

FY 2009 Annual Afloat Safety Report



**FOR MARITIME OPERATIONAL FORCES
CUTTERS,
CUTTER BOATS,
SHORE-BASED BOATS**

**Commandant (CG-1134)
Afloat Safety Division
Office of Safety and Environmental Health**

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PURPOSE

This report contains summaries and analyses based upon reported FY09 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 in preserving property and providing a safe workplace environment for personnel.

To reduce future safety risk within maritime operations, we must understand where we currently stand. Identifying hazards that have resulted in mishaps helps us to better anticipate, recognize, and control risk 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 their chains of commands. 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 detached Safety and Environmental Health Officer (SEHO's), other applicable safety staff, or the appropriate Headquarters point of contact listed at the end of this report.



Message from Chief, Afloat Safety Division (CG-1134)

This was a remarkable year for safety within the afloat community. Drastic reductions were noted in the occurrence of small boat mishaps. The Team Coordination Training program is undergoing a transition and the new course is “Operational Risk Management” name will be used for the course along with new curriculum and new videos.

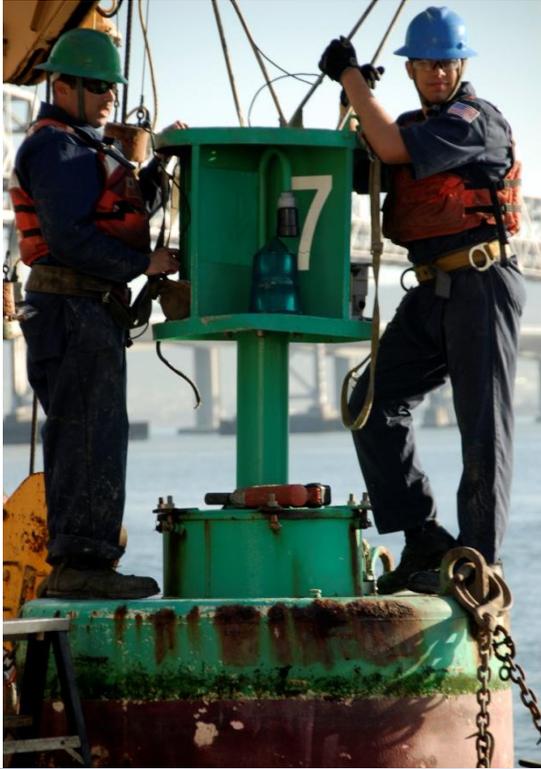
Last year we were looking to the future for delivery of the RB-M and WMSL. This year many RB-M’s have been delivered to the field and have received high praise from operators. The USCGC BERTHOLF has transited to homeport in Alameda, CA and the USCGC WAESCHE is expected to be delivered in the near future. These new assets are critical to meeting the future mission demands of the organization. As we look to the future of safety in the Coast Guard, “Hazard Awareness” is the name of the game. Only by learning to appropriately utilize risk management principles in all levels of mission execution will we be able to continue the reduction of mishaps within the organization.

The information contained in this report has been extracted from the E-MISHAP database, <http://apps.mlca.uscg.mil/kdiv/ksemisrep/mhgo.asp>. It has been reported by your shipmates for you to use in the prevention of similar mishaps in the future. Please review it, share it, and discuss it with your chain of command. Think about your risks and be safe!

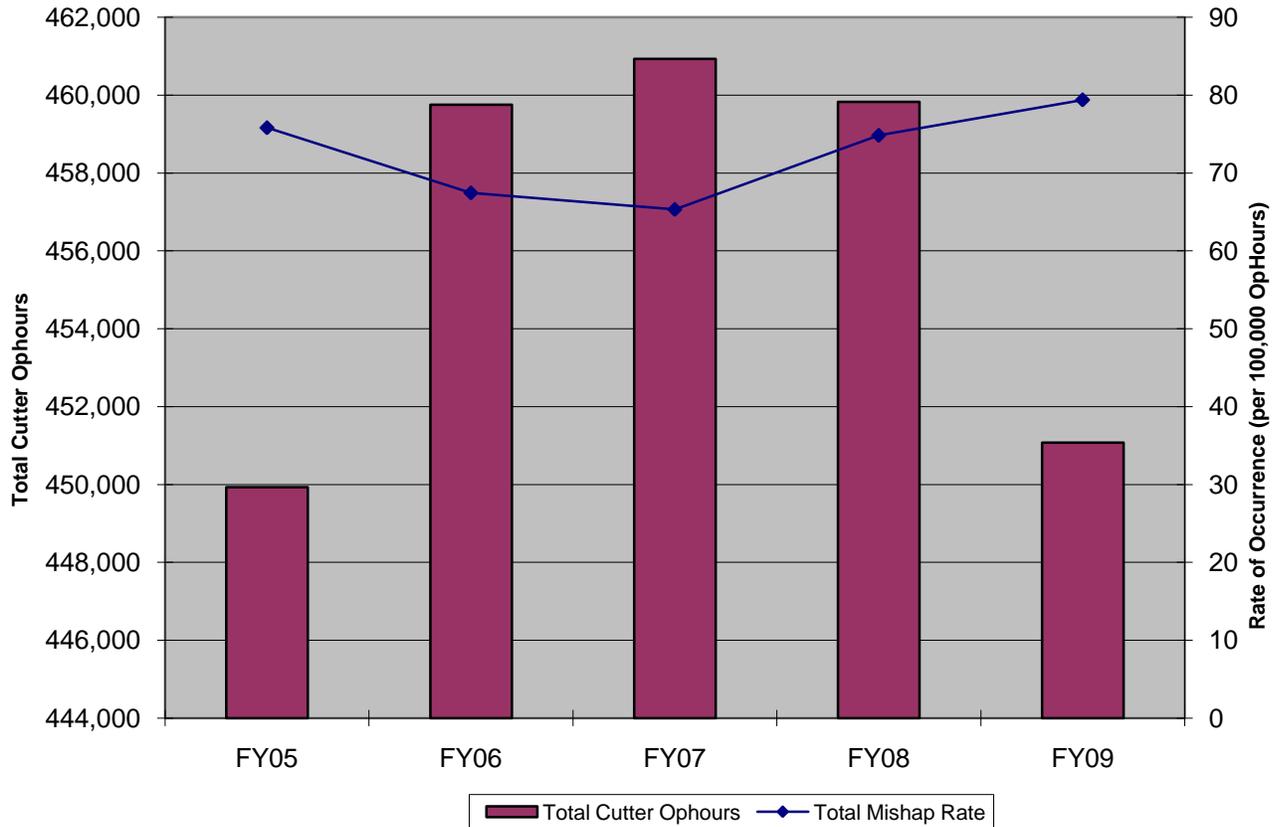
CDR R. M. Keesler, Chief Afloat Safety Division (CG-1134)



Cutter Forces

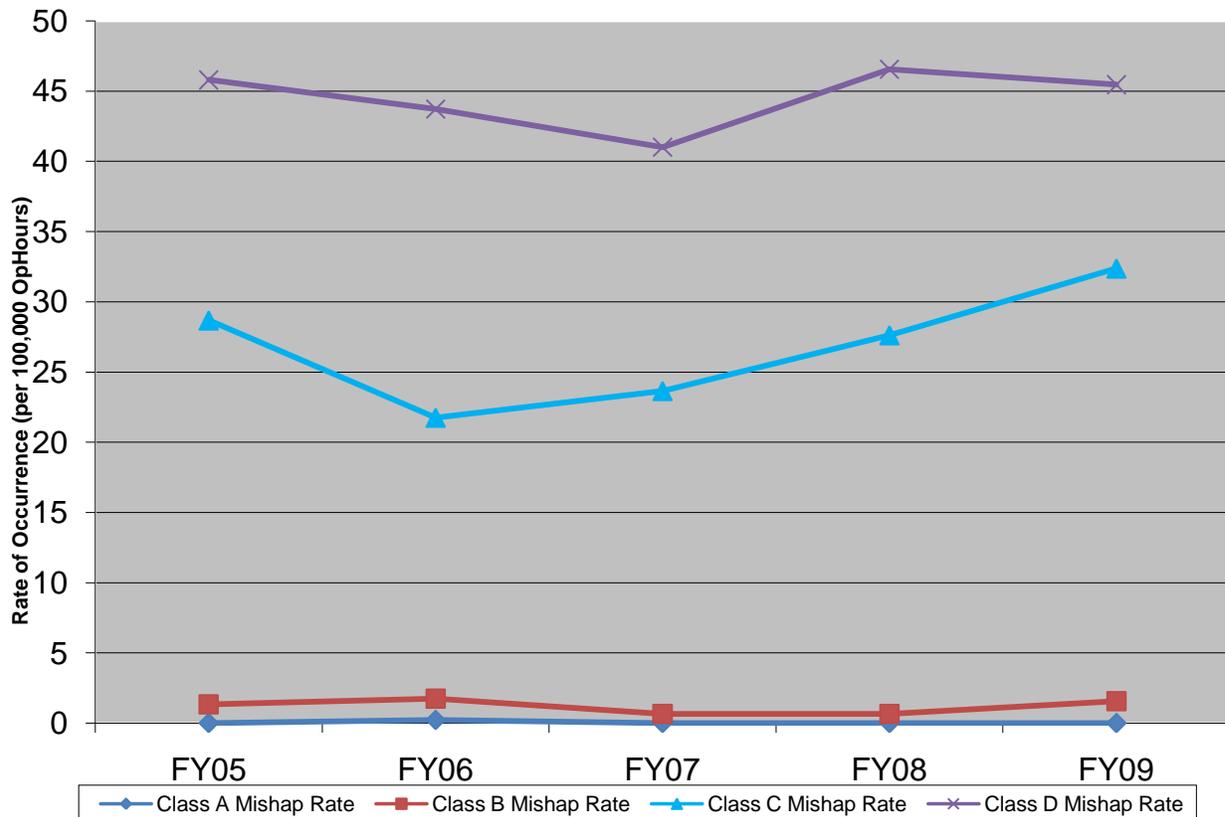


GRAPH 1: Cutter Mishap Rate per 100K Operating Hours



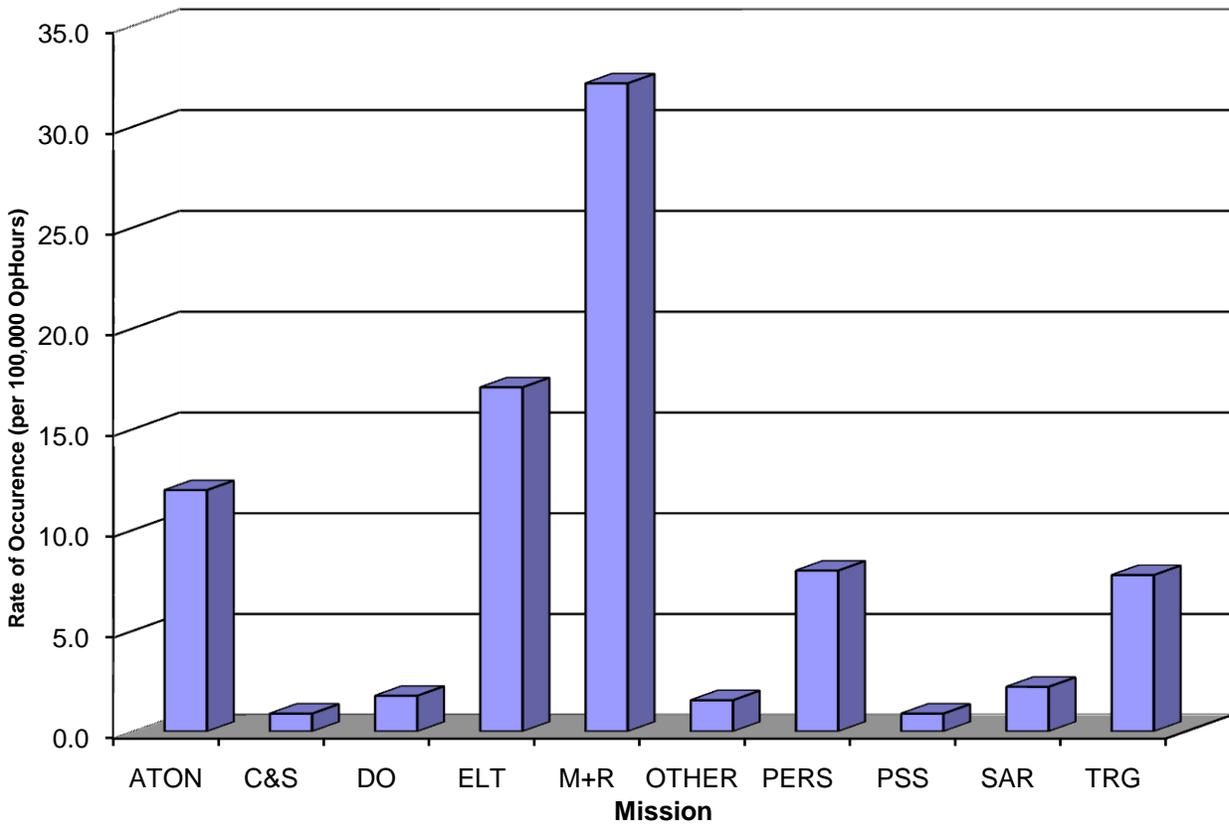
Cutter mishap rates have climbed to the highest level on record while operational hours decreased slightly. The mishap rate was driven by an increase in personal injuries to members. While there was no common mechanism of injury, the largest number of injuries occurred during maintenance and repair evolutions aboard ship.

GRAPH 2: Cutter Mishap Rate by Class of Mishap



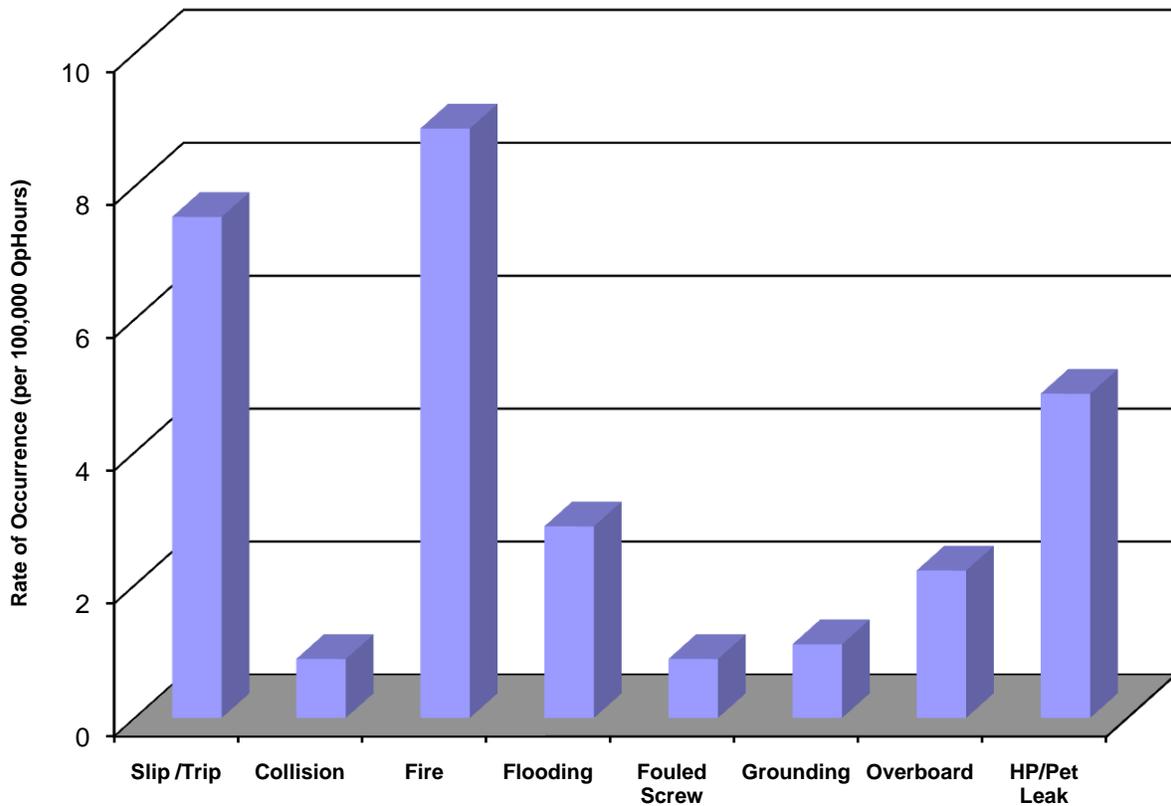
Class C mishap rates continued an upward trend that started in FY 07. Class D mishaps show a decrease from the previous year (see Graph 2). No class A mishaps occurred aboard cutters during the year. Seven class B mishaps were experienced aboard cutters which is the second largest number in the last ten years behind FY06. The class B mishaps consisted of three engine casualties aboard WPB 110's that were due to unrelated factors. Flooding aboard a WMEC 270 when an improperly set cold weather bill resulted in a flooded forward magazine when a potable water line became frozen and later ruptured. Three Class B mishaps occurred during dry-dock/dockside maintenance evolutions. A fire in the engineering storeroom of a WHEC 378 occurred when a contractor conducted unauthorized hot work while in dry-dock. A contractor working aboard a WMEC 270 was working on a hatch that he thought he secured; it fell and amputated his fingers. Finally, a contractor working aboard a WLB 225 suffered an amputated thumb when he was struck by a falling deck plate. The largest concentration of class C mishaps continues to be Injuries followed by Slips, Trips, and Falls. Class D mishaps decreased slightly in FY 09 after last year's increase. Decreased numbers were seen in Fires and HP/Pet Leaks. Overall, Fires decreased from 45 in FY 08 to 40 in FY 09. While the decrease in reported fires is a good sign, there is still a need for crews to approach shipboard fire prevention with greater vigilance and report all fires.

GRAPH 3: Mishaps Rates by Mission FY 2009



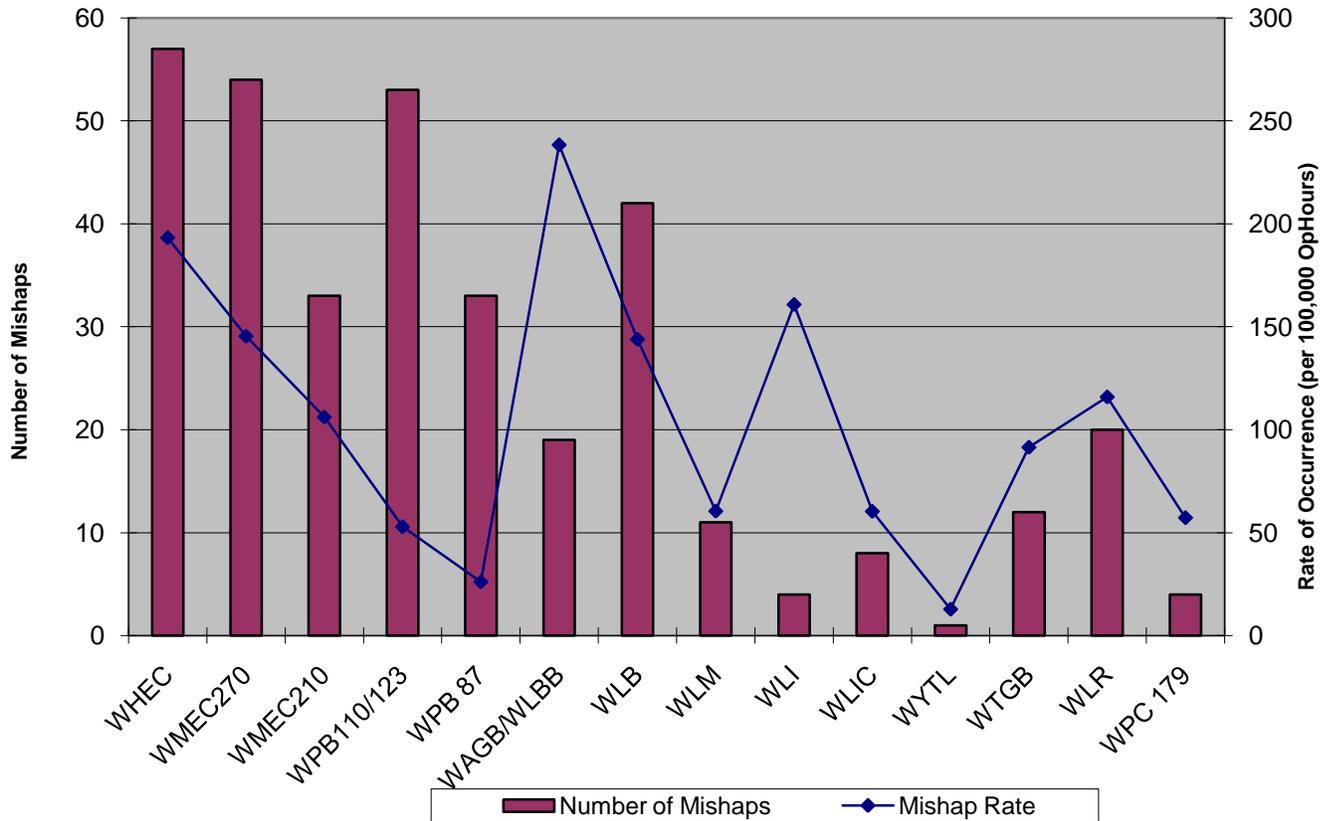
In FY 09 cutters experienced the largest mishap rates during Maintenance and Repair. The leading category of mishaps within this mission set is personal injuries to Coast Guard members. Personal injuries are also the leading mishap in the Enforcement of Laws and Treaties, and ATON (See Graph 3). The largest increase in mishap rates over FY 08 numbers occurred while executing the Enforcement of Laws.

GRAPH 4: Cutter Mishap Rate by Mishap Type FY 2009



Examining cutter mishaps by mishap type (Graph 4) indicates that the highest rates were associated with shipboard fires and Slips, Trips, and Falls. The largest source of slip, trip, and fall injuries occurred while transiting ladders, scuttles, and hatches aboard ship. Shipboard fires were distributed amongst several different classes of cutter with the largest numbers occurring on 378's, 270's, and 110's. The fires generally involved machinery or equipment failure in engine room compartments and electrical fires with no common point of failure. Flooding generally resulted from misalignment of a system, incorrect maintenance procedures, or failure of system integrity. The majority of crew members that fell overboard occurred during maintenance and repair; two occurred while trying to board another vessel during law enforcement boardings. Collisions occurred mainly during mooring evolutions and while getting underway.

GRAPH 5: FY 2009 Cutter Mishap Rate by Class of Cutter



Examining mishaps by platform finds the highest rates aboard the WAGB and WHEC class of cutters (See Graph 5). The leading categories of mishap aboard these cutters are injuries, fires, and slips trips and falls. The high mishap rate for the WAGB is due to an increase from 14 mishaps in FY 08 to 19 in FY 09. Injuries aboard WAGB’s rose from 10 in FY 08 to 15 in FY 09; this factor drove the increased mishap rate. The mishap rate for 270’s was driven by an increase numbers of fires and injuries. Fires increased from 3 in FY08 to 8 in FY09. The WLR, WPB 87, and WLM all experienced a reduction in mishap rate from FY08 to FY 09. Numbers for the remaining platforms are consistent with last year’s figures with a few showing minor reductions over the previous year.

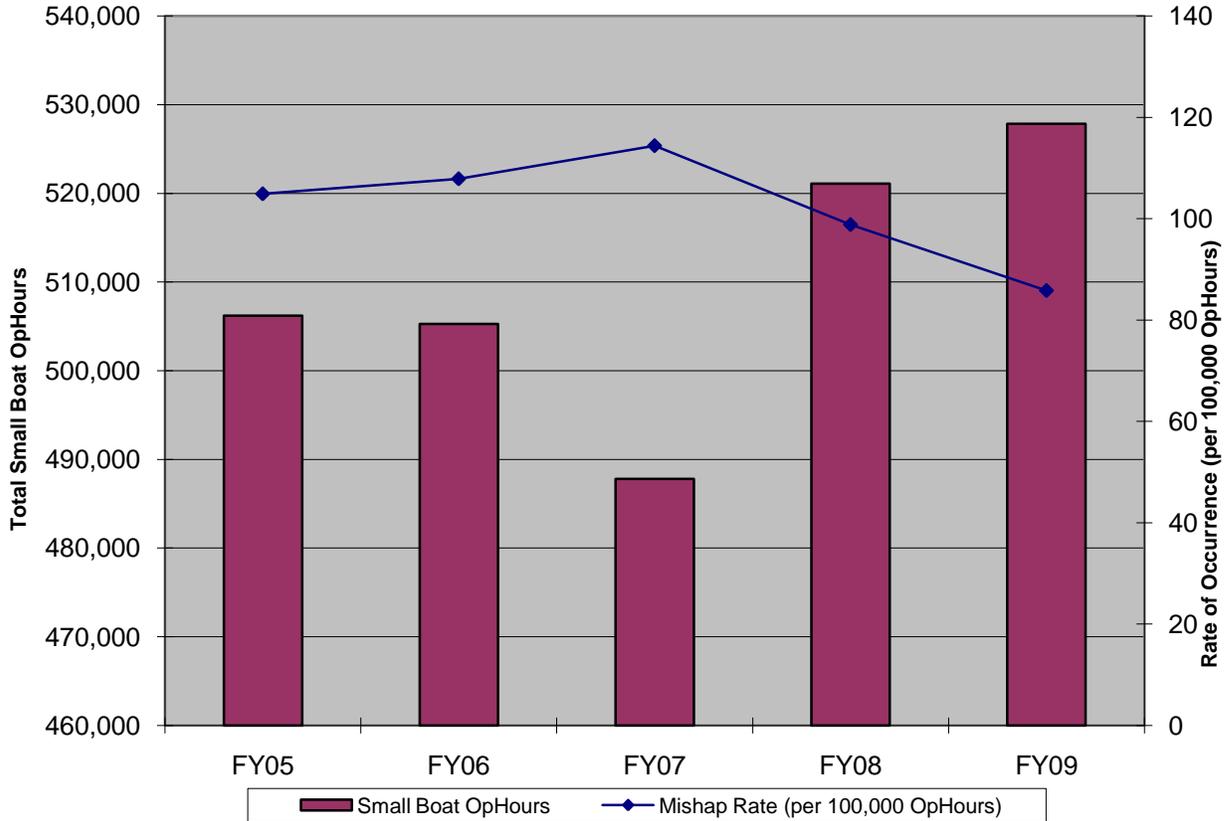
Boat Forces



Shore Based and Cutter Based Boats

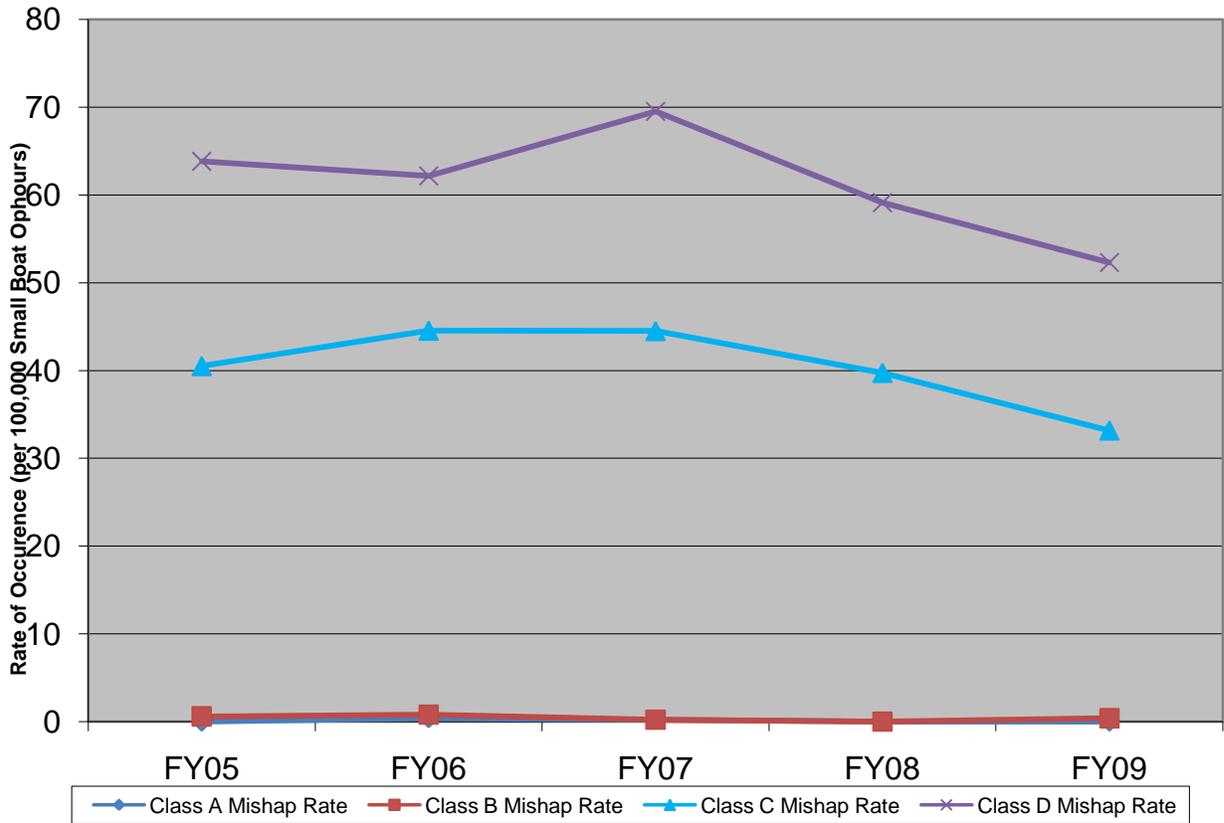
Mishap Analysis:

GRAPH 6: Boat Mishaps per 100K Operating Hour



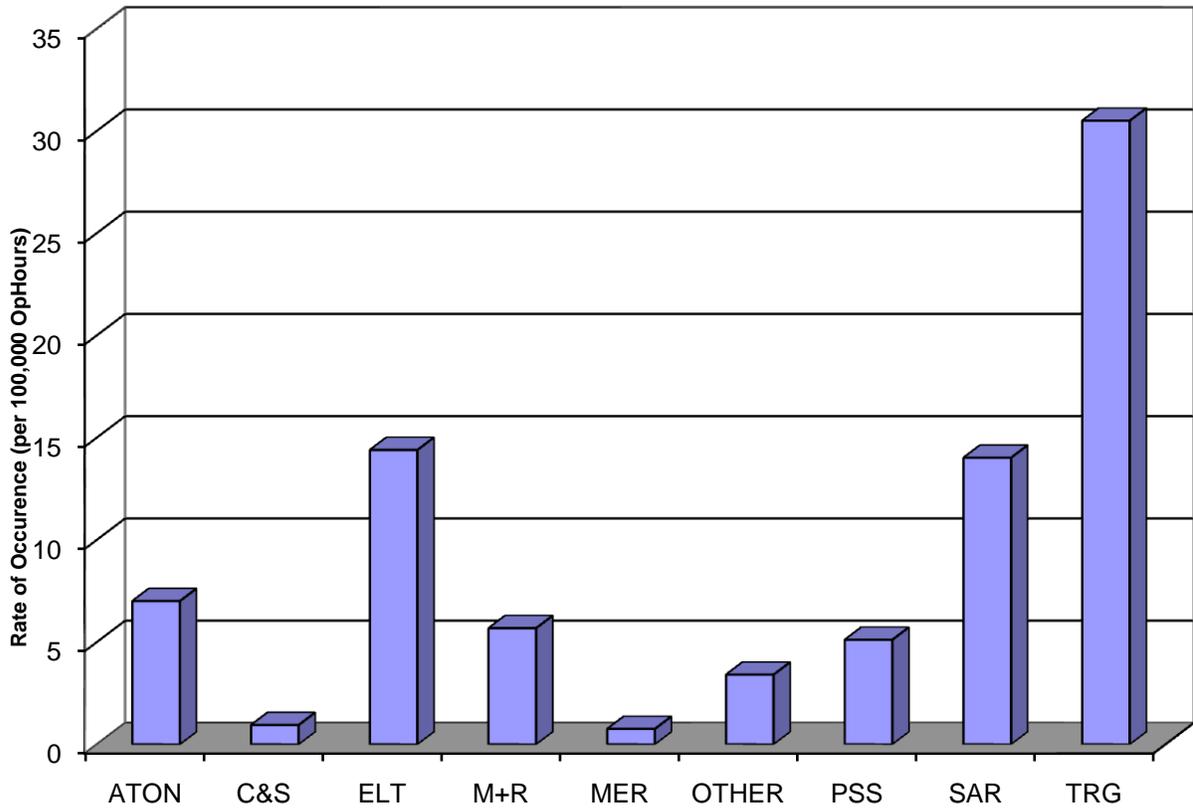
Small boat mishap rates in FY 09 fell to the lowest level since FY03. Improved communication at all levels concerning hazards, lessons learned, and best practices have contributed to safer boat operations throughout the organization. Several mishaps between Coast Guard assets and civilian/commercial watercraft highlight the need for vigilance and adherence to COMDT policy while executing missions. An area of significant risk to Guardians is cutter/small boat evolutions. The challenge of safely interfacing these two assets during mission execution requires thorough risk management at all stages of planning and execution. High risk evolutions such as launch and recovery or the transfer of personnel and equipment are further complicated by changing sea states, weather, and crew fitness. Training, Crew Endurance Management, and the proper use of Operational Risk Management are essential steps in ensuring we are always Semper Paratus.

GRAPH 7: Boat Mishap Rates by Class of Mishap



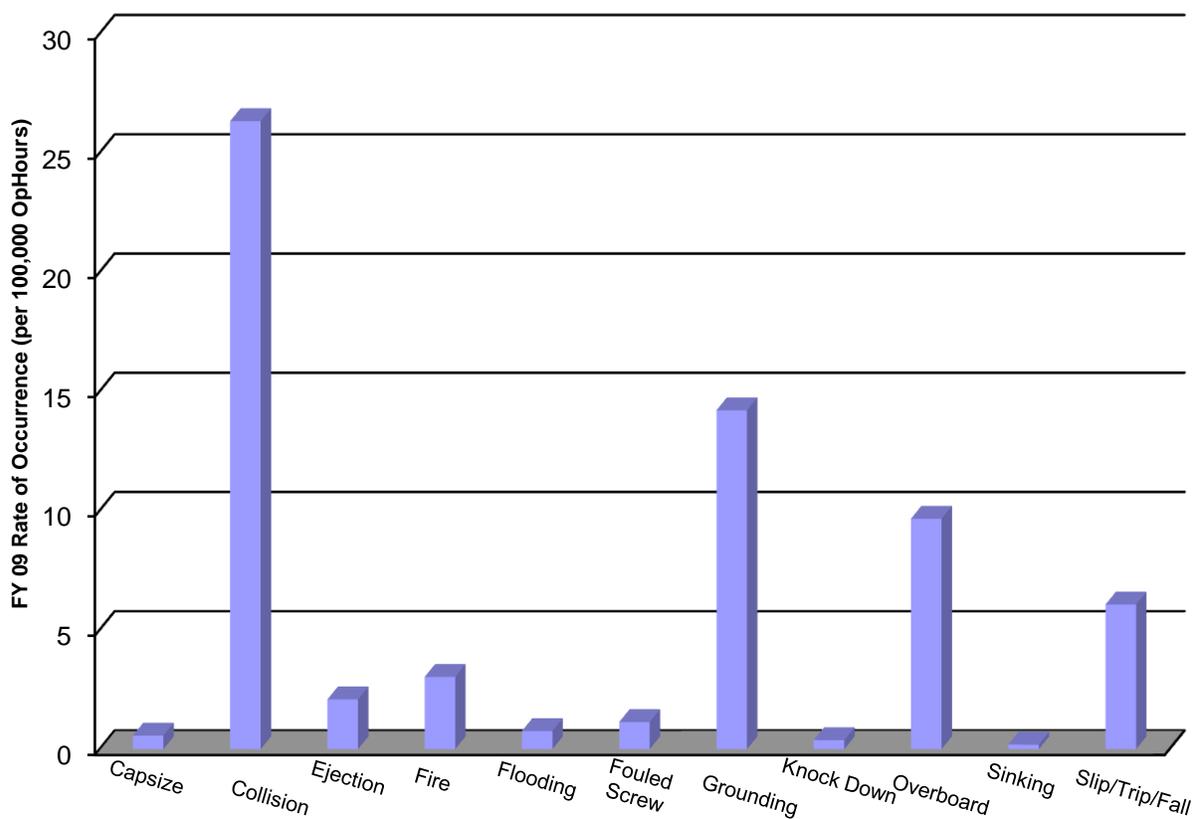
The small boat community has continued to experience a significant reduction in mishap rates in FY 09 (see graph 7). No class A mishaps have occurred in well over 1,000,000 operating hours. It is the first time in over ten years that two fiscal years have passed without a Class A mishap. Two Class B mishaps occurred during the fiscal year. In both cases the mishap involved a cutter boat capsizing while alongside a cutter. Class C mishap rates are at the lowest level the operational community has seen since FY 02. The reduction in the Class C mishap rate is due in part to a reduction in reported groundings. Groundings fell from 91 in FY 08 to 75 reported incidents in FY 09. The significant drop in the rate of occurrence for Class D mishaps is due largely to the reduction in collisions from 156 reported in FY 08 to 139 reported in FY 09.

GRAPH 8: Small Boat Mishap Rates by Mission Type FY 2009



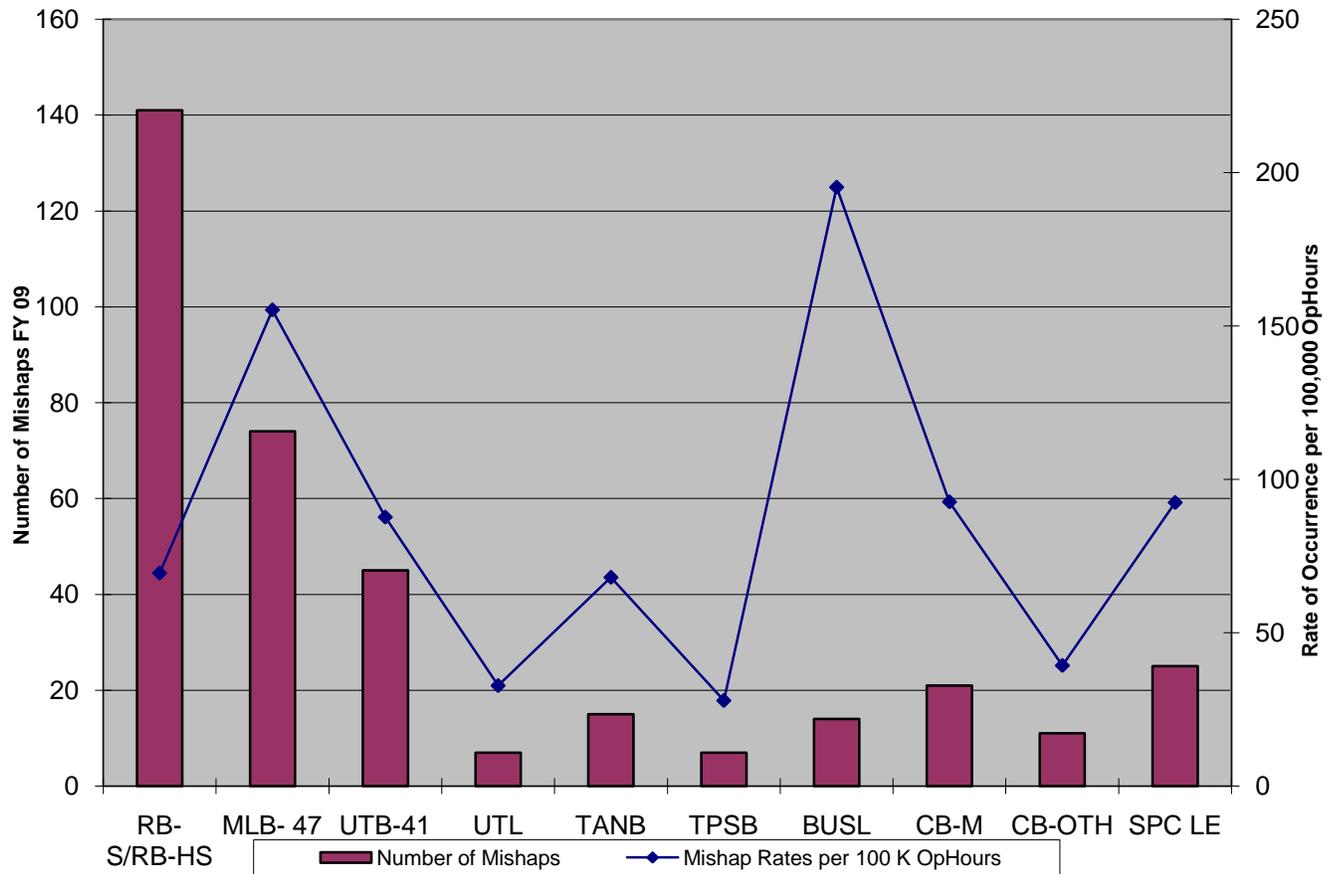
In FY 09 small boats experienced the largest number of mishaps while conducting Training followed by the Enforcement of Laws and Treatise and Search and Rescue (See Graph 8). Training is traditionally the mission set with the highest level of mishaps. Collisions make up the largest subset of mishaps within training. During the Enforcement of Laws and Treaties the mishaps are composed of collisions caused while coming alongside vessels, members falling into the water during personnel transfer, and injuries sustained during boarding's. The numbers of mishaps were reduced in every mission set from FY08 to FY09.

GRAPH 9: Boat Mishap Rates by Mishap Type FY 2008



While collisions and groundings have continued to decline in FY 09, they are still the largest category of mishaps in the small boat community (see graph 9). Both collisions and groundings experienced a significant reduction in numbers over previous years (see page 13). Other categories that have fallen below the previous fiscal year totals include slips, trips, and falls and reported cases of people in the water (PIW). Ejections continue to be a significant safety concern in the Coast Guard. Despite efforts to reduce ejections, the total number of ejections went from 8 in FY08 to 11 in FY09.

GRAPH 10: Small Boat Mishap Rate by Platform FY 2009



Small Boat Mishap Rate by Platform Continued:

Mishap rates have continued to decrease for most of the small boat platforms. The mishap rate for the MLB-47 is slightly higher than last year. The BUSL has the highest mishap rate among small boats. The number of mishaps between FY08 and FY 09 for BUSL’s increased by 3 and were typically groundings, collisions, and injuries related to the ATON mission. Both the SPC-LE and UTB-41 display higher mishap rates than most other platforms, however, both have undergone a reduction over the previous year’s mishap rate. The UTB-41 went from 60 mishaps in FY 08 to 45 in FY 09. The SPC-LE went from 30 in FY08 to 25 in FY 09 (see Graph 10).

List of Acronyms-Boats and Cutters

Acronym	Type	Class
ANB	AtoN Boat	55'-64'
BUSL	Buoy Boat Stern Loading	49'
CB-S	Cutterboat-Small	13'
CB-M	Cutterboat-Medium	17'
CB-L	Cutterboat-Large	24'
CB-OTH	Cutterboat-Over the Horizon	23'
MLB	Motor Life Boat	47'
RB-HS	Response Boat-Homeland Security	25'
RB-M	Response Boat-Medium	45'
RB-S	Response Boat-Small	25'
SPC-LE	Special Purpose Craft-Law Enforcement	33'
SPC-AIR	Special Purpose Craft-Airboat	18' & 20'
SPC-BTD	Special Purpose Craft-Boarding Team Delivery	24'
SPC-HWX	Special Purpose Craft-Heavy Weather	52'
SPC-NLB	Special Purpose Craft-Near Shore Lifeboat	42'
SPC-SW	Special Purpose Craft-Shallow Water	24'
SPC-SKF	Special Purpose Craft-Skiff	---
TANB	Trailerable AtoN Boat	26'
TPSB	Transportable Port Security Boat	25'
UTB	Utility Boat-Big	41'
UTL	Utility Boat-Light	17' thru 28' 11" aluminum or fiberglass boat that may have fendering and installed electronics and engines.
WAGB/WLBB	Icebreakers	420'/399'/240'
NSC	National Security Cutter	418'
WHEC	High Endurance Cutter	378'
WLB	Buoy Tender-Seagoing	225'

WLI	Buoy Tender-Inland	100'/65'
WLIC	Construction Tender-Inland	75'/100'/160'
WLM	Buoy Tender-Coastal	175'
WLR	Buoy Tender-River	65'/75'
WPB	Patrol Boats	110'/87'
WPC	Patrol Coastal	179'
WTGB	Icebreaking Tug	140'
WYTL	Harbor Tug	65'



TEAM COORDINATION TRAINING (TCT)

The TCT training program is comprised of TCT Facilitators, TCT District Administrators, USCG Academy Command and Operations School staff, and the Training Quota Management Center (TQC).

TCT Unit Level training is requested through the respective District Administrator who then assigns a facilitator and forwards their name to TQC for orders. Personnel interested in teaching TCT should contact their respective District Administrator. In order to be a TCT Facilitator, members must complete the TCT correspondence course, #G0652, and the Instructor Development Course (IDC), #230140. The TCT correspondence course must be completed prior to attending the IDC course. Prospective TCT facilitators must also have completed the 8 hour TCT Unit Level refresher course, or a resident TCT course listed below. Once the end of course test for the TCT correspondence course has been completed satisfactory, prospective TCT Facilitators will notify their respective TCT District Administrator. The District Administrator will then enroll the student into Instructor Development Course (IDC) #230140. Once the IDC has been completed the instructor must be observed instructing two TCT classes by a qualified TCT Facilitator. If successful, a TCT Facilitator Certificate will be issued by HQ certifying the member as a TCT Facilitator.

TCT course: Cutter OPS (500686). The Cutter OPS course is required for all Cutter Operations Officers and Operations Petty Officers of cutters 65 ft in length or greater. Students should be slated for the operations position, but it is not required.

The TCT curriculum is being combined with the Operational Risk Management (ORM) program, COMDTINST 3500 (Series), to become Operational Risk Management. The new program also includes TCT. A new ORM instruction that includes TCT is being developed.

Current District TCT Administrators (and work phone numbers) are listed below for reference:

District	Administrator	Email	Work Phone	Fax
D1	CWO Manny Zambrana	Emmanuel.Zambrana@uscg.mil	(212) 668-7992	(212) 668-7975
D5 Primary	CWO Tim Luton	Timothy.M.Luton@uscg.mil	(757) 398-6509	(757) 398-6203
Secondary	CWO Philip Pinto	Philip.Pinto@uscg.mil	(215) 271-4934	
	Lionel Crossman	Lionel.Crossman@uscg.mil	(215) 271-4936	(215) 271-4968
D7	CWO Pete Louzao	Peter.D.Louza@uscg.mil	(239) 985-0560	(239) 985-0561
D8	CWO William Gordon (Ashley)	William.A.Gordon@uscg.mil	(504) 671-2142	(504) 671-2146
D9	LT Winward Griffin	Winward.A.Griffin@uscg.mil	(216) 902-6118	(216) 902-6121
D11	BMC John Prentice	John.E.Prentice@uscg.mil	(510) 437-5323	(510) 437-3223
D13 Primary	Jeanette Wells	tesseract1@juno.com	(253) 891-0620	(253) 891-0620
		Jeanette.L.Wells@uscg.mil		
D14	CWO Brian Leavy	Brian.A.Leavy@uscg.mil	(808) 535-3430	(808) 535-3439
D17	Mr. Mike Folkerts	Michael.R.Folkerts@uscg.mil	(907) 463-2297	(907) 463-2273
LANT TRATEAM	BMC Kenneth Harper	Kenneth.W.Harper@uscg.mil	(757) 398-6457	(757) 391-8100

PAC TRATEAM	Bobette Burdick	Bobette.M.Burdick@uscg.mil	(510) 437-3301	(510) 437-3297
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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.

SAFETY POC's

Health Safety and Work-Life (HSWL)

Chief - Mr. Vincent Andreone (757) 628-4392
Assistant Branch Chief- LCDR Harrichand Rhambarose (757) 628-4392
Vessel Branch Chief - CWO Mike Lindsay (757) 628-4409
<http://cgweb.lant.uscg.mil/Kdiv/kseHomePage.htm>

FORCECOM (FC-7)

Chief – CDR Jeff Church (510) 637-1151
Safety Specialist – Mr. Duke Pettigrew (510) 637-1248
<http://cgweb.mlcpac.uscg.mil/mlcpk/SafEnvHlthBran.htm>

Other Helpful Information:

- Afloat Safety Division (CG-1134) / TCT / ORM web site:
<http://www.uscg.mil/hq/cg1/cg113/cg1134/TCT.asp>
- Office of Boat Forces (CG-731) Boat Forces web site:
<http://cgweb.comdt.uscg.mil/G-RCB/>
- 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/>