



# National Transportation Safety Board

## Marine Accident Brief

### Contact of *Bettye M. Jenkins* Tow with Bunge Grain Facility

<b>Accident type</b>	Contact	<b>No.</b> DCA19FM018
<b>Vessel names</b>	<i>Bettye M. Jenkins</i> and barge <i>T9353</i>	
<b>Location</b>	Lower Mississippi River, mile 361, near Vidalia, Louisiana 31°32.95' N, 091°26.43' W	
<b>Date</b>	February 15, 2019	
<b>Time</b>	0130 central standard time (coordinated universal time – 6 hours)	
<b>Injuries</b>	None	
<b>Property damage</b>	\$3.3 million est.	
<b>Environmental damage</b>	None	
<b>Weather</b>	Visibility 10 miles, partly cloudy, winds south 4 knots, air temperature 60°F	
<b>Waterway information</b>	The Lower Mississippi River near mile marker 361 is 0.6 mile wide with a maintained channel depth of 9 feet. At the time of the accident, the river near mile marker 361 was at flood stage, and a high-water safety advisory was in effect. The river stage near Vidalia, at Natchez, Mississippi, was 49.1 feet.	

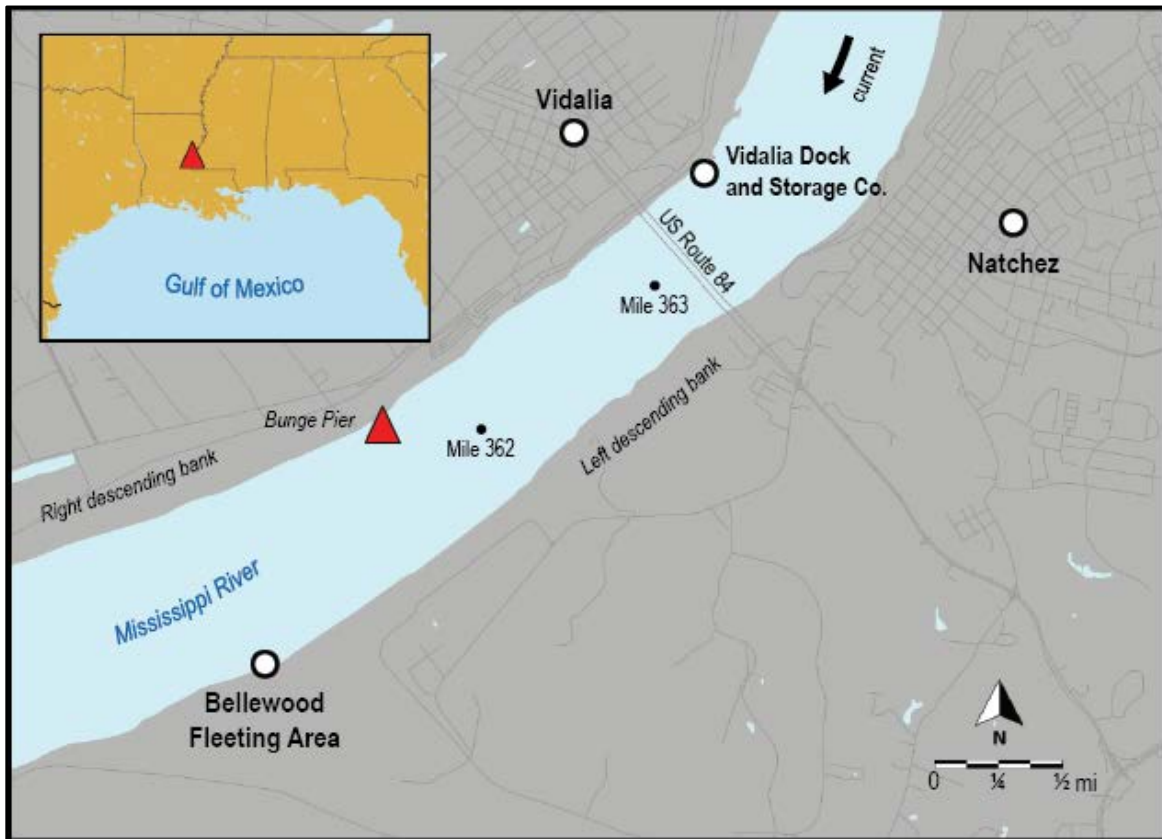
On February 15, 2019, about 0130 local time, the towboat *Bettye M. Jenkins* was pushing two loaded barges upbound on the Lower Mississippi River, 1.4 miles south of Vidalia, Louisiana.<sup>1</sup> While maneuvering across the river about 2 miles downriver of the Natchez Bridge, the lead barge, *T9353*, struck the Bunge grain facility pier and pilings. No pollution or injuries were reported. Damage to the facility was estimated at \$3,336,718.



Preaccident image of the *Bettye M. Jenkins*. (Source: towboatgallery.com)

<sup>1</sup> All miles in this report are statute miles.

## Contact of *Bettye M. Jenkins* Tow with Bunge Grain Facility



Area where the *Bettye M. Jenkins* tow contacted the Bunge pier and pilings as indicated by the red triangle. (Background Source: Google Maps)

## Background

The *Bettye M. Jenkins* was a 56-foot towboat built in 1959 at Vidalia, Louisiana, for Vidalia Dock & Storage Co. Originally named the *Sheila Ann Parker*, the vessel worked locally as a fleeting and switching towboat. The company operated two other vessels in the same service.

The *Bettye M. Jenkins* was staffed by a captain and deckhand. They worked a 14-days-on/7-days-off schedule, working by day during their first week and by night the second week. The off-duty crew slept ashore instead of on board. The accident voyage was the first night of the captain's second week, and he had 24 hours off beforehand.

The Bunge grain facility, located 2 miles downriver of the Natchez Bridge (US Route 84), handled corn, wheat, and soybeans. The facility included storage silos connected by a conveyor belt that was supported by trusses and extended approximately 700 feet out into the river. The loading cell at the end of the structure was marked by a green light. Four mooring dolphins were installed parallel with the shore on either side of the loading cell (2 upriver and 2 downriver). The northernmost and southernmost dolphins were marked by lights.



The Bunge facility, including silos, conveyor, and mooring pilings. (Source: Google Earth)

## Accident Events

About 0100, the *Bettye M. Jenkins* left the Bellewood fleeting area 2 miles below the Natchez Bridge on the left descending bank, pushing a string of two loaded rock barges upriver.<sup>2</sup> The T9353 was the lead barge. These were the first two of three barges that the *Bettye M. Jenkins* was tasked to move overnight to the company's facility upriver in Vidalia, just above the Natchez Bridge on the opposite bank. Each barge was 35 feet wide by 200 feet long and was loaded with approximately 2,000 tons of crushed stone. The two barges were made up with a 6-part polypropylene line on center, a 4-part polypropylene line on port, and a 1-inch stationary wire to starboard.<sup>3</sup> The *Bettye M. Jenkins* used two 7/8-inch facing wires to make up to the aft barge.

The towboat *Clark Todd* was 2 miles downriver pushing a string of two barges up the river and making 5–6 knots over ground. The pilot on the *Clark Todd* hugged the right descending bank, where there was less current, in order to line up with the west span of the Natchez Bridge. The captain of the *Bettye M. Jenkins* and the pilot of the *Clark Todd* both told investigators they preferred passing under the west span in high water, since there was significantly less current compared to the center.

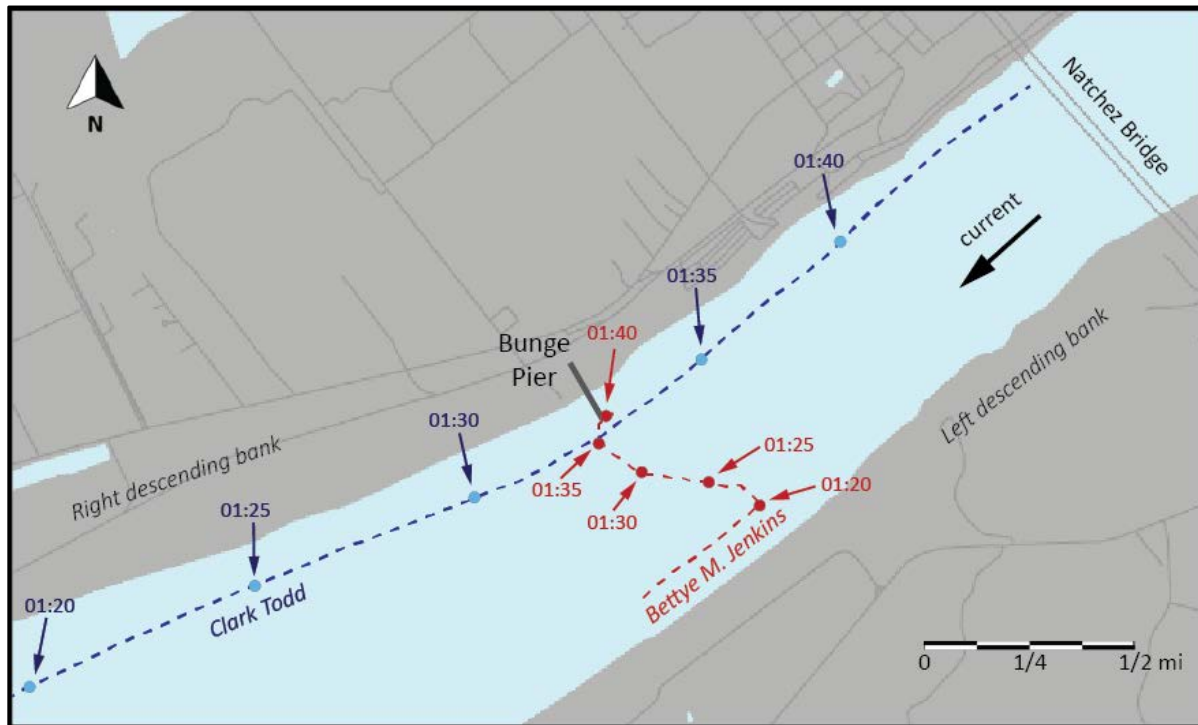
The *Bettye M. Jenkins* hugged the left descending bank to avoid the extreme high current in the middle of the river until about 0120, when the captain started to cross the river below the bridge, perpendicular to the current, to line up to pass beneath the west span of the Natchez Bridge.

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<sup>2</sup> The inland towing industry refers to the shorelines of western rivers as the left and right banks when traveling (facing) downstream. The left bank is called the *left descending bank*, and the right bank is called the *right descending bank*.

<sup>3</sup> A *stationary wire*, as its name intimates, stays with the barge and is shackled in place.

## Contact of *Bettye M. Jenkins* Tow with Bunge Grain Facility



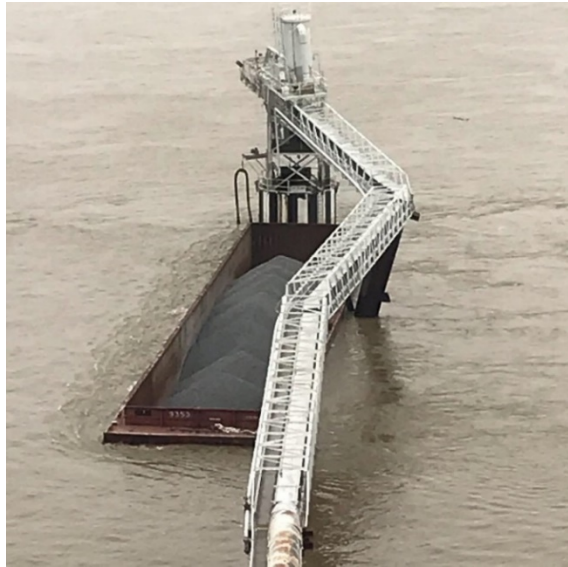
Select positions of the *Clark Todd* and the *Bettye M. Jenkins*. (Data source: US Coast Guard Navigation Center; background source: Google Maps)

After turning into the river, the *Bettye M. Jenkins* captain contacted the *Clark Todd* pilot on VHF channel 13, and they agreed to a passage where the *Bettye M. Jenkins* intended to turn ahead of the *Clark Todd* and head upriver to proceed under the west span of the Natchez Bridge.

According to the *Clark Todd*'s pilot, the *Bettye M. Jenkins* lingered in the middle of the river while crossing. After notifying the crew of the *Bettye M. Jenkins* by radio, the *Clark Todd* passed ahead of the *Bettye M. Jenkins* about 0136. The *Bettye M. Jenkins* was about 300–400 feet astern of the *Clark Todd* when they attempted to turn to starboard and head for the west span of the bridge. According to the captain, the *Bettye M. Jenkins* had difficulty making the turn upriver (to starboard) as it was against/into the high current and because the tow was in the *Clark Todd*'s wheelwash (reducing propeller thrust). As the vessel attempted the turn, the river current set the tow further downstream (to port). About 0140, the lead barge, T9353, struck the northernmost mooring piling at the Bunge facility, all lines parted between the two barges, and the lead barge broke free and drifted downstream inside the pilings and onto the vertical dolphins, damaging them. The pilot of the *Clark Todd* was not aware of the *Bettye M. Jenkins*' situation and continued upriver.

As a result of the contact, the two dolphins farthest from shore that supported the conveyor and trusses were deflected up to 15 feet. Three conveyor trusses were forced out of alignment as much as 3 feet. Bunge employees cut the conveyor belt to prevent the entire structure from being damaged. Due to the damage, Bunge had to transport cargo 7.4 miles across the river to the Adams County Port for loading on barges until repairs were completed on August 20, 2019.





**The damaged Bunge grain conveyor and barge T9353, four days after contact. (Source: Bunge Grain Facility)**

### Additional Information

The captain had held a merchant marine credential since 2012 and was endorsed as master of towing vessels upon Great Lakes, inland waters, and Western Rivers. He had worked for the company since January 2015.

According to the owner and crew, the vessel had no material or maintenance deficiencies at the time of the accident. The *Bettye M. Jenkins* had yet to be issued a Coast Guard Certificate of Inspection per the new Title 46 *Code of Federal Regulations (CFR)* Subchapter M.<sup>4</sup> The vessel's last uninspected towing vessel exam was in July 2015.

The Coast Guard, in collaboration with the US Army Corps of Engineers (USACE) and industry representatives, maintains a Waterways Action Plan (WAP) with guidelines for high- and low-water events. The WAP defines three action

phases (watch, action, and recovery) for each section of the waterway and lists high-water impacts on levees, damage to homes, and unsafe navigation conditions. For the accident site, the action phase was triggered at high water, indicated by 36 feet and rising at the Vicksburg gage. The "Extreme High Water Advisory" with additional guidelines was triggered by 40 feet.

On January 5, the Mississippi River at Natchez, Mississippi, reached flood stage (over 48 feet at the Natchez gage at mile marker 361.3). The gage read 49.1 feet at the time of the accident, 1.1 feet above flood stage.<sup>5</sup> The Coast Guard published a High Water Safety Advisory for this section of the Mississippi River in the Local Notice to Mariners on January 23, 2019, reporting "hazardous conditions associated with strong currents, severe outdrafts, missing/off station aids to navigation and diving buoys." The Notice recommended that upbound vessels request an assist tug if they could not maintain 3 knots over ground while passing under the Vicksburg Bridge, 72 miles north of Vidalia, and recommended that vessels travel at the slowest safe speed to minimize damage to homes and levees.

The flooding on the Lower Mississippi River in 2019 was the longest on record, lasting from December 28, 2018, through August 10, 2019.<sup>6</sup> Vidalia Dock and Storage ceased operations about a week after the accident when the river reached 50 feet due to flooding at their facility. On February 27, the USACE opened the Bonnet Carré Spillway, which diverts part of the Mississippi River into Lake Pontchartrain near New Orleans (downriver from the accident site) in order to lower the river height, the first time the spillway had been opened for 2 consecutive years.

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<sup>4</sup> While towing vessels were required to comply with the provisions of Subchapter M by July 20, 2018, there was a phase-in period for operators to obtain a Coast Guard Certificate of Inspection.

<sup>5</sup> The river crested at 57.9 feet on March 12, 2019, the third highest level on record.

<sup>6</sup> National Weather Service, "Mississippi River Flood History 1543–Present," retrieved October 28, 2019, from [https://www.weather.gov/lix/ms\\_flood\\_history](https://www.weather.gov/lix/ms_flood_history).

## Analysis

Because the river's current was unusually high at the time of the accident, both the *Bettye M. Jenkins* and the *Clark Todd* aimed for the west span of the Natchez Bridge, where the current was typically slower. The *Bettye M. Jenkins*, which had stayed close to the left descending bank as it moved upriver, needed to cross the river to get to the west span. The captain told investigators that he would normally start to cross when abeam the Adams County Port. He could have avoided a difficult turn back upriver on the right descending bank had he crossed at a shallower angle in the high current instead of his normal track perpendicular to the river.

While moving upriver, the *Clark Todd* hugged the right descending bank. The initial plan agreed upon by both vessels was for the *Bettye M. Jenkins* to pass ahead of the *Clark Todd*. However, the *Bettye M. Jenkins* took longer than expected to cross the river since the high current caused the tow to be set further downstream. The *Bettye M. Jenkins* attempted to turn upriver after the *Clark Todd* passed ahead of it, but because they had to wait for the *Clark Todd* to clear ahead of them, they turned later than originally planned. The captain of the *Bettye M. Jenkins* stated that along with the difficulty of turning the tow into the high current, his turn was slowed by the *Clark Todd*'s wheelwash. The late turn left the tow too close to the Bunge facility, which the lead barge contacted, parting the tow's lines.

Although the *Bettye M. Jenkins* was equipped with steel wire and ratchets for securing tows, the captain stated that he thought the polypropylene lines would be strong enough to secure the tow given the short passage. According to Vidalia management, the mooring arrangement would have sufficed for normal fleeting operations but was inadequate for this job in the high current; instead, the tow should have been secured using the steel wire and ratchets on board.

## Probable Cause

The National Transportation Safety Board determines that the probable cause of the contact of the *Bettye M. Jenkins* tow with the Bunge grain facility was the captain's decision to attempt to pass ahead of an upbound tow while crossing a river in strong current during high-water conditions.

### High-River Current Operations

Extreme high current poses unique hazards for vessels working on and/or transiting inland rivers. Mariners should thoroughly assess the impact of high current on all aspects of operations, including securing barges, passage planning, and boat handling.

## Vessel Particulars

Vessel	<i>Bettye M. Jenkins</i>	<i>T9353</i>
Owner/operator	Vidalia Dock & Storage Co Inc	Graestone Aggregates Logistics
Port of registry	New Orleans	Mobile
Flag	United States	United States
Type	Towboat	Open barge
Year built	1956	1993
Official number (US)	279701	996992
IMO number	None	None
Classification society	None	None
Construction	Welded steel	Welded steel
Length	56 ft (17 m)	200 ft (61 m)
Draft	6 ft (1.8 m)	10 ft (3 m)
Beam/width	36 ft (11 m)	35 ft (10.7 m)
Tonnage	67 GRT	2,009 GRT
Engine power; manufacturer	2 x 600 hp (441.3 kW); Cummings KTA19-M3 diesel engines	None
Persons on board	2	0

**NTSB investigators worked closely with our counterparts from Coast Guard Marine Safety Detachment Vicksburg, Mississippi, throughout this investigation.**

For more details about this accident, visit [www.nts.gov](http://www.nts.gov) and search for NTSB accident ID DCA19FM018.

**Issued: January 14, 2020**

The NTSB has authority to investigate and establish the probable cause of any major marine casualty or any marine casualty involving both public and nonpublic vessels under Title 49 *United States Code*, Section 1131(b)(1). This report is based on factual information either gathered by NTSB investigators or provided by the Coast Guard from its informal investigation of the accident.

The NTSB does not assign fault or blame for a marine casualty; rather, as specified by NTSB regulation, “[NTSB] investigations are fact-finding proceedings with no formal issues and no adverse parties . . . and are not conducted for the purpose of determining the rights or liabilities of any person.” Title 49 *Code of Federal Regulations*, Section 831.4.

Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by conducting investigations and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report. Title 49 *United States Code*, Section 1154(b).