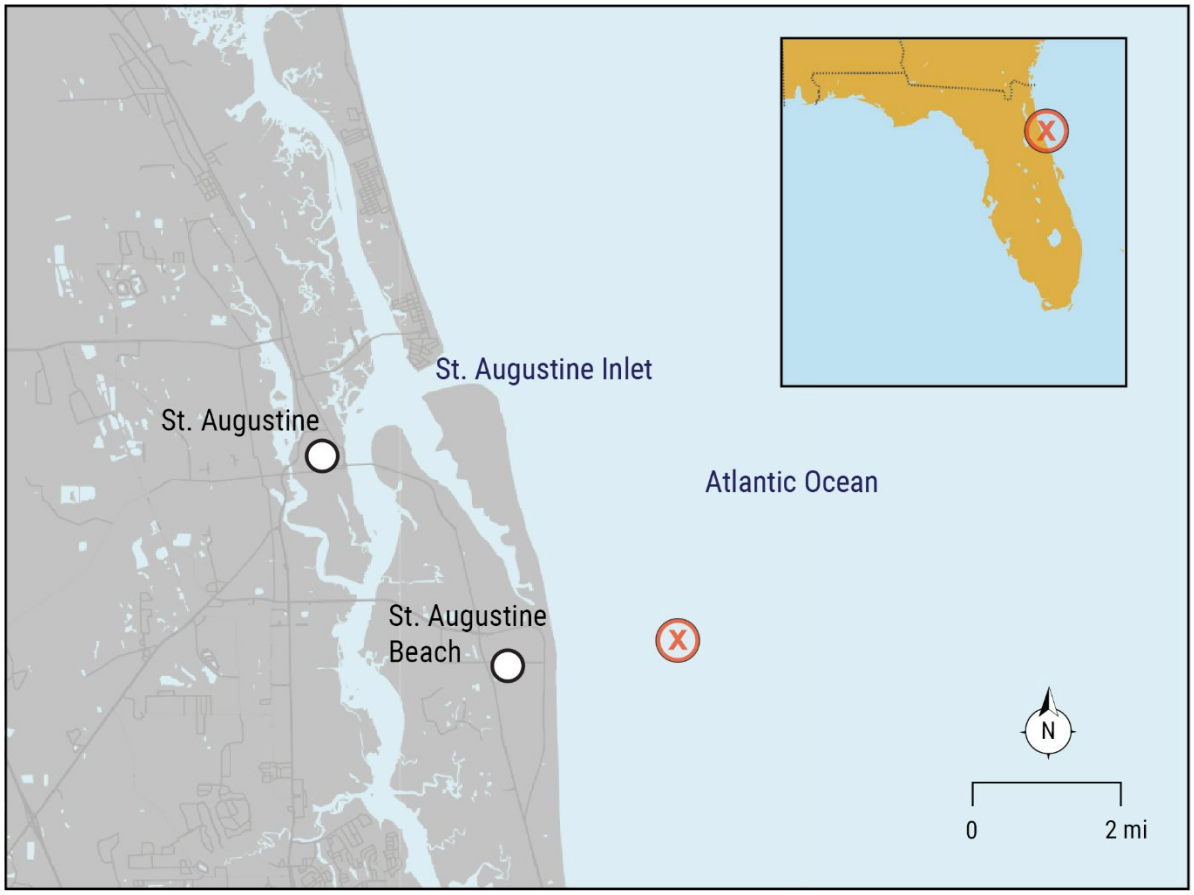

Figure 2. Area where the *Atlantis* struck the dredge pipe pump-out cube, as indicated by a circled *X*. (Background source: Google Maps)

1 Factual Information

On May 25, 2024, about 0650, the 80-foot-long Sunseeker Predator 80 yacht *Atlantis* departed Port Canaveral, Florida, and headed north toward its destination, Fernandina Beach, Florida, with two persons (operator and spouse) on board (see figure 3). They were in the process of moving the vessel from Florida to North Carolina and had made this trip from Port Canaveral to Fernandina Beach around 40 times. The operator was following previously used navigation tracks for the route, which were displayed on the chart plotter located at the helm.

Figure 3. *Atlantis* in undated photo before the contact. (Source: *Atlantis* owner)

At 1129, the vessel was proceeding north at 24 knots on autopilot (to maintain the vessel's heading), with good visibility and calm seas. According to the operator, who was at the helm, the vessel was about 2 miles south of the inlet to St. Augustine, Florida. "We're approaching St. Augustine … so I know we were really watching at that point for any small traffic, any changes in the buoys, we're looking for the inlet buoys." About this time, his spouse, who was also on the bridge, went below.

A minute later, about 1130, the vessel jolted "as if it had hit a wall." The operator stated that, shortly after, "the alarm sensor for water in the forward bow was on." The operator told investigators that he did not visually sight what the vessel had impacted.

The operator immediately checked on his spouse, who informed him that she had bumped her head. He then checked the vessel for damage. He went to the forwardmost space, opened a hatch to the area beneath the space, and observed

water "just pouring in" through a hole in the hull. Realizing the rate of water coming in could not be controlled, the operator determined the vessel would sink.

At 1137, the operator notified the US Coast Guard via VHF radio of the emergency. The Sector Jacksonville Command Center acknowledged the emergency, requested the operator activate the vessel's emergency position indicating radio beacon (which he did), and then coordinated rescue efforts with the Coast Guard, the local fire department, and nearby vessels.

Both persons on board donned lifejackets, and the operator deployed one of the vessel's two liferafts, but the operator and his spouse remained on the vessel while waiting for rescue. About 1215, St. Johns County Fire Rescue personnel arrived on scene and evacuated the operator and spouse; the spouse was transported to a local hospital for treatment of her head injury.

After the operator and spouse were rescued, the *Atlantis* drifted and eventually sank (see bow damage in figure 4). The vessel was removed from the water and transported to a marina in Jacksonville, Florida, on May 29. The owner's insurance company declared the *Atlantis* a total loss.

Figure 4. Hull damage to the *Atlantis*. (Source: St. Johns County Fire Rescue)

Following the casualty, the operator and spouse were informed by personnel on one of the responding vessels that the vessel had impacted a floating dredge pump-out cube (mooring cube). The location of the pump-out cube was confirmed by its operator and the Coast Guard Search and Rescue report as being about 1.5 miles offshore from St. Augustine Beach.

The operator's navigation was assisted by two chart plotters, GPS, and radar. The operator stated that the vessel's radar was operating properly, it was set at the 6 nautical mile scale, and it had a proximity alarm that would sound for any object it identified ahead of the vessel's track. He did not hear the proximity alarm before the casualty.

The pump-out cube struck by the *Atlantis* was a piece of equipment used by a contractor as part of a US Army Corps of Engineers project to renourish St. Augustine Beach. The contractor managing the project operated a dredge that collected sand and was connected to a 200-foot-long floating hose that attached to the pump-out cube of the dredge pipeline (see figure 5). The pump-out cube could rotate, which enabled the dredge to connect to the floating hose against the wind and current. After the dredge was connected to the floating hose, it would pump the sand/water mixture to the shore through an underwater metal dredge pipe lying on the bottom.

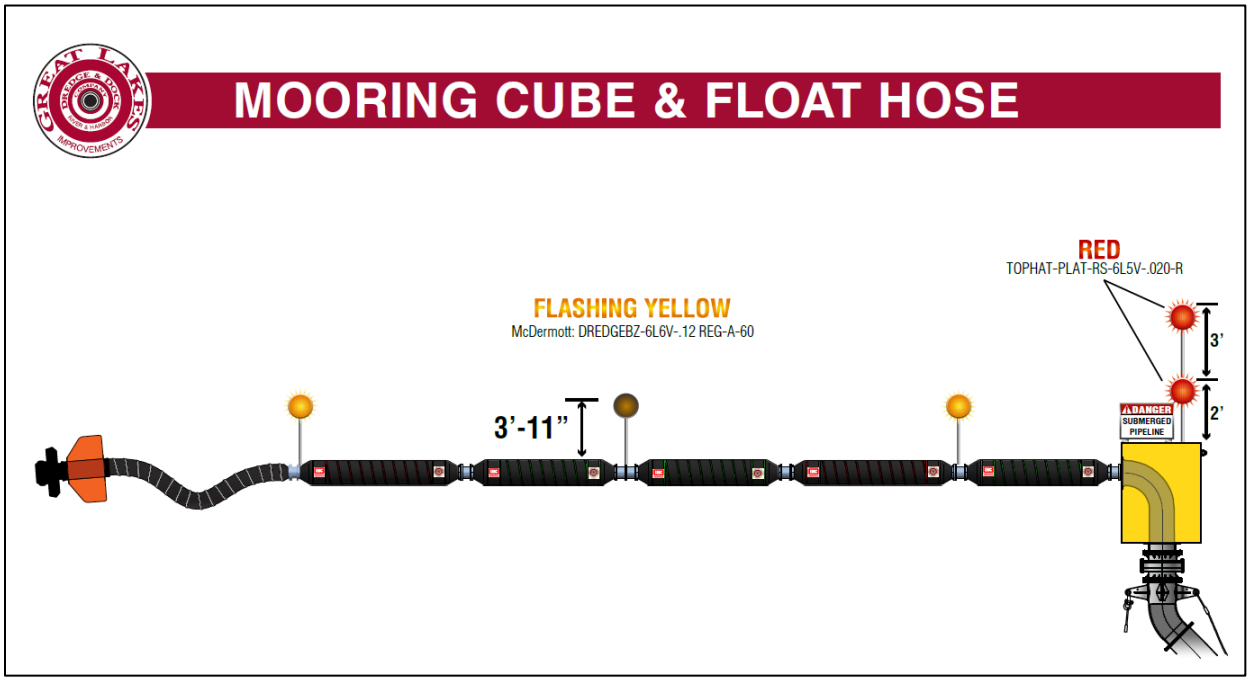

Figure 5. Sample arrangement of a mooring cube (pump-out cube) and floating hose. (Source: Great Lakes Dredge & Dock Company)

The pump-out cube dimensions were 10 feet by 11 feet (equivalent in size to a small boat) with an approximately 3-foot freeboard, and the float hose with a connector was 200 feet in length. The underwater dredge pipe that transported the sand/water mixture toward the beach was about 9,000 feet long.

The Coast Guard had reviewed and approved the application for the installation of the pump-out cube, floating hose, and dredge pipeline in that location. To facilitate identification by vessels of the dredging equipment's location, the underwater dredge pipe was marked by six buoys, the floating hose had three flashing yellow lights, and the pump-out cube had a radar-reflective warning sign with two red lights (see figure 6). The location of the dredge operations for the St. Augustine Beach renourishment project had been first published in the February 2024, 07-24 weekly edition of the Coast Guard District Seven Local Notice to Mariners, which was available on the district's website. The pump-out cube was anchored on March 7, 2024. The St. Augustine Beach renourishment project was listed in each of the weekly editions of the District Seven Local Notice to Mariners up to the latest edition at the time of the casualty.

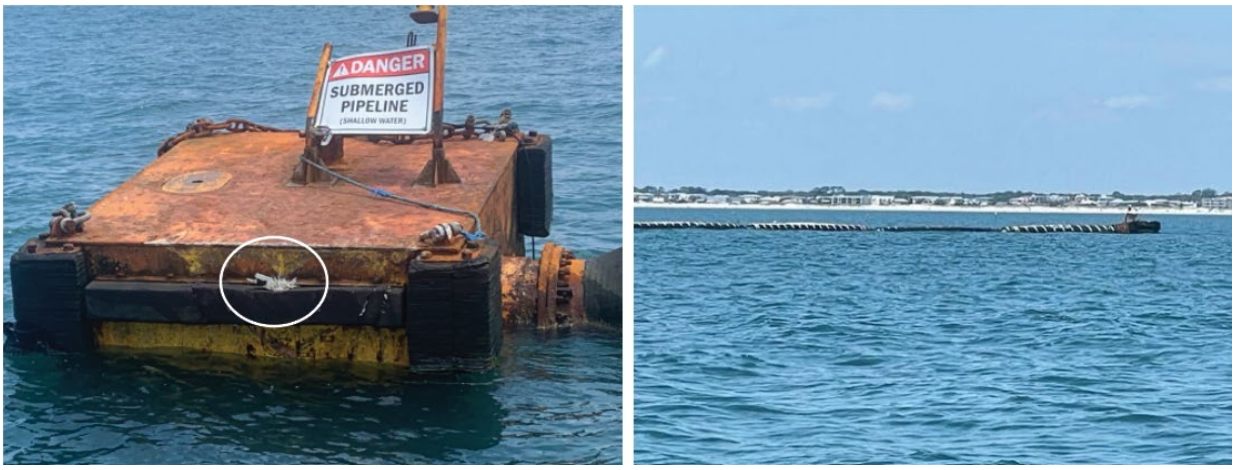

Figure 6. *Left to right*: The pump-out cube with damaged sign and the area where the *Atlantis* made contact circled; the dredge pipeline pump-out cube and floating hose from a distance, after the casualty. (Source: Florida Fish and Wildlife Conservation Commission)

2 Analysis

The *Atlantis* was transiting north along the coast in the Atlantic Ocean when the vessel struck a floating dredge pump-out cube associated with a beach renourishment project, compromising the hull and causing the yacht to flood and eventually sink.

The Coast Guard had approved the installation of the pump-out cube, floating hose, and dredge pipeline, and they had been in place for several months before the contact. Six buoys marked the underwater dredge pipe, three flashing lights were on the floating hose, and a radar-reflective warning sign and two red lights marked the pump-out cube. In addition, investigators confirmed that the location of dredging operations for the St. Augustine Beach renourishment project had been listed in all weekly editions of the District Seven Local Notice to Mariners leading up to the casualty. Therefore, the required markings and notifications were in place to warn mariners of the dredging associated with the beach renourishment project.

The operator, who was alone on the bridge, maintained the vessel's speed at 24 knots on autopilot as he unknowingly approached the pump-out cube. He told investigators that he was keeping an attentive lookout due to their proximity to the St. Augustine Inlet and the possibility of increased boat traffic. He had several navigation tools available to him, including two chart plotters, GPS, and radar, to assist him during the transit. However, the vessel's speed of approach and pronounced bow (limiting visibility forward to the horizon beneath the bow while running at a trim on plane) reduced the amount of time the operator would have had to see the pump-out cube. Nevertheless, given the conditions (calm seas, clear skies, good visibility), the operator should have been able to see the pump-out cube.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the contact of the yacht *Atlantis* with a floating dredge pipe pump-out cube was the operator not maintaining an effective lookout.

Vessel Particulars

Vessel	*Atlantis*
Type	Yacht/Boat (Yacht)
Owner/Operator	Private citizen (Private)
Flag	United States
Port of registry	Palm Beach, Florida
Year built	1998
Official number	1075527 (US)
IMO number	N/A
Classification society	N/A
Length (overall)	80.0 ft (24.4 m)
Breadth (max.)	19.5 ft (5.9 m)
Draft (casualty)	4.9 ft (1.5 m)
Tonnage	102 GT ITC
Engine power; manufacturer	2 × 1,350 hp (1,006 kW); Caterpiller diesel engines

NTSB investigators worked closely with our counterparts from **Coast Guard Sector Jacksonville** throughout this investigation.