

Gulf Coast Mariners Association



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GCMA Report #R-305, Revision #1
Date: October 2002

BETRAYED A Call for Increased Congressional Oversight of the United States Coast Guard.

This story started long before September 11, 2001. Although it may be controversial, it should not be caught up in the hustle and bustle that followed the terrorist attack on America. Although it deals with an American icon, the United States Coast Guard, it deals with an arrogance in the fabric of this unique organization that has caused it to rot from within. The folds of this fabric have long been hidden from the general public who are always treated to dramatic rescues at sea by brightly painted boats and cutters. However, this rot has been plainly visible to members of our organization, the Gulf Coast Mariners Association (GCMA).

Who is GCMA? We are a voluntary membership organization representing hundreds of "lower-level" mariners who work on tugs, towboats, small passenger vessels, and oilfield supply vessels in the vast Eighth Coast Guard District encompassing twenty-two states. Our "lower-level" mariners serve on merchant vessels under 1,600 gross tons and, as such, represent a majority of all merchant mariners. GCMA serves as the voice for these mariners!

Our principal concerns in this report deal with the unrealistic approach that permeates Coast Guard official thinking about the number of hours they expect mariners, both their own enlisted active duty personnel as well as commercial mariners, to work on the job on a daily basis. The Coast Guard tries to impress Congress and the general public that they can perform the job of giants on a budget for midgets. While they trumpet as a fact that "human factors" are involved in over 80% of maritime accidents, they fudge the figures when they expect mariners, theirs or ours, to work unrealistically long hours. Whether you call it personnel shortages" or "retention problems," mariners, both Coast Guard and civilian, vote with their feet when Coast Guard officers give their stamp of approval to overly-long workdays.

PART 1: THE MORNING DEW

In the rolling ocean surf after a winter storm, the fiberglass 34-foot sailboat, the MORNING DEW slammed into a rock jetty extending 2½ miles offshore at the entrance of Charleston Harbor, South Carolina. The impact ripped a gash in the boat's hull carrying 49-year old Michael Cornett, two teenage sons and their cousin. At least one person survived the accident for more than four hours and called for assistance that never came.

Following the accident, the National Transportation Safety Board (NTSB) investigated the MORNING DEW accident at the specific request of several Members of Congress who wanted an independent investigation of the accident with particular attention to the U.S. Coast Guard's lackluster response.

A call for help. "During the early morning hours of December 29, 1997, the 34-foot recreational sailing vessel MORNING DEW struck the rock jetty on the north side of the shipping channel into the harbor of Charleston, South Carolina. The boat was later found about 15 yards south of the jetty, submerged in about 12 feet of water. The owner/operator of the vessel and his three passengers, all members of the same family, died as a result of the accident.

"The National Transportation Safety Board determines that the probable cause of the sinking of the recreational sailing vessel MORNING DEW was the operators failure to adequately assess, prepare for, and respond to the known risks of the journey into the open ocean that culminated in the vessel's allision with the jetty at the entrance to Charleston Harbor. Contributing to the loss of life in this accident was the substandard performance of U.S. Coast Guard Group Charleston in initiating a search and rescue response to the accident.

"The major safety issues identified in this investigation are the adequacy of the reasoning and decision-making of the operator; the fatigue and hypothermia suffered by the operator; the adequacy of the reasoning and decision-making of Coast Guard Group Charleston's watchstanders; the adequacy of Coast Guard Group Charleston's personnel, equipment, and procedures for responding to an emergency; and the role of the Coast Guard in providing factual information for safety investigations."⁽¹⁾⁽²⁾ [⁽¹⁾NTSB Marine Accident Report #NTSB/MAR-99/01 adopted October 5, 1999. ⁽²⁾Refer to Ibid., pgs 71-73 concerning an attempted cover-up.]

Minutes after the accident, at 0217, an inexperienced watchstander at the local Coast Guard station heard static being transmitted over his radio. All he could make out were the words "U.S. Coast Guard..." through the static. There was no response when the watchstander answered the anonymous call. Although he could replay the radio call to listen more carefully, he did not do so. Nor did he wake the duty officer and ask for further advice. Only much later was the tape replayed to hear a young boy's voice calling: "Mayday, mayday, U.S. Coast Guard come in."

Four hours after the accident at 06:20, an incoming freighter, the PEARL ACE, reported hearing cries for help as it passed through the jetties entering Charleston. The crew on the freighter alerted the pilot boat PALMETTO STATE that was following astern; although the operator of the pilot vessel was alone at the time, he turned back, searched the area but found nothing. Hearing that pilot boat

had been dispatched, the Coast Guard duty officer⁽¹⁾ decided no further action was necessary. Consequently, when the pilot boat sent a negative report in at 06:48, the Coast Guard took no further action. Around 11:00, the first body washed ashore...about 9 hours after the accident. [⁽¹⁾*Ibid.* p. 35. "Because the duty officers had 24-hour duty schedules, they were allowed to go to bed on premises after 2200 hours but were subject to being called by the watchstander. The Safety Board was unable to find any evidence that the Coast Guard has undertaken any systematic study of communication watchstanders' work hours or conducted a scientific study to assess the optimum work schedule for communications watchstanders. "These are "human factors!""]

As a result of its investigation, the Safety Board made safety recommendations to the U.S. Coast Guard, the Governors of the 50 States and the U.S. Territories, the National Association of State Boating Law Administrators, the U.S. Coast Guard Auxiliary, the U.S. Power Squadrons, the National Safe Boating Council, and the Boat Owners Association of the United States.

The Safety Board recommendations released almost two years after the accident were solid. The safety recommendations generated considerable public attention. In addition, Michael Cornett's widow went before a Congressional panel to plead for better rescue response. Her plea was supported by the NTSB which studied a string of maritime accidents involving the Coast Guard since 1993. "They didn't have to die," Mrs. Cornett told the House panel. "They could have been saved."

Sues the Coast Guard.⁽¹⁾ "A federal judge has found fault with the U.S. Coast Guard's failure to launch an adequate rescue of the stricken sailboat MORNING DEW near Charleston Harbor and has awarded the skipper's widow and sister-in-law damages of \$19 million.

"Libby Cornett of Hiltons, VA, filed the lawsuit for \$35 million following the December 29, 1997 tragedy in which her husband, Michael Cornett, 49, and their sons Michael, 16, and Daniel, 13, were killed, along with a cousin, Bobby Lee Hurd, 14. The four were offshore, moving their 34-foot sailboat MORNING DEW, south when the boat hit the jetty at the entrance to Charleston Harbor and sank.

"In his 64-page opinion, U.S. District Judge David Norton wrote, "This tragedy was avoidable...It was not an angry sea or cruel weather that impeded the Coast Guard's ability to rescue MORNING DEW's passengers. It was human error the impetuous termination of a search and rescue mission approximately 30 minutes before sunrise."

An investigation after the accident revealed that Daniel Cornett radioed a mayday call at 2:17 a.m. A Coast Guard petty officer tried to return the call but got no reply; he later said he did not hear a "mayday" in the scratchy transmission. However at 6 a.m., crew on a commercial vessel entering the harbor reported to the Coast Guard that they heard cries for help from the water. A pilot boat in contact with the Coast Guard conducted a search but found nothing. The Coast Guard did not send out any units until the bodies of two of the boys were found at 11 a.m.

The Coast Guard's attorneys argued that the case should be dismissed because they had no legal obligation to launch a search. Norton, however, ruled that if a search had been conducted, the boys might have been saved. No damages were awarded for the death of the father, Michael Cornett, because it is assumed he was thrown overboard when the vessel hit the jetty and could not have been rescued.

The case has brought national attention to the Coast Guard's antiquated and often malfunctioning distress communications equipment and lack of manpower at coastal stations. The entire national distress communications network is now being upgraded for about \$300 million but won't be completed until about 2006.

"At press time, the Coast Guard was considering an appeal of the decision." [⁽¹⁾*Reprinted with permission from Boat/US Magazine, May 2001, p. 5. Boat/US is a recreational boating membership organization with over 500,000 members.*]

PART 2
THE DEPARTMENT OF TRANSPORTATION
INSPECTOR GENERAL'S REPORT

*[GCMA Comment: The MORNING DEW accident was more than a temporary lapse of attention on the part of one watchstander. The 83-page NTSB report pointed out internal Coast Guard problems of national significance. Members of Congress asked the Department of Transportation's Inspector General to probe the matter in greater depth. Excerpts from his report highlights the service's chronic shortage of personnel excessive work hours violating established policy, inability to "retain" experienced personnel, equipment that is falling apart and other problems. **GCMA concerns:** While Coast Guard officers betray thousands of their own enlisted personnel, they also betray our "lower-level" mariners by their unwillingness to enforce regulations that deal with "human factors" that could protect them from predictable accidents.]*

Office of Inspector General

Audit Report

**AUDIT OF
THE SMALL BOAT STATION
SEARCH AND RESCUE PROGRAM
*United States Coast Guard***

Report Number: MR-2001-094
Date Issued: September 14, 2001

MEMORANDUM Date: SEPTEMBER 14, 2001

Subject: ACTION Report on Audit of the Small Boat Station Search and Rescue Program United States Coast Guard
From: Alexis M. Stefani
Assistant Inspector General for Auditing
To: Commandant
United States Coast Guard

This report presents the results of our audit of the United States Coast Guard's (Coast Guard) Search and Rescue (SAR) Program. The audit was conducted in response to congressional direction contained in the Conference Report accompanying the Department of Transportation's Fiscal Year 2001 Appropriations Act. Our objectives were to review the readiness of the Coast Guard's SAR Program by determining the status, historical trends, and plans for SAR Program staffing, training, equipment, and funding. At the request of Committee staff, this report focuses on the SAR missions and activities conducted by SAR small boat stations (SAR stations).

The draft report was provided to the Coast Guard on July 6, 2001. OIG staff subsequently met with Coast Guard officials on two occasions to discuss the draft report's findings and recommendation. In its July 30, 2001, written response to the draft report, Coast Guard concurred with the recommendation. Coast Guard's response also included comments to clarify what it considered to be misunderstandings and incorrect impressions in the draft report. We modified the report to reflect Coast Guard's comments. Coast Guard's comments and our analysis are included in the Appendix to this report.

Coast Guard concurred with the recommendation to develop and implement a strategic plan for improving SAR station readiness, but did not provide a target date for completing the plan. Therefore, we request that within 30 days, Coast Guard provide an estimated date for completing action on the recommendation.

We appreciate the courtesies and cooperation of the Coast Guard's representatives during this review. If I can answer any questions concerning the report, please call me at (202) 366-1992 or Thomas J. Howard, Deputy Assistant Inspector General for Maritime and Highway Safety Programs, at (202) 366-5630.

Attachment #

EXECUTIVE SUMMARY

INTRODUCTION

This report presents the results of our audit of the United States Coast Guard's (Coast Guard) Search and Rescue (SAR) Program. The audit was conducted in response to

congressional direction contained in the Conference Report accompanying the Department of Transportation's Fiscal Year 2001 Appropriations Act.⁽¹⁾ Our objectives were to review the readiness of the Coast Guard's SAR Program by determining the status, historical trends, and plans for SAR Program staffing, training, equipment, and funding. At the request of Committee staff, this report focuses on the SAR missions and activities conducted by SAR small boat stations (SAR stations). Additional information on our scope and methodology can be found in Exhibit A. [⁽¹⁾House of representatives Report 106-940, page 68.]

BACKGROUND

The Coast Guard's network of SAR stations provides emergency response to mariners in distress. The primary surface response is provided by 188 SAR stations located along more than 95,000 miles of U.S. coastline. These SAR stations are authorized 4,049 personnel operating a fleet of 554 rescue boats. During fiscal year (FY) 2000, SAR stations responded to 40,068 calls for help from recreational boaters and mariners in distress. These responses assisted 54,368 people and saved 3,365 lives. More than 90 percent of all offshore SAR missions occur between 0 and 10 nautical miles of the U.S. coastline.

SAR station personnel also perform a variety of non-SAR missions including law enforcement, recreational boating safety, and marine environmental protection. The SAR Program constitutes about \$443 million or 12.3 percent of Coast Guard's FY 2001 total operating and acquisition, construction, and improvements budgets, a decrease from 15.4 percent in FY 1991.

More than 78 million Americans boarded recreational vessels during FY 1998, a population forecast to increase 65 percent to 129 million by 2020. Between FY 1996 and FY 2000, 3,870 people died in marine-related accidents. A string of high visibility SAR missions that went awry over the past decade, which resulted in the deaths of 5 Coast Guardsmen, highlights the inherent safety hazards associated with SAR operations.⁽¹⁾ [⁽¹⁾Sea King (NTSB/MAR-92105), Duke Luedike (NTSB/MAR-96/01/SUM), and Station Quillayute River (Coast Guard Decision letter dated April 21, 1997).]

RESULTS IN BRIEF

The readiness of the Coast Guards SAR stations continues to deteriorate. Since 1989, Coast Guard studies have identified serious staffing, training, and equipment problems in the SAR Program. Coast Guard has yet to implement many of the studies' recommendations. Our basic findings are:

- staff shortages require boat crews at 90 percent of the SAR stations to work an average of 84 hours per week.
- over the last 5 years, the ratio of trainer to trainee has declined from 5.5 to 1 to 1.5 to 1 increasing the on-the-job training workload for experienced staff and diminishing the overall quality of on-the-job training.

- there is no formal entry-level training for boatswain's mates, who are key SAR staff and comprise one of the largest of the Coast Guard's enlisted job specialties.
- 84 percent of the standard rescue boat fleet inspected by the Coast Guard in FY 2000 were found "Not Ready for Sea" for reasons that were often corrected within two days of the initial inspection.
- Coast Guard has not requested funding to either replace or extend the useful life of its 41-foot utility boat fleet, which is reaching the end of its service life.
- SAR stations operate 293 non-standard boats that are not required to undergo regularly scheduled, formal, readiness inspections.

Recently, Coast Guard began addressing some of these problems. During FY 2001, Coast Guard increased staffing levels at selected stations, increased the budget supporting its 47-foot motor lifeboat fleet, and is expanding training opportunities for station boatswain's mates. While these actions are steps in the right direction, significant additional Coast Guard actions are needed to fully rebuild SAR station readiness.

We recommend that Coast Guard develop and implement a strategic plan to improve SAR station readiness. The plan should provide a clear framework for rebuilding the SAR program by describing specific actions, establishing timeframes for completing those actions, identifying organizations and personnel responsible for the actions, and estimating implementation costs.

In its July 30, 2001, comments to the draft report, Coast Guard concurred with the recommendation to develop a strategic plan for restoring SAR readiness. Coast Guard's response also included comments to clarify what it considered to be misunderstandings and incorrect impressions in the draft report. We modified the report to reflect Coast Guard's comments. Coast Guard also suggested some wording changes in the areas that should be addressed in the strategic plan. These changes were consistent with the intent of our recommendation so we revised the areas as suggested. We are asking Coast Guard to provide a target date for completion of the strategic plan within 30 days.

PRINCIPAL FINDINGS

Staff Shortages Require SAR Station Personnel to Work Long Hours

Ninety percent of the 188 SAR stations operate with staffing levels so low that boat crews must work an average of 84 hours weekly to maintain station readiness. This is due to a lack of station billets as well as billets that either are vacant or are filled with personnel lacking the requisite training and experience to perform their assigned duties. Our analysis of staff levels at 55 stations during FY 2000 showed that of the 1,431 personnel authorized for these stations, 454 (32 percent) of the positions were either vacant (169 positions) or filled by personnel not certified for small boat duty (285 positions). Twelve of the 55 stations had less than

60 percent of the authorized staff level available to perform SAR missions.

Also, the 84-hour workweeks violate Coast Guard's 68-hour workweek standard, which was established to limit fatigue and stress among station personnel. Since FY 1998, rescue boat accidents have increased by 225 percent. Coast Guard's analysis of FY 2000 accidents showed that 56 percent of the accidents occurred as a result of poor judgment and navigation and operator error and, therefore, were preventable.

In its response to the draft report, Coast Guard commented that presently, there are almost no empty positions at SAR stations, and "extra" personnel at some stations. Our draft report recognized that Coast Guard has increased staffing at some stations. However, the increased staffing levels will not, by itself, immediately increase the number of trained and certified personnel at the stations, which was the larger problem identified in our analysis. In concurring with our recommendation, Coast Guard stated that it is developing new operating and staffing methodologies that will provide for a reduced duty week, better development of skills, improved retention of experienced people, and better utilization of training investment.

Experience Level of SAR Station Personnel Has Declined

Since January 1996, the number of senior level personnel (E-4 to E-9) at SAR stations has decreased by 21 percent while the number of inexperienced personnel (E-1 to E-3) has increased by 194 percent. In its July 30, 2001, response to a draft of the report, Coast Guard acknowledged that it has and continues to experience a service-wide decline in experience in certain billet levels and specialties.

Maintaining an appropriate number of senior level personnel is vitally important to the SAR Program because Coast Guard relies on experienced personnel to provide on-the-job training to all new SAR station personnel. Over the last 5 years, the ratio of trainer to trainee has declined from 5.5 to 1.5 to 1. A declining trainer to trainee ratio increases workload for experienced staff and diminishes the overall quality of on-the-job training at SAR stations. Providing on-the-job training is a continuing burden to experienced station personnel.

Boatswain's Mates Lack Formal Entry-Level Training

Boatswain's mates represent one of the largest of the Coast Guard's enlisted job specialties. However, no formal entry-level school exists for active duty boatswain's mates. This is in sharp contrast to other enlisted job specialties. Coast Guard provides 12 weeks of formal entry-level classroom training to become a public affairs specialist and 11.5 weeks of classroom training to become a food service specialist. Boot camp graduates generally qualify as boatswain's mates through 8 to 18 months of on-the-job training.

More than 70 percent of the vacant positions at small boat stations are filled with Coast Guard boot camp (basic training) graduates. These graduates received little training in seamanship and water survival techniques and no training

in small boat handling, SAR techniques, and piloting and navigation, prior to reporting to a SAR station. These skills are learned through an on-the-job training program conducted by senior station staff.

Coast Guard evaluations indicate knowledge gaps for SAR station personnel. Thirty-two percent of 572 utility boat coxswains tested during FYs 1999 and 2000 averaged 69 percent or less on all 5 sections of a written examination. Twenty-eight percent of the senior utility boat coxswains (chief boatswain's mate and boatswain's mates first and second class), who provide the bulk of the on-the-job training to newly arriving station personnel, scored 69 percent or less on the examination.

In its response to the draft report, Coast Guard stated that although its on-the-job training regime was a formal process with specific performance requirements, it has re-instituted an entry-level boatswain's mate school to help accelerate the training and qualification process. Coast Guard noted that it will continue to evaluate the utility of the on-the-job training program versus the cost and quality of formal entry-level classroom training for the remainder of its boatswain's mate training needs.

Standard Rescue Boat Fleet "Not Ready for Sea"

Despite months of advance notice of upcoming inspections, 100 (84 percent) of 119 SAR boats inspected by Coast Guard during FY 2000 were found to warrant a "Not Ready for Sea" evaluation. The "Not Ready for Sea" evaluation means Coast Guard inspectors identified mechanical, structural, or safety deficiencies serious enough to render the boat not fully capable of performing SAR missions.

Inspection results show that Coast Guard's new 47-foot motor lifeboats, which are all less than 5 years old; its 44-foot motor lifeboats, which are all more than 28 years old; and its aging 41-foot utility boats, of which 92 percent are more than 20 years old, are failing to meet Coast Guard readiness standards. The following table contains the inspection results for FY 1999, the last year for which boat-specific data were available.

Breakdown of Rescue Boats Found "Not Ready for Sea" During FY 1999

Boat Type	Age of Boat (Years)	Percentage Found "Not Ready for Sea"
47-Foot Motor Lifeboat	0 to 4	90
44-Foot Motor Lifeboat	29 to 38	100
41-Foot Utility Boat	18 to 28	99

In making a determination that rescue boats were "Not ready for Sea", Coast Guard inspectors identified the lack of watertight integrity as a major problem. Watertight closures failed to completely seal on 79 percent of the motor lifeboats inspected during FY 2000. This is a significant problem because motor lifeboats are designed to roll over and self-right

in heavy surf. The proper operation of watertight seals is needed to ensure survival of the boats in heavy sea conditions.

Coast Guard commented that they are considering design improvements and engineering modifications to help eliminate issues with the watertight closures on the 47-foot motor lifeboat.

In its response, Coast Guard commented that the 84 percent "Not Fully Mission Capable" rate drops to less than 5 percent before the inspection teams leave the stations. (Coast Guard changed the term "Not Ready for Sea" to "Not Fully Mission Capable" in 2000.) According to the Coast Guard, this shows the problems were not as serious as our report indicates. Coast Guard also suggested the high failure rate may say more about zealous enforcement of technical standards than the practical assessment of mission readiness. The 84 percent statistic, however, is based on data from inspections conducted by some of Coast Guard's most experienced small boat personnel using Coast Guard's own inspection standards. The contrast between what the experienced personnel find and are able to quickly correct supports our finding that SAR stations lack personnel with the requisite training and experience needed to identify and correct boat deficiencies.

Utility Boat Fleet Reaching the End of Its Service Life

Coast Guard's fleet of 168 utility boats, which comprise 64 percent of the SAR station standard boat fleet has been in operation over 18 years and is reaching the end of its service life. Coast Guard estimates the utility boats have an average of 3 years of engine life and 8 years of hull life remaining. In addition, failure of structural and mechanical components (cracks in the hull and superstructure, and aging and obsolete propulsion and steering systems), coupled with a scarcity of spare parts (Coast Guard is fabricating parts to keep some of these vessels operating), make the utility boat fleet increasingly difficult and expensive to maintain.

Coast Guard commented that they have a more detailed evaluation underway to determine action needed to keep the 41-foot utility boat operational and will address its plans to replace the 41-foot utility boat as part of its strategic plan for rebuilding the SAR program. However, Coast Guard did not provide a time frame for completing the evaluation or the replacement project.

Non-Standard Rescue Boat Fleet Lacks Headquarters Oversight

In addition to standard motor lifeboats and utility boats, SAR stations have 293 non-standard rescue boats including rigid hull inflatable of various sizes and capabilities. Non-standard rescue boats make up 53 percent of boats operated by SAR station boat crews and carry out roughly 31 percent of SAR missions. In contrast to standard boats, non-standard rescue boats and their crews, are not required to undergo regularly scheduled, formal, readiness inspections.

A July 2000 Coast Guard risk analysis of non-standard rescue boats, initiated in response to an increasing trend in

accidents, identified improper operation as the area of highest concern. While Coast Guard has taken some action to implement the study's recommendations; little progress has been made to develop and implement a nationwide training program or to standardize the non-standard boat fleet. In commenting on the draft report, Coast Guard agreed to include each of the top 10 recommendations from the research and development report as action items in its strategic plan and address them appropriately with new policy, acquisitions, and budget initiatives.

RECOMMENDATION

We recommend the Commandant direct the Assistant Commandant for Operations to develop and implement a strategic plan for improving SAR station readiness, it is important that the plan provide a clear framework for rebuilding the SAR Program by describing specific actions, establishing timeframes for completing the actions, estimating implementation costs, and identifying organizations and personnel responsible for completing the actions. The following areas should be addressed in the strategic plan:

- Staffing levels needed at SAR stations sufficient to meet Coast Guard 68-hour workweek standard,
- Improving experience levels by revising assignment practices at SAR stations,
- The need to ensure personnel assigned to SAR stations are adequately trained and qualified as boat crewmembers before reporting to their SAR station assignments,
- Actions to increase the capacity of the Coxswain "C" school
- Actions to provide training and experience to station personnel to reduce the percentage of SAR boats found "Not Ready for Sea",
- The replacement of the 41-foot utility boat fleet, and

- The "Top Ten Risk Reduction Recommendations" from the Coast Guard Research and Development Center's July 2000 internal study on non-standard boats.

U.S. COAST GUARD AND OFFICE OF INSPECTOR GENERAL COMMENTS

A draft of this report was provided to Coast Guard on July 6, 2001. In addition, we met with Coast Guard and discussed the draft report findings and the intent of the report's recommendation on July 12 and July 20, 2001.

In its July 30, 2001, response to the draft report, Coast Guard concurred with the recommendation. However, Coast Guard's written response did not provide a specific timeframe for completing the strategic plan.

Coast Guard's response also included comments to clarify what it considered to be misunderstandings and incorrect impressions in the draft report. Where appropriate, we modified the report to reflect Coast Guard's comments. Our analyses of Coast Guard's comments are included in the Appendix to this report.

[END OF EXECUTIVE SUMMARY]

DETAILED RESULTS OF THE REVIEW

Staff Shortages Require SAR Station Personnel to Work Long Hours

Ninety percent of the 188 Search and Rescue small boat stations (SAR stations) operate with staffing levels so low that boat crews must work an average of 84 hours each week to maintain station readiness. Eighty-four hour workweeks exceed Coast Guards 68-hour workweek standard established in 1988. The standard was established to limit the fatigue and stress among station personnel.

Table 1. Examples of SAR Stations Experiencing Severe Staff Shortages (FY 2000)

SAR Station	Authorized Positions	Vacant Positions	Number of Staff Not Certified	Number of Fully Certified Staff at Station	Percentage of Authorized Positions Filled With Certified Personnel
Fort Lauderdale, FL	39	7	9	23	59
Belle Isle, MI	29	7	5	17	59
Shinnecock, NY	31	9	4	18	58
Point Allerton, MA	37	2	14	21	57
Marathon, FL	30	7	6	17	57
Two Rivers, WI	14	2	4	8	57
Brunswick, GA	20	4	5	11	55
Fort Pierce, FL	28	7	6	15	54
Port Isabel, TX (South Padre Island)	52	8	17	27	52
Fire Island, NY	35	9	9	17	49
St. Clair Shores, MI	32	14	6	12	38
Venice, LA	25	3	17	5	20
Totals:	372	79	102	191	51

A review of staffing levels during fiscal year (FY) 2000 for 55 stations found 454 (32 percent) of 1,431 positions were either vacant (169) or filled by personnel not certified to perform coxswain or boat crew duties (285).⁽¹⁾ Therefore, 977 personnel (68 percent) were performing the SAR rescue boat duties of 1,431 people. Twelve of the 55 stations had less than 60 percent of the authorized staff level available to perform SAR missions. Table I provides examples of SAR stations experiencing severe staff shortages. [⁽¹⁾*Coast Guard uses Personnel Qualification Standards to train SAR station staff in the duties and responsibilities of rescue boat coxswain, boat crewmember, and boat engineer. These standards are in a checklist format. Individuals must satisfactorily demonstrate proficiency in all checklist items for that particular billet before they can be certified in the Officer-in-Charge of the station. These certifications must be renewed annually.*]

The table shows that during FY 2000, Station Fort Lauderdale had 39 authorized positions but was short 16 people; 7 positions were vacant and 9 were filled by personnel not certified as either boat crewmembers or coxswains. This left the station with only 23 people (59 percent) available to fill-out station duty rosters.

The shortage of certified staff does not allow station management to establish work schedules that comply with Coast Guard staffing standards. According to Coast Guard regulations, stations must be staffed to allow for 68-hour workweeks for optimal operations.⁽¹⁾ [⁽¹⁾*Commandant Instruction M5312.11A, Staffing Standards Manual, September 26, 1988.*]

Staffing standards assume that personnel assigned to SAR stations arrive trained and qualified to perform their assigned duties and responsibilities. More often than not, this is not the case. The lack of experienced and certified personnel is a primary reason why boat crews are standing duty 84 hours per week.

Coast Guard regulations also require SAR station personnel to have a minimum of 10 hours of continuous rest before assuming duty and 10 hours of continuous rest during every 24-hour duty period.⁽¹⁾ These work-rest standards were implemented because of Coast Guard's concern about the inability of boat crews to recognize when their physical and mental states were impacted by fatigue. Neither the Coast Guard's Office of Search and Rescue nor its Office of Boat Forces know if stations working 84-hour weeks are violating this work-rest standard. Although stations unable to meet work-rest standards and requesting additional personnel are required to notify the Chief of the Office of Boat Forces via their Group and District Commanders, no records of such notifications are kept at either the District or Headquarters levels. [⁽¹⁾*Commandant Instruction 5312.16, Boat Crew Utilization, October 16, 2000.*]

Most SAR stations are required to maintain a readiness standard of launching a fully manned and fully mission-capable rescue boat within 30 minutes of the initial call for help. However, a shortfall of experienced and certified coxswains and boatswain's mates is forcing station

managers (officers in charge, executive petty officers, and engineering petty officers) to incorporate themselves into day duty rosters to meet and maintain SAR station readiness. In the 1st District, 48 percent of the stations rely on their management to augment their station duty rosters. At our request, staff assigned to Coast Guard's Office of Boat Forces polled the stations in Coast Guard's 5th and 13th Districts and found that it is a widespread practice for station managers to incorporate themselves into their station duty rosters to meet and maintain readiness. Standing boat crew duty leaves station managers with less time to oversee the training and qualification of junior personnel and to monitor the maintenance and operation of the stations' rescue boats.

Coast Guard commented that the examples of empty positions cited in the report were snapshots in time when the entire Coast Guard was experiencing personnel shortfalls and that today there are almost no empty positions at its small boat stations and, in fact, there are "extra" personnel at some stations. However, increased staffing levels will not, by itself, immediately increase the number of trained and certified boat crewmembers available for duty, which was the larger problem identified in our analysis. Our audit found 32 percent of assigned personnel were not physical at stations or lacked the requisite certification to perform boat crew or coxswain duties.

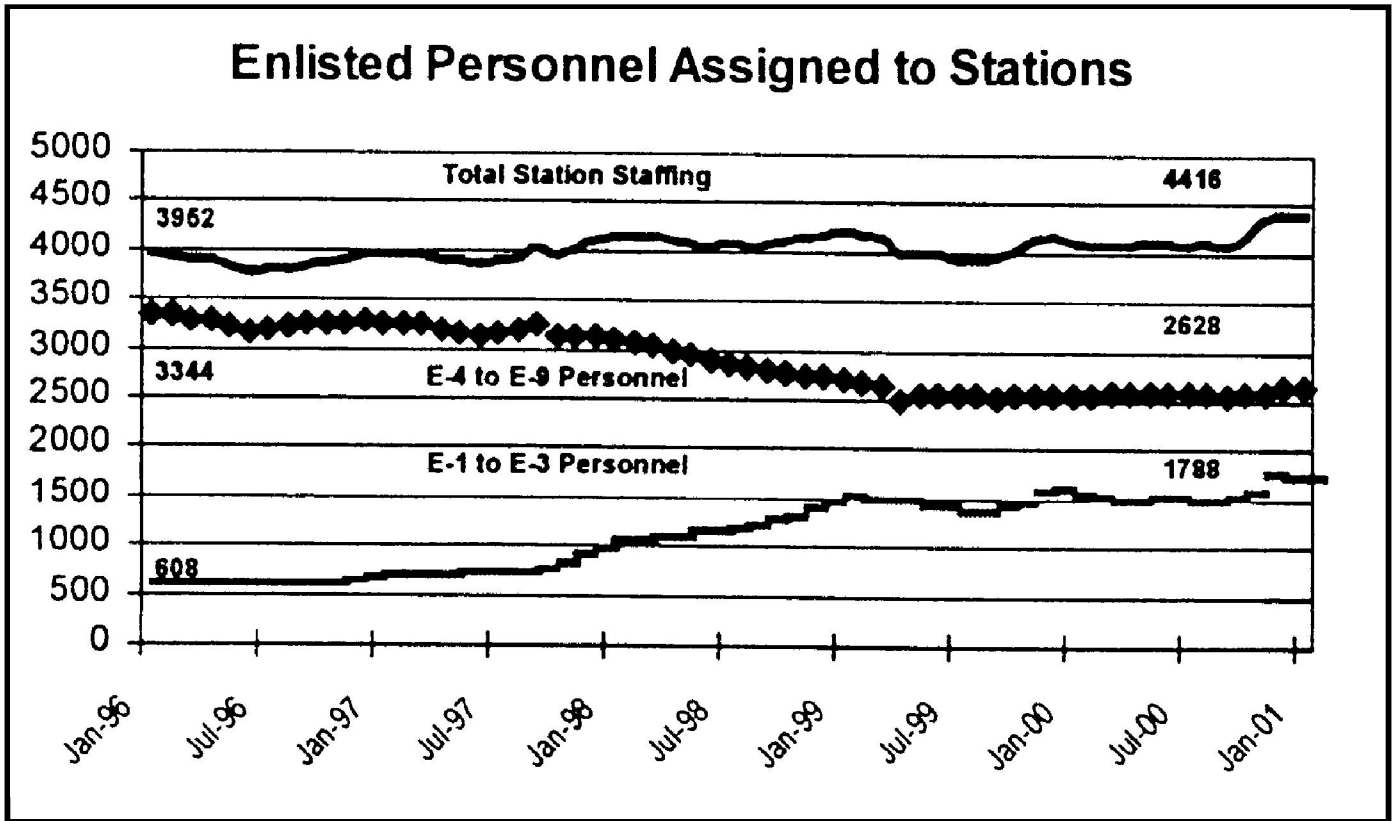
Staff shortages at SAR stations are a longstanding problem. The Coast Guard's 1991 Station Staffing Study found that, on average, station personnel were on duty from 80 to 100 hours weekly. The study noted that long hours on duty resulted in lost time due to illness and injury, and increased attrition levels among duty personnel. The high number of stations employing the 84-hour duty rotation shows that staffing continues to be a significant problem at SAR stations.

Experience Level of SAR Station Personnel Has Declined

Since January 1996, the number of experienced personnel (E-4 to E-9) at SAR stations has decreased by 21 percent while the number of inexperienced personnel (E-1 to E-3) increased 194 percent. On average, this constitutes a loss of 3 experienced people and a gain of 6 inexperienced people per station. Maintaining an appropriate number of senior level personnel is vitally important to the SAR Program because Coast Guard relies on experienced personnel to provide on-the-job training to new personnel. In 1996, the ratio of trainer to trainee was 5.5 to 1. The ratio has since declined to 1.5 to 1.

Coast Guard considers E-4s as apprentices, who require supervision to perform their assigned duties. Coast Guard does not currently track the number of E-4s assigned to stations. It does however track as a group, the number of E-4s to E-6s at stations. Consequently, these statistics are believed to seriously understate the experience drain occurring at SAR stations. Figure 1 shows the staffing trend for enlisted personnel assigned to SAR stations from January 1996 to January 2001.

Figure 1



In its July 30, 2001 response to a draft of this report, Coast Guard acknowledged that experience levels have declined throughout the Service due to personnel leaving Coast Guard for various reasons. The Coast Guard also commented that it has not reduced its experience levels by design.

A review of the personnel assigned to SAR stations during FY 2000 disclosed that station boatswain's mates and machinery technicians (generally E-4 to E-9) completed less than 28 months of their 48 month tour of duty at stations before being transferred. According to Coast Guard's Office of Boat Forces, the shortened tours are due to a number of factors including early separation from duty for personal and medical reasons, retirement, and the lack of senior positions at stations sufficient to allow newly promoted personnel the opportunity to complete their tour of duty. A boatswain's mate second class who is promoted to boatswain's mate first class may be required to accept a transfer if there is not a vacant boatswain's mate first class position at his or her current station.

The high turnover rate among senior station personnel limits the Coast Guard's ability to rebuild its training and experience base. Many SAR stations oversee areas with unique weather, sea, and geographic conditions. Conducting SAR missions in these areas requires a high level of expertise and local knowledge that can take boat crews a year or more to acquire. Because Coast Guard

relies on on-the-job training to pass on basic skills, local knowledge, and SAR expertise to its junior personnel, a high turnover rate among the more experienced station personnel can seriously disrupt the continuity and quality of SAR station training.

Increasing the average SAR station tour of duty to 4 years could mitigate many of the problems associated with declining experience levels. Further, increasing the number and seniority of boatswain's mates' billets at stations to ensure there are enough certified coxswains on hand to meet Coast Guard readiness standards would also increase the overall experience levels at SAR stations.

Boatswain's Mates Lack Formal Entry-Level Training

Boatswain's mates represent one of the largest of the enlisted job specialties in the Coast Guard, accounting for 65 percent of the coxswains and boat crewmembers assigned to stations. However, no formal school exists for active duty boatswain's mates. This is in sharp contrast to other enlisted job specialties in the Coast Guard, which require weeks of formal training to prepare personnel for their job specialty. Coast Guard provides 12 weeks of formal classroom training to develop public affairs specialists and 11.5 weeks of training for food service specialists. Table 2 illustrates the formal Coast Guard training provided in the various other enlisted career specialties.

Table 2—Coast Guard Enlisted Career Fields and Length of Trade Schools

Job Specialty	Weeks of Formal Training	Job Specialty	Weeks of Formal Training
Telephone Technician	24.0	Food Service Specialist	11.5
Fire Control Technician	23.5	Machinery Technician	11.5
Electronics Technician	19.5	Telecommunications Specialist	11.0
Avionics Technician	19.4	Quartermaster	9.5
Aviation Maintenance Technician	18.0	Gunner's Mate	9.4
Aviation Survival Technician	15.4	Storekeeper	9.0
Electrician's Mate	15.0	Marine Science Technician	7.2
Health Services Technician	13.5	Yeoman	6.0
Radarman	13.5	Musician	-0-
Damage Controlman	12.7	Boatswain's Mate	-0-
Public Affairs Specialist	12.0		

The lack of formal training for boatswain's mates places a heavy training burden on stations. More than 70 percent of vacant positions at small boat stations are filled with Coast Guard boot camp graduates. Boot camp provides little training in seamanship and water survival techniques and no training in small boat handling, SAR techniques, and piloting and navigation.

Providing formal boatswain's mate training to entry-level personnel, seeking a boatswain's mate rating before they report to their station assignment, would significantly alleviate the training workload at stations and ensure all station personnel have a basic level of knowledge needed to become productive members of the stations' workforce. Eight to 18 months of on-the-job training are currently needed for a boot camp graduate to become a boatswain's mate. Boatswain's mates must undergo months of additional on-the-job training to become certified as rescue boat coxswains. Coast Guard re-instituted a boatswain's mate entry-level specialty school for active duty personnel during FY 2001. However, the school's capacity is limited to approximately 120 students per year, far less than the estimated 400 new boatswain's mates needed per year by the Coast Guard.

Recent Standardization Team (STANTEAM) evaluations

and station accident statistics indicate Coast Guard's on-the-job training regime is insufficient and results in knowledge gaps for SAR station boat crews. STANTEAMs biennially inspect and evaluate the material and operational readiness of all standard rescue boats assigned to SAR stations. During these evaluations, written tests are administered to small boat coxswains and boat crewmembers to determine their knowledge of navigation rules of the road, piloting and navigation techniques, rescue boat operations and missions, SAR, and water survival techniques.

Our analysis of the written test results for 572 utility boat coxswains from 91 stations during the FYs 1999 and 2000 STANTEAM testing cycle found 32 percent scored an average of 69 percent or less on all 5 sections of the examination. One-fourth of all coxswains scored 69 percent or less on small boat operations and missions, about one-third scored 69 percent or less on SAR and water survival techniques, and one-half scored 69 percent or less on navigation rules of the road. Our analysis also showed that 28 percent of the senior LTB coxswains, who provide the bulk of the on-the-job training to newly arriving station personnel, scored 69 percent or less on the examination. Table 3 breaks down the senior utility boat coxswain test results by rank.

Table 3—Breakdown of Senior Utility Boat (UTB) Coxswain Test Results

Rank	Number Tested	Number Scoring 69% or Less	Percent Scoring 69% or Less	Average Test Score ⁽¹⁾
Chiefs	65	14	22	64%
First Class	94	24	25	62%
Second Class	211	64	30	61%
TOTAL:	370	102	28	

⁽¹⁾Average of those scoring 69 percent or less.

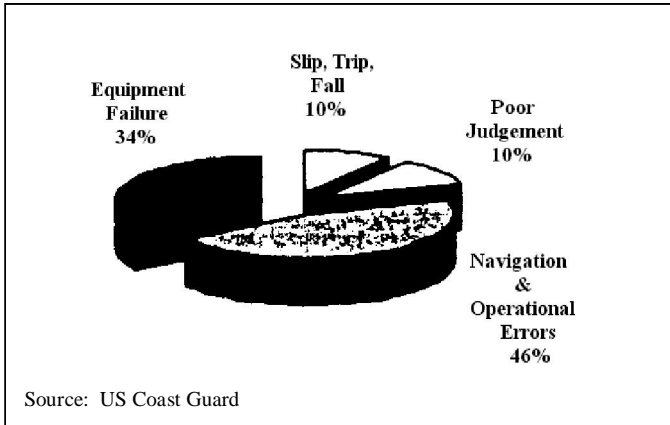
Though utility boat coxswains are performing poorly on these written examinations, Coast Guard has no minimum pass/fail standards. Furthermore, Coast Guard does not analyze test results to identify which coxswains are performing, poorly and in what subject areas. By not analyzing test results, Coast Guard is unaware of how

poorly their small boat coxswains are performing on these examinations so that corrective measures can be taken.

The lack of training and experience for boatswain's mates is one of the factors contributing to an increase in rescue boat accidents. In FY 2000, there were 130 rescue boat accidents, a 225 percent increase over the 40

accidents that occurred during FY 1998. Coast Guard's analysis of FY 2000 rescue boat accident data found 56 percent of the accidents were caused by poor judgment, or navigation and operational errors and hence, were preventable. Providing boat crews with additional formal training and increasing the output of coxswain schools may reduce these types of accidents. Figure 2 illustrates the breakdown of the causes of the 130 rescue boat accidents that occurred during FY 2000.

Figure 2—Causes of Rescue Boat Accidents (FY 2000)



In its response to the draft report, Coast Guard stated that although its on-the-job training regime was a formal process with specific performance requirements, it has re-instituted an entry-level boatswain's mate school to help accelerate the training and qualification of station boat crews. Coast Guard noted that it will continue to evaluate the utility of the on-the-job training program versus the cost and quality of formal entry-level classroom training, for its remaining boatswain's mate training needs.

Many of the SAR station personnel training deficiencies have been identified in prior Coast Guard reports. In its 1989 Station Study, Coast Guard determined the shortage of experienced personnel at stations significantly impacted the ability of stations to train the large number of inexperienced personnel assigned to stations. The study also cited results of operational examinations where 40 percent of 125 coxswains tested had difficulty on examinations designed to test their navigational skills. Coast Guard's 1991 Station Staffing Study found that senior experienced personnel at stations were not spending enough time training the younger, less experienced personnel, and that unit training was increasingly conducted by inexperienced boatswain's mates.

Standard Rescue Boat Fleet "Not Ready for Sea"

The Coast Guard has 554 rescue boats at SAR stations. Of these, 261 (47 percent) are standard rescue boats. Despite months of advance notice of upcoming inspections, the vast majority of the standard rescue boats inspected at stations are consistently failing to meet minimum Coast Guard inspection standards, During FY 2000, 100 (84 percent) of 119 standard rescue boats

inspected by Coast Guard had mechanical problems serious enough for Coast Guard to characterize the boats as "Not Ready for Sea." The "Not Ready for Sea" evaluation means structural, mechanical, and safety deficiencies were identified that tendered the vessel as not fully capable of performing its SAR mission.

Coast Guard's standard rescue boats share a common structural and propulsion configuration and operating characteristics. All standard rescue boats are required to undergo formal biennial inspections conducted by STANTEAMs comprised of experienced rescue boat personnel from Coast Guard's Utility Boat Systems Center and the National Motor Lifeboat School. STANTEAMs typically notify stations 60 to 90 days in advance of the inspection.

Recent STANTEAM inspection results show Coast Guard's new 47-foot motor lifeboats (the latest addition to its standard rescue boat fleet) and its aging utility boat fleet is failing to meet Coast Guard readiness standards. Unlike the 44-foot motor lifeboat (all more than 28 years old) and the 41-foot utility boat (all more than 18 years old), the 47-foot motor lifeboat fleet is less than 5 years old. During FY 2000, 94 percent of the motor lifeboats and 80 percent of the utility boats inspected were found "Not Ready for Sea". Figures 3 and 4 show the percentage of motor lifeboats and utility boats found "Not Ready for Sea" by STANTEAMs since FY 1997.

Figure 3

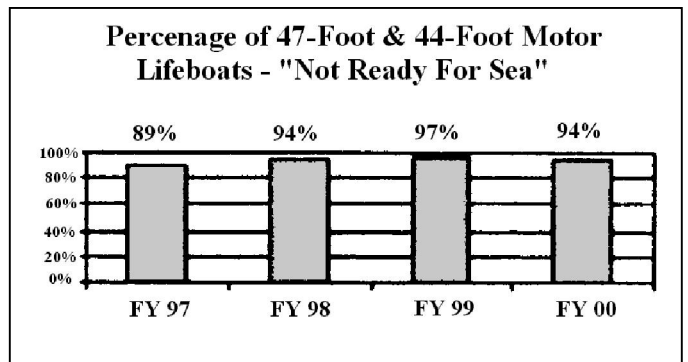
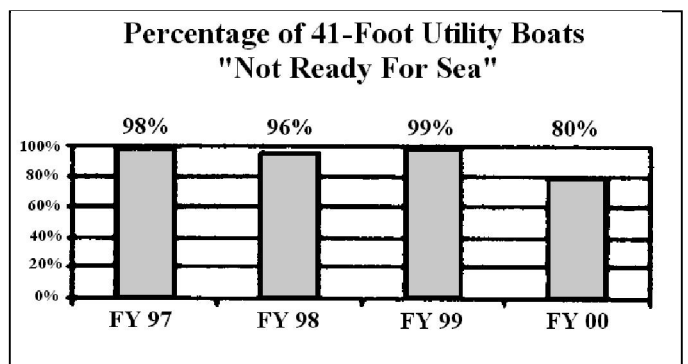


Figure 4



While Coast Guard has made progress in improving the readiness of its 41-foot utility boat fleet, the vast majority

of these boats continue to experience serious mechanical, structural, and safety problems sufficient to warrant the "Not Ready for Sea" determination. Table 4 shows examples of mechanical problems found on Coast Guard's motor lifeboats and utility boats.

Table 4—Commonly Identified Mechanical Problems (FY 2000)

Motor Lifeboats	Rate of Occurrence
Failure of Watertight Closures	79%
Engine Air Shutdown Failure	12%
Failure of Engine Room Venting	9%
Engine Exhaust Leaks	9%

Utility Boats	Rate of Occurrence
Engine Oil Leaks	72%
Loose/Missing Fittings	65%
Failure of Watertight Closures	20%
Engine Exhaust Leaks	12%

The failure of watertight closures is a significant problem on motor lifeboats because these boats are designed to roll over and self-right in heavy surf. The proper operation of watertight seals is needed to ensure survival of the boats and their crews. The chief of the motor lifeboat STANTEAM attributes the equipment problems to SAR station staff who often lack the necessary time and knowledge to identify and respond to small boat equipment problems.

STANTEAM inspectors have been finding similar mechanical problems with rescue boats since FY 1989. STANTEAM inspections of 28 motor lifeboats at that time found 17 (61 percent) had engines that overheated at full-throttle and 15 (54 percent) had extremely worn hoses and belts. During that same year, Coast Guard issued its Station Study that found preventive maintenance was being neglected. The study made recommendations to relieve the manpower shortage so adequate staff would be available to perform needed maintenance. However, SAR stations continue to experience staffing shortages and equipment problems that threaten their ability to effectively maintain the rescue boat fleet.

In its response, Coast Guard commented that the 84 percent "Not Fully Mission Capable" rate drops to less than 5 percent before the inspection teams leave the stations. Coast Guard changed the term "Not Ready for Sea" to "Not Fully Mission Capable" in 2000. According to the Coast Guard, this shows the problems were not as serious as our report indicates. Coast Guard suggested the high failure rate may say more about zealous enforcement of technical standards than the practical assessment of mission readiness. The 84 percent statistic, however, is based on data from inspections conducted by some of Coast Guard's most experienced small boat personnel using Coast Guard's own inspection standards. The contrast between what the experienced personnel find and are able to quickly correct supports our finding that SAR stations lack personnel with the requisite training and experience needed to identify and correct boat deficiencies.

Coast Guard also commented that the problems with watertight closures are not serious because they involved seals that had slight gaps over 10 percent or less of their length. We believe the problems are more serious because, as Coast Guard stated in its response, it is considering design improvements or engineering modifications to eliminate the problem.

Utility Boat Fleet Reaching the End of Its Service Life

Utility boats make up 64 percent (168 of 261) of the standard rescue boat fleet, 92 percent (155) of which have been in service 20 years or more and are reaching the end of their service life. According to Coast Guard, these vessels have an average of 3 years of engine life and 8 years of hull life remaining.

Failure of structural and mechanical components (cracks in the hull and superstructure, and aging and obsolete propulsion and steering systems) coupled with a scarcity of spare parts are making the utility boat fleet increasingly difficult and expensive to maintain. Because many utility boat parts are no longer manufactured, Coast Guard is having difficulty finding replacement parts and is, in some instances, rebuilding or fabricating replacement parts to keep these vessels fully operational.

Coast Guard has not requested funding either to extend the service life of its utility boat fleet or to design and procure a replacement boat. In its Five Year Funding Projection dated April 9, 2001 Coast Guard eliminated \$116 million for sustainment and modernization of small boats that was included in the August 2000 Five Year Capital Investment Plan.⁽¹⁾ According to Coast Guard officials, the \$110 million would have been used, in part to design, test, and procure a replacement vessel for the aging 41 utility boat. Coast Guard officials told us there are plans in process to reinstate at least some of this funding in future budget requests. *[⁽¹⁾Five Year Funding Projection includes \$22.5 million for future sustainment and modernization of vessels spread over FYs 2004 through 2006. However, the funding is not specifically dedicated to SAR rescue boats.]*

According to Coast Guard, it is premature to estimate the cost of a 41-foot replacement boat. However, based on prior Coast Guard small boat procurements, designing, constructing, and deploying a replacement boat will take 3 years or more (the projected service life remaining on the 41-foot utility boat engines) to complete. The 47-foot motor lifeboat replacement project, which began in 1986, did not deliver its first boat to a SAR station until 1997, more than 10 years after the project began. While it may not take 10 years to design, construct, and deploy a replacement for the utility boat, any delay beyond FY 2004, the expected end of service life for the 41-foot boat engines, increases the likelihood that these boats will not pass future ready for sea inspections. Continuing to operate the utility boat fleet without rehabilitation will further reduce readiness levels at SAR stations and unnecessarily increase the level of risk to boat crews and mariners in distress.

Coast Guard commented that they have a more detailed evaluation underway to determine action needed to keep the 41-foot utility boat operational, are in the process of developing a replacement project for the utility boat mission, and will address its plans to replace the 41-foot utility boat as part of its strategic plan for rebuilding the SAR Program. However, Coast Guard did not provide a timeframe for completing the evaluation or the replacement project.

Non-Standard Rescue Boat Fleet Lacks Headquarters Oversight

Of Coast Guard's 554 rescue boats at SAR stations, 293 are non-standard rescue boats. Non-standard rescue boats include small and medium sized rigid hull inflatable of various sizes, speeds, and capabilities. These shallow draft boats operate at speeds up to 50 miles per hour, and exert significant stress on boat crews during high-speed operations. Non-standard rescue boats carry out about 31 percent of SAR missions and are involved in 63 percent of rescue boat accidents in which crewmembers fall overboard or are ejected into the water. Between June 1998 and April 2001, 28 Coast Guard personnel either fell overboard or were ejected from non-standard rescue boats. Table 5 shows the number of SAR station personnel who fell overboard or were ejected from rescue boats between June 7, 1998, and April 1, 2001.

Table 5—SAR Station Personnel in the Water

Boat Type	Number of Personnel in the Water	Number of Accidents
Rigid Hull Inflatable	28	16
Utility Boat	11	8
Motor Lifeboat	7	6
Total	46	30

In contrast to Coast Guard's standard rescue boat fleet, none of the 293 non-standard rescue boats assigned to SAR stations undergo formal, STANTEAM inspections. Furthermore, no operational doctrine or formal training currently exists for non-standard rescue boat crews. Operational doctrine could provide boat crews with information concerning the handling abilities and limitations of non-standard rescue boats when operated under a variety of weather and sea conditions. The doctrine could assist coxswains in assessing the degree of risk associated with SAR mission activities.

A formal training program, devoted solely to train and qualify personnel on the operation of non-standard rescue boats, is needed to ensure SAR personnel are aware of the inherent hazards associated with high-speed non-standard rescue boat operations. Such training could improve the ability of station personnel to evaluate the circumstances and conditions in which non-standard rescue boats are used and, over time, could reduce the number of accidents involving these vessels.

A July 2000 Coast Guard risk analysis of non-standard rescue boat operations was initiated in response to an increasing trend of accidents involving these boats. The study predicted 3 Class A mishaps annually.⁽¹⁾ Such an accident occurred in March 2001 when a non-standard boat assigned to Station Niagara capsized and ejected its 4-man crew into Lake Ontario. Two Coast Guardsmen subsequently died from cardiac arrest associated with hypothermia. [⁽¹⁾*Class A mishaps are those accidents involving property loss of \$1 million or greater, loss of a vessel, or injury resulting in a fatality or a permanent total disability.*]

Furthermore, the study identified improper operation of non-standard boats as the area of highest concern, and made recommendations including initiation of unit-level training to quickly reduce operational risk and the development of formal Coast Guard-wide training in this area. The study also recommended developing a standard design and engine configuration for rigid hull inflatable boats, which make up the largest percentage of non-standard rescue boats at stations.

While Coast Guard has taken some action to alert SAR stations of the hazards associated with non-standard rescue boat operations, little progress has been made to implement the bulk of the study's recommendations, particularly the recommendation that Coast Guard develop a formal training program and standardize its fleet of rigid hull inflatable boats.

Declining SAR Station Readiness Is a Longstanding Problem

The SAR small boat stations' problems with staffing, training, and equipment have been identified in congressional testimony and Coast Guard studies for at least 2 decades. Coast Guard has not taken adequate action to correct the problems, but has instead conducted additional studies, which reached similar conclusions. The 1981 Coast Guard Oversight Report of the Committee Merchant Marine and Fisheries identified staff shortages at SAR stations, where personnel worked between 90 to 110 hours a week.

Coast Guard's subsequent 1989 Station Study reported a shortage of staff, inadequate training, rescue boats in poor condition, and tour lengths that were too short. Further, Coast Guard's 1991 Station Staffing Study reported significantly under-staffed SAR stations; long work hours resulting in illness, injury, and lower retention; increased fatigue and stress; degraded performance; potentially unsafe operations; and reduced re-enlistment rates. Consequently staffing, training, and equipment problems continue to undermine SAR readiness at small boat stations.

Recommendation

We recommend the Commandant direct the Assistant Commandant for Operations to develop and implement a

strategic plan for improving SAR station readiness. It is important that the plan provide a clear framework for rebuilding the SAR Program by describing specific actions, establishing timeframes for completing the actions, estimating implementation costs, and identify organizations and personnel responsible for completing the actions. Areas the strategic plan should address include:

1. Staffing levels needed to ensure SAR stations do not exceed the 68-hour workweek standard mandated by Commandant Instruction M5312.11A. *Staffing Standards Manual*, September 26, 1988.
2. Assignment practices to reduce turnover rates at SAR stations by increasing the actual average station tour of duty to 4 years.
3. The need to increase the number and seniority of boatswain's mate billets at SAR stations to ensure there are enough certified coxswains on hand to meet Coast Guard readiness standards.
4. The need to ensure personnel assigned to SAR stations are adequately trained and qualified as boat crew before reporting to their station assignments.
5. The need to increase the capacity of the coxswain "C" school to ensure all eligible boatswain's mates receive training early in their SAR station tour of duty.
6. Plans to replace the 41-foot utility boat fleet.
7. The "Top Ten Risk Reduction Recommendations" from the Coast Guard Research and Development Center's July 2000 internal study on non-standard boats.

U.S. COAST GUARD RESPONSE

A draft of this report was provided to Coast Guard on July 6, 2001. In addition, we met with Coast Guard and discussed the draft report findings and the intent of the reports recommendation on July 12 and July 20, 2001. In its July 30, 2001, written response to the draft report. Coast Guard concurred with the recommendation. Coast Guard also suggested wording changes to some of the key areas that we recommended be included in the strategic plan. These changes were consistent with the intent of our recommendation so we revised the recommendation to reflect these suggestions. However, Coast Guard's written response did not provide a specific timeframe for completing the strategic plan.

Coast Guard's response also included comments to clarify what it considered to be misunderstandings and incorrect impressions in the draft report. Where Coast Guard provided additional or clarifying information, we modified the report. Our analyses of Coast Guard's comments are included in the Appendix to this report.

OFFICE OF INSPECTOR GENERAL COMMENT

Coast Guard's planned action is responsive to the recommendation. However, the recommendation will remain open until Coast Guard provides a timeframe for completing the strategic plan for improving SAR station readiness.

PART 3 ABUSE OF "LOWER-LEVEL" MARINERS BY THEIR EMPLOYERS WITH COAST GUARD ACQUIESCENCE

Mariners Advocates. In our role representing "lower-level" mariners, the Gulf Coast Mariners Association has repeatedly expressed the concern our members have over the relationship between the hours that their employers have them work and the hours that Coast Guard regulations permit them to work. Our licensed mariners know the law and regulations because we have gone to great lengths to explain it to them in meetings and in our Newsletter.

Most "deep sea" or "blue water" mariners, who are members of maritime unions, work under a contract with 4 hours on duty followed by 8 hours off duty (i.e., a "three watch system" or "4 & 8"). This system, when enforced, leads to an 56-hour work week. If a mariner chooses to perform additional work (when available) it is performed at overtime rates. On the other hand, most lower-level mariners are not members of unions. A common work pattern, without the protections offered by a contract, is 6 hours on duty followed by 6 hours off duty (i.e., a "two watch system" or "6 & 6"). This extrapolates into a 84-hour work week, usually without overtime pay.

Abusing the 12-hour rule. GCMA's long-standing complaint, formally presented to the Coast Guard in June 2000, is that many employers in the towing and offshore oil sectors of the maritime industry abuse the 12-hour rules. The abuse results from undermanning industry vessels with too few licensed mariners or crewmembers, or manning vessels with mariners with insufficient training to perform their assigned duties. Employers often saddle their competent employees with additional duties that occur at times that compromise their sleep time. This leads to fatigue which, in turn, leads to accidents, a general frustration over working conditions, and eventually to quitting the industry.

Unlimited hours for deckhands. In addition, many deckhands and uncertificated mariners have no legal limits set to their working hours. The American Waterways Operators, a towing industry trade association, in their Responsible Carrier Program that has won Coast Guard acceptance, recommends that "All other crewmembers on a towing vessel should be permitted to work no more than 15 hours in any 24-hour period or more than 42 hours in a 72-hour period, except in an emergency or drill." The fact that such a schedule violates the spirit if not the letter of international agreements⁽¹⁾ to which the United States is a party seems to have escaped the Coast Guard. This unconscionable figure extrapolates into what employers consider to be an "acceptable" work week of 99 hours. Even worse, our members tell us is that, on locking rivers with locks only a few miles apart, there is no meaningful

opportunity for the deck crew to rest other than napping for several hours under conditions of complete, mind-numbing exhaustion. The 99-hour workweek for deck crews allowed by this policy is...

- Far above the 84 hours for licensed mariners under the two-watch system.
- Far above the 68 hours the Coast Guard considers a safe work week for its own personnel.
- Far above the 56 hours worked by deep-sea mariners on a three watch system.
- Far above the 40 hours worked by the average American worker.

[⁽¹⁾46 CFR 15.1111, based on STCW '95 and currently in force, and International Labor Organization Convention, 1996, (ILO-180), Article 5.1.a and b. proposes that: "The limits on hours of work shall not exceed 14 hours in any 24-hour period; and 72 hours in any seven day period or minimum hours of rest shall not be less than ten hours in any 24-hour period; and 77 hours in any seven-day period."]

On April 20, 2000 a member of GCMA our association, wrote directly to Congressman "Billy" Tauzin, R. La, citing violations of the 12-hour rules. Congressman Tauzin wrote to Eighth District Commander, RADM Paul Pluta, inquiring about the matter. A key part of Admiral Pluta's response stated: "Recently my staff conducted an informal phone survey of a cross section of the Eighth Coast Guard District Marine Safety Offices to get a feel for the volume of 12-hour rule complaints we receive. This survey indicated that (those offices) have received very few complaints involving mariners being forced to work more than 12 hours." This is probably true considering the actual number of formal complaints Coast Guard offices receive, but this is a very superficial survey. However, from what we have seen, the next sentence simply is NOT TRUE: "However, when we receive such a complaint, it is aggressively investigated and appropriate action taken."

In May 2000, GCMA collected fifty-seven (57) signed statements from lower-level mariners and compiled them in a book titled Mariners Speak Out on Violation of the 12-Hour Work Day. Over the next 18 months we presented a copy of this book to RADM Pluta, to Commandant Loy, to DOT Secretaries Slater and Mineta, and to at least 200 other individuals including Congressmen and Senators that shared our concerns about sweatshop working conditions in the marine industry.

At our request, the Coast Guard did review the statutes and regulations in an attempt to clarify confusing passages. On September 1, 2000 Headquarters published G-MOC Policy Letter #04-00 that clarified existing regulations but changed nothing. GCMA distributed over 7,500 of these policy letters at our expense to inform mariners. We determined that this policy letter was helpful even though it was largely ignored by many employers.

GCMA also presented our views on the "two watch system" in particular and on fatigue in general to three federal advisory committees, namely the Towing Safety Advisory Committee (TSAC), the Merchant Marine

Personnel Advisory Committee (MERPAC), and the National Offshore Safety Advisory Committee (NOSAC)...all under the control of the Coast Guard. As a result, NOSAC committed to "study" the subject of "fatigue" under the auspices of its Prevention Through People (PTP) subcommittee.

The PTP subcommittee study included studying a number of reports on the subject provided by the Coast Guard and committee members. Of these reports, the one that clearly caught the committee's attention was the Coast Guard report titled U.S. Coast Guard Guide for the Management of Crew Endurance Risk Factors published in September 2001 by the USCG Research and Development Center.⁽¹⁾ An abstract from this report states in part: "The(se) practical methods have been tested and proven on Coast Guard cutters, at Coast Guard air stations, and on commercial vessels." [⁽¹⁾Report CG-D-13-01.]

The reports overview states in part: Recent studies of Coast Guard crews on cutters, at small boat stations, and at air stations, have shown that some of our traditional work practices may lead to decreases in crew alertness that could compromise readiness: 70% of the CG personnel studied exhibited signs of compromised alertness.⁽¹⁾ While we might like to believe we can be "Semper Paratus" under any conditions, this simply is not the case: long work hours, insufficient sleep, and extreme environmental conditions take their toll on the human body, leaving even Coast Guard personnel less-than-ready for duty. If we are to be "always ready" we must make crew endurance a top priority. This Guide⁽²⁾ provides step-by-step instructions to identify and manage crew endurance risks in CG operations. [⁽¹⁾This is not hard to understand in light of the Inspector General's report cited in PART 2 of this paper. ⁽²⁾Since this "Guide" was designed to fit the Coast Guard's military methods of operation some specific steps might be difficult to adapt to civilian small vessel operations.]

While living and working on a Coast Guard cutter may differ from working on a commercial vessel in many ways, this in-depth report outlines and then reiterates many of the human factors that are common to working conditions for mariners on comparably sized vessels. The report continues:

"If your unit (or vessel) experiences any⁽¹⁾ of the following, you are at risk for compromised endurance and readiness:

- insufficient sleep duration (<7-8 hours);⁽²⁾
- poor sleep quality (awakenings);
- breaking sleep into multiple "naps";
- main sleep during daytime;
- rotating between day and night work;
- long work hours (>12 hr.);
- no opportunities to make up lost sleep;
- poor diet (high fat, sugar, caffeine);
- high workload;
- high stress;
- lack of control over work environment or decisions;
- exposure to extreme environment (cold, heat, high seas);
- no opportunity to exercise."

[⁽¹⁾Most of the human factors in this list affect our lower-level mariners. ⁽²⁾The report reiterates time and again that 7 to 8 hours of daily uninterrupted sleep are an absolute necessity.]

The Coast Guard's Crew Endurance project. If the Coast Guard can see where 7 to 8 hours of uninterrupted sleep are a necessity for their own personnel, why can't they see it is equally important for mariners on commercial vessels? What we see instead, is that it may be more important (i.e., politically correct) for the Coast Guard to place the needs of employers above those of our mariners. This is not our first complaint of unfairness to mariners!

Aside from studying its own personnel, the Coast Guard also actively studied the effects of fatigue on merchant mariners on large oceangoing vessels and, separately, on mariners working on western rivers towboats. Here we see signs that the Coast Guard plans to put its "thumb on the scale" to tip the balance against our "lower-level" mariners.

The Coast Guard and the towing industry are in partnership with each other on the "Responsible Carrier Program (RCP)." Unfortunately, the RCP is wedded to the "two watch system" ("6 & 6"). Unfortunately, this system is incompatible with the 7 to 8 hours of uninterrupted sleep the Coast Guard acknowledges it needs for its own personnel need to perform safety.

We don't buy this line! Our Association's concern about exploiting lower-level mariners and abusing the "12-Hour Rules" pressed us to offer these comments on the Coast Guard's "Crew Endurance Management" project.

We submitted to RADM Pluta and other Coast Guard officers copies of our "Yellow Book" titled Mariners Speak Out on Violation of the 12-Hour Work Day that contain 57 cases where mariners came forward to report working more than the legal number of hours simply to hold their jobs and feed their families. Yet, the Coast Guard never took the first step to investigate a single one of our allegations!

In 1999 the Chairman of the National Transportation Safety Board recommended and urged all modal agencies within the Department of Transportation to adopt scientifically based work-hour regulations. Nevertheless, VADM Josiah, Coast Guard Chief of Staff, responded to the Chairman that this could not be done. We disagree.

To date, our protests dealt with cases where mariners illegally worked in excess of 12 hours in a 24-hour period. However, we are also concerned with other attempts to fragment and otherwise infringe upon our mariners' off-duty hours.

It is impossible to correlate the report titled U.S. Coast Guard Guide for the Management of Crew Endurance Risk Factors that repeatedly calls for 7 to 8 hours of uninterrupted sleep with the Coast Guards attempts to juggle the existing '6 & 6" watch schedules on river towboats to a "7 & 5 followed by a 5 & 7" watch schedule. The Coast Guard report cited above repeatedly and uncompromisingly states that anything less than 7 to 8 hours of uninterrupted sleep is insufficient sleep duration...and we emphasize the necessity for

"uninterrupted sleep." Further, this report considers a number of alternative arrangements but never even considers the "two-watch system" as a viable alternative to a "three-watch system" or any other system under consideration. We note that the Coast Guard signals that it may use the same thinking and apply it to lower level mariners in the offshore oil industry where not even the "6 & 6" system has taken hold over a "run-till-you-drop" philosophy.

A 7 & 5 hour watch followed by a 5 & 7 hour watch does not allow for a full 7 to 8 hours of uninterrupted sleep in a 24-hour period. In addition, the irregularity of the schedule itself is disruptive.

The Risk Factors report discusses the problems the Coast Guard faces with its own personnel such as those experienced for many years at the small boat stations, problems that finally came to the public's attention as a result of the S/V MORNING DEW where one key Coast Guard watchstander on 24-hour duty was asleep at the time of the incident and another was insufficiently trained to act responsibly. Of course, the \$19,000,000 settlement against the Coast Guard emphasized the point and involved every American taxpayer.

As a result of GCMA's visit to Capitol Hill last September a number of our lawmakers now know "up close and personal" about our mariners' problems with abuses of the 12-hour rule.

Coast Guard officers with grandiose schemes and precious little service at sea to back them need to understand that lower-level mariners are human beings. They need their sleep as well as a little leeway when they can't sleep aboard ship because of noise, vibration, change of schedule, frequent call-outs and any number of understandable reasons. They need to be well-rested when they join the vessel. They cannot be expected to absorb the sleep loss resulting from standing two consecutive watches during certain types of crew changes...common problems faced by personnel on undermanned vessels.

The existing two-watch system, extended over a period of time, also stretches "crew endurance." Cooking, eating, bathing, doing laundry, filling out paperwork and simply relaxing slashes the most optimistic 7 hours to an easily predictable 6 hours and 5 hours to 4 hours. A schedule using these numbers falls even farther short of the 7 to 8 hours the Coast Guard's report readily admits is necessary as the sleep deficit only builds up as time passes.

The two trade associations that the Coast Guard appears to cater to, namely the American Waterways Operators (AWO) and the Offshore Marine Services Association (OMSA), are the organizations whose members profit from exploiting lower-level mariners employed by their members. AWO deals primarily with uninspected vessels while OMSA deals primarily (but not exclusively) with inspected vessels that employ lower-level, non-union mariners.

In the offshore oil industry, the manning levels are reduced to such a low point that personnel seldom if ever have the opportunity to overcome their sleep deficit. The

Coast Guard and the vessel owners (as represented by their trade association) are responsible for setting appropriate manning levels. Mariners have absolutely no voice in this process. Consequently, many offshore supply vessels do not even post meaningful watch schedules because undermanning defeats attempts at scheduling and time clocks that could expose violations clearly would not be welcomed by management. Even though Coast Guard officials may have seen people happy or even delighted with their proposed "7 & 5 and 5 & 7" watch schedules as opposed to "6 & 6" watches, their "test subjects" were part of a captive audience working with full crews for reputable companies. By ignoring the overwhelming numbers of hard-working mariners, the Coast Guard prostitutes itself

as it is "partnered", flattered and conned by business interest. These ill-considered policies will eventually come home to roost as mariners continue to flee the industry.

<p style="text-align: center;">PART 4 Taking Responsibility</p>

We leave this section blank in hopeful anticipation that someone in the Coast Guard will step forward to accept responsibility. If not, we suggest that some well-paid flag officers be held responsible for their actions or inactions.