



National Transportation Safety Board

Marine Accident Brief

Grounding and Loss of the *FV Chevelle*

Accident no.	DCA-12-LM-011
Vessel name	<i>Chevelle</i>
Accident type	Grounding and subsequent loss of vessel (sinking)
Location	North jetty of Yaquina Bay entrance, Newport, Oregon 44° 36.7014' N, 124° 4.8587' W
Date	March 10, 2012
Time	1720 Pacific standard time (universal coordinated time – 8 hours)
Injuries	None
Damage	\$625,000
Environmental damage	Reported 0.25 by 0.5 nautical mile sheen from est. 3,000–4,000 gallons marine diesel fuel, which dissipated due to open water, weather, and seas
Weather and sea conditions	Winds 21–25 knots from the south, clear with visibility 2 nautical miles, air temperature 46° F, water temperature 48° F, west swell approx. 8–10 ft. with occasional breaking waves to 12 ft., tide ebbing with current up to 2.3 knots (rain at time of rescue)
Astronomical data	Sunset 1817, nautical twilight 1920
Waterway characteristics	Pacific Ocean entrance bar between two jetties: mean tidal range 7.2–1.3 ft. at bar entrance; designated by US Coast Guard as “regulated area” subject to heavy swells and rough seas

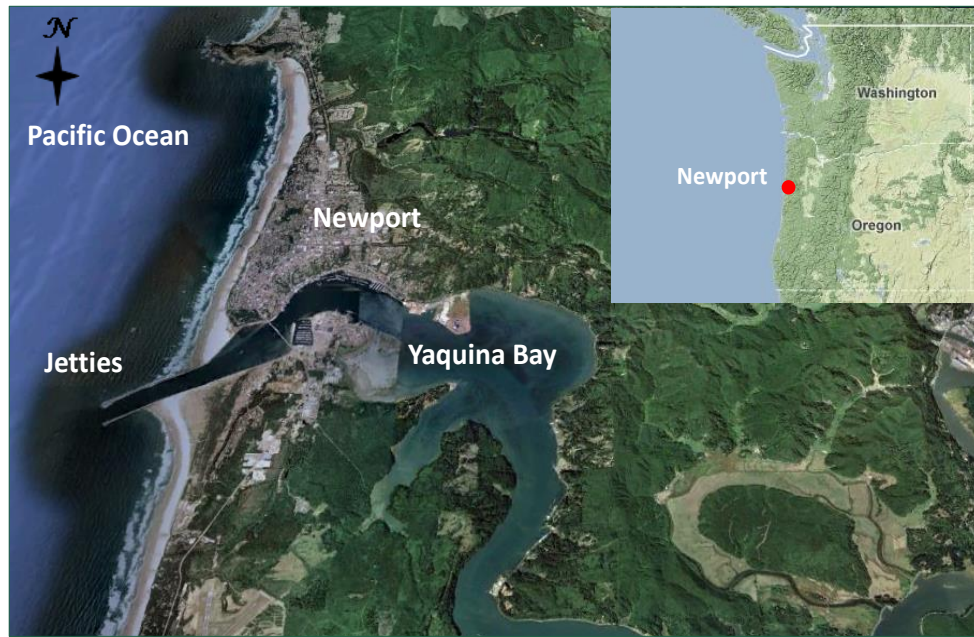
The fishing vessel *Chevelle* was returning to its homeport of Newport, Oregon, when a series of large breaking waves on its stern resulted in a loss of maneuverability and grounding on the Yaquina Bay entrance north jetty on March 10, 2012. The crew was hoisted to safety by

a US Coast Guard helicopter before the vessel broke apart and sank more than a day later, resulting in an estimated loss of \$625,000. No one was injured.



The abandoned fishing vessel *Chevelle* on the Yaquina Bay entrance north jetty the day after grounding. (Photo by Ed Chauvaud)

Grounding and Loss of the Fishing Vessel *Chevelle*



Aerial view of accident location at entrance jetties to Yaquina Bay near Newport, Oregon. Inset map shows location of Newport on the Pacific Ocean. (Satellite images by Google Earth)

Two days earlier, the *Chevelle* had completed a Dungeness crabbing trip near Point Arena, California, and was heading north to unload its catch in Newport, a voyage of about 360 nautical miles. Aboard the vessel were the master and three deckhands, accompanied by a dog. Before departing Point Arena, the master said he checked all bilge alarms and found them to be functional. He said the vessel was loaded with 350 empty crab pots (estimated to weigh 90 pounds each) on the aft deck exterior and 2,500–3,000 pounds of crab in the fully flooded forward hold. The aft hold was empty. At the time of the accident, he estimated the vessel had 3,000 to 4,000 gallons of diesel fuel remaining.



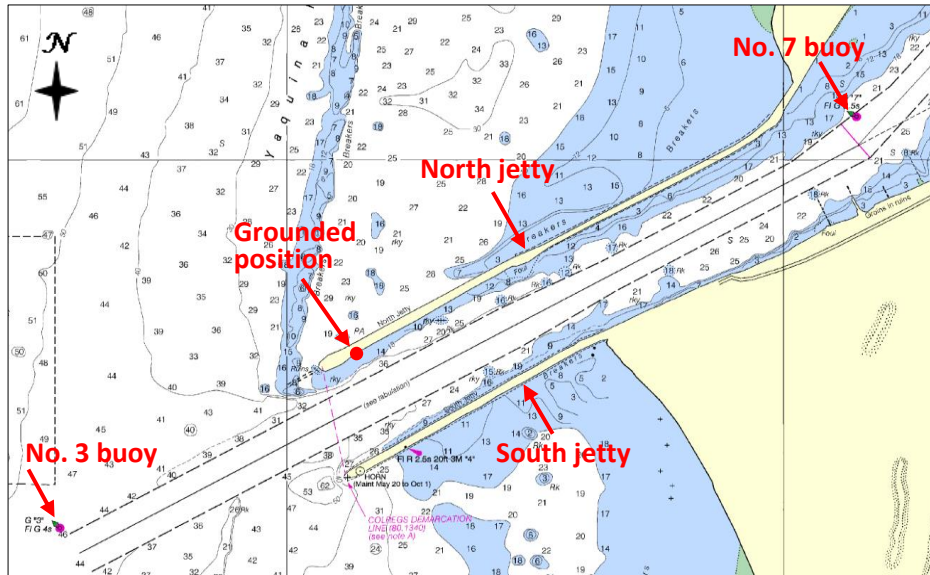
The fishing vessel *Chevelle* entering Newport on a previous voyage. (Photo by Ed Chauvaud)

To reach Newport harbor, vessels must transit from the Pacific Ocean into the Yaquina River and Yaquina Bay. As in many coastal northwest harbors, vessels arriving and departing Newport must cross a “bar” where the deep waters of the ocean meet the shallower waters near a river mouth. North and south jetties 990 feet apart protect the 40-foot-deep entrance channel to Yaquina Bay.

At 1344 on March 10, Coast Guard Station Yaquina Bay reported a 2- to 4-foot swell with occasional 6-foot breaking waves at the jetty tips and restricted “all

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recreational vessels and Uninspected Passenger Vessels (UPV)” from operating in the channel from the middle of the north jetty to the ocean due to hazardous conditions. An excerpt from NOAA chart 18581, Yaquina Bay and River, below, depicts the accident area, and the box below provides more information on bar restrictions. While Coast Guard bar reports provide all mariners information regarding bar conditions, as a commercial fishing vessel, the *Chevelle* was not subject to these bar restrictions.



Excerpt from NOAA chart 18581, Yaquina Bay and River, indicating the north and south jetties, buoys 3 and 7, and the location where the *Chevelle* grounded, shown by a red dot.

attempted to cross a bar. Another was uncertain if the vessel should have crossed but felt the weather was not bad.

As the vessel began the transit, swells were increasing. After the accident, at 1906 hours, the Coast Guard expanded the bar restriction to begin below buoy no. 7 after observing an 8- to 10-foot swell with occasional 12-foot breaking waves between buoy no. 3 and the jetty tips as well as a 6- to 8-foot choppy swell with 10-foot breaking waves at the jetty tips.

Bar Restrictions

The Coast Guard designated the Yaquina Bay Bar and several other northwest coast harbor entrances as regulated areas. *US Coast Pilot 7* notes, “During the summer, when the swell is approximately parallel with the coast, the bar is comparatively smooth. . . . In winter, however, the heavy west swell makes the bar very rough.” Recreational boats and smaller vessels are more likely to broach and capsize when crossing a bar from the ocean because the seas are on the stern, resulting in less control over the vessel. A strong ebb current makes the bar rougher, and small craft are advised to cross during a slack tide. Rules allowing the Coast Guard to correct for hazardous conditions for recreational and uninspected passenger vessels in these areas are found in 33 *Code of Federal Regulations 177*. These regulations state wave heights of 4 feet or greater create an unsafe condition when a vessel is operated within Regulated Boating Areas identified in the code.

The Yaquina Bay Coast Guard Station updates the bar conditions and restrictions advisory every 3 hours based on observation during daylight hours. The advisories are available to mariners via VHF radio broadcast over channels 16 and 22 and through a recorded report accessed by dialing the station’s phone number. The station also posts a rough bar advisory sign 25 feet above the water and activates lighted signals visible to vessels outbound toward the bar. Additionally, a station flagpole flies signal warnings, and an unofficial bar restriction sign is updated at a local marina.

Shortly after 1700, the master turned east at buoy 3 to cross the Yaquina Bay bar and lined up the vessel on the center of the entrance channel. He later stated that although there was some wave and chop on the bar, he had crossed it in worse conditions and did not hesitate to proceed. On the other hand, a crewmember indicated these were the worst conditions in which he had

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Just before the *Chevelle* crossed the jetty tips, the vessel took a large breaking wave over its starboard quarter, resulting in a severe heel and turning the vessel toward the north jetty. The master stated that the crab pots on the stern did not appear to shift at that time and the vessel began to recover. Another wave over the starboard quarter rolled the vessel again, leaving the *Chevelle* heeled further over and down by the head, and it did not recover. A witness said the crab pots appeared to shift. Such a redistribution of weight, along with water on the deck from the breaking wave, could have contributed to the severity of the heel and the inability of the vessel to right itself. The wave left the vessel touching the north jetty boulders bow-first but the vessel was not hard aground.

The master initially attempted to back down but was unable to free the vessel as subsequent waves drove it further against and up onto the jetty. At 1725, the master contacted the Coast Guard for assistance, and two 47-foot motor lifeboats (MLBs), designed for operation in heavy surf, launched to respond. At 1739, the *Chevelle* lost propulsive power, but its generator continued to operate. By 1948, a hull breach caused the vessel engine room and forepeak tank to begin flooding, and a stream of diesel oil was leaking from the hull.

The crew donned survival suits, and the MLBs attempted to tow the vessel off the jetty. The Coast Guard took the vessel under a 100-foot tow but had to cut the line at 1805 because the vessel was hard aground and conditions were hazardous. The rough conditions prevented the MLBs from conducting a rescue, and one crewman jumped off the vessel to the jetty. At 1823, a Coast Guard helicopter arrived, and all four crewmembers and the dog were hoisted to a safe location on the south jetty where they were able to walk ashore.

Bar conditions improved slightly during the next morning although a steep, choppy swell 4 to 8 feet at the tips remained, and the bar restrictions were continued for all recreational boats and UPVs. The rough weather prevented salvage or recovery, and the continued battering of the vessel resulted in a visibly expanding hull breach (see photo at right) and the loss of the vessel's crab pots. A light oil sheen developed on the water, which a Coast Guard overflight reported to be 0.25 by 0.5 nautical miles in area. The Coast Guard Sector Columbia River Incident Management Division (IMD) pollution response team implemented its geographic response plans to protect sensitive areas within Yaquina Bay. In response to the vessel's release of diesel oil, the Coast Guard implemented booming strategies, but the light nature of the oil sheen and adverse weather prevented the pollution response team from recovering oil.



***Chevelle* against the rocks of the north jetty with arrow pointing to crack in hull. (Photo by Coast Guard)**

The weather and bar conditions deteriorated by late afternoon, and the first bar report on the morning of March 12 described occasional breaks of 16 to 18 feet at the jetty tips and winds of 40 to 50 knots. The Coast Guard closed the port to all vessel types due to the weather under a captain of the port (COTP) order. The *Chevelle* was no longer visible after breaking in two and sinking overnight. Although bar and weather conditions varied over the next several days, the

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sunken vessel presented a possible navigation hazard in the channel, and the COTP closure remained in effect until the Army Corps of Engineers completed a channel obstruction sonar survey, and the port opened to traffic with bar restrictions still in place on the morning of March 18.

After the *Chevelle* broke apart and sank, the forward half of the vessel was later located inside the north jetty tip and salvaged in August 2012, but the stern was not located. The monetary loss due to the sinking of the *Chevelle* was estimated to be \$625,000.

As an uninspected vessel, the *Chevelle* was subject to safety regulations at 46 *Code of Federal Regulations* subchapter C but was not required to undergo inspection by the Coast Guard. However, the operator took part in the Coast Guard's voluntary commercial fishing vessel dockside examination program, which verifies the vessel meets basic safety requirements including lifesaving, dewatering, and firefighting. The *Chevelle* was last satisfactorily examined on October 31, 2011, by a Coast Guard inspector. The latest marine survey report on the vessel in November 2011 stated the boat was “in excellent condition” with the engine room in “new condition.”

The master was the primary person at the helm of the *Chevelle* during the transit north. He said he had a few hours of rest the morning of the grounding; however, the quality of that rest was unknown to investigators. After the accident, the master was tested for both alcohol and drugs with negative results. He was in his mid-thirties and had 10 years of experience aboard fishing vessels and 5 years primarily aboard the *Chevelle*. He stated he was very familiar with transiting the Yaquina Bay bar and had done so “hundreds” of times. The other three deckhands had from 2 to 20 years of fishing vessel experience.

Both the *US Coast Pilot* and Station Yaquina Bay MLB personnel stated that mariners could call the Coast Guard to arrange an escort across the bar. No records indicate the master of the *Chevelle* called ahead for such assistance.

Regardless of precautions taken, crossing a bar in large swells is inherently hazardous, and mariners should take steps to reduce risk. When faced with rough conditions, operators might consider heading to another port or remaining offshore. However, Yaquina MLB personnel indicated that conditions during a winter swell were typically worse at the two closest ports to the south, Umpqua and Siuslaw, than at Yaquina Bay. They also said masters of fishing vessels the size of the *Chevelle* often chose to “ride it out” offshore and wait for better conditions. Although the *Chevelle* could have remained offshore, the vessel contained perishable cargo and the weather and bar conditions were forecast to worsen over the next few days, and with the last remaining light of the day the master began his transit of the bar.

Previous Bar Accident Investigations

The NTSB has investigated two other ocean bar accidents on the Oregon Coast in the last decade. In June 2003, the outbound 33-foot charter fishing vessel *Taki-Too*, a UPV, capsized while attempting to cross the bar to the ocean at Tillamook Bay, resulting in the death of 10 passengers and the master (Marine Accident Report NTSB/MAR-05/02). In September 2005, the 38-foot charter fishing vessel *Sydney Mae II*, also a UPV, was approaching the Umpqua River bar from the ocean when it was struck by a large wave on its stern and capsized, resulting in the death of three passengers (Marine Accident Brief, NTSB/MAB-05/04). These reports are available at www.nts.gov.

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Probable Cause

The National Transportation Safety Board determines that the probable cause of the grounding and subsequent loss of the *Chevelle* as it crossed the Yaquina Bay bar was the master's loss of control of the fishing vessel after a series of breaking waves on the stern heeled the vessel to a severe degree from which it did not recover.

Vessel Particulars

Vessel	Commercial fishing vessel <i>Chevelle</i>
Owner/managing owner	Chevelle LLC
Managing owner	Chevelle Fisheries Inc.
Port of registry	Newport, Oregon
Flag	United States
Type	Fish-catching vessel
Built	1968
Official number (US)	513954
Construction	Steel
Length	69 ft. (21 m)
Draft forward/aft	9 ft. (2.7 m)/10.5 ft. (3.2 m)
Beam	10.3 ft. (3.1 m)
Gross tonnage (GRT)	96
Propulsion type	Single engine, 4-blade propeller
Main engine power	Cummins KT19M turbo-diesel, 425 hp (317 Kw) at 1,800 rpm
Steering	Single steel rudder
Service speed	Approx. 9 knots
Cargo	2,500–3,000 lbs. of Dungeness crab and 350 empty crab pots
Persons on board	4 persons and 1 dog

For more details about this accident, visit <http://www.nts.gov/investigations/dms.html> and search for NTSB accident ID DCA12LM011.

Adopted: July 18, 2013

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 49 *United States Code* 1131. This report is based on factual information provided by the US Coast Guard from its informal investigation of the accident. The NTSB did not conduct its own on-scene investigation.