

# Grounding and Capsizing of Fishing Vessel *Challenger*

On August 7, 2022, about 0700 local time, while transiting along the northwestern shore of Kodiak Island, Alaska, the fishing vessel *Challenger* struck a submerged rock and began taking on water.<sup>1</sup> The captain and three crewmembers used onboard pumps to remove the floodwater, but the pumps were unable to keep up, and the crew abandoned the vessel. A nearby Good Samaritan fishing vessel rescued them. The *Challenger* eventually capsized. There were no injuries, and no pollution was reported. Damage to the vessel was estimated at \$600,000.



Figure 1. Fishing vessel *Challenger* on blocks before the grounding. (Source: Fleenor)

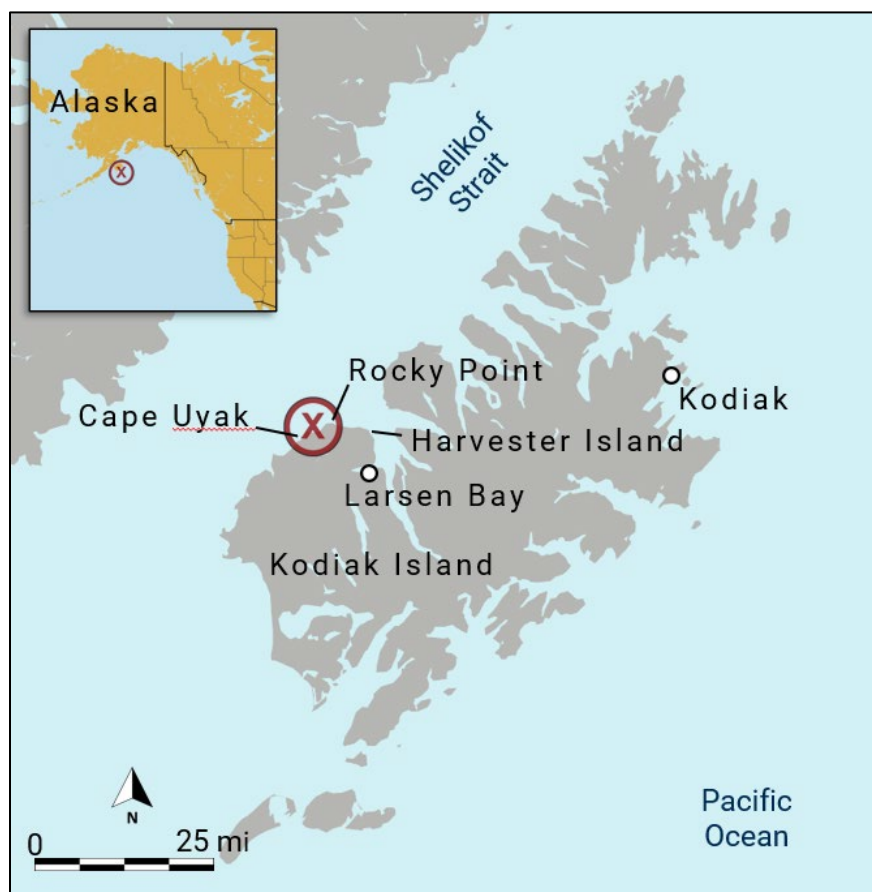
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<sup>1</sup> (a) In this report, all times are Alaska daylight time, and all miles are nautical miles (1.15 statute miles). (b) Visit [ntsb.gov](https://www.ntsb.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA22FM036). Use the [CAROL Query](#) to search investigations.

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<b>Casualty type</b>	Grounding/Stranding
<b>Location</b>	Shelikof Strait, Karluk, Kodiak Island, Alaska 57°38.32' N, 154°19.16' W
<b>Date</b>	August 7, 2022
<b>Time</b>	0700 Alaska daylight time (coordinated universal time -8 hrs)
<b>Persons on board</b>	4
<b>Injuries</b>	None
<b>Property damage</b>	\$600,000 est.
<b>Environmental damage</b>	None
<b>Weather</b>	Visibility 8.5 nm, clear, winds west-southwest 12 kts, gusts 15 kts, seas 4 ft, air temperature 55°F, water temperature 53°F, morning twilight 0528, sunrise 0618
<b>Waterway information</b>	Open strait, rocky coastline, depth 25-30 ft at casualty location.

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**Figure 2.** Area where the fishing vessel *Challenger* grounded, as indicated by a red X. (Background source: Google Maps)

# 1 Factual Information

## 1.1 Background

The *Challenger*, owned and operated by Alward Fisheries since 2007, was a 52.5-foot-long, molded, fiber-reinforced polymer-hulled purse seiner, built in 1989 by LeClerq Marine in Seattle, Washington.<sup>2</sup> Homeported in Homer, Alaska, the *Challenger* was an uninspected commercial fishing vessel that operated in the salmon fishery. Twin 425-hp John Deere diesel engines, each driving a propeller, powered the vessel.

The vessel's main deck consisted of a main cabin with an enclosed pilothouse and an open working deck on the stern. The cabin housed accommodations, a galley, and access to a forepeak berthing area. An empty compartment (void) was beneath the forepeak berthing area and could be accessed via a nonwatertight plywood hatch. Aft of the berthing area was a dry stores room and then the vessel's engine room, both accessed through nonwatertight hatches in the main cabin. Aft of the engine room was the vessel's fish hold and then the lazarette, both of which could be accessed from the working deck.

## 1.2 Event Sequence

On August 7, 2022, about 0500, the *Challenger* got underway from the west side of Harvester Island, where it had anchored the night before. The crew consisted of a captain, who had fished in the area for 15 years, and three deckhands, all of whom had previous fishing experience on the vessel. With the captain at the helm, the *Challenger* headed west at 6 knots in the direction of Cape Uyak (about 12 miles away).

As the vessel rounded Rocky Point, it encountered 4-foot seas and west-southwesterly winds gusting up to 15 knots. To minimize the effects of the prevailing weather on the vessel, the captain attempted to stay in the lee of Cape Uyak by navigating close to shore. The captain told investigators that this area close to shore was also where the fish typically could be found and he was planning to set nets in this area. He said that during the transit, the vessel had a draft of 4.5 feet and was traveling about 200–300 yards (600–900 feet) away from the shoreline in about 25–30 feet of water. To aid navigation, the captain and crew used a desktop computer situated in the wheelhouse loaded with Nobeltec TIMEZERO electronic

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<sup>2</sup> *Purse seiners* use a large wall of netting with floats on the top of the net and a lead line strung through rings at the bottom of the net. The net is deployed using a skiff and then circled around fish as they school or run. Once the fish are encircled, the lead line is drawn tight to close, or "purse," the bottom of the net, preventing the catch from escaping downward. The net is then pulled alongside the fishing vessel, where the fish are loaded into holds.

charting software that incorporated updated National Oceanic and Atmospheric Administration (NOAA) electronic navigation charts (ENCs). The vessel was also equipped with a depth sounder (fish finder) for identifying fish and determining water depth below the keel. The captain told investigators that he knew from experience that there was an uncharted rock somewhere near his intended path along the coast, but he believed it was closer to shore. He said that on previous fishing trips, during a “really low minus tide,” he had seen the rock.<sup>3</sup> The captain told investigators that on the morning of the grounding, it was low tide but not as low as the low minus tide when he had previously seen the rock.

About 0700, with the captain navigating the vessel, the *Challenger* struck a submerged rock and came to a stop. The captain told investigators this was the rock he had previously seen. Deckhand 1, who was in the galley at the time, alerted the other two deckhands, who were in the forepeak berthing area. The captain departed the wheelhouse and proceeded to the forepeak to check for flooding. He discovered water rising through the plywood, nonwatertight hatch on the deck of the forepeak berthing area.

Float-activated submersible bilge pumps of varying capacities were in the dry stores room, engine room, and lazarette. In addition, a 3-inch hydraulic driven (power takeoff from the starboard main engine) pump and a 2-inch electric pump in the engine room could be manually aligned to pump the bilges in the space. Also, a 2-inch portable pump driven by a gasoline engine sat on top of the wheelhouse and could be relocated to pump bilge water.

Deckhand 1 retrieved the portable pump from the top of the wheelhouse, started its engine, and began pumping the water overboard. The captain returned to the wheelhouse and, using his VHF radio, alerted the captain of the nearby fishing vessel *Sea Grace* to his emergency.

Fearing the wave action would create more damage to his vessel as it rested on the rock, the captain backed the vessel off the rock. This caused the rate of flooding to increase. The captain said that his crew told him the water went from “coming in good to coming in like a geyser.” Floodwater began pouring into the dry stores space and engine room through their respective nonwatertight hatches located inside the main cabin. The captain left the wheelhouse and went to the engine room, where he attempted to stem the flooding by lining up and starting the 3-inch hydraulic driven pump and 2-inch electric driven pump.

About 4 minutes after the *Challenger* struck the rock, the captain recognized that the bilge pumps could not keep up with the flooding. He gave the order to abandon the vessel. The crew launched and boarded their engine-powered skiff,

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<sup>3</sup> A *minus tide* is any tide below zero, with zero defined as the local mean lower low tide.

which was regularly used in the fishing operation and easily accessible. The captain said the skiff was safer than the onboard inflatable liferaft, considering the proximity of other fishing vessels in the area. The fishing vessels *Sea Grace* and *Sea Tsar*, which were both within eyesight of the *Challenger*, launched their skiffs to aid the fishermen and arrived on scene in about 5 minutes. Assisted by the other skiffs, the *Challenger* crew salvaged the sein net off the vessel.

The *Challenger* capsized about 10 minutes after the crew abandoned the vessel but remained afloat.



**Figure 3.** The *Challenger's* sein net as crewmembers in the vessel's skiff removed it from the stricken vessel. (Source: Alward Fisheries)

The *Sea Tsar* crew attached a tow line to the capsized *Challenger* to prevent the vessel from sinking and began towing the *Challenger* to Larsen Bay. A couple hours into the tow, the *Sea Tsar* crew transferred the tow line to the *Sea Ern*, another fishing vessel in the area. The *Sea Ern* towed the *Challenger* the remainder of the way to Larsen Bay. The vessels moored at Larsen Bay later that evening, about 14 to 16 hours after the initial flooding and capsizing.

A marine surveyor representing the underwriters of the *Challenger* declared the vessel to be a total loss, with the proposed repair cost exceeding \$600,000.

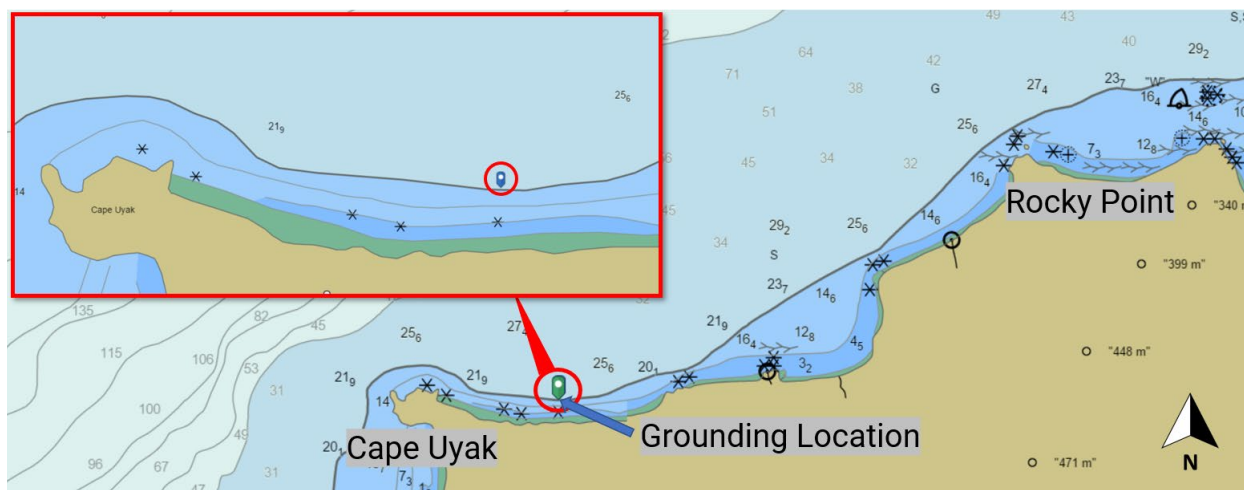


**Figure 4.** Fishing vessel *Sea Ern* using line to prevent the *Challenger* from sinking. (Source: Alward Fisheries)

### 1.3 Additional Information

Investigators could not independently verify the exact location of the rock that the *Challenger* struck. A friend of the vessel's captain traveled to the area of the grounding several days after the casualty and supplied investigators with coordinates he said corresponded with the location of the rock. When plotted on a NOAA ENC, these coordinates corresponded to an area with a water depth of about 30 feet, located about 220 yards (660 feet) seaward of the low tide mark. The ENC showed three rocks, in about 6 feet of water, within about 150 yards (450 feet) of the coordinates supplied to investigators.

The navigation chart for the area the vessel was operating (NOAA chart 16598) indicated that a National Ocean Service hydrographic survey with partial bottom coverage was completed sometime between 1900 and 1939.



**Figure 5.** NOAA ENC for the area of the grounding. Annotations (green and blue markers) show the location of the uncharted rock as reported to investigators. (Background source: NOAA)

Regulations require vessels such as the *Challenger* to carry updated marine charts for the area where they operate and an updated copy of the *United States Coast Pilot* for the area.<sup>4</sup> The *Coast Pilot* for the area in which the *Challenger* was traveling on the morning of the casualty advised, "Give Cape Uyak, Rocky Point and Bear Island berths of 1 mile or over."<sup>5</sup> The captain told investigators that the *Challenger's* electronic charting software was updated. It is unknown whether there was a copy of the *Coast Pilot* on board the vessel.

Stability regulations, including requirements to combat unintentional flooding and the need for a watertight collision bulkhead, did not apply to this vessel due to its age and length.

<sup>4</sup> Title 46 *Code of Federal Regulations* part 28.225

<sup>5</sup> NOAA, *United States Coast Pilot 9*, 40th ed. Chapter 5, 270, last modified July 30, 2023, [CPB9\\_WEB.pdf\(noaa.gov\)](https://www.noaa.gov/publications/United-States-Coast-Pilot-9-40th-edition-Chapter-5-270).

## 2 Analysis

While the fishing vessel *Challenger* was transiting along the northwestern shore of Kodiak Island between Rocky Point and Cape Uyak at low tide, the vessel struck a submerged rock and began taking on water. The crew of the vessel attempted to stem the incoming floodwater by using onboard fixed and portable bilge pumps but ultimately were unsuccessful and were forced to abandon the vessel into their skiff. The vessel soon capsized but remained afloat. Nearby Good Samaritan vessels aided the crew and towed the capsized fishing vessel to Larsen Bay.

The captain of the *Challenger* used an electronic navigation system that incorporated updated NOAA charts for the area he was navigating. The charts, however, did not include the location of the rock. The northwestern coast of Kodiak Island, like many parts of Alaska, is remote with a complex coastline. These areas are not surveyed as frequently as would be a harbor or inland passage. Because of this, mariners should not rely solely on their navigation systems and nautical charts but also use other references, as well as their experience and knowledge of the area. The *Coast Pilot* for the area where the *Challenger* grounded indicated that vessels should give the shore a berth of at least 1 mile, much more than the 220-yard (660-foot) distance from the shore where the vessel was operating when it grounded. Additionally, the captain had knowledge of a rock in the area, having seen it before during a low minus tide. The captain could have marked the uncharted rock on his charting software the first time he observed it but did not. He assumed the risk of operating close to shore so he could be in the area where the weather conditions and fishing were more favorable, which resulted in the grounding.

Maintaining watertight integrity of a vessel is a fundamental principal of safe operations on water. Within the hull, watertight bulkheads are designed to prevent progressive flooding when portions of the hull are compromised in a collision or by other contact (referred to as compartmentalization or subdivision). The *Challenger* was not required by regulations to have watertight bulkheads. However, voluntary standards for uninspected commercial fishing vessels found in Coast Guard Navigation and Vessel Inspection Circular (NVIC) No. 5-86 state that vessels should have a "watertight collision bulkhead between five and fifteen percent of the vessel's length aft from the bow," and that the main machinery space "be bounded by watertight bulkheads which extend up to the working deck."<sup>6</sup> The NVIC also notes, "In practice, it is a good idea to design and maintain all bulkheads watertight."

The hatch between the *Challenger's* forepeak and void was not watertight. If the bulkhead comprising the aft side of the forepeak and void below it on the *Challenger* had met the guidance in NVIC 5-86 and been watertight, the flooding into

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<sup>6</sup> Coast Guard, "Voluntary Standards for U.S. Uninspected Commercial Fishing Vessels," Navigation and Vessel Inspection Circular No. 5-86, August 1, 1986, [No5-86.PDF \(uscg.mil\)](#).



the void would have been contained, and the resulting progressive flooding that led to the vessel's capsizing would likely have been prevented.

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## 3 Conclusions

### 3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the grounding of the fishing vessel *Challenger* was the captain's decision to navigate close to shore in an area known to him to have an uncharted rock. Contributing to the capsizing of the vessel was the lack of a watertight collision bulkhead and subdivision or compartmentalization below the main deck, which allowed for progressive flooding.

### 3.2 Lessons Learned

#### Reporting Uncharted Hazards

In addition to marking hazards on their own charts and charting software, mariners can report issues (errors or omissions) with the National Oceanic and Atmospheric Administration's nautical charts and/or *Coast Pilot* through the Office of Coast Survey's [ASSIST](#) tool.<sup>7</sup> To report an issue such as an uncharted rock, a user can enter the rock's position manually or drop a pin on the electronic navigation chart incorporated into the ASSIST tool. Users can access ASSIST from a computer or mobile device.

Coast Survey aims to follow up with all inquiries within 2 business days. Mariners should contact their regional navigation manager if they have questions about how to report a discrepancy. Contact information for regional navigation managers is posted here: <https://nauticalcharts.noaa.gov/customer-service/regional-managers/index.html>.

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<sup>7</sup> <https://www.nauticalcharts.noaa.gov/customer-service/assist/>

Vessel	<i>Challenger</i>
Type	Fishing (Fishing vessel)
Owner/Operator	Alward Fisheries, LLC (Commercial)
Flag	United States
Port of registry	Falling Waters, West Virginia
Year built	1989
Official number (US)	943644
IMO number	N/A
Classification society	N/A
Length (overall)	52.5 ft (16.0 m)
Breadth (max.)	15.0 ft (4.6 m)
Draft (casualty)	4.5 ft (1.4 m)
Tonnage	36 GRT
Engine power; manufacturer	2 x 425 hp (317 kW); John Deere 6090 AFM 6-cylinder diesel engines

NTSB investigators worked closely with our counterparts from **Coast Guard Sector Anchorage** and **Marine Safety Detachment Kodiak** 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 DCA22FM036. 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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