FY 2011 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

The purpose of this report is to promote safety awareness in the afloat community. By providing valuable trend analysis on our afloat assets, we hope to optimize operational performance and continue to reduce afloat mishaps in the future. Our purpose is also to improve 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 for our personnel. This report contains both a comprehensive evaluation of FY11 mishaps as well as a historical look at past years' mishaps in order to evaluate our success in safeguarding our assets. The enclosed graphs depict **operational** Class A-D mishaps by fiscal year for Coast Guard cutters and boats, both underway and inport. Excluded from the graphs are mishaps that took place while off duty, such as sports-related injuries and mishaps that take place in an environment other than on a cutter or related to small boat operations.

Please take some time to review the graphs and share this information with your crew. Awareness is the most important step in preventing mishaps. Also, take time to discuss previous mishaps and their potential impact on your unit. By reviewing this report, we encourage each unit to evaluate their own safety programs and seek to continually improve the safety and security of their personnel and property. We must continue to share lessons learned and practice proper risk management in all of our daily activities.

As always, any ideas and comments are valuable in improving the Coast Guard's Safety and Environmental Health Program. Please share them with your Command, Sector Safety Managers, applicable detached Safety and Environmental Health Officer (SEHO's), the Safety and Environmental Health Office (SC) at the Health, Safety, and Work-Life Service Center (HSWL SC), other applicable safety staff, or the appropriate Headquarters points of contact listed at the end of this report.

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

Safety - Together. Recent mishap analysis boards have found that a serious lack of synergy among disparate commands lead to their inability to work together. This ultimately created an unsafe training and operating environment which sadly ended in both the loss of life and property. By putting aside our differences and making the safety of our crew's paramount, we can overcome a smaller budget and aging resources while effectively getting our jobs done. The key to our success is team-work and cross-program collaboration.

Mission Analysis. Mission analysis is critical to safe operations – it is Leadership's role in ensuring that it is completed prior to each mission. ORM needs to be completed as part of mission planning and the six Human Factors of TCT (Communication, Leadership, Assertiveness, Situational Awareness, Flexibility/Adaptability and Decision Making) need to be addressed as to how they will be handled during the mission. To have a safe and effective mission, your plan must:

Define tasks based on mission requirements and the roles of everyone assigned to the mission.

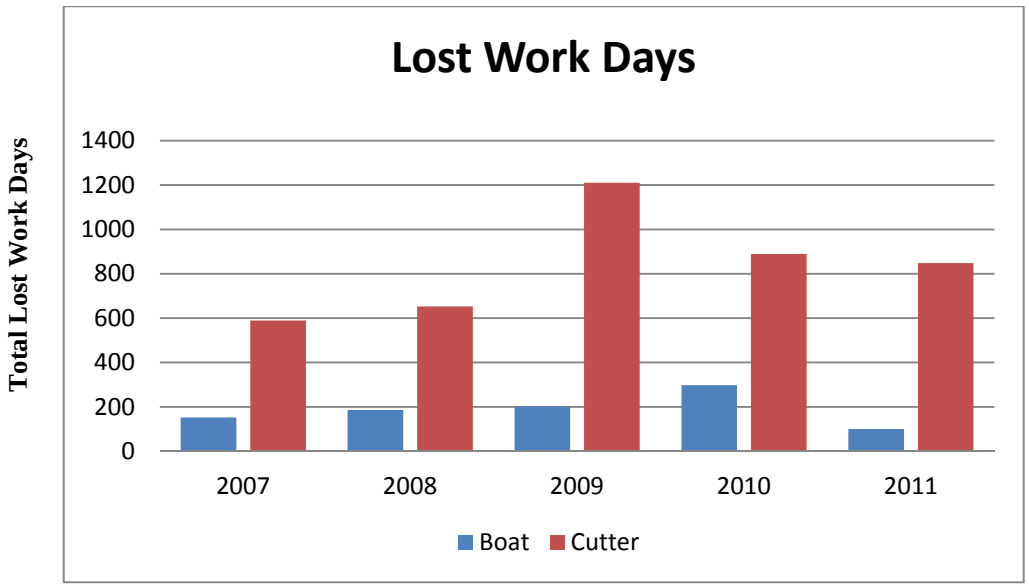
- Question data or ideas as they relate to mission accomplishment.
- Discuss the long and short term plans for the mission.
- Structure tasks, plans and objectives related to the mission.
- Thoroughly critique existing plans for potential problems.
- Identify hazards and reduce hazards to an acceptable level.

As discussed in last year's report, Headquarters Cutter and Boat Forces, Engineering, and Safety (CG-751/CG-731, CG-451, and CG-1134) are working closely to keep all personnel safe while operating on our valued assets. We ask your continued identification of hazards and sharing of best practices to mitigate these hazards. By using the ORM process of identifying hazards, assessing risk, mitigating hazards, monitoring and reassessing mission progress, you have done much of your part to improve the safety of your crew as well as increase mission effectiveness.

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. Practice risk management both on and off duty. After all, you are our most valuable asset!

CDR R. A. Hartley, Chief Afloat Safety Division (CG-1134)

GRAPH 1: Lost Work Days

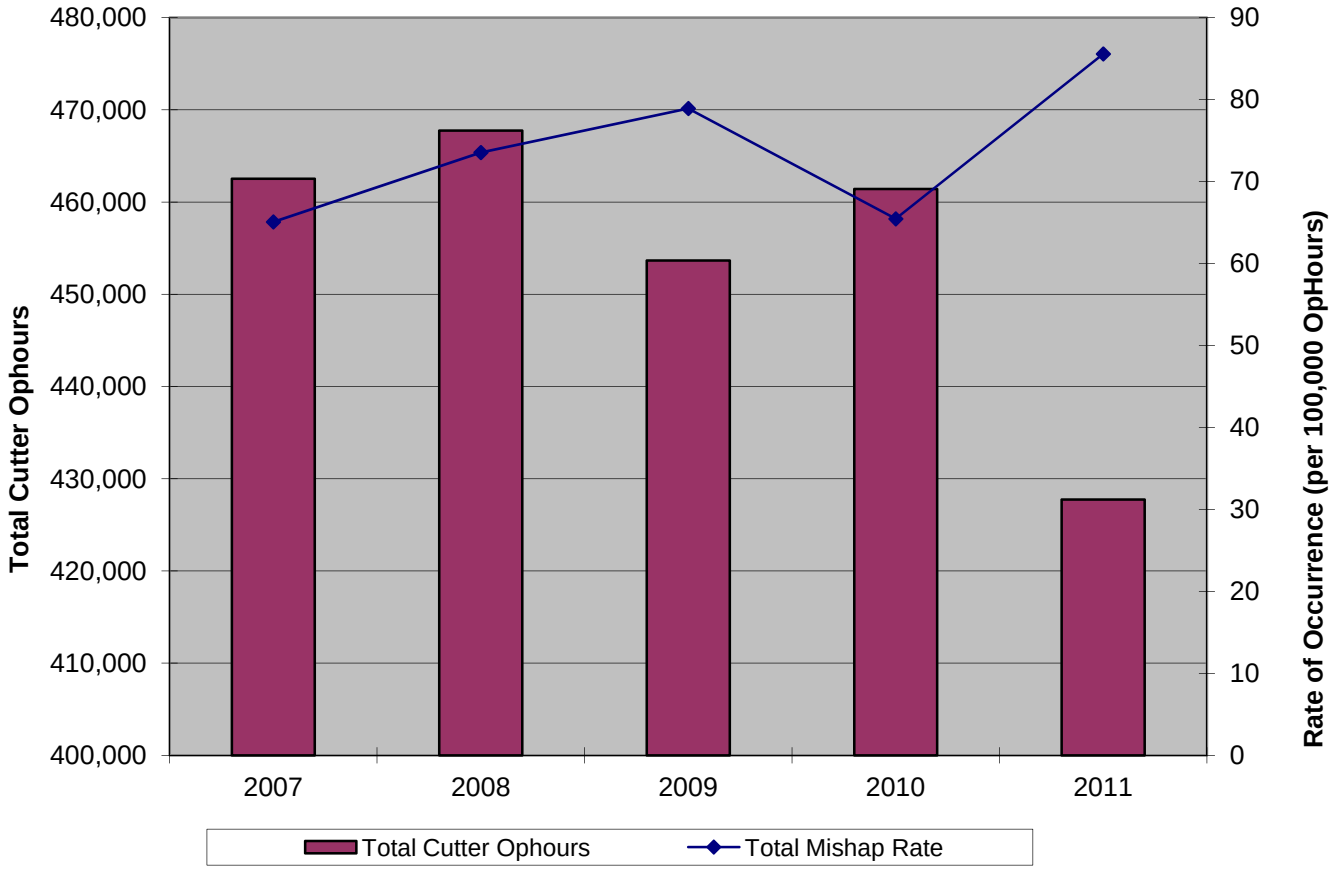


Cutter: Decrease in lost work days for FY 11 was attributed to a reduction in cutter operations which resulted in a slight decrease in slip trips and falls on our MEC and HEC cutters. Ladders and scuttles continue to be our most hazardous areas particularly during Maintenance and Repair periods.

Boat: Decrease in lost work days for FY 11 was directly related to a decrease in boat operations.

Cutter Forces

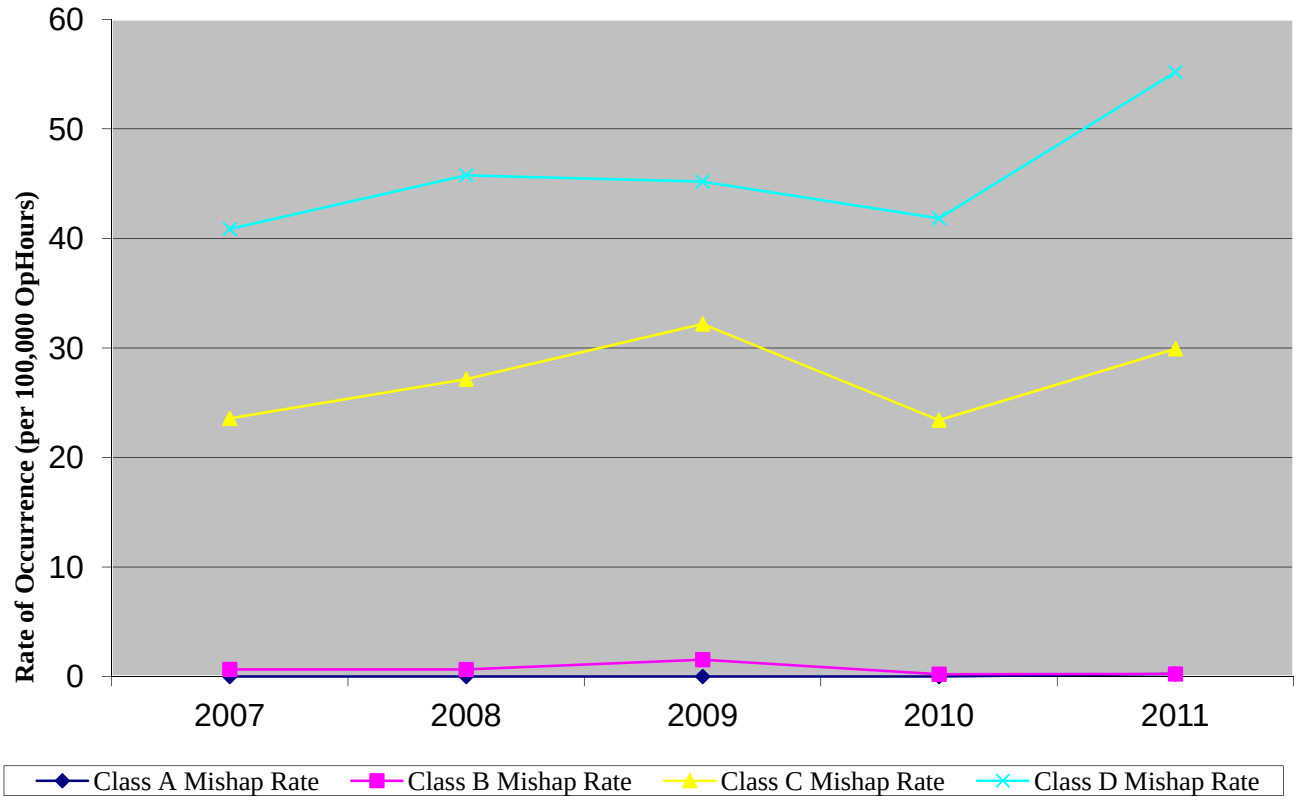
GRAPH 2: Cutter Mishap Rate per 100K Operating Hours



Cutter mishap rates have increased in FY11 (See Graph 2). Operational hours for cutters decreased in 2011 and the Total Mishap Rate increased. This increase is the result of new reporting requirements for fires and Class "D" mishaps per ALCOAST 590/10. Also, the number of PIW has increased due to the new reporting requirements in ALCOAST 472/11.

Cutter mishaps resulted in 28 days hospitalized, 848 lost work days, 1556 days of restricted duty and property damage of $4.8M.

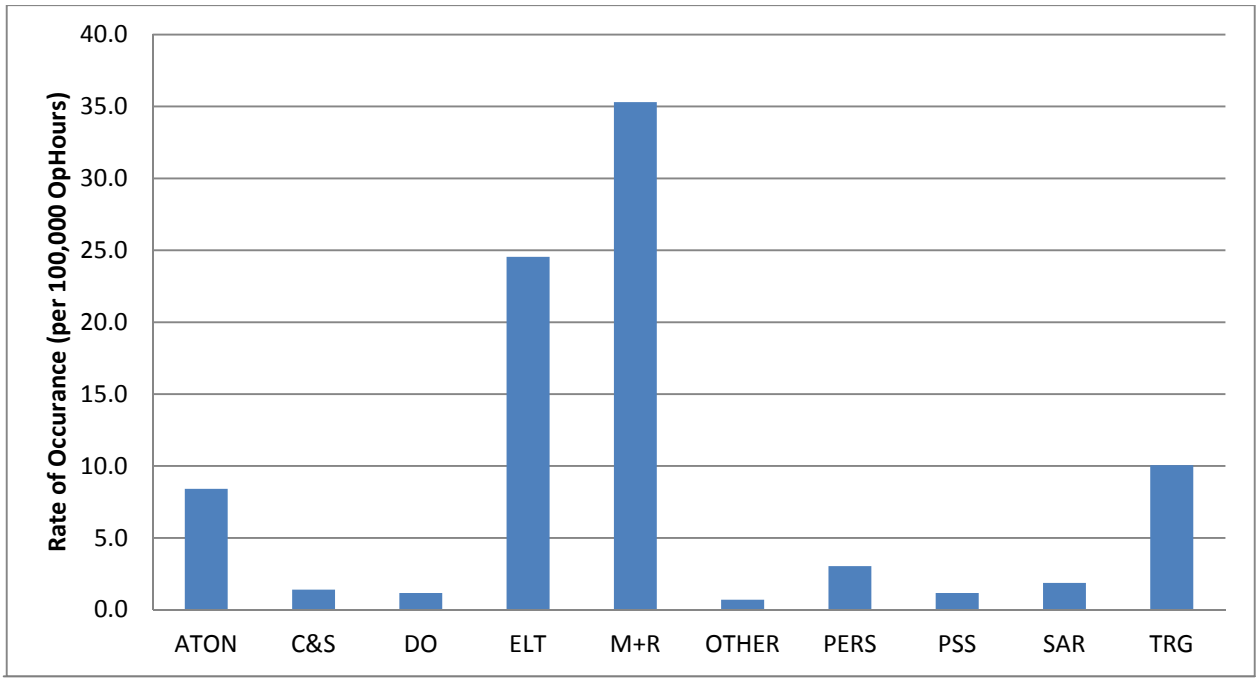
GRAPH 3: Cutter Mishap Rate by Class of Mishap



Class "C" and "D" mishaps have increased in FY11 (see Graph 3). There were 366 reportable mishaps resulting in 188 injuries.

There was one Class "A" mishap involving the radar on a WMSL and no Class "B" mishaps that occurred aboard cutters during the fiscal year. The majority of Class "C" mishaps were due to personal injuries involving slips, trips, and falls. The majority of the Class "D" mishaps were the result of personal injuries and fires.

GRAPH 4: FY11 Mishaps Rates by Mission

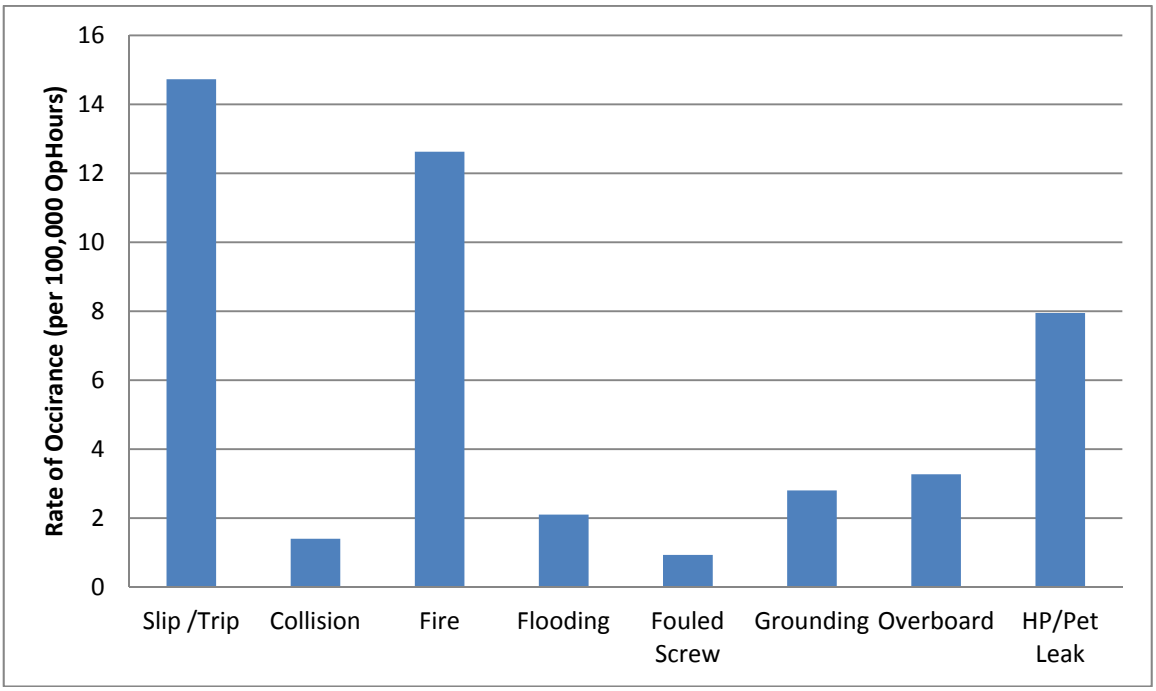


The largest number of cutter mishaps in FY11 (See Graph 4) occurred during Maintenance and Repair (M+R) resulting in eye, finger, and back injuries.

M+R mishaps have decreased since FY09 by 50% due to better hazard awareness aboard cutters and looking out for our shipmates.

ATON	Aids to Navigation
C & S	Command and Support
DO	Deployable Operations
ELT	Enforcement of Laws and Treaties
M + R	Maintenance and Repair
PERS	Off Duty / Off the Job
PSS	Port Safety and Security
SAR	Search and Rescue
TRG	Training

GRAPH 5: FY11 Cutter Mishap Rate by Mishap Type



Examining cutter mishaps by mishap type (Graph 5) shows that the highest rates were associated with slips, trips, and falls. Units should remind new personnel reporting onboard of the risk of slips, trips and falls. These risks can be mitigated by ensuring decks are kept clean, non-skid is in place and one hand is always on the hand rail. The largest source of slip, trip and fall injuries were attributed to ladders, scuttles and hatches.

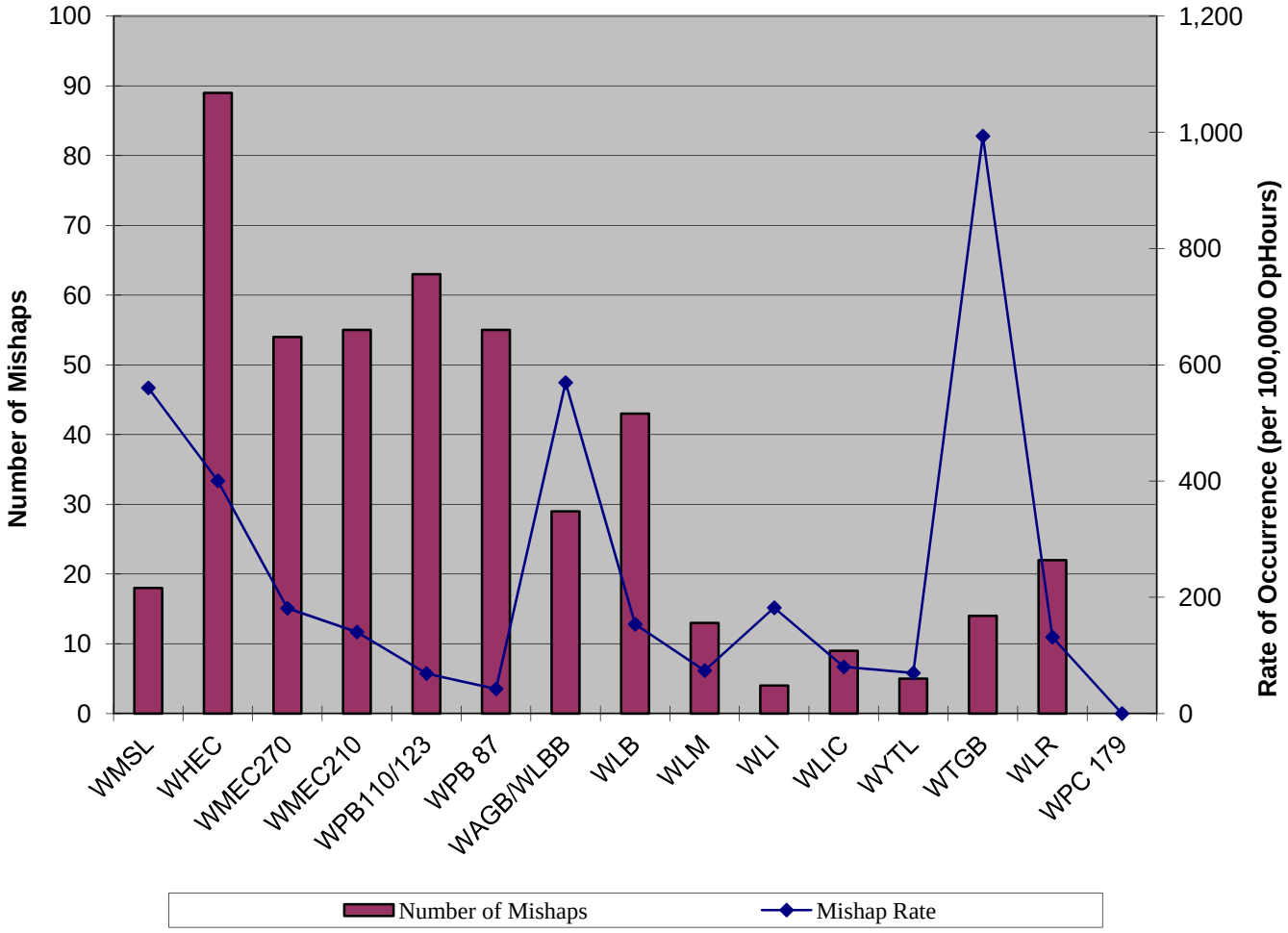
The majority of HP/Pet (high pressure lube oil/fuel) leaks occurred aboard 110' WPB's and the 87' WPB's which pose a fire hazard.

Shipboard fires were distributed amongst several different classes of cutters and generally involved machinery or equipment failure. The reporting of fire has greatly improved and provides us with a better understanding as to the condition of our aging cutters.

The increase in overboard mishaps are the results of a crewmember falling off a cutter, two instances of crew members falling off the pier while line handling and others occurred during embarking/disembarking from the cutter boat.

Collisions/Allisions occurred mainly during mooring evolutions.

GRAPH 6: FY11 Cutter Mishap Rate by Class of Cutter



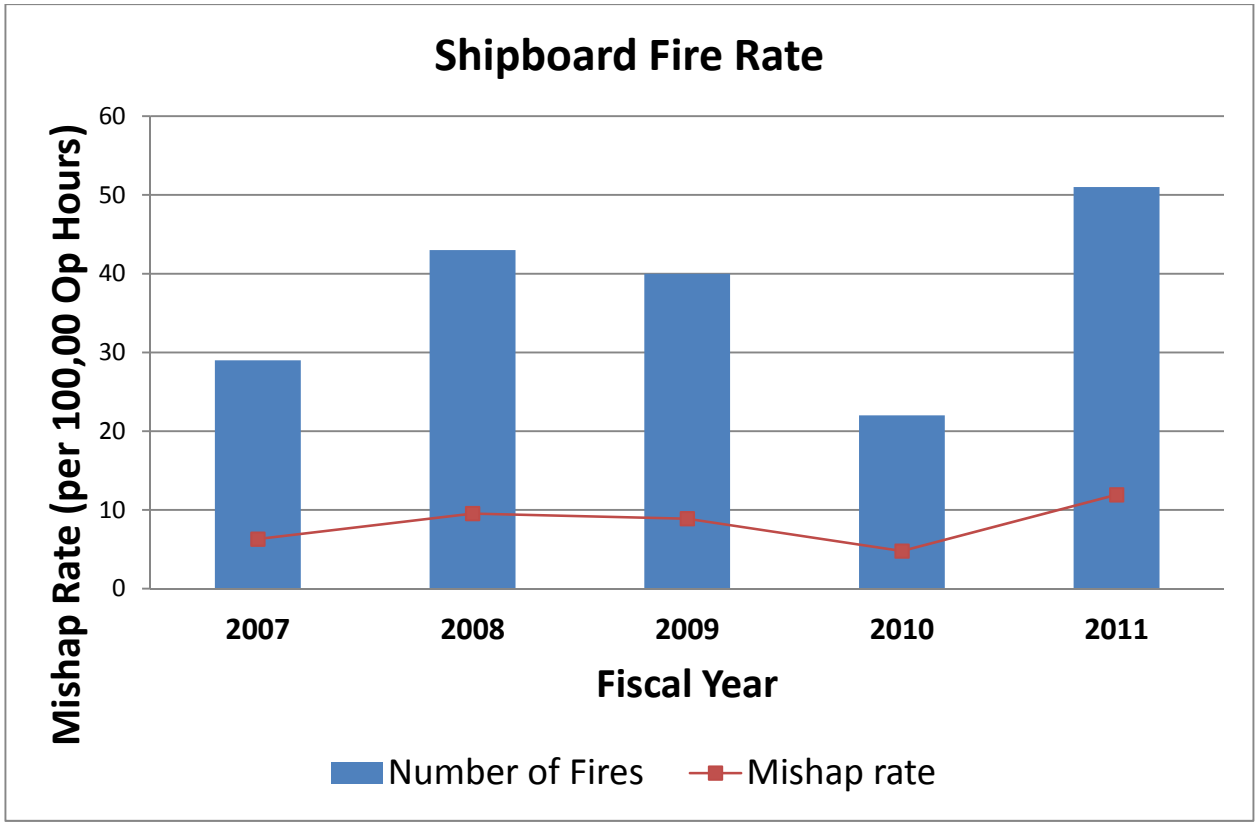
Reviewing the number of mishaps by platform finds the highest rates aboard the WTGB, WMSL, and WAGB class of cutters (See Graph 6).

The WMSL high mishap rate was due to slip, trips, and falls and in part to their low number of operational hours.

The WTGB mishap rate spikes due to the low number cutters .

The overall mishap rate decreased compared to FY09 even though operational hours increased for several of the platforms.

GRAPH 7: Cutter Fire Rates

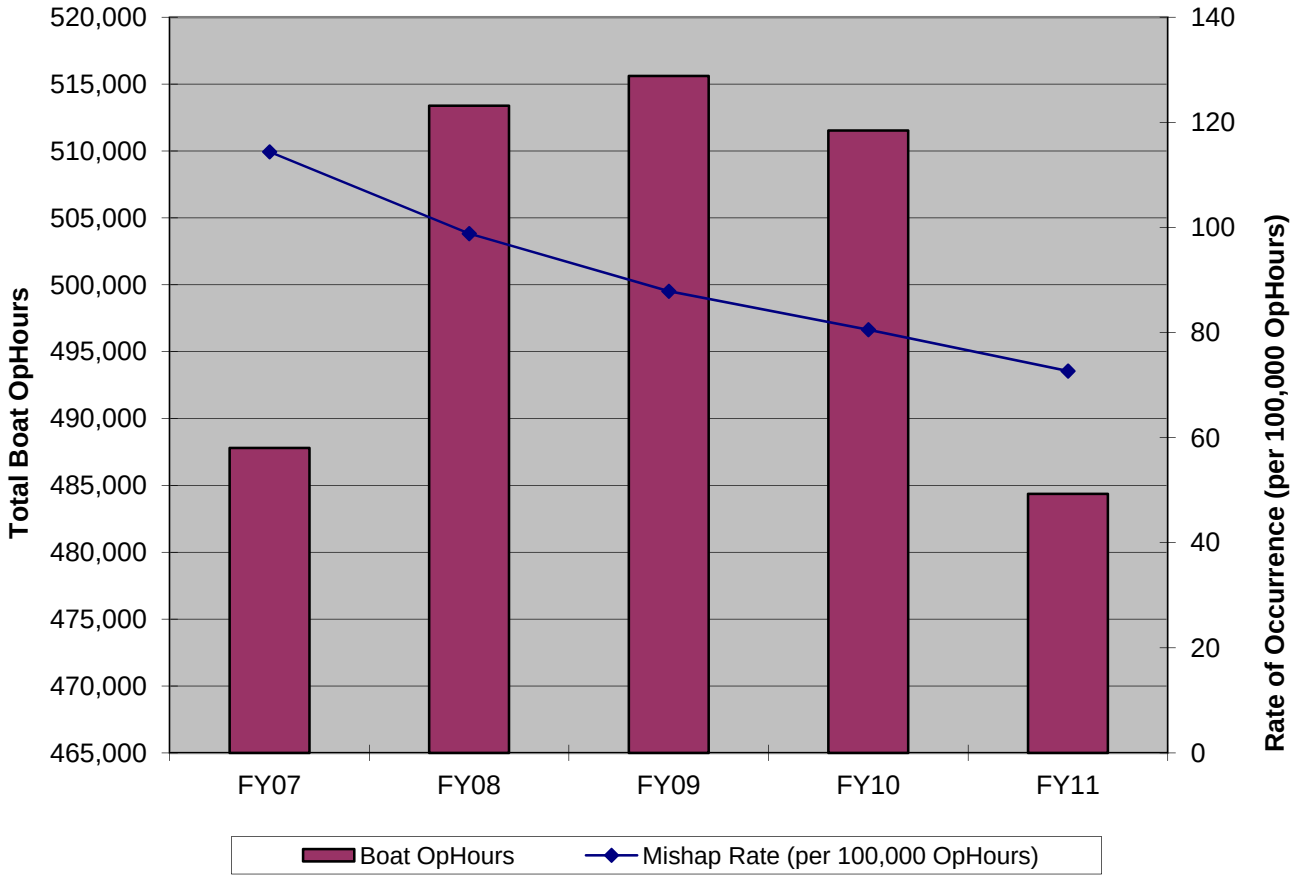


Cutter fires have increased in FY11 due in part to a change in mishap reporting requirements. ALCOAST 590/10 requires that all fires onboard cutters be reported via message to the fleet within 12 hours regardless of cost. Cutters are now more aware of fires that have occurred and the corrective action taken to prevent them. The increase in the number of cutter fires can be attributed to our aging fleet. Reported fires are discussed at the weekly Cutter Forces Tripartite.

Boat Forces (*Shore Based and Cutter Based Boats)*

Office of Boat Forces
USCG
Soul of the Service

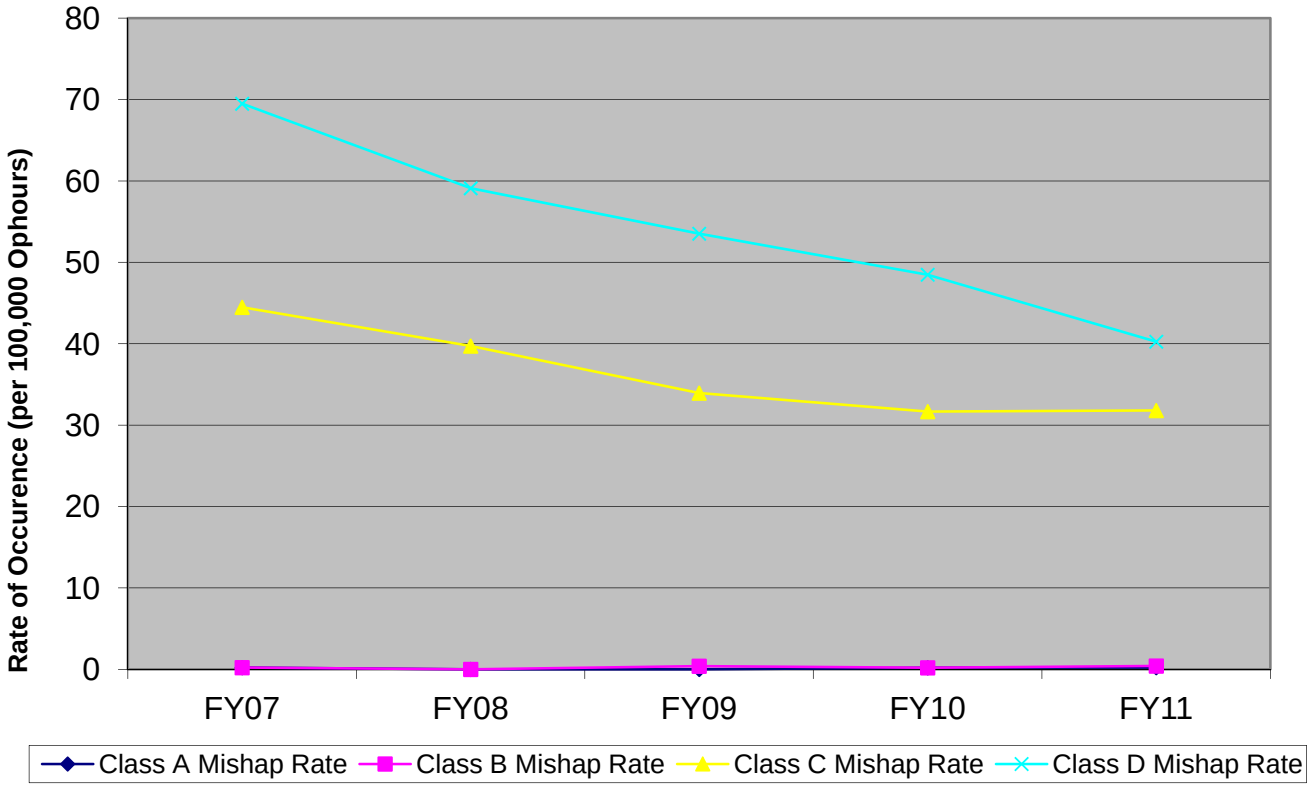
GRAPH 8: Boat Mishaps per 100K Operating Hour



Boat related mishap rates fell in FY11 (See Graph 8) and have steadily declined since 2007.

Collisions and groundings are still a major cause of boat mishaps. These mishaps have resulted in 7 days hospitalized, 101 lost work days, 545 days of restricted duty and property damage of $1.2M.

GRAPH 9: Boat Mishap Rates by Class of Mishap

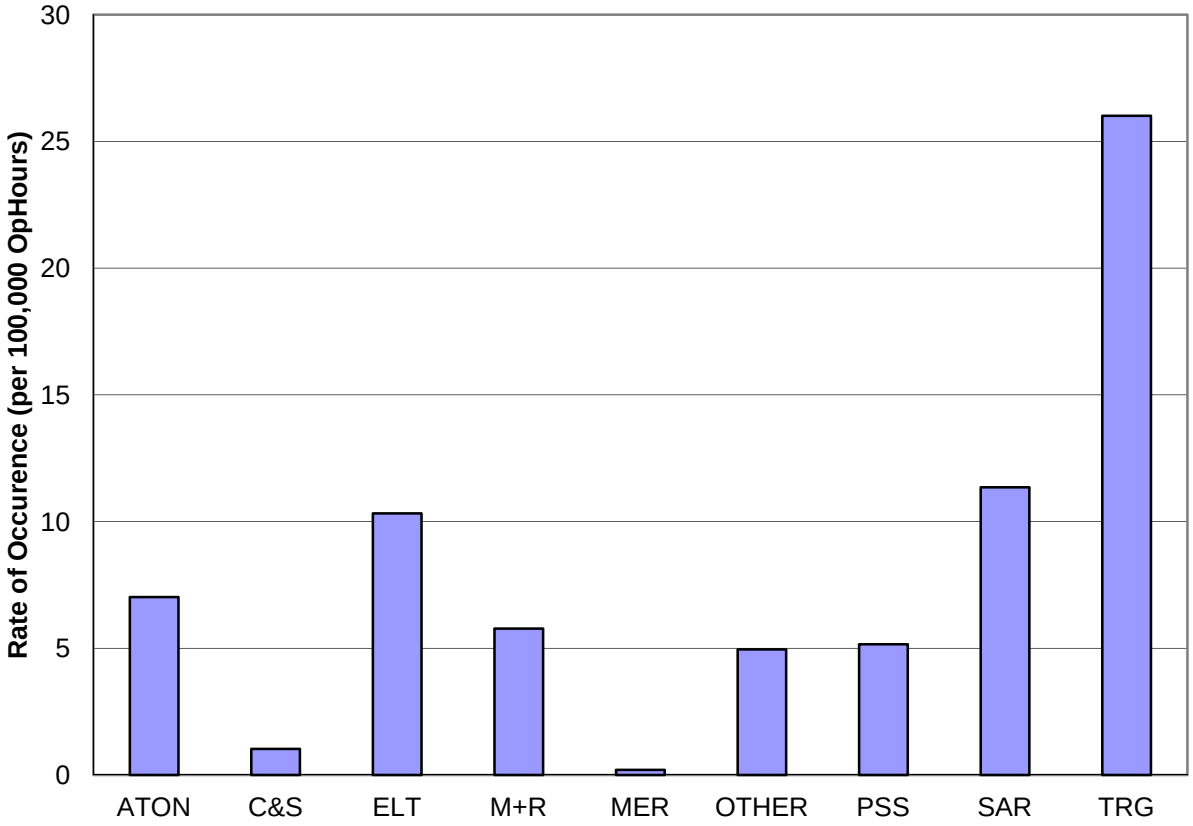


Boat Forces continues to experience a reduction in mishap rates in FY11 (see graph 9).

There was one Class “A” mishap involving hook and climb training from a Defender Class Boat.

Class “C” and Class “D” mishap rates declined slightly.

GRAPH 10: FY11 Boat Mishap Rates by Mission Type



Training mishaps have increased for the second year in a row. Training continues to experience the highest level of mishaps followed by the Search and Rescue and Enforcement of Laws and Treatise (See Graph 10). Training of new personnel requires that everyone understands their role and position on the boat and keep a constant vigil in identifying potential hazards that will affect the training.

ATON	Aids to Navigation
C & S	Command and Support
DO	Deployable Operations
ELT	Enforcement of Laws and Treaties
M + R	Maintenance and Repair
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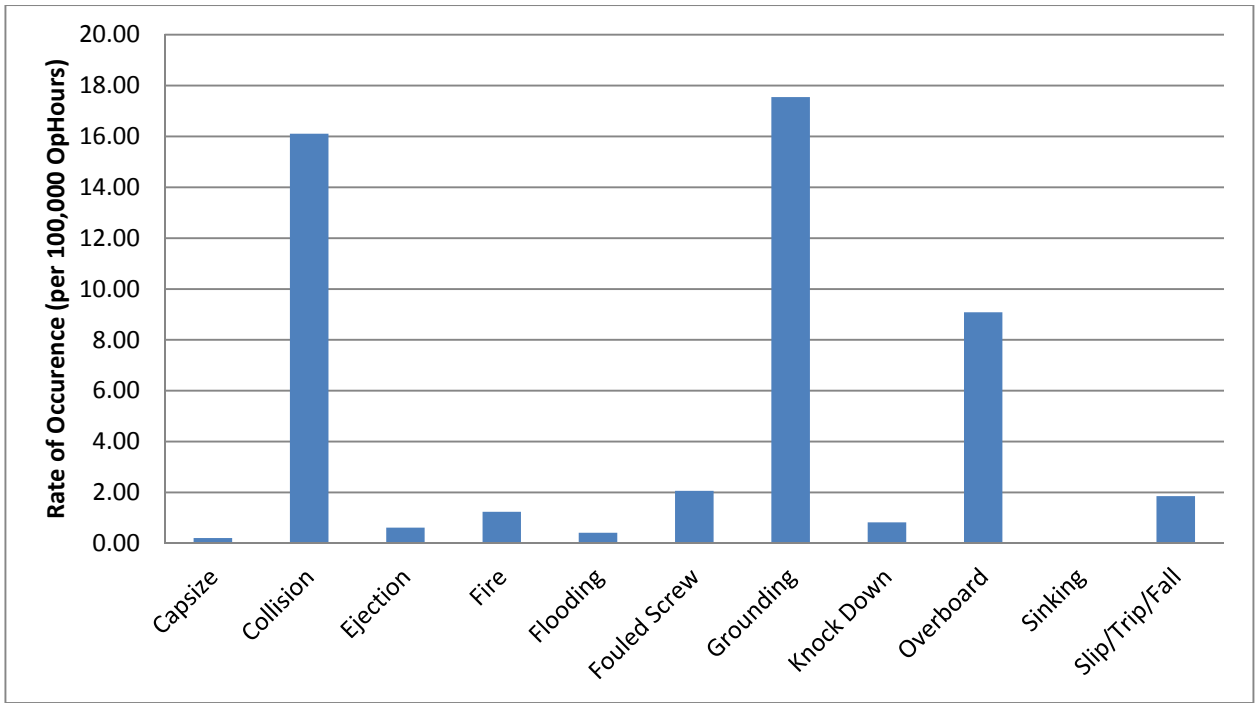
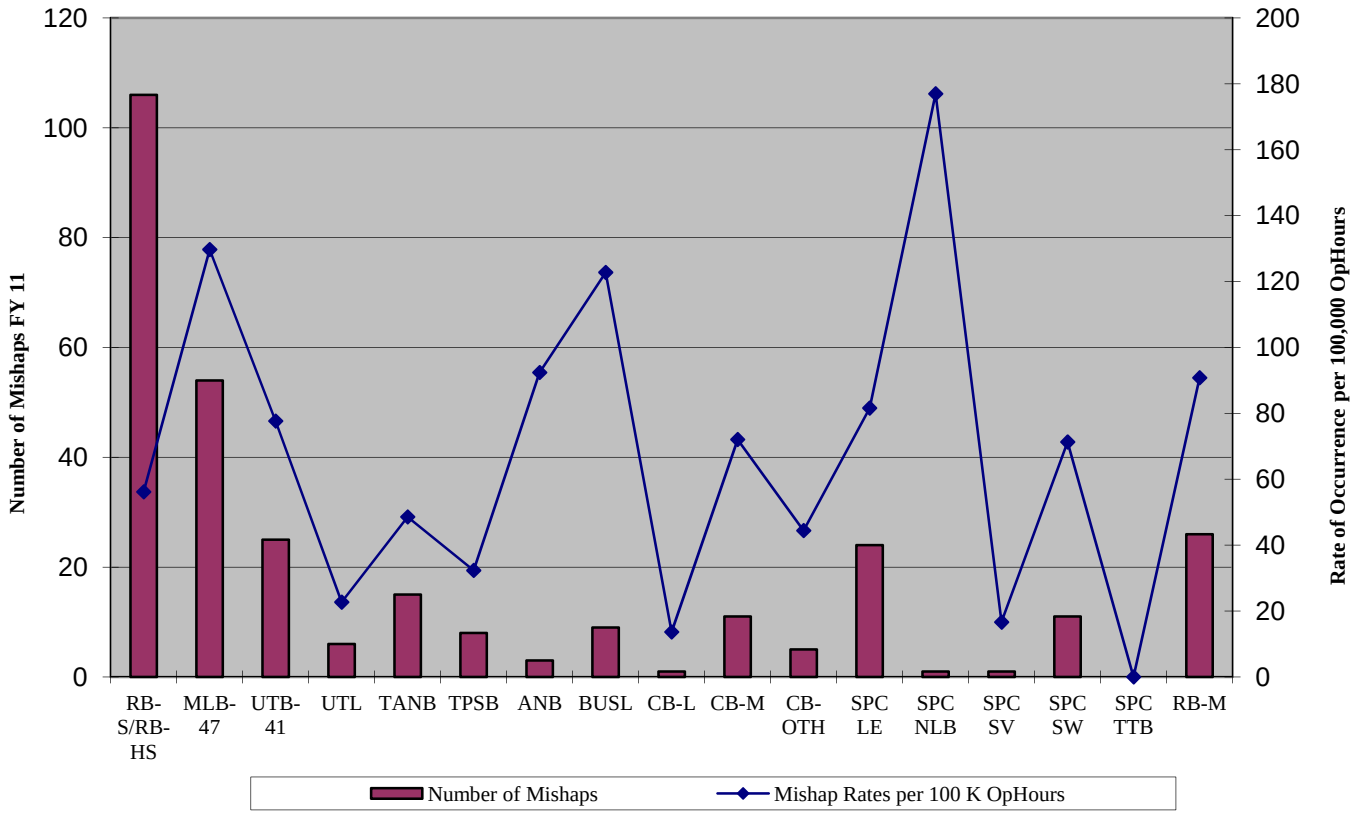
GRAPH 11: FY11 Boat Mishap Rates by Mishap Type



While collisions continue to decline; groundings increased slightly in FY11. Collisions and groundings still account for the largest category of boat related mishaps (see graph 11).

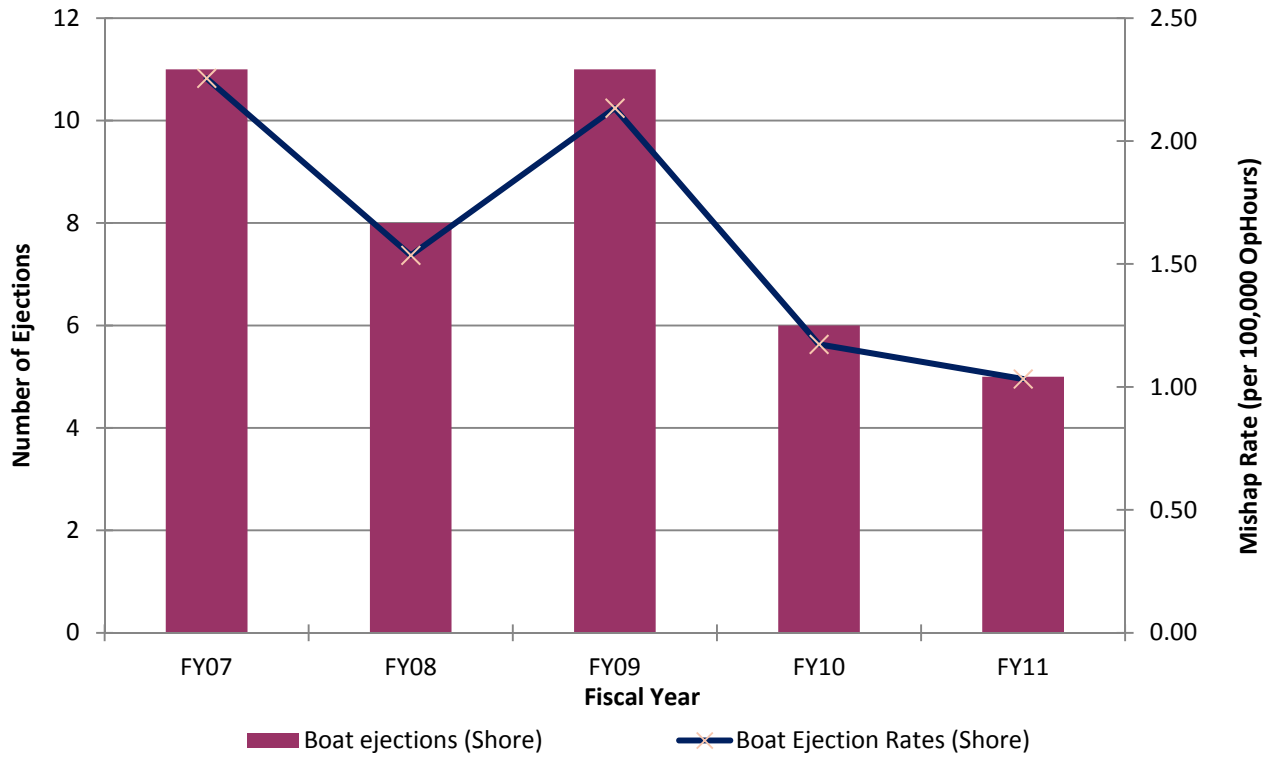
Collisions were the result of boats colliding with vessels during ELT boarding's, hitting submerged objects and mooring evolutions. The majority of all overboard mishaps occurred during embarking or disembarking evolutions. Personnel need to identify potential hazards in boarding or disembarking and mitigate the risk of injury.

GRAPH 12: FY11 Boat Mishap Rate by Platform



While the RB-S (Defender Class A&B) experienced the largest number of mishaps it also has the largest number of operational hours of all boat types due to collisions and groundings. The RBS represents a total of 29% of all boats in the USCG. The SPC-NLB and SPC-TTB are new platforms and the lack of experience and proficiency is driving up the rates is also a new boat with low operational hours which accounts for its high mishap rate. Both boats experienced a total of three mishaps for FY10. The rates are also affected by the fact there are only two SPC-NLB boats.

GRAPH 13: Boat Ejection Rates



Boat ejection mishap rates have decreased in conjunction with operational hours and decreased a third since 2009 due to decrease in mishaps involving the Transportable Port Security Boat (TPSB) (four ejections involved 02 Cutter Boat Medium (CBM), 01 Defender Class (RBS), and 01 TPSB). Additionally, the Chief, of the Office of Boat Forces CG-731, sent an article titled "*Coxswains: Cause for Action!*" in June of 09, to the Master Chief and the Gold Badges of the Coast Guard and identified human error as the major cause of ejections. It called for units to tighten up the qualifications for coxswains and hold them responsible for their actions. Reported ejections are discussed at our weekly Boat Forces Tri-Partite meetings.

Note:
Definition of an Ejection: A Person In Water (PIW) as a result of an ejection is a situation where the individual enters the water due to centrifugal force on a moving platform (e.g. turning fast causing member to be propelled out of the boat or ship, catching the chine and propelling the member off the boat or ship, catching a wave and propelling outward of the vessel, etc.)

Definition of Falling in the water: A PIW as a result of a fall is an event where an individual enters the water unexpected or unexplained (e.g. slipping, losing balance, falling, etc.) off a moving structure (e.g. Ship, boat, paint float etc.) or fixed structure (e.g. pier, jetty, etc.) into the water.

These definitions have been added to the E-mishap system.

List of Acronyms for 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-TTB	Special Purpose Craft- Tactical Training Boat	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)

BACKGROUND:

The TCT training program increase team effectiveness and minimizes human error in cutter, boat and command / control operations and activities. It serves the Active Duty, Reserve and Auxiliary community in accordance with COMDTINST 1541.1. The TCT 8 hour refresher training is a biennial requirement (two years). If more than 24 months have elapsed since the last TCT initial or refresher course, then initial training must be repeated.

Initial training (16 hours) can be satisfied with the successful completion of: POPS Afloat School, OIC/PXO School, Coxswain C-School, Heavy Weather Coxswain School, MLB Coxswain School, and BM-A School, TCT Bridge Resource Management Course, or the TCT Correspondence course.

The TCT program is composed of TCT Facilitators, TCT District Administrators and the Training Quota Management Center (TQC). Operational units request TCT Unit Level training through their respective District Administrator who will assign a facilitator and then forwards the facilitators name to TQC for orders. Personnel interested in facilitating TCT training should contact their respective District Administrator (see below). Active Duty, Reservists, Auxiliarists and CG Civilians are all eligible to train as TCT Facilitators. Priority will be given to personnel with an operational background. In order to become a TCT Facilitator, members must complete the TCT Facilitator course (#500688). Facilitators must also have previously attended a TCT course or completed the TCT Correspondence course (G0648).

UPDATE:

There are two TCT Facilitator classes scheduled this Fiscal Year, 16-20 January, and 19-23 March 2012. Both classes will be held at TRACEN Petaluma with a student capacity of 14 students each. These classes are open to all Active Duty, Reserve and Auxiliary personnel. Members are expected to facilitate at least 5 classes per year. Contact your District TCT Administrator if you are interested.

The ORM/TCT/CRM programs are currently under review by a Strategic Needs Analysis which will identify any gaps in these programs.

The approximate number of Active Duty, Reserve, and Auxiliarists receiving exportable, TCT Unit-Level Training was approximately 10, 943 for FY11.

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

District	Administrator	Email	Work Phone	Fax
D1 DPA	CWO Manny Zambrana	Emmanual.Zambrana@uscg.mil	(212) 668-7992	(212) 668-7975
D5 DPA NR	CWO Sean McGarigal	Sean.McGargial@uscg.mil	(215) 271-4936	(757) 271-4968
D5 DPA SR	CWO Tim Luton	Timothy.M.Luton@uscg.mil	(757) 271-4934	(215) 271-4968
D7 DPA	CWO Ursula Walther	Ursula.W.Walther@uscg.mil	(305) 415-7053	(305) 415-7059
D8 DPA	CWO Jim Todd	James.A.Todd@uscg.mil	(504) 671-2142	(504) 671-2146
D9 DX	LCDR Dave Uhl	David.J.Uhl@uscg.mil	(216) 902-6385	(216) 902-6044
D11 DRM	BMCM Stephen Barr	Stephen.L.Barr@uscg.mil	(510) 437-5323	(510) 437-3223
D13 DR	Ms Jeanette Wells	tesseract1@juno.com	(253) 891-0620	(253) 891-0620
D14 DPA	CWO Ryan Omeara	Ryan.W.Omeara@uscg.mil	(808) 535-3432	(808) 535-3439
D17 DPI	Mr. Mike Folkerts	Michael.R.Folkerts@uscg.mil	(907) 463-2297	(907) 463-2273
LANT TRATEAM	DCC Josh Zirbes	Josh.J.Zirbes@uscg.mil	(757) 641-1232	(757) 295-2210
PAC TRATEAM	LT Jorge Valente	Jorge.L.Valente@uscg.mil	(510) 437-3294	

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 POINTS OF CONTACTS:

Afloat Safety Division (COMDT CG-1134)
Division Chief, CDR Richard Hartley (202) 475-5215
Safety and Occupational Health Manager, Mr. George Borlase (202) 475-5218
Safety Specialist, LT Eric Cooper (202) 475-5217
Safety Specialist, CWO Thomas Dardis (202) 475-5208
http://www.uscg.mil/hq/cg1/cg113/cg1134/

Health Safety and Work-Life Service Center (HSWL SC)
Chief, Mr. Vincent Andreone (757) 628-4412
Assistant Division Chief, CDR Harrichand Rhambarose (757) 628-4426
Afloat Safety Branch Chief, CWO Andrea Currie (757) 628-4409
http://cgweb.lant.uscg.mil/Kdiv/kseHomePage.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/