FY-2005 Safety Report

FOR MARITIME OPERATIONAL FORCES – CUTTERS. CUTTER BOATS, SHORE-BASED BOATS, AND MARINE SAFETY UNITS

Commandant (CG-1134)
Cutter and Sector Safety Division
Office of Safety and Environmental Health

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PURPOSE

This report contains summaries and analyses based upon reported FY05 mishaps; where applicable, this data is compared to historical trends. Its purpose is to promote safety awareness and improved risk management across the spectrum of maritime operations by providing program managers, operational commanders, and individual operating units with a snapshot of how well we are doing to provide a safe and healthful workplace for our personnel aboard cutters, operating small boats, and conducting marine safety activities.

To reduce future safety risk within maritime operations, we must understand where we currently are. Having knowledge of problems that have resulted in accidents helps us to better anticipate, recognize, and control hazards throughout our workplaces and operations.

We hope units with operational maritime assets will find this report useful and will share and discuss the information up, down, and across chains of command. Combined with the operational mishap messages that are shared service-wide, the awareness of potential hazards generated by this report should help units to take a critical look at operational procedures and safety programs.

As always, any ideas and comments are valuable in improving the Coast Guard's safety and environmental health program. Please share them with your Unit Safety Coordinators (USC's), Sector Safety Managers, applicable MLC-detached Safety and Environmental Health Officer (SEHO's), or the appropriate Headquarters point of contact listed at the end of the report.

MESSAGE FROM CHIEF, CUTTER AND SECTOR SAFETY DIVISION (CG-1134)

Thank-you for reviewing the FY05 Safety Report for Maritime Operations.

Please note we have modified the name of our division from "Afloat and Marine Safety" to "Cutter and Sector Safety" to better reflect the nature of our support. Regardless of what we are called, as the Coast Guard finalizes the integration of maritime operations under Sector commands, we will continue to be the Headquarters program manager for safety & environmental health support for personnel engaged in cutter operations, boat operations and maritime safety activities.

Amidst the many organizational changes, a question continues to drive us: Where should the safety program best fit into the Sector command structure? Based upon feedback from field command and our MLC's, we believe the answer lies in the creation of a new role, the Sector Safety Manager. The complexity and size of sector organizations, combined with the greater external focus of the Deputy Sector Commander as compared to either Deputy Group Commanders or Executive Officers at Marine Safety Offices, has created the need for focused coordination of the multitude of safety programs and activities that are spread throughout the Sector organization. We will continue to work with you, at both the program and field level, to best define the associated roles and responsibilities as well as the necessary policy changes for Sector Safety Managers. We welcome all input and would especially like to solicit any metric-driven approaches that Sectors have taken in regards to Safety organization.

The integration of traditional "O" and "M" activities under the sets of Sector Response and Prevention activities has also pointed out a need for our Team Coordination Training (TCT) and Operational Risk Management (ORM) programs to be similarly modified. While TCT & ORM will remain fundamental to the safe and effective operation of our cutters and boats, they must now also become integral to inspection, pollution response, and port security missions. We will be engaging program managers as well as the field over the next year to better understand unique risks and hazards; how communications, decision-making and other human factors-related skills contribute to effective teamwork in completing such missions; and what risk management tools will be most appropriate for the activities and personnel engaged in them.

It has been my pleasure to serve all of you operating in the maritime domain as the Chief of this division for the last four years. As I move on, I'm confident that you will continue to improve the effectiveness of Coast Guard cutter, boat, and marine safety activities through proactive and appropriate risk management.

Thank-you!! Think about your risks and be safe!

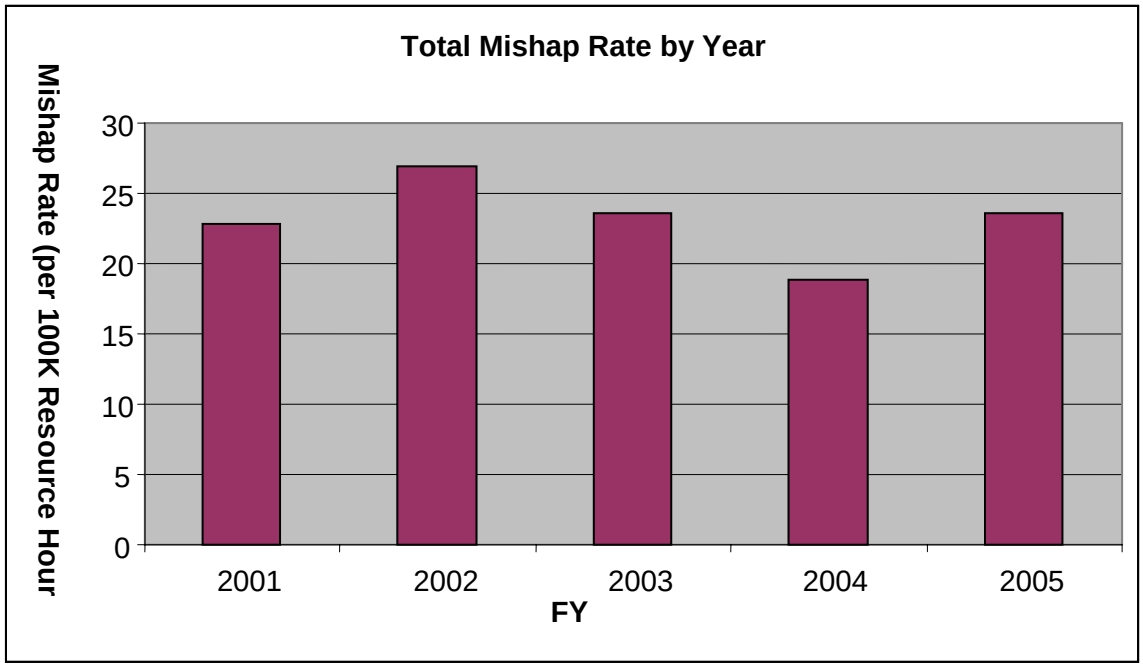
CDR Tommey H. Meyers

CUTTERS

Mishap Analysis:

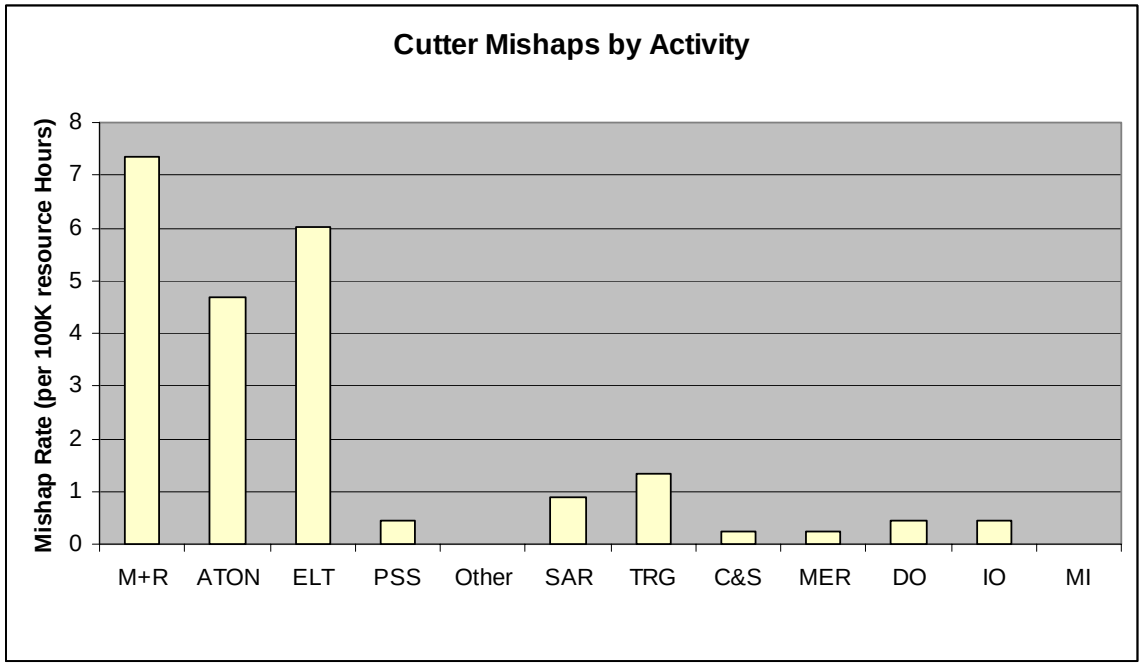
FY 2005 saw a slight increase over FY 2004 in overall mishap rates for the cutter fleet. (See Graph 1) While this might simply represent the probabilistic nature of accidents, it could also be a leading indicator of the increasing impact from the aging of the surface fleet.

GRAPH 1: Cutter Mishap per 100K Operating Hours



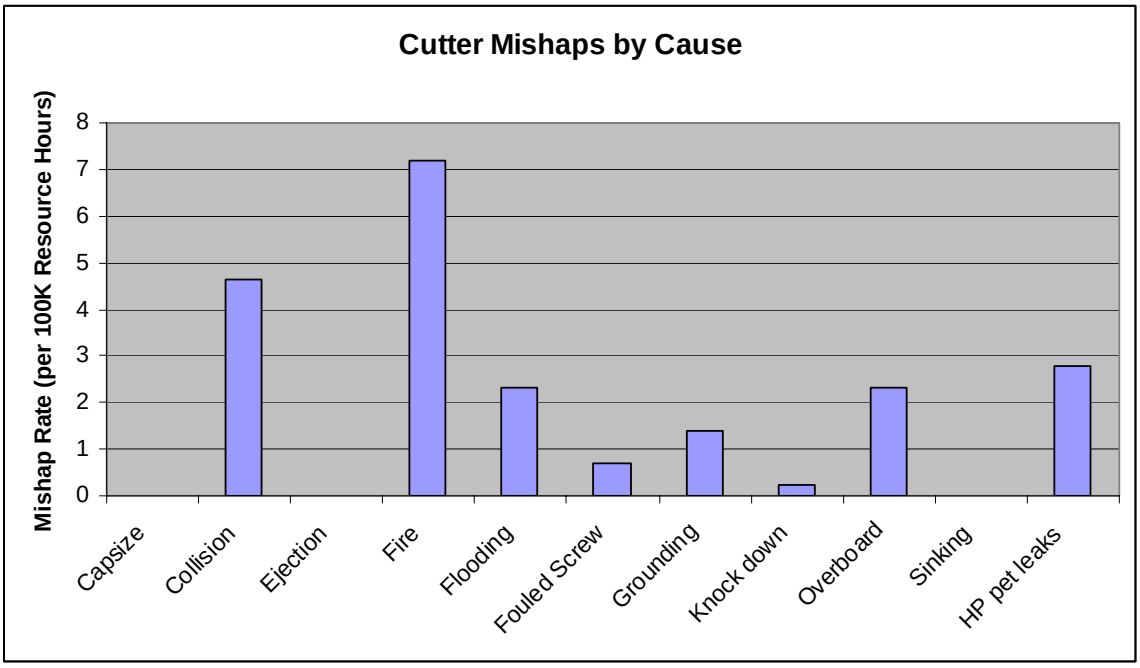
The vast majority of operational cutter mishaps in FY2005 occurred during Maintenance and Repair and in conducting Aids to Navigation and Law Enforcement missions. (See Graph 2) This could also be indicative of the contribution of an aging surface fleet is contributing.

GRAPH 2: Mishaps by Mission



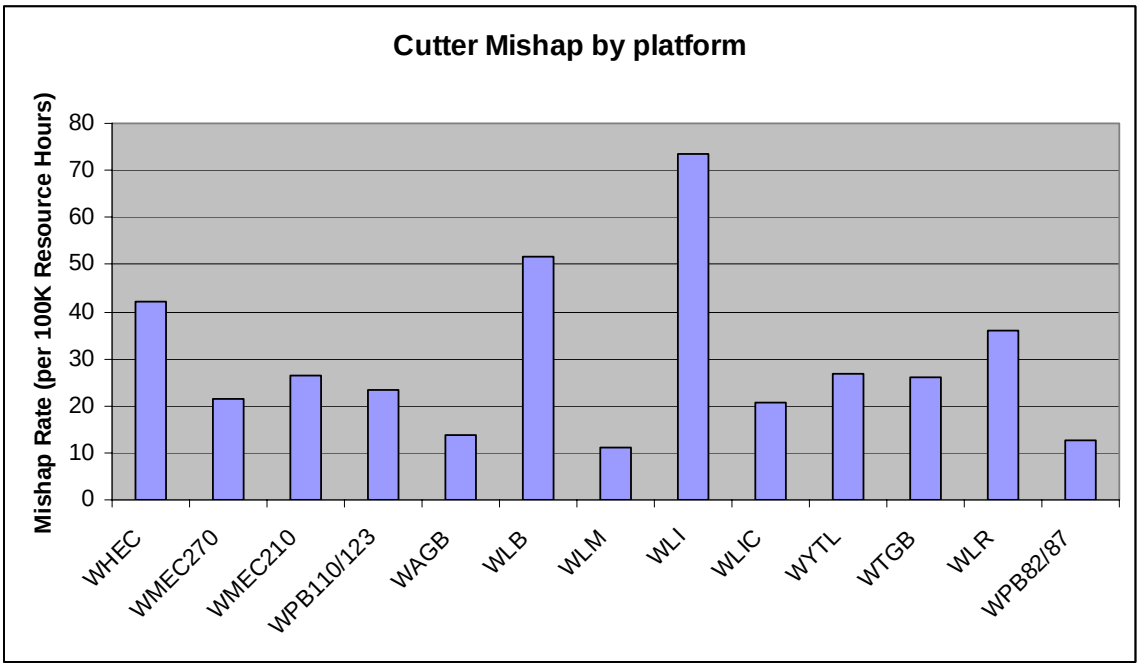
Examining cutter mishaps by cause (Graph 3) we see that the highest rates were associated with fires and collisions. Fires were most commonly seen on WHECs and WMECs, again pointing out the seeming influence of vessels age on mishap rates. Collisions were primary experienced by the WPB community.

GRAPH 3: Cutter Mishaps by Mishap Type



Examining mishap by platforms finds the highest rates associated with WLI. (See Graph 4) This appears to be driven more by the very low resources hours for this platform; two total mishaps in FY2005 is not indicative of high risk operations. The likely impact of age is again seen in the relatively high rates for WHECs, most of which were caused by fire and high pressure leaks.

GRAPH 4: Cutter Mishaps per 100K Operating Hour by Cutter Type



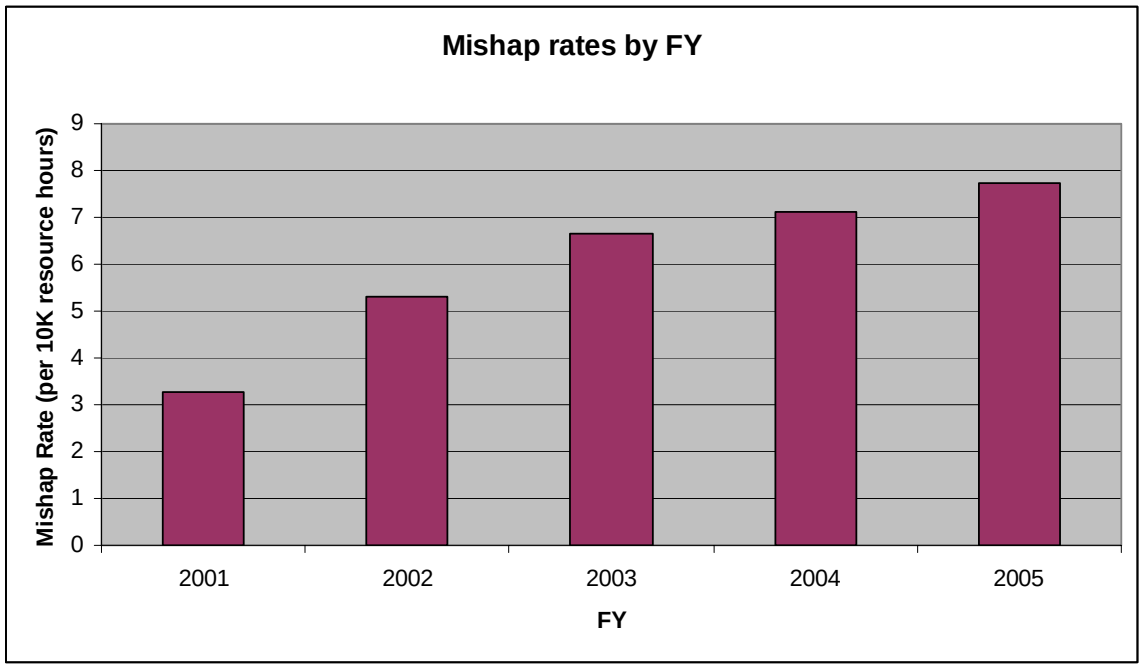
Boat Forces

Shore Based and Cutter Based Boats

Mishap Analysis:

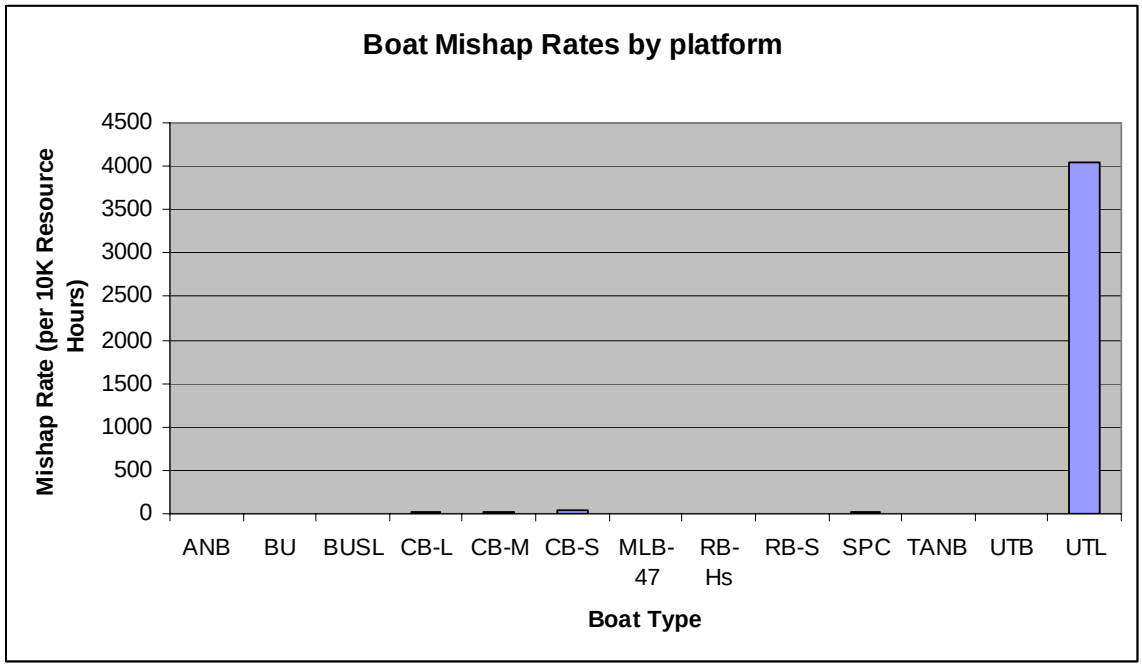
The trend of increased mishap rates for boats continued in FY05, although the rate of increase seems to have leveled off from the steep increases seen in FY02 and FY03. (See Graph 5) These increases are still primarily attributable to the Coast Guard's changing mission sets and the continuing deployment of new platforms with increased capabilities.

GRAPH 5: Boat Mishaps per 10K Operating Hour



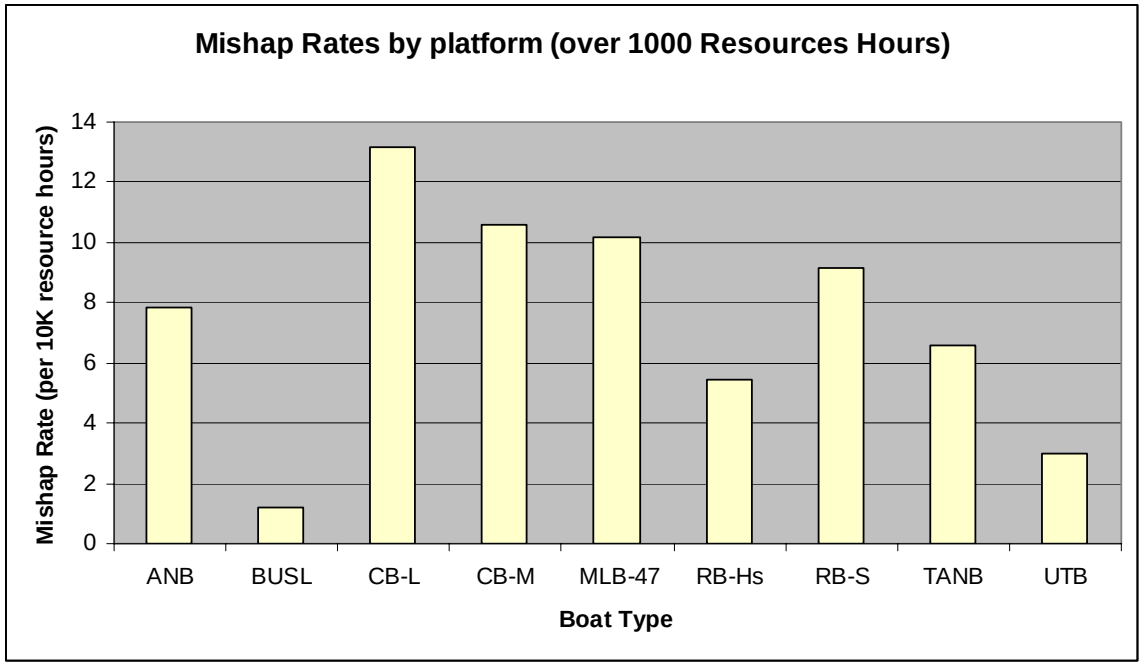
UTL's had a significantly higher rate than all other types small boats in FY05; these were predominantly groundings and collisions. (See Graph 6) Much of this rate appears driven by a small number of resource hours and almost exclusive use in areas where groundings are likely to occur.

GRAPH 6: Boat Mishap per 10K Operating Hours by Boat Type



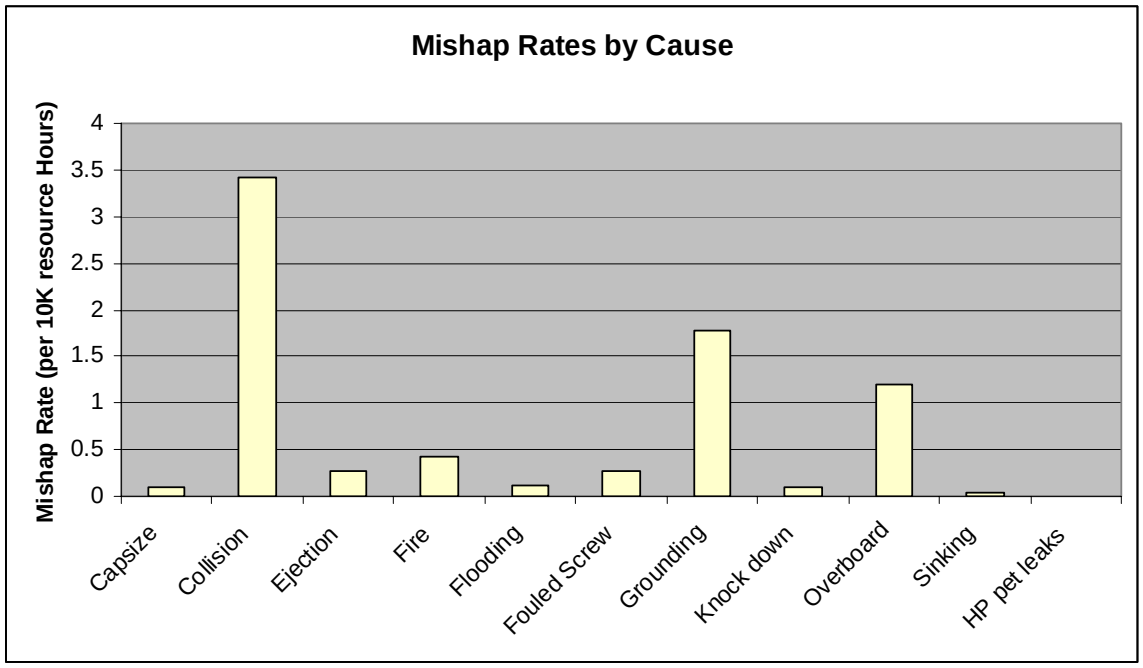
When we further examine boat types with at least 1000 operational hours (See Graph 7) we find that cutter-based boats dominate the mishaps rates. As with UTL's, the mishaps were primarily associated with collisions and groundings.

GRAPH 7: Boat Mishap Rates per 10K Resource Hours (over 1000 hours in FY05)



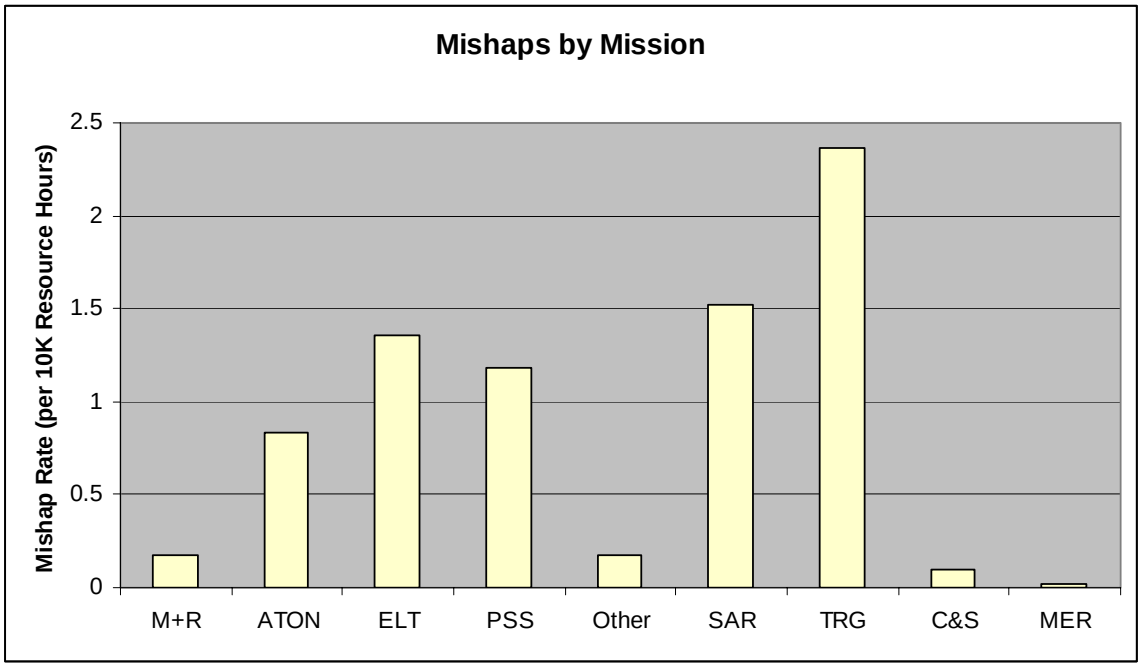
These two factors were also the predominant cause for all small boats (See Graph 8) with many of the collisions occurring during boarding and towing evolutions and many of the groundings occurring aboard non-standard platforms, as would be expected. Given the increased percentage of high-performance boats such as the RB-S in the boat fleet, it was also not surprising to see that the overboard numbers included 14 ejections, up from 11 in FY04.

GRAPH 8: Boat Mishaps by Mishap Type



Examining the associated mission or activity when mishaps occurred (See Graph 9) found that the top three rates were Training, Search and Rescue, and Enforcement of Laws and Treaties.

GRAPH 9: Small Boat Mishap rates by mission



TEAM COORDINATION TRAINING (TCT)

The TCT training program is comprised of TCT Facilitators, TCT District Administrators, TRACEN Petaluma Instructional Systems School staff, USCG Academy Command and Operations School staff, the Training Quota Management Center (TQC) and both MLC(kse).

Training is requested through the District TCT Administrator, who ensures that the paperwork is complete and then forwards it to their respective MLC (kse). Students registered for the TCT Facilitators course must have completed a TCT Unit Level course prior to attending. A TCT Correspondence course is available, course code 0648 for command afloat and other personnel who need initial training. The TCT facilitator quotas and funding are tracked by the respective MLC(kse). TQC processes the completed TCT rosters into Peoplesoft.

While the number of unit level students (6288—see below) was lower in FY05 than last year, much of that seeming reduction is actually due to improvements in record keeping, thanks to the invaluable assistance from TQC and the MLC's.

FY-2005 TCT STATISTICS

- Total number of students receiving TCT Resident Training:

  27 TCT-Group Operations (Course Code 500687)
  68 TCT-Cutter Operations (Course Code 500686)
  49 TCT-Facilitator Training (Course Code 500688)

  144 Total

- Total number of students receiving Exportable, TCT Unit-Level Training (Course Code 500834) (as recorded in Direct Access):

  6288

- Exportable, TCT unit level training program average cost per student / quota:

  $ 16.45

TCT CONTACTS

In accordance with Team Coordination Training (TCT), COMDTINST 1541.1, all requests for exportable, TCT-unit level training (500834) shall be forwarded to the cognizant District TCT Administrator and coordinated through the appropriate Auxiliary division captains for Auxiliary TCT. Current District TCT Administrators (and work phone numbers) are listed below for reference:

D1 (osr):	CWO Mark Ferreia	(212) 668-7992
D5 (oax):	CWO David Lukasik	(757) 398-6509
D7 (osr):	CWO Steve Hanson	(305) 415-7053
D8 (oax):	CWO Joseph Temple	(504) 589-2972
D9 (cc):	LTJG Christopher Pasciuto	(216) 902-6117
D11 (osr):	OSC Jay Thomas	(510) 437-5366
D13 (cc):	Ms Jeanette Wells	(253) 891-0620
D14 (osr):	LCDR Jeff Janszen	(808) 541-2312
D17 (oan)	MCPO David Coffman	(907) 463-2266

Other helpful information:

- COMDT TCT Program Manager:
  Mr. George Borlase: gborlase@comdt.uscg.mil (202) 267-2969 or
  1-800-842-8740, Ext. 7-2969

- Afloat & Marine Safety Division (CG-1134) / TCT / ORM web site:
  http://www.uscg.mil/hq/G-W/g-wk/wks/wks4/index.htm

- Office of Boat Forces (G-OCS) Boat Forces Newsletter web site:
  http://cgweb.comdt.uscg.mil/g-ocs/g-ocs/newsletter.htm

- Training Quota Management Center (TQC) web site:
  http://www.uscg.mil/hq/tqc

- Coast Guard Institute (CGI) web site:
  http://www.uscg.mil/hq/cgi/

CLASS A AND B CUTTER & BOAT OPERATIONAL MISHAP SUMMARY

The table below provides E-mishap narrative data for Cutter & Boat Class A and B operational mishaps over the last four fiscal years.

date	class	narrative
10/1/2000	B	CG 212522 (RHI) patrol with 3 POB. Break-in coxswain requested to take helm for return trip; after coxswain change, coxswain removed kill switch to shift to break-in. Break-in coxswain increased speed and began hard turn, and all three crewmembers were ejected. CG 212522 was running in circles around 3 PIW. Three PIW were not wearing pyro jackets and two of three fired a total of six 9 MM rounds as signal for help and were picked up by Good Sam. Florida fish and wildlife conservation boat (FWC) then arrived on scene and one CG member was transferred to FWC boat to attempt to stop runaway CG 212522. After second attempt to stop CG 212522 (still running in circles), CG 212522 hit wake, causing CG 212522 to change direction and travel straight ahead at high rate of speed. FWC boat and CG 212522 then collided and CG member embarked on FWC boat was ejected. While in water, it appears he was run over by CG RHI and struck in head by skeg or prop. Member retrieved from water by FWC Boat, transferred to ashore medical care and then airlifted to trauma hospital in Miami (see MY 012215Z OCT 00). Member was released from hospital 5 OCT 00 and overall prognosis is good. Remaining two members undergoing physical exams.
11/25/2000	A	STORIS was prosecuting a suspected incursion at pos 60-50`n, 178-32`w. MSB aft davit arm snapped as small boat and boarding team (9 personnel) were lowered over the side. Small boat capsized while boat lowering crew made efforts to control the boat. All personnel on board the small boat went into the water. Capsized small boat remained tethered to ship by the forward falls. Man overboard bill was set. STORIS brought dead in water maneuvering only to keep small boat from impacting PIW and fouling rescue attempts alongside. STORIS deployed two rescue swimmers to assist. All personnel were brought safely on board and treated for hypothermia. One crewmember treated for back injuries. Small boat was then cut free from the ship. STORIS attempted to grapnel boat and roll (to dewater) and hoist boat on deck with crane, attempts were unsuccessful. Due to snow showers and fog, STORIS began to lose visual contact with the small boat. STORIS opted to sink small boat vice leaving it as a hazard to navigation. Expended 80 rounds 5.56 fm m-16, and 300 rounds fm .50 cal into hull of MSB.
1/10/2001	B	During a go-fast pursuit in 4-6 ft seas, the DPB regularly took water over the bow and the stern while DIW. This is normal and heavy bilge pumps have been installed to handle the frequent surges of green water. After pursuing the go-fast for nearly 4 hours, the vessel was stopped. The DPB was tasked with recovering numerous bales in the water. After off loading contraband to TAMPA, the crew started experiencing electrical surges throughout the crew compartment of the DPB. The crew attempted to return to USNS PERSISTENT. After 5 minutes of transit the electronics shorted out completely. The pumps were unable to keep up with the incoming water. The cox'n attempted to maneuver the vessel into the most favorable seas to minimize flooding. Soon the engine compartment flooded with enough water to reach the engine air intakes and stall the engine. The stern sank below the waterline. TAMPA lowered their MSB with damage control equipment and placed dewatering pump onboard. TAMPA came alongside to create a lee and pass more dewatering equipment. Once water was removed, USNS came along side and raised the DPB out of water and cradled the boat.

date	class	narrative
2/10/2001	B	While crossing the bar, vessels stern was lifted 20 degrees by a swell causing both generators and MDE's to stall, and steering to fail. Vessel then struck the jetty, causing damage to the bow and forward areas.
3/23/2001	A	23 march 2001 at 1941 CG-214341, a nonstandard foam collar boat (FCB) was underway from STA NIAGARA to conduct a law enforcement mission in the Niagara River for the purpose of interdicting illegal migrants. A three-person boat crew/armed law enforcement team and one break-in crew member were on board the vessel. Immediately upon departure, the coxswain of the boat deviated from the patrol plan and took the vessel north into Lake Ontario to familiarize the break-in crew member with this portion of the stations area of operation. The boat experienced steep, four-foot waves from the north shortly after entering Lake Ontario. On scene winds were reported from the northwest at 10 knots, the air temperature was 37 degrees and the water temperature was 36 degrees. The coxswain successfully navigated the boat approximately 1,000 to 1,500 yards north of buoy no. 3 (about 3,000 to 3,500 yards north of the mouth of the Niagara River) in Lake Ontario, turned the vessel around and proceeded back south in the direction of the Niagara River. At some time shortly before 2000 and on the return trip south, approximately 50 yards north of buoy no. 3, the coxswain overtook a wave, surfed down the front of that wave and buried the bow of CG-214341 in the backside of another wave. The vessel then slowly rolled over to starboard and all four crew members safely abandoned the vessel without injury. The vessel missed its first communications check at 2001. Rescue efforts were initially hampered by the coxswain's decision to proceed north into Lake Ontario without advising STA NIAGARA of his deviation from his previous float plan. The Wilson, NY fire department boat crew recovered all four crewmen at 0027 Saturday, 24 March 2001. Two of the crewmen were in cardiac arrest when recovered and subsequently died despite the heroic and professional efforts of local EMS personnel to re-warm and resuscitate them. The other two crewmen recovered and returned to duty.
11/1/2001	A	Unit conducting ATON operations at Mantua Creek Anchorage Buoy A (LLNR 3390) with the assistance of Philadelphia Marine Police Divers. Unit had scheduled operations with Marine Police Divers to recover sunken hull. Marine Police Divers have been used in the past for similar operations. WILLIAM TATE small boat arrived on scene with Police Divers to on sunken buoy hull. Initial dive attempts delayed due to strong currents. Recommended dive ops near slack water. Diver deployed from small boat with tag/comms line to attach retrieving line to sunken hull. Unit maintained position approximately 50 feet from dive position. Diver was underwater for approximately 20 minutes when the dive supervisor lost communications with the diver and stated that he might be tangled in the tag/comms line. A second Philadelphia Police Diver suited-up and immediately entered the water to assist. The second diver brought the first diver to the surface in 2 minutes. The stricken diver was brought alongside the cutter and lifted to the buoy deck. EMT and PA (AUX) commenced CPR. Unit transferred diver to local EMS at Fort Mifflin where he was pronounced dead.
11/14/2001	B	VSL completed SAR case involving capsized vsl with 1 PIW. PIW was taken to station and VSL returned to scene to conduct salvage ops. CG47250 had capsized vsl rigged for stern tow. 22 crew attempted to assist in righting by passing grapnel hook. 22 STBD aft section dipped in and filled with water when strain was applied. 22 became unstable and capsized.
1/12/2002	A	On 12 JAN 02, at 2005 hrs, UTL CG 242513 got underway out of STA Miami Beach with a crew of two (BM2 as coxswain and MK3 as engineer), to conduct RBS in Biscayne Bay. UTL CG 242513 transited through the MacArthur Causeway and proceeded north and west around Star Island, paralleling the shoreline of Hibiscus Island. Crew saw no vessels of note in the vicinity of Hibiscus Island, the coxswain decided to reverse course to the east along the northern shore of Hibiscus Island and subsequently south around the end of Hibiscus Island, toward the Mac Arthur Causeway. Estimated speed was 30-35 knots. The coxswain realized he was in a Manatee Zone and began throttling back on both engines. At the same time, they saw a silhouette of a dark object in their path. The coxswain took evasive action, turning the

date	class	narrative
		steering wheel hard to port (to the lock position) and applying starboard throttle. The UTL CG 242513 made broadside contact with the vessel. Immediately after contact and clearing the stern of the contacted vessel the crew was involuntarily ejected over the starboard side of UTL CG 242513. They were aware UTL CG 242513 was still operating and the engines had not cut off. The crew heard a second impact (UTL CG 242513 struck its bow on the silhouetted vessel's starboard amidships). No passengers or crew of the vessel were ejected during either strike. The UTL CG 242513 continued to run, and turn in counter-clockwise circles. UTL CG 242513 edged closer to the shore of Palm Island, (lying parallel and to the South of Hibiscus Island) and struck a privately owned vessel two times, docked behind the owner's home. UTL CG 242513 then continued to circle and work it's way north two houses, finally becoming trapped in pilings, and the engines secured by Miami Marine Patrol or FWCC. During the time UTL CG 242513 was an unmanned runaway, the crew was making their way to shore on Palm Island where they were recovered with the assistance of shore side residents. The crew had to abandoned their life vests, in order to avoid UTL CG 242513 hitting them and to be able to swim. The vessel struck by UTL CG 242513 continued underway to nearby Monument Island, were it was beached and the passengers offloaded. The captain checked for watertight integrity and called for assistance. Local police authorities and CG AUX assisted with the passenger checks and evacuation from the island to another vessel. Nine passengers were brought to the station; three were taken to the local emergency room and released after treatment of minor injuries. The crew was evaluated and treated for minor injuries at a local hospital, then released the same day. The coxswain turned over his weapon and belt to another CG member prior to departing for the emergency room. The weapon belt had a synthetic loop with a plastic keeper, to which the coxswain had attached the metal clip of the kill switch lanyard cord. The plastic keeper on the synthetic loop was broken. The UTL CG 242513 was recovered and hauled by trailer to STA Miami Beach. The collided vessel returned, under it's own power, to its mooring. The privately owned vessel was not moved.
1/18/2002	A	CG-242512 U/W conducting night time law enforcement operations in search of illegal gill net fishing boats. CG-242512 observed a net boat hauling gill net onboard. Subj net boat spotted CG-242512 and fled away heading north across a known shallow bar, in the direction of a local fish house. CG-242512 proceeded north bound in the ICW with the intent to meet or wait for the net boat just outside the local fish house. Shortly after coming up on plane, CG-242512 struck Sarasota Bay Daybeacon 25, splitting a 4ft x 2ft section of the port bow. Unit OIC and XPO arrived on scene w/ CG-242512 in private boat and provided escort to boat ramp. MK3`s forehead struck t-top stanchion and experienced a headache with slight dizziness. SN also experienced a small lump on his head. Both members were taken in gov vehicle for screening at local hospital.
1/23/2002	B	Vessel was underway transiting offshore conducting training. SN was standing next to Cox`n chair with right hand on hand rail over cox`n chair. The vessel took a roll to Port and the member`s hand slid down the rail and was cut by near-by wire bracket. SN immediately instructed cox`n to stop the boat and that he was hurt. The Engineer administered first aid while the vessel RTB. Upon arrival member was taken to the local hospital by station personnel. It was determined that member tendon on middle finger was severed between first and second joints, beyond the capabilities of that hospital to repair. Member was seen by specialist the following day and underwent surgery. Specialist was successful in rejoining the tendon but it was too early to tell if member will regain full use of finger.
2/11/2002	B	While underway for surf training at south beach, MLB 47266 encountered a 16ft break at the end of a series causing the MLB to roll 360 degrees to starboard and righted facing the opposite direction. Upon righting, the MLB was struck by a smaller break off of the stern pushing it towards the beach. The MLB was able to return to station under own power on one engine, and by using the emergency backup panel. Injuries: 6 members were injured during the incident with all receiving 5 days of lost work. Injuries included - ligaments torn in knee, sprains, strains, deep bruising, mild hypothermia, & lacerations. Property damage was extensive including: port reduction gear seized,

date	class	narrative
		throttles broken off on port and starboard throttle control heads, armrests and back on port & stbd helmsman chairs are bent, magnetic compass missing housing, helm unit broken, port forward window broken in, windshield wiper bent, blue light inoperable, search light inoperable, bent radar antenna pedestal mounting bracket, 3` crack under buoyancy chamber, overhang above port fwd window bent upward, d-ring between jump seats bent, port life ring holder bent, open bridge port console hand hold bent, port tow rail post stanchion has 3` crack at base, insulation in steering house water saturated, port MDE, & electronics.
3/22/2002	B	Mbr attempted to open watertight hydraulic door while it was nearly closed by activating the safety strip. Mbr s right index finger tip was entrapped between hydraulic door and door frame, causing the amputation. Mbr was medivaced via OPBAT HH-60 to Jackson Memorial hospital in Miami.
10/2/2002	B	Mbr was transiting ladder into fwd sewage Rm. Mbr did not secure the WTH properly upon opening it. Mbr lost footing on the ladder. As member fell, mbr grabbed hatch with left hand and knife edge with right hand. Mbr was rushed to ISC Alameda clinic with finger on ice and then immediately transferred to specialist hospital in San Francisco for emergency surgery. Doctors were unable to reattach the finger. Doctors placed pins trough fractured fingers and provided member with soft cast on right forearm and hand.
11/14/2002	B	While transiting engine room to aft berthing, GM2 noticed lube oil spraying from Nr1 MDE. GM2 notified MKC and EOW on mess deck, and MKC informed the bridge. At 0414l OOD set main space fire doctrine. Upon entering space MKC and FA observed approx 20 gals of lube oil in bilge and on deck plates, and lube oil using portable AFFF extinguishers. Attempts were made to secure both MDE's using local, bridge, and flying bridge stops and all emergency pull stops. Nr2 MDE secured, but Nr1 continued to run. FA discovered fires coming fm lagging around flowerpot and under outboard guillotine on Nr1 MDE. Fires were reported to bridge and extinguished by FA using portable AFFF extinguisher. All fuel supply valves to Nr1 MDE were secure and all remote fuel supply valves leading to engine room were closed causing Nr1 SSDG to secure. Nr1 MDE continued to run at 600 rpms fm lube oil burning in cylinders which allowed lube oil to continue to leak and make contact with hot machinery resulting in thick grey smoke engulfing the ship. Plastic were placed over air intakes of Nr1 MDE which still failed to secure the engine. With no SSDG online and AFFF portable extinguishers expended, engine room was evacuated. Attempts were made to start both the P-250 and P6—both failed to start. The P250 started, but seized after a short period as the 20ft suction hose was unable to remain in the water due to heavy rolls of the ship . Approx. 35 mins after main space fire doctrine was set, NR1 MDE seized and secured. Once engine secured, smoke dissipated. EM1 reentered engine room opening local supply valves to Nr2 SSDG restoring power to ship. When fire pumps were energized, first two-man fire team entered the space and was able to get four canisters of AFFF into engine room reflash. CGC SITKINAK arrived on scene before main space fire doctrine was secured, two hours and 36 mins after it had been set. Commercial tug relieved SITKINACK inside key west harbor and docked orig at GRU Key West. Upon investigation at pier, discovered Nr16 cylinder exhaust valve fell and punctured piston causing crank case explosion.
1/16/2003	A	While conducting routine ice channel grooming operations, the number 1 blade of the starboard propeller broke off the hub. Blade was not recovered. Vessel was operating in ahead propulsion with all three turbines on-line, widening the existing channel and breaking larger ice plates when unusual ship vibrations were suddenly felt. Conn immediately came to all stop and EOW reported low CPP oil level alarm on the starboard CPP system and emergency stopped the no. 1 main gas turbine. Diver later visually confirmed suspected blade loss.
8/10/2003	B	Visibility was varying between 20 and 250 yards, winds were blowing 15-20 knots, and seas 2-4 feet out of the south. MLB was responding to a vessel that hit a rock in thick fog and was dragging anchor onto a ledge. The MLB found the vessel hard aground and was evaluating the proper course of action to assist people on the vessel. Coxswain was using a lobster pot buoy for reference to ensure he was in safe water while evaluating the scene. Coxswain called the vessel via VHF radio and lost sight of

date	class	narrative
		his visual references, did not take into account set and drift, and ran aground on the ledge. Coxswain made 2 attempts to get off of the ledge without success. Crew immediately set anchor but it completely failed to hold. MLB was pushed furthur up on the ledge where it came to rest on an even keel.
10/8/2003	B	On October 23, 2003. CG 41462 was lit off for engine trials; after being lit off the pressure of both engines was reading around 90 PSI approximately. The engines were allowed to idle for approximately 20 minutes and the pressure dropped to around 65 to 70 PSI. This was still above the 45 to 65 PSI normal operating parameters, the engines were secured, both lube oil filters were then replaced. The engines were then restarted, the pressure continued to be high. The crew of CG41462 then proceeded to get underway for the trials, with the exception of the high oil pressure readings the engines ran fine, shortly thereafter a noise was detected from the starboard engine (S/N 48800058). CG 41462 then returned to STA Belle Isle to pick up one of the Station MK's, and then got underway again. Approximately 10 to 15 minutes later, a metallic noise was emitting from the starboard engine. The engine was secured and the 41462 proceeded back to STA Belle Isle for troubleshooting. After returning, an inspection on the starboard engine commenced and 3 broken push rods were found on the inboard side of the engine. Due to the similar high oil pressure indications on the port engine (S/N 48800022), it was decided to have both engines replaced by engines from CG 41479. These engine numbers are (S/N 48800042) starboard engine and (S/N 48800132) port engine. Upon reading through the history of the CG 41462, the boat was scheduled to be removed from the active list in late 2002 early 2003. The 41462 was in storage outdoors at the Toledo Beach Marina in Lasalle, MI., for approximately 12 months and subjected to the weather and elements without proper winterization care taken. The starboard engine (S/N 48800058) was installed on August 1, 2000, shortly after its installation there were several casualties to the engine: April 30, 2001 fuel leak repair; June 15, 2001 oil and exhaust leak; December 3, 2001 replaced rear main seal; March 14, 2002 replaced o-rings on raw water pump, and exhaust manifold leak; April 9 to 11, 2002 rear main seal replaced
12/18/2003	B	The 47301 with a crew of 5 were returning from offshore. They had responded to a request from PAFB to provide a surface safety platform for AF swimmer ops. They were not required to actually do anything but stand by, so they conducted some training while O/S, before RTB. The crew had just completed a MOB drill in the vicinity of Entrance LB 4 and knew they had good water for miles in all directions when they started their inbound transit back to Port Canaveral. Buoy 6 is exactly 1 NM from buoy 4. As the crewman (BM3 qualified, FN break-in) were securing the deck, the Cox'n (BM2) conducted a drill debrief with the B/I cox'n (BM3 qualified on NSB's). The BM2 then conducted a drill debrief with the crewmen and engineer (MK2) aft leaving only the BM3 looking forward while driving (stbd helm station). The BM3 requested to bring the speed up while BM2 was conducting the crew debrief and rcv'd the okay to do so. Their pos'n was approximately 500-800 yds NW of LB 4. The BM3 had set a waypoint to LB 13 and planned to cut across the buoy line back into port. The BM2 completed his crew drill debrief and returned fwd with the BM3 while the two crewmen remained on the aft deck and the engineer was by ladder facing aft talking with them. When the cox'n returned fwd he noticed the engine rpm's were not sync'd and instructed the B/I to correct it. The BM3 had noted a red flashing buoy several hundred yards ahead and thought he had plenty of time to correct the engine sync problem before manuevering. The BM3 had difficulty syncing and the BM2 then proceeded to explain how to complete the sync. Both sets of eyes were on the throttle control. The BM2 saw the buoy. He yelled "look out!" and grabbed the wheel and turned hard to port. The first contact was on the stbd bow under the first pair of bitts, and resulted in a through hull breach directly below the bitts, and two 4" fore and aft "knife blade" cuts. The rub rail was also damaged. The boat heeled over in response to the helm, exposing the underbody. Second contact was under reduction gear space at frame 6 and caused a dent 2 foot by three foot by 1 1/2 inches deep. Third contact was at the strut and sheared 20 of the 24 bolts holding the strut assembly to the hull and severely bent the strut. There was a small amount of water seeping through these sheared bolts (the

date	class	narrative
		bolts were still in place, but wobbled freely). The prop shaft was yanked from the red gear at the shaft spacer (the spacer is still connected to the prop shaft, all bolts broke free (and took the threads with them.) The prop shaft moved approx 8" aft. The output shaft of the reduction gear was pulled out of the reduction gear housing approximately 6" and has 2 inches of play in all directions. The engine was secured immediately, and the crew completed all casualty control measures. Coxswain informed station of accident and proceeded back to station on unaffected engine. LB 6 was verified to still be watching properly.
5/20/2004	B	Vessel returning from routine MarSec patrol. Upon entry to channel to Bayboro Harbor coxswain cut into harbor before the channel and hit the seawall adjacent to Albert Whitted airport. After hitting seawall vessel slid up onto embankment.
5/22/2004	B	While attempting to move 5NI buoy into position for gripping, crewmember used foot to slide buoy. Crewmember at the tail of the buoy was not yet in proper position to execute move. When buoy tail rolled unexpectedly, member's finger was crushed between buoy bail and A-frame. Member was evacuated via Station small boat to local boat launch where EMS was standing by. Injury resulted in medical amputation of approximately 1 and a quarter inches of fourth finger on left hand due to severe fracture. MISHAP occurred at 1430, unit was not notified of the extent of the injuries until 1950. Winds and Sea state were calm.
7/18/2004	B	Thunderstorms with Scattered Showers, Seas 2-4ft, Wind 217 degrees at about 15 kts, Visibility reduced occasionally by rainsqualls. On 17 July 2004 at approximately 2200Q the properly outfitted and manned MLB 47244, departed CG Station Hatteras Inlet for a Search and Rescue Case off the Old Light House Site at Cape Hatteras NC. The SAR Case involved a possible person in the water wearing an orange lifejacket. While enroute to the search area, the voyage was mostly uneventful with the exception of a minor leak from an exhaust coupling. The leak caused water to drip onto the bilge alarm sensor thus energizing the bilge alarm. The Boat Engineer tightened the fitting and the MLB continued on its mission. Prior to arriving on scene, Gru Cape Hatteras passed the coordinates for a PS and the crew entered them into the GPS. At approximately 2330Q the MLB arrived at the CSP. The O/S Weather: Thunderstorms with Scattered Showers, Seas 2-4ft, Wind 217 degrees at about 15 kts, Visibility reduced occasionally by rainsqualls. Just prior to beginning their first leg of their search, the MLB 47244 launched one MK127A1 Parachute Flare to illuminate the area. At approximately 2335Q after negative sightings, the Coxswain posted lookouts on the Port and STBD side and the MLB commenced the PS. The Search Speed was set at 12kts however when rain showers were present the Coxswain reduced the speed to about 8kts. At approximately 0327Q after making the turn to a cross-leg, the MLB 47244 rode up on one of the narrow jetties in the immediate area. The Coxswain mustered the crew on the Open Steering Station and shortly thereafter realized the MLB was stuck on the jetty with the bow hanging over one side and the stern hanging over the other. The waves along the jetty pushed the bow of the MLB down into the water and forced the MLB into a knockdown while partially on the jetty. With breaking waves all around them, no control over the fate of the MLB, and the propellers striking the jetty; the Coxswain instructed the crew to disembark swim to safety. At approximately 0334Q, after ensuring everyone was away from the MLB, the Coxswain heard the engines running at a high rate of speed and was again concerned about their safety. The Coxswain, timing the waves, swam back and re-boarded the MLB 47244. Once aboard he secured both engines, instructed the crew to swim to shore and he re-entered the water as well. At approximately 0340Q the Coxswain reached the shore and observed the MLB 47244 sitting upright on the beach. The distance was about 200 yds. Upon meeting up with the other crewmembers, the Coxswain instructed two of his crewmembers to go and report the situation to Gru Cape Hatteras Operation Center and also to the OIC. Shortly thereafter the Coxswain and the Boat Engineer boarded the MLB 47244 and then set the anchor up on the beach. At about 0415Q Group Personnel and the OIC arrived on scene. The MLB's power was secured and the crew was taken back to the Station for showers and clothing. Later the Group Engineering Officer and the Station EPO went aboard to assess the damage. No hull breaches were apparent and additional inspections provided the same results. At approximately

date	class	narrative
		1330Q a light sheen around the Starboard side of the MLB was present and it is believed that a breach may be present in the fuel tank. There was approximately 250 gallons of diesel fuel aboard and the tanks has been capped. As of 1630Q 18 July 04 the MLB 47244 remains on the beach and plans are in place to extract it via water on the High Tide at approximately 0930Q 19 July 2004.
7/20/2004	A	On 20 July 2004 at approximately 1820Q STA was contacted by Southampton police department reporting two people in the water off Tiana Beach (40-49.82n, 072-30.73w, approximately 1.5 miles west of Shinnecock Inlet). 220523 launched with 3 POB. WX at time of mishap: visibility unlimited, seas 3-6 ft, wind 220 degrees at 10 kts. 220523 commenced search along shoreline and lookout spotted PIW waving in their direction. The BM3 coxswain proceeded to the PIW to realize that the individual was sitting on a surfboard and was not in distress. As the coxswain maneuvered away from the surfer, he was caught by a wave on his port beam. At 1842Q, STA rcvd a call of an overturned vessel, and at 1850Q, Suffolk County helo reported that the overturned vessel was 220523. 220523 had been pushed over to starboard by the first wave, immediately hit by another wave, and then corkscrewed over onto its starboard side approximately 400 yards off shore. The starboard side lookout (SN) fell overboard, followed by the BM3 coxswain. The coxswain's kill switch cut the engines as the boat continued to capsize and throw the port lookout (MK3) into the water. The SN and BM3 thought the MK3 was under the capsized boat and swam towards it to assist him. As they swam closer, the MK3 popped up out of the water. The MK3 activated his P-EPIRB and the SN shot off three MK79 flares. The boat crew then proceeded to swim to shore. Approximately 50 yards from shore, the boat crew was met by good Samaritans who assisted them the last 50 yards from the water. The MK3 and the BM3 were taken to Southampton hospital, thoroughly examined, and released. The SN was taken back to the station. 220523 was righted and loaded onto a trailer by the Hampton Bays fire department. 220523 was then taken to the station and later transported to GRU Moriches for further investigation.
5/23/2005	B	At 2059 local time on May 23, 2005, Station South Portland was directed by Group to launch a resource to assess and provide assistance as necessary to the 45-foot Sailing Vessel, which was reportedly dragging its mooring in the harbor, Maine, due to high winds. The S/V was believed to be in danger of grounding on the rocky shoreline or drifting into other nearby vessels; there was one person on board. The winds and seas were associated with a frontal system that passed through the local area shortly before the call from the S/V was received; the weather was rainy with East-Northeast winds from 25-35kts and 6-foot choppy seas. CG Motor Lifeboat 47 sortied from Station at 2114 local time. At approximately 2146, CG 47 ran aground on a island, two of the crew received minor bumps and bruises from the impact of the grounding and during damage control efforts. At 2152, the S/V reported assistance would be provided by a friend using a boat from the fisherman's Co-Op located in the harbor. The MLB subsequently broke free of the island and came to rest on the Eastern side of near by island. The crew was recovered by the Marine Patrol, and the MLB was salvaged by Station and Group personnel the following day CG 47 was extensively damaged and removed from service for repair.
6/24/2005	B	While enroute for two-boat training with another Unit's Station, CG 47 struck a submerged object. The MLB was in 16 FT of water while transiting southbound 300 yards offshore. Seas were 1-2 feet, with an outgoing tide; and the winds were 10-15 knots out of the SE. After striking the submerged object, the coxswain immediately initiated casualty control measures. The coxswain notified station of their location and activated the man overboard button on SINS package. The coxswain instructed two crewmembers to rig an emergency anchor while the engineer and other crewmembers checked the compartments. The engineer reported that there was marine gear oil in the starboard marine gear space. The coxswain attempted to maneuver the vessel into safer water but was unable to engage the marine gears. The coxswain energized the emergency backup panel and still was unable to engage the marine gear. The engineer also attempted to manually engage the marine gears but was unable to. The coxswain

date	class	narrative
		updated the station of the situation and the station launched CG 41 to assist CG 47. The crew of the 47 continued to try, but were unable to set the anchor due to the anchor line back lashing and becoming tangled on the reel. The coxswain then went up onto the bow of the boat to assist in detangling the anchor and letting more line out; but they were still unable to anchor the boat. The boat drifted towards the Steel Pier off the City Boardwalk. The engineer reported that they were taking on water through the strut bolt holes in the engine space where several bolts were sheared off from impact from the submerged object. The engineer verified the bilge pumps were keeping up and plugged the affected bolt holes. The coxswain instructed crewmembers to fend the starboard quarter of the boat as it approached Steel Pier. While crewmembers were fending off the pier, the coxswain pulled the anchor back in and found that the fluke was fouled. The coxswain cleared the anchor and attempted to set the anchor again. When the anchor finally held, the MLB was in 6 feet of water approximately 30 yards off the beach and the coxswain set an anchor watch. The coxswain then updated CG 41 of their location and situation. CG 41 arrived on scene and de-anchored CG 47 and towed the vessel back to the station.
9/19/2005	B	Defender class CG 25 with four POB capsized while underway near buoy "B". Initial report was as the coxswain turned hard to port the vessel violently caught on its starboard chine and immediately capsized. Coxswain emphasized how he felt "something was wrong" just before the vessel went over. Crew reports all windows and doors were secure, but the cabin began to rapidly fill with water. All crew members were in the cabin throughout the capsizing. One of the crewman opened the aft door and all except the coxswain were able to exit. The coxswain floated up into an air pocket just above his seat. He believes this was caused by air trapped in his drysuit. He did not realize his crew had exited the vessel and began to search the cabin for his shipmates, returning to the air pocket. Finally he "burped" the air from his drysuit and exited through the aft cabin door. Once on the surface all four crewman activated their type 5 PFDs. The coxswain immediately launched four mk-81 pencil flares in succession. Near by on shore security personnel saw the flares and notified authorities. two other MSST boats approximately 1.5nm away, overheard the broadcast and observed the last couple flares. They were on scene in three minutes and recovered all four piw within four minutes. Crew transferred to station boat for transport to local medical facility, were they were later released. MSST boats immediately re-established the zone. CG 25 was towed by STA to a local dock and secured. Guard posted to watch vessel and weapons which may be onboard. Intend to re-right the vessel tomorrow during daylight hours using local salvage. Reported weather at time of mishap: air temp 53, water temp 51, winds 270 8-15 knots, seas 270 1-2 ft.

Common Mishap Discrepancies

Misclassification of Mishaps

The table to the right outlines the mishap classification criteria. Probably the most frequent misclassifications involve groundings and personnel injuries. All groundings, no matter how minor are Class C mishaps. Likewise, any mishap in which an individual is placed on more than 30 days of limited duty or is determined to be Not Fit For Duty (NFFD) or sick in quarters for one or more days is a Class C mishap.

Failure to include the cost of property damage

Mishaps have an economic impact on the service: Parts, commercial repairs, even the value of Coast Guard man-hours that could be spent doing other important work. We need to do a better job of capturing these costs.

Failure to capture lessons learned from Near-Misses

Some of the best lessons learned come from those that did not happen. HIPO's range from those events in which nothing short of divine intervention would have prevented a mishap from occurring to ones in which ORM or strong team skills broke the error chain. Please ensure that sharing HIPOs with the field is the norm.

What are the Mishap Descriptions?

Mishap Severity	Description
Class A	Cost of reportable property damage is $1,000,000 or greater. Vessel is missing or abandoned, recovery is impossible or impractical, vessel cannot be repaired economically. An injury or occupational illness results in a fatality or permanent total disability.
Class B	Cost of reportable property damage is $200,000 or more, but less than $1,000,000. Injury/Illness results in permanent partial disability. Three or more people are inpatient hospitalized. For small boats 30 feet in length or greater, damage is $50,000 or more. For small boats less than 30 feet in length, damage is equal to, or greater than, half of the replacement cost of the boat.
Class C	Cost of property damage is $20,000 or more, but less than $200,000. Non-fatal injury/illness results in any loss of time from work beyond the day or shift on which it occurred, or more than 30 days of limited duty. A person falls overboard accidentally. **Any grounding, capsizing, rollover, or knockdown greater than 90 degrees from an even keel** that does not meet higher criteria.
Class D	Cost of property is between $1,000 and $20,000. Non-fatal injury/illness does not meet criteria of a Class C. Any firearm discharge, or electrical shock occurs that does not meet the criteria of a higher classification HIPO: Near mishaps, lessons learned events, or other events with a HIgh POtential for injury or damage.

CONTACT INFO

Your comments on this report including recommended content, as well as any suggestions concerning the safety of maritime operations will always be greatly appreciated. Please feel free to call, fax, or e-mail us with any comments, questions or concerns.

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http://www.uscg.mil/hq/G-W/g-wk/wks/wks4/index.htm

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http://cgweb.lant.uscg.mil/Kdiv/kseHomePage.htm

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http://cgweb.mlcpac.uscg.mil/mlcpk/SafEnvHlthBran.htm