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M/V SAN MATEO: CAPSIZING IN MORRO BAY, CALIFORNIA
ON FEBRUARY 16, 1983, WITH NO LOSS OF LIFE

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16. Abstract <p>At approximately 1000 on February 16, 1983, the small passenger vessel SAN MATEO capsized approximately 300 yards west of the Morro Bay Harbor entrance, tossing all thirty-two (32) persons on board into the Pacific Ocean. All persons were rescued within 20 minutes by the Morro Bay Harbor Patrol and the Coast Guard. A few of the twenty-three (23) children on board sustained minor injuries. Two of the seven adults sustained serious injuries. The surf conditions caused the vessel to break up after it capsized, making it a total loss.</p> <p>This report contains the U. S. Coast Guard Marine Board of Investigation report and the Action taken by the Commandant to determine the proximate cause of the casualty and the recommendations to prevent recurrence.</p>			
17. Key Words Small passenger vessel; inspected; surf; bar warning light; child life jacket; safety orientation; passenger lists		18. Distribution Statement This document is available to the public through the National Technical Information Service, Springfield, Virginia 22151	
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16732/SAN MATEO

NOV 1984

Commandant's Action

on

The Marine Board of Investigation convened to investigate the circumstances surrounding the capsizing and total loss of the M/V SAN MATEO on 16 February 1983 with personnel injuries

The report of the marine board of investigation convened to investigate the subject casualty has been reviewed; and the record, including the findings of fact, conclusions and recommendations is approved subject to the following comments.

COMMENTS ON CONCLUSIONS

1. In concurrence with the board, the proximate cause of the casualty was a set of 3 breaking waves which were higher than the prevailing wave conditions that the SAN MATEO encountered as it was attempting to cross the bar at the entrance to Morro Bay, California. That loss of control of the vessel during the encounter was a contributing cause of the casualty is also concurred with.
2. Conclusions 11, 13, 15, 16, and 23: These conclusions are not adequately supported in the findings of fact; however, they are supported in the record and are concurred with.
3. Conclusion 17: This conclusion is not adequately supported in the findings of fact or the record and is not concurred with. Although the inspector testified that only 28 adult and 3 child life jackets were inspected and passed, the mate indicated that additional jackets were on board. The mate's testimony is supported by the unstamped jackets recovered after the casualty. This incident points out the need for changing the regulations relating to children's personal flotation devices, which is addressed in recommendation 2.

ACTION CONCERNING THE RECOMMENDATIONS

1. Recommendation 1: This recommendation is concurred with. A regulatory project will be initiated to review all of 46 CFR, Subchapter T (small passenger vessels - under 100 gross tons). Included in the review will be consideration of a proposed change to 46 CFR 185.25-1(d) which would require the safety orientation announcement rather than making it optional as is the case now if "instructive placards. . .are provided." This project will also con-

sider the emergency procedure regulations with respect to the provisions relating to donning life preservers to determine if they should be more specific. In addition, to make operators more aware of their responsibility in emergency situations, the provisions of 46 CFR 185.23 will be brought to their attention, citing the SAN MATEO casualty. This action is intended to make both crews and passengers more safety conscious and help insure timely action for all emergencies.

2. Recommendation 2: This recommendation is concurred with. Included in the review of Subchapter T will be consideration of a change to 46 CFR 180.25-5 which would require additional life preservers suitable for children to be carried for each person weighing less than 90 pounds on board a vessel.

3. Recommendation 3: The intent of this recommendation is concurred with. 46 U.S.C. 3502 presently requires certain vessels carrying passengers to keep passenger lists or counts. Seagoing vessels in the coastwise trade, vessels arriving from foreign ports (except Great Lakes vessels), passenger vessels making voyages of more than 300 miles on the Great Lakes (except from a Canadian to a U.S. port) are required to keep a correct list of passengers received and delivered from day to day. The owner, charterer, managing operator, agent, master or individual in charge is required to maintain the passenger list. On small passenger vessels not included in the above categories of vessels that require lists, the master is required to keep a correct count of all passengers received and delivered. Revisions to 46 CFR Subchapter T will include proposed regulations regarding lists and counts on small passenger vessels.

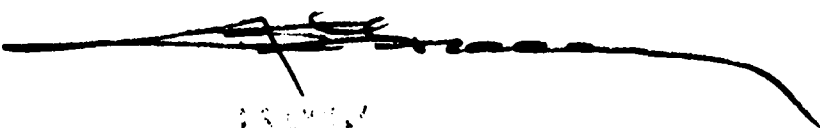
4. Recommendation 4: This recommendation is not concurred with. Regulations pertaining to the operation of a boat under certain conditions in Regulated Boating Area, 33 CFR 177.07, are not applicable to commercial vessels. Had Morro Bay been so designated, it is unlikely that this casualty would have been prevented.

5. Recommendation 5: This recommendation is not concurred with. Subsequent to this accident, the bar warning light was permanently removed from service. This action was taken because no reliable procedure for operating the light could be provided. When the bar warning light was established, the City of Morro Bay indicated that its harbormaster would operate the light. This proved to be impracticable in that there is no continuous watch in the Harbormaster's office. The city has notified the Coast Guard that they could not operate it. The Coast Guard has no unit at Morro Bay that could be responsible for a Bar Warning Light on a round-the-clock basis.

6. Recommendation 6: The intent of recommendation 6 is concurred with. Calcium carbide waterlights are no longer permitted on newer small passenger vessels. The ones that were installed before 1 January 1972 may be retained as long as they are maintained in good condition. Therefore, these waterlights will eventually be phased out of use on small passenger vessels. The

circumstances of this casualty do not warrant a change to the current regulatory exemption for older small passenger vessels. The waterlight in this particular case operated properly and no injuries or further aggravation of the casualty resulted from its deployment.

7. Recommendation 7: This recommendation is concurred with. A copy of this report has been forwarded to the Army Corps of Engineers in Washington, D.C.



U.S. Coast Guard
National Incident Command System
Investigation



16732/SAN MATEO

From: Marine Board of Investigation
To: Commandant (G-MMI)

Subj: M/V SAN MATEO, O.N. 254 831; capsizing with total loss of vessel on 16 February 1983 in Morro Bay, CA., approximately 300 yards west of the harbor entrance, 35°21.39N 120°52.26W, with injuries to crew and passengers, and no loss of life.

FINDINGS OF FACT

1. SUMMARY

At approximately 1000 hours (all times are local Pacific Coast Time) on 16 February 1983, the M/V SAN MATEO, O.N. 254 831, capsized approximately 300 yards west of the Morro Bay Harbor entrance, tossing all thirty-two persons on board into the Pacific Ocean. Due to the instant response and competency of the Morro Bay Harbor Patrol and the Coast Guard, everyone was rescued within 20 minutes of the capsizing. There were 23 children onboard, a few of whom sustained minor injuries. Of the seven adult passengers, two sustained serious injuries. The operator of the vessel was the most seriously injured of the total persons on board. The surf destroyed much of the vessel after it capsized, making it a total loss.

2. VESSEL DATA

Name:	SAN MATEO
Official Number:	254831
Service:	Passenger
Gross Tons:	14
Net Tons:	7
Length:	46'
Breadth:	14.6'
Depth:	4.5'
Year Built:	1948
Propulsion:	Diesel, GRAYMARINE 671
Horsepower:	185
Home Port:	San Francisco, CA.
Owners:	Edward E. Lindquist & Barbara J. Lindquist & Larry V. Hutchison & Susan B. Hutchison all of: 915 Embarcadero Morro Bay, CA 93442
Operator:	Gerald D. Weaver 901 Morro Bay Blvd. Morro Bay, CA. 93442

License: Ocean Operator - #172184
- 100 gross tons
- Pacific Ocean between Point
Conception and Point Sur, CA.,
not more than 100 miles off the
mainland shore
- Date of issue: 10 NOV 80
- Place: San Diego, CA.

Certificate of Inspection: Issued 12 JAN 82 San Francisco, CA (SFC)
Last Inspection: 10 JAN 83, First Reinspection, SFC
Last Drydock: 22 APR 81, SFC

3. The following persons were injured and required hospitalization in excess of 72 hours:

Gerald D. Weaver	Operator	901 Morro Bay Blvd. Morro Bay, CA. 93442
Albert J. Mast	Passenger	220 East Lake Blvd. Dr. Sebring, FL. 33870
Georgia B. Mast	Passenger	220 East Lake Blvd. Dr. Sebring, FL. 33870

Several passengers experienced emotional trauma from the casualty. A few children swallowed diesel fuel while they were awaiting rescue, and received outpatient treatment at three local hospitals.

4. WEATHER CONDITIONS

Weather conditions at the time of the casualty were obtained from the National Weather Service's Coastal Forecast for Point Pinos to Point Conception out 60 miles. Small craft advisories had been issued for hazardous seas. Swells were westerly 7 to 12 feet. Wind was variable to 15 knots, becoming southerly and increasing Thursday; waves 3 feet. Partly cloudy through the night. On scene weather observations by the USCGC CAPE WASH (WPB-95310) estimated clear sky, calm wind, swells northwesterly, and visibility at about 8 miles at 0800. The air temperature was 55° Fahrenheit; sea water temperature was approximately 56°.

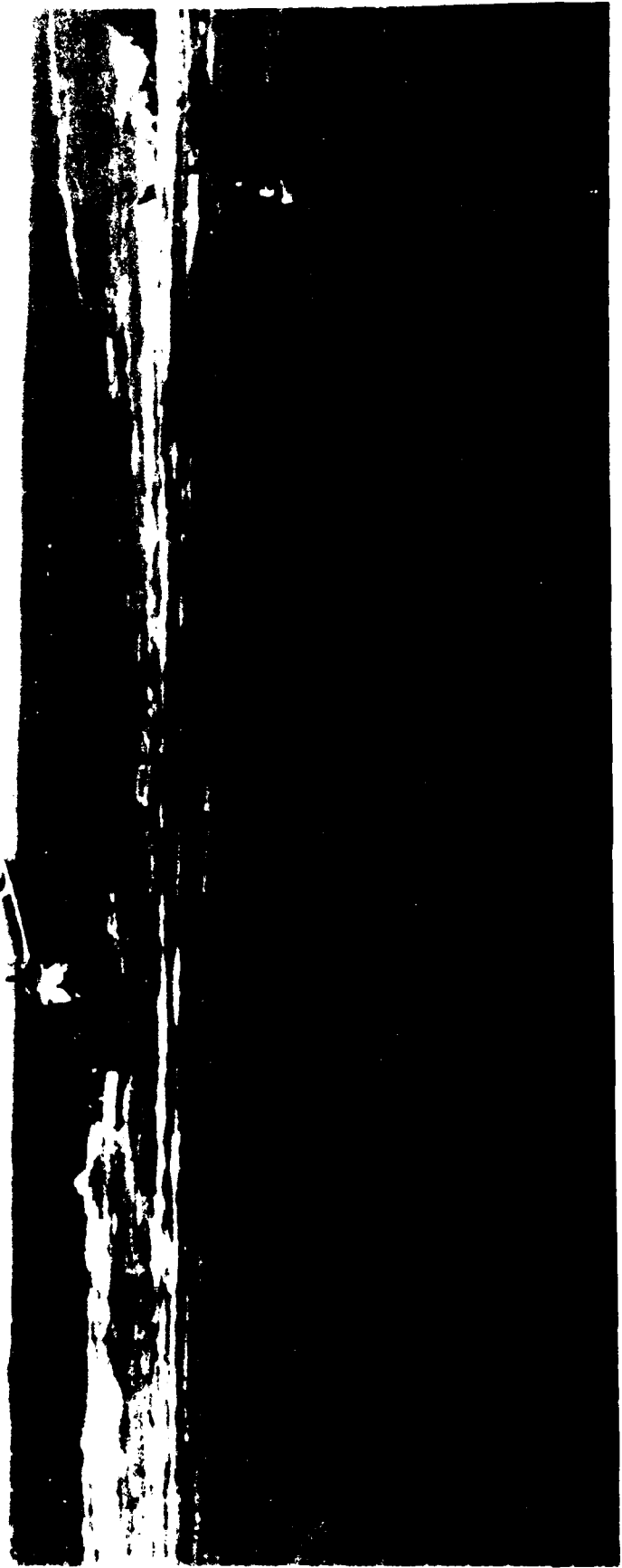
Observations by the Harbor Patrol, the deckhand on the SAN MATEO, and some of the passengers, indicate that the height of waves in the set that capsized the vessel was between 15 and 20 feet.

At the time of the casualty the tide was flooding at the Morro Bay entrance. The preceding low tide was at 0539, at 1.5 feet. Maximum flood was at 1136, computed at a velocity of 1 knot from 310° to a height of 4.5 feet. The predicted state of the tide at 1000 was 4.0 feet.

5. THE CASUALTY

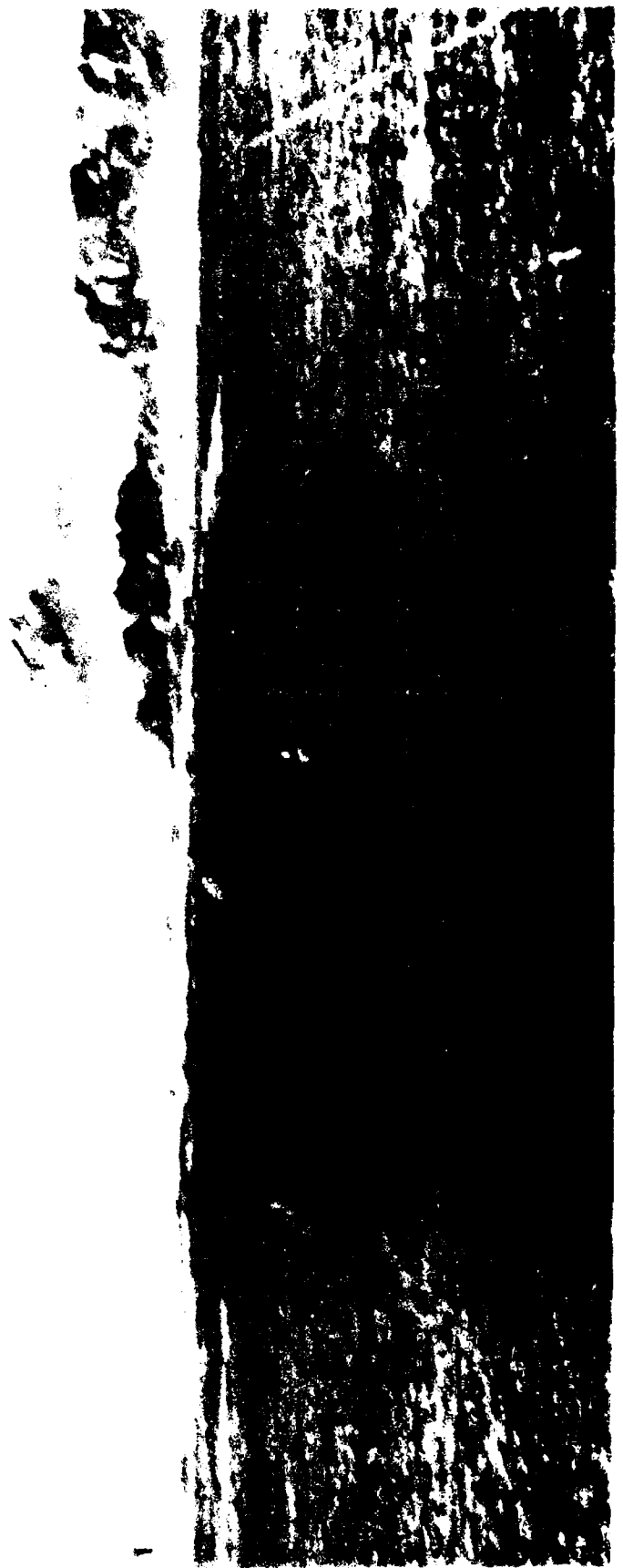
Mr. Tom LAURIE, a resident of Los Osos, CA., was on scene the morning of the casualty. LAURIE, who often surfs at Morro Bay, was equipped with a 35mm single lens reflex camera and a 400mm lens. He photographed the capsizing of the SAN MATEO from a vantage point inside the harbor entrance.

LAURIE's photographs of the capsizing of the SAN MATEO are copyrighted. A selection of these photographs are included here:



2. The 200 MATC was dropped into
the fire, exploding the first time
in 1951. It is an excellent
example of a fire warning light,
but it is not in the present
in a position for people.





1. The ALPAC has completed
one of the necessary steps required
in the shift water. The Harbor Patrol
boat is underway to receive the vessel.



On the morning of 16 February 1983, Ms. Linda HOGABOOM, a teacher at Flamson Middle School in Paso Robles, CA. talked with the operator of the SAN MATEO, Mr. Gerald WEAVER, by telephone, to confirm that the whale-watching trip scheduled a month before was still on for that day. WEAVER told HOGABOOM that the trip was on, but he requested that HOGABOOM try to get her class to Morro Bay earlier than planned. His reason was that the weather might deteriorate later in the afternoon, and the sooner the boat got underway, the sooner it would get back into port. HOGABOOM informed him that she and the class probably wouldn't be able to get there much sooner than planned because the school-bus drivers had their own schedules to meet, but that she would get the group out there as soon as she could.

Both WEAVER and Pete EVANS, the deckhand on the SAN MATEO, were at Graham's Landing (the SAN MATEO's berth) by 0700 that day. WEAVER told EVANS to clear the vessel's deck of all loose gear in preparation for the whale-watching trip. WEAVER himself listened to the weather broadcast on the radio. He also contacted Tom JONES, skipper of the LOT-A-FUN, on VHF radio to find out about local weather conditions and the condition of the bar outside the entrance. The LOT-A-FUN had departed Morro Bay at approximately 0700 that morning for a salmon fishing trip. JONES responded to WEAVER's questions by stating that..."that it was a little bit hazardous but it was worth looking at...". He mentioned to Weaver that a big swell had appeared out of nowhere on the middle of the bar, but that it didn't break until it had passed the LOT-A-FUN. He said that the weather was nice and that he had seen a couple of whales.

Mr. Jim COX, the SAN MATEO's mechanic for the past 2-1/2 years, conducted the operational tests on the vessel that morning before it got underway. COX found no discrepancies. He also sounded the fuel tanks; the port tank was carrying approximately 240 gallons of diesel fuel and the starboard tank held about 175 gallons.

By 0930, the bus carrying Ms. HOGABOOM, six other adults, and 23 children, arrived at Graham's Landing. WEAVER went up into the wheelhouse before the passengers boarded the vessel. EVANS greeted the passengers as they came on board. He told them to find seats on the stern and remain seated there until the vessel was safely out of the harbor. Neither EVANS nor WEAVER gave a safety orientation before the SAN MATEO departed. None of the passengers questioned the crew about lifesaving equipment. HOGABOOM had informed her students, prior to the trip, that if the Captain of the SAN MATEO required them to put on life preservers, they would all do them as required.

Before the vessel departed, there was some difficulty in getting an accurate head count; a few changes had taken place as to children originally scheduled to take the trip and those who came in their place. But at approximately 0945 the SAN MATEO departed Graham's Landing with a total of 32 people on board. Hogaboom was the only person who had a complete list of the passengers.

During the transit through the harbor, Tom JONES of the LOT-A-FUN contacted WEAVER by radio on Channel 16, requesting him to switch to Channel 18, to see

if he had made it over the bar yet. WEAVER responded that he was approaching Buoy #7 at Target Rock. He said that the bar looked lumpy from where he was but that he saw some flat spots. JONES once again told WEAVER that there were whales outside, and then he signed off on Channel 18 and switched his own receiver back to Channel 16. Gerry WEAVER also switched his receiver back to Channel 16.

The transit through the harbor was uneventful. EVANS went back and forth from the bow to the stern to the wheelhouse until the vessel approached the #2 and #3 can buoys just inside the harbor entrance. At that point he went up into the wheelhouse. WEAVER was watching the bar and trying to hold the boat at approximately the same position, about 25 yards inside the buoys. EVANS testified they stayed in this general area for about 5 to 10 minutes, watching the bar. Estimates by other persons range from a couple of minutes to fifteen minutes.

At approximately 0745 that morning, Harbormaster Jim FUNK drove out to the end of Coleman Drive near the north jetty of the harbor entrance, as he routinely does on his way to work, to examine the condition of the bar. He watched the swells come through the entrance for approximately 15 minutes. He saw two waves break at six-minute intervals.

At about 0830 FUNK sent another Harbor Patrol Officer, Jerry MENDEZ, out to observe the entrance again. MENDEZ reported back to FUNK that he had seen one set in 30 minutes break across the entrance.

The Coast Guard has two 95-foot cutters stationed in Morro Bay. LTJG G. Arthur ROBBINS is the commanding officer of the CAPE WASH, and LTJG Robert PARKER is the commanding officer of the CAPE HEDGE. It was an established routine between LTJG ROBBINS, LTJG PARKER, and Jim FUNK that, at least during the winter months, they would get together daily and discuss the condition of the bar. If conditions warranted it, if any of the three men felt that a Broadcast Notice to Mariners should be issued for a hazardous bar condition, then either LTJG ROBBINS or LTJG PARKER would see that one was issued.

The CAPE HEDGE was in drydock in Alameda, CA. on the day of the casualty. The CAPE WASH was moored at the city T-pier in front of the Harbor Patrol Office at 1275 Embarcadero. LTJG ROBBINS arrived at his vessel at about 0730 that morning. He observed the entrance from the pilothouse roof of the CAPE WASH, determining that it was sloppy, i.e., sets were coming through every five to six minutes, about six to eight feet high, just spilling over a bit, not breaking. To him, the bar didn't look terribly pressing, and he had yet to hear differently from the Harbor Patrol.

LTJG ROBBINS stopped by the Harbormaster's Office at approximately 0950 that day to talk with FUNK. At this time, FUNK saw the SAN MATEO passing Target Rock on its way out of the channel. LTJG ROBBINS told FUNK that the SAN MATEO was carrying a load of school children out for a whale-watching trip.

FUNK's immediate response to the sight of the SAN MATEO and the information he had just received from LTJG ROBBINS was to summon MENDEZ; the two of them donned exposure suits and got underway in a 21' Radon patrol boat, CF1505XC. FUNK stated that not only was it routine for the Harbor Patrol to follow all boats out to the entrance in the winter, but also that he was operating on "gut reaction" when he saw the boat and heard that there were children onboard.

MENDEZ, who was at the wheel of the CF1505XC, ran the boat at about 15 knots to catch up with the SAN MATEO. He pulled alongside the SAN MATEO, approximately 30 feet off its port beam; at this point both vessels were attempting to maintain a position between buoys #2 and #3.

MENDEZ tried to raise the SAN MATEO on Channel 16 but was unsuccessful. Both FUNK and MENDEZ could see inside the wheelhouse of the SAN MATEO, and saw that their radio transmission was not being acknowledged.

MENDEZ transmitted on Channel 22 in the blind - his second attempt to raise the SAN MATEO - but he was not acknowledged. During this transmission, MENDEZ broadcasted that the entrance was of a hazardous nature and that there were long periods of flat spots in between.

MENDEZ again tried to transmit on Channel 16; at this time the SAN MATEO had started easing out of the harbor and did not respond. This was the last of the three transmissions that MENDEZ made to the SAN MATEO - the total transmitting time did not exceed one minute.

According to Pete EVANS, the first transmission by MENDEZ was heard on the SAN MATEO as the vessel was moving forward, ready to cross the bar. EVANS stated that MENDEZ requested they shift to Channel 22. Gerry WEAVER, although not committed to crossing the bar at that point, was busy maneuvering the vessel and did not respond to the hailing on Channel 16.

Within seconds, EVANS looked to port, and, noticing the Harbor Patrol boat about 50 feet off to his port side, waved to the officers in it. EVANS turned to look ahead and saw big swells forming outside the sea buoy from the northwest. The SAN MATEO was a few hundred yards inside the sea buoy, and the vessel was now far enough out of the harbor that WEAVER was committed to take the swells as they came. At about this same time, MENDEZ and FUNK saw the same swells forming. MENDEZ saw the first one lift up the sea buoy very sharply, and soon after he made a turn to port with the throttle forward at about 2500 rpm's and headed back into the harbor to avoid being hit by the oncoming waves.

At approximately 1000, the first in the set of breaking waves hit the SAN MATEO. The vessel was about 300 yards west of the harbor entrance. WEAVER met the wave head-on with the throttle full ahead. The wave began its break underneath the vessel as WEAVER backed off the throttle. The vessel fell sharply down the back side of the breaking wave, bringing WEAVER to his knees at the controls.

Pete EVANS helped WEAVER back up to stand before the wheel because the second wave was about to break forward of the vessel. The wave was about 20 feet high and it broke over the bow of the SAN MATEO, throwing both EVANS and WEAVER to the aft portion of the wheelhouse and damaging the forward wheelhouse bulkhead, including the control panel.

The SAN MATEO was in a 20 percent broach after the second wave broke and passed over it. Because the vessel had lost its head into the waves, the third wave broke forward of it on its starboard side. The slamming impact of the surf twisted the vessel into a full broach to port. Within seconds, the vessel capsized.

Two more swells developed and broke over the capsized hull of the SAN MATEO before FUNK and MENDEZ attempted to approach it and commence rescue operations. As they approached they saw people in the water as well as pieces of the vessel, and they noticed that the cabin had broken off from the hull.

Several passengers were clinging to the buoyant apparatus that floated free from the top of the wheelhouse of the SAN MATEO. They provided the victims with an effective means of flotation until rescue.

HOGABOOM, who was clinging to a buoyant apparatus with three of her students, noticed a calcium carbide waterlight, secured by line to the apparatus, burning in the water. The waterlight was floating in diesel oil, and HOGABOOM was afraid that "...it was going to explode in the water...that it would catch the oil on fire...".

A box containing life preservers floated free from the SAN MATEO when the vessel capsized. Peter EVANS swam over to the box and started throwing life jackets to the children in the water. EVANS couldn't put the jackets on the children, but he helped them put their arms through the arm holes and encouraged them to kick and get away from the boat.

MENDEZ did the maneuvering of the CF1505XC during rescue operations, and he also assisted FUNK in pulling people out of the water. They filled their boat with approximately 12 victims and then sped over to the beach on the south side of Morro Rock, and off-loaded the victims. Several people standing on the adjacent bank came down to help the victims.

Prior to capsizing, BMT Jose HERNANDEZ from the CAPE WASH had been watching the movements of the SAN MATEO from the roof of a dock shack alongside which the CAPE WASH was moored. He had taken a pair of binoculars (7X35) with him. It was not unusual for him to do this; quite often he watched vessels go in and out the harbor. He saw the SAN MATEO proceed out to the entrance and stop by Buoy #2 for no more than 5 minutes. He saw a puff of smoke as the vessel proceeded out and turned to the right. He also saw a big wave forming just inside the Sea Buoy, and saw the vessel capsize when it was hit by the third wave.

BMI HERNANDEZ jumped off the shed and onto the CAPE WASH, and requested permission from LTJG ROBBINS to get underway in the AVON, a 13-foot inflatable boat with a fiberglass hull and a 35-horsepower Evinrude engine, and offer assistance to the victims. BMI HERNANDEZ was on scene within 5 minutes after the capsizing; he hauled six victims into the AVON and brought them to the beach near Morro Rock.

MENDEZ and FUNK rescued approximately 10 more victims on their second trip out to the scene of the casualty, and because they could detect no more people in the water, they brought the second boatload straight to the harbor patrol pier. In the meantime, Harbor Patrol Officer Dick ROGERS, assisted by Morro Bay Fireman Mike SISEMORE, got underway in a 25' bartender, CF1172XC, and rescued 4 people from the water.

None of the rescued persons were wearing life preservers, although one boy was clinging to a life preserver when he was rescued.

Emergency assistance to the victims was administered by several agencies including the Morro Bay Fire Department, Morro Bay Police, South Bay Fire Department, San Luis Obispo County Sheriffs, State Park Employees, and Hunder-Liggett Military Installation, which sent a helicopter to the scene.

After all of the people in the water had been rescued, the search for more people was still going on because members of the Police Department, Harbor Patrol, and Coast Guard did not know the total number of people who had been aboard the SAN MATEO. The deckhand, who had helped HOGABOOM take a head count that morning, finally verified that all persons were accounted for, and the search was ended.

Practically all of the victims were then taken to one of three different hospitals in San Luis Obispo: French Hospital, San Luis Obispo General Hospital, or Sierra Vista Hospital. Mr. and Mrs. MAST and Mr. WEAVER were taken to Sierra Vista Hospital. Both WEAVER and Mrs. MAST were admitted to the intensive care unit and were classified as being in extremely critical condition. Mr. MAST was listed as being in serious condition. As of this writing, Mr. WEAVER remains incapacitated from substantial impairment of brain function. The MASTs were released from the hospital.

Thirty adult and three child life preservers were retrieved from the area of the capsized vessel. Their types and numbers were: 21 adult's kapok life preservers, Coast Guard approval 160.002/78/0; seven adult's foam life preservers, Coast Guard approval 160.005/61/0; two adult's balsa wood life preservers, Coast Guard approval 160.004/3/0; and three child's kapok life preservers, Coast Guard approval 160.002/125/0.

Of the total number of retrieved life preservers, 28 adult's life preservers had been stamped approved by a U.S. Coast Guard inspector in January, 1983.

6. VESSEL HISTORY

The SAN MATEO was built by John NOREK in 1948 in Newport Beach, CA. NOREK also built a similar vessel, the SAN CLEMENTE, which was the start of an enterprise he owned along with a partner, Woody PAYNE. The business was called San Clemente Fishing Boats, Inc., and it catered to sportfishermen who fished out of the port of San Clemente, CA. NOREK later built four more boats of similar design to the SAN CLEMENTE and SAN MATEO. The business and the vessels were sold to Robert CALLIS in 1952.

In 1958, San Clemente Fishing Boats, Inc. requested a USCG Certificate of Inspection examination to meet the requirements of 46 CFR Subchapter T. To pass the initial inspection the owners had to correct several minor deficiencies as well as install a watertight collision bulkhead in the vessel. The initial Certificate of Inspection was issued 12 June 1958 by the Marine Inspection Office in Long Beach, CA.

In 1959, Hugh D. GRAHAM bought the SAN MATEO and began carrying passengers out of Graham's Landing in Morro Bay, CA. After his death, his wife Mildred was decreed sole owner in 1967. She remarried and redocumented the SAN MATEO in her new married name - Mildred L. DENNIS. In 1979, DENNIS sold the vessel to the joint tenants - Edward E. LINDQUIST, Barbara J. LINDQUIST, Larry V. HUTCHISON, AND Susan B. HUTCHISON - who retained ownership up until the capsizing on 16 February 1983. In a letter dated 18 February 1983, they abandoned the vessel to the United States of America and its agencies, with full right to dispose of or to salvage it and retain any strippings.

The SAN MATEO remained a certificated passenger vessel up until the time of the casualty. The maximum number of passengers that the vessel was ever able to carry was 40, with 2 crew. The vessel sailed out of Graham's Landing in Morro Bay from the time that Hugh GRAHAM owned it until the capsizing.

The SAN MATEO was stoutly built, of fir and oak, plank and frame, carvel construction. A single engine, Gray Marine 671, 185 horsepower, powered the vessel; the one onboard at the time of the casualty was a rebuilt one, installed in April, 1981. There were two steel fuel tanks with internal baffles that had a maximum capacity of 300 gallons each.

In the 1960's, major alterations to the SAN MATEO included removal of the fixed CO₂ fire fighting system and reconstruction of the deckhouse to include an enclosed wheelhouse and a sheltered space for passengers below the steering station.

Early in 1981, the SAN MATEO suffered damage to its rudder when a stop chain failed, permitting the rudder to swing over hard and catch in the leading edge of the propeller. In April, 1981, while in drydock in Morro Bay, the propeller was pulled and shaved to 29-1/2" by 28" and the rudder was extended ten inches. This work was completed under the cognizance of the Officer in Charge, Marine Inspection (OCMI), San Francisco.

The most recent Certificate of Inspection examination was conducted by LT John KIMBLE from MSO San Francisco on 12 January 1982. There were no major discrepancies at that time. KIMBLE also conducted the first reinspection, on 10 January 1983, and detected one major problem regarding the drydock exam of the vessel. The last drydock had been conducted in April, 1981. The vessel was due to be drydocked in November, 1982. LT KIMBLE issued a CG-835 requirement that the owner either prove a recent drydocking exam or get an extension from MSO San Francisco, and not to carry passengers until that item was resolved. He also left the owner with 12 other deficiencies, 11 of which were to be corrected to the satisfaction of the OCMI by 24 January 1983.

Mr. Edward LINDQUIST, one of the joint tenants of the vessel, signed for the CG-835 on 10 January 1983, and also requested that the passenger load be permanently reduced because the vessel never carried its maximum load as allowed on the Certificate of Inspection. LT KIMBLE then drafted an amendment to the Certificate, stating that the passenger load would be reduced from 40 to 32.

At that reinspection examination, LT KIMBLE stamped and passed 28 adult lifejackets and 3 child lifejackets. Item #11 on the CG-835 issued that date required the owner to provide 6 adult and 1 child lifejackets, which would bring the total number up to 34 adult and 4 child lifejackets necessary for a vessel that carries 32 passengers with 2 crewmembers. Until the vessel obtained the required lifejackets, its passenger load would be reduced to 26.

In January, 1983, the Chief, Inspection Department, MSO San Francisco, reinstated the program to conduct stability tests district-wide so that all small passenger-carrying vessels would have a stability letter.

On 9 February 1983, CWO BROWN went back to Morro Bay for vessel inspection duties. He boarded the SAN MATEO that date to clear some of the CG-835 items issued by LT KIMBLE and also to issue another CG-835 item for the owner of the SAN MATEO to make arrangements within 30 days to conduct a stability test of the vessel. When CWO BROWN left, the stability test requirement was outstanding as well as three items from the 10 January 1983 CG-835, i.e., item #1, the drydock exam (extended until April 1983), item #4, to scrape and coat fuel tanks (the port tank had not been coated yet), and item #11, to provide 6 adult and 1 child lifejackets (passenger load was reduced to 26 until this requirement was met).

Since January, 1981, the SAN MATEO had required Coast Guard assistance on four occasions. On 22 January 1981, the vessel ran out of fuel and had to be towed back to Morro Bay. On 10 June 1982, the vessel suffered loss of electrical power and had to be towed back to Morro Bay. On 7 August 1982, the vessel suffered battery failure and had to be towed back to Morro Bay. On 10 August 1982, a passenger suffering from an apparent heart attack, was medically evacuated from the vessel which was about 4-1/2 miles offshore.

7. WATERWAY INFORMATION

Morro Bay is a shallow lagoon, and the port facilities at the city of Morro Bay, a mile inside the entrance, are used by commercial fishing, sport-fishing, and recreational craft. The dominant landmark in this area is Morro Rock, a tall cone-shaped mound on the north side of the entrance to Morro Bay. A breakwater, extending 600 yards south from the rock, is marked at its outer end by Morro Bay West Breakwater Light (35°21.8'N., 120°52.1'W.), a flashing white light with a 5-second period, 36 feet above the water with a nominal range of 15 nautical miles. It is housed in a white cylindrical structure that includes a radio beacon and a fog signal. A hazardous bar warning light is also at the breakwater light. This flashing white light, 2.5-second period, is controlled by the harbormaster and is activated when hazardous conditions exist on the bar at the entrance to the bay.

The primary light was installed in 1965 by the Coast Guard as an aid to navigation. The hazardous bar warning light was installed by the Coast Guard in 1982 in response to requests from the citizens of Morro Bay after winter storms from October, 1981, through 1982 created hazardous bar conditions that were directly responsible for several boating deaths. The Coast Guard has the responsibility of maintaining both lights.

The white cylindrical housing and both lights are easily damaged during winter storms because they are located at the end of the jetty. The most severe weather occurs between November and March. Since its installation in January 1982, the warning light has been inoperative about one-third of the time during those months when hazardous seas are likely to occur. The seas that extinguish the light are the same ones that make it impossible to get out to the light to effect repairs. On several occasions during the past two winters, Coast Guard personnel have been unable to effect repairs to the light until several days after the hazardous seas subside.

In January, 1983, a storm damaged the structure and extinguished both lights. The Coast Guard Group Office in Monterey attempted to make repairs in early February, but they were prevented from doing so by more storms and extremely hazardous bar conditions. The CAPE WASH then assumed the responsibility of repairing the light as soon as the conditions would permit. CAPE WASH crewmembers went out to the light structure on the morning of 15 February 1983, repaired the primary aid, and took parts of the warning light ashore for rebuilding. By early afternoon the light was rebuilt, but sea conditions had deteriorated and the repair party was unable to reinstall the light on the jetty. On the day of the casualty, the primary aid was operating; the warning light was still inoperative.

Morro Bay Entrance Lighted Bell Buoy #1 (Sea Buoy) is a flashing white light with a 4-second period. It is situated at the harbor entrance (35°21.7N 120°52.4W). This buoy was relocated in May, 1981, after winter storms and four boating deaths at the mouth of the harbor entrance prompted Morro Bay citizens to request everything they could to lessen the hazardous nature of

the entrance. The repositioning of the buoy marked safer access into the harbor.

For the past two winters, the California coast has been hit by severe storms. High, steep, short-period waves in winter take sand from the beach and pull it offshore, which builds a bar. Morro Bay mariners have noted that the bar has become significantly more hazardous in the past two years, and they have also noted shoaling within the channel.

The Army Corps of Engineers constructed the Morro Bay breakwater in the 1940's. Since that time there has been one major rehabilitation program, in 1963, to reconstruct the breakwater due to accumulated damage from severe storms and surf.

The City of Morro Bay has signs posted at several locations inside the harbor warning the public of hazardous waters at the harbor entrance. Most of the signs are located at boat launching areas along the waterfront; one large warning sign, cautioning boaters and urging them to wear life jackets, is posted inside the entrance channel adjacent to buoy #7.

CONCLUSIONS

1. That the primary cause of the casualty was a set of three breaking waves, between 15 to 20 feet in height, that hit the SAN MATEO with such rapidity and force that the vessel broached and capsized.
2. That a contributing cause of the casualty was a loss of control at the operating station of the SAN MATEO when the second wave broke over the vessel.
3. That the SAN MATEO successfully rode up and over the first wave in the set.
4. That after the second wave broke over the bow of the SAN MATEO, neither the operator nor the deckhand had control of the vessel.
5. That the SAN MATEO was not making headway after the second wave broke over it due to the combined effects of cavitation and opposing speed and force of the surf.
6. That the SAN MATEO's heading had fallen well off to port when the third breaking wave approached.
7. That the third wave broke just forward of the SAN MATEO's starboard side, causing it to roll over to port and capsize, throwing all persons overboard.
8. That the operator of the SAN MATEO stopped the vessel's forward motion between buoys #2 and #3 for approximately three minutes to observe the harbor entrance wave conditions before proceeding to sea.
9. That the Harbor Patrol radioed the operator of the SAN MATEO while the vessel was at the entrance between buoys #2 and #3 to advise him of possible hazardous conditions, but the transmissions were not acknowledged.
10. That when the operator first observed the wave set that eventually capsized the SAN MATEO, the vessel was committed to its outbound course and could not turn back.
11. That the surf action and the flood tide carried the capsized vessel and the victims back into the harbor.
12. That the rescue operation was a success due to the immediate response and professionalism exhibited by the Morro Bay Harbor Patrol and the Coast Guard.
13. That the inter-agency "working agreement" for emergencies in Morro Bay was effective in providing immediate emergency medical treatment to the SAN MATEO victims.
14. That there was confusion among the various agencies participating in rescue operations due to the uncertainty about the number of people onboard the SAN MATEO.

15. That the passengers aboard the SAN MATEO assumed that their personal safety was the responsibility of the vessel's crew and that they would be provided with the proper lifesaving equipment if necessary.

16. That prior to getting underway, no public announcement was given concerning safety orientation, nor did passengers have the opportunity to read the instructive safety placards.

17. That there was an insufficient amount of suitable approved life preservers on board the SAN MATEO for the number and size of the passengers it carried on the day of the casualty.

18. That there was evidence of violation of 33 USC 1321 in that a noticeable sheen on the water's surface was created by a spill of diesel fuel from the SAN MATEO. This matter has been forwarded to the Commander, Twelfth Coast Guard District for further investigation under civil penalty proceedings.

19. That adequate warning signs are posted by the City of Morro Bay regarding the hazardous bar conditions at the harbor entrance.

20. That the buoyant apparatus from the SAN MATEO served the purpose for which it was intended.

21. That a burning calcium carbide waterlight, floating in diesel oil on the water's surface, frightened survivors in the water.

22. That the Hazardous Bar Warning Light is sometimes ineffective in its present location because it is frequently subjected to violent surf action that causes damage to it and prevents repair party access.

23. That even though the Hazardous Bar Warning Light was inoperative on 16 February 1983, it would not have been activated prior to 1000 that day.

24. That the Morro Bay Harbor Entrance can be extremely hazardous to traverse, especially in winter.

25. That there has been excessive shoaling immediately outside the Morro Bay Harbor Entrance during the last two years due to the number and intensity of winter storms that have battered the California coast.

26. That there is evidence of misconduct on the part of the operator in that he failed to provide sufficient, suitable, approved life preservers for his passengers on the day of the casualty, and he failed to provide them with an opportunity for safety orientation prior to getting underway. This has been referred to Commander, Twelfth Coast Guard District for action.

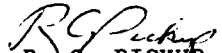
27. That there is evidence that as a result of this casualty the operator is physically incompetent. This has been referred to Commander, Twelfth Coast Guard District.

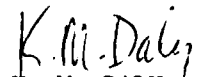
28. That heroic and commendatory actions of military and civilian personnel is worthy of recognition and has been made the subject of separate correspondence.

29. That there is no evidence of failure of inspected equipment, nor evidence that any personnel of the Coast Guard or any other government agency caused or contributed to this casualty.

RECOMMENDATIONS

1. That in addition to providing instructive placards, vessel operators insure that a public announcement is made at the beginning of each trip to afford all passengers knowledge of the stowage location of life preservers, the proper method of donning and adjusting life preservers, the type and location of all lifesaving devices carried on the vessel, and the location and contents of the "Emergency Checkoff List".
2. That the regulations be clarified to insure that vessel operators have on board a number of life preservers suitable for children equal to at least 10% of the number of passengers on board, or such greater number as may be required to provide a life preserver for each child.
3. That the Coast Guard amend the regulations to the effect that all vessel operators be required to record the names of all personnel on board at the time of departure, and keep the list in a safe shore-side location until the vessel completes its trip.
4. That the Coast Guard study the feasibility of using the authority provided by 46 USC 1488 to designate Morro Bay Harbor Entrance as a regulated boating area.
5. That the Hazardous Bar Warning Light be relocated in a protected area visible to both incoming and outgoing traffic.
6. That calcium carbide waterlights not be permitted onboard small passenger-carrying vessels.
7. That a copy of this report be forwarded to the Army Corps of Engineers Headquarters in Washington, D.C.
8. That no further action be taken and that this case be closed.


R. C. PICKUP
Captain, USCG
Chairman


K. M. DALY
Lieutenant (jg), USCGR
Member and Recorder

Encl: (1) CG-2692 SAN MATEO with attachments (a) and (b)

END

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