



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

April 15, 2024

MIR-24-08

Capsizing of Dredging Vessel *WB Wood*

On January 16, 2023, about 0050 local time, the dredging vessel *WB Wood* capsized near mile 85 on the Lower Mississippi River about 10 miles east-southeast of New Orleans, Louisiana.¹ The sole crewmember was rescued by a Good Samaritan towing vessel; there were no injuries. An estimated 5,500 gallons of oil were released from the sunken vessel. The *WB Wood* was salvaged but the vessel, valued at \$1.5 million, was declared a total loss.



Figure 1. Dredging vessel *WB Wood* engaged in dredging operations (with its spuds up) before the casualty. (Source: Wood Resources)

¹ (a) In this report, all times are central standard time, and all miles are statute miles. (b) Visit [nts.gov](https://www.nts.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA23FM014). Use the [CAROL Query](#) to search investigations.

Casualty type	Capsizing/Listing
Location	Lower Mississippi River, mile 85, near Meraux, Louisiana 29°54.77' N, 89°55.00' W
Date	January 16, 2023
Time	0050 central standard time (coordinated universal time -6 hrs)
Persons on board	1
Injuries	None
Property damage	\$1.5 million est.
Environmental damage	Oil sheen from capsizing site to mile 64 (diesel and hydraulic oil), est. volume released 5,500 gal
Weather	Visibility 10 mi, few clouds, winds from southeast at 6 kts, air temperature 55°F, water temperature 52°F
Waterway information	River, depth 116 ft, surface current 1.2 mph est., Carrollton gage (upstream at mile 102.8) at 7 ft

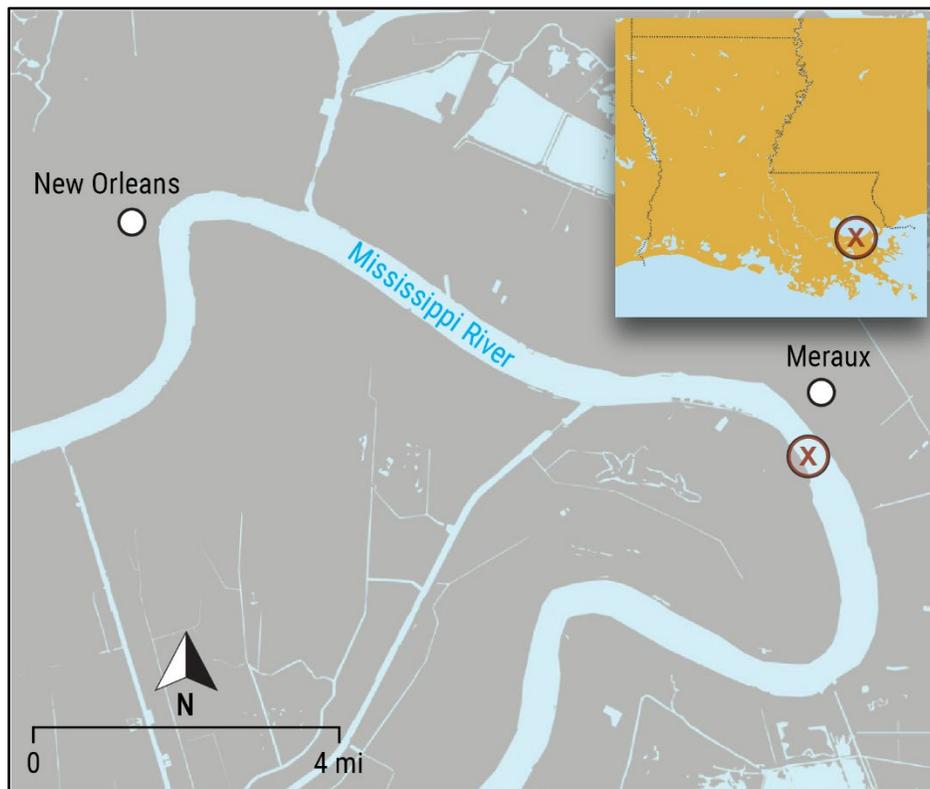


Figure 2. Area where the dredge *WB Wood* capsized and sank as indicated by a red X. (Background source: Google Maps)

1 Factual Information

1.1 Background

The non-propelled, 135-foot-long, 35-foot-wide uninspected dredge *WB Wood*, owned and operated by Wood Resources, LLC., was built in 1983 (see figure 1). The vessel consisted of two welded-steel, single-skinned, pontoon-type hulls with a deck structure aft. A 165-foot-long open-suction dredge ladder ran between the hulls from the deck structure to forward of the pontoons. The ladder was capable of being raised and lowered but could not be moved from side to side (see figure 3).

The dredge ladder was controlled by an operator (called a leverman) from the lever room atop the deck structure. The suction pipe ran down the ladder and onto a discharge pipe on the port side of the vessel, aft. The discharge pipe was connected to a submerged pipe, which, in turn, carried material to the bank.

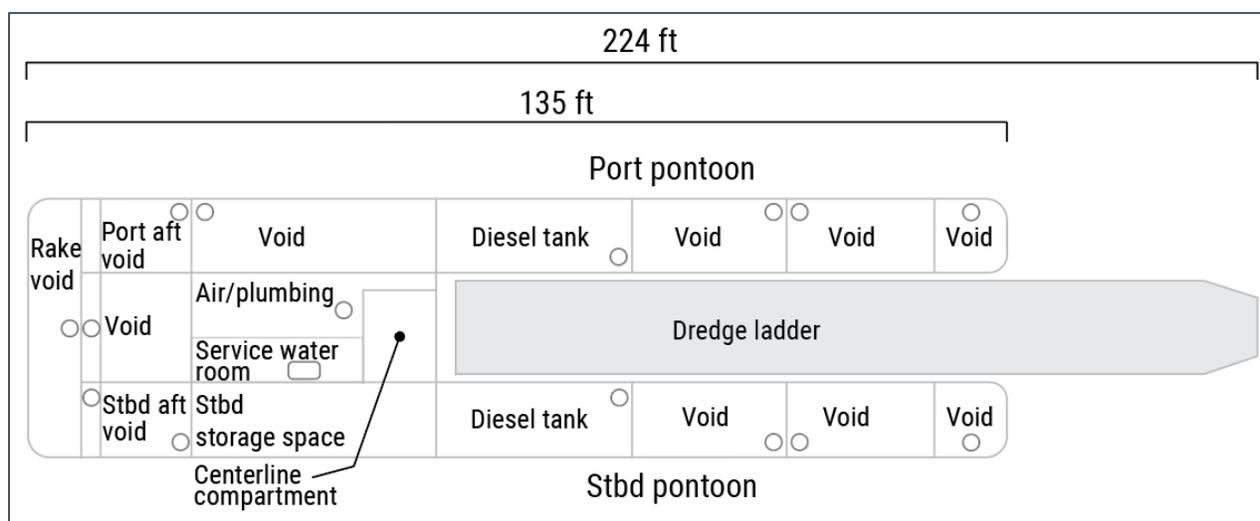


Figure 3. Approximate plan view of the *WB Wood*'s hull below the main deck (not to scale). Hatches on the main deck are depicted as circles.

The *WB Wood* had three engines, all located in the engine room on the main deck within the deck structure: one of the engines powered the dredge suction jet pump, and the other two were used for electrical power on board. The dredge did not have a propulsion system. The vessel's fuel capacity was 22,000 gallons.

The dredge was fitted with two spuds on the raked stern and four anchors, one at each corner of the dredge. The anchor cables were connected to winches at each corner of the hull, which the operator could slacken or take up tension to move the dredge about the anchor area. An A-frame barge, a pipe barge, and a small workboat

accompanied the dredge. The dredge crew used a skiff to travel from the dredge to the riverbank.

1.2 Event Sequence

On January 15, the *WB Wood* was anchored near mile 85 on the Lower Mississippi River, about 500 feet from the right descending (west) bank.² The dredge had been in that location for 9 days, pumping sand from the riverbed to a pit on the right descending bank about 800 feet away (see figure 2). The dredge was facing generally north in its anchored position (its port side facing the right descending bank and the starboard side facing the river). The spuds were in the up position (normal for sand dredging operations). During dredging operations, the crew consisted of a leverman and a deckhand. The day crew worked from 0400 to 1600, and the night crew worked from 1600 to 0400. While the dredge was operating, the crew communicated by radio, text message, and mobile phone.

About 1600, the night leverman and night deckhand conducted a shift handover on the riverbank with their counterparts from the dayshift. Nothing out of the ordinary was noted. The night leverman and night deckhand then took the skiff to the *WB Wood*. The night leverman carried out a routine visual inspection and walkaround of the vessel, per the company's daily inspection checklist. He did not observe any problems with the suction pump, ladder, or any associated piping and equipment. He did not check any compartments or spaces in the hull beneath the main deck; the daily inspection checklist included checks for engine oil levels, fuel levels, leaks in suction and discharge pipes, ladder cracks, and other conditions. However, the checklist did not require checks of hull tanks, compartments, or hatches for leaks or watertight integrity.

The night deckhand cleaned the engine room at the start of his watch for 20 to 30 minutes before returning to the riverbank. He told investigators that he did not see signs of anything abnormal in the engine room. Meanwhile, the night leverman contacted the day deckhand (who was still at the pit on the bank) to ask if he could begin pumping sand; the day deckhand told him that it was okay to resume. The night leverman lowered the ladder to the riverbed and resumed dredging operations. After completing his work in the engine room, the night deckhand returned to the riverbank.

² The inland towing industry refers to the shorelines of Western Rivers as the left and right banks when traveling (facing) downriver. The left bank is called the *left descending bank*, and the right bank is called the *right descending bank*.

Dredging operations were uneventful throughout the evening. Around 2213, the night deckhand radioed to the night leverman to stop pumping to allow the pit on the riverbank to dewater since it was about to go over the levee. The night leverman said he raised the ladder off the riverbed so that he could wash all the material out of the pipeline while waiting for the water to subside in the pit.

Once the water had drained off from the pit, the night deckhand contacted the night leverman and told him that he could resume dredging. About 2250, after resuming dredging operations, the night leverman noticed "something was wrong" and noted that the dredge was listing to starboard and down by the stern. He told investigators there was no noticeable sound or vibration on the hull of the *WB Wood* in the time before he noticed the starboard list. He took the dredge out of gear and raised the ladder off the river bottom but not out of the water (estimating the ladder was about 30 or 40 feet down).

The night leverman went down to the main deck to investigate the cause of the list. When he opened the watertight door leading down to the starboard storage space, he saw that the space was completely full of water (up to the door threshold). He did not see an oil film or smell fuel. He recalled that, at the time, there was river water on the main deck aft, but water was not entering the storage space through the watertight door, which had a raised threshold (see figure 4).



Figure 4. Postrecovery photos of the door to the starboard storage space and the starboard aft void deck hatch, viewed from the starboard aft main deck looking forward (*left*), and the storage space interior from the main deck door looking down and forward (*right*).

At 2255, the night leverman called his supervisor, at home at the time, to inform him of the flooded storage space, and the supervisor instructed him to pump the space out. The night leverman began pumping water out with a 2-inch portable

electric pump. About 30 minutes later, at 2325, the night leverman texted the night deckhand and informed him that he was pumping water from the flooded storage space. He later told investigators that, at that point, the water in the storage space “wasn’t that big of a deal yet.”

About 2349, the night deckhand rode the skiff out to the *WB Wood* and picked up the night leverman to get a portable gas-powered dewatering pump from the A-frame barge nearby, to aid in dewatering. The night leverman told investigators that the flooding was becoming a “bigger issue,” as the dredge’s list increased to starboard. Upon returning to the *WB Wood* with the pump, the night deckhand recalled seeing a “massive amount of water across the back deck and the boat was leaning towards the starboard stern.” The night leverman and night deckhand placed the dewatering hose in the starboard storage space through the open watertight door and started the second pump. The night deckhand told investigators that, at that time, the river water on the deck of the dredge was flowing into the top of his boots. The night deckhand recalled that it looked like the pumps were removing the water, but it was only “for a moment,” because soon the pumps could not keep up with the water that was coming in.

About 0034, the night leverman and his supervisor discussed cutting the anchor wires and have a towing vessel push the *WB Wood* into the riverbank. The night leverman hailed a towing vessel he knew was working in the area, but his call went unanswered. About a minute later, he hailed the towing vessel *Omaha*, which was working at a fleet about 0.3 miles upriver of them, and, at 0037, the *Omaha* was en route toward the *WB Wood*. At 0042, the night leverman asked the night deckhand to go back to the bank to get a torch kit to cut the anchor wires. The night leverman told investigators that he could tell the dredge was going to “go over” as everything started “creaking really bad.”

As the captain of the *Omaha* approached the *WB Wood*, he noticed the entire starboard side of the dredge under water. As he maneuvered closer to assist, he saw the lights go out and the *WB Wood* begin to roll over.

The night leverman, who was in the lever room of the dredge, felt the vessel begin to roll over (see figure 5). He left the lever room, jumped over the handrails down to the dredge pipe, and from there jumped onto the main deck. By that point, the list had increased so much that he had to climb onto the outboard side of the port pontoon. As the *WB Wood* rolled over, the night leverman jumped into the river without a lifejacket. (The night deckhand did not make it back to the *WB Wood* with the torch kit before the vessel capsized.)

The captain of the *Omaha* said that, as the *WB Wood* rolled over, its hull hit the hull of the *Omaha*. The *Omaha*'s deckhand threw a lifeline to the night leverman and pulled him on board. Shortly after, the *Omaha* dropped the night leverman off to company personnel on the A-frame barge on the riverbank. The night leverman was not injured and declined medical attention.

The last automatic identification system transmission from the *WB Wood* was at 0041.



Figure 5. The overturned hull of the *WB Wood* with its port pontoon on the left and the starboard pontoon on the right the morning after the capsizing. (Source: US Coast Guard)

1.3 Additional Information

1.3.1 Damage

After the casualty, the *WB Wood* remained afloat, upside-down. Both pontoons retained buoyancy at their forward ends, but the vessel's aft end was completely submerged. The ladder had completely sheared off during the rollover with its remaining lattice, still attached to the hull, bent in the direction of the starboard side and aft. About 5,500 gallons of diesel oil and 100 gallons of hydraulic oil were reported to be on board at the time of capsizing; a boom was deployed to contain the pollution.

Recovery activities further damaged the wreckage. On January 28, a marine salvage company recovered the *WB Wood* and placed it onto a barge for examination (see figure 6). During the recovery operations, the starboard-side pontoon was bent downward and inward towards the centerline to where it was in contact with the port

pontoon, and the portside ladder weld seam to the port trunnion was separated from the structure (the starboard side was still in place).



Figure 6. Postrecovery photo of the *WB Wood* on the deck of a barge.

The *Omaha* was not damaged when the *WB Wood* hull hit the hull of the *Omaha*.

1.3.2 Vessel Traffic and Current

The night leverman told investigators there was a “fair amount” of traffic in the river during his shift, but that he did not experience any wake of concern from passing vessels. The day leverman, who had considerable experience and time operating the *WB Wood*, told investigators that the dredge got hit by drift in the river “every day,” took wake from passing ships “like a champ,” and that he could barely even feel it rocking when hit by one.

At the time of the casualty, the current was estimated at 1.2 mph (by the captain of the *Omaha*). The night leverman did not believe the list was caused by the current. The day leverman said the *WB Wood* had operated in far greater current velocities than the currents on the day of the casualty.

1.3.3 Watertight Integrity

Six exterior flush hatches (not raised or with coamings) were located on the aft main deck of the *WB Wood*: one about midship for the aft rake void, one about midship for a void aft of the engine room, two on the port side outboard for two unnamed voids, and two on the starboard side, one for the starboard aft void and one for an unnamed void (see figure 3 and figure 7). Both the day and night levermen told investigators that none of the hatches were open in the time leading up to the casualty.

The company said the operating draft of the *WB Wood* was 3.5 feet and that the vessel had a freeboard of about 1.5 feet. The vessel did not have, nor was it required to have, any stability letters, approvals, or documentation. Further, no documentation was available related to any structural changes or modifications to the vessel from when it was originally built in 1983. The leverman noted that, when engaged in dredging operations, the bow of the dredge was higher out of the water than the stern.

According to the day leverman, during his time working on the *WB Wood*, it always had a port list; he attributed this list to the jet pump and discharge pipe being on the port side deck, which made it heavier on the port side than starboard. He noted that during his last shift, he was surprised that the aft deck was out of the water while the ladder was down for dredging. Normally, he said the aft deck had about 6 inches to a foot of water on it when they were pumping in deep water (as they were at the time of the casualty). He told investigators that a starboard list “don’t [sic] ever happen.”

There were two bilge water level sensors (upper and lower) located in the service water room; if the sensors were activated, an audible alarm would sound from a panel in



Figure 7. Postrecovery photo showing the flush hatch for the starboard aft void. Hatches were opened for salvage operations.

the lever room. The night leverman said that he did not hear either of the alarms until just before the *WB Wood* capsized. The room could be accessed via a watertight door in the engine room, but no crewmember had been in the room for an undetermined time before the capsizing. The *WB Wood* had a bilge pump in the service water room, but it was not working at the time of the capsizing.

1.3.4 Vessel Maintenance

From April 11 to May 27, 2022, the *WB Wood* underwent a drydock period. The supervisor for the *WB Wood* told investigators that this drydock period was used to get the vessel into “better condition,” and there were no known issues. The drydock work consisted of numerous projects, including ladder and ladder fitting rebuild work, exterior hull inspection, steel thickness inspections and replacement (as needed), and paint work.

The day leverman, who worked with the dredge during the drydock period, said they replaced about 10-15 feet of steel in the starboard storage space along the bottom section of the hull, where it wrapped around to the outboard side. The supervisor confirmed the knuckle plate for the starboard storage space underwent replacement and that there was no other work done for that space. The supervisor said other bilge knuckle repairs were completed but did not recall how many. The drydock work sheet provided to investigators by Wood Resources stated all “exterior knuckles have been cut and replaced.”

There was no documented hull maintenance or inspections conducted after the *WB Wood* left the shipyard.

1.3.5 Previous Compartment Flooding

During its first job after the drydock period (on an unknown date), the *WB Wood* experienced flooding in three aft spaces: the starboard storage space, the service water room, and one of the voids on the port side aft. The day leverman said that no one ever found out why those spaces had flooded. The crew pumped the spaces out and looked for a leak but could not find one. During that incident, the bilge pump in the service water room was damaged. It was not repaired and remained out of service.

The supervisor said that he believed that, during the drydock period, gaskets for the hatches on the aft deck of the *WB Wood* had “dried up” and were compromised from deck surface-blasting in preparation for painting. The day leverman recalled that, after the flooding, the crew changed the hatch gaskets on the port side, but they never changed the gaskets on the starboard side.

The day leverman told investigators that, on January 6, he had vacuumed out the starboard storage space and it was dry. Two days before the casualty, on January 14, he noticed about 2 inches of water in the storage space during his shift. He informed his supervisor, who told him to look for leaks. The day leverman said that he couldn't find any leaks and that the depth of the water was not enough for the portable pump to pump it out. For his shift preceding the casualty, he said he did not look into the starboard storage space.

1.3.6 Crew

The night leverman had 13 years of experience in dredging operations and had been working for Wood Resources for 14 months at the time of the casualty, all on the *WB Wood*. He had worked on 10 to 12 other dredges in the past. Following the casualty, the night leverman and night deckhand for the *WB Wood* were tested for alcohol and other drugs, with negative results.

1.3.7 Examination of the *WB Wood* Wreckage

On January 28, a marine salvage company recovered the *WB Wood* and placed it onto a barge for examination, transport, and disposal. Investigators from the US Coast Guard and NTSB examined the wreckage on January 31 and February 1. Coast Guard investigators also followed up with additional examinations of the wreckage on February 23 and March 9.

There were multiple fractures, cracks, areas of buckled steel, and indentations throughout the vessel. However, investigators found no areas of deteriorated exterior hull plating, damage, or fractures at the starboard aft end of the *WB Wood*. Investigators examined the starboard storage space and the void aft of it.³ Water markings at the head of the dredge indicated that, when the vessel was operating, there was about 1.5 feet of freeboard at the bow, and water level marks showed about 0.9 feet of freeboard at the stern.

In the starboard aft void, along the forward transverse bulkhead separating that space from the starboard storage space, there was rust and scale extending from the bilge up about 10 inches across the entire bulkhead. At the bottom of the bulkhead, investigators found multiple small wastage holes at the weld joining the transverse bulkhead and the floor plate (figure 8). There were no observable signs of damage or deteriorated steel to the exterior hull plating in this space.

³ Investigators were not able to safely enter and examine the fuel tanks and the service water room below the engines during the January 31 and February 1 examinations.

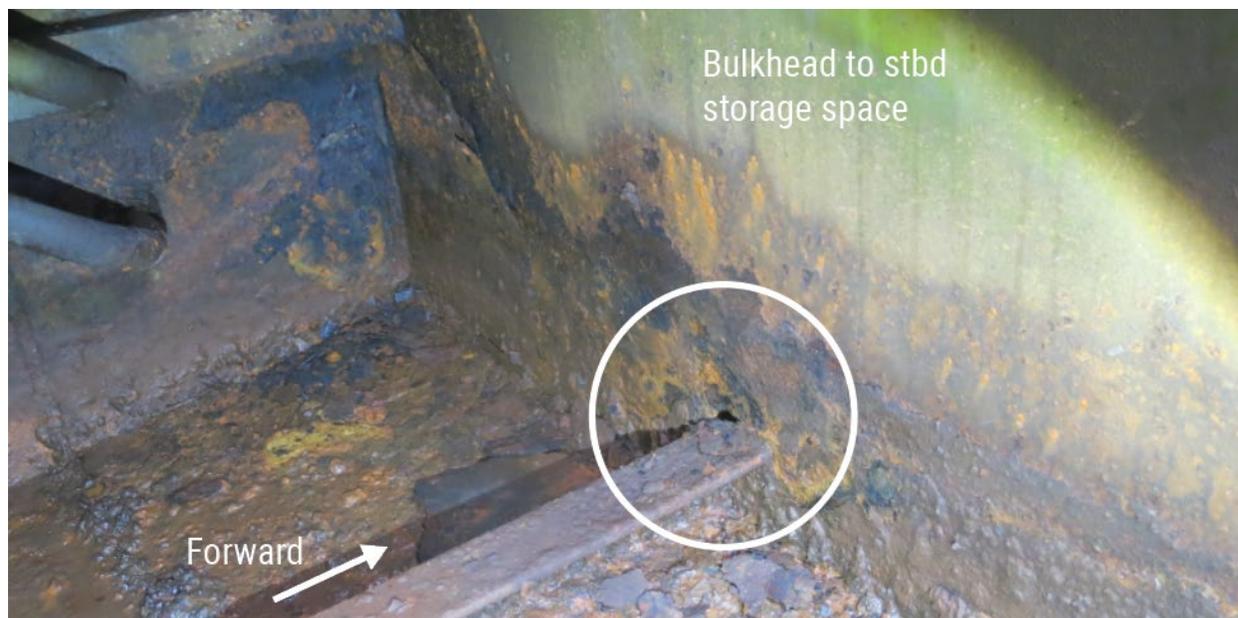


Figure 8. Rust, rust scaling, water accumulation markings, and a wastage hole (circled in white) in the transverse bulkhead between the starboard aft void (inboard forward corner) and the starboard storage room forward of it (viewed from the starboard aft void)

In the starboard storage space, investigators found an open 2-inch through-hull pipe on the starboard-side hull plating, near the top of the space. The center of the through-hull pipe was measured about 5 inches below the main deck. The pipe threading showed rust, scale, and dirt accumulation on the inboard side. Nearby, a 2-inch pipe in the overhead of the space led athwartships from the storage space through the longitudinal bulkhead into the adjacent service water room (see figures 9 and 10). In the starboard storage space, this pipe's threading, near the through-hull, was fractured. According to the day leverman, the pipe "needed work" so it was taken out of service at an unknown point and an overboard check valve was put in place. Investigators found a 2-inch check valve in the bilge in the bottom of the compartment.

In the service water room, the pipe with the missing overboard check valve ended in a threaded elbow that angled downward.

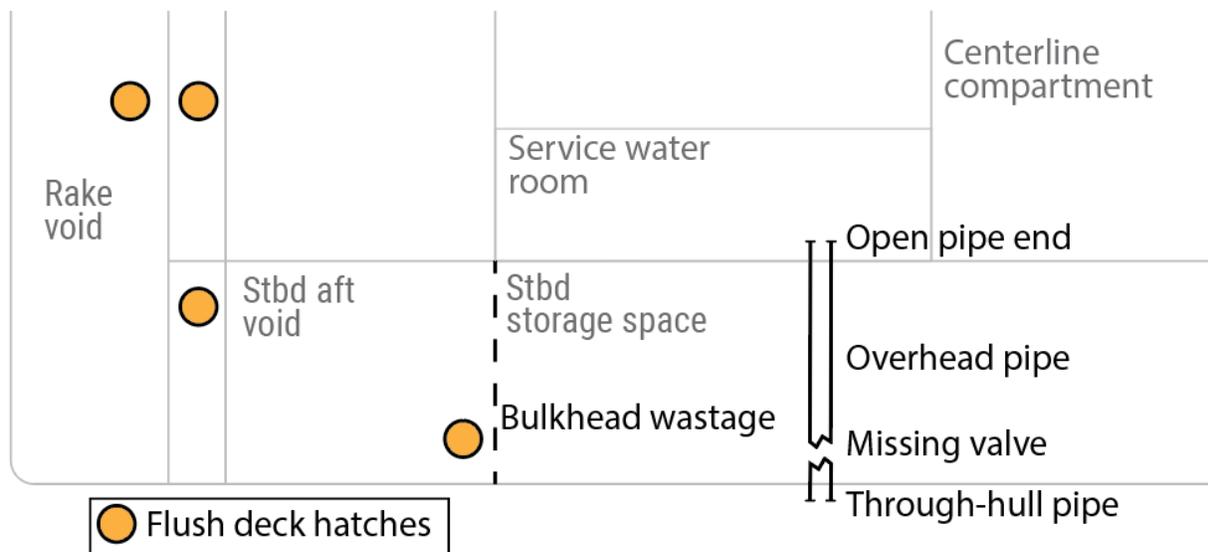


Figure 9. Compartment layout of the starboard aft quarter of the vessel below the main deck.



Figure 10. Left: The longitudinal bulkhead separating the service water room from the starboard storage space (viewed from the top of the service water room, facing forward). Right: The starboard storage space showing the overhead pipe and the 2-inch pipe through-hull pipe. Inset: A closeup of the end of the overhead pipe and the unsecured through-hull pipe. (Source: Coast Guard)

During the Coast Guard's February 23 exam of the *WB Wood* wreckage, investigators and a Wood Resources Marine Surveyor representative found a fracture and buckling in the bottom corner plating of the starboard fuel tank on the inboard side of the starboard pontoon. The fracture and buckling compromised both the starboard fuel tank and the center void.

1.3.8 Surveyor Findings

Wood Resources provided to investigators a postcasualty salvage/cause of capsizing report that was completed by a marine survey company. The report concluded that the flooding and capsizing of the *WB Wood* was due to "operator error [that] caused multiple breaches in the hull." The report determined that the dredge ladder "made contact with the [river] bottom in such a way that the ladder caused the sheering of the port heel pin from its weld securement," distorting the ladder under the starboard pontoon and leading to the ladder striking the starboard pontoon at the bottom shell and the centerline compartment, which resulted in both the starboard fuel tank and centerline compartment flooding.

2 Analysis

Just after midnight on January 16, the dredge *WB Wood* capsized while engaged in dredging operations on the Mississippi River. The dredge was salvaged 12 days later.

About 2 hours before the capsizing, the dredge's night leverman noticed the dredge was listing abnormally to starboard. Within minutes, he discovered the starboard-side storage space was full of water, and he rigged a portable pump to begin dewatering the space. Although the vessel had just a foot of freeboard aft, both of the vessel's levermen believed it was unlikely that water ingress from passing vessel wakes, river current, or drift in the river caused the flooding.

Two days earlier, the day leverman had discovered about 2 inches of water in the starboard storage space. However, he was unable to identify the source of the water and did not report the water to the night leverman, nor did he pump it out (the water was not deep enough). Although this water was indicative of some source of water ingress in the space, the crew did not regularly check hull spaces and voids while the *WB Wood* was operating. Further, the company's daily inspection checklist did not include checks of any hull tanks, compartments, or hatches for leaks or watertight integrity. Therefore, on the night of the casualty, the crew did not know if any hull compartment had leaks or water in them in advance of the capsizing.

Postrecovery, a 2-inch through-hull pipe into the starboard storage space was found to be open, as its overboard check valve was missing (the presence of rust, scale, and dirt accumulation on the inboard side of the through-hull pipe threading indicated that the valve had been missing before the casualty). Based on investigators' measurements, the center of the through-hull pipe was likely no greater than 5 inches above the dredge's normal waterline, so waves, a list to starboard, and/or an increase in stern trim could have submerged the opening, allowing water to enter the storage space. Further, the night leverman found this space to be fully flooded 2 hours before the capsizing but did not know where the water had come from. As the quantity of water increased in that space, the list to starboard would have increased and the aft freeboard would also have decreased. Thus, it is likely that the initial starboard list was caused by flooding through the unsecurable through-hull pipe into the starboard storage space.

After discovering the flooding in the starboard storage space, the night leverman did not check any of the vessel's other watertight compartments for water (hatches aft of the starboard storage space were under water). During the 2 hours from the discovery of flooding to capsize, the onboard portable pump and second pump added by the night leverman could not keep up with the rate of flooding, and the starboard list and stern trim continued to increase.

Six flush hatches on the aft main deck allowed access to the dredge's voids and spaces, including the starboard storage space. The condition of the hatches and their gaskets, presalvage, was unknown. On the *WB Wood's* first job (at an unknown date) following a drydock about 8 months before the casualty, a flooding of three aft compartments occurred (including the starboard storage space). The port side hatch gaskets were subsequently replaced; the supervisor believed that the gaskets for the hatches on the aft deck had "dried up" and been compromised during the drydock period. However, the starboard-side gaskets were not replaced, and, due to the vessel's minimal freeboard, may have frequently been under water during dredging operations. Leaky or compromised starboard gaskets could have allowed water to enter the aft voids and spaces. Therefore, the initial starboard list and increasing stern trim, which would have put the starboard gaskets under water, would have allowed for water across the aft deck to work its way through any compromised flush hatch gaskets on the aft starboard side and flood into the spaces below.

After the vessel was recovered, investigators found water marks, corrosion, wastage holes, and rust scale along the bottom 10 inches of the transverse bulkhead at the forward of the aft starboard void space, indicating that water normally pooled there. Although the wastage holes were small and went undetected by the vessel's crew, if the starboard storage space flooded first, the water level in the starboard aft void would eventually increase from communication with the storage space. (Conversely, if the starboard aft void flooded initially, the water level in the starboard storage space would

eventually increase from communication of water from the starboard aft void.) Additionally, investigators found that the 2-inch through-hull pipe with the missing valve ran transversely along the overhead from the storage space and through the bulkhead into the service water room—where it was uncapped. Therefore, once the storage space filled with water, it would have begun flooding the service water room. The only space below the main deck with a bilge alarm was the service water room. The night leverman did not hear the bilge alarm for the service water space activate until just before the dredge rolled over, indicating the space eventually began flooding but was not the initial compartment to experience water ingress. Therefore, progressive flooding through compromised watertight bulkheads occurred, and, combined with the initial flooding, resulted in the capsizing.

A report provided by an attending marine survey company representing Wood Resources concluded that the flooding and capsizing of the *WB Wood* was due to operator error. Specifically, the surveyor believed that the ladder was distorted as a result of contacting the river bottom, resulting in multiple breaches in the hull that flooded the starboard diesel tank and centerline compartment. However, the night leverman did not believe he had hit anything. He was an experienced dredge operator, and he did not report any sounds or vibrations before the flooding that would have indicated the ladder had contacted the river bottom or struck a pontoon. He also did not smell or see any oil that would have indicated a fuel tank breach. Finally, the starboard pontoon was damaged (bent down and inward toward the port pontoon) during recovery operations, so investigators were unable to determine what damage, if any, may have occurred before the recovery. Lacking evidence supporting the surveyor's conclusions and because the vessel was damaged by recovery operations, investigators could not determine if operator error was a factor in the flooding.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the capsizing of the dredging vessel *WB Wood* was a lack of company requirements for crew to regularly check compartments below deck, which resulted in undetected flooding from a through-hull pipe that was missing its overboard check valve and subsequent progressive flooding from compromised watertight bulkheads.

3.2 Lessons Learned

Conducting Routine Checks of Voids and Hull Spaces

Vessel crews should regularly check tanks and voids that are adjacent to the vessel's hull to identify hull integrity issues (such as potential corrosion and steel wastage, and watertight integrity deficiencies) that can lead to flooding. The presence of water can indicate an issue with watertight integrity or wastage and should be addressed. Vessel operators should ensure crews have procedures for anticipating, preventing, and addressing the potential for water ingress and flooding, including establishing scheduled checks. Bilge alarms set to detect water at a low level in voids and other spaces are another means to ensure early detection.

Vessel	<i>WB Wood</i>
Type	Specialty/Other (Dredge Vessel)
Owner/Operator	Wood Resources, LLC (Commercial)
Flag	United States
Port of registry	New Orleans, Louisiana
Year built	1983
Official number (US)	661326
IMO number	N/A
Classification society	N/A
Length (overall)	135.0 ft (41.1 m)
Breadth (max.)	35.0 ft (10.7 m)
Draft (casualty)	5.0 ft (1.5 m)
Tonnage	134 GRT
Engine power; manufacturer	N/A

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

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For more detailed background information on this report, visit the [NTSB Case Analysis and Reporting Online \(CAROL\) website](#) and search for NTSB accident ID DCA23FM014. Recent publications are available in their entirety on the [NTSB website](#). Other information about available publications also may be obtained from the website or by contacting—

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