October 14, 2026 MIR-26-34

Contact of Towing Vessel *Tensaw* with Power Transmission Poles and Subsequent Contact of Towing Vessel *Albert* with Terminal Breakwater

On January 16, 2025, about 1850 local time, the towing vessels *Tensaw* and *Albert* were maneuvering two tank barges loaded with diesel oil into the Galveston Channel after departing Texas International Terminals in Galveston, Texas, when the *Tensaw* contacted two power transmission poles (see figure 1 and figure 2).[1] Subsequently, the *Albert* contacted the terminal's breakwater. There were no injuries, and no pollution was reported. There was no damage to the *Tensaw* or the two barges. Total damages to the *Albert*, power transmission poles, and breakwater were estimated at $1.1 million.



Figure 1. *Left to right*: Towing vessel *Tensaw* underway pushing a barge in April 2023. Towing vessel *Albert* underway in July 2020. (Source: Michael Farrell, marinetraffic.com)

[1] (a) In this report, all times are central standard 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. DCA25FM018).

Casualty Summary

NTSB casualty category	Contact
Location	Galveston Channel, Galveston, Texas 29°18.60' N, 094°49.39' W
Date	January 16, 2025
Time	1850 central standard time (coordinated universal time −6 hrs)
Persons on board	4 (*Tensaw*), 4 (*Albert*)
Injuries	None
Property damage	$1.1 million est. (*Albert* $22,000; power utility infrastructure $900,000; breakwater $127,240)
Environmental damage	None
Weather	Visibility 10 mi, clear skies, light winds, air temperature 52°F, water temperature 54°F, sunset 1744, civil twilight 1811
Waterway information	Harbor; depth 30–45 ft at mean lower low water, flood current 0.9 kts

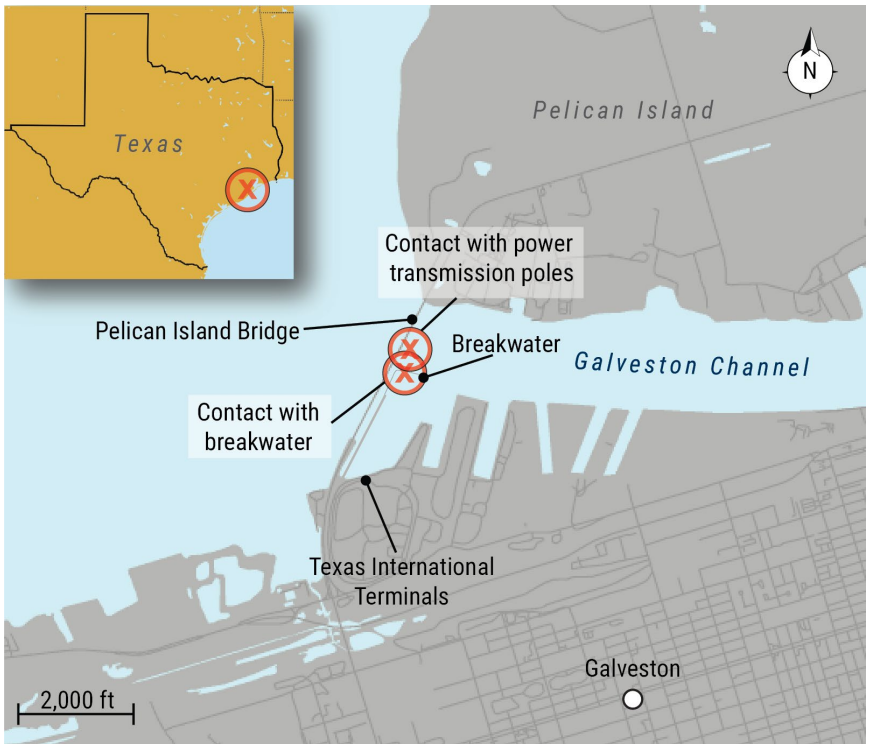


Figure 2. Area where the towing vessels *Tensaw* and *Albert* contacted power transmission poles and a terminal breakwater, respectively, as indicated by circled *X*s. (Background source: Google Maps)

1 Factual Information

1.1 Background

The *Tensaw*, a 65-foot-long towing vessel constructed of welded steel, was built in 2006. The vessel was owned and operated by Enterprise Marine Services (EMS) of Houston, Texas. Two 1,700-hp diesel engines, each connected to a four-bladed, fixed-pitch propeller by a set of reduction gears, provided vessel propulsion. Two steering rudders and four flanking rudders provided steering.[2]

The *Albert*, a 79-foot-long towing vessel constructed of welded steel, was built in 1993, and was also owned and operated by EMS. Three 750-hp diesel engines, each connected to a four-bladed, fixed-pitch propeller by a set of reduction gears, provided vessel propulsion. Two steering rudders and four flanking rudders provided steering. Both the *Tensaw* and the *Albert* operated under the company's towing safety management system (TSMS), and each had a valid US Coast Guard-issued certificate of inspection documenting compliance with Title 46 *Code of Federal Regulations* Subchapter M.

Texas International Terminals (TXIT), a liquid- and dry-bulk facility with three ship docks and three barge berths, was located south of the Galveston Channel in Galveston, Texas. A lift bridge that carried Seawolf Parkway between Galveston and Pelican Island was located to the west of the terminal and was commonly referred to as the Pelican Island Bridge. Wooden fendering protected the bridge piers on either side of the bridge's movable span.

Overhead electrical power lines with a vertical clearance of 85 feet ran parallel to the bridge. The lines, which were owned by CenterPoint Energy, were supported by power transmission poles located in the water about 85 feet to the east side of the bridge. A breakwater, which was added on the west side of the TXIT basin in 2020, ran perpendicular and adjacent to the bridge (see figure 3).

[2] *Flanking rudders* are used to provide greater maneuverability when a towing vessel and its tow are navigating river bends (flanking) with a following current, and to provide enhanced control when operating a vessel astern.



Figure 3. Area surrounding TXIT and the nearby Pelican Island Bridge and power transmission poles. (Vessels shown in image were not present at time of casualty). (Background source: Google Earth)

1.2 Event Sequence

On January 16, 2025, about 1800, the four crewmembers of the towing vessel *Albert* were preparing the vessel to depart the TXIT dock and tow two tank barges, *EMS 345* and *EMS 521*, to Bolivar, Texas. The barges were both 297 long by 54 feet wide with a 10-foot draft. The two barges were loaded with a total of about 2.2 million gallons of high sulfur diesel oil. The two barges were moored box end to the dock to load the diesel oil and secured together in a breasted configuration.[3]

To maneuver the tow away from the TXIT dock and into Galveston Channel, the captain of the *Albert* requested assistance from the towing vessel *Tensaw*, which

[3] A *breasted tow configuration* is one where barges are towed alongside each other.

had a crew of four. The *Albert* captain told investigators that all vessels going in and out of the TXIT facility were required to use an assist vessel (see sections 1.3.3 and 1.3.4). According to the *Albert* captain, he wanted an assist vessel to maneuver the tow away from the dock so that he could make up to the box end of the barges. The *Albert* captain also stated that he was aware of strong currents in the area of Galveston Channel near TXIT and that the nearby power transmission poles had been struck before, and he took both into consideration when planning to get underway.

The *Tensaw* captain agreed to assist. Before getting underway, the captain of the *Albert* called by phone EMS's port captain assigned to the *Albert* to discuss his plan. The port captain approved the plan.

According to the *Tensaw* and the *Albert* captains, the maneuvering plan they agreed upon consisted of the following steps:

1. The *Tensaw* would face up to the rake ends of the loaded barges and back the tow past the breakwater into Galveston Channel while the *Albert* stood by off the starboard side of the tow.
2. Once the tow was in the channel, the *Albert* would push on the tow's starboard side to hold the tow in the current while the *Tensaw* maneuvered the tow so that the box end of the barges faced west.
3. The *Albert* would face up on the box end of the barges (heading east), and the *Tensaw* would release its wires secured to the tow so the *Albert* could push the tow east through the Galveston Channel.

According to the *Albert* captain, conducting the maneuver within the breakwater would have been possible, but it "would've been tight" given the limited space within the breakwater and other vessels moored nearby at the docks.

Before getting underway, the *Albert* captain notified Vessel Traffic Service (VTS) Houston-Galveston of the tow's pending departure.[4] About 1830, the *Tensaw* faced up on the rake end of barges *EMS 345* and *EMS 521* and began to maneuver astern toward the breakwater opening. As planned, the *Albert* was positioned inside the terminal breakwater near the west breakwater. The *Tensaw* backed the tow into the

[4] VTS required participation in the Vessel Movement Reporting System (VMRS) for every vessel engaged in towing of 8 meters (26.2 feet) or more in length while navigating. VMRS is a mandatory reporting system used to monitor and track vessel movements. This is accomplished by a vessel providing information under established procedures as set forth in the areas defined in 33 *Code of Federal Regulations* 161.12. The *Albert* and the *Tensaw* were both VMRS users.

channel at a maximum speed of about 1 knot while the *Albert* stood by off the starboard side of the tow waiting to connect tow wires to the barges.

About 1843, as the *Tensaw* entered the channel, the captain of the *Tensaw* saw that the tow was being set to the west from the current, toward the bridge. The *Tensaw* captain informed the *Albert* captain via VHF radio that he was getting set "really hard" and that he did not have the power to hold position. The *Albert* captain left the tow's starboard side and, about 1844, positioned the vessel to face up on the box end of the tow (see figure 4). He then instructed the tankerman on deck to connect the starboard face wire (made of high modulus polyethylene) to the tow. The tankerman attached the starboard wire to the *EMS 345* while the *Tensaw* and tow continued to be pushed west with the current toward the Pelican Island Bridge and nearby power transmission poles.

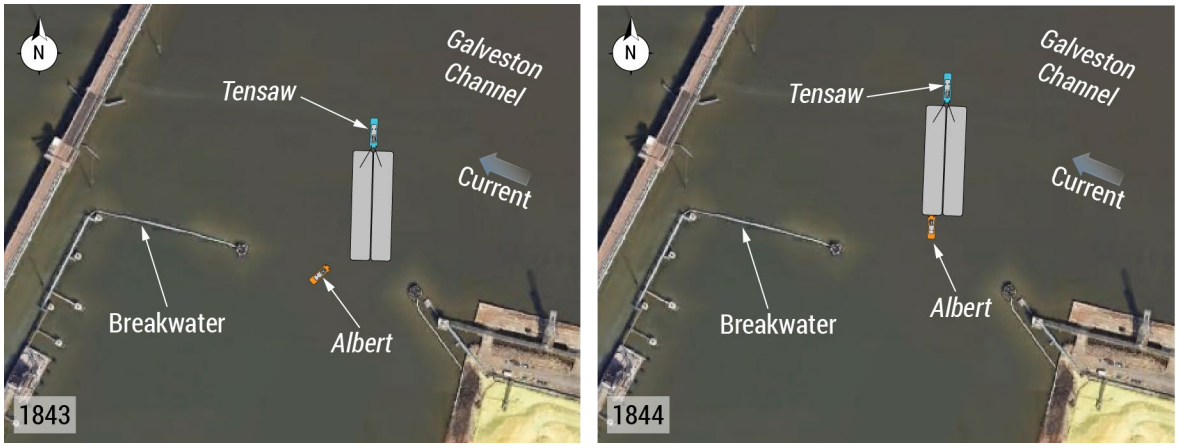


Figure 4. *Left to right*: Approximate positions of vessels about 1843 and 1844. (Background source: Google Earth)

When the *Albert*'s starboard wire was secured to the box end of the barges, the *Tensaw*'s captain informed the *Albert* captain once again that they were "falling pretty quick" and that he needed the vessel "back on the starboard side again to try to push him off the bridge." The *Albert* captain told investigators that this was not feasible as he already had a face wire on the barge. Instead of maneuvering the *Albert* as the *Tensaw* captain requested, the *Albert* captain instructed the tankerman to attach the port wire to the tow as quickly as possible, and the tankerman complied.

With the *Tensaw* connected to the rake end of the barges and the *Albert* secured to the box end, the tow and both vessels were still perpendicular to the current. The captain of the *Albert* used astern propulsion while the captain of the *Tensaw* came ahead on the engines in an attempt to pivot the tow (clockwise) and position the tow in line with the channel and current. During this maneuver, the

Albert's port face wire parted. The broken section of the port face wire eventually fouled the *Albert*'s centerline propeller, causing the centerline engine to shut down.

The *Albert* captain continued backing down on the starboard engine with the starboard wire still attached to the tow. The *Albert* captain stated that he shut down the port engine as a precautionary effort to prevent damage to the port propeller and shaft from the parted wire, leaving him with only the starboard engine and propeller operating. The *Tensaw* and tow continued to be swept westward toward the Pelican Island Bridge and power transmission poles by the 1.3-knot current.

About 1848, the *Tensaw*'s starboard quarter struck one of the power transmission poles east of the bridge (see figure 5). The *Tensaw* captain attempted to steer the vessel away from the pole using full throttle. As he came ahead on the engines, the stern of the *Tensaw* contacted a second power transmission pole to the southwest. Finally, about 1850, the *Tensaw* contacted the wooden fendering protecting the bridge piers, and the *Albert*, which remained secured to the box end of the barges by its starboard wire, contacted the west breakwater of the TXIT terminal. The tow remained in this location as the current pinned the barges in place.

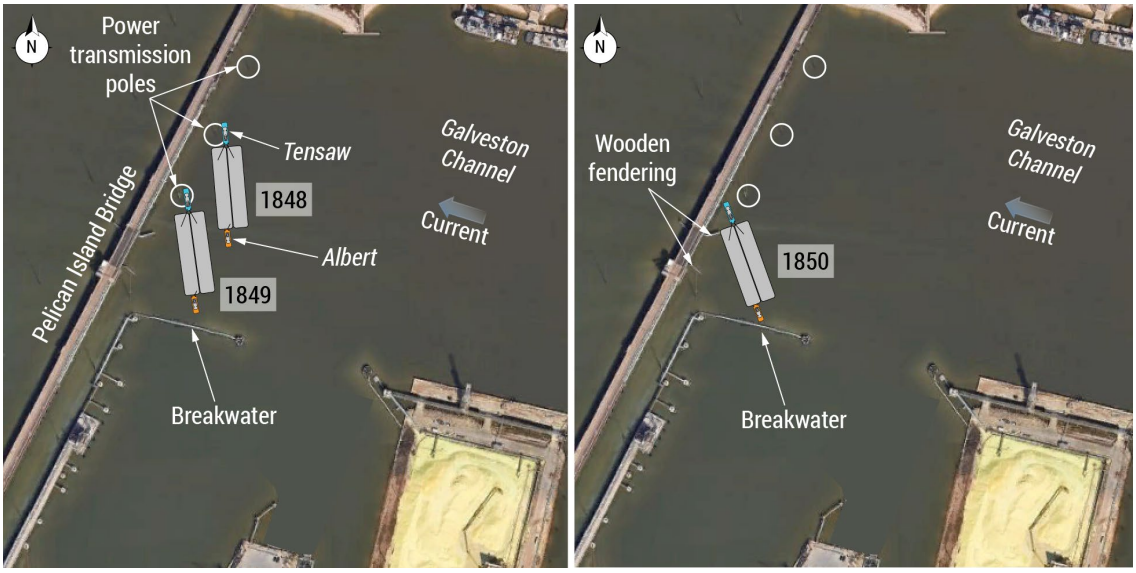


Figure 5. *Left to right*: Approximate positions of vessels at 1848 and 1849, when the *Tensaw* contacted the power transmission poles, and at 1850, when the *Tensaw* contacted the fendering system and the *Albert* contacted the west breakwater. (Background source: Google Earth)

1.3 Additional Information

1.3.1 Damage

The *Albert* sustained damage to its centerline gear box and associated propulsion machinery; damage was estimated at $22,000. The *Tensaw* and barges *EMS 345* and *EMS 521* were not damaged.

The two power transmission poles struck by the *Tensaw* were displaced from their upright positions (see figure 6). Three power lines fell into the waterway, which caused a temporary power outage on Pelican Island. CenterPoint Energy estimated damage to the power transmission poles was $900,000.

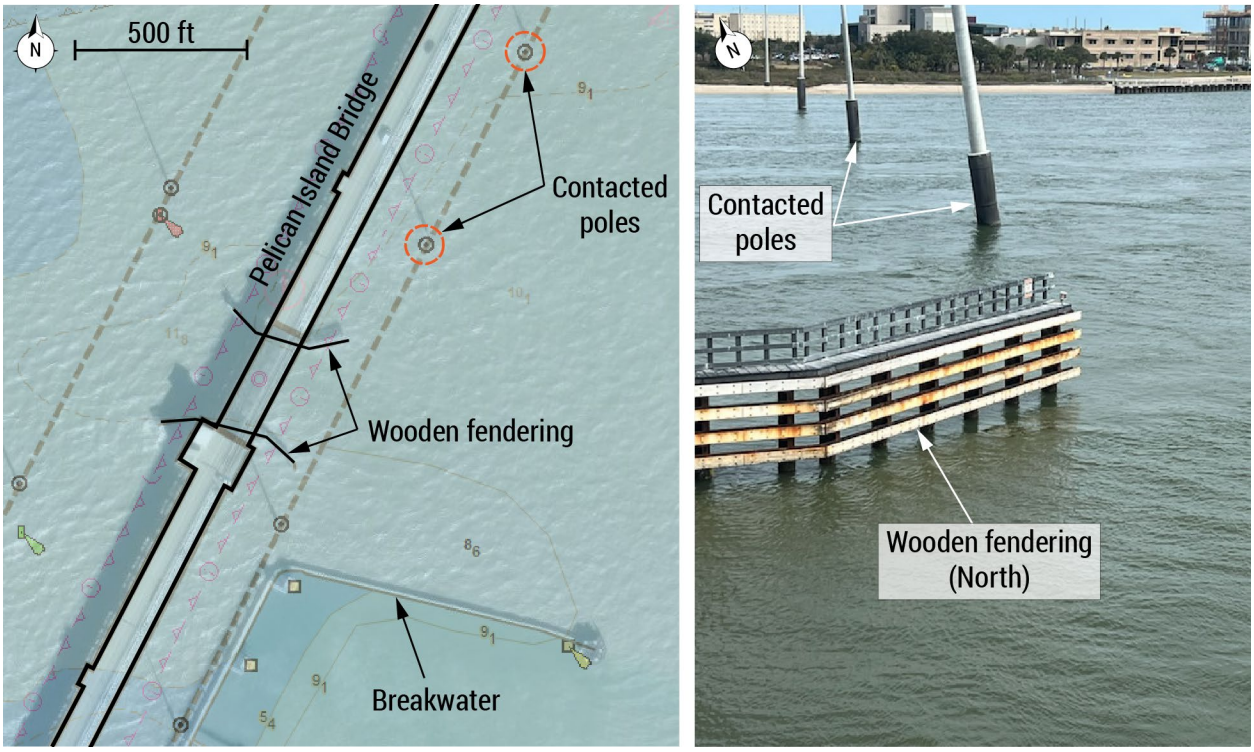


Figure 6. *Left to right*: Infrastructure contacted by the *Tensaw* or the *Albert*. (Background sources: National Oceanic and Atmospheric Administration Electronic Navigational Chart US5TXDB as viewed on Made Smart; Coast Guard)

The concrete piling and support pillar structure of the TXIT breakwater sustained damage estimated to be between $85,000 and $127,240 (see figure 7).



Figure 7. Breakwater pile displaced by the towing vessel *Albert*. (Background sources: Callahan Marine; Enterprise Marine Services)

1.3.2 Personnel Experience

The captain of the *Tensaw* held a valid Coast Guard-issued credential as a master of 500-ton vessels. He had been working with EMS for 5 years, with about 2 years as captain. During his time working for EMS, he primarily operated in the Galveston area and on the Intracoastal Waterway from Brownsville, Texas, to Mobile, Alabama. He told investigators that he had been in and out of TXIT with various size tows "hundreds" of times.

The captain of the *Albert* held a valid Coast Guard-issued credential as a master, unlimited tonnage. He was a credentialed mariner for 25 years, working on various types of vessels. He had also been working with EMS for about 5 years total. He told investigators that he had been in and out of TXIT "maybe 20 times," typically with an assist vessel.

The port captain had about 30 years of experience in the industry, all while employed by EMS. He held a master of towing credential. As port captain, he was assigned to manage 16 vessels, including the *Albert*. (A different port captain was assigned to the *Tensaw*.)

1.3.3 Towing Safety Management System

EMS's TSMS provided procedures for navigating vessels as well as assisting other vessels. The TSMS advised vessel operators to modify or suspend vessel operations and notify the EMS dispatcher and/or port captain "if conditions or

circumstances may potentially endanger the safety of the tow, its cargo, or the vessel crew."

The TSMS procedure for "Assist Boat Guidance" listed the conditions a wheelman on watch should assess in determining the need for an assist vessel. These conditions included docking (arriving or departing) and strong currents, particularly with loaded barges. According to a company representative, EMS policy required the use of an assist vessel for all vessels departing TXIT, irrespective of the prevailing current.

1.3.4 Vessel Traffic Service Directives

On November 22, 2024, VTS Houston-Galveston sent an email to industry stakeholders describing directives for vessels docking or undocking at TXIT.[5] The directives required:

- No arrivals or departures with strung out barges,
- No multi-barge arrivals or departures without an assist vessel(s) of appropriate horsepower, and
- That an assist vessel(s) of appropriate horsepower should be present when the current was greater than 1.5 knots.[6]

The email further stated:

> Vessel operators should take into consideration all necessary parameters for safe transit, such as vessel capabilities, weather conditions, and vessel traffic. The ultimate decision to transit or not, based on the prevailing conditions, is at the Master's discretion.

The electronic chart system in use by both vessels at the time of the casualty displayed the guidance described in the current VTS directives from November 22, 2024.

[5] These directives superseded previous directives issued by VTS in May 2024 in response to the contact of the *LCPL Phillip C George* tow with a terminal dolphin, power transmission pole, and the Pelican Island Bridge. See section 1.3.7.

[6] A *strung-out tow configuration* is one where multiple barges are connected, end to end, in a single line.

1.3.5 Currents Near Galveston Channel

The nearest National Oceanic and Atmospheric Administration tidal current prediction station (Galveston Channel, West End, g09010) was located near TXIT, east of the Pelican Island Bridge, near the entrance to the Galveston Channel. Table 1provides the currents recorded from 1803 until 1857 on January 16, 2025. The prediction station's sensor and data were available at the time of the casualty and listed on the electronic chart system as "New Current Meter" with a hyperlink providing data to be used by the vessel operator during navigation planning.

Table 1. Station recorded data for National Oceanic and Atmospheric Administration Station Galveston Channel, West End (g09010), from departure to time of casualty.

Time	Speed (kts)	Direction (true)
1803	0.89	Westerly (289°)
1833	1.34	Westerly (280°)
1845	1.53	Westerly (284°)
1851	1.31	Westerly (285°)
1857	1.45	Westerly (285°)

1.3.6 Postcasualty Actions

As a result of this casualty and previous casualties in the area, in January 2025, VTS Galveston-Houston sent emails to industry stakeholders to inform them of directives that restricted all inland tow and barge operations in the area of Galveston Channel where the casualty occurred. The VTS directives prohibited barge configuration changes midstream in the channel, including the area of the channel near TXIT.[7] Additionally, VTS prohibited arrivals and departures from TXIT when the flood tide exceeded 0.5 knots, as well as multibarge operations without an assist vessel. VTS also required that tow and barge operations use assist vessels of appropriate horsepower when the flood tide was 0.5 knots or less.

1.3.7 Related Casualties

On July 13, 2023, about 0130 local time, the towing vessel *Duke*, in conditions of darkness, backed out of TXIT with two empty tank barges in a breasted configuration. As the tow entered the channel, it was set toward the Pelican Island

[7] A *barge configuration change* is when a towing vessel or vessels modify the tow's arrangement, including shifting from pulling to pushing or where it is secured to the barges in the tow.

Bridge by a 0.8-knot current. One of the barges in the tow contacted two power transmission poles near the bridge, and the towboat subsequently contacted the bridge, resulting in damage but no injuries or pollution. The National Transportation Safety Board (NTSB) determined that the probable cause of the contact of the *Duke* tow with the power transmission poles and the Pelican Island Bridge was the captain's focus on staying clear of a nearby moored cargo vessel and not recognizing how close the tow was getting to the power transmission poles and bridge.[8]

On May 15, 2024, about 0947 local time, the towing vessel *LCPL Phillip C George* was departing TXIT pushing two loaded tank barges. One of the barges, *MMLP 321*, separated from the tow and contacted a terminal dolphin, one of the nearby power transmission poles, and the Pelican Island Bridge, resulting in damage. There were no injuries, and about 20,000 gallons of vacuum gas oil were released into the water. The NTSB determined that the probable cause of the contact of the *LCPL Phillip C George* tow with the terminal dolphin, power transmission pole, and Pelican Island Bridge was the captain not being able to overcome the effect of the tidal current, which was stronger than predicted, as the strung-out tow exited the protection of the terminal breakwater and entered the channel.[9]

[8] See *Contact of* Duke *Tow with Power Transmission Poles and Pelican Island Bridge, Galveston Ship Channel, Galveston, Texas, July 13, 2023*, MIR-25-25.

[9] See *Contact of* LCPL Phillip C George Tow *with Terminal Dolphin, Power Transmission Pole, and Pelican Island Bridge*, MIR-26-14.

2 Analysis

On January 16, 2025, the towing vessels *Tensaw* and *Albert* were maneuvering two tank barges loaded with diesel oil into the Galveston Channel after departing TXIT in Galveston, Texas, when the *Tensaw* contacted two power transmission poles and the *Albert* subsequently contacted the terminal's breakwater.

Before getting underway, the captains of the *Tensaw* and the *Albert* discussed a plan, which was subsequently approved by the EMS port captain. According to the plan, the *Tensaw* would maneuver the two breasted barges from TXIT into the center of the channel, with the *Albert* standing by to push on the starboard side of the tow to hold it in the current. The *Tensaw* and the *Albert* then planned to work together to reconfigure the tow so that the *Albert* could push it east out of Galveston Channel. The captains of the *Tensaw* and the *Albert* were both aware of the fast tidal currents common in the area of the Galveston Channel near TXIT, and both had experience maneuvering out of TXIT. When the *Tensaw* got the tow underway, with the *Albert* standing by as planned, the current was about 1.34 knots. Because the tow was perpendicular to the current as it came out of the TXIT facility, it was subjected to the maximum force of the current. Consequently, the *Tensaw* and tow were set toward the bridge and power transmission poles, and the *Tensaw* captain was unable to hold the tow in position.

As the tow was set toward the bridge, the captain of the *Albert* deviated from the agreed-upon plan by facing up on the box end of the tow and pushing. He said he did not inform the captain of the *Tensaw* before performing this action. Had the *Albert* captain proceeded as planned, with the *Albert* pushing on the starboard side of the tow, the two towing vessels may have been able to turn the tow parallel to the current and prevent it from continuing toward the bridge and power transmission poles.

Two face wires were used to secure the *Albert* to the box end of the barges. As the tow was pushed west toward the bridge and power transmission poles the *Albert's* port wire parted. When the wire parted, it became fouled in the *Albert*'s centerline propeller, reducing the vessel's maneuvering capabilities. The *Albert* captain discontinued use of the port engine to avoid further damage. With only the starboard engine in use and one wire connected, the *Albert* was severely limited in its ability to assist the *Tensaw* in repositioning the tow and successfully completing the maneuver. Given the *Albert*'s limited maneuverability and the tow's proximity to the bridge and power transmission poles, both captains had no further resources to prevent the *Tensaw* from contacting the nearby infrastructure. When the *Tensaw*'s

stern contacted the bridge fendering, the *Albert* was unable to maneuver away from the breakwater before contacting it.

The *Albert* captain was aware of the current in the area and that the nearby power transmission poles had been struck before. He stated that took this information into consideration when planning transits. Before entering the channel, the towing vessels and barges were inside the boundary of the breakwaters and sheltered from the full current in the channel. The captain's planned maneuver required reconfiguring the tow in the middle of Galveston Channel where the vessels would not be shielded by the breakwater. At the time of the casualty, VTS did not prohibit reconfiguring a tow in the middle of the channel. Additionally, the EMS port captain approved the *Albert* captain's plan. The *Albert* captain told investigators that he could have conducted the maneuver within the breakwater, but "it would have been tight." However, given the *Albert* captain's knowledge of, and experience with, the tidal currents in the area, he should have been aware of the possible effect of the current on the ability to reconfigure the tow once in the channel. The planned maneuver exposed the tow to the risk of being pushed by the current into the bridge.

Including this casualty, within 18 months, the NTSB investigated three casualties involving tows departing TXIT. While the circumstances of each differed, all involved tidal flood current conditions that acted to set each tow in the direction of the Pelican Island Bridge and the power transmission poles. After the casualty involving the *Tensaw* and the *Albert*, VTS updated their policies and regulations for vessels operating near TXIT, limiting operations when flood tides exceeded 0.5 knots and prohibiting barge configuration changes midstream.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the contact of the towing vessel *Tensaw* with power transmission poles and the subsequent contact of the towing vessel *Albert* with the Texas International Terminals breakwater was the *Albert* and the *Tensaw* captains' attempt to reconfigure the tow in the middle of a channel known to have strong tidal currents.

3.2 Lessons Learned

Planning Towing Maneuvers in Restricted Areas

Tidal currents can pose unique hazards for vessels working on or transiting in restricted areas such as harbors or channels. When planning towing operations in restricted waters, where immediate hazards (shallow water, traffic, fixed infrastructure) are present, mariners can ensure better outcomes by thoroughly assessing the impact of high currents and taking mitigating actions, such as changing departure times or using additional and more powerful assist vessels.

Vessel Particulars

Vessel	*Tensaw*	*Albert*
NTSB vessel group	Towing/Barge (Towing vessel)	Towing/Barge (Towing vessel)
Owner/operator	Enterprise Marine Services (Commercial)	Enterprise Marine Services (Commercial)
Flag	United States	United States
Port of registry	Houma, Lousiana	Houma, Lousiana
Year built	2006	1993
Official number	1186668 (US)	999122 (US)
IMO number	N/A	N/A
Classification society	American Bureau of Shipping (Third-party organization)	American Bureau of Shipping (Third-party organization)
Length (overall)	65.0 ft (19.8 m)	78.8 ft (24.0 m)
Breadth (max.)	26.0 ft (7.9 m)	27.4 ft (8.4 m)
Draft (casualty)	9.0 ft (2.7 m)	10.5 ft (3.2 m)
Tonnage	127 GRT	153 GRT
Engine power; manufacturer	2 × 750 hp (559 kW); Caterpillar 3508 diesel engines	3 × 750 hp (559 kW); Cummins QSK19 diesel engines

NTSB investigators worked closely with our counterparts from **Coast Guard Marine Safety Unit Texas City** throughout this investigation.

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable cause of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for any accident or event investigated by the agency. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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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 DCA25FM018. 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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