

U.S. Department
of Transportation
**United States
Coast Guard**



Commanding Officer
U.S. Coast Guard
Marine Safety Office

MAILING ADDRESS:

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16732/MC89006613
08 JUN 1990

From: Investigating Officer
To: Commandant (G-MMI)
Via: Commanding Officer, Marine Safety Office Honolulu, HI
Subj: SEA BREEZE PARASAIL, HA 915 CP, CAPSIZING, ON 22 NOVEMBER
1989, IN MOANALUA BAY, OAHU, HAWAII WITH INJURY TO THREE
PASSENGERS BUT NO LOSS OF LIFE

FINDINGS OF FACT

1. Summary

On 22 NOVEMBER 1989, AT 1125 (all times are local Hawaiian Standard times GMT +10), the 28' Uninspected Passenger Vessel used by Sea Breeze Parasail to carry passengers for hire on parasail thrill rides in Moanalua Bay on the south east side of the island of Oahu, Hawaii capsized. There were five passengers aboard, two of which were aloft in the parasail. Three passengers were hospitalized with injuries sustained during the casualty. The vessel was salvaged, and upon repair, returned to service. Subject vessel is not certificated.

2. Vessel Data [see photo log]

Name:	UN NAMED
Registration	HA 915 CP
Service:	Uninspected Passenger Vessel
Length overall:	30.3 feet
Breadth:	8.0 feet; (Max. beam accessible to passengers 6.0')
Depth:	4.25 feet from keel to gunwale
Year built:	1989
Propulsion:	Gasoline Inboard Outboard; Mercruiser 7.4 liter Bravo; 15X19 Propeller
Horsepower:	330 @ 4600 rpm
Hull material:	Single piece molded fiber reinforced plastic; hand laminate, hard chine, blown foam flotation.
Flight deck:	8' X 9'
Winch:	20 hp hydraulic w/pressure loss locking clutch
Sail line:	330' of 3/8" braided dacron with a rated breaking strength of 3750 pounds
Parasail:	24' dia., asymmetrical cut, "Waterbird Standard"

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Owner/Operator: Sea Breeze Parasail
555 West Hind
Honolulu, Hawaii 96821

Licensed Operator: Richard W. Ames
Master Near Coastal (1-1)
#637907 Motor/Steam 25 ton
Issued: Honolulu on 31 May 89.

3. Passengers:

Mr. Atsuro Hosono (Queen's Medical Center - 5 days)
Ms. Noriko Funahashi (Straub hospital - 3 days)
Ms. Midori Yosioka (Straub hospital - 3 days)

[REDACTED]

4. Weather Conditions

National Weather Service forecasts for Oahu coastal waters were for east winds at 20 knots and seas of 8 feet. This forecast remained unchanged from 6 am Monday November 20 until the time of the casualty. Weather conditions on scene at the time of the casualty were variously reported as from 18 to 25 knots steady, clear sky, and 1 to 2 foot of chop.

5. Human Factors

The Licensed operator had no formal training in operating vessels towing parasails. The master was relatively inexperienced. His first exposure to Parasail operations was on the job training as crew starting in late August 1989. He began carrying passengers as master in late September 1989.

Commercial Parasail Corporation of America, the vessel distributor, requires purchasing owner/operators to have their licensed Coast Guard Master complete a 4 day training course in Lake Havasu, AZ. The operator during this casualty did not attend this training.

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Commercial Parasail Corporation of America does not endorse the carriage of more than one passenger at a time aloft in a parasail or operation in wind speeds in excess of 16 mph. Commercial Parasail Corporation of America specifically informed the subject vessel's owner, by letter dated 15 November 1989, that the vessel and its equipment was designed only for solo flying. That tandem flying would result in referral for termination of insurance coverage. The vessel was operated at the time of the casualty with two passengers aloft in the parasail in winds in excess of 16 mph.

Sea Breeze Parasail has no written procedure for assessing weather conditions to determine if operation is to be cancelled or to ensure proper sail size selection for conditions.

Sea Breeze Parasail operates this vessel with three different sizes of sail: a 19' for high wind conditions, a 24' for moderate wind conditions, and a 28' for light breeze conditions. All use a harness arrangement to secure the passenger to the chute.

6. The Casualty

On 22 NOVEMBER 1989, at approximately 1000, Richard W. Ames, was serving as the licensed operator of a 28' Uninspected Passenger Vessel used by Sea Breeze Parasail to carry passengers for hire on parasail thrill rides. He was assisted by one crewmember, Mark S. Hull. That morning, he had already taken a group of passengers for rides on Moanalua Bay, a semi-protected bay on the south east side of the island of Oahu, Hawaii. At 1110, the master embarked five passengers, four women and one man, all of which were Japanese.

The first passengers, a man and a woman were harnessed in tandem to the 24' diameter parasail and were aloft at 1121. At approximately 1125, the vessel was struck 10 to 15 degrees off the starboard bow by a gust of wind which resulted in the vessel's bow being swung to port. The master attempted to place the bow into the wind but was unsuccessful. The vessel was dragged broad to the wind with the sail positioned athwartships.

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In short order, the port rear quarter of the vessel submerged, the vessel rolled to port and subsequently capsized. Two of the three passengers in the vessel had donned Type V "ski-vest" Personal Flotation Devices (PFD). The two passengers who were aloft in a parasail had on Type V PFD's. All five persons in the vessel were thrown into the water at the time of the capsizing. The two persons riding the parasail descended into the water at the time of the capsizing, or shortly thereafter.

The master swam to two of the passengers who had been in the boat, while the crewman swam to the other passenger. At 1128 a parasail vessel operated by Hawaii Kai Parasail rendered assistance. All three passengers were placed in this vessel. At this same time a rubber inflatable boat, operated by Aloha Ocean Sports, picked up the two passengers who had been in the parasail. The man and woman in the parasail and one female passenger riding in the vessel were hospitalized with symptoms of near drowning and shock. The man had additional indications of internal injury. He was treated for five days and released. The women were held over the weekend for observation and released. All of the passengers returned to Japan.

When the vessel was righted, the throttle control lever position was placed in neutral and the hydraulic winch control lever position was set to pay in (see photo log). The vessel was equipped with a hand held VHF-FM radio and a CB radio. This equipment was reported to be in satisfactory operating condition at the time of the incident.

7. Vessel Background

The vessel, known as a Nordic Ascender, is a winch boat, designed and outfitted by Commercial Para-Sail Corporation of America, and manufactured by Nordic Boats both of Lake Havasu, Arizona. The first vessel built of this design was January 1987. Approximately 115 of these vessels have been placed in parasail service. The Nordic Ascender is not fitted with self bailing cockpits.

Commercial Parasail Corporation of America has designed the vessel based on the use of three different sail sizes, all manufactured by Waterbird and distributed by Sportchutes Over Texas:

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- a. 28' diameter, "Jumbo", low wind (0-5 mph) min/max load - 75 to 280 lbs.
- b. 26' diameter, "Magnum", medium wind (0-15 mph).
- c. 24' diameter, "Standard", high wind (10-15 mph), maximum load of 182 pounds.

8. Stability

Parasail Enterprise Inc. commissioned a comparative stability study of the Nordic Ascender using towline pull criteria established in 46 CFR 173.095. The study is attached as enclosure (2). The study showed:

- a. A 24' parasail generates between 1300 and 1800 pounds of pull under normal operating conditions (the subject vessel is routinely operated with two passengers in a tandem harness arrangement with this size chute).
- b. The tow point of the vessel is approximately 8.5 feet forward of the stern drive propulsion. This location increases the likelihood of the vessel being pivoted beam to the wind by a parasail.
- c. With an 1800 pound pull athwartships. at 25 degrees to the horizontal, and six persons aboard, the subject vessel would heel 27.5 degrees.
- d. The heeling moment required to flood the cockpit of the Nordic Ascender is 9,138 ft-lbs (approximately 2500 pounds of pull).
- e. The subject vessel does not meet the standard for residual righting energy established in 46 CFR 173.095 for each vessel equipped for towing.

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CONCLUSIONS

1. That the proximate cause of the casualty was an error in judgement on the part of the vessel operator in that he failed to properly evaluate the effects of the wind gusts on the parasail, resulting in the vessel being pulled onto its side and subsequently capsizing.
2. That a contributing cause was a relatively inexperienced vessel operator that had been poorly trained by operators of Sea Breeze Parasail.
3. That a contributing cause was the operation of the vessel under environmental conditions exceeding both the vessel distributor's and sail manufacturer's recommendations for maximum wind speeds for the sail employed.
4. That a contributing cause was inadequate attention given by the vessel operator to weather observations and forecasts in determining what size of sail to employ or in decisions not to sail.
5. That the rated breaking strength of the line used to tow the parasail allowed it to develop a force that exceeded the residual righting arm of the craft.
6. That the vessel operator may have pushed the winch control lever aft (retrieve) thereby dramatically increasing the heeling moment of the vessel.
7. There is no evidence of actionable misconduct, inattention to duty, negligence, or willful violation of law or regulation on the part of licensed personnel; nor evidence of failure of inspected equipment or material; nor evidence that any personnel of the Coast Guard or of any other federal agency, or any other person contributed to this casualty. Therefore, it is recommended that this casualty investigation be closed.

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RECOMMENDATIONS

1. That the operators of winch operated parasail vessels within Hawaiian waters be provided a copy of this report.
2. That Commercial Parasail Corporation of America and Parasail Enterprise Inc., manufacturers of parasail winch vessels be provided a copy of this report.
3. That the State of Hawaii, Department of Transportation, Harbors Division be provided a copy of this report.
4. That the towing stability criteria found in 46 CFR 173.095, or some similar standard, be applied to any vessel which applies for small passenger vessel certification for parasail activities.
5. That a copy of this report with enclosures, be provided to all Coast Guard district(m) offices for distribution to Marine Safety Offices within their respective districts that have operators conducting parasail activities.
6. That a copy of this report with enclosures, be provided to the Marine Safety Center for inclusion in a parasail reference file for inspected passenger vessels.


M. J. BECHTEL

Encl: (1) CG 2692 dated 24 November 1989
(2) James S. Krogen report on parasail vessel stability
(3) Photo log

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FIRST ENDORSEMENT on Investigating Officer's ltr dtd 04 May 90

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1. Forwarded approved.


G. G. PICHE'