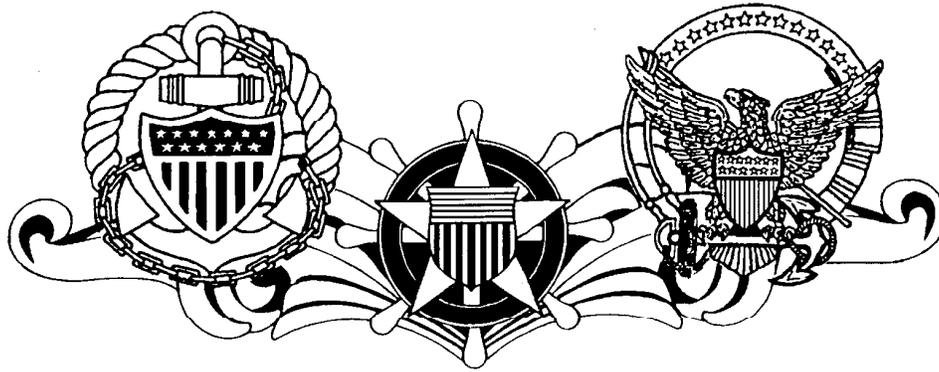


# Command and Operations School



## Team Coordination Training Cutter Operations

# Instructions & Supplemental Readings

U.S. COAST GUARD ACADEMY  
NEW LONDON, CONNECTICUT

2003 Edition

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***For Further Information:***  
Commandant (G-WKS-4)



COMDTINST 3500.3  
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COMMANDANT INSTRUCTION 3500.3

Subj: OPERATIONAL RISK MANAGEMENT

Ref: (a) Team Coordination Training, COMDTINST 1541.1

1. PURPOSE. This Instruction standardizes the Coast Guard's Operational Risk Management (ORM) policy and outlines procedures and responsibilities to implement it.
2. ACTION. Area and district commanders, commanders of maintenance and logistics commands, commanding officers of headquarters units, assistant commandants for directorates, Chief Counsel, and special staff offices at Headquarters shall ensure this Instruction is distributed to the widest extent possible and all personnel comply with its provisions.
3. DIRECTIVES AFFECTED. None.
4. BACKGROUND. Human error causes a significant number of mishaps that have resulted in the loss of personnel, cutters, boats, aircraft, and equipment. Many times faulty risk decisions have placed our personnel at greater risk than necessary. After four major marine mishaps between 1991 and 1993, including the capsizing and sinking of the F/V SEA KING, the National Transportation Safety Board issued two recommendations documenting the need for Coast Guard risk assessment training. Reference (a) formalizes the Team Coordination Training (TCT) program to combat human error by focusing on improved team performance to prevent mishaps. This curriculum and other similar programs, such as Crew Resource Management (CRM), contain risk management principles that outline a systematic process to continuously assess and manage risks: the ORM process.
  - a. Risk Management Workshop. In the Fall of 1996, the Coast Guard held a multi-dimensional workshop whose participants included afloat, aviation, marine safety, Auxiliary, Research and Development, Quality and Performance Consulting, and training

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commands representing the aids to navigation, search and rescue, maritime law enforcement, and small boat communities. Despite differences in individual missions and approaches toward risk management, each community shared the basic philosophy of minimizing risks without sacrificing mission success. They also shared the same concern for developing a common risk management process the Coast Guard could apply universally to improve communication among various operational communities during joint efforts for more effective decision-making. After sharing individual ideas, all programs reached consensus on a simple, common, effective process. These results formed the framework for this standard ORM process.

- b. TCT and CRM Programs. The TCT and CRM programs already provide the delivery vehicles to adequately train active duty, reserve, and Auxiliary operational personnel in risk management principles and processes. Initiatives are under way to train MLC personnel as TCT facilitators to lead other Coast Guard personnel, including civilians, through the concepts of risk management, during normal safety and compliance visits. A TCT correspondence course, especially helpful to those not required to attend formal TCT or CRM programs, also is available to anyone desiring to learn risk management principles. Having advocated these basic principles for many years, the TCT and CRM programs have taken a “bottom to top” approach toward developing a formal universal risk management plan. Measuring mishap rates involving boats’ and cutters’ mobility and navigation shows these principles are effective and the tools used are valid. Since the earliest implementation of TCT in 1992, boats’ and cutters’ mishap rates per 100,000 operating hours have declined steadily:

<b>Decrease in Mishap Rates per 100,000 Operating Hours (Compared to 1987-1992 Average Baseline Rates)</b>		
<b>Fiscal Year</b>	<b>Boats</b>	<b>Cutters</b>
1994	40%	78%
1996	66%	89%
1998	71%	75%

This Instruction expands a flourishing acceptance of these principles at the operational unit level to all organizational levels in the Coast Guard, and clearly reinforces the Commandant’s direction for improved decision-making for superior performance.

- c. Other Service Programs. While compatible with other armed forces’ efforts, the Coast Guard’s standard risk management plan is specifically tailored for our organization’s unique size and multi-mission nature.
5. SCOPE. The application of ORM basic concepts is not limited to unit or mission operations as the Coast Guard usually defines them. All Coast Guard missions and daily activities, both

on- and off-duty, require decisions managing risk. In ORM “operational” refers not solely to a rated person or operator, but includes any military or civilian Team Coast Guard member who contributes to the overall goal of increasing unit effectiveness. All organizational levels contribute either directly or indirectly to operational mission successes. From an Integrated Support Command or Naval Engineering Support Unit technician swapping out a 41-foot utility boat’s engine, to an electronics technician maintaining a group high-site antenna, to an acquisition officer purchasing new equipment or services, to a marine safety officer selecting and deploying pollution response resources, to an area staff planning a major operation or exercise, to a motor lifeboat coxswain working a challenging SAR case, every command level and every person is responsible for identifying potential risks and adjusting or compensating accordingly. Therefore, ORM’s target audience includes all those involved in operations, maintenance, and support activities. While risk assessment and risk management concepts generally apply to all Coast Guard activities and decision-making, some areas require additional tools and techniques. Regulatory and/or rule-making requirements need a more quantitative, in-depth analysis than the techniques presented here. The Coast Guard Marine Safety and Environmental Protection Program has made significant progress in that regard through the development of specific Risk-based Decision-Making Guidelines. However, this Instruction’s procedures do apply to the marine safety and environmental protection community in managing Coast Guard members’ safety and related issues and thus supplement rather than supplant the Marine Safety decision-making guidelines.

6. PHILOSOPHY. Traditional risk management practices assert risk is “bad.” In reality that may not be so. Taking *calculated* risks is essential for an organization to grow and capitalize on its capabilities. The Coast Guard’s aim is to increase mission success while reducing the risk to personnel, resources, and the environment to a level acceptable to a particular unit for a given situation. Units should identify risk using the same disciplined, organized, logical thought processes that govern all other aspects of military endeavors. ORM provides the framework to minimize risk, show concern for colleagues, and maximize the unit’s mission capabilities, helping to achieve the Commandant’s direction, “Perform all operations flawlessly.” This process’s additional benefits include safeguarding our members’ health and welfare and conserving vital resources and support equipment. As the Coast Guard continues to operate in a streamlined environment, preventing mishaps and reducing losses become even more important to maintain mission readiness. To accomplish these goals, the Coast Guard must change its business focus from a compliance-based to a risk-based philosophy. No longer can the Coast Guard afford to simply audit its units to ensure compliance with various requirements and regulations. ORM focuses on units’ missions, the risks involved, and the safeguards in place to ensure mission success. Beyond reducing losses, risk management provides a logical process to identify and exploit opportunities producing the greatest return on our investment of time, dollars, and personnel.
7. RISK TERMINOLOGY. Team members need to understand ORM terms clearly and communicate risk effectively in order to use the ORM process. Understandably, each facility and activity will differ in how it interprets risk assessment and risk management results in its own community due to unique mission differences and its members’ varying degrees of

### COMDTINST 3500.3

knowledge, skill, experience, and maturity. All personnel shall use these common key terms when communicating risk across program and activity lines.

- a. Operational Risk Management (ORM): A continuous, systematic process of identifying and controlling risks in all activities according to a set of pre-conceived parameters by applying appropriate management policies and procedures. This process includes detecting hazards, assessing risks, and implementing and monitoring risk controls to support effective, risk-based decision-making.
- b. Risk: The chance of personal injury or property damage or loss, determined by combining the results of individual evaluations of specific elements that contribute to the majority of risk concerns. Risk generally is a function of severity and probability. The models in this Instruction, however, single out exposure as a third risk factor.
- c. Severity: An event's potential consequences in terms of degree of damage, injury, or impact on a mission.
- d. Probability: The likelihood an individual event will occur.
- e. Exposure: The amount of time, number of cycles, number of people involved, and/or amount of equipment involved in a given event, expressed in time, proximity, volume, or repetition.
- f. Mishap: An unplanned single or series of events causing death, injury, occupational illness, or damage to or loss of equipment or property.
- g. Hazard: Any real or potential condition that can endanger a mission; cause personal injury, illness, or death; or damage equipment or property.
- h. Risk Assessment: The systematic process of evaluating various risk levels for specific hazards identified with a particular task or operation. Various models are available to complete this step in the ORM process.
- i. Risk Rating Scale: A scale of specific risk degrees, determined during the ORM process's risk assessment step. Various Coast Guard communities and activities should use the safety industry's standard terms low, medium, and high when discussing risk across program lines. However, each community will define low, medium, and high risk in terms meaningful to its own personnel.

8. CONCEPT. The ORM process:
- a. Is a decision making tool people at all levels use to increase operational effectiveness by anticipating hazards and reducing the potential for loss, thereby increasing the probability of a successful mission.
  - b. Advocates harnessing feedback and input from all organizational levels to make the most informed decisions possible.
  - c. Exists on three levels: time-critical, deliberate and strategic. Risk decisions must be made at levels of responsibility that correspond to the degree of risk, considering the mission significance and the timeliness of the required decision. Enclosure (1) discusses these three levels of risk management application in more detail.
9. PRINCIPLES. Apply these basic decision-making principles before executing any anticipated job, action or mission. As an operation progresses and evolves, personnel should continuously employ risk management principles during the decision-making process.
- a. Accept No Unnecessary Risk: All Coast Guard operations and daily routines entail risk. *Unnecessary* risk conveys no commensurate benefit to safety of a mission. The most logical courses of action for accomplishing a mission are those meeting all mission requirements while exposing personnel and resources to the lowest possible risk. ORM provides tools to determine which risk or what degree of risk is unnecessary.
  - b. Accept Necessary Risk When Benefits Outweigh Costs: Compare all identified benefits to all identified costs. The process of weighing risks against opportunities and benefits helps to maximize unit capability. Even high-risk endeavors may be undertaken when decision-makers clearly acknowledge the sum of the benefits exceeds the sum of the costs. Balancing costs and benefits may be a subjective process open to interpretation. Ultimately, the appropriate decision authority may have to determine the balance.
  - c. Make Risk Decisions at the Appropriate Level: Depending on the situation, anyone can make a risk decision. However, the appropriate level to make those decisions is that which most effectively allocates the resources to reduce the risk, eliminate the hazard, and implement controls. Commanders at all levels must ensure subordinates are aware of their own limitations and when subordinates must refer a decision to a higher level.
  - d. ORM is Just as Critical in Executing as in Planning All Activities: While ORM is critically important in an operation's planning stages, risk can change dramatically during an actual mission. Therefore, supervisors and senior leadership should remain flexible and integrate ORM in executing tasks as much as in planning for them.
10. PROCESS. Figure 1 illustrates the Coast Guard's seven-step ORM process. Enclosure (1) thoroughly describes each process step, provides some useful models for risk assessment, and

outlines the elements of launching and recovering small boats as an example of a deliberate application of the ORM process.

### SEVEN-STEP ORM PROCESS

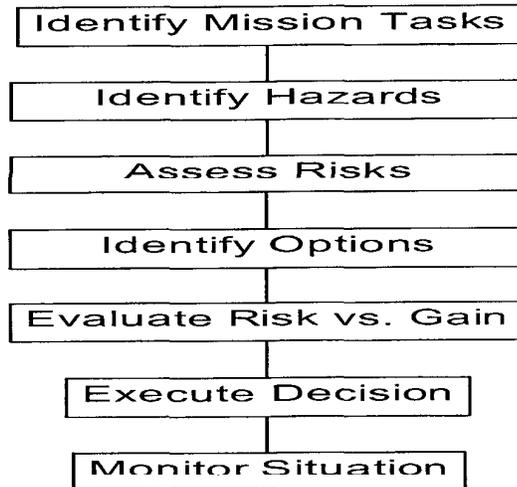


Figure 1

11. **REQUIRED ORM COMPETENCIES:** Table 1 suggests the expected ORM proficiency for the active duty, reserve, Auxiliary and civilian forces at the entry, intermediate, and senior work levels. Specific circumstances may warrant flexibility in determining specific ranks for certain categories corresponding to a person's position and expected extent of responsibility in an organization. TCT and CRM are current delivery programs already in place to train intermediate and senior supervisory personnel to achieve these competencies. A member's first exposure to ORM fundamentals should occur in a formal training setting when practical. Therefore, entry-level training curricula should incorporate the basic elements of communications and describe the ORM process to achieve an overall awareness.

ORM COMPETENCIES		
Job Level	Rank	Proficiency Criteria
Entry	Recruits Officer Candidates Cadets Direct Commission Officers Civilian Employees (through GS-7)	<ol style="list-style-type: none"> <li>1. Describe the ORM process steps.</li> <li>2. Learn standard ORM terms and be able to explain basic actions required for each step.</li> <li>3. Bring information under their control to the decision-maker.</li> <li>4. Expected responsibility in monitoring situations and executing risk decisions.</li> </ol>
Intermediate	Petty Officers Junior Officers Civilian Employees (GS-8 through GS-12)	<ol style="list-style-type: none"> <li>1. Apply ORM techniques in mission-oriented environments.</li> <li>2. Demonstrate team coordination behaviors that promote risk management.</li> <li>3. Demonstrate risk management in planning and executing tasks.</li> </ol>
Senior	Chief Petty Officers Chief Warrant Officers Senior Officers Civilian Employees (GS-13 and up)	<ol style="list-style-type: none"> <li>1. Advocate and support risk management.</li> <li>2. Apply ORM concepts in initially developing and reviewing plans, directives, and other written guidance.</li> </ol>

Table 1

12. **IMPLEMENTATION.** A key objective is to implement the ORM process as an integrated aspect of daily activities and operations. Successfully implementing ORM will create an environment in which every Coast Guard member is motivated to personally manage risk in all they do. Due to resource limitations, smaller units are not expected to use these implementation methods as frequently or thoroughly as larger units having more resources.

**How do I implement ORM?** Implementation efforts should correspond to the complexity of the processes and procedures of the various activities targeted. In other words, devise simple implementation plans for simple processes. Integration plans should target processes, procedures, and guidance affecting daily activities, such as checklists, drill sheets, operations manuals, standard operating procedures (SOP), training doctrines, pre- and post-deployment briefings, stress-related issues, orientation and indoctrination programs for new personnel, plans for dockside availabilities or yard periods, construction plans, refueling and/or maintenance procedures, hazardous materials procedures, recreational activities, fiscal management, acquisition, and accountability procedures, among others. A person or team in a command's existing leadership structure, or those specially designated to monitor ORM integration initiatives, will select and prioritize those processes. Each individual command ORM integration plan should include responsibilities, milestones, and performance measures

for specific actions. Commanders, commanding officers or officers-in-charge, and upper management should monitor the progress of implementation efforts.

The Atlantic Area Training Team is a good, real-world example of integrating risk management concepts into daily processes. The Training Team has effectively embedded TCT and risk management elements into its cutter Special Emergency Operations Procedures (SEOPS) evaluation program through drill sheets, training doctrine, and briefings.

13. MANAGEMENT ROLES AND RESPONSIBILITIES.

a. **Commanders, commanding officers, and officers-in-charge shall:**

- (1) Manage risk effectively.
- (2) Select from risk reduction options developed.
- (3) Accept or reject risk based on the benefit derived.
- (4) Motivate leaders to use ORM and advocate supporting training opportunities.

b. **Staff elements, department heads, and division officers shall:**

- (1) Assess risks, develop risk reduction options, and implement additional safeguards as needed.
- (2) Eliminate ineffective safeguards.
- (3) Ensure those writing doctrine or planning orders apply ORM concepts.
- (4) Eliminate barriers to taking acceptable risks.

c. **Supervisors shall:**

- (1) Apply the ORM process to operations and tasks and encourage its use off duty.
- (2) Elevate risk issues to higher authority for resolution when appropriate.

d. **Individuals shall:**

- (1) Understand, accept, and implement risk management processes.
- (2) Maintain situational awareness of the changing risks associated with an operation or task and assertively notify supervisors when appropriate.

#### 14. PROGRAM RESPONSIBILITIES.

##### a. **Commandant:**

- (1) Assistant commandants for directorates and special staff offices at Headquarters shall:
  - (a) Integrate the ORM process and concepts into appropriate doctrinal publications and manuals for all Coast Guard missions and activities;
  - (b) Incorporate ORM principles into appropriate personal qualification standards publications; and
  - (c) Require program managers to review programs periodically to help field units identify areas and processes for ORM implementation.
- (2) Commandant (G-WT) shall:
  - (a) Validate including basic ORM principles and terms into initial (entry-level) or qualification indoctrination and training programs (including basic military training for recruits, officer candidates, and Academy cadets; direct commission programs; professional military education; and applicable class "A" schools) through the Training Coordination Council;
  - (b) Incorporate ORM concepts into military requirements for advancement; and
  - (c) Integrate ORM concepts into professional development and leadership courses at the Leadership Development Center.
- (3) After validation by the Training Coordination Council, applicable training program managers shall integrate ORM concepts into pertinent curricula at Training Center, Petaluma; Reserve Training Center, Yorktown; Aviation Training Center, Mobile; and Aviation Technical Training Center, Elizabeth City.
- (4) Commandant (G-WK) shall:
  - (a) Serve as technical advisor on ORM issues; and
  - (b) When practical, incorporate ORM lessons learned into regular safety messages promulgated to the field.
- (5) Commandant (G-OCX) shall develop detailed implementation guidance for the Auxiliary.

**b. Area and district commanders shall:**

- (1) Ensure SOPs and/or OPLANs apply the ORM process and ORM concepts in coordinating missions, in the course of normal reviews;
- (2) Integrate ORM process and supporting concepts into Afloat Training Group tactical cutter training and readiness evaluations, and ensuring that training requirements specified in reference (a) are included in readiness evaluation checklists;
- (3) Ensure all exercises and planning efforts address the ORM process; and
- (4) Incorporate ORM into unit readiness evaluations, e.g., SEOPS and Ready-for-Sea programs.

**c. Section, activity, group, and unit commanders and marine safety offices shall:**

- (1) Incorporate ORM concepts into daily operational, maintenance, and support activities, using appropriate guidance provided by applicable program managers, e.g., daily preventive maintenance and operating checklists for small boats and shipboard systems; pre-underway and entering port checklists; port security waterfront and passenger terminal monitoring activities to deter potential terrorist attacks; boat and aircraft search and rescue and law enforcement patrol planning and execution; pre- and post-flight engineering maintenance and aircrew system checks; facilities engineering departments performing scheduled maintenance or conducting minor repairs, e.g., to a damaged boiler; integrated support commands' welding and carpentry or hazardous materials handling; civil engineering units evaluating the environmental impacts of a proposed new park or base golf course; and facility design and construction centers designing new roads or buildings;
- (2) Include ORM process information in all operational briefs, e.g., pre- and post-flight mission briefs; cutter port briefs; and damage control, navigation, and seamanship training team exercises and briefs;
- (3) Include ORM process information in appropriate written, operational notices and plans during the course of normal updates, e.g., cutter organization manuals, Commanding Officer's Standing Orders, AMIO, helicopter operations, law enforcement, and other operational bills; pulsed counter-narcotics and fisheries enforcement operation planning and execution; and maritime defense zone exercises; and
- (4) Integrate ORM process concepts into group inspections and Ready-for-Operations procedures.

**d. Maintenance and logistics commands shall:**

- (1) Incorporate ORM concepts into the unit safety and environmental health program;  
and
- (2) Instruct units in ORM concepts during normal safety and compliance visits.

*//s//*

T. W. JOSIAH  
Chief of Staff

Encl: (1) Operational Risk Management Process Steps

## OPERATIONAL RISK MANAGEMENT

### I. Operational Risk Management Process (ORM) Steps

Figure 1 illustrates the Coast Guard's "seven-step" ORM process.

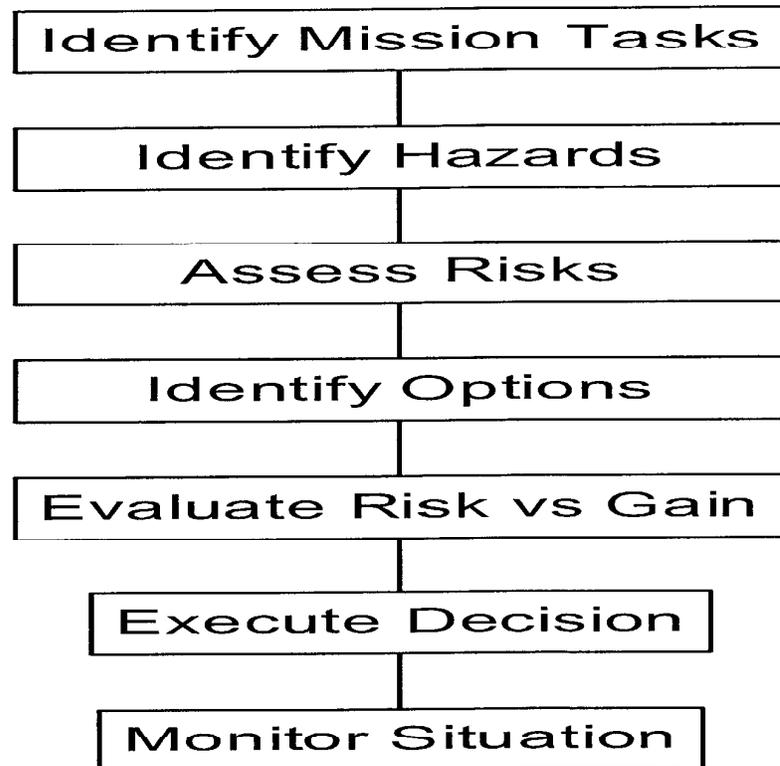


Figure 1

### II. Using the ORM Process

Figure 2 expands and assigns more specific actions to each ORM process step. Subsequent pages briefly describe each step and provide useful models to help assess risk.

C O M M U N I C A T I O N S & S I T U A T I O N A L A W A R E N E S S	1. Define Mission and/or Task	<ul style="list-style-type: none"> <li>• What does the task entail?</li> <li>• What do we have to do?</li> <li>• Are there other ways to do this?</li> </ul>
	2. Identify Hazards <u>P</u> lanning <u>E</u> vent Complexity <u>A</u> sset Selection <u>C</u> ommunications (and Supervision) <u>E</u> nvironmental Conditions	<ul style="list-style-type: none"> <li>• What can go wrong?                      → Equipment                      → Personnel                      → Environment</li> <li>• How is risk defined for us?</li> <li>• What safeguards exist? How effective are they?</li> </ul>
	3. Assess Risks <i>Low</i> <i>Medium</i> <i>High</i>	<ul style="list-style-type: none"> <li>• What are the effects? – Severity</li> <li>• Can this happen to us? – Probability</li> <li>• What is the event frequency or degree of involvement? – Exposure</li> </ul>
	4. Identify Options <u>S</u> pread out <u>T</u> ransfer <u>A</u> void <u>A</u> cept <u>R</u> educe	<ul style="list-style-type: none"> <li>• Are risks acceptable or unacceptable?                      → What options can eliminate <i>unacceptable</i> risk (that which does not contribute to accomplishing the mission safely)?</li> <li>→ What options reduce undesirable risk?</li> <li>• Can we modify mission to reduce risk?</li> <li>• Are any safeguards missing?</li> <li>• What new options should we consider?</li> </ul>
	5. Evaluate Risk vs. Gain Double-check the mission or task Verify the objective is still valid	<ul style="list-style-type: none"> <li>• Did someone with authority validate the potential risks resulting from the options considered are worth the gain?</li> <li>• This risk decision must be made at the lowest appropriate level, considering experience and maturity.</li> </ul>
	6. Execute decision	<ul style="list-style-type: none"> <li>• Implement the best options.</li> <li>• Have we allocated the necessary resources?</li> <li>• Have we initiated risk management procedures?</li> <li>• Does everyone know why we are doing this and the expected outcome?</li> </ul>
	7. Monitor situation	<ul style="list-style-type: none"> <li>• Are the safeguards working?</li> <li>• Are participants accomplishing the mission or task objective?</li> <li>• Has the situation changed?</li> </ul>

Figure 2

Team coordination skills vital to the process

### **Step 1:**

**Define the Mission or Task:** To accomplish this step review current and planned operations, describing the mission at hand. The commander defines what is required to accomplish the tasks and the conditions under which to conduct them. To assist with this step, construct a list or chart depicting the operation's major phases or steps in the job process, normally in time sequence. Break down the operation into "bite-size" chunks.

### **Step 2:**

**Identify Hazards:** Using the list or chart formulated in Step 1, list the hazards associated with each phase of the operation or step in the job process. Potential failures, i.e., things that could go wrong, encompass equipment or operational problems both internal and external to the unit. Looking at each element of the "PEACE" model (Planning, Event complexity, Asset selection, Communications, and Environmental conditions) will ensure effective hazard identification in each of these three main categories:

- **Equipment:** Is the equipment functioning properly and will it do so throughout the planned evolution?
- **Environment:** How will weather, geographic influences, physical barriers, workplace climate, and available light effect the event?
- **Personnel:** Are personnel properly trained and capable of handling the mission's demands? Are they fatigued, complacent, or suffering from physical or mental stress?

The key to successfully analyzing risk is to carefully define the hazards and identify and evaluate safeguards. In brainstorming sessions, asking the question "What if?" is an excellent tool to help identify all potential hazards. Specific hazard identification is important, since it leads to *assessing risk more accurately and subsequently developing risk control options or safeguards more thoroughly*. When identifying a hazard, state what it is, and further, describe the cause of potential exposure to that hazard, since that will help identify risk controls or safeguards later in the process.

### **Step 3:**

**Assess the Risks:** Consider risk applicable to the unit and the mission. Determine individual risk levels for each hazard identified. Assess risk by evaluating specific elements or factors, that, when combined, define risk. Two models that assess risk for these hazards are the Severity, Probability, and Exposure (SPE) and the Green, Amber, and Red (GAR) models. They differ in how they look at the hazards identified in Step 2 of the ORM process.

## **SPE RISK ASSESSMENT MODEL**

The SPE model assesses risks for specific hazards, such as those involved in launching or recovering a small boat or aircraft, by determining risk as a function of severity, probability, and exposure; i.e.,  $Risk = f(S,P,E)$ . This model uses this formula:

$$\text{Risk} = \text{Severity} \times \text{Probability} \times \text{Exposure}$$

**Severity:** Severity is an event's potential consequences measured in terms of degree of damage, injury, or impact on a mission. Should something go wrong, the results are likely to occur in one of these areas:

- Injury or Death
- Equipment Damage
- Mission Degradation
- Reduced Morale
- Adverse Publicity
- Administrative and/or Disciplinary Actions.

Severity can vary from 1 to 5:

1	=	None or slight
2	=	Minimal
3	=	Significant
4	=	Major
5	=	Catastrophic

**Probability:** Probability is the likelihood that the potential consequences will occur.

Probability can vary from 1 to 5:

1	=	Impossible or remote under any conditions
2	=	Unlikely under normal conditions
3	=	About 50-50
4	=	Greater than 50%
5	=	Very likely to happen

**Exposure:** Exposure is the amount of time, number of occurrences, number of people, and/or amount of equipment involved in an event, expressed in time, proximity, volume, or repetition.

Exposure can vary from 1 to 4:

1	=	None or below average
2	=	Average
3	=	Above average
4	=	Great

By computing the level of risk, we can evaluate its potential impact on mission effectiveness and execution. After computing the risk values using the formula **Risk = S x P x E**, we need to *control substantial to very high values*:

Values	Degree of Risk	Guidance
80-100	Very High	Discontinue, Stop
60-79	High	Correct Immediately
40-59	Substantial	Correction Required
20-39	Possible	Attention Needed
1-19	Slight	Possibly Acceptable

After computing the risk levels for each hazard identified, we can order hazards from the highest to the lowest risk to focus first on the areas of most concern in conditions of limited resources.

### **GAR RISK ASSESSMENT MODEL**

We can address more general risk concerns, involving planning operations or reassessing risks as we reach milestones within our plans, by using the GAR model. A survey of cutter commanding officers identified these elements as contributing to the majority of risk in their cutter operations: supervision, planning, crew selection, crew fitness, environment, and event or evolution complexity. The GAR model incorporates these elements, further defined below:

**Supervision:** Supervisory control should consider how qualified a supervisor is and whether he or she actually is supervising. Even if a person is qualified to perform a task, supervision, even as simple as verifying the correctness of a task, further minimizes risk. The higher the risk, the more a supervisor needs to focus on observing and checking. A supervisor actively involved in a task (doing something) can be distracted easily and probably is not an effective safety observer in moderate to high-risk conditions.

**Planning:** Preparation and planning should consider how much information is available, how clear it is, and how much time is available to plan the evolution or evaluate the situation.

**Crew and Watchstander Selection:** Crew and watchstander selection should consider the experience of the persons performing the specific event or evolution. If individuals are replaced during the event or evolution, assess the new team members' experience.

**Crew and Watchstander Fitness:** Crew and watchstander fitness should judge the team members' physical and mental state, generally a function of how much rest they have had. Quality of rest should consider how a platform rides and its habitability, potential sleep length, and any interruptions. Fatigue normally becomes a factor after 18 hours without rest; however, lack of quality sleep builds a deficit that worsens the effects of fatigue.

**Environment:** Environment should consider all factors affecting personnel, unit, or resource performance, including time of day, lighting, atmospheric and oceanic conditions, chemical

hazards, and proximity to other external and geographic hazards and barriers, among other factors.

**Event or Evolution Complexity:** Event or evolution complexity considers both the time and resources required to conduct an evolution. Generally, the longer the exposure to a hazard, the greater the risks involved. However, each circumstance is unique. For example, more iterations of an evolution can increase the opportunity for a loss to occur, but on the positive side, may improve the proficiency of the team conducting the evolution, depending on the team's experience, thus possibly decreasing the chance of error. Other factors to consider in this element include how long the environmental conditions will remain stable and the precision and level of coordination needed to conduct the evolution.

**Calculating Risk:** To compute the total degree of risk for each hazard previously identified, assign a risk code of 0 for no risk through 10 for maximum risk to each of the six elements to obtain a personal estimate of the risk. Add the risk scores to come up with a total risk score for each hazard. Figure 3 is suitable for this process:

<b>Risk Calculation Worksheet</b>		<b>Risk Score</b>
Supervision		
Planning		
Crew Selection		
Crew Fitness		
Environment		
Event/Evolution Complexity		
<b>TOTAL SCORE</b>		

Figure 3

GAR Evaluation Scale for Color-Coding the Degree of Risk					
0	23	24	44	45	60
10	20	30	40	50	
<b>GREEN</b> (Low risk)		<b>AMBER</b> (Caution)		<b>RED</b> (High risk)	

If the total risk value falls in the green zone (1-23), the risk is rated low. A value in the amber zone (24-44) indicates moderate risk; consider adopting procedures to minimize it. If the total value falls in the red zone (45-60), implement measures to reduce the risk before starting the event or evolution.

The GAR model is good to assess an operation or mission generally. If the degree of risk appears unduly high in one or more of the elements above, perform a second assessment using the SPE model for each element of concern, since the SPE model is more specific. As with the SPE model, rank-order all hazards assessed in the GAR model from the highest to the lowest risk to target areas of greatest concern first.

**Risk Ratings:** The ability to assign numerical values or color codes to risk elements in either the SPE or GAR model is not the most important part of risk assessment. What is critical in this ORM step is team discussion to understand the risks and how the team will manage them. *Different Coast Guard operational communities have adopted the GAR model, but may interpret green, amber, and red differently for their own missions and operators. For example, law enforcement personnel may define a "green" risk level a bit higher than personnel involved in recreational boating safety. Understanding these differences will improve communications among communities. However, a low/medium/high scale is generally understood throughout the Coast Guard and is the safety industry's widely used standard. Therefore, discussions of risk among various Coast Guard activities will use the terms low, medium, and high, but each operational community will define those terms meaningfully for its own operators.*

**Step 4:**

**Identify the Options:** Starting with the highest risk hazards assessed in Step 3, identify as many risk control options or safeguards as possible for all hazards exceeding an acceptable degree of risk. Determine each option's impact on mission and unit goals and select the

perceived best alternative or combination of alternatives. Mission priority and time criticality often drive option choice. Risk control options include: **Spread out, Transfer, Avoid, Acept, and Reduce (STAAR).**

**Spread Out:** Risk commonly is spread out by increasing either the exposure distance or the time between exposures.

**Transfer:** Transferring risk does not change probability or severity but rather shifts possible losses or costs to another entity.

**Avoid:** Avoiding risk altogether requires canceling or delaying the job, mission, or operation, but this option is rarely exercised due to mission importance. However, it may be possible to avoid specific risks, e.g., avoid risks associated with a night operation by planning the operation for daytime.

**Accept:** Accept risk when the benefits clearly outweigh the costs, but only as much as necessary to accomplish the mission or task.

**Reduce:** Risk can be reduced. The overall goal of risk management is to plan missions or design systems that do not contain hazards. However, the nature of most complex operations and systems makes it impossible or impractical to design them completely hazard-free. As we analyze hazards, we will identify those requiring resolution. To be effective, risk management strategies must address risk's components: severity, probability, and exposure.

- Using protective devices, engineering controls, and personal protective equipment usually helps control *severity*.
- Training, situational awareness, attitude change, rest, and stress reduction usually help control *probability*.
- Reducing the number of people involved or the number of events, cycles, or evolutions usually helps control *exposure*.

### **Step 5:**

**Evaluate Risk vs. Gain:** Analyze the operation's degree of risk with the proposed controls in place. Determine whether the operation's benefits now exceed the degree of risk the operation presents. Be sure to consider the cumulative risk of all identified hazards and the decision's long-term consequences. This step also serves as a reality check to verify the objective still is valid.

- If the risk's costs outweigh the benefits, re-examine the control options to learn whether any new or modified controls are available. If not, inform the next level in the chain of command the mission's risk, based on the evaluation, exceeds the benefits and should be modified.

- If the mission's benefits outweigh the risks, with controls in place determine if the current level in the chain of command can implement all the controls. If not, find assistance from the next level in the chain of command.
- When notified of a situation whose risk outweighs benefit, the next level in the chain of command should assist with implementing required controls, modify or cancel the mission, or accept the identified risks.

The equation **Risk = Severity x Probability x Exposure** defines what is called the expected value of the loss. However, individuals can value the same loss differently because the loss may affect their overall satisfaction (their needs, issues, and concerns) differently. It is easy to overlook the issue of perceived value in typical risk management theories, but it may determine the kinds of actions decision-makers take in weighing risk vs. gain. Personnel should be aware the acceptability of risk can vary from person to person because the perceived risk, affected by different values placed on the expected loss, also varies. Therefore, while taking this "reality check" step in the risk management process, it is wise to consider a loss's perceived as well as expected value to avoid potential controversy when making risk decisions.

### **Step 6:**

**Execute the Decision:** Once the risk control decision is made, assets must be made available to implement the specific controls. Part of implementing control measures is informing the personnel in the system of the risk management process results and subsequent decisions. If personnel disagree, the decision-makers should explain the decision rationally. Carefully documenting the decision and all steps in the process, usually done only for deliberate or strategic ORM applications, facilitates communications and clarifies the rational process behind risk management decisions.

### **Step 7:**

**Monitor the Situation:** Monitor the situation to ensure the controls are effective and remain in place. Identify changes requiring further risk management and act on them. Take action when necessary to correct ineffective risk controls and reinitiate the risk management steps in response to new hazards. It is important to remember **RISK MANAGEMENT IS A CONTINUOUS PROCESS**. Failure to respond to changes in the situation can become a link in a chain of errors that lead to a mishap.

## **III. Levels of Risk Management**

The risk management process exists on three levels. While it may be desirable to apply risk management in depth to every mission or task, time and resources may not always be available. One objective of risk management training is to develop sufficient proficiency in applying the process so risk management becomes an automatic part of the decision-making methodology on and off duty. Leaders must employ the risk management process to make sound, timely decisions. The three levels of risk management are:

- **Time-Critical**: Time-critical risk management is an “on the run” mental or verbal review of the situation using the basic risk management process without recording the information. Personnel employ the time-critical process to consider risk when making decisions in a time-compressed situation. This level of risk management is used during both the execution phase of training or operations and in planning and executing crisis responses. It also is the most easily applied level of risk management in off-duty situations. It is particularly helpful in choosing the appropriate course of action when an unplanned event occurs while executing a planned operation or daily routine.
- **Deliberate**: Deliberate risk management applies the complete process. Each step is documented in some manner, at the discretion and for the benefit of the process owner. It primarily uses experience and brainstorming to identify hazards and develop controls and therefore is most effective when done in a group. Examples of deliberate applications include planning upcoming operations; reviewing standard operating, maintenance, or training procedures; and planning damage control or disaster response.
- **Strategic**: The Strategic process identifies hazards and assesses risk more thoroughly than the Deliberative process by researching available data, using diagramming and analysis tools, testing formally, and tracking hazards associated with the system or operation over the long term. An independent contractor equipped with the necessary tools and expertise to perform an ORM strategic application is likely to be needed to perform this task. Strategic applications study complex operations’ or systems’ hazards and associated risks, or those whose hazards are not well understood. Examples of strategic applications may include long-term, complex operational planning and introductions of new equipment, materials, missions, and major replacement assets.

#### **IV. Example of Applying a Deliberate Level of ORM**

To prepare for transferring personnel or equipment, a Deck Watch Officer (DWO) might use ORM to plan to launch and recover small boats.

##### **Step 1:**

**Define the Mission or Task:** The operational commander has identified these requirements:

- The transfer must occur within the next four hours; its maximum duration is 30 minutes
- The event involves transferring 200 pounds of boxed electronic testing gear and one Electronics Technician to another medium endurance cutter at sea
- The small boat is the best option due to the proximity to the receiving cutter, the number of personnel, and amount of equipment involved

These are the primary tasks (not an all-inclusive list) for launching and recovering a small boat:

- a. Muster and brief appropriate deck personnel

- b. Personnel staff their stations and prepare to lower and recover the small boat
- c. Deck Watch Officer (DWO) ensures appropriate launch and recovery equipment are energized
- d. Conning Officer steers a proper launch and recovery course
- e. For launching:
  - Bring small boat to the rail or lower boat alongside, as appropriate, to load personnel and equipment
  - Boat is away; retrieve sea painter and stow lines
- f. For recovery:
  - Pass sea painter to small boat as it approaches alongside
  - Secure small boat alongside, or engage forward then aft falls, and bring to the rail to unload personnel or equipment, as appropriate
  - Cradle small boat and secure for sea
- g. Launch and recovery equipment are de-energized
- h. Deck debrief; ship returns to base course

**Step 2:**

**Identify Hazards:** Many different hazards could be associated with each operational phase identified in Step 1. Here are a few, possible causes for exposure, and simple safeguards to limit exposure to those hazards.

Hazard	Cause	Safeguard in Place
Personnel slip, fall, are pinched or trapped	Wet deck, gear adrift, fatigue, boat overload, high sea state, inadequate training, complacency, inadequate supervision	Non-skid boat deck
Lose control of boat in water or on deck with potential for death, serious injury, equipment damage, mission failure	Material casualty, e.g., davit, line, or cable failure; hydraulic leak; high sea state; improper procedures (winch davit operation or coxswain); improper positioning (boat or boat-lowering detail)	Crew weight-tests cables annually and replaces them as needed
Fire or explosion	Material casualty, hydraulics, boat overload, improperly stowing flammables; improper electrical load	Electrical cut-off switch

**Step 3:**

**Assess the Risks:** Using the SPE model and the rating and descriptions for each risk factor as explained, determine the risk level for each hazard above and rank-order from highest to lowest risk.

- **Personnel slip, fall, are pinched or trapped:** Severity = 4, Probability = 2, Exposure = 3; Risk =  $S \times P \times E = 24$  (possible risk; attention needed)
- **Lose control of boat:** Severity = 4, Probability = 2, Exposure = 2; Risk = **16** (slight risk; possibly acceptable)
- **Fires or explosion:** Severity = 5, Probability = 1, Exposure = 2; Risk = **10** (slight risk; possibly acceptable)

#### **Step 4:**

**Identify the Options:** *Identify and evaluate risk control options according to their impact on mission and unit goals, using each STAAR technique element for guidance. Some of the risk control options available for the “Personnel slip, fall, are pinched or trapped” hazard are:*

- Avoid some risk by delaying transferring the personnel or equipment until conditions are optimal (favorable sea state, daytime vice nighttime, etc.), if possible.
- Reduce the risk by ensuring adequate supervision is available or increasing supervision in suspect areas.
- Reduce risk by ensuring the personnel involved are not overly fatigued from previous or multiple evolutions.
- Reduce risk by using personal protective equipment and engineering controls effectively to reduce the severity of possible mishaps.
- Reduce risk by thoroughly inspecting the deck and small boat space to ensure proper housekeeping and eliminate tripping hazards.
- Hold a dry run if necessary to ensure all personnel, especially those recently qualified, thoroughly understand their duties and positions.

#### **Step 5:**

**Evaluate Risk vs. Gain:** With all the controls in place, the DWO determined the cumulative risk of all the hazards was acceptable. The gain in this case far outweighed the risk, especially since the unit needing the electronics equipment and technical support would lose mission readiness and effectiveness and possibly could have to pull into port for repairs if immediate support were not available. Therefore, a reality check verified the task’s objective was still valid.

**Step 6:**

**Execute the Decision:** Based on the DWO's ORM analysis, the commanding officer decides to launch the small boat to conduct the transfer before nightfall, clarifies supervisory roles, and communicates all potential risk factors to personnel involved in the evolution during the pre-launch brief.

**Step 7:**

**Monitor the Situation:** The DWO closely monitors the weather and sea state for any significant changes that could affect the small boat launch and especially considers the material readiness of the small boat-lowering equipment. The Executive Officer monitors the boatswains mates' walk-through boat deck inspections for thoroughness to ensure tripping hazards are eliminated. The crew immediately reports any significant changes in these factors so the CO can reassess the decision to launch. A post-event debriefing identifies which controls were effective and the command takes measures to implement them in future evolutions.

## DON'T LET YOUR GUARD DOWN - THE RISK MANAGEMENT HABIT

This Flag Voice is about avoiding injuries and property damage in your personal lives as well as on duty. I recently received an E-mail from a member that gave a candid first person account of *how he mangled his finger in his lawnmower*. As he tells the story, he had been diligently following a number of safety rules as he went about his chores for most of the weekend, but, in a momentary lapse of sound judgment, he used his hand to lift a guard to clear clogged grass from beneath his still-running power mower. Thirty stitches, a crushed bone and a lost fingernail later, he generously told his story so that others might avoid his mistake. What struck me most about his story was his frank admission that he was thinking "turn off the engine, turn off the engine" as he reached down to clear the grass. To me this means that he had instinctively started the risk management process. Unfortunately, he did not carry it through to its conclusion before the blade sliced and diced his finger.

In contrast to private sector employers, the Coast Guard assumes a high degree of responsibility for its people (all workforces) even when they are away from their workplaces. This provides us *with a unique challenge as well as an opportunity*. The challenge is that we have to address many risks in addition to those that are encountered on the job. The opportunity is that we have a single tool that can help us manage all those risks, and we can get very proficient in its use if we practice it 24 hours a day, if we make its use a continual habit.

Probably all of us have taken chances similar to the one just described. Many have taken much greater risks and escaped unscathed. We have all been there, both on-duty and off-duty. To help put the matter into a personal context, consider these questions:

- How many times have you performed a task in a way you knew was unsafe, but you rationalized the unsafe behavior by telling yourself you were only going to do it one time, or only for a short time, or thinking that "it" just would not happen to you?
- *How many times have you taken a short cut, hurried a task, ignored proper procedures, neglected to use proper tools or safety equipment, or failed to read or follow instructions?*
- How many times have you performed activities requiring your undivided attention but allowed distractions?
- How many times have you undertaken activities and not considered your personal physical limitations or environmental conditions?
- How many times have you truly assessed the risks of hazards in your own homes, including fire and electrical hazards, power tools, tripping and falling hazards, and even ergonomics?

The answers to these questions will probably suggest a greater need for risk management in your personal as well as your professional lives. We know from our analysis of reported mishaps that:

- *Most mishaps involve factors that at least at one time were under the direct control of the personnel involved.*
- Hazards were sometimes masked by the familiarity born of routine tasks or normally secure environments.
- Operational risk management (ORM) processes were unknown or not used.
- The ORM process was used but unnecessary risks were accepted.

The Challenge: Many on- and off-duty mishaps are the result of slips, trips, falls, pinching/cutting fingers and hands, strains, and using tools. These are routine, individual activities. It seems paradoxical that we have compiled a relatively good safety record while engaged in the potentially hazardous situations our missions sometimes demand, but we injure ourselves with alarming frequency performing more mundane tasks. I believe this is at least partially due to a higher level of *focus, situational awareness, teamwork, and deliberate risk management during our operational activities*. I am also amazed that many of the personnel involved in mishaps knew they were placing themselves at unnecessary risk but continued, in spite of their reservations, on to the unfortunate conclusion. Though it is disheartening to see people recognize a hazard yet forge ahead hoping for a lucky outcome, I also find encouragement in these findings because there is evidence that the essential first element of risk management is already in place, hazard identification.

We Have the Tools: What was often referred to in the past as “common sense” or “thinking ahead” has now evolved into a process known as operational risk management, a tool that can be applied to any situation. In fact, use of operational risk management is Coast Guard policy, as described in Commandant Instruction 3500.3 of 23 November 1999. ORM is a continuous, systematic process of identifying and controlling risks in all activities. The principles of ORM are to accept no unnecessary risks, to accept necessary risks only when benefits outweigh potential costs, to make risk decisions at the appropriate level, to use ORM in planning and executing all activities, and to adapt the ORM process to changing conditions. The ORM process itself consists of seven steps:

The Operational Risk Management Process:

- Identify the tasks.
- Identify the hazards.
- Assess the risks.
- Identify the options.
- Evaluate risk versus gain.
- Decide on a course of action including measures to control risks.
- Monitor the situation, changing controls if necessary.

Coast Guard training, policies, procedures, and command structure combine to promote and enforce the application of ORM in the performance of our missions. Why are these principles often ignored off-duty? What is the missing link?

The Link - The Risk Management Habit: We need take ORM to the next evolutionary step, to make ORM every individual's habit, almost an instinct. Ideally, this habit would apply to all activities, at all times, on and off-duty. Stephen R Covey, in *The 7 Habits of Highly Effective People*, defines a habit as the intersection of knowledge (what to, why to), skill (how to) and desire (want to). He believes effective habits are internalized principles and patterns of behavior. To avoid mishaps away from the workplace, we must bridge that geographic boundary between the cutter, flight line, or shore facility and the sites of our off-duty activities. We must educate and encourage our members to intersect their operational risk management knowledge, skills and desires at all times. We must evolve ORM from a Commandant Instruction and an occupational process into an individual habit of every member, a continual internalized pattern of behavior without regard for location, activity or duty status.

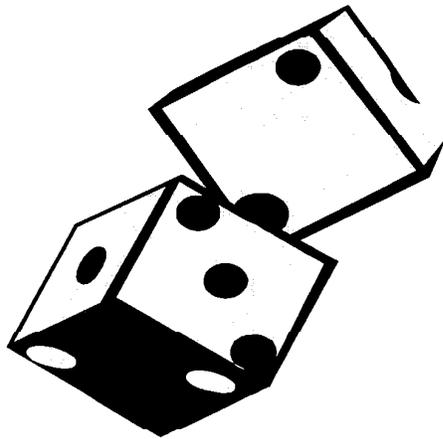
Personal risk management may take only seconds as we change our personal probabilities for safe outcomes by choosing the proper tools, donning the proper personal protective equipment, buckling up a seat belt, or shutting off machinery before working on it. Or It may require some additional time such as properly planning for a trip or a home remodeling project. It may require continuing evaluations and adaptations to changing conditions. It may require stopping an activity until safer options can be found. But we must remember that this time taken is time-proven to prevent mishaps.

The Opportunity: The more risk management is practiced, the more of a habit it becomes and the more effective it will be. Emphasis on practicing risk management in off-duty activities will benefit our on-duty risk management as well. The habit will become a behavior without boundaries. Everyone should follow the advice RADM Brown gave in MLCA's Memorial Day safety message: “Don't let your guard down.” Don't lower your risk management guard when you are off-duty and don't let your (Coast) Guard down by becoming a casualty while accepting unnecessary risks.

Regards, FL Ames

# **OPERATIONAL RISK MANAGEMENT (ORM)**

## **INTEGRATION JOB AID**



# ORM INTEGRATION JOB AID

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**ORM INTEGRATION PROCESS MODEL**

Figure 1 below illustrates a five-step process that effectively integrates risk management principles into an organization.

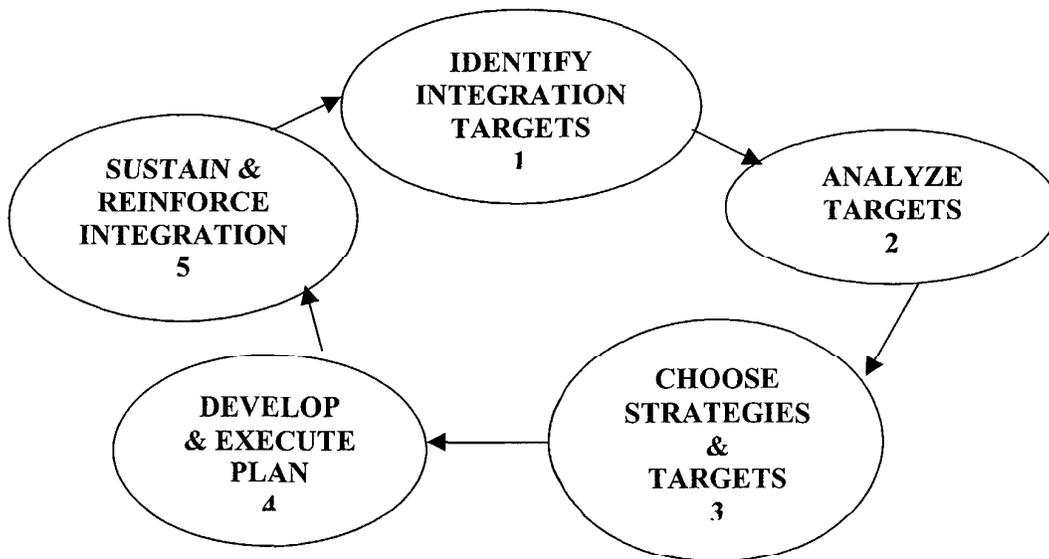


Figure 1

**Step 1:**

**Identify Integration Targets:** This first step develops various potential ORM integration targets, such as recreation activities, accident-reporting procedures, hazardous material handling and storage, and ergonomics programs, for evaluation. It is important to maximize the *involvement of appropriate personnel while developing possible targets to create a sense of ownership in the process.* Consider these factors in developing these targets:

- To what extent has the unit already integrated ORM? Has the organization conducted risk assessments for its major missions?
- Are all aspects of risk (security, fiscal, mission, safety, environmental, etc.) evaluated on an integrated basis rather than as independent variables?
- How successful have integration efforts been? Why or why not?
- Does the organization have an effective overall long-term strategy to integrate ORM, led by senior leaders and supported by effective tactics and techniques? Does that long-term strategy consider future changes in requirements for personnel, training, tasks and missions, equipment, or environmental conditions?

- Can the integration process be measured? The organization must determine a baseline from which to measure progress.

### **Step 2:**

**Analyze Targets:** After identifying targets, use these procedures to evaluate them separately to prioritize the best among them:

- Define and select the desired selection criteria to prioritize each target area chosen in Step One. Examples of some criteria and their definitions include these:
  - (1) Real Risk Threat. Does the target area pose a well-understood threat to the organization's mission success? Does it pose a personal threat in the form of adverse publicity, civil or criminal legal action, or other forms of accountability with potential adverse consequences to the welfare of those in leadership positions?
  - (2) Easy to Integrate. Will it be easy to integrate ORM procedures permanently into this target?
  - (3) Hot Topic. Is the target area of special interest to the organization's leadership and most personnel? Is it likely to stay a hot topic for a sustained period of time?
  - (4) Broad Application. Does the target area affect on a relatively broad spectrum of the organization's personnel and therefore interest more of them in the risk management integration effort?
  - (5) Short-Term Benefits. Is there potential for quick, relatively easy return on investment (low-hanging fruit) that will contribute momentum to the target area?
  - (6) Good Resource Availability. Are resources accessible to support ORM action in this area?
  - (7) Involves Military and Civilian Personnel. Will this target area involve both military and civilian personnel in positive ways?
- Using a simple matrix, evaluate each target area against each selection criterion, weighted if desired, to indicate relative importance and assigning point values of 1 (low) to 10 (high).
- Total the points for each target area. Generally, the options scoring the highest are the most attractive options. Figure 2 shows a sample matrix.

**Sample Options Evaluation Matrix**

Rate from 1 (Low) to 10 (High) (selection criteria not weighted)

	<b>Claims</b>	<b>Hazmat</b>	<b>Stress</b>	<b>Sports/Rec</b>	<b>Ergo</b>	<b>Force Protection</b>
Easy to Integrate	7	10	8	3	5	7
Hot Topic	5	7	8	4	3	7
Real Risk Threat	3	8	7	2	4	6
Short-Term Benefits	6	8	6	7	7	7
Good Resource Availability	9	10	7	3	8	10
Involves Military & Civilians	0	10	10	3	5	10
Broad Application	7	10	6	5	8	9
<b>TOTAL SCORES</b>	<b>37</b>	<b>63</b>	<b>52</b>	<b>27</b>	<b>40</b>	<b>56</b>

THIS USER HAS IDENTIFIED  
6 INTEGRATION TARGETS (TOP) AND  
SELECTED 7 SELECTION  
CRITERIA (LEFT)

Figure 2

**Step 3:**

**Choose Strategies and Targets:**

- Study the 12 integration strategies described in chapter two of this job aid. Consider their potential application to the top three or five target areas identified in Step Two. It may be helpful to list the strategies that seem best suited to each target area, then consider which single or combined strategy(ies) will most effectively integrate ORM in a given target area.

- Refine the best strategy options for the strongest target areas by outlining the specific actions required to proceed with the chosen strategies. Think through the issues of who will need to do what, when they will need to do it, and where the resources will come from to accomplish it. Be sure the personnel who actually have to do the work are not only involved in this process but actually control it to the maximum extent possible.
- After carefully evaluating the best target areas and various strategies that might apply to each and including your assessment of the organization's current and future status, resource issues, etc., decide which target areas and associated strategies to use.
- After determining integration strategies, select an effective method to implement and manage ORM integration. Consider these five management and staff options:
  - (1) **Integrate Various Loss Control Functions.** Accomplish this by actually incorporating loss control communities (safety, fire and environmental protection, physical security, occupational medicine, etc.) into the organizational structure, a pattern increasingly common in leading-edge organizations. This method may be less effective at field units, which have less flexibility in reorganizing limited resources.
  - (2) **Designate a Risk Control "Czar".** This position, often at the vice-presidential level in the private sector, integrates all risk management activities whether or not the loss control functions have been integrated. A major role is to assure full exploitation of the "opportunity" dimension of ORM. More often than not czars are chosen for their general management expertise rather than their loss control background. Technical experts in loss control functional areas provide the necessary expertise.
  - (3) **The Safety Function Leads ORM.** ORM in its present context originated within the safety community, which in most cases is best prepared to guide its implementation in any existing function. If selecting this option take special care to assure ORM encompasses all issues and the safety staff thinks well outside its traditional realm.
  - (4) **Create Cross-Functional Steering Committees and Working Groups.** Their membership can come from across the loss control community or more desirably across all major staff functions. Ideally, these groups' chairs are experienced senior managers capable of advancing ORM integration and cross-functional applications.
  - (5) **Use the Existing Leadership Structure.** In this option, each functional area implements ORM within the scope of its activities. No one element leads or coordinates. This option places a heavy burden on senior commanders to assure the ORM effort progresses effectively.

#### **Step 4:**

**Develop and Execute Integration Plan:** Based on the target areas selected, their associated strategies, and appropriate integration management option, develop an actual integration plan. The simpler it is, the more personnel will use it, and the easier it will be to maintain its continuity. However, the plan most likely will create long-term changes, since it

may involve a culture change, requiring personnel to change firmly entrenched beliefs, attitudes, and behaviors. The plan's goal should be to re-engineer processes to expand from merely complying with standards to performing excellently in all activities. Focus on changing processes to include one or more of the seven ORM process steps discussed in the ORM COMDTINST. Building key ORM tasks into mainstream supervisor responsibilities will help ensure its success. Suggested elements, not all-inclusive, to choose from in developing this plan are:

- **Preparation**
  - (1) Target areas
  - (2) Scope of application
  - (3) *Timing and marketing considerations*
  - (4) Planning team composition and command's role
  
- **Planning Timeline**
  - (1) Key actions
  - (2) Responsibilities
  - (3) Milestones
  
- **Performance Measures**
  - (1) Effectiveness measures, e.g., loss reductions, operational enhancements, sustainability of integration
  - (2) Efficiency measures, e.g., adherence to timeline and budget
  - (3) Perception measures, e.g., leader and operator perceptions

### **Step 5:**

**Sustain and Reinforce Integration:** To successfully sustain ORM integration, use an effective combination of incentives, leadership advocacy, and performance measures.

- Focusing on rewarding those who excel in ORM is more effective than dwelling on losses' negative consequences.
- Use a variety of performance measures, such as those below, built into the ORM integration plan to monitor progress:
  - (1) Percentage of key integration plan milestones met
  - (2) Percentage of safe behaviors displayed (measure changed behaviors by sampling observations or similar procedures)
  - (3) Percentage of positive replies to perception survey questions (perceptions change as integration process changes the organization's culture)
  - (4) Mishap rates, after a few years of ORM integration (ORM benefits should become apparent when compared to pre-integration baseline mishap rates)

- Use these 12 ORM leadership techniques, designed to induce an organization to accept and eventually embrace ORM. Some leaders, especially in a military context, may react to these proposals by asking, “What’s the problem? I’ll issue the necessary orders and that’s it.” The problem is personnel who attempt to *do* ORM without understanding and embodying its philosophy almost certainly will *create* unnecessary risk, not reduce it. For example, ORM advocates a fairly radical decentralization of decision-making authority. Directing this change before personnel really have assimilated ORM knowledge and attitudinal perspectives probably will result in confusion and performance will deteriorate. Also, as the Coast Guard and other military organizations around the world have downsized extensively, mission demands have not fallen proportionally and operations tempos are very demanding. Rapidly forcing ORM practice on already overworked and often over-stressed personnel may *cause only more harm than good*. Accordingly, these techniques’ premise is leadership will induce ORM rather than simply sledgehammer it into the organization. These techniques provide ideas for this more subtle leadership process.

- (1) **Commit to Breakthrough Improvement.** Put risk performance improvement on a competitive par with other important mission concerns.

LEVEL: This technique can be applied at any level but is most effective when initiated at the highest level of leadership. While junior leaders can make this commitment for their work group, it will be difficult unless it is part of an overall organization commitment.

PURPOSE: The commitment to breakthrough improvement has two objectives. The first is to create the awareness that the organization is not all that it can be or needs to be presently in the area of risk management. Most individuals in an organization are not particularly aware of the risk status of an organization and few if any are aware of just how good it is possible to be. The process of commitment to a real breakthrough should correct both these knowledge gaps. The second objective is to publicly express the top leaders commitment to outstanding risk management performance. This commitment becomes an important part of the justification of the changes that will be necessary to achieve ORM success. The rationale is simply that what we have done to date has not produced the performance we need, therefore we need to try new things. An important caveat is to make it very clear that breakthroughs will be achieved in fully mission supportive ways. The commitment to breakthroughs is not an unqualified commitment to unlimited resources for risk management. It will be achieved by more effective, efficient, and intelligent risk management processes, not through inappropriate investment of money or work.

PROCEDURES: The commitment to breakthroughs should involve the following steps:

- ✓ Step 1. Carefully determine the possibilities for breakthroughs by evaluating the performance of leading edge organizations in various fields, examining the best levels of performance within the organization itself as goals for all of it, and careful evaluation of the potential of the organization based on the values that ORM can be expected to produce. Generally in an organization that has not been

using systematic ORM procedures, a breakthrough should target at least 50% better than present performance, with a 90% improvement normally a practical long term objective.

- ✓ Step 2. Present the possibilities to the organization. Stimulate discussion of the potential to reach these objectives. Stress the success of external organizations when data is available. The success of leading edge civilian organizations can be cited as the basis of goals for USCG activities that perform similar functions, whether they are performed by civilians or military personnel. The case can be made that there are no insurmountable barriers (i.e. no obstacles that cannot be overcome by cost effective, mission supportive actions) in the USCG to replicating the breakthrough results achieved in the best of the private sector. The direct challenge here is to ask “Do our personnel deserve anything less than world class performance when it comes to protecting their lives and welfare? Does the national defense mission deserve anything less than world class risk management performance? Other organizations achieve it in pursuit of the production of potato chips; can a military organization do anything less for its vital missions?”
- ✓ Step 3. Incorporate the ORM breakthrough goals within the mainstream goals of the organization and develop the measures and accountability procedures characteristic of other important organizational goals.

(2) **Set Goals and Objectives.** Establish periodic ORM performance and programmatic goals.

**LEVEL:** This technique can be applied at any level, but the goals and objectives at lower levels of command should be fully integrated with and compatible with those developed at higher levels of leadership. Junior leaders should be encouraged to tailor higher level objectives to their specific needs and to develop unique objectives based on their missions.

**PURPOSE:** Goals and objectives turn the relatively intangible commitment to breakthrough into measurable targets. These targets can be parceled out to each level of leadership. Objectives also force consideration of the realities of what can be accomplished given the tempo of operations, workload, and cultural barriers.

**PROCEDURES:** The establishment of goals and objectives should involve the following steps:

- ✓ Step 1. Decide on the scope of application of the goals and objectives. Application can be as narrow as one element of the loss control community - safety for example, the entire loss control community, or functional elements completely outside the traditional scope of loss control (fiscal risk management, schedule risk management, etc.).
- ✓ Step 2. Establish the objectives. These should be as ambitious as possible given the realities of the organization environment. They should reflect the possibilities

inherent in ORM and should if accomplished, result in the achievement of the breakthrough type results to which the organization has committed in a reasonable length of time.

- ✓ Step 3. Cascade the objectives. Induce each subordinate level of leadership to develop sub-objectives that are directly connected to accomplishment of the overall organization objectives. The use of direct measures of risk as the basis of objectives, rather than mishap rates and numbers, will be important at lower organizational levels below wing level where most mishap rates and numbers have little or no statistical validity.
- ✓ Step 4. *Incorporate the objectives into mainstream command reviews and process assessments.* Assure periodic reviews and clear + or - status assessments. Assure accountability and emphasize the application of positive incentives for even small successes as opposed to negative sanctions for shortcomings.

- (3) **Set a Personal Example.** Assure ORM process credibility through appropriate personal behavior.

**LEVEL:** This technique must be applied at all levels of leadership. It is especially critical for first level leaders because they set the day-to-day standard more by what they do than what they say. Nevertheless, senior leaders can seriously damage their credibility and perceived commitment with a thoughtless moment of non-compliance with a safety or environmental requirement.

**PURPOSE:** Employees understand that leaders are required by their positions to express supportive opinions about many things that they actually couldn't care less about. To understand what is really important they closely monitor patterns of behavior to see what the leader does, not simply what he or she says. By personally living the commitment to risk management excellence in everything from scrupulous compliance with risk control rules and guidelines to informal expressions reflecting consistent commitment, leaders signal their serious intent.

**PROCEDURES:** For lower level leaders there is simply no substitute for careful attention to detail every day in every way. For example, failure to wear required personal protective equipment will be overlooked by subordinates if it is very rare. Any frequent pattern of violations will be detected and will strongly signal lack of commitment. Further, it will quickly lead to a deterioration of standards compliance. At more senior level of leadership, this is very much a staff responsibility. Senior leaders visit such diverse work places and are so busy that it is not practical for them to personally maintain awareness of all of the standards that may apply everywhere they go. The staff, especially personal aides, must assure the senior leader is in full compliance. Sometimes in an effort to be deferential to a senior leader, a subordinate will waive risk controls. To the observing operators, this is often simply interpreted as a signal that risk control is unimportant.

- (4) **Build an Aggressive Opportunity Mindset Within the Organization.** Create an awareness of the potential gains in developing and capitalizing on an organization's capabilities through ORM as well as the more obvious risk reduction benefits.

**LEVEL:** This technique can be applied at all levels of leadership. As in many areas of ORM it will only be fully effective in a context in which the senior leaders have set the tone. In the absence of the right signal from the top, junior leaders will be very hesitant to explore the possibilities of the opportunity dimension of ORM.

**PURPOSE:** This technique is directly targeted at getting all personnel to begin thinking about the opportunity dimension of risk. **Most personnel have developed the perception promoted by traditional risk management practices that all risk is "bad". In fact, not all risk is bad; it is essential if an organization is to fully develop and capitalize on its capabilities.** Leaders must develop the understanding among every individual in the organization that the right risks must be taken and that not taking them is wrong. Obviously there is significant potential for personnel to confuse good risks that should be taken with unnecessary risks that should not be taken. The role of the leader is to assure that personnel can make the distinction and are motivated to take risks when in the overall interest of the organization.

**PROCEDURES:** Leaders can take the following actions to develop an aggressive organizational attitude toward good risk-taking.

- ✓ Incorporate the opportunity mindset in your own perspectives on risk. Intellectually accept the concept that good risks must be taken or the organization will suffer.
- ✓ Use the power of the question (see technique 10) to assure that subordinates are conscious of and applying effort to the identification of and acceptance of necessary risk.
- ✓ Cause the organization to have a target list of areas where risk barriers and the opportunities they present for mission enhancement are identified. Challenge personnel to suggest ways to overcome these barriers. Energetically reward those that come forward with effective ideas.
- ✓ Ensure that the organization is effectively monitoring risk management developments in other organizations with special focus on the opportunities of ORM. Where are they doing something our organization can't do or can't do as well, and how are they doing it?
- ✓ Assure that your accountability processes respect the distinction between taking necessary risks and failing, and taking unnecessary risks and failing. In the first case, *no personal adverse consequences should result for those involved.*

- (5) **Induce Loss Control Community Functional Integration.** Increase cooperation among different loss control community factions.

LEVEL: This technique applies at levels of leadership at which loss control staffs (safety, fire protection, occupational health and medicine, environment, and security) are provided.

PURPOSE: Risk management is inherently integrative in character and process. It is poor ORM practice to manage risk narrowly within functional stovepipes because that approach precludes the proper prioritization of risk across the overall organization. Further, attempts to manage risk within stovepipes reduces the ability of the organization to take advantage of the fact that risk is generally cross-functional in nature with the same root causes producing several different types of risk. For example, weaknesses in hazardous materials (HAZMAT) training can produce injuries, fires, environmental damage, health problems, and even important security issues. Attempting to manage these risk issues separately among the elements of the loss control community is ineffective and ultimately costly in many ways. The role of the leader is to assure a suitable degree of integration of risk management activities.

PROCEDURES: On the surface, the simple solution is to combine these various functions in a single office. This course of action is becoming the standard in leading edge organizations in one form or another. There are several alternatives:

- ✓ Retain the traditional organizational structure but designate a risk management czar with the power to integrate, coordinate, and align the actions of the various loss control components. In the private sector these czars are typically at vice presidential level.
  - ✓ Create cross-functional management councils that have the power to review significant initiatives from any part of the loss control community. The role of the council is to assure cross-functional integration, represent the interests of first level commanders/leaders and managers, and see that loss control requirements placed on the line structure are in balance with total job demands. These councils should be composed of both loss control representatives and line leaders with a relatively senior line management chairman.
  - ✓ In organizations in which risk is a very important aspect of operations, the commander can effectively play the role of integrating authority. This is a demanding task and expenditure of significant command time on this process is only warranted when risk issues are extraordinarily important.
- (6) **Establish an ORM Management Structure.** Provide the necessary leadership and staff resources to adequately guide the ORM process.

LEVEL: This technique applies at levels of leadership at which loss control staffs (safety, fire protection, occupational health and medicine, environment, and security) are provided.

**PURPOSE:** Finding the right management structure to pursue ORM objectives is an important leader responsibility. The issues involved in cross-functional integration of risk control initiatives were discussed in technique #5. However, there are other issues related to the process of actually integrating ORM into mainstream operational processes to consider. Technique #6 offers some alternatives for this process.

**PROCEDURES:** Alternative approaches to managing ORM integration are as follows:

- ✓ Integration of various loss control functions. This aspect is covered in technique #5.
  - ✓ Designation of a risk control “czar”. In addition to the role of integrator as described in technique #5, the czar may have other ORM responsibilities. The czar is responsible for the integration of all risk management activities whether or not the loss control functions have been integrated. A major role is to assure full exploitation of the “opportunity” dimension of ORM. Often czars are chosen for their general management and operational expertise rather than their loss control background. The technical expertise comes from the technical experts in the loss control functional areas.
  - ✓ The safety function leads ORM. ORM in its present context originated within the safety community and in most cases the safety function is best prepared to guide its implementation. If this option is selected, special care must be directed at assuring that ORM is not confined to safety issues and that the safety staff possesses the ability to think well outside the limits of traditional safety issues. ORM is a mission enhancer that provides the added benefits of mishap prevention.
  - ✓ Create cross-functional steering committees and working groups. These can be across the loss control community or more desirably across all major staff functions. Ideally, the chairs of these groups are experienced senior managers capable of advancing the integration and cross-functional application of ORM.
  - ✓ Use the existing leadership structure. In this option, each functional area is responsible for ORM within the scope of its activities. No one element leads or coordinates. This option places a heavy burden on senior commanders and other line leaders to assure the effective integration and progress of the ORM effort.
- (7) **Fund ORM Activities.** Allocate resources to ORM at a level it can competitively justify.

**LEVEL:** This technique applies at all levels of leadership with special emphasis on those that control budgets and manpower allocations.

**PURPOSE:** The purpose of this technique is to assure that investments are made in risk management performance at a level consistent with the maximum mission benefit to the organization. The key word here is “investment”. The ORM concept envisions commitment of resources to risk controls only when those controls will produce a positive mission return

on the investment. Additionally, ORM proposals that will produce a positive return on investment must also compete successfully against all other mission supportive alternative uses of the funds. Resources are always limited and not every good idea can be resourced. One of the basic principles of ORM is that risk-related expenditures should and can compete against all other alternative uses of resources on a level playing field. Only when risk management becomes a fully competitive part of the resource allocation process does it achieve its maximum value to the organization.

**PROCEDURES:** Leaders should take the following actions to assure the proper allocation of resources to ORM needs.

- ✓ Whenever there are significant resources involved and time permits, require proponents of risk management initiatives to provide at least a basic cost-benefit assessment as part of their proposal. In this context the word “cost” is not simply dollars, it is cost in the full dimension of the word (dollars, mission impact, manpower, opstempo, etc.).
  - ✓ Become fully conscious of the full impact of mishaps and incidents. Careful research has established that the average mishap produces at least \$4 in indirect loss for every direct \$1 recorded on the mishap report. Other adverse impacts of mishaps extend well beyond their dollar impact.
  - ✓ Induce proponents of risk controls to refine the targeting of their proposals. Traditional risk management often involved the application of blanket risk controls targeting entire populations. ORM demands precision targeting to reduce the cost of risk controls and enhance their impact.
  - ✓ Allow risk control proposals to compete freely and fairly in resource allocation processes such as budget reviews. When required to be competitive, properly designed risk controls can be competitive and the result will be better overall mission performance.
- (8) **Shield Subordinates.** Protect those who take prudent, mission-supportive risks from negative consequences associated with losses.

**LEVEL:** This technique applies at all levels of leadership. As in most areas, more senior leaders will establish the precedent for junior leaders.

**PURPOSE:** The purpose of this technique is to assure that individuals who exhibit bold, but appropriate, risk-taking behavior do not receive any adverse consequences as a result of their actions. Traditional risk management was not always as careful as it should have been to protect prudent, mission supportive risk takers from some form of adverse consequences when the risk results in a loss. The system tended to require a scapegoat regardless of the facts of the case. The well-established dictum “The commander is responsible for all that does or does not happen in his command” seemed to dictate adverse action of some sort following a serious mishap. “We had a mishap, mishaps are bad, CAPT Jones was in

command, CAPT Jones must have done something wrong.” is the traditional attitude. ORM says NO. Military organizations must accept risks to maintain readiness. Accepting risk means periodically accepting losses. While every practical effort is made to minimize these losses, there will still be losses. Assuming the risk taken was a mission supportive risk (ORM enables us to know this), then the occasional (indeed predictable) loss should not produce adverse consequences for the leaders that happened to be involved at the particular point in time when it occurs. Of course this assumes that they were following the established risk controls.

**PROCEDURES:** Leaders should take the following actions to assure the proper “shielding” of subordinates.

- ✓ Provide subordinate leaders with the training and guidance necessary to allow them to make sound risk decisions according to ORM principles.
- ✓ Hold leaders as accountable for not taking needed risks as you do for taking unnecessary risks.
- ✓ Accept the moral responsibility to act on occasion as a shield. When the media pack is attacking, when the Congressionals are piling up, and grief-stricken parents and spouses are demanding that someone pay, it is not pleasant duty to protect a vulnerable subordinate who was simply taking a necessary risk. How much easier to step aside and let the heat descend as it will. The effective leader will not step aside and will not allow adverse action against the subordinate. Further, unless the mishap investigation changes the risk equation, the effective leader will authorize resumption of the activity that led to the loss. Failure to do so will degrade mission capabilities and simply create greater future risk to the force and the national security.

(9) **Detect and Correct Gambling.** Develop an organization that deters risk “gambling” even when the gambler “wins.”

**LEVEL:** This technique applies at all levels of leadership. As in most areas, more senior leaders will establish the precedent for junior leaders.

**PURPOSE:** The purpose of this technique is to assure that individuals who exhibit unjustified and inappropriate risk-taking behavior are not rewarded when they are successful. In fact, they are guided to avoid future similar behavior. In the past individuals would sometime take a risk that objectively was inappropriate and not mission supportive, but when they were successful they were rewarded in one way or another. Such decisions were reached without the application of reasonable risk management processes. Such unsupported and mission negative decisions are called “gambling”. By definition gambling is bad. But gamblers often win in the short term. The result appears to be mission excellence because something was done faster, longer, harder, etc. Is the gambler then rewarded? If so, gambling behavior is reinforced and others encourage similar behavior. The end result is deteriorating risk standards and eventually mission destructive losses.

PROCEDURES: Leaders should take the following actions to deter gambling.

- ✓ Provide subordinate leaders with the training and guidance necessary to allow them to make sound risk decisions according to ORM principles. Make sure they understand exactly what gambling is and why it is bad.
- ✓ Hold leaders accountable for taking unsupported, mission-negative risks even when they apparently succeed.

(10) **Use the Power of Question.** Use specific ORM questions and terms to induce ORM activity and culture change.

LEVEL: This technique applies at all levels of leadership.

PURPOSE: The purpose of this technique is to use the leader's power and right to ask questions to build the ORM understanding and technical competency of subordinates. The idea is to probe the extent and quality of ORM embedded in a wide range of operational proposals developed by subordinates. The expectation of being confronted by these probing questions in turn quickly induces subordinates to inject the desired ORM processes into all relevant activities.

PROCEDURES: Leaders should ask several general risk-based questions as often as necessary to develop subordinates who come prepared to answer them. These questions should be used in formal briefings, staff meetings, informal contacts, when giving initial direction, and in most other leadership situations.

(11) **Regularly Monitor ORM Processes.** Periodically assess specified measures that monitor an organization's ORM status.

LEVEL: This technique applies at all levels of leadership.

PURPOSE: The purpose of this technique is to accomplish the leader's responsibility to know what is happening; in this case to know the risk status of his or her organization. In traditional risk management applications this has been virtually impossible in smaller organizations because the number of mishaps or incidents is not large enough to give a statistically valid picture of what was happening. Even in larger organizations, where it is possible to obtain valid data, the size of the variations in this data needed to have statistically significant changes precluded anything close to real time assessment of risk management performance. ORM offers the new tool of direct measures of risk. Using this tool, even the smallest unit leader can maintain close-to-real-time awareness of the success of risk management initiatives.

PROCEDURES: Leaders should take the following actions to maintain reliable understanding of their organization's risk management status.

- ✓ Determine the validity of mishap numbers and rates as measures of performance. Most current indicators cannot be reliably applied below flag level. Use these indicators when they are valid.
- ✓ Even if mishap data is valid, and particularly if it is not, select an essential number of direct measures of risk. These can be measures of critical behaviors, knowledge, attitudes, conditions, or program parameters.
- ✓ Regularly use the direct measures of risk to assess status. Pinpoint areas of progress and shortfall. Take action as necessary to reinforce success and remedy shortcomings. Use the measurement data to guide these actions.

(12) **Exploit the ORM Value of Major Mishap Reviews.** Consistently discuss mishaps' ORM implications.

LEVEL: This technique applies at all levels of leadership.

PURPOSE: The purpose of this technique is to use the hard-learned lessons of the post-mishap experience to improve ORM processes. A mishap is an opportunity to learn. What went wrong, if anything? Could this mishap have been prevented? Should it have been prevented? These are questions that are at the heart of the mishap investigation, reporting, and review process. ORM processes are designed to minimize the occurrence of mishaps. When a mishap occurs it is completely appropriate to ask if improved ORM processes could reduce the probability or severity of another similar mishap.

PROCEDURES: Leaders should use mishap reviews as an opportunity to enhance and refine ORM processes. The following may be useful.

- ✓ Direct those responsible for mishap investigations to include an assessment of the ORM process in effect at the time of the mishap. This inquiry can proceed as an integrated aspect of the standard investigation process without interfering in any way with that process.
- ✓ Direct investigators to report ORM process weaknesses as mishap causation factors if they are found and direct development of ORM process enhancements as mishap corrective actions and recommendations.
- ✓ Use the power of the question to drive the process of considering ORM issues into the mishap investigation and reporting process.
- ✓ Direct inclusion of ORM weaknesses into mishap analytical databases so trends and hotspots can be determined.

## THE 12 STRATEGIES FOR PROGRAM INTEGRATION

- Accountability
- Teaming
- Partnership
- Integrate in Training
- Risk Decision Points
- Organization and Policy Structure
- Employee Activities
- Process Integration
- Direct Change
- Gain a Champion
- Integrate in Strategic Planning
- Integrate into Measurement

### THE 12 INTEGRATION STRATEGIES

Consider applying one or more of these strategies during Step 3 of the ORM Integration Process Model to each of the target areas chosen.

1. Accountability. This strategy identifies key tasks in the integration target area and then defines objectives for these tasks' various performance levels (satisfactory, good, excellent), with the personnel performing the tasks participating fully in this process. Then leaders periodically evaluate the responsible persons' actual performance of these tasks and rewards good performance, while personnel correct substandard performance. If the organization already has an effective accountability program, then leaders should integrate the risk accountability aspects into it.
2. Teaming. This strategy coordinates various functional elements in a particular risk-related area. The coordination must be cross-functional to effect true change. The objective is twofold: to rationally define all kinds of risk issues across the entire organization and coordinate risk management processes. In a fully mature teaming process, the organization sees the risk management process as seamless.
3. Partnership. Partnership forms cooperative arrangements with other organizations to accelerate ORM effectiveness and efficiency. Several potential partnership modes exist: one is partnership among Chief Petty Officer messes as sub-groups of unit commands; another is between safety offices and other loss control functions belonging to different organizations. In these partnerships, personnel develop joint work plans in areas of common interest, allocate work on individual projects to various partners, and share the outputs among them. A partnership with four elements can accomplish literally four times the work in one-quarter of the time of any one partner working alone.
4. Integrate Training. This strategy identifies all training the organization accomplishes and then prioritizes this training based on its risk implications. Next, personnel analyze the

higher-risk training task by task to identify points in the training at which to insert ORM-related content, often in the same amount of training time and retaining current training on other topics. For example, officer candidates' and Academy cadets' decision-making training can focus on risk decisions while maintaining current training objectives.

5. **Risk Decision Points**. This strategy reviews the processes involved in an integration target area. If possible, personnel identify various established points in the process at which decision-makers must periodically make decisions, for example, budget reallocation decisions or timetable revisions. Personnel propose a plan to assure relevant risk decisions are considered at these points. The materiel acquisition function has such a process. Personnel could establish similar risk decision points in high-risk training, in developing new maintenance lifecycles, or developing industrial processes or construction projects.
6. **Organizational and Policy Structure**. This strategy recognizes adopting an ORM approach may require reorganizing loss control staff offices' internal processes and structure. Similarly, it may be appropriate to revise published safety and other loss control policies, not to develop several new stand-alone ORM instructions, but to integrate standard ORM principles into pre-existing, relevant functional policy.
7. **Employee Activities**. This strategy identifies and implements employees' risk management activities to the processes of the target area. For example, professionals train employees in an effective ergonomics process and then leaders challenge them to take charge of their workplaces. This process "democratizes" involvement in risk management processes that eventually transforms the organization's culture right down to the individual employee and service member. The benefits of this expanded workplace "ownership" produce value well beyond accident and injury reductions.
8. **Process Integration**. This strategy develops a fairly detailed description of the process(es) used in the target area, often using a flow diagram. Then personnel review each step of the process to assess risk implications leaders prioritize those processes involving significant risk to integrate enhanced risk controls. The hazardous materials and waste process is an excellent example. Leaders consider all risk dimensions at each stage of the hazardous materials process and identify specific risk controls.
9. **Direct Change**. This strategy promotes direct action to change organizational attitudes and perceptions about ORM initiatives. Addressing the issue of change across the entire organization rather than selecting integration targets is bold and aggressive but also high-risk and likely to fail. The models here are Dr. Dan Petersen's "Challenge of Change" approach and the National Safety Council's "Agenda 2000" program. These well-tested approaches offer the best chance of success for this speedy but very risky approach to achieving high ORM performance.
10. **Gain a Champion**. Given a selected target area, this strategy identifies key leaders who might be potential "champions", i.e., those willing to play a leading role in ORM initiatives. Often champions offer themselves for the role by signaling their special interest in ORM. In other cases, supervisors may create a champion by carefully cultivating a target person and

essentially convincing him or her to support the ORM effort. Once found, leaders use the champion's power to the maximum practical extent to advance the ORM process. Leaders provides feedback to the champion about program successes to motivate continuing involvement.

11. Integrate in Strategic Planning. In this strategy, the ORM staff monitors the creation of all plans, mission statement revisions, vision statements, and similar initiatives for their ORM implications to integrate the overall ORM effort or appropriate risk management aspects into these documents. Often a single sentence, paragraph, or even a phrase will suffice. The object is to ensure the personnel involved in the document will at least briefly consider ORM elements in the context of their larger overall plan. Over time these ORM "wedges" contribute significantly to building the organization's ORM culture and support resource requests, training programs, and many other ORM initiatives.
12. Integrate Measurements. Most modern organizations strongly emphasize developing mission-connected performance measures that reveal various processes' health or "sickness." The measurement development process is an excellent opportunity to create an awareness of risk management's role in all processes. By requiring the development of risk-related measures in those processes in which risk is a significant issue, we ensure the organization will define ORM performance metrically, measure, and track it, which in turn will place ORM in the management mainstream.

**BASIC ORM INTEGRATION METHODS**

Not all risk situations require using the formal integration model to incorporate ORM principles into an organization's culture. Even small organizations experience several risk situations affecting personnel, equipment, environmental, and other, more time-critical factors. A formal integration method for many of these situations would be neither feasible nor appropriate, yet some method of embedding risk management concepts into an organization is necessary for effective performance. Below are three basic methods. While they may not cover every ORM process step described in Enclosure (1), they do achieve the primary goal of getting people to use risk management concepts daily.

- **Simple Risk Assessment Questions Technique.** This technique employs five simple questions anyone anywhere can ask. It requires no documentation and can be applied very quickly and easily, with very little training. It is an exceptional tool for all employees to effectively address common, everyday risk situations. Some individuals may dismiss this process as overly simple and purely "common sense," yet the unfortunate truth is common sense is an uncommon virtue. The natural human tendency is to *just do it*, rather than stop for a moment to think about the risks associated with a certain activity or task. These questions are:

- (1) **Why** am I doing this task?
- (2) **What** could go wrong?
- (3) **How** could it affect me or others?
- (4) **How** likely is it to happen?
- (5) **What** can I do about it?

A simple way to promote this program and encourage all employees' awareness of these issues is to distribute tags containing these five fundamental questions to everyone in the workplace. The tags could be pocket-size, durable, and readily attachable to other identification tags employees are required to wear. They conspicuously remind everyone of the never-ending importance of continually asking simple risk questions while performing all daily work activities.

- **Job Planning Process Technique.** When the simple risk assessment question technique requires a more structured environment, the job-planning process offers a suitable alternative. Work teams can use this method when assigned to complete unusual or infrequent tasks or common tasks that must be completed in unusual circumstances, e.g., foul weather, heights, etc. The primary difference between this and the five simple questions technique is the job planning process requires basic documentation of risk levels (low, medium, high) for all people, equipment, materials, and environmental issues specific tasks entail. Each medium- or high-risk area also lists risk controls, and personnel determine and document the residual

risk after the specific risk control is implemented. Supervisors can generate a simple form to document this information and insert an employee communication and sign-off record to ensure workers have properly communicated hazards and controls.

- **Neil George System.** Although designed as a safety philosophy, the Neil George System uses an approach to changing an organization's culture that could function as a simple method of integrating risk management into daily activities. Easily adaptable to any particular work activity, its main premise is to emphasize safety must be a state of mind in which employees constantly are aware of the possibilities of injury. Upper management encourages supervisors to continually promote safety awareness by using a five-point checklist, methodically focusing on each step. The five steps are:
  - (1) **Check the Workplace Entrance.** Concentrate on what you see as you travel to the workplace. Keep your mind on what is required and see it is done promptly.
  - (2) **Are Workplaces and Equipment in Good Order?** As in the first step, focus on only one thing, this time where employees work. Having corrected any discrepancies noted in the work entrance, workers could give full attention to the equipment and general order within the work place.
  - (3) **Are Employees Working Properly?** Focus here on the way employees work, such as how they handle tools and equipment and discover and correct unsafe working habits. Are employees organized or do they complete a task haphazardly? Resolving this issue is the function of all employees, particularly of leadership.
  - (4) **Do a Safety Act.** This is a tool for building all supervisors' and employees' safety consciousness. The act should be a short statement or act on the cause or prevention of certain kinds of accidents. The act should not be a general caution, but a substantive fact that interests and impresses listeners. Examples of safety acts include citing a recent mishap emphasizing the importance of wearing personal protective equipment or making an on-the-spot safety correction.
  - (5) **Can and Will Employees Continue to Work Properly?** This requires both carefully considering individual employees' circumstances and closely monitoring the results of changing work conditions and possible consequences if an accident happens.



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COMDTINST 1541.1  
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COMMANDANT INSTRUCTION 1541.1

Subj: TEAM COORDINATION TRAINING

- Ref: (a) Cutter Training and Qualification Manual, COMDTINST M3502.4 (Series)  
 (b) Boat Crew Training Manual, COMDTINST M16114.9 (Series)  
 (c) Auxiliary Boat Crew Training and Qualification Guide - Crewman and Coxswain, COMDTINST M16798.28 (Series)  
 (d) Command-at-Sea Orientation Guide, COMDTPUB P1500.17 (NOTAL)

1. **PURPOSE.** This Instruction establishes requirements and the delivery system to support a training program to increase team effectiveness and minimize human error in cutter, boat and command/control operations and activities. This program is titled Team Coordination Training (TCT) and serves the operational active duty, reserve and Auxiliary forces.
2. **ACTION.** Area and district commanders, section/activity/group commanders, cutter and station commanding officers/officers-in-charge, and Auxiliary unit commanders shall ensure compliance with the provisions of this Instruction.
3. **DIRECTIVES AFFECTED.** The requirements outlined in this Instruction have already been approved for inclusion in upcoming changes to references (a), (b) and (c).
4. **BACKGROUND.** This paragraph defines TCT and provides a historical overview of the TCT implementation process over the past several years.
  - a. **Definition.** Prudent sailors have exhibited and human factors researchers have described seven critical skills that reduce the potential for human error-induced mishaps. These skills are leadership, mission analysis, adaptability and flexibility, situational awareness, decision making, communication and assertiveness. Collectively, they are titled "Team Coordination." Within these skills are important processes that serve to control safety risks and improve team performance. The processes are risk management, crew briefing and crew debriefing. TCT reinforces these processes and makes the student aware of both

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A	2	2	2		2	2	1	2	1	1		1	2	2	1	1	1	1		2						
B		12	20	2	12		1	1		4	1	4		12			1	6		2						
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*effective and ineffective behaviors. Diagnostic tools and corrective strategies are taught. Through discussion, case study, class exercise and/or role-play, students gain an understanding of these skills and how best to apply them.*

- b. **History.** Human error has been and continues to be a significant cause of operational mishaps. These errors have resulted in the loss of personnel, cutters, boats, and equipment. As an example, navigation mishaps between FY87 and FY92 exceeded \$400,000 annually, excluding the loss of USCGC MESQUITE in December 1989. Ineffective risk decisions many times have placed our personnel at greater risk than necessary. Technical knowledge and skill alone cannot prevent mishaps. It also takes *teamwork that minimizes, recognizes, and corrects human errors and a systematic process to continuously assess and manage safety risks.* A boat consisting of a coxswain and crew is one team, but seldom performs its mission without interacting with members of a larger team. The larger team includes mission coordinators (the officer-in-charge or duty officer), other Coast Guard assets, other government, commercial, and private parties, and the “customer,” who is usually the person or vessel which is the focus of the mission. Because the majority of missions have inherent safety risks, effective communication between the boat and the larger team is a cornerstone for mishap prevention.

Analysis of operational teams by several government sources identified the critical skills *that enhance productivity and minimize errors.* A FY93 needs assessment of Coast Guard navigation mishaps identified a need for training cutter personnel in these skills as well as policy changes to reinforce effective team behavior. That assessment has been validated by a recent Chief of Staff action item resulting from a Class “A” mishap and substantiating the training need for ashore personnel. Between FY94 and FY95, training material and policy were developed, resident courses were offered, and integration of TCT into existing curricula began.

- (1) During FY95, exportable team training was implemented and comprehensive training packages were developed.
  - (a) The Ninth Coast Guard District successfully prototyped a district-wide exportable training program, utilizing facilitators whose training and travel funds were supported by Coast Guard Headquarters. This prototype became the benchmark for service-wide unit-level training programs using a cadre of trained facilitators with continued support from Commandant (G-WKS).
  - (b) Commandant (G-WKS) designed a comprehensive training package for facilitators during exportable training, as well as for unit supervisory personnel to conduct their own departmental training as needed. This training material is further described in paragraph 7.d. below.
- (2) The following resident courses now contain training on some, if not all, TCT skills:
  - (a) Cutter Prospective Commanding Officer/Executive Officer (PCO/PXO) Course

- (b) Ashore PCO/PXO Course
  - (c) Officer-in-Charge/Executive Petty Officer (OINC/XPO) School
  - (d) Coxswain "C" Course
  - (e) Heavy Weather Coxswain Course
  - (f) Cadet and Officer Candidate Training
  - (g) National Search and Rescue School
  - (h) Maritime Law Enforcement School
  - (i) National Aids to Navigation School
  - (j) TCT Cutter Operations Course
  - (k) TCT Group Operations Course
  - (l) TCT Facilitator Course
  - (m) Cutter Prospective Operations Officer Course (POPS)
- (3) Commencing third quarter FY96, the Coast Guard Institute began offering a TCT correspondence course. Entitled "Introduction to Team Coordination Training" (course code 0648), this course provides an overview of TCT for command afloat and other interested personnel. At that time, Atlantic Area (Aot) integrated TCT into its exportable navigation/mobility courses and into its Special Emergency Operations Procedures training. Later that year, the Leadership and Management School incorporated elements of TCT into its curriculum.
5. DISCUSSION. Currently, all cutters, groups, and districts have had some exposure to TCT. Over 150 district-controlled facilitators have been trained to support the exportable TCT program, and dozens more have been trained to support the resident courses. However, to be an effective program, all members within operational teams must understand and apply these skills. Based on the requirements outlined below, the annual training target is approximately 7,100 personnel, which would include 2,325 active duty, 575 reserve and 4,200 Auxiliary personnel. The majority of these personnel will receive exportable, unit-level training at their individual units. More important than the number of people trained, however, is the goal to have teams trained together to emphasize teamwork through this exportable training concept.
6. TRAINING REQUIREMENTS. The following requirements apply for active duty, Auxiliarists and integrated reserve personnel:

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- a. **Cutters 180 feet in length or greater.** All cutter personnel assigned to team billets during an underway watch, a restricted maneuvering evolution, or special sea detail, as determined by the commanding officer, shall receive TCT.
  - (1) Unit training shall include TCT as a biennial requirement for the personnel described above, per an approved pending change to chapter four of reference (a). Commands (including area units) shall request biennial exportable training through the parent district TCT administrator and shall be part of a district-wide training plan. Unit-level team training requires the attendance of senior supervisory personnel (e.g., cutter COs and XOs) to advocate TCT principles and to empower junior personnel to use them. Senior member attendance also permits open communications between leaders amongst the “larger team” that assists in Coast Guard mission prosecution and the “smaller team” members at the worker level. As needed, based on periodic self-assessment, cutters shall conduct departmental training to reinforce selected skills using unit supervisory personnel as facilitators. Training materials for this purpose have already been delivered and are discussed in more detail in paragraph 7.d. below.
  - (2) Commanding officers and executive officers receive TCT as part of Command and Operations School pipeline training.
  - (3) Operations officers receive TCT either as part of the Command and Operations School training under the POPS (major cutter) course curriculum, the POPS non-flight deck cutter course curriculum (pending development), or by attending the TCT Cutter Operations course as billet-specific required training per an approved pending change to reference (a). This training provides the graduate with adequate knowledge to conduct departmental training as needed to reinforce the biennial exportable unit-level training required in subparagraph (1) above and conducted by a trained TCT facilitator.
- b. **Cutters less than 180 feet in length.** All cutter personnel assigned to team billets during an underway watch, a restricted maneuvering evolution, or special sea detail, as determined by the commanding officer/officer-in-charge, shall receive TCT.
  - (1) Unit training shall include TCT as a biennial requirement for the personnel described above, per an approved pending change to chapter four of reference (a). Commands shall request biennial exportable training through the parent district TCT administrator and shall be part of a district-wide training plan. Unit-level team training requires the attendance of senior supervisory personnel (e.g., cutter COs and XOs) to advocate TCT principles and to empower junior personnel to use them. Senior member attendance also permits open communications between leaders amongst the “larger team” that assists in Coast Guard mission prosecution and the “smaller team” members at the worker level. As needed, based on periodic self-assessment, ready for operations inspections, standardization team visits, or training team visits, cutters shall conduct departmental training to reinforce selected skills

using unit supervisory personnel as facilitators. Training materials for this purpose have already been delivered and are discussed in more detail in paragraph 7. d. below.

- (2) Commanding officers and executive officers receive TCT as part of pipeline training.
  - (3) Operations officers and operations petty officers shall receive TCT either as part of the Command and Operations School training under the POPS non-flight deck cutter course curriculum (pending development), or by attending the TCT Cutter Operations course as billet-specific required training per an approved pending change to reference (a). This training provides the graduate with adequate knowledge to conduct departmental training as needed to reinforce the biennial exportable unit-level training required in subparagraph (1) above and conducted by a trained TCT facilitator.
- c. **Sections/activities/groups, area and district command centers, and all shore units that have small boats attached.** All personnel, including Auxiliarists, assigned as boat coxswains/crew/engineers, communications/operations center watchstanders and controllers, command and control positions (including commanders, deputy commanders and executive officers) and group operations/assistant operations officer billets shall receive TCT.
- (1) Unit training shall include TCT as a biennial requirement for the personnel described above. The requirement that boat coxswains, crew, engineers, and surfmen receive TCT is also supported by reference (b). Stations to which surfmen are attached require TCT at least biennially. Commands shall request biennial exportable training through the district TCT administrator and shall be part of a district-wide training plan. Unit-level team training requires the attendance of senior supervisory personnel (e.g., station CO/OINCs or XO/XPOs, and section/activity/group commanders and deputies) to advocate TCT principles and to empower junior personnel to use them. Senior member attendance also permits open communications between leaders amongst the “larger team” that assists in Coast Guard mission prosecution and the “smaller team” members at the worker level. As needed, based on periodic self-assessment, ready for operations inspections, standardization team visits, or training team visits, supervisory personnel shall facilitate departmental training to reinforce selected skills. Training materials for this purpose have already been delivered and are discussed in more detail in paragraph 7. d. below.
  - (2) Station officers-in-charge and executive petty officers who attend OINC/XPO training also receive TCT as part of the school curriculum.
  - (3) Group operations/assistant operations officers shall attend a TCT Group Operations course within one year of reporting aboard *their respective units*. This training provides the graduate with adequate knowledge to effect departmental training within the group operations center as needed.

- (4) Area and district command center controllers shall attend either the unit-level exportable training or the TCT Group Operations resident course.

**d. Auxiliarists.**

- (1) Qualified Auxiliary members serving in boat crew positions on Coast Guard boats and standing watch in Coast Guard operations and communications centers must meet the same biennial TCT requirements as their active duty counterparts. Commands shall include Auxiliarists working at their units in their request for biennial exportable training through the district TCT administrator, which shall be part of a district-wide training plan. Unit-level team training requires the attendance of senior supervisory personnel (e.g., Auxiliary unit commanders) to advocate TCT principles and to empower junior personnel to use them. Senior member attendance also permits open communications between leaders amongst the “larger team” that assists in Coast Guard mission prosecution and the “smaller team” members at the worker level. As needed, based on periodic self-assessment or other examinations, Auxiliary supervisory personnel may facilitate their own training to reinforce selected skills. Training materials for this purpose have already been delivered to division captains and are discussed in more detail in paragraph 7.d. below.
- (2) *Auxiliarists serving in coxswain, boat crew, and communications watchstander positions on Auxiliary vessel and radio facilities, including Auxiliary unit vessels and special purpose facilities, shall receive TCT as indicated below. This requirement may be fulfilled by completing the eight-hour TCT curriculum approved for Auxiliary use, which has been distributed to district TCT administrators for use by all TCT facilitators, and has been officially incorporated into the standard TCT facilitator package. Auxiliarists are encouraged to attend the eight-hour sessions specifically designed for them, and should request this exportable training through the district TCT administrator. However, documented attendance at either a 16-hour unit-level or resident TCT course will satisfy the Auxiliary TCT requirement.*
  - (a) Currently qualified coxswains and boat crew: Each year, attend a district Auxiliary operations workshop that includes TCT review and discussion, when such workshops are required by a district. Additionally, complete an eight-hour exportable TCT course prior to 01 January 2003, and once every five years after initial course completion.
  - (b) Candidates for coxswain and boat crew qualification: Demonstrate to a Qualification Examiner (QE) an understanding of TCT and risk management principles and skills. It is also recommended that candidates attend an eight-hour exportable TCT course.
  - (c) QEs: All QE’s are encouraged to complete an eight-hour exportable TCT course prior to 01 October 1998 so that they will be prepared to certify coxswain and

boat crew understanding of TCT and risk management principles and skills. Each year, QE's must attend a district Auxiliary operations workshop which includes TCT review and discussion, when such workshops are required by a district. Once the eight-hour TCT course is completed, it must be repeated every two years thereafter in order to retain the QE qualification. This requirement will be satisfied if the QE is a qualified TCT facilitator and has taught at least one course (eight or 16 hours) in the last two years.

- (d) QE Candidates: Effective 01 October 1998, QE candidates must complete an eight-hour exportable TCT course prior to being designated as a QE. Additionally, QE candidates must demonstrate to the QE Review Board an understanding of TCT and risk management principles and skills.
- (e) Communications watchstanders are encouraged to attend an eight-hour exportable TCT course.
- (f) Directors of Auxiliary may add to these requirements as appropriate for operations in their district/region. Directors may grant waivers of TCT requirements if a lack of training availability will prevent a member's qualification. However, in such cases, TCT must be completed as soon as possible.
- (g) Guidance for the entry of TCT into the Auxiliary Member Information System will be provided separately.

7. TRAINING DELIVERY SYSTEM. The core elements of the TCT delivery system are as follows:

a. **Resident Training.**

- (1) **TCT Group Operations Course.** A three-day course intended for group operations officers and assistant operations officers. It is also open to area and district command center controllers. Its scope is to improve multi-team coordination. Students receive a total of 22 hours of instruction, which includes facilitated discussions with video, case studies and group exercises. Applicants must have at least one year remaining at their unit after graduation. Short-term Resident Training Requests (CG-5223) are to be submitted through the chain of command, endorsed by the appropriate district TCT administrator, and forwarded directly to the Training Quota Management Center (TQC).
- (2) **TCT Cutter Operations Course.** A three-day course intended for operations officers and operations petty officers of most cutters 65 feet in length or greater (see reference (a)). Its scope is to improve shipboard team coordination. Students receive 18 hours of classroom instruction and four hours of simulator training. Classroom instruction includes facilitated discussions with video, case studies and group

exercises. This course has been integrated into the Command and Operations School under the POPS (major cutter) and PCO/PXO course curricula, and may be incorporated into a future POPS non-flight deck course generally for buoy tenders and patrol boats. Applicants must have at least six months career sea time and at least one year remaining onboard after graduation. Cutters which typically rotate the Operations Officer position to the most experienced junior officers (i.e., buoy tenders) should coordinate their training requests so that no more than one junior officer will be trained every two years. Ideally, that individual trained should be slated for the Operations Officer position, but is not required. Prospective operations officers of major cutters will be scheduled by TQC as their pipeline training schedule allows. *CG-5223's are to be submitted through the chain of command, endorsed by the appropriate district TCT administrator, and forwarded directly to TQC.*

- (3) **TCT Facilitator Course.** A five-day course for personnel recommended by higher authority to deliver TCT to the field as facilitators. Its scope is to train personnel in the effective presentation skills and experiential learning methodology with specific focus on TCT skill development. Students receive 14 hours of TCT overview and 24 hours of facilitator training, which includes lesson development and role-play. Graduates of this course are also given the course materials to provide unit-level exportable training to groups, stations, flotillas and cutters within their district area of responsibility. *Auxiliarists are preferred due to geographic stability which maximizes the return on investment, although active duty and integrated reservists can apply.* Active duty applicants must have at least two years remaining at their unit after graduation. Applicants having successfully completed a TCT course (cutter/group operations or unit-level) are given priority for selection. *CG-5223's are to be submitted through the chain of command, approved by the appropriate district TCT administrator, and forwarded directly to TQC. Block 22 of the CG-5223's must contain the following statement: "Applicant has been informed that upon graduation, he/she should expect to facilitate at least five classes per year, as directed by the district TCT administrator. This command will permit the student time to perform this collateral duty." Other selection criteria include:*
- (a) practical operational experience on either a boat or cutter,
  - (b) strong presentation and people-motivational skills,
  - (c) strong leadership, interpersonal and listening/feedback skills, and
  - (d) willingness to commit between 20-40 hours of time to customize lesson plans.
- b. **Exportable Training.** A two-day course (one eight-hour day for Auxiliarists conducting operations independent from active duty participation) designed for unit-level training, conducted at the unit to train teams together. Its scope is to improve team performance by focusing on individual development of TCT skills. Students receive 14 hours of instruction (eight hours for Auxiliarists, as noted above), which includes facilitated

discussions with video, case studies and group exercises. As noted in paragraph 6 above, effective team training requires the attendance of senior supervisory personnel to advocate TCT principles and empower junior personnel to use them. Optimum class size is between 20-25 students. Commands shall request training through their respective district TCT administrators.

- c. **Correspondence Course.** Titled “Introduction to Team Coordination Training” (course code 0648). This course provides an overview of TCT for command afloat and other interested personnel to familiarize the student with its terms and principles.
  - d. **Unit Training Material.** During April/May 1996, each cutter, group office, ATON team and station was mailed a package of TCT training material. This package is a self-contained training program with sufficient support material to meet a unit’s training needs. The package has eight stand-alone modules (i.e., an introduction and the seven TCT skills). It is designed to be used as a complete program for facilitators or can be broken up into its individual modules to allow command supervisory personnel to conduct their own TCT refresher training, as necessary. The distribution point is the Coast Guard Institute. Units missing copies of this package should contact Commandant (G-WKS-4). The course material is periodically updated to reflect new efforts in human factors and risk management research, and to be responsive to student and facilitator feedback. The package consists of:
    - (1) an instructor’s guide and handbook which outlines lessons and directions to carry out activities. The handbook includes a full library of case studies and exercises to be used as masters for all handouts. ATON units receive instructor’s guides and handbooks specifically adapted for buoy operations;
    - (2) an addendum to the instructor’s guide. This pamphlet describes adult learning techniques. Its application is necessary to maximize student learning. It also includes the eight-hour TCT curriculum specifically designed to train Auxiliarists conducting operations from separate Auxiliary units; and
    - (3) a set of transparencies and two videos. One video entitled “Who Rescues the Coast Guard?” includes brief descriptions of each skill plus a library of 16 scenarios that can be used to demonstrate behaviors. The second video contains four episodes documenting true Coast Guard SAR/MLE cases for optional use by facilitators. Both videos should be used with process questions in the instructor’s guide to maximize student learning. They were intended to complement course facilitators’ lesson plan outlines, not replace them.
8. MEASUREMENT TOOL. A specific TCT measurement tool is currently under development and will be promulgated separately.
9. PROGRAM ROLES AND RESPONSIBILITIES.

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a. **Commandant:**

- (1) Commandant (G-WTL) will:
  - (a) continue to support facilitation of the TCT curriculum at appropriate schools and resident courses within the Leadership Development Center; and
  - (b) support improvements to the content and quality of the TCT curriculum as needed with Commandant (G-WKS) providing assistance on content issues.
- (2) Commandant (G-OCU) will continue to support the Coast Guard Academy Command and Operations School staff's ongoing facilitation of the TCT Cutter Operations resident course.
- (3) Commandant (G-WKS) will:
  - (a) serve as program administrator, who will fund the TCT delivery system. Funding excludes reserve pay for ADT, IDT or SADT; and
  - (b) assist the Leadership Institute Quality Center update the TCT curriculum by providing current case studies and other afloat safety interest information to revise the content of the course, as needed.
- (4) Commandant (G-OCX) will provide necessary support and coordination to Directors and the Auxiliary national staff to assist them in meeting Auxiliary TCT goals.

b. **Area commanders will:**

- (1) review Standard Operating Procedures (SOP) to ensure that risk management and related TCT processes are applied in mission coordination; and
- (2) incorporate TCT into navigation and mobility courses provided by their training teams.

c. **District commanders will:**

- (1) review SOP's to ensure that risk management and TCT processes are applied in mission coordination;
- (2) assign a TCT administrator, historically from either (osr) or (cc) district offices, who shall be an active duty member permanently assigned to the district staff to ensure unbroken coordination with groups/stations and with Commandant (G-WKS). Administrator functions may be delegated to others within the district as directed by the district commander, but an active duty member from the district staff shall be identified to give final approval on district decisions regarding quota, training plan, and funding issues. A single point of contact with approval authority from each

district staff will ensure effective program administration with Commandant (G-WKS). The TCT administrator shall:

- (a) coordinate all requests for resident and/or exportable TCT within the district (including those area units within the district boundaries), and coordinate the preparation of travel orders through district (oax) offices for all Auxiliarists receiving quotas for resident TCT courses;
- (b) work closely with district Directors of Auxiliary to identify Auxiliarist training needs and funding requirements, and to coordinate the use of Auxiliarists as facilitators. Administrators should also match training needs (such as for QEs) with facilitator availability. Administrators shall provide informational copies of all unit-level training rosters having Auxiliarist graduates to district Directors of Auxiliary;
- (c) separately account for charges against G-KSE-052 (TCT unit-level) funds. Commandant provides funds for exportable training at units with standard boats, at cutters, and at Auxiliary flotillas;
- (d) submit annual fiscal year reports within 14 days after the end of the fiscal year to Commandant (G-WKS-4) via letter, email, fax or message with the following information:
  - 1 List the current facilitators by name, rank/rate, duty status (i.e., active duty, reservist, Auxiliarist) and how many classes each had facilitated during the
  - 2 For each quarter, and for a fiscal year grand total, provide: (1) the total number of personnel trained, broken down by active duty, reservists, and Auxiliarists (of the Auxiliarists, indicate how many were QEs); and (2) amount of funds obligated for TCT.
- (e) submit annual fiscal year training plans within 21 days prior to the start of that fiscal year to Commandant (G-WKS-4) via letter, email or message with the following information:
  - 1 List the total number of personnel needing training within the district, broken down by active duty, reserve and Auxiliary status.
  - 2 List the number of QEs expecting to train that fiscal year, in conjunction with the goals of the district Directors of Auxiliary, as a subset of the total number of Auxiliarists needing training as noted in subparagraph 1 above.
  - 3 Estimate the cost for facilitator travel and per diem. Exportable TCT is a two-day course for active duty, reservists and Auxiliarists integrated into regular Coast Guard operations, and is normally taught by a single facilitator. It is a

one-day course for those Auxiliarists conducting operations from separate Auxiliary units.

- 4 Estimate the cost for student travel and per diem. This is normally not authorized unless found to be more advantageous to the government (i.e., may be authorized for Auxiliarist TCT courses, but must be articulated in the district plan).
  - 5 Indicate the anticipated number of additional facilitators needed to meet program goals, given current numbers of active facilitators and their ability to schedule classes.
- (f) review, approve and forward directly to TQC all requests for resident TCT training (Cutter Operations, Group Operations and Facilitator courses) and all requests for substitutions and/or quota cancellations;
  - (g) ensure all facilitators use the standardized student roster form previously distributed so that TQC can accurately credit all graduates for training received. Administrators shall use the rosters to compile information for their annual fiscal year reports and annual training plans to Commandant (G-WKS-4). Do not send copies of unit-level training rosters to Commandant, but send them directly to TQC at the end of each quarter;
  - (h) collect and review unit-level TCT course critiques to evaluate facilitator performance and course effectiveness. Feedback received on TCT program issues should be consolidated by the TCT administrator and forwarded to Commandant (G-WKS-4) as desired by the district but as a minimum with the annual fiscal year report. Do not send copies of unit-level critiques to Commandant;
  - (i) produce and issue certificates of final qualification, using the format provided by Commandant (G-WKS), to all facilitators having successfully conducted at least five classes, thereby formally certifying them as TCT facilitators; and
  - (j) consolidate facilitator requests for student TCT training material in support of unit-level exportable training and forward to the Coast Guard Institute;
- (3) fund reserve pay for ADT, IDT or SADT in conjunction with any TCT activities (including training, facilitating, or program administration duties), if unable to coordinate these activities during normally authorized drill time; and
  - (4) ensure that Directors of Auxiliary work closely with regional Auxiliary liaisons and *the district TCT administrators to include* Auxiliarists in TCT initiatives while the annual district TCT training plan is being developed. They shall also enforce the timely and accurate submission of CG-5223's, through the Auxiliary chain of command, for approval by Directors of Auxiliary and district TCT administrators, before final submission to TQC.

**d. Section/activity/group commanders will:**

- (1) review SOP's to ensure that risk management and TCT processes are applied in mission coordination;
- (2) assess team coordination and risk management as part of ready for operations inspections, and for all personnel per paragraph 6.c. of this Instruction, including all Auxiliarists and integrated reservists under their operational control;
- (3) advocate TCT. Compile exportable TCT needs for units within their command and submit a consolidated request to the district TCT administrator. TCT requests shall delineate the number of students needing to be trained at each unit and the dates training can occur. Training opportunities for Auxiliarists shall be coordinated with Auxiliary division captains and flotilla commanders;
- (4) review and forward to the district TCT administrator all requests for facilitator training. Facilitators must meet the criteria described in paragraph 7 above, and requests shall be submitted via CG-5223. Requests from Auxiliarists shall be coordinated through the appropriate Auxiliary division captains; and
- (5) submit CG-5223 requests for resident TCT training through the chain of command to the appropriate district TCT administrator for approval and forwarding to TQC. The district TCT administrator must also approve all requests for substitutions and/or quota cancellations.

**e. Cutter/station commanding officers/officers-in-charge will:**

- (1) review SOP's to ensure that risk management and TCT processes are applied in cutter and small boat operations. Reference (d), if held, provides further guidance;
- (2) ensure team coordination and risk management training is conducted as required in paragraph 6.c. of this Instruction and documented in each members' training record, including all Auxiliarists and integrated reservists under their operational control; and
- (3) submit CG-5223 requests for resident TCT training through the chain of command to the appropriate district TCT administrator for approval and forwarding to TQC. The district TCT administrator must also approve all requests for substitutions and/or quota cancellations.

**f. TCT facilitators will:**

- (1) carry out exportable team training under the direction of the district TCT administrator, per the district training plan. Facilitator duties are collateral;
- (2) customize lesson plans to meet the criteria outlined in the TCT instructor's guide. When training Auxiliarists that conduct operations at separate Auxiliary units, use the

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eight-hour TCT curriculum specifically designed for them by the Auxiliary national staff. This curriculum is available from the district TCT administrators and is part of the facilitator-training package;

- (3) keep the district TCT administrator informed of their availability to conduct exportable TCT classes;
- (4) expect to conduct five exportable TCT classes annually;
- (5) complete student rosters with the following standardized information, using forms made available to all TCT administrators: 1) type of TCT course (Cutter Operations, Group Operations, Facilitator, unit-level); 2) date and location of training; 3) name/rank of facilitator; and 4) name, rank, SSN, Auxiliary member number (if applicable), unit/parent district, and status (Auxiliarist/reservist/active duty; if Auxiliarist, indicate whether QE or not) for each student. Review for accuracy and forward original rosters to the district TCT administrator within five days of course completion for documentation and subsequent forwarding to TQC;
- (6) only if facilitating resident courses (held at either the Coast Guard Academy or Training Center Petaluma), send original student rosters directly to TQC, with copies to Commandant (G-WKS-4) after each individual course convening; and
- (7) submit requests for student TCT training material in support of unit-level exportable training to district administrators for consolidation and forwarding to the Coast Guard Institute for further action.

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J. M. JOHNSON  
Director of Health and Safety

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**SUBJ: TEAM COORDINATION TRAINING (TCT)**

- A. TEAM COORDINATION TRAINING, COMDTINST 1541.1
- B. COMDT COGARD WASHINGTON DC 191137Z OCT 99/ALCOAST 147/99
- C. COMDT COGARD WASHINGTON DC 281719Z DEC 00/ALCOAST 494/00
- D. COMDT COGARD WASHINGTON DC 061425Z NOV 98/ALDIST 275/98

1. PURPOSE. THIS ALCOAST SUPPLEMENTS INFO CONTAINED IN REF A AND IS EFFECTIVE IMMEDIATELY. THE BIENNIAL UNIT-LEVEL TRAINING REQUIREMENTS FOR THOSE UNITS REQUIRED TO RECEIVE TCT ARE BEING MODIFIED TO REFLECT THE INSTITUTIONALIZATION OF OPERATIONAL RISK MANAGEMENT (ORM) AND TCT PRINCIPLES IN BOTH OUR ORGANIZATIONAL TRAINING CURRICULA AND OPERATIONAL CULTURE. ADDITIONALLY, AN ALTERNATIVE DELIVERY METHOD IS IMPLEMENTED TO SATISFY TCT UNIT-LEVEL TRAINING REQUIREMENTS IN REF A FOR PACAREA STATIONS.

2. DISCUSSION:

A. REF A OUTLINES THE BIENNIAL UNIT-LEVEL TCT REQUIREMENT AS A TWO-DAY, EXPORTABLE COURSE FOR ALL APPLICABLE PERSONNEL (EXCLUDING AUXILIARISTS CONDUCTING OPERATIONS INDEPENDENT FROM ACTIVE DUTY PARTICIPATION). SINCE THE INCEPTION OF THE TCT PROGRAM, MANY COAST GUARD FORMAL TRAINING PROGRAMS HAVE EMBEDDED TCT AND ORM INTO THEIR CURRICULA AND THUS FACILITATED THEIR PRACTICE INTO OUR OPERATIONAL CULTURE. TO REFLECT THIS MIND SET, **THE BIENNIAL UNIT-LEVEL TRAINING REQUIREMENT IS BEING MODIFIED TO INCLUDE SEPARATE INITIAL AND REFRESHER TRAINING.**

(1) INITIAL TRAINING SHALL CONSIST OF TWO EIGHT-HOUR DAYS. THE FIRST DAY SHALL CONSIST OF ALL TCT MODULES COMPRESSED INTO A SINGLE COURSE OF INSTRUCTION (UTILIZING VIDEOS AND EXERCISES, BUT MINIMIZING CASE STUDIES). THE SECOND DAY CONSISTS OF A BRIEF (APPROX. ONE HOUR) REVIEW OF ALL TCT SKILLS FOLLOWED BY EXTENSIVE USE OF CASE STUDIES, EXERCISES AND OPTIONAL DISCUSSION OF LESSONS LEARNED FROM PREVIOUS UNIT MISHAPS. FOR THE PURPOSE OF THIS REQUIREMENT, **INITIAL TRAINING CAN ALSO BE SATISFIED WITH THE SUCCESSFUL COMPLETION OF:**

- POPS AFLOAT SCHOOL
- OINC/XPO SCHOOL
- COXSWAIN-C SCHOOL
- HEAVY WEATHER COXSWAIN SCHOOL
- MLB COXSWAIN SCHOOL
- BM-A SCHOOL
- TCT CUTTER OPERATIONS COURSE
- TCT GROUP OPERATIONS COURSE
- TCT CORRESPONDENCE COURSE

(2) REFRESHER TRAINING SHALL CONSIST OF THE SECOND DAY OF THE INITIAL (TWO-DAY) TRAINING FORMAT.

B. INITIAL TRAINING IS REQUIRED FOR ALL PERSONNEL FULFILLING BILLETS INDICATED IN PARA 6 OF REF A. REFRESHER TRAINING IS REQUIRED FOR THOSE SAME PERSONNEL ON A BIENNIAL BASIS AFTER COMPLETING INITIAL TRAINING. ALL UNIT PERSONNEL REQUIRING TCT PER REF A COME TOGETHER DURING REFRESHER TRAINING SESSIONS TO DISCUSS TCT SKILLS IN THE CONTEXT OF CASE STUDIES AND LESSONS LEARNED.

THIS HELPS TO ACCOMPLISH THE PRIMARY GOAL OF THE TCT UNIT-LEVEL COURSE, WHICH IS TO TRAIN TEAMS TOGETHER. IN SUMMARY, ONCE THE INITIAL (TWO-DAY) TRAINING (OR ONE OF THE COURSES/PROGRAMS LISTED ABOVE) HAS BEEN SUCCESSFULLY COMPLETED, ONLY THE REFRESHER (ONE-DAY) TRAINING IS REQUIRED ON A BIENNIAL BASIS. IF MORE THAN 24 MONTHS ELAPSE SINCE THE LAST TCT (INITIAL OR REFRESHER) SESSION, INITIAL TRAINING MUST BE REPEATED. THUS, THE SPIRIT OF THE BIENNIAL TRAINING REQUIREMENT REMAINS INTACT.

**C. PER REF B, CERTAIN CUTTER CLASSES STILL HAVE THE OPTION OF CONDUCTING TCT UNIT-LEVEL TRAINING USING EXPERIENCED UNIT PERSONNEL AND USING THE TCT FACILITATOR PACKAGE PREVIOUSLY DISTRIBUTED TO ALL APPLICABLE UNITS.** ALL UNITS NEEDING TCT MAY REQUEST THE ASSISTANCE OF A FACILITATOR THROUGH THE RESPECTIVE DISTRICT TCT ADMINISTRATOR. IF UNITS REQUEST ASSISTANCE, FACILITATORS WILL EITHER PRESENT TCT OVER TWO CONSECUTIVE DAYS, OR ON JUST ONE DAY, DEPENDING UPON UNIT NEEDS. THE FIRST DAY IS FOR THOSE NEEDING INITIAL TRAINING. THE SECOND DAY IS FOR ALL PERSONNEL NEEDING EITHER INITIAL OR REFRESHER TRAINING.

D. THE TCT CURRICULUM FOR AUXILIARISTS CONDUCTING OPERATIONS INDEPENDENT FROM ACTIVE DUTY PARTICIPATION REFERRED TO IN REF A REMAINS UNCHANGED.

**E. THE PACAREA STATION TRAINING GROUP (PSTG) CURRICULUM SATISFIES TCT UNIT-LEVEL TRAINING REQUIREMENTS OF REF A FOR PACAREA STATIONS RECEIVING THAT TRAINING. PER REF C, THE SPECIAL AND EMERGENCY OPERATIONS AND PROCEDURES (SEOPS) PROGRAM CONTINUES TO SATISFY THE TRAINING REQUIREMENTS OF REF A FOR ALL SEOPS-TRAINED CUTTERS.**

3. ACTION:

A. FOR ALL DISTRICT TCT ADMINISTRATORS:

(1) ADVISE ALL TRAINED FACILITATORS OF THESE CHANGES TO THE TCT TRAINING APPROACH AND ENCOURAGE PRIOR COORDINATION WITH UNIT COS/OINCS TO ASCERTAIN UNIT NEEDS (INITIAL TRAINING OR REFRESHER TRAINING) AND TAILOR CURRICULUM OUTLINES AS REQUIRED.

(2) ADMINISTRATORS ARE NO LONGER REQUIRED TO SEND COPIES OF TCT UNIT-LEVEL TRAINING ROSTERS TO TQC. HOWEVER, THEY SHOULD CONTINUE TO MAINTAIN LOCAL RECORDS TO HELP PREPARE ANNUAL REPORTS TO COMDT (G-WKS-4) PER REFS A AND D.

(3) MAINTAIN CLOSE COORDINATION WITH APPLICABLE AREA TRAINING TEAMS WHILE DEVELOPING DISTRICT TRAINING PLANS TO AVOID POTENTIAL OVERLAP FOR UNITS RECEIVING TCT VIA EITHER SEOPS OR THE PSTG.

B. FOR PACAREA DISTRICT TCT ADMINISTRATORS: EXCLUDE PACAREA STATIONS FROM YOUR ANNUAL DISTRICT TCT TRAINING PLANS AND BUDGETS. FY02 DISTRICT TCT BUDGETS ALREADY SUBMITTED INCLUDED THIS EXCLUSION IN ANTICIPATION OF THIS OFFICIAL POLICY CHANGE.

C. FOR UNITS REQUIRED TO RECEIVE TCT TRAINING: UPON COMPLETION OF UNIT-LEVEL TRAINING, SUBMIT COPIES OF TRAINING ROSTERS TO YOUR SERVICING PERSRU FOR DOCUMENTATION INTO THE CGHRMS USING THE COURSE CODE 500834 (SAME AS OLD PMIS CODE).

4. THIS INFORMATION WILL BE INCORPORATED INTO THE NEXT FORMAL CHANGE TO REF A.

5. INTERNET RELEASE AUTHORIZED.

6. RADM JOYCE M. JOHNSON, DIRECTOR OF HEALTH AND SAFETY, SENDS.

BT

NNNN

R 191137Z OCT 99  
FM COMDT COGARD WASHINGTON DC//G-WK//  
TO ALCOAST  
BT

UNCLAS //N01541//

ALCOAST 147/99

COMDTNOTE 1541

SUBJ: **TEAM COORDINATION TRAINING (TCT)**

A. TEAM COORDINATION TRAINING, COMDTINST 1541.1

B. COMDT (G-CCS) LTR 5402 OF 8 SEP 99 (NOTAL)

C. CUTTER TRAINING AND QUALIFICATION MANUAL, COMDTINST M3502.4  
(SERIES)

1. PURPOSE. THIS ALCOAST SUPPLEMENTS INFO CONTAINED IN REF A, AS ANNOUNCED IN REF B, AND IS EFFECTIVE IMMEDIATELY. ALTERNATIVE DELIVERY METHODS ARE BEING OFFERED TO SATISFY TCT UNIT-LEVEL TRNG REQUIREMENTS IN REF A FOR SOME AFLOAT UNITS.

2. ACTION.

A. LANTAREA AND PACAREA WAGB, WHEC, WMEC AND WLB JUNIPER CLASS CUTTERS MAY CONDUCT THEIR OWN TCT UNIT-LEVEL TRNG, IN LIEU OF, BUT EQUIVALENT TO, THE FORMAL TWO-DAY UNIT-LEVEL COURSE TO SATISFY THE REQUIREMENTS PER REF A. UNITS SHOULD USE THE UPDATED TCT FACILITATOR PACKAGE PREVIOUSLY MAILED FOR GUIDANCE. IT SHOULD BE EMPHASIZED, HOWEVER, THAT TCT REQUIREMENTS, AS SET FORTH IN REF A AND SUPPORTED BY REF C, ARE STILL VALID. COMDT IS MERELY INCREASING UNITS' FLEXIBILITY TO SATISFY THOSE REQUIREMENTS BY ATTEMPTING TO CIRCUMVENT SCHEDULING PROBLEMS THAT HAVE PREVENTED SOME UNITS FROM RECEIVING TCT IN THE PAST. HOWEVER, THOSE UNITS STILL HAVE THE OPTION OF REQUESTING FACILITATOR-LED TRNG, IF DESIRED, THROUGH THE AREA TRNG STAFF, WHO MUST COORDINATE THAT REQUEST WITH THE APPROPRIATE DISTRICT TCT ADMINISTRATOR. TCT ADMINISTRATORS CURRENTLY RESIDE IN DISTRICT SEARCH AND RESCUE (OSR) BRANCHES (EXCEPTIONS: AUXILIARY (OAX) BRANCH FOR D1, PACAREA (PCC) FOR D11 AND FORCE OPTIMIZATION (PF) BRANCH FOR D17). IF UNITS CONDUCT THEIR OWN TCT UNIT-LEVEL TRNG, THEY SHALL SUBMIT STUDENT ROSTERS TO APPROPRIATE DISTRICT TCT ADMINISTRATORS INCLUDING: (A) UNIT NAME, (B) TRNG DATE, AND (C) STUDENT NAME, RANK, SSN AND STATUS (AD, RES OR AUX). UNITS SHALL USE CODE 500834 TO MAKE APPROPRIATE PMIS ENTRIES FOR STUDENTS RECEIVING TCT UNIT-LEVEL TRNG.

B. THE TCT MATERIAL CONTAINED IN THE SPECIAL AND EMERGENCY OPERATIONS AND PROCEDURES (SEOPS) PROGRAM WILL ALSO SATISFY THE TRNG REQUIREMENTS IN REF A FOR ALL SEOPS-TRAINED CUTTERS. COMDT INTENDS TO EXTEND THIS OPTION TO OTHER CUTTERS WHEN THE SEOPS PROGRAM BECOMES STANDARDIZED IN BOTH AREAS.

C. TQC REPORTS THAT IT IS NOT RECEIVING COPIES OF TCT UNIT-LEVEL TRNG ROSTERS, AS REQ PER REF A. DISTRICT TCT ADMINISTRATORS ARE REMINDED TO FORWARD ALL TCT ROSTERS RECEIVED BY FACILITATORS AND UNITS TO TQC FOR TMS ENTRY. ACCURATE TCT DATA IN TMS WILL ALLOW INDEPENDENT DATA QUERIES THAT MAY REDUCE CURRENT ADMINISTRATOR REPORTING REQUIREMENTS.

3. THIS INFORMATION WILL BE INCORPORATED INTO THE NEXT FORMAL CHANGE TO REF A.

4. INTERNET RELEASE AUTHORIZED.

5. RADM JOYCE M. JOHNSON, DIRECTOR OF HEALTH AND SAFETY, SENDS.

BT

NNNN

R 281719Z DEC 00  
FM COMDT COGARD WASHINGTON DC//G-WK//  
TO ALCOAST

BT

UNCLAS //N01541//

**ALCOAST 494/00**

COMDTNOTE 1541

SUBJ: **TEAM COORDINATION TRAINING (TCT)**

A. TEAM COORDINATION TRAINING, COMDTINST 1541.1

B. ALCOAST 147/99

C. SPECIAL AND EMERGENCY OPERATIONS AND PROCEDURES (SEOPS)  
TRAINING MANUAL, PACAREAINST 3502

1. PURPOSE. THIS ALCOAST SUPPLEMENTS INFO CONTAINED IN REF A  
AND IS EFFECTIVE IMMEDIATELY. ALTERNATIVE DELIVERY METHODS ARE BEING  
OFFERED TO SATISFY TCT UNIT-LEVEL TRNG REQUIREMENTS IN REF A FOR SOME  
AFLOAT UNITS.

2. ACTION.

A. REF B ANNOUNCED THAT **DELIVERY OF THE TCT MATERIAL  
CONTAINED IN THE SEOPS PRGM SATISFIED THE TRNG REQUIREMENTS SET FORTH  
IN REF A FOR ALL LANTAREA SEOPS-TRAINED CUTTERS. DUE TO PACAREA'S  
RECENT ADOPTION OF THE SEOPS PRGM PER REF C, COMDT EXTENDS THIS OPTION  
TO ALL SEOPS-TRAINED CUTTERS.**

B. DISTRICT TCT ADMINISTRATORS MANAGING TCT WITHIN THEIR  
DISTRICT BOUNDARIES SHOULD COORDINATE CLOSELY WITH APPROPRIATE AREA  
TRNG TEAMS WHILE DEVELOPING THEIR OWN PLANS/BUDGETS TO AVOID TRNG  
OVERLAP. AREA TRNG TEAMS SHALL REPORT TOTAL NUMBERS OF ACTIVE DUTY,  
RESERVIST, AND AUX PERSONNEL WHO RECEIVE TCT VIA SEOPS NLT 14 DAYS  
AFTER THE END OF EACH FY DIRECTLY TO COMDT (G-WKS-4) VIA MSG, EMAIL,  
LETTER OR FAX.

C. COMBINED GRP/AIRSTA'S AND ACTIVITIES WITH BOTH AIROPS AND  
SURFOPS OFFICERS ASSIGNED ARE REQUIRED TO SEND SURFOPS (WHO DO NOT  
RECEIVE CREW RESOURCE MGMT (CRM) TRNG) TO TCT UNIT-LEVEL TRNG. BOAT  
STATION PERSONNEL AT THESE CMDS ARE REQUIRED TO ATTEND TCT PER REF A.  
ALTHOUGH AVIATION PERSONNEL RECEIVE CRM RATHER THAN TCT, SENIOR CMD  
AND CONTROL PERSONNEL AT THESE UNITS ARE ENCOURAGED TO ATTEND TCT FOR  
CMD ADVOCACY AND SUPPORT.

D. MARINE SAFETY UNITS ARE REMINDED THAT TCT REQUIREMENTS  
APPLY TO THOSE UNITS THAT HAVE SMALL BOATS ATTACHED, PER PARA 6.C. OF  
REF A.

3. GENERAL INFO.

A. **ALL TCT MATERIAL (MINUS VIDEOS AND PPT PRESENTATIONS) IS NOW  
AVAILABLE ON THE COAST GUARD INSTITUTE'S WEB SITE FOR USE AS DESIRED.**

B. WHILE ONE TCT FACILITATOR MAY CONDUCT A UNIT-LEVEL TRNG SESSION,  
RECENTLY QUALIFIED FACILITATORS ARE AUTHORIZED TO "TAG TEAM"  
INSTRUCTION TO HELP REFINE THEIR TRNG STYLE AND APPROACH.

C. UNITS ARE REMINDED THAT UTB STAN TEAMS AND MLC'S CHECK FOR  
COMPLIANCE WITH TCT REQUIREMENTS PER REF A.

4. THIS INFORMATION WILL BE INCORPORATED INTO THE NEXT FORMAL CHANGE  
TO REF A.

5. INTERNET RELEASE AUTHORIZED.

6. RADM JOYCE M. JOHNSON, DIRECTOR OF HEALTH AND SAFETY, SENDS.

BT

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FM COMDT COGARD WASHINGTON DC//G-WK//  
TO ALDIST  
BT

UNCLAS //N01541//

ALDIST 275/98

COMDTNOTE 1541

SUBJ: TEAM COORDINATION TRAINING (TCT)

A. COMDTINST 1541.1 DTD 1 JUN 98 (TEAM COORDINATION TRAINING)

B. COMDT (G-WK) LTR 3502 OF 14 OCT 98 (NOTAL)

1. PURPOSE. THIS ALDIST IMPLEMENTS CHANGES TO REF A, AS ANNOUNCED IN REF B, AND IS EFFECTIVE IMMEDIATELY. THESE CHANGES REDUCE REPORTING REQUIREMENTS AND EASE THE ADMIN BURDEN ON THE DISTRICT TCT ADMINISTRATORS CHARGED WITH MANAGING DISTRICT TCT PROGRAMS.

2. ACTION. UNITS SHALL MAKE THE FOLLOWING CHANGES TO REF A.

A. THE TCT ADMINISTRATOR'S ANNUAL REPORT SHALL INCLUDE:

(1) THE TOTAL NUMBER OF PERSONNEL TRAINED (BROKEN DOWN BY ACTIVE DUTY, RESERVIST AND AUXILIARIST) FOR EACH QUARTER AND FOR THE ENTIRE FISCAL YEAR;

(2) AMOUNT OF FUNDS OBLIGATED FOR TCT; AND

(3) CURRENT NUMBER OF ACTIVE, TRAINED FACILITATORS.

ADMINISTRATORS NO LONGER HAVE TO REPORT INDIVIDUAL FACILITATOR NAMES AND NUMBERS OF CLASSES FACILITATED.

B. ADMINISTRATORS SHALL REVIEW, APPROVE AND FORWARD TO TQC REQUESTS FOR FACILITATOR TRAINING TO CONTROL THE QUALITY AND QUANTITY OF FACILITATORS NEEDED TO ACCOMPLISH TRAINING GOALS. ADMINISTRATORS ARE NO LONGER REQUIRED TO REVIEW REQUESTS FOR GROUP OPERATIONS AND CUTTER OPERATIONS TCT RESIDENT COURSES.

C. EACH AREA COMMANDER SHALL DESIGNATE THEIR OWN TCT ADMINISTRATOR TO MANAGE TCT FOR AREA UNITS, AND REPORT TO COMDT (G-WKS) THE SAME INFORMATION AS REQUIRED OF DISTRICT ADMINISTRATORS. THIS EASES THE ADMIN BURDEN ON THE DISTRICTS AND ELIMINATES THE POTENTIAL COMMAND AND CONTROL CONFLICTS AS THEY CURRENTLY MANAGE TRAINING FOR AREA UNITS WITHIN THEIR DISTRICT GEOGRAPHIC BOUNDARIES. AREAS SHALL REPORT NAMES/PHONE NUMBERS OF AREA TCT ADMINISTRATORS NLT 23 NOV 98 TO COMDT (G-WKS) VIA MSG OR E-MAIL.

3. THESE CORRECTIONS WILL BE INCORPORATED INTO THE NEXT FORMAL CHANGE TO REF A.

4. INTERNET RELEASE AUTHORIZED. COMDT (G-WKS) POC IS LCDR D. BECKER, (202) 267-2965.

5. RADM JOYCE M. JOHNSON, DIRECTOR OF HEALTH AND SAFETY, SENDS.

BT

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Updated: 16 October 2002

**TCT DISTRICT ADMINISTRATORS**

<u>District</u>	<u>Administrator/email</u>	<u>Work #</u>	<u>Fax#</u>
D1 (reserve)	CDR Michael A.Cicalese <u>Mcicalese@ISCBoston.uscg.mil</u> <u>inn@marinershouse.org</u>	(617) 227-3979	4065
D5 (oax)	CWO Wesley R. Orvis <u>Worvis@LANTD5.uscg.mil</u>	(757) 398-6509	6203
D7 (oax)	CWO4 Robert P. Flynn <u>Rflynn@D7.uscg.mil</u>	(305) 415-7053	7059
D8 (oax)	CWO Bob Barr <u>Bbarr@D8.uscg.mil</u>	(504) 589-6620	3653
D9 (oax)	LT Nicole E. Novotny <u>Nnovotny@D9.uscg.mil</u>	(216) 902-6118	6121
D11 (osr)	QMC Stephen J. Tierney <u>Stierney@D11.uscg.mil</u>	(510) 437-5366	3223

Updated: 16 October 2002

**TCT DISTRICT ADMINISTRATORS**

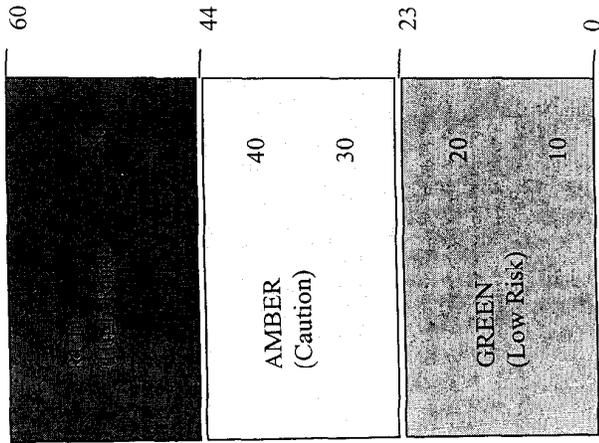
<u>District</u>	<u>Administrator/email</u>	<u>Work #</u>	<u>Fax#</u>
D13 (cc)	LT Eric Reeter <u>Ereeter@pacnorwest.uscg.mil</u>	(206)220-7004	7009
D14 (osr)	LT Michael C. Wessel <u>Mwessel@D14.uscg.mil</u>	(808)541-2312	2309
D17 (oan)	MCPO David A. Coffman <u>Dcoffman@CGAlaska.uscg.mil</u>	(907)463-2266	2273
LANTAREA TRATEAM	CPO Graham H. Bostic <u>Gbostic@lantD5.uscg.mil</u>	(757)398-6277 FAX# (757)391-8100	
PACAREA TRATEAM	LT Michael A. Fazio <u>Mfazio@d11.uscg.mil</u>	(510)437-3293	3297

# Calculating Risk

To compute the total level of risk for the six elements, assign a risk code of 0 (For No Risk) through 10 (For Maximum Risk) to each element. This is your personal estimate of the risk. Add the risk scores to come up with a total risk score.

The mission risk can be visualized using the colors of a traffic light. If the total falls in the green zone, risk is at a minimum. If the total falls in the amber zone, risk is moderate and you should consider adopting procedures to minimize risk. IF THE TOTAL FALLS IN THE RED ZONE, YOU NEED TO IMPLEMENT MEASURES TO REDUCE THE RISK PRIOR TO STARTING THE EVENT/EVOLUTION.

**TEAM DISCUSSION TO UNDERSTAND THE RISKS AND HOW THEY WILL BE MANAGED IS WHAT IS IMPORTANT; NOT THE ABILITY TO ASSIGN NUMERICAL VALUES OR COLORS TO RISK ELEMENTS.**



## GAR EVALUATION SCALE

SUPERVISION	
PLANNING	
CREW SELECTION	
CREW FITNESS	
ENVIRONMENT	
EVENT/EVOLUTION COMPLEXITY	
TOTAL	

### Supervision

Supervisory Control should consider how qualified the supervisor is and is supervision taking place. Even if a team member is qualified to perform a task, supervision acts as a control to further minimize risk. This may simply be someone checking what is being done to ensure it is correct. The higher the risk, the more the supervisor needs to be focused on observing and checking. A supervisor who is actively involved in a task (doing something), can be easily distracted and should not be considered an effective safety observer in moderate to high risk situations.

### Planning

Planning and preparation should consider how much information you have, how clear it is, and how much time you have to plan the evolution or evaluate the situation

### Crew Selection

Crew Selection should consider the qualifications and experience level of the individuals used for the specific event/evolution. Individuals may need to be replaced during the event/evolution. The same concerns apply to the reliefs.

### Crew Fitness

Crew Fitness should consider the physical and mental state of the crew. This is a function of the amount and quality of rest a crew member has had. Quality of rest should consider how the ship rides, its habitability, potential sleep length, and any interruptions. Fatigue normally becomes a factor after 18 hours without rest; however, lack of quality sleep builds a deficit that worsens the affects of fatigue.

### Environment

Environment should consider factors affecting personnel performance and factors affecting the performance of the ship and its boats or attached aircraft. This includes, but is not limited to, time of day, temperature, humidity, precipitation, wind and sea conditions, proximity to aerial/navigation hazards and other exposures (e.g. oxygen deficiency, toxic chemicals, and/or injury from falls and sharp objects).

### Event/Evolution Complexity

Event/Evolution complexity should consider both the required time and the situation. The longer exposed to a hazard, the greater the risks. The situation includes considering how long the environmental conditions will remain stable and the complexity of the work.

**The GAR model can address more general risk concerns, which involve planning operations, or reassessing risks as we reach milestones within our plans.**

**Specific Hazard :** \_\_\_\_\_

$$\text{Risk} = S \times P \times E = \underline{\hspace{2cm}}$$

**Severity (S)** : Describes potential loss or consequences of a mishap (i.e. extent of injury, illness, equip damage, mission degradation).

0= No Potential For Loss  
 2= Minimal  
 4= Major

1= Slight  
 3= Significant  
 5= Catastrophic

Risk Controls Used: PPE, Engineering Controls, protective devices.

**Probability (P)** : Likelihood that consequences will occur.

0= Impossible  
 2= Unlikely under normal conditions  
 4= Greater than 50%

1= Remote under any conditions  
 3= About 50-50  
 5= Very Likely to Happen

Risk Controls Used: Training, Awareness, Attitude Change

**Exposure (E)** : Amount of time, number of people involved, number of repetitions.

0= No Exposure  
 2= Average  
 4= Great

1= Below average  
 3= Above average

Risk Controls Used: Reducing the number of people involved, the number of events, cycles, evolutions, etc.

Circle Resultant Risk Level:

Values	Risk Level	Action
80-100	Very High	Discontinue, Stop
60-79	High	Immediate Correction
40-59	Substantial	Correction Required
20-39	Possible	Attention Needed
1-19	Slight	Possibly Acceptable
0	None	None

Definitive action required for risk levels rated from substantial to very high.

**TEAM DISCUSSION, THE UNDERSTANDING OF THE RISKS INVOLVED AND HOW RISK IS TO BE MANAGED, IS WHAT IS IMPORTANT; NOT THE ABILITY TO ASSIGN NUMERICAL VALUES TO RISK!**

**The SPE model can address specific hazards, such as those involved in launching or recovering a small boat or the meeting of two vessels in a congested waterway.**

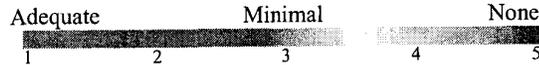
# U. S. C. G. Afloat Risk Assessment

Date: \_\_\_\_\_ Mission: \_\_\_\_\_

## Step 1. Risk Assessment

Review questions and circle the score according to currently available information. Score items according to the examples given and instincts. Absence of data automatically sets the score to maximum point value.

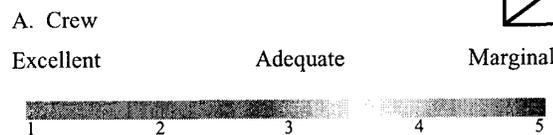
**P**lanning: Thoroughness of pre-mission planning. Factors which increase risk: B-0 response assets, diversion of asset.



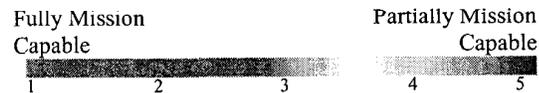
**E**vent: Refers to mission complexity and guidance or doctrine available. Factors which may increase risk: sketchy details or non-standard mission profile.



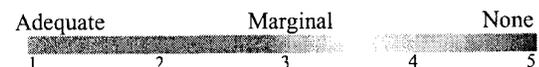
**A**sset: Selection of appropriate resources. Factors that effect risk: time at unit, unfamiliar w/OP area, fatigue, u/w time, crew rest, crew selection, adequate supervision.



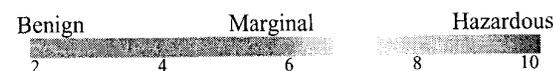
B. Cutter/Boat Resources



**C**ommunications: Ability to maintain comms throughout mission. Factors: internal w/command and external w/customer.



**E**nvironment: External condition surrounding mission: weather, night/day, sea state, water temp, air temp, visibility.



Add the values for each Risk Assessment and plot the final Risk Assessment on graph below (include re-assessment from Step 2).

## Step 2. Risk Management

Risk Management is the decision to control or reduce hazards. Below are *Control Options* to assist in risk control or reduction. Review the options and reassess the risks as appropriate.

**S**pread-out – Disperse the risk by increasing the time between events or using additional assets.

**T**ransfer – If practical, locate a better-suited asset to conduct the mission (i.e. different type of asset or crew).

**A**void – Circumvent hazard: Wait for risk to subside (i.e. wait until daylight or weather passes).

**A**ccept – In some cases the benefit might justify the assumption of risk. In these cases a decision to accept risk may be made with the stipulation that risk is reevaluated as the mission progress. (No adjustment to Risk Assessment)

**R**educe – Reduce or limit risk exposure, use of PPE, additional training or rest, stress reduction.

### Re-assess Step 1 Values

## Step 3 Risk vs. Gain

**Low Gain** – Situation with intangible benefits or a low probability for providing concrete results. Examples include passenger transport, non-critical logistics missions, public affairs demonstrations.

**Medium Gain** – Situation that provides immediate, tangible benefits. Examples include saving property, protecting the environment, deterring illegal operations.

**High Gain** – Situation that provides immediate, tangible benefits that if ignored could result in loss of life. Examples include Urgent SAR and MEDEVACs.

Given the mission description above, what is the "Gain" for this mission?

Vs.

**Risk Assessment**  
(Hi/Med/Lo)

**Gain**  
(Hi/Med/Lo)

Use the Risk vs. Gain Chart on the next page for a recommendation on how to proceed with the mission.



7  
Low

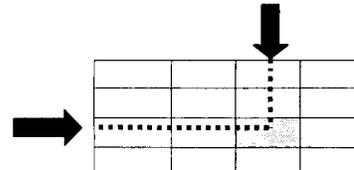
14

21  
Medium

28

35  
High

How to use this Chart:



	High Gain	Medium Gain	Low Gain
Low Risk	Accept the Mission. Continue to monitor Risk Factors, if conditions or mission changes.	Accept the Mission. Continue to monitor Risk Factors, if conditions or mission changes.	Accept the Mission. Re-evaluate Risk vs. Gain, should Risk Factors change.
Medium Risk	Accept the Mission. Continue to monitor Risk Factors and employ Control Options when available.	Accept the Mission. Continue to monitor Risk Factors and employ Control Options when available.	Accept the Mission. Continue to monitor Risk Factors and actively pursue Control Options to reduce Risk.
High Risk	Accept the Mission only with Command endorsement. Communicate Risk vs. Gain to Chain of Command. Actively pursue Control Options to reduce Risk.	Accept the Mission only with Command endorsement. Communicate Risk vs. Gain to Chain of Command. Actively pursue Control Options to reduce Risk.	Do not Accept the Mission. Communicate to Chain of Command. Wait until Risk Factors change or Control Options warrant.

## Instructions

1. Complete Step 1, Risk Assessment. Review each of the risk factors and assign a numerical score as indicated. Place the score in the upper left-hand portion of the boxes.

Note: The relative scale provided is a guide to determine how much risk is associate with each factor. If you know or have information not specifically addressed in the example you may want to reference the scale at the bottom of the page. Example: If you feel that the wrong *asset* is being sent on the case, that should be considered in the appropriate risk factor score. Use your best judgment as YOU see the information developing.

Add the values of the boxes together for a total risk score and compare it to the risk scale at the bottom of the page to determine an overall risk level. *Note: The environmental risk factor scale values are weighted.*

2. Compete Step 2, Risk Management. If risk assessment is determined to be excessive, review the control options and determine if the risks can be reduced or controlled. Re-assess each risk factor and enter a new value in the lower right hand portion of the box provided. Re-total the values of the boxes and again compare to the risk scale at the bottom of the page to determine an overall risk level.
3. Complete Step 3, Determine Potential Gain. Determine the gain by reviewing the assigned mission and comparing it to the definitions as appropriate.
4. Utilize the matrix above to receive a recommendation on whether, or how to proceed with the mission.
5. Communicate the findings to the Chain-of-Command. Continue to reevaluate risk assessment vs. risk management throughout all phases of the mission. This process should be an endless loop and continue until the safe completion of the mission.

**ALCOAST 566/02**

COMDTNOTE 5100

**SUBJ: CHANGE 8, SAFETY AND ENVIRONMENTAL HEALTH MANUAL, CIM 5100.47**

A. SAFETY AND ENVIRONMENTAL HEALTH MANUAL, COMDTINST M5100.47

1. CHANGE 8 REVISIONS TO REF A WERE APPROVED ON 26NOV02.

**2. THIS CHANGE SIGNIFICANTLY REDUCES MISHAP REPORTING REQUIREMENTS FOR THE FIELD, PROVIDES UNITS AN OPPORTUNITY TO USE THE NEW E-MISHAP REPORTING SYSTEM, AND ALIGNS THE COAST GUARDS OCCUPATIONAL INJURY/ILLNESS REPORTING SYSTEM WITH OSHA STANDARDS.**

**3. THE REQUIREMENT FOR UNITS TO REPORT MINOR OFF DUTY INJURIES THAT RESULT IN NO LOST WORK TIME IS ELIMINATED.** SINCE 1994, THESE HAVE ACCOUNTED FOR OVER 25 PERCENT OF MISHAP REPORTS RECEIVED FROM THE FIELD.

4. IN ADDITION TO REDUCED REPORTING REQUIREMENTS, AN **OPTIONAL E-MISHAP REPORTING SYSTEM IS NOW AVAILABLE.** ALL UNITS MAY USE THIS SYSTEM FOR REQUIRED MISHAP REPORTS EXCEPT AVIATION DAMAGE-ONLY MISHAPS WHICH WILL CONTINUE TO BE ENTERED EXCLUSIVELY VIA THE AVIATRS SYSTEM. THE AVIATRS SYSTEM WILL BE CONVERTED TO ALLOW E-MISHAP ENTRY IN 3RD/4TH QTR FY03.

5. THE E-MISHAP SYSTEM WAS DEVELOPED TO REDUCE ADMINISTRATIVE BURDEN ON UNITS, PROVIDE MORE COMPLETE CAPTURE OF MISHAP DATA, AND ELIMINATE ENTRY ERRORS. **IT FULFILLS REPORTING REQUIREMENTS AS OUTLINED IN REF A AND WILL ALSO AID UNITS IN GENERATING THE FORMATTED MSG TEXT FOR REQUIRED INFORMATION SHARING OF OPERATIONAL MISHAPS.** THE E-MISHAP SYSTEM IS CURRENTLY ON LINE AND AVAILABLE FOR USE. IT CAN BE ACCESSED AT

[HTTP://CGWEB.LANT.USCG.MIL/KDIV/KSEMISREP/DEFAULT.ASP](http://CGWEB.LANT.USCG.MIL/KDIV/KSEMISREP/DEFAULT.ASP).

INSTRUCTIONS FOR USING THE SYSTEM CAN BE VIEWED ON THE SAME PAGE OR A GUIDE CAN BE OBTAINED AT

[HTTP://CGWEB.LANT.USCG.MIL/KDIV/KSEMISREP/HELP/QUICKGUIDE.DOC](http://CGWEB.LANT.USCG.MIL/KDIV/KSEMISREP/HELP/QUICKGUIDE.DOC).

6. NO PAPER DISTRIBUTION OF THIS CHANGE WILL BE MADE. OFFICIAL DISTRIBUTION WILL BE MADE VIA COAST GUARD DIRECTIVES SYSTEM CD-ROM AND THE DEPARTMENT OF TRANSPORTATION WEB SITE AT

[HTTP://ISDDC.DOT.GOV/](http://ISDDC.DOT.GOV/). AN UPDATED ELECTRONIC VERSION OF REF A AND CHANGES ARE AVAILABLE FOR USE, DOWNLOADING, AND PRINTING VIA THE G-WK PUBLICATIONS AND DIRECTIVES WEBSITE AT

[HTTP://WWW.USCG.MIL/HQ/G-W/G-WK/G-WKH/G-WKH-1/PUBS/PUBS.DIRECT.HTM](http://WWW.USCG.MIL/HQ/G-W/G-WK/G-WKH/G-WKH-1/PUBS/PUBS.DIRECT.HTM).

7. UNITS USING THE E-MISHAP REPORTING SYSTEM ARE ENCOURAGED TO PROVIDE FEEDBACK/COMMENTS REGARDING DESIRED IMPROVEMENTS OR PROBLEMS ENCOUNTERED TO COMDT (G-WKS). POC: CDR TOMMEY H. MEYERS, PH 202-267-6863, EMAIL THMEYERS(AT)USCG.COMDT.MIL.

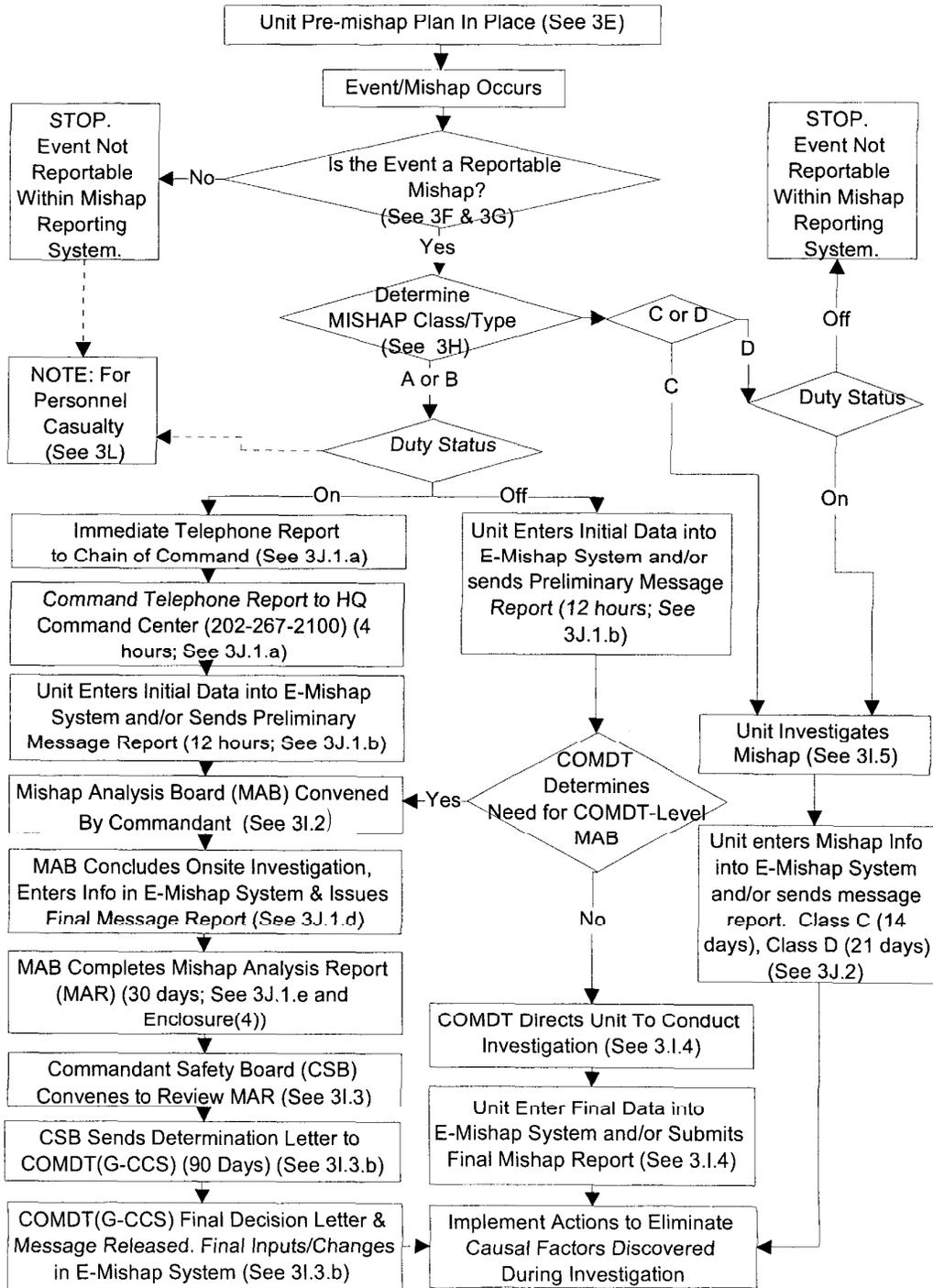
8. INTERNET RELEASE AUTHORIZED.

9. RELEASED BY RADM KEN VENUTO, ASSISTANT COMMANDANT FOR HUMAN RESOURCES, SENDS.

BT

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## Mishap Response Flow Chart



**Figure 3 - 1**

### CHAPTER 3 MISHAP RESPONSE, INVESTIGATION AND REPORTING

- A. Scope. This chapter provides requirements and guidance for response, investigation and reporting of Coast Guard mishaps.
- B. Mishap Definition. Any unplanned, unexpected or undesirable event causing injury, occupational illness, death, or property damage/loss.
- C. Policy. All Coast Guard mishaps will be investigated and reported in accordance with the requirements of this chapter.
- D. Action. Use the Figure 3-1 flowchart located on page 3-2 of this Manual, together with the appropriate sections of this chapter, to determine whether a reportable mishap has occurred and to determine the appropriate unit response, investigation and reporting responsibilities. The Coast Guard's E-Mishap System, accessed at <http://cgweb.lant.uscg.mil/KDiv/kseMISREP/Default.asp>, is the preferred method of reporting. However, units without access to the online system or who wish to continue using message traffic may report via the message system.
- E. Pre-Mishap Planning. Each unit shall develop a pre-mishap plan to organize an effective unit response to mishaps, especially major mishaps. Although the plan does not need to be a separate unit instruction, it should be separate and distinct. One way of accomplishing this is inclusion as a portion of whatever method the unit uses to document required actions (e.g. Standing Orders, Standard Operating Procedures, and/or Operational Bills). Because of the limited resources and response capabilities of smaller units, Groups and Marine Safety Offices shall establish pre-mishap plans, which cover mishaps for units that report to them. A sample unit pre-mishap plan is provided in enclosure (15) to this Manual.
  - 1. Pre-mishap plans are the main planning tool for reducing the debilitating effects of a major mishap.
  - 2. To remain a viable tool, pre-mishap plans must be reviewed and exercised at least annually to ensure accuracy and unit familiarity.
  - 3. A good plan provides simple, easy to use checklists to ensure key personnel are knowledgeable concerning their duties following a mishap. Permanent Unit Mishap Analysis Board members, and their alternates, must be clearly identified in the pre-mishap plan. Their respective duties must be delineated prior to the mishap. Members should be identified by position or billet and not by name.
  - 4. Pre-mishap plans distribute tasks and resources for:
    - a. Notification of the chain of command.
    - b. Rescue and emergency medical care of personnel.
    - c. Minimizing injury and property damage, including secondary or subsequent mishaps.

- d. Notification of next-of-kin (NOK), death-imminent process, media, etc.
  - e. Security of mishap site.
  - f. Preservation of wreckage to facilitate analysis of the mishap causes and eventual restoration of damaged property (e.g., photograph, fluid samples oil, fuel, etc., physical examinations as appropriate, etc.).
  - g. Prior arrangements and coordination with other military, government and civilian agencies to obtain the necessary fire-fighting, rescue and salvage equipment, security guards, divers, flight surgeons, medical facilities, logistics, photographers, etc.
  - h. Preliminary mishap investigation and analysis which includes activating the unit mishap board, interviewing witnesses and initiating critical physical examinations and fluid specimens. See Section 3-I of this Manual.
  - i. Unit Critical Incident Stress Management actions.
  - j. Safeguarding of electronic memory units. Commandant (G-SEA) and (G-WKS) will provide guidance on the correct routing, handling, downloading, and analysis of aircraft electronic memory units. This includes crash survivable memory units in flight data recorders (FDR), cockpit voice recorders (CVR), and nonvolatile memory (NVM) chips on circuit cards from electronic engine controls, programmable navigation equipment, and other avionics. As shipboard automated systems evolve, similar steps may be required of shipboard system memory units.
5. Not every circumstance at every unit can be anticipated. The guidance presented provides a framework which must be tailored and customized by each unit according to their own requirements, equipment, mission responsibilities, etc. Pre-mishap plans should incorporate the eventuality that the unit mishap board may be required at a site away from the home unit.
6. Audits of unit mishap plans have found five areas of pre-mishap planning that are generally weak and are highlighted below. These areas should be particularly reviewed and addressed in all pre-mishap plans.
- a. Telephone/Recall Lists. These lists should include names, home numbers and work numbers of spouses or next of kin. Mishaps often occurred during work hours and next of kin could not be located for many hours because work telephone numbers were not known. Verify and update at least annually. The pre-mishap plan should not actually include these lists—for privacy reasons—but should indicate where they may be located at the unit.
  - b. Incoming Telephone Calls. Commands have often experienced such a deluge of calls from other units, friends, media, senior commands, etc., that their ability to make outgoing calls was severely impacted.

Controlling this influx will be difficult and needs to be addressed in unit planning. A mechanism needs to be established to screen calls, eliminating press/interested parties posing as official Coast Guard callers.

- c. Next of Kin (NOK) Notifications. Commands should anticipate the need to make several notifications simultaneously and in a timely manner. Additionally, there are administrative requirements for death-imminent retirements or death notifications that have strict time limits. These need to be reviewed with administrative staff, parent commands and district/area support staff and should be noted in the plan. (See the Personnel Manual, COMDTINST M1000.6 (series), Chapter 11)
- d. Critical Incident Stress Debriefing (CISD). Units suffering serious loss may benefit from CISD. Additionally, members of a unit suffering serious loss may require extended counseling. These capabilities are available through the servicing ISC worklife staff. The telephone number of the ISC worklife employee assistance coordinator should be part of the pre-mishap plan. The Critical Incident Stress Management Commandant Instruction (COMDTINST 1754.3 (series)) highly encourages defusing or debriefing for those involved in serious mishaps or the loss of life, however, participation is not mandated.
- e. Establishment of Support Plans. Pre-establishing support plans with other emergency preparedness agencies--local police departments, fire departments, rescue and SWAT teams, other federal agencies, hospitals--and including these agencies in the annual exercise of the pre-mishap plan will make it much more effective.

F. Mishap Events. The following events constitute a reportable mishap:

- 1. Injury or Illnesses which result in any of the following: death, days away from work, restricted duty, transfer to another job, medical treatment beyond first aid, or loss of consciousness.
  - a. Coast Guard active duty military personnel injured, missing, or missing in action while on duty; active duty military personnel injured or missing while in an off-duty status if it results in days away from work, more than 30 days of restricted duty or transfer to another job.
  - b. Coast Guard civilian personnel injured, missing, or missing in action while performing Coast Guard work, on or off Coast Guard property. Any occupational injury or illness reported on a Form CA-1 or CA-2 to the Office of Workers' Compensation, Department of Labor, is a mishap that occurred while performing Coast Guard work and must be also reported via the Coast Guard mishap system.
  - c. Coast Guard Reserve personnel injured, missing, or missing in action, while in an active duty status. (Active Duty for Training--ADT-AD, IADT, ADT-OTD; Active Duty other than Training--ADSW-AC, ADSW-RC, Involuntary AD, Emergency Voluntary AD;

Drilling on Inactive Duty for Training (IDT); or on an Extended Active Duty (EAD) contract). Injuries to Coast Guard Reserve personnel in one of the above active duty statuses while off-duty would also be reported if they resulted in days away from Coast Guard work, restricted duty or transfer to another Coast Guard position.

- d. Coast Guard Auxiliary personnel injured, missing, or missing in action while under orders. See the Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series).
  - e. Coast Guard contractors injured while working on Coast Guard property, on Coast Guard equipment, or while conducting Coast Guard missions.
  - f. Non-Coast Guard personnel and visitors injured or missing on Coast Guard property, including Coast Guard housing.
  - g. Coast Guard military or civilian personnel who develop an illness that may reasonably be ascribed to an immediate (acute) or long term (chronic) exposure to chemical or physical agents in the workplace. For illnesses linked to chronic exposures, a mishap report shall be initiated upon first diagnosis. An example of such a “sentinel event” for an occupational illness is a permanent threshold shift seen on an audiogram. Work-related musculoskeletal disorders (MSD’s), occupational exposures to active tuberculosis (TB) that result in subsequent tuberculosis infections, and work-related needlestick injuries and cuts from sharp objects that are contaminated with another person’s blood or other potentially infectious material should also be reported.
  - h. Coast Guard Exchange System (CGES) personnel injured while performing Coast Guard work.
2. Property Damage.
- a. Damage to Coast Guard afloat or ashore facilities or aircraft.
  - b. Damage to non-Coast Guard facilities as a result of Coast Guard operations.
  - c. Personal property owned by Auxiliary units or Auxiliarists under orders that is damaged in the course of duty.
3. Other. To be reported regardless of whether injury, illness, or damage result.
- a. Accidental firearms discharge.
  - b. Electrical Shocks
  - c. Fires
4. Aviation-specific Reportable Events. Report as *Class D Flight-Related* incidents that may not meet the criteria of a reportable event (as listed above), but can be used as indicators of possible trends and can teach valuable lessons.

These events usually do not have costs associated with them and do not involve injury or illness. These lessons learned incidents make for "hangar flying" or "there I was..." topics and should be shared. They shall be reported to prevent similar events from becoming actual mishaps.

- a. Near Midair Collisions. Near midair collisions are extremely hazardous situations requiring special reporting procedures. Chapter 2 of this Manual and the Coast Guard Air Operations Manual, COMDTINST M3710.1 (series) provide specific reporting requirements for these events.
- b. Human Factor Event. A psychological, physiological, or pathological condition occurring to a crewmember when intent for flight exists and results in interference of a crewmember's duties. This includes flight delays, diverts or aborts due to conditions affecting a crewmember or passenger (airsick, vertigo, suspected or proven hypoxia, other toxic exposure, decompression events, preexisting illness, spatial disorientation, other in-flight incapacitation or injury).
- c. Special Operations. From time to time, headquarters will request that certain events be reported (e.g., use of the Traffic Collision Avoidance System (TCAS)).
- d. Precautionary or Forced Landing (Aborted Flights). Any landing required because conditions or circumstances make further flight inappropriate or impossible is a reportable event. This includes emergency or precautionary landings when imminent engine and/or rotor system failure is confirmed after landing. Precautionary landings without confirmed failure, malfunction, or damage (e.g. suspected blade strike, warning lights, bird-strike, etc.) and no additional damage occurs during landing are not reportable (no components are replaced). However, if additional circumstances surrounding the event can be of value to the fleet, the event should be reported. If the event does not result in replacement of the component, it is not reportable.
- e. The following events are reportable aviation mishaps and should be reported under the appropriate mishap class based on damage costs or injury:
  - (1) Power Loss. Any engine flameout, failure, substantial loss of power or required engine shutdown, regardless of successful restart. Unintentional engine shutdowns are reportable, regardless of restart.

NOTE: Intentional engine shutdowns (training, test flight, etc.) are not reportable, unless the engine fails to restart or other circumstances surrounding the event can be of value to the fleet.

- (2) Propeller, Rotor or Engine Wash. Damage or injury resulting from propeller backwash, rotor down wash, or engine exhaust is reportable.

- f. Weather Related Mishaps. Events caused by natural phenomena such as turbulence, lighting, sea state, floods or surges, restricted visibility, or static discharge, etc.
- g. Jettison of a sling load or other external stores (intentional or unintentional) resulting in damage or injury.
- h. Unplanned or inadvertent equipment drops resulting in injury or property damage.
- i. Impact Damage. Damage or injury resulting from striking or being stuck by foreign objects.
- j. Emergency breakaway during replenishment, helicopter-in-flight-refueling (HIFR), refueling at sea.
- k. TFOA (Things Falling Off Aircraft). Damage or injury caused by any object unintentionally dropped or falling from an aircraft shall be reported regardless of amount of damage or severity of injury.
- l. Aborted Takeoffs: An event that occurs before takeoff and interrupts a planned flight (e.g., vibrations, warning lights, noises or fumes, etc.).
- m. Other Occurrences. Any event not specifically listed above where a definite mishap potential or trend exists and the Coast Guard Aviation Safety Program could benefit from the report. These may not have resulted in property damage or injury, but there is benefit from the lessons learned. Examples include: use of emergency procedures, use of nonstandard procedures, excellent displays of CRM, a significant failure of crew coordination, mishandling of Coast Guard equipment, or problems with aviation life support equipment.

NOTE: Reporting events involving positive action by the crew, good CRM or where crew actions avoided a more catastrophic outcome is encouraged. Incidents compounded by a breakdown in CRM or no CRM should also be reported.

- n. Contractor Mishaps. Investigate and report all contractor mishaps resulting in reportable Coast Guard aviation damage or that can be of value to the Aviation Safety Program.
5. Afloat-specific Events. Report events that may not always meet the criteria of a reportable event, as per 3.F.1-3, but can be used as indicators of possible equipment/training trends and or can teach valuable lessons. These events usually do not have costs associated with them and may not involve injury or illness. They shall be reported to prevent similar events from becoming actual mishaps.
- a. Falls overboard from vessels or supporting equipment and facilities.
  - b. Vessel Rollovers and Knockdowns (in excess of 90 degrees from an even keel)

- c. Any event which may identify possible deficiencies in current operational policy or procedures; allowances, outfits, or personal protective equipment; or platform configuration or performance.
6. Near Misses/High Potential (HIPO) Events. Near mishaps, lessons learned events or other events with a High Potential (HIPO) for injury, damage or Coast Guard-wide implications are reportable even though they result in MINIMAL or NO DAMAGE, do not result in PERSONNEL INJURY, or would otherwise not be reportable in the mishap reporting system, i.e. improper maintenance.
- G. Non-Reportable Mishap Events. The following events are non-reportable as mishap events and do not fall under the requirements of this Manual:
1. Minor Off-duty Injuries. Injuries to military members which occur off duty and do not result in either 1) days away from work; 2) more than 30 days of restricted duty or 3) transfer to another job.
  2. Non-Occupational Illnesses. Illnesses which cannot be associated with an occupational exposure.
  3. Intentional Acts of Violence. Suicide, homicide or other malicious and intentional acts of violence that result in physical harm or property damage (e.g. bar fights, muggings, etc.).
  4. Intentional Damage or Injury. Intentional damage or injury caused by hostile action, malicious acts of sabotage or arson, law enforcement action ordered by competent authority, intentional damage or destruction for R&D purposes.
  5. Conditionally Predicated Damage. Damage which cannot be reasonably prevented (e.g. damage from storms, range or forest fires, floods, or seismic events).
  6. Normal Wear and Tear of Equipment. Damage, malfunctions or failures of equipment or components due to normal wear and tear, if it has a fixed useful life less than the complete system. These items are subject to periodic inspections, maintenance and replacement, and are **NOT** reported as mishaps.
- NOTE: This applies only if the malfunction or failure is the **ONLY** damage and the sole corrective action is to replace or repair the component. If the malfunction or failure of a component causes collateral damage to other components, the incident is reportable. Design defects, poor workmanship, incorrect use of materials and improper installation are not considered normal wear and tear.
7. Normal Testing and Calibration. Damage or failure of equipment of components due to their normal testing and calibration.
  8. Coast Guard Flying Club. Mishaps involving CG flying club aircraft are not reportable as an aviation mishap, however, if there is injury or death the event should be reported as an off-duty mishap.
  9. Bird Strikes With No Damage. Bird strikes without aircraft damage or personnel injury (even if a precautionary landing is made) are not reportable

unless additional circumstances surrounding the event would be of value to the fleet.

10. Planned Controlled Jettison. Intentional jettison or release during flight of cargo, fuel, life rafts, auxiliary fuel tanks, drag chutes or external equipment when there is NO reportable damage to the aircraft or other property or injury. This does not apply if the jettison was the result of a malfunction. A good test of this exception is to question the intent of the aircrew. If the load was not meant to depart the aircraft, it is a reportable mishap. However, if the jettison is intentional but other aspects of the event can be of value to the community, it should be reported.
11. False Indications. False Alarms (precautionary landings, engine, propeller or rotorhead shutdowns) determined to be the result of erroneous indicators (e.g., chip light, warning light, etc.) are not reportable UNLESS it results in repair or replacement of a component.

H. Mishap Classifications. Mishaps are classified according to severity level (class) and operational mode (type).

1. Mishap Class (severity). Mishaps are divided into four classifications according to severity of injury or cost of property damage/loss. Class A and B mishaps are the most serious or costly and usually warrant a formal Commandant appointed Mishap Analysis Board (MAB). To determine costs, see enclosure (13) to this Manual.
  - a. Class A--Mishaps in which:
    - (1) An injury or occupational illness results in a fatality or permanent total disability.
    - (2) The cost of reportable property damage is \$1,000,000 or greater.
    - (3) A Coast Guard aircraft or cutter is missing or abandoned, for which recovery is impossible or impractical, or is beyond economical repair.
    - (4) A Coast Guard small boat has reportable property value of \$50,000 or more and
      - (a) is missing or abandoned;
      - (b) for which recovery is impossible or impractical;
      - (c) or is beyond economical repair.
    - (5) A midair collision, regardless of the severity of injury or amount of damage.
    - (6) Any Coast Guard personnel are missing or missing in action.
  - b. Class B--Mishaps in which:
    - (1) Any injury and/or occupational illness results in permanent partial disability.

- (2) The resulting cost of reportable property damage, or damage to cutters and aircraft, is \$200,000 or more, but less than \$1,000,000.
  - (3) Three or more personnel are inpatient hospitalized.
  - (4) Coast Guard small boats incur repairable damage of \$50,000 or more.
- c. Class C--Mishaps in which:
- (1) An injury or occupational illness results in 1) any loss of time from work beyond the day or shift on which it occurred; 2) placement of any individuals on limited duty or restricted status for more than 30 consecutive days; or 3) transfer of any individuals to a different job.
  - (2) The resulting cost of reportable property damage, or damage to cutters and aircraft, is \$20,000 or more, but less than \$200,000.
  - (3) Coast Guard small boats incur repairable damage of \$20,000 or more, but less than \$50,000.
  - (3) A person falls overboard accidentally from a vessel or a pier or other structure or equipment associated with Coast Guard operations.
  - (4) A grounding, capsizing, or rollover/knockdown occurs which is greater than 90 degrees from an even keel.
- d. Class D--Mishaps in which:
- (1) An occupational injury or occupational illness occurs requiring more than simple first aid treatment but that does not meet the criteria of a Class C mishap.. This includes events where individuals are placed on limited duty status or restricted duty for less than 30 consecutive days.
  - (2) The cost of property damage for non-aviation mishaps is \$1,000 or more but less than \$20,000.
  - (3) The cost of property damage for aviation mishaps is less than \$20,000.
  - (4) An accidental firearm discharge, electrical shock, or fire occurs that does not meet the criteria of a higher classification.
  - (5) A near midair collision (NMAC) occurs. Report as a Flight-Related Class D mishap. See section 3.F.4.a and Chapter 2 of this Manual for additional NMAC reporting requirements.
  - (6) There is a Near Miss/High Potential (HIPO) Event. Near mishaps, lessons learned events or other events with a High Potential (HIPO) for injury, damage or Coast Guard wide implications are reportable as Class D mishaps, even though

they result in *MINIMAL* or *NO DAMAGE OR PERSONNEL INJURY*.

(7) An Aviation Reportable Mishap occurs as described in section 3.F.4. Report these as a Flight Related Class D mishap.

- e. Aviation Class E--Aviation mishaps which involve engine damage only, regardless of the damage cost. If the damage is not contained or not limited to the engine (e.g., airframe, props, rotors, non-airframe damage or injury), the mishap will be reported and investigated according to the appropriate mishap Class. (Class E mishaps can be Flight, Flight-Related or Ground.) Class E incidents also include Foreign Object Debris (FOD) Damage Incidents.

NOTE: Foreign Object Debris (FOD) Damage. Foreign Object Debris (FOD) damage confined to the engine or limited to internal components (does not include cowling) are reported as a Class E mishap. If engine parts are not contained, exit the engine and cause other damage, then report as the appropriate mishap Class based on severity of the mishap.

NOTE: FOD mishaps where the engine is the only damage do not normally require a formal mishap investigation and are reported as a Class E mishap. Commandant (G-WKS) may deem it necessary to convene a Mishap Analysis Board if other circumstances dictate.

2. Injury Severity Definitions. For the purposes of mishap reporting (unrelated to Physical Disability Evaluation Processing (PDES)), the following definitions apply:

- a. **Permanent Total Disability.** Any non-fatal injury or occupational illness that in the opinion of competent medical authority, permanently and totally incapacitates persons to the extent that they cannot follow any gainful occupation.

NOTE: The loss of use of both hands, both feet, both eyes, or a combination of any of these body parts as a result of a single mishap, shall be considered as a permanent total disability. *Occupationally linked chronic irreversible diseases* shall also be considered as a permanent total disability.

- b. **Permanent Partial Disability.** An injury or occupational illness that does not result in death or permanent total disability, but that in the opinion of competent medical authority, results in permanent impairment.

NOTE: The loss or loss of use of any body part other than teeth, nails, and tips of digits shall normally be considered a permanent partial disability unless specifically determined to be otherwise by competent medical authority. *Occupationally linked cancers--other than non-malignant skin cancers--*shall also be considered as a permanent partial disability.

- c. **Simple First Aid Treatment.** First aid which a person, who may or may not be a health care professional, can provide. It is defined as

using a non-prescription medication at nonprescription strength; administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, are considered medical treatment beyond first aid); cleaning, flushing or soaking wounds on the surface of the skin; using wound coverings such as bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™; using hot or cold therapy; using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.; using temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.); drilling of a fingernail or toenail to relieve pressure; draining fluid from a blister; using eye patches; removing foreign bodies from the eye using only irrigation or a cotton swab; removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means; using massages (physical therapy or chiropractic treatment are considered medical treatment beyond first aid); or drinking fluids for relief of heat stress.

3. Aviation Mishap Types. Aviation-specific mishaps are divided into four types; intent for flight is used to differentiate among the mishap types. Intent for flight exists when an engine is started for the purpose of flight and continues until the aircraft comes to rest with the engine(s), propeller(s), or rotor(s) stopped and brakes set or wheel chocks in place. An aircraft's engines are considered started or running the instant any one of them is set into motion intentionally, either by internal or external power. In the case of an amphibian aircraft (Auxiliary only) landing on water, intent for flight ceases when the aircraft has made a water landing, the engine(s), propeller(s) or rotor(s) have stopped, and the aircraft has been anchored, moored, taken in tow, or otherwise comes to rest (adrift).
  - a. Flight Mishap. Mishaps involving Coast Guard aircraft damage/loss with or without other property damage, personnel injury/death, or occupational illness, where intent for flight existed at the time of the mishap.
  - b. Flight-Related Mishap. Mishaps in which there is NO Coast Guard aircraft damage. Intent for flight must have existed at the time of the mishap, and other property damage, death, injury or occupational illness has occurred. (Includes near midair collisions, non-aircraft damage caused by rotor wash, and other reportable events with NO reportable Coast Guard aircraft damage.)
  - c. Aviation Ground Mishap. Mishaps involving damage to Coast Guard aircraft/aviation equipment or where death, injury, or occupational illness occurred where NO intent for flight existed (e.g., towing, maintenance, run-ups, servicing, etc.). Ground mishaps imply no intent for flight and include maintenance or handling mishaps of aviation assets while deployed aboard vessels.

- d. *CG Auxiliary Aviation Mishaps. Damage to auxiliary aircraft or the death, injury, or occupational illness to personnel while operating auxiliary aircraft, while under official orders shall be reported as per the Auxiliary Operations Policy Manual, COMDTINST M16798.3 (series).*

NOTE: Flight, Flight-related, and CG Auxiliary Aviation mishaps which do not have any personnel injuries or occupational illnesses associated with them will NOT be reported via the E-Mishap system. However, all aviation related mishaps that involve personnel injuries, occupational illness or death, regardless of operational mode, must be reported via the E-Mishap System.

I. Mishap Investigation Boards.

1. Permanent Unit Mishap Board. Each unit shall assign a Permanent Unit Mishap Board. Members of the board, as appointed in the Pre-Mishap Plan (see enclosure (15) to this Manual), must be familiar with safety procedures and requirements of this Manual, relevant directives, and preliminary mishap analysis procedures before a mishap occurs. The Unit Mishap Board should also be familiar with the Coast Guard Administrative Investigation Manual (AIM), as well as manuals that apply to decedent affairs and other U. S. Coast Guard investigations that may be required as a result of the incident. The Unit Permanent Mishap Board should be familiar with what type of mishap *information can be shared with other investigations (see enclosure (10) of this Manual)*. While the Unit Mishap Board would conduct or coordinate the investigation for minor mishaps (C & D), actions after a major mishap (A & B) should be limited to:
  - a. Securing and protecting the mishap site and wreckage until the arrival of the Commandant's Mishap Analysis Board (MAB).
  - b. Documenting the mishap site and wreckage by written, taped, videotaped and photographed documentation of the wreckage, location of survivors and fatalities and the mishap site. This is especially important if wreckage and bodies must be disturbed before the MAB can arrive.
  - c. Photographing and videotaping to preserve otherwise perishable evidence and aid the investigation.
  - d. Collecting Human Factors Evidence. Take blood and fluid samples of survivors, documenting evidence of mental and physical capability and medical opinion about individuals' ability to return to their duties. See Enclosure (4) for more guidance.
  - e. Safeguarding Electronically Stored Data. Immediately safeguard "continuously recorded" memory units. This can be accomplished by assuring power is not applied to the aircraft or memory unit or by removal of the unit. Failure to do so can result in the overwriting and loss of valuable mishap data. This includes crash survivable memory units in flight data recorders (FDR), electronic cockpit voice recorders

- (CVRs), and nonvolatile memory (NVM) chips on circuit cards from electronic engine controls, programmable navigation equipment, and other avionics. Contact Commandant (G-WKS) and (G-SEA) for guidance.
- f. Witness Statements. Physical and documentary information is usually the most credible form of information, but witness accounts often provide important leads. Witnesses include those involved in the mishap, those who saw it, and those whose training and experience qualify them as experts. See enclosure (2) and (4) to this Manual for guidance on the collection of witness statements.
  - g. Collecting and securing aircraft, boat crew training and administrative records and files.
2. Class A or B Commandant Mishap Analysis Board (MAB). MAB's will be appointed and convened at the discretion of Commandant (G-WKS) to investigate and report on Class A & B Mishaps. Enclosure (4) to this manual describes the Class A and Class B MAB composition and process. In cases where a Commandant level review of command policies, training procedures or equipment deficiencies are not anticipated, Commandant (G-WKS) may delegate this responsibility. In these cases, Commandant (G-WKS) will specify the scope and requirements of any unit investigations. These boards vary in composition according to the circumstances of the mishap. (G-CCS) may designate additional attendees as deemed necessary.
  3. Commandant's Safety Board (CSB). Once the Mishap Analysis Report (MAR) from a Commandant-convened MAB (see 3.J.1.e) reaches Headquarters, a CSB shall be convened.
    - a. The CSB shall review the MAB report and endorsing comments and develop a report for Commandant (G-CCS). This report shall include:
      - (1) A synopsis of the mishap
      - (2) Classification and cost of the mishap
      - (3) Determination of the causal factors
      - (4) Determination of additional findings
      - (5) Determination of recommended corrective actions
      - (6) Other remarks as appropriate
      - (7) Information for the final update of the Coast Guard Mishap Reporting and Data System
      - (8) Development of a draft Commandant (G-CCS) Decision Letter and Final Action Message
    - b. Within 90 days of receipt of the MAB report and comments, the CSB shall forward the CSB report and draft Final Decision Letter to Commandant (G-CCS) for consideration. After review, Commandant (G-CCS) will issue a Final Decision Letter directing the corrective

actions to be taken. The CSB will also be responsible for any updates to the E-mishap system.

- c. Upon approval of the Final Decision Letter, Commandant (G-CCS) will notify the Commandant prior to releasing the investigative results. As warranted, the Commandant will be briefed in the following types of mishaps:

- On-Duty Fatality or Permanent Partial Disability
- Loss of Coast Guard Asset
- Extensive Non-Coast Guard Property Damage or Personal Injury

Attendance at this brief, which will be determined by (G-CCS), will vary by mishap type and may include (G-CV), (G-I), (G-L), (G-WK), the applicable Assistant Commandant(s) responsible for unit/program involved, and the Area/District Commander.

- (1) The purpose of this brief, which normally will be given by the President of the appropriate CSB within two weeks following approval of the Final Decision Letter, is to ensure appropriate staff elements are aware of the pending release of the findings and that required staff actions have been initiated. Likely staff actions could include preparation of a press release and draft media guidance (G-IPA), scheduling the notification of members or next of kin (Area or District Commander), development of Congressional outreach strategy (G-ICA), and preparation of a draft Secretary Alert (CGHQ 3517E) (G-WKS).
- (2) Attendees shall bring drafts of any correspondence, notifications, or press releases that are anticipated to the brief. Commandant (G-WKS) will provide each attendee a copy of the approved Final Decision Letter and draft Final Action Message. After all required staff actions have been completed, Commandant (G-CCS) will release the Final Action Message.

4. Class A or B Off-Duty Mishap Boards. MAB's will be appointed and convened at the discretion of Commandant (G-WKS) to investigate and report on Class A and B off-duty mishaps. In most cases, mishaps involving off-duty Coast Guard military personnel will be investigated by the member's permanent command and the results will be reported via the E-Mishap submission (see 3.J.2), although Commandant (G-WKS) may also require a formal MAR. This includes off-duty motor vehicle mishaps, sports, hobbies or permissible outside employment activities. The mishap report shall include the results of any outside (non U. S. Coast Guard) investigations. Local law enforcement investigation report and related documents should be a major source of information. If the mishap occurs far from a member's permanent command, the permanent command may request via G-WKS that a command local to the incident conduct the investigation.

5. Class C and Class D Unit Mishap Boards. Unit Mishap Boards shall generally conduct local investigations for Class C and D mishaps and the results of the investigation shall be entered into the E-Mishap System (see 3.J.2 b and c). For high interest Class C, D or HIPO mishaps, a Commandant (G-WKS) MAB may be assigned to investigate the mishap or the unit may be tasked to complete and submit a formal MAR. Enclosure (4) to this Manual provides information on the makeup of Class C and D Unit Mishap Boards.
6. Joint Mishap Boards. In the event of a mishap involving the Coast Guard and other United States military aircraft or property, a joint board may be convened, if considered appropriate by both Commandant (G-WKS) and the Safety Chiefs of the service safety centers. Each service shall be represented on the Joint Mishap Board. The appointment of the MAB President, selection of board members and the report format, shall be by mutual agreement between Commandant (G-WKS) and the chief of the safety center involved.
7. Auxiliary Aviation/NTSB Boards. The NTSB will investigate auxiliary Class A and B aviation mishaps. A Coast Guard representative (active duty and/or auxiliary) will be assigned to such investigations. Commandant (G-WKS-1) will determine if a separate Commandant's MAB is to be convened. Immediate initial reports to Commandant (G-OPF) and (G-WKS) are required to ensure timely NTSB notification.

J. Mishap Reporting.

1. Class A and Class B Mishaps.
  - a. Immediate telephone report. (Not required for off-duty Class A or B mishaps.) Unit commanding officers or officers-in-charge shall immediately report all Class A and Class B to their Chain of Command. Within four hours of a Class A or B mishap, a telephone report, by the Command, shall be made to the Coast Guard Headquarters Command Center (G-OPF), 202-267-2100. This initial report shall include as much information as is available and should include location, time, and injury to personnel and or damage to Coast Guard property. See Section 3.J.2.a below for additional immediate telephone reporting requirements.
  - b. Preliminary Message Report. Within 12 hours of a Class A or Class B Mishap, a priority message report shall be sent to Commandant (G-WKS), MLCLANT (kse), MLCPAC (kse), the Area and the operational commanders, by the unit experiencing the mishap. The 12-hour delay is designed to allow for immediate rescue/recovery actions and for the collection of more detailed information. When the information has been entered into the E-Mishap online system, it can be used to generate the text for the message report. This text can be copied over to CGMS for transmittal. In the event that a unit is not able to connect to the intranet, i.e. a cutter underway, or does not

desire to use the E-Mishap System, the appropriate standard mishap format of Enclosure (6) should be used to send a message.

NOTE. For aviation Flight and Flight-related mishaps which involve equipment damage only, do NOT use the E-Mishap System but instead submit a message following the format specified in Enclosure (5) to this Manual with AIG 8907 as an info addressee.

- (1) The initial input into the E-Mishap System and preliminary message shall amplify and expand on the data provided during the immediate telephone report regarding location, time, and injury to personnel and/or damage to property.
  - (2) The initial input and preliminary message shall contain factual information only. It shall not contain information based on witness statements or other testimonies. If some of the required information is unavailable or incomplete, subsequent updates to the E-Mishap System and/or supplemental messages shall be sent when such information is available.
  - (3) Although the E-Mishap System will collect names to meet OSHA reporting requirements and for analysis, the message generated for CGMS will not list the names or any other personal information such as social security numbers of members involved in the mishap. Message submissions made without use of the E-Mishap Systems shall not include names or SSN's.
  - (4) If there are serious injuries, personnel missing or deaths involved, personnel data must be reported in a Personnel Casualty Report within four hours. (See Section 3.L of this chapter.)
- c. Progress/Supplemental Message Report. An update to the E-Mishap System shall be made within 72 hours. In the event that a unit is not able to connect to the intranet, i.e. a cutter underway, or does not desire to use the E-Mishap System, the appropriate standard mishap format of Enclosure (6) should be used to send a message to Commandant (G-WKS) and appropriate headquarters offices within this time frame. If an MAB has convened, then the MAB President shall send this message. Supplemental E-Mishap inputs and messages shall be sent thereafter at the MAB President's discretion or as directed by Commandant (G-WKS).

NOTE: For aviation Flight and Flight-related mishaps not involving personnel injury, death, or occupational illness, either the format in enclosure (5) to this Manual or the optional MAB progress message format in enclosure (14) to this Manual should be used.

- (1) The MAB President shall send an arrival message notifying headquarters that all MAB members have arrived and that the

MAB has assumed the investigation. This information may be included as part of any Progress/Supplemental messages.

- (2) The MAB President shall update the E-Mishap System and send appropriate messages at a minimum when critical information is discovered, when the MAB adjourns, and if it reconvenes.

NOTE: If the MAB discovers information that seriously impacts Coast Guard operations, the MAB President shall immediately notify Commandant (G-WKS) by telephone. E-Mishap System update(s) and supplemental message(s) shall be sent, regardless of whether the information is associated with the mishap under investigation. Commandant (G-WKS) will notify the appropriate Coast Guard Headquarters offices and other agencies and ensure that proper action is taken.

- d. Final MAB Message. A final MAB message shall be sent when the MAB concludes the on site investigation and analysis. The E-Mishaps system should be updated, used to format the final message, and the text generated should be used as the draft within CGMS. Because the final MAB process is not complete at this point, Commandant (G-WKS) shall be the releasing authority for the message. The President of the MAB shall confer with and receive Commandant (G-WKS) permission prior to release. The final E-Mishap input and message report shall contain:
  - (1) A short factual synopsis of the event.
  - (2) Date the MAB adjourned.
  - (3) Description of damage.
  - (4) Disposition of wreckage and/or status of salvage operations.
  - (5) Specific recommendations the MAB feels should be brought to the immediate attention of field commands.
  - (6) The message shall not contain opinions or speculation regarding the mishap.
  - (7) Upon receipt of the final MAB Message, Commandant (G-WKS) shall notify the reviewing chain of endorsement of the deadlines contained in this Manual and offer MAB briefings to expedite the reviewing process.
- e. Commandant Mishap Analysis Report (MAR). In addition to E-Mishap entries and messages, every Commandant appointed MAB should produce a MAR. Enclosure (2) to this Manual provides a description and format for the MAR. Enclosure (3) to this Manual provides a description and format for the Medical Officer's Report, which should be made part of the MAR when applicable.
  - (1) Within 21 days after the MAB completes their on-site investigation and analysis, the MAB President shall forward

the original MAR. The original MAR shall be forwarded to Commandant (G-WKS) via the commanding officer and appropriate chain of command for review and endorsement.

- (2) Commandant (G-WKS) shall inform the endorsement chain of endorsing deadlines and the importance of timely review.
- (3) When desired, Commandant (G-WKS) shall provide funding for member(s) of the MAB to brief endorsers, to assist in understanding the incident and to streamline the review process.
- (4) Because mishap reports contain sensitive and privileged material, it is imperative that copies of the MAR be controlled. Therefore, only a limited number of copies and copyholders are authorized. See enclosure (2) to this Manual for specifics. The MAB President is the only MAB member authorized to keep a copy of the MAR. Reviewers in the chain are not authorized to hold a copy, and shall not be provided or reproduce a copy, unless requested of and authorized by Commandant (G-WKS). The MAB president will return his MAR copy to Commandant (G-WKS) after the Final Action Message is released.

## 2. All Mishaps.

- a. Immediate telephone reporting. In addition to Class A and B mishaps the following incidents require an immediate telephone report to Coast Guard Headquarters:
  - (1) All Coast Guard mishaps likely to cause intense or unusual reaction from the public or news media.
  - (2) All Coast Guard mishaps requiring notification of the NTSB.
  - (3) A Coast Guard auxiliary aircraft involved in a Class A or Class B mishap while operating under written or verbal orders.
  - (4) A Coast Guard aircraft is involved in a mishap with a foreign aircraft, or a mishap occurring in a foreign country.
  - (5) Serious Near Midair Collision as discussed in chapter 2.
  - (6) Whenever deemed appropriate by the Commanding Officer or operational commander.
  - (7) Personal Casualty as discussed in Section 3.L of this chapter.
- b. Aviation-specific Mishaps. Flight and Flight Related mishaps in which there are no deaths, injuries, or occupational illnesses, and which do not require a formal MAR shall be reported by message following the format in Enclosure (5) to this Manual. NO E-Mishap System entries should be made. Class C Aviation messages shall be submitted within 14 days; Class D and Class E Aviation messages shall be submitted within 21 days.

- c. All other mishaps will be initially entered into the E-Mishap System or reported by message (including Aviation Ground mishaps). Class C mishaps must be entered within 14 days and Class D mishaps within 21 days.
- d. Operational mishaps shall be shared within the appropriate operational community; the message format generated by the E-Mishap System shall be used to generate a message that will also be transmitted within the applicable time frames. If a unit is not able to connect to the intranet within the submission period or specifically desires to use message traffic, then a message report using the appropriate format of Enclosure (6) shall be submitted within the applicable time frames.
- e. Although the E-Mishap System will collect names to meet OSHA reporting requirements and for analysis, the message generated for CGMS will not list the names or any other personal information such as social security numbers of members involved in the mishap. Message submissions made without use of the E-Mishap Systems shall not include names or SSN's.

NOTE: Class D mishaps for military members off-duty—no loss time from work; less than 30 days restricted or fit for light duty status; no transfers to a new job--are NOT reportable

- 3. Annual Reports. Commandant (G-WKS) will produce and publish annual safety awareness reports. These will be distributed to appropriate field commands and will include summaries and analysis of applicable mishap data. Real-time mishap data and reports will be available via the online E-Mishap System.

K. Limitations on the Use and Disclosure of Mishap Investigations and Reports. A thorough understanding of the concept of privilege and confidentiality as used in the Safety Program is essential for the proper investigation of mishaps. Enclosure (10) to this Manual discusses the use and restrictions of safety privilege. If the causal factors and the sequence of events that culminated in a mishap are to be determined and similar mishaps prevented, it is imperative that all parties involved either in the mishap or the administrative/legal investigation and mishap review process understand and honor the privileged nature of the information. These concepts are critical to the success of the Coast Guard Safety Program. The statements, material, and information obtained during a mishap investigation are for the sole purpose of mishap prevention and must be handled according to the provisions of this instruction.

L. Personnel Casualty Reporting. Personnel Casualty Reporting is required in addition to Mishap Reporting when the casualty is the result of a mishap or may be a stand-alone requirement in a non-mishap personnel event. It is not within the scope of this chapter to address Personnel Casualty Reporting in detail.

- 1. Immediate telephone notifications to the chain of command are required for Class A and B on-duty mishaps. A Preliminary Mishap Message Report,

regardless of whether it is generated by the E-Mishap System or not, is required within 12 hours for both on and off-duty Class A and B mishaps. See sections 3.J.1.a and 3.J.1.b of this chapter.

2. Immediate telephone notification to HQ Command Center (202) 267-2100 is required for death or death imminent situations. In addition, a Personnel Casualty Report Message is required within four hours of receiving personnel casualty information whether the result of a mishap or other causes, on or off duty. Procedures, message instructions, and format reside in the Personnel and Pay Procedures Manual, HRSICINST M1000.2, Section 5.A and enclosure (7) and in the Personnel Manual, COMDTINST M1000.6 (series), *Chapter 11, Section A*.
3. Though some message information may overlap, sufficient information will be provided on the mishap and on the member's personal data, ensuring a wide distribution of mishap information, yet protecting the member's privacy.
4. An Administrative Investigation may also be required in a personnel casualty case whether or not the result of a mishap. Contact Commandant (G-OPF) for additional information and see the Administrative Investigations Manual, COMDTINST M5830.1 (series), Section G.4.



**Additional Cause Information:**

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**Corrective Actions Taken/Lessons Learned:**

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**Medical Injuries:**

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Grade: \_\_\_\_\_ Rate: \_\_\_\_\_

<b>Status:</b>				
On Duty Coast Guard (Act Duty)	On Duty CG Reserve	On Duty DOD	Contractor	NAFA
Off Duty Coast Guard (Act Duty)	On Duty Civilian	Off Duty DOD	Visitor	Auxiliary

<b>Part of Body Injured:</b>					
Arm	Foot	Head	Lung	Neck	Trunk
Eyes	Hand	Legs	Middle/Inner Ear	Other Internal	

<b>Nature of Injury:</b>				<b>Severity:</b>	
Abrasions/Cuts/Punctures	Fractures/Dislocation			Fatal	
Biological Exposure	Irritation			Full Disability	
Bruise/Sprain/Strain/Tear	Occupational Illness			Partial Disability	
Chemical Exposure	Radiation Exposure			None of the above	
Concussion/Loss of Consciousness	Thermal Exposure (Includes Hot & Cold)				
Electrical Exposure					

<b>Type of Personal Protective Equipment used:</b>								
	Req.	Used		Req.	Used		Req.	Used
Ear			Foot			PFD		
Eye			Hand			Respirator		
Fall Protection			Head			Seat Belt		
								Description of Other:

Days Hospitalized	Lost Work Days (NFFD/SIQ)	Days Restricted (FFLD)
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Were any days of sea/boat/flight duty missed? Yes	No	(Civilians Only) Worker Comp Filed? Yes	No
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**Property Damage:**

<b>Coast Guard Property Damage</b>	
Government Property General	
Government Property Specific	
Operational Days Lost	
Cost of CG Owned Parts/Materials	
No. of CG man hours to repair damage	

<b>Non-Coast Guard Property Damage Due to CG Operations</b>	
Description	
Cost of Repairs	

<b>Coast Guard Auxiliary Facilities / Equipment</b>	
Description:	
Cost of Repairs:	

**First Level Review**

Comments:

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Name: \_\_\_\_\_

Phone: \_\_\_\_\_

**Command Review (By Direction Authority)**

Comments:

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Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Table 1: Mission

ATON	Shore and Radio Navigation Aids
C&S	Command and/or Support
DO	Defense Operations
ELT	Enforcement of Laws and Treaties
IO	Ice Operations
M+R	Maintenance and Repair
MER	Marine Environmental Response
MI	Marine Inspection
OTHER	Other Not Listed
PERS	Off Duty/Off-The-Job
PSS	Port Safety and Security
SAR	Search and Rescue
TRG	Training

Table 2: Boat Types

ANB	ATON Boat (ANB - 55', 63' & 64')
ANB(X)	ATON Boat Misc. (34' and 38')
ASB	Arctic Survey Boat (38')
ATB	Aviation Training Boat (41' UTB)
BU	Buoy Boat (45')
BUSL	Buoy Boat, Stern Loader (49')
CB-S	Cutter Based: 14-15'
CB-M	Cutter Based: 17-18'
CB-L	Cutter Based: 19'-22'
CB-OTH	Cutter Based: Over the Horizon (24' Zodiac)
CT (All Types)	Cadet Training Boat
DPB	Deployable Pursuit Boat (38' or 42')
IMARV	Independent Maritime response Boat (50' Or 55')
LCVP	Landing Craft
MCB	Motor Cargo Boat (25')
MSB	Motor Surf Boat (26')
MLB-44	Motor Life Boat (44')
MLB-47	Motor Life Boat (47')
PWB	MSO Port & Waterways Boat (21" – 38', all brands)
RB-HS	Response Boat, Homeland Security
RB-S	Response Boat, Small
SKF	Skiff: Immediate vicinity maintenance & response
SPC	Special Purpose Craft (General)
SPC (Airboat)	Special Purpose Craft (Airboat)
SPC (Cable)	Special Purpose Craft (Cable Boat)
SPC (Ferry)	Special Purpose Craft (Ferry)
SPC (LE)	Special Purpose Craft (Law Enforcement)
SPC (HWX)	Special Purpose Craft: Heavy Weather (52' MLB)
SPC (SURF)	Special Purpose Craft: Surf (30' SRB)
TANB	Trailerable ATON Boat (21')
TPSB	Transportable Port Security Boat (PSU)
UTL	Utility Boat, Light (17' – 28'11")
UTB	Utility Boat, Big (41')
UTM	Utility Boat, Medium (25'-40'11" and is STA(sm) Primary Response vsI)

Use the following format for the message:

**FM** (UNIT NAME)  
**TO** COMMANDANT (G-WKS)  
COMCOGARD MLC LANT NORFOLK VA//KSE//  
COMCOGARD MLC PAC ALAMEDA CA//KSE//

AIG FOUR NINE THREE FOUR (FOR SMALL BOAT OPERATIONAL MISHAPS)  
AIG FOUR NINE TWO THREE (FOR CUTTER/CUTTER SMALL BOAT OPERATIONAL MISHAPS)  
AIG EIGHT NINE SEVEN FOUR (FOR SHORE UNIT OPERATIONAL MISHAPS)  
(AIG's to be used only for operational mishaps)

**INFO OPERATIONAL CHAIN**

**BT**

**UNCLAS FOUO//N05100//**

**SUBJ:** CLASS (A, B, C, D or D - HIPO) MISHAP (Unit or Boat Type) – NRN

//

**WHAT FOLLOWS MAY CONTAIN PRIVILEGED SAFETY INFORMATION.**

**USE FOR MISHAP PREVENTION PURPOSES ONLY.**

//

**1. GENERAL INFO//**

**OPFAC**/(Five Digit Operating Facility Code)//

**DATE**/(Date in MMDDYY Format)//

**TIME**/(Time in HHMM Format)//

**UNIT MISSION**/(See Table 1 above)//

**RELATED TO MISSION**/(Yes or No—Is this an operational mishap?)//

**TYPE OF BOAT**/(See Table 2 above if applicable, NA if not)//

**COXSWAIN DATA/GRADE:**(E-4 for example)/**AGE:**(19 for example)/**MOS QUAL IN**

**VSI:**(Number of months qualified on platform)/**MOS AT UNIT:**(Number of months at unit) (NA if not applicable)

**NARR**/(Describe the event—use the worksheet above for guidance)//

**CAUSE**/(Primary cause of the mishap as per the worksheet above)//

**ADD CAUSE**/(Additional causes of the incident as per the above worksheet) (Each type separated by a “/”, NA if none)

**ACTION**/(Action taken to prevent this mishap from occurring again)//

**2. PERSONAL INJURY DATA/NUMBER OF REPORTS:**(Number of injured personnel)//

**GRADE**/(E-4, for example)//

**RATE**/(MK, for example)//

**STATUS**/(Status as per above worksheet. ON DUTY CG for example)//

**PRI**/(Primary body part injured)/(Nature of primary injury)//

**SEC**/(Secondary body part injured)/(Nature of secondary injury)//

**SEVERITY**/(LOST WORK, for example)//

**PPE USED**/(Type(s) of PPE used) (Each type separated by a “/”)

**PPE REQ**/(Type(s) of PPE required by the operation) (Each type separated by a “/”)

**DAYS HOSP**/(Number of days hospitalized)//

Encl. (6) to COMDTINST M5100.47

**DAYS LOST**/(Number of days of lost work time beyond the day of injury)//

**DAYS REST**/(Number of days in a restricted or fit for light duty status)//

(Repeat the above fields for each injury)

**3. PROPERTY DAMAGE**//

**CG PROP DESC**/(Description of Coast Guard property damaged)//

**LOST OP DAYS**/(Number of operational days lost for the CG property due to the mishap)//

**CG PROP COST/CG MAT:\$**(Cost of Coast Guard property or cost to repair in \$, 0.00 if none)/**LABOR:\$**(Cost of labor need to make repairs in \$, 0.00 if

none)/**CONTRACT:\$**(Cost of contractors needed for repairs in \$, 0.00 if none)//

**NON-CG PROP COST**/(Cost to repair non-Coast Guard property in \$, 0.00 if none)//

**AUX COST**/(Cost to repair Auxiliary property in \$, 0.00 if none)//

**4. INVESTIGATOR/NAME**/Name of mishap investigator)/(Phone number of mishap investigator)/(E-mail address of mishap investigator)//

**BT**

**NNNN**

UNIT INST 5100.xx

UNIT INSTRUCTION 5100.xx

Subj: PRE-MISHAP PLAN

Ref: (a) Safety and Environmental Health Manual, COMDTINST M5100.47

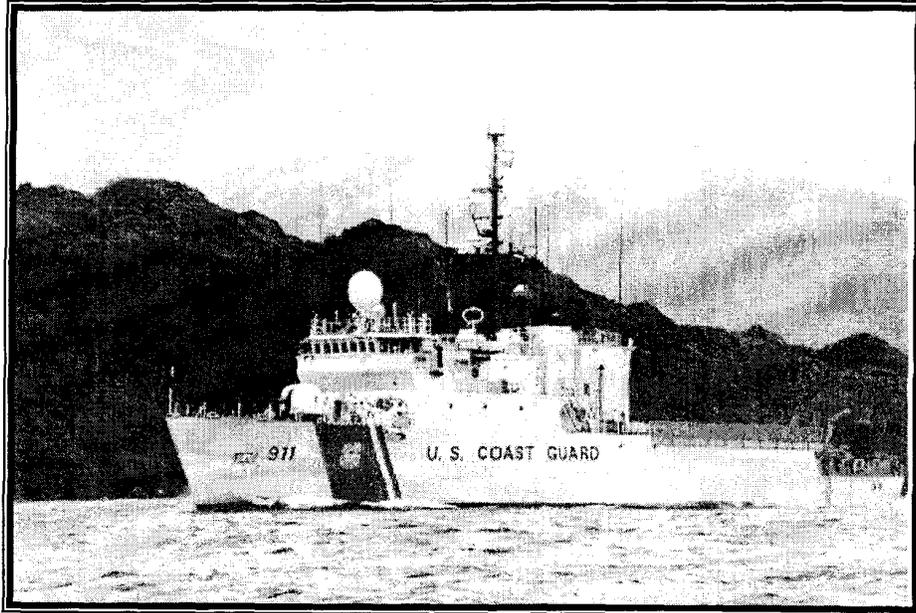
1. PURPOSE. This instruction establishes guidance for mishap response and reporting at Coast Guard Unit. Reference (a) provides additional guidance.
2. ACTION. All *[appropriate unit levels and personnel, i.e. department heads]* shall ensure compliance when a reportable mishap occurs as per reference (a).
3. DISCUSSION. It is Coast Guard policy that mishaps be reported. Prompt mishap investigation and reporting provides supervisors and managers with information to prevent mishaps and prioritize resources.
4. PROCEDURE.
  - a. Rescue and recovery phase. *(List personnel assigned rescue and recovery responsibility e.g., duty section, clinic, local EMS, fire department, etc. Either include phone numbers for each or provide specific direction where to find these, i.e. recall lists)*
  - b. Responsibilities:
    - 1)
    - 2)
    - 3) (etc.)

*Responsibilities for the Permanent Unit Mishap Board, for drug and alcohol testing, release of information to the public (per COMDTINST M5728.2 (series)), next of kin notification (per Personnel Manual, COMDTINST M1000.6 (series)), obtaining of Critical Stress Incident De-brief, etc. should be specifically assigned with alternates*
  - c. Preservation of evidence: Unit personnel shall secure the mishap scene and collect any information which may hold clues to the cause of the mishap. The mishap scene provides the most perishable information, so gathering on scene/onboard evidence, taking photographs, and making diagrams of the scene are the first investigative priorities. Additionally, the following evidence should be preserved and collected for the investigation:
    - 1) Maintenance record(s) of equipment involved
    - 2) Training records of those involve in the mishap.
    - 3) Service records of those involve.

- 4) Medical records of those involved.
  - 5) Unit/deck log
  - 6) Engineering logs.
  - 7) Standard bearing book.
  - 8) Standing orders, night orders, morning orders.
  - 9) Inspection log/records.
  - 10) Weather and sea state observed at the mishap scene, and forecast/analysis data from nearest NWS or FAA facility.
- d. Reporting. The following procedures shall be followed, as appropriate, when a mishap is reported:
- 1) Responding personnel shall make an initial determination as to the severity of the mishap.
  - 2) Responding personnel shall use the unit recall list to contact the *(appropriate personnel, e.g., CO, OIC, XO, OOD, Safety Officer, Unit Safety Coordinator)*.
  - 3) Immediately report all class A & B mishaps to Commandant via telephone through the chain of command.
  - 4) A preliminary message shall be sent for class A & B mishaps as per reference (a) within 12 hours.
  - 5) Class C & D mishap reports shall be initiated by the first line supervisor and submitted to the *(CO/OIC or OX/XPO)* within ## days of the mishap.
  - 6) Reporting format shall be in accordance with reference (a).
- e. Investigation of mishaps.
- 1) Commandant will assign a Mishap Analysis Board (MAB) to investigate most class A & B mishaps. Preservation of evidence shall be undertaken with the assumption that an MAB will convene. Every MAB shall produce a Mishap Analysis Report (MAR) in accordance with reference (a).
  - 2) MAB's are not normally assigned for off duty personnel not on Coast Guard property involved in a class A or B mishap, (e.g., private vehicle, sporting event, hobby, or authorized outside employment). Appropriate local authority (e.g., local police or fire department) normally will investigate these mishaps. Unit shall produce MAR in accordance with reference (a) and incorporate local authority findings in report unless directed otherwise by Commandant.
  - 3) All class C & D mishaps shall be analyzed and investigated per reference (a). The Unit safety board shall review all such reports.

*CO/OINC Signature*

# FY-2001 AFLOAT SAFETY REPORT



**FOR COAST GUARD CUTTERS, CUTTER BOATS,  
AND SHORE-BASED BOATS**

**Commandant (G-WKS-4)  
Afloat Safety Division**

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## **WHY THIS REPORT?**

**The purpose of this report is to promote safety awareness within the afloat community. It is part of an overall effort to provide program managers, operational commanders, and individual operating units information regarding accident trends experienced by our cutters and small boats.**

**Awareness is one of the most effective ways to reduce mishaps. Therefore, this report contains both a comprehensive analysis of reported FY01 mishaps focusing on such issues as causal factors, mishap types, and mishap rates (based upon operating hours) for our cutter, cutter boat, and shore-based boat fleets. Where applicable, a historical comparison of FY01 data is provided. Through ongoing programs such as *Operational Risk Management and Team Coordination Training*, our ultimate goal is to identify and reduce risks related to afloat operations in order to reduce operational, economic, and human resource impacts of marine mishaps.**

**Despite the many demands placed on our operational units, we hope you can find the time to review this report, as well as the operational mishaps submitted by similar units, and share the information with your crews. In doing so, we encourage you to take a critical look at your own operational procedures and safety programs.**

**As always, your ideas and comments are valuable in improving the Coast Guard's overall afloat safety program. Please share them with your unit Safety Officer, or feel free to contact one of the Headquarters or Maintenance and Logistic safety staff points of contact listed at the end of the report.**

## MESSAGE FROM THE CHIEF OF AFLOAT SAFETY

Thanks for taking the time and interest to review the FY01 Afloat Safety Report. No matter if you're the commanding officer of a major cutter, a small boat coxswain, or a leading non-rate, each of us has a leadership responsibility within our unit and in our service as a whole. In the words of our Commandant, "the safety of our people must always be central to our leadership responsibilities." The graphs and summaries contained within this report are intended to show raw mishap data for the past year and trends when that data is compared to previous years. What I hope to accomplish in this introduction is to fill in what's between the lines and address some of the safety challenges I see potentially facing the afloat community on the horizon.

The adage "You have to go out, but you don't have to come back" has long left the Coast Guard's vernacular. Nowadays, when you do go out, we expect you to come back... and come back in one piece. If this is used as the measure of an effective safety program, than we fell short of the bar last year within the afloat community. Two shipmates who set out on an operational mission failed to return last year when they succumbed to the effects of hypothermia after their small boat capsized last winter. We also came close to losing a third shipmate after he was struck in the head by the propeller of a run-away RHIB after being ejected.

We had a number of close calls last year too. A helicopter crash on deck of a WMEC caused over \$1,500,000 of damage to the airframe and cutter, but miraculously no one was seriously injured. A catastrophic structural failure of a cutter's davit system resulted in nine personnel falling into frigid Alaskan waters before being recovered. Damage to the cutter and the value of the small boat that was intentionally scuttled was in excess of \$200,000, and one shipmate sustained serious back injuries. The potential from death or serious injury is high anytime someone falls into the water, and last year over 70 Coast Guard men and women found themselves unexpectedly in this dangerous situation. Nearly half of this total was as a result of boat capsizings.

Last year's figures were not all doom and gloom. On the positive side, we went another year without a major cutter grounding. This certainly speaks highly of the exacting navigation and seamanship standards maintained within our deepwater fleet. At the very end of the fiscal year, our shore based boat crews rallied in response to increased national security needs and operated at a unparalleled tempo without an increase in major mishap rates.

Looking ahead, the immediate future holds mounting challenges for afloat safety. Certainly the events of last September have had a tremendous impact on our service. As we organizationally search for a new "normalcy," most of our cutters and shored based boat units are being called upon to learn and perform new missions, operate new or unfamiliar assets, execute new tactics, operate in unfamiliar waters and environments, and continue to operate short-handed due to unfilled billets. While the natural reaction of

every can-do Coastie is to meet these challenges head first and then ask for more, pause for a second to think about what you may be asking your crews to do. Practicing Operational Risk Management (ORM) and using risk assessment models may help you quantify, and thus “see,” the increased risk inherent with these new operations and pause to find ways to reduce them.

The potential for serious mishaps involving RHIBs and other similar non-standard boats are of particular concerns. Two years ago, the R&D Center analyzed non-standard boat operations and forecasted three serious mishaps each year in which someone was killed, seriously injured, or the boat was unable to execute it’s mission. It’s amazing how prophetic this report was. Last year we had six such mishaps. The number of groundings and collisions, many occurring at high speed, indicate that not all of our crews may be consistently operating these boats with the highest degree of seamanship. *This is a trend we need to check.* The Office of Boat Forces (G-OCS) will soon be promulgating a Non-Standard Boat Operators Guide. While this will provide much of the doctrine needed to improve the safety of NSB operations, the key to reducing mishaps rests with individual unit leadership.

The number of mishaps, especially personal injury mishaps, which can at least partially be attributed to a breakdown of leadership or supervision, is alarming. We lost hundreds of workdays last year due to people using wrong tools for the job, improperly using proper PPE (or using the wrong PPE/no PPE at all), violating basic safety procedures, or merely *not being told to “pipe down” when engaged in horseplay.* Perhaps this is another example of workforce “junioritis,” a reference to the decreasing work force experience levels. I encourage all unit COs/OINCs and XOs/XPOs to review the safety responsibilities and expected conduct with front line supervisors. After all, if our junior petty officers and officers don’t learn that it is incumbent upon them to monitor the work efforts of their subordinates and immediately correct noted safety or other work related discrepancies, what type of leader will they be when they are the Chief or CO?

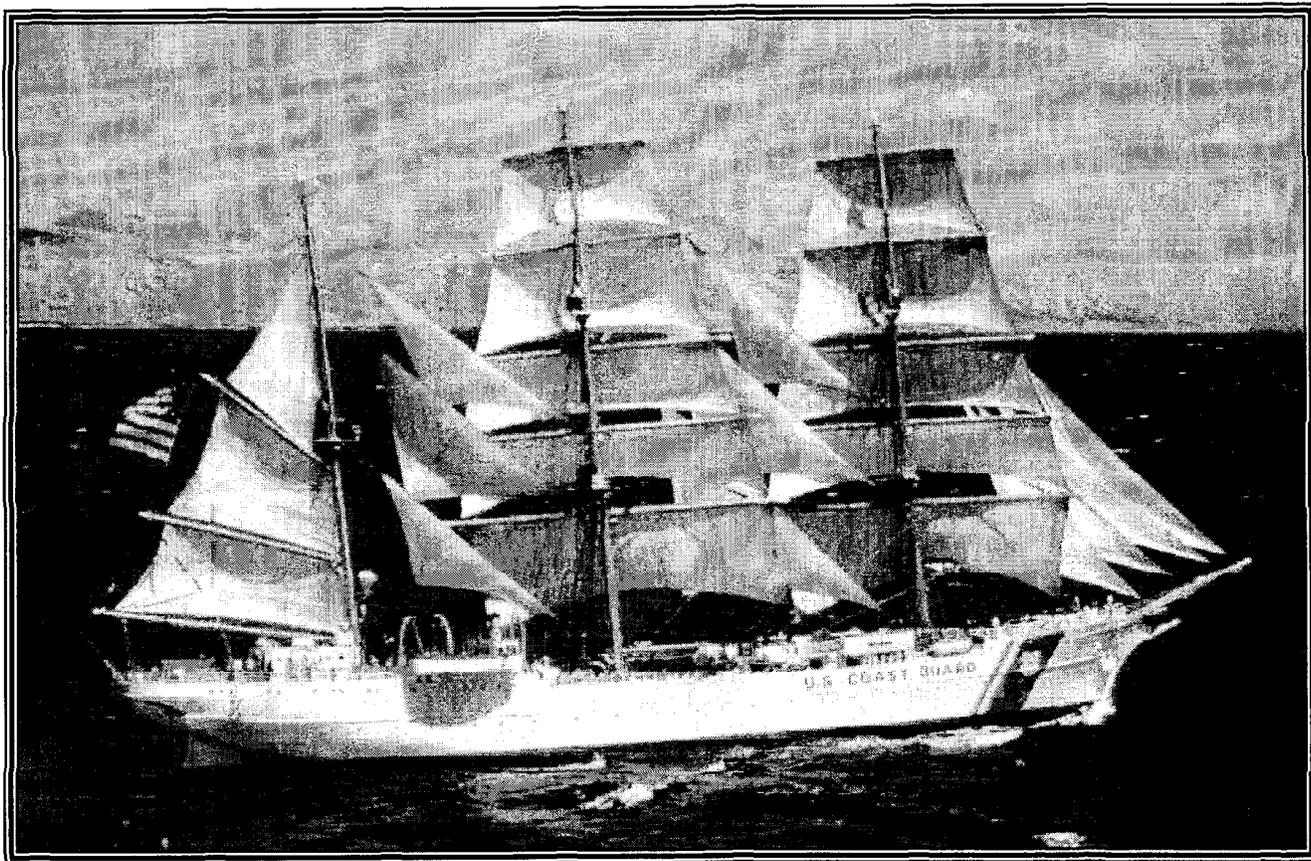
Underway operations, even in the best of conditions, contain an inherent risk, and letting your guard down for even for a second opens the door for an accident. There is no such thing as a “routine mission.” The risk factors for each mission are unique and need to be evaluated as such. Safety is an ALL HANDS responsibility, and the use of ORM and Team Coordination Training are proven tools to identify and resolve potential problems before a mishap occurs. All it takes is one person to speak up to make a difference.

Be safe out there!

Respectfully,

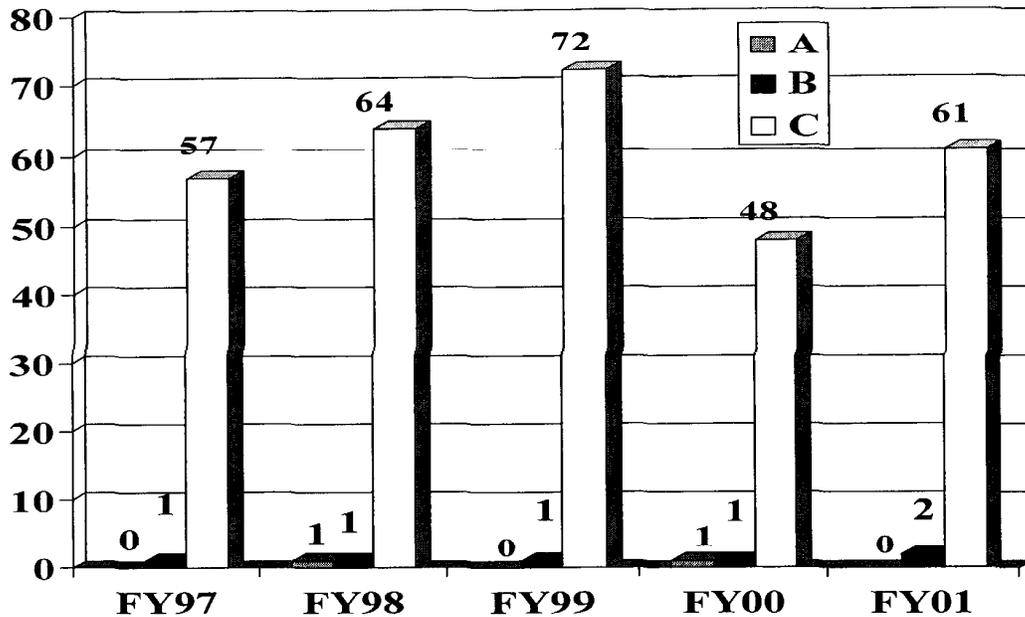
CDR Bob Wagner

# *COAST GUARD*



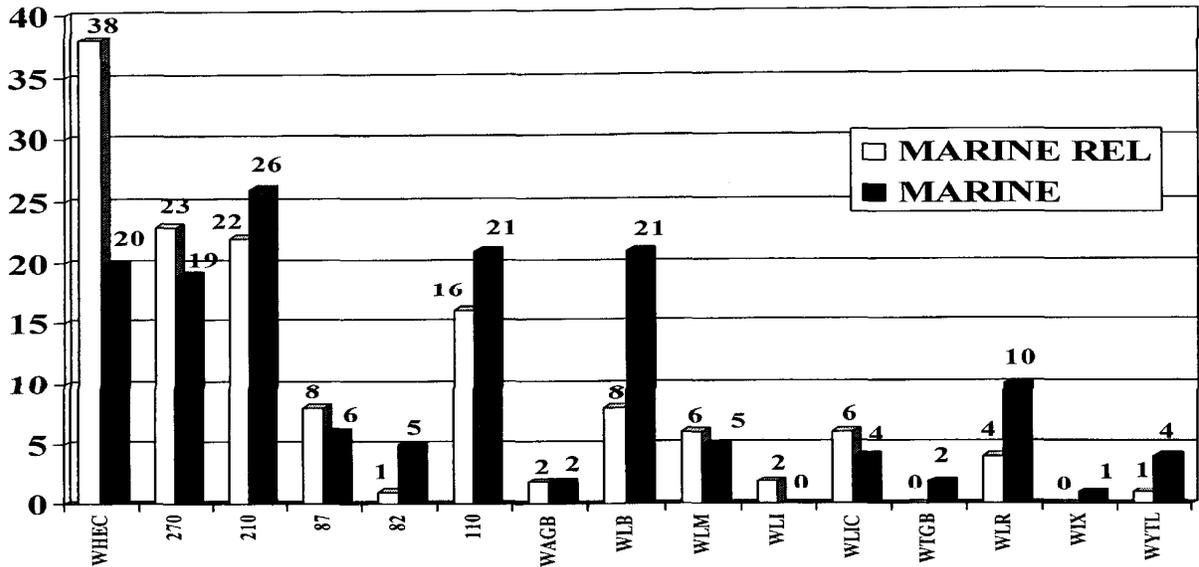
# *CUTTERS*

## *Coast Guard Cutter Operational Mishaps*



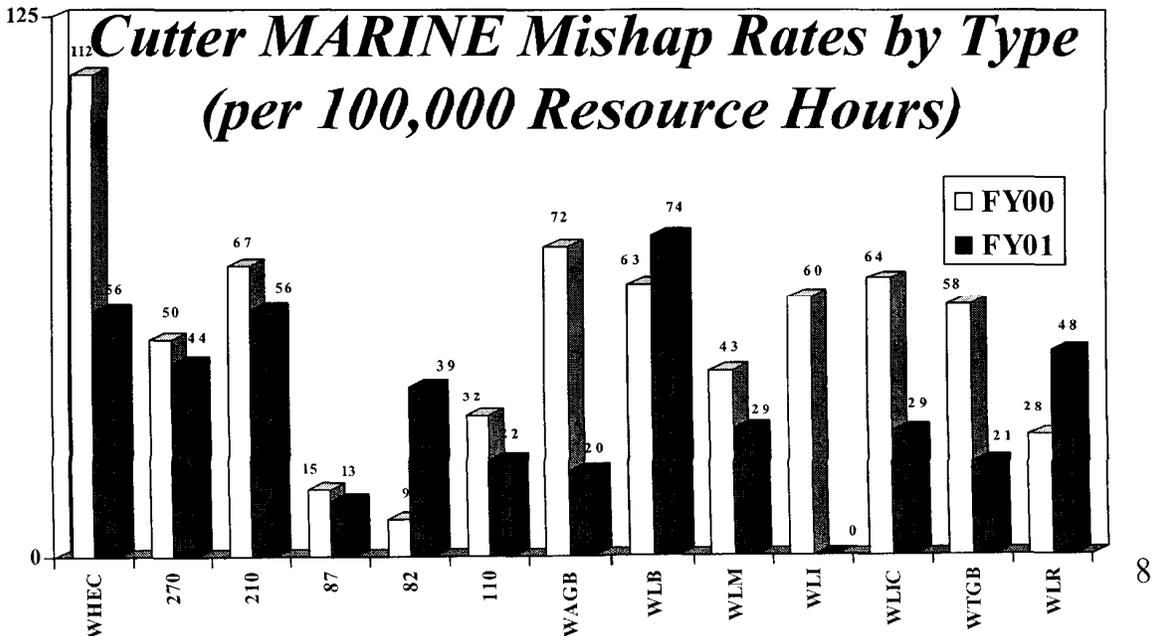
This graph depicts the major (Class A-C) *operational* mishaps reported by our cutter fleet from FY97 to FY01. Excluded from this graph are mishaps that took place while off duty (such as sports-related and motor vehicle injuries) and mishaps that occurred outside of the shipboard environment. Looking at this graph, there was a moderate increase in mishaps from FY00 to FY01. The majority of the *increase* was mishaps involving personal injuries resulting in lost work time. Since the average number of major mishaps over the past five years was 62, the number of mishaps reported last year is not a significant statistical difference.

## *Number of Cutter Mishaps by Type*

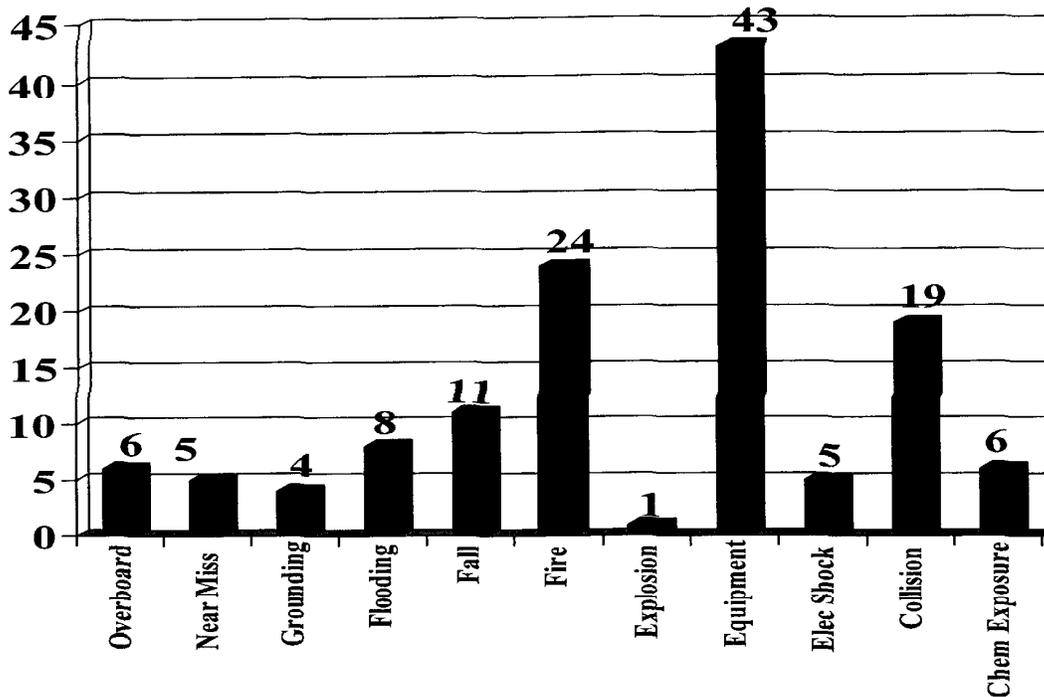


The above graph compares the number of reported Class A-D Marine and Marine-Related mishaps by cutter type. Marine related mishaps are those that occur while the cutter is underway or at anchor and related to the accomplishment of an operational mission. Marine-Related mishaps are those that occur underway and inport but are not related to the accomplishment of an operational mission.

Below, the marine mishaps are computed per 100,000 resource hours for cutter types for both FY00 and FY01. The total number of mishaps in FY01 for all cutter types is similar to the average number of mishaps for the past five years, despite an overall 5.5% increase in resource hours. The result is generally decreasing mishap rates in FY01.



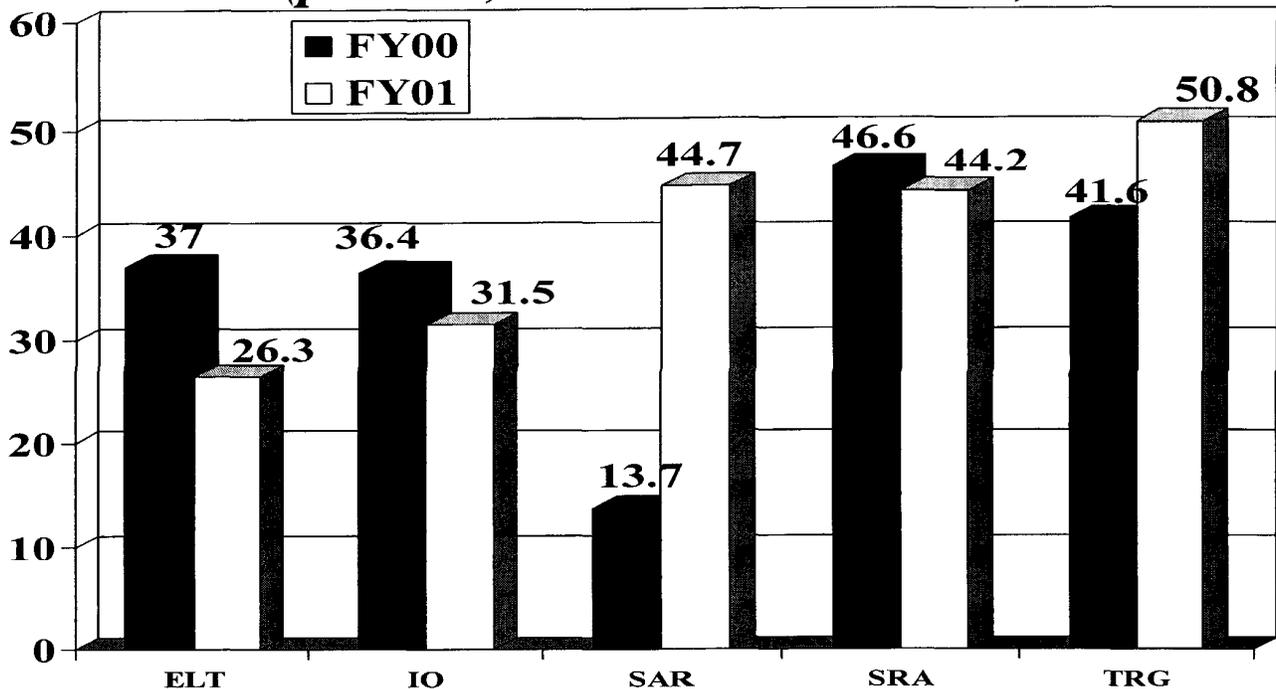
## *Types of Cutter Mishaps*



What types of mishaps are occurring? This graph details the types of mishaps our cutters and crews are experiencing. Aside from equipment mishaps (fouled screws, etc.) fires, collisions (both with fixed and floating objects), and falls occur most often for the second consecutive year. In FY01, the Main Space Fire Doctrine was set 14 times.

Additionally, there were 141 personal injury mishaps reported in FY01. These range from minor ankle sprains to broken bones, torn ligaments, serious burns and head injuries. Many of these mishaps can be attributed to lack of supervision, poor judgment, inattention, and inadequate PPE. Although seemingly inherent with operating in a marine environment, most of these injury mishaps could be minimized through common sense and being attentive to the assigned task. Always keep one hand free for the ship. Wear the right PPE for the job. Pay attention to your surroundings. These seemingly basic tenets of safety, and common sense, can go a long way in reducing injury mishaps to cutter personnel.

## *Cutter MARINE Mishap Rates By MISSION (per 100,000 Resource Hours)*

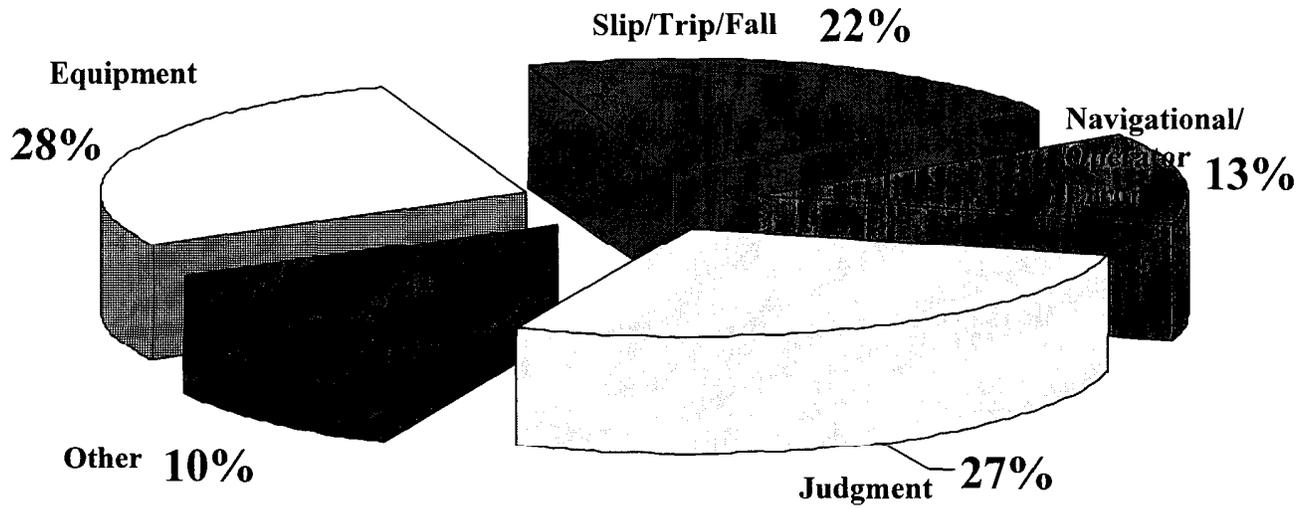


Looking at the mishap rate for cutters, we see that Enforcement of Laws and Treaties, Ice Ops, SAR, Short-Range ATON, and Training comprise the majority of mission types for mishaps. There was a noticeable increase in the SAR-related mishap rate from FY00 to FY01, but this 31 point increase equated to only 4 more mishaps. Compare this to ELT where a 10.7 point decrease translates into 22 fewer mishaps in a years time. Here you can see the effect resource hours have on rates; there were around 13,500 resource hours each year for SAR compared to over 200,000 resource hours each year for ELT.

In addition to the missions you see above, 93 mishaps took place during Maintenance and Repair periods, both in port away from and in homeport. These are not computed as rates since there are no resource hours reported for M+R.

There were 16 mishaps reported as a result of injuries incurred during personnel 'free time' while underway, i.e. horseplay in berthing areas, lifting weights, sports on the flight deck, etc. All of these mishaps were preventable had personnel paid more attention to their surroundings in the ever-changing marine environment.

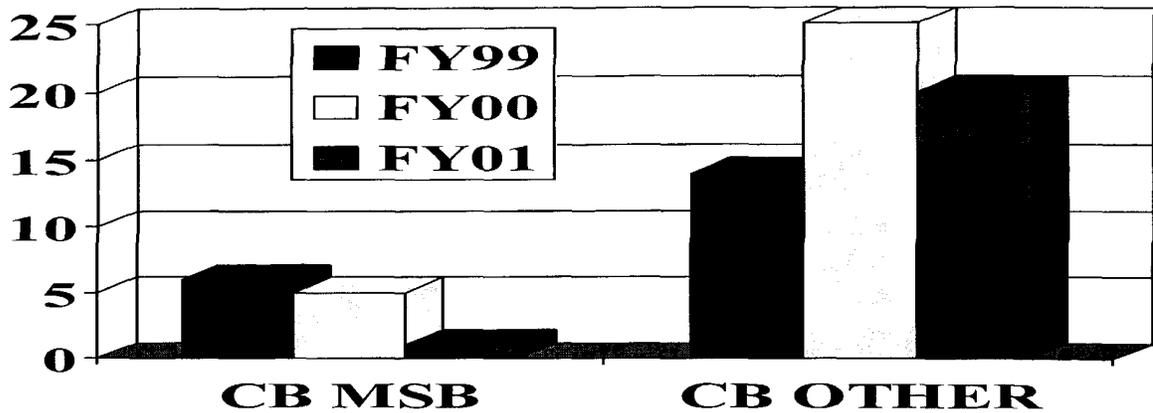
# Causal Factors to Cutter Mishaps



\*62% of cutter mishaps are due to human error.



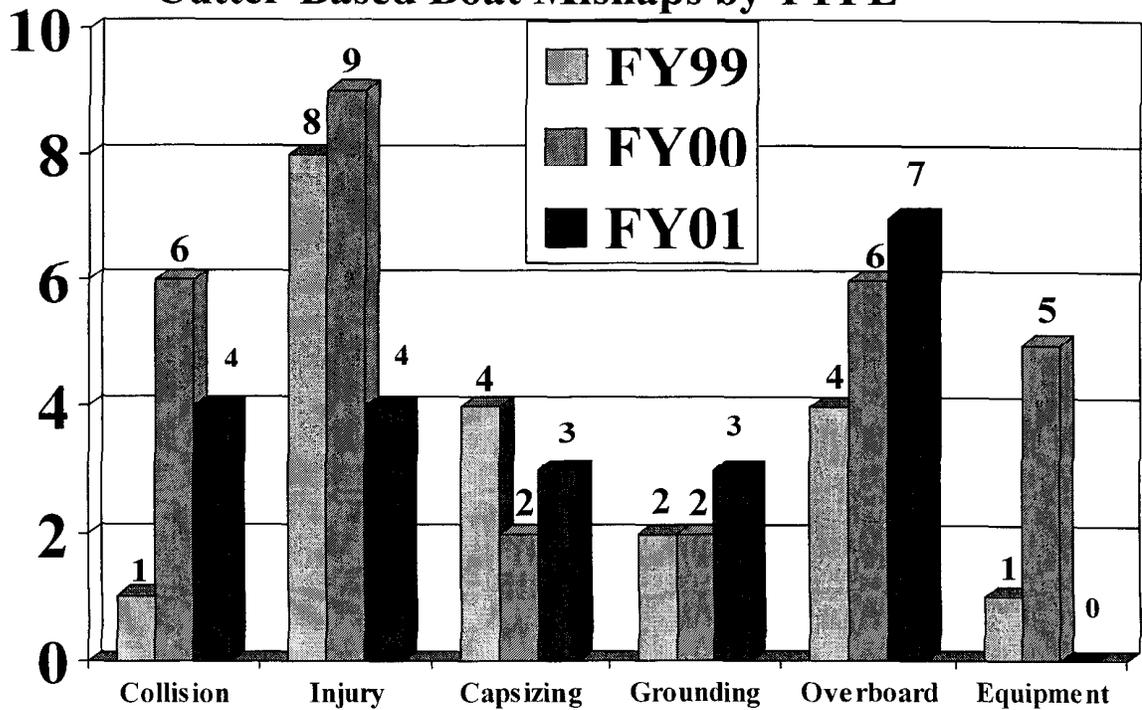
## Cutter-Based Boat Mishaps



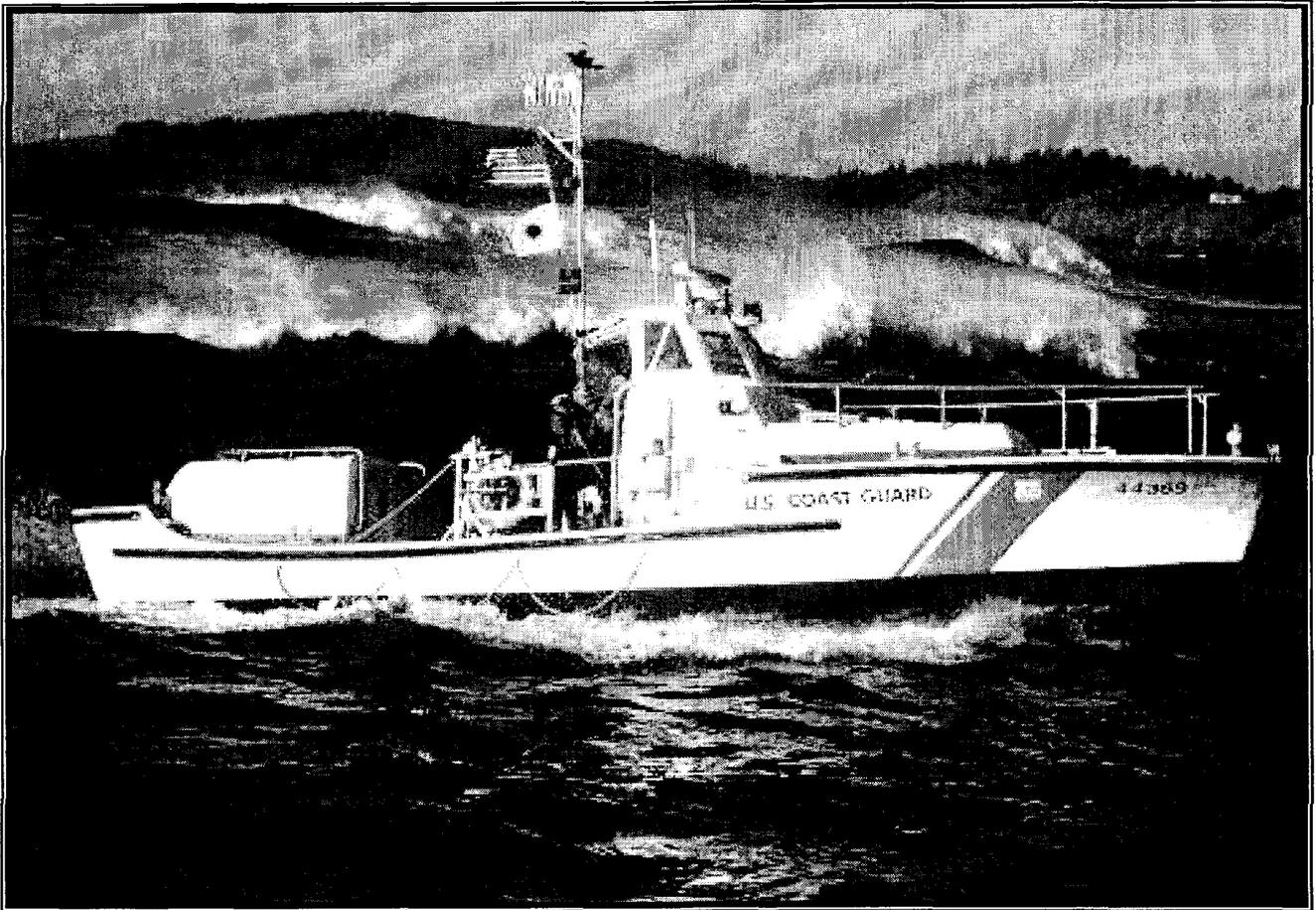
The above graph is a comparison of cutter boats for FY99, FY00, and FY01.

Below, the mishaps are broken down into various "types" for the last three years. A consistent rise in the number of overboard mishaps is of concern because of the increased potential for severe consequences anytime someone unintentionally goes into the water.

## Cutter-Based Boat Mishaps by TYPE

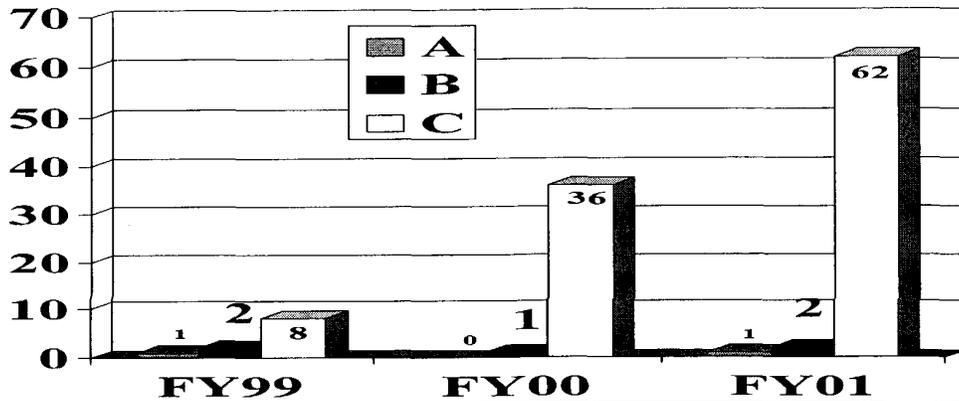


# SHORE-BASED



# BOATS

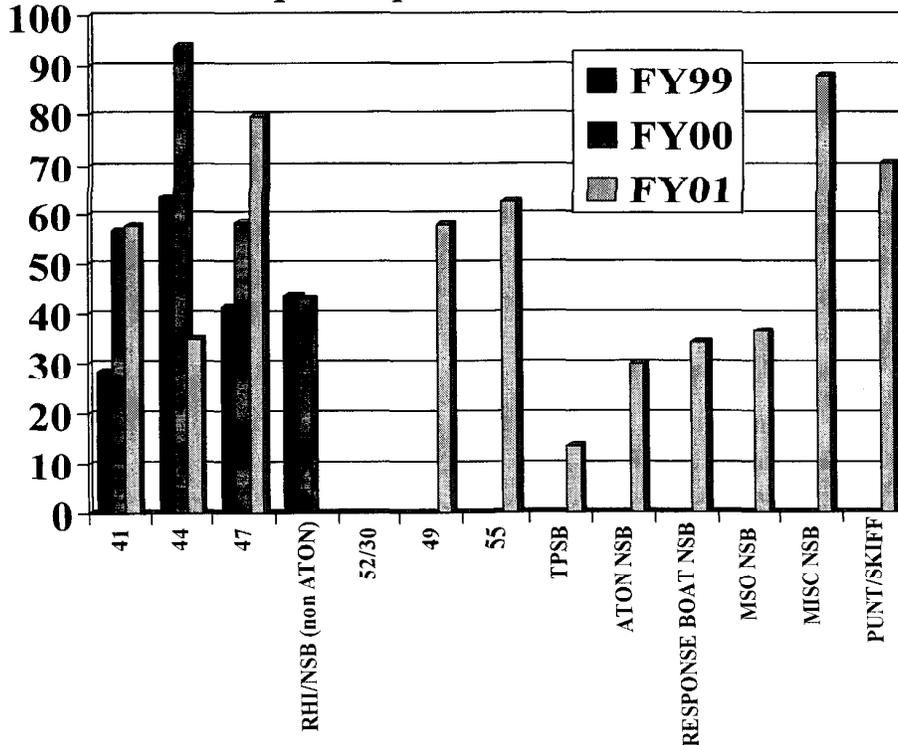
## Number of Shore-Based Boat Operational Mishaps



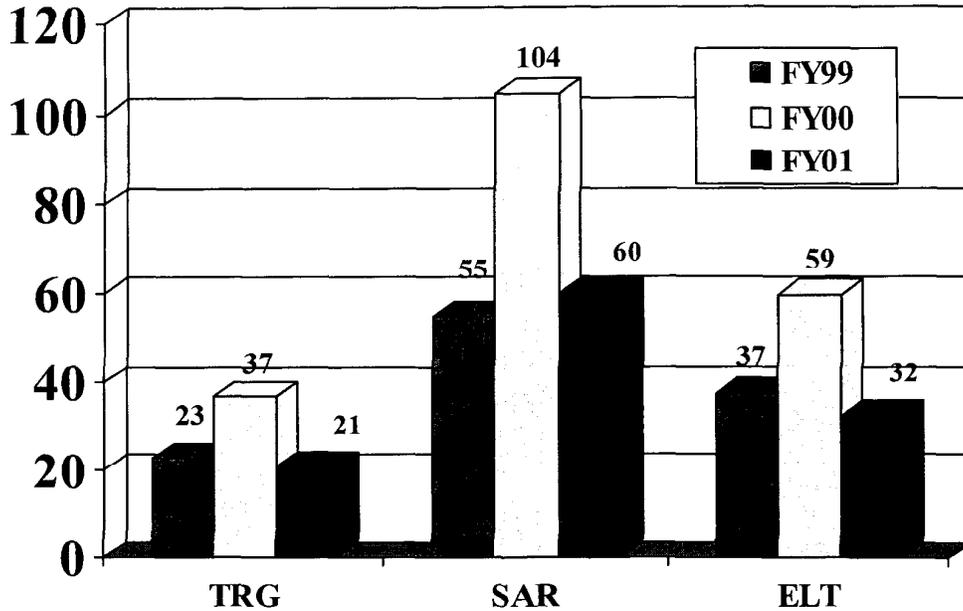
The above graph depicts the major (Class A-C) mishaps associated with Shore-based boat operations from FY99 to FY01. There was a significant increase of class C mishaps in FY01. A sweep of data revealed that many groundings and PIW's were not reported as class C mishaps in the past. The data for FY01 was thoroughly examined to ensure proper classification for all mishaps.

In past analyses of boat mishap rates, all boats other than 41s, 44s, and 47s were lumped into a generic "other" category. This year they have been broken out, and future trend analysis can be done once historical data is established. Rates for 44' UTBs significantly decreased, while mishap rates for 47s have risen consistently over the past three years. This correlates to a rising number of 47' knockdowns... a 80% increase from FY00 – FY01.

## Boat Mishap Rate per 100,000 Resource Hours

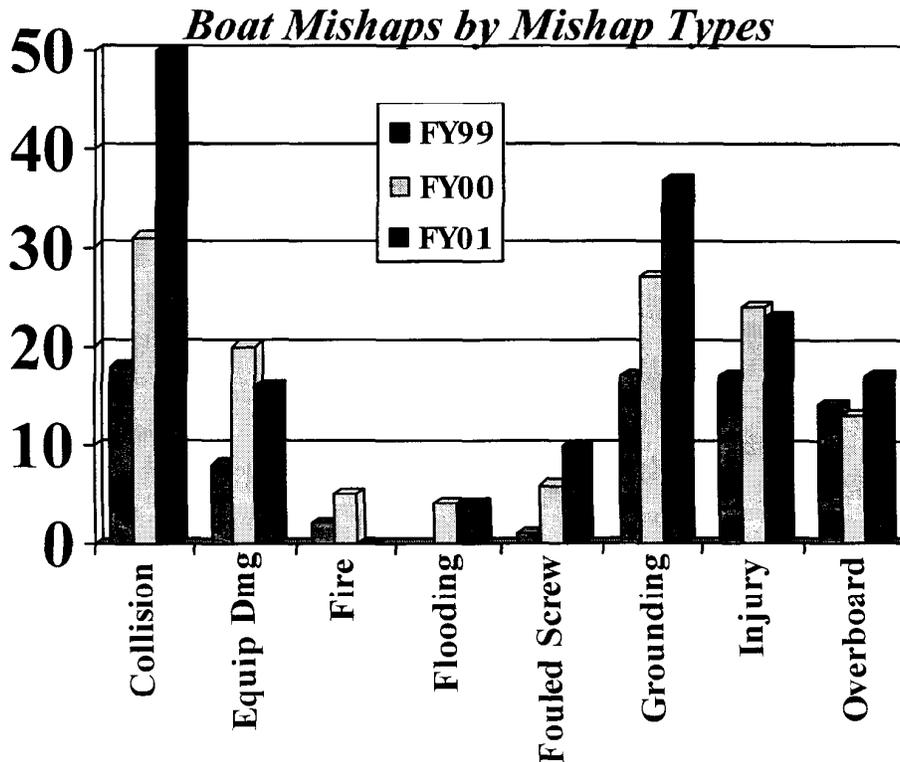


**Boat Mishap Rates by MISSION**  
(per 100,000 Resource Hours)

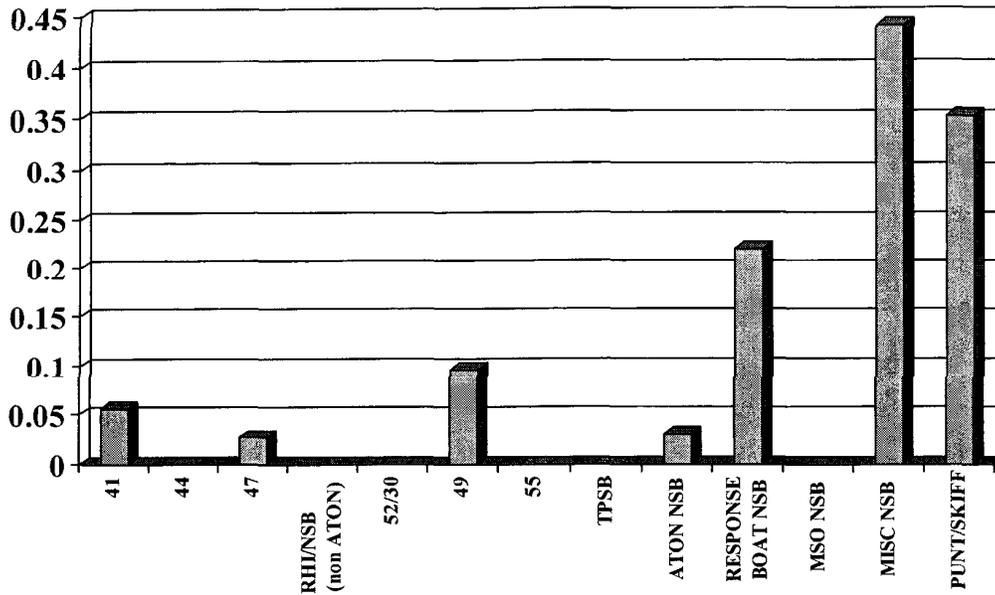


Above is a comparison of the mishap rates for the three most significant missions for shore boats over a period of three years.

Below is a look at the types of Class A-D mishaps occurring. Note the increase in collisions (both fixed and floating objects) and groundings over the past three years.

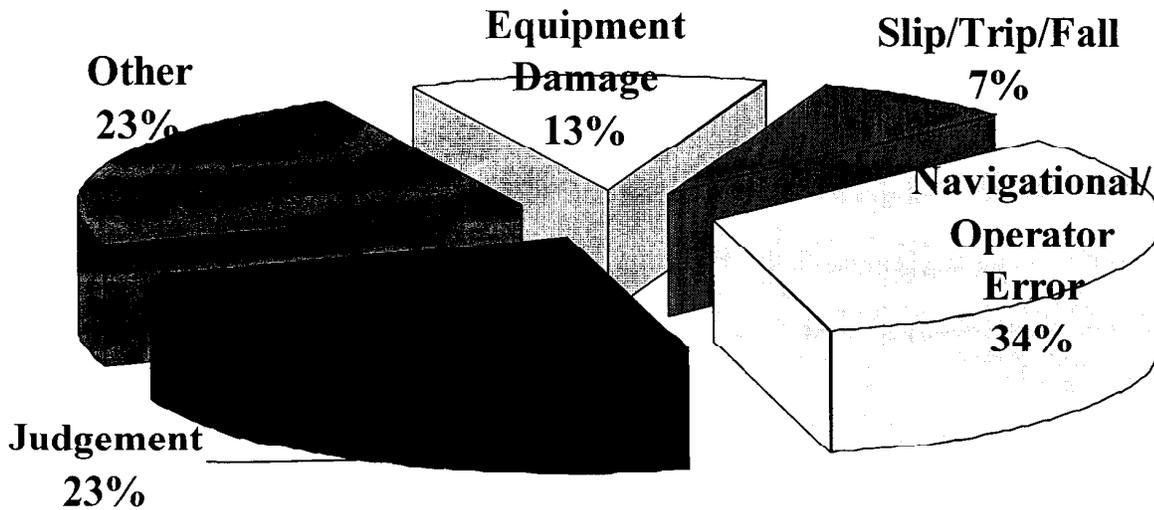


### Overboard/PIW Rates by Boat Type



The above graph depicts the rate of mishaps in which personnel unintentionally enter the water by type of platform. Overall, the rates this type of mishap occurring on a non-standard boat was five times that for standard boats.

### Causal Factors to Boat Mishaps



\*64% of the boat mishaps are due to human error.

## CLASS A AND B MISHAP SUMMARY

Table 1 below summarizes the Class A and B mishaps for boats and cutters for the last five fiscal years. The primary cause of 62% of the serious cutter mishaps was human error. Mechanical and environmental causal factors accounted for the remaining 38% of those mishaps. Human error accounted for the primary cause in 78% of the serious small boat mishaps, while environmental factors accounted for the remaining 22% of those mishaps. Human error was the primary cause in 100% of the cutter and small boat Class A mishaps, and was the primary cause in 54% of the Class B mishaps.

While it is well known that mishaps are seldom the result of a single cause, these statistics clearly show that human error continues to be the leading causal factor. That conclusion underscores the importance of training programs that focus on minimizing human error, such as Team Coordination Training, and implementing those concepts through the Operational Risk Management policy.

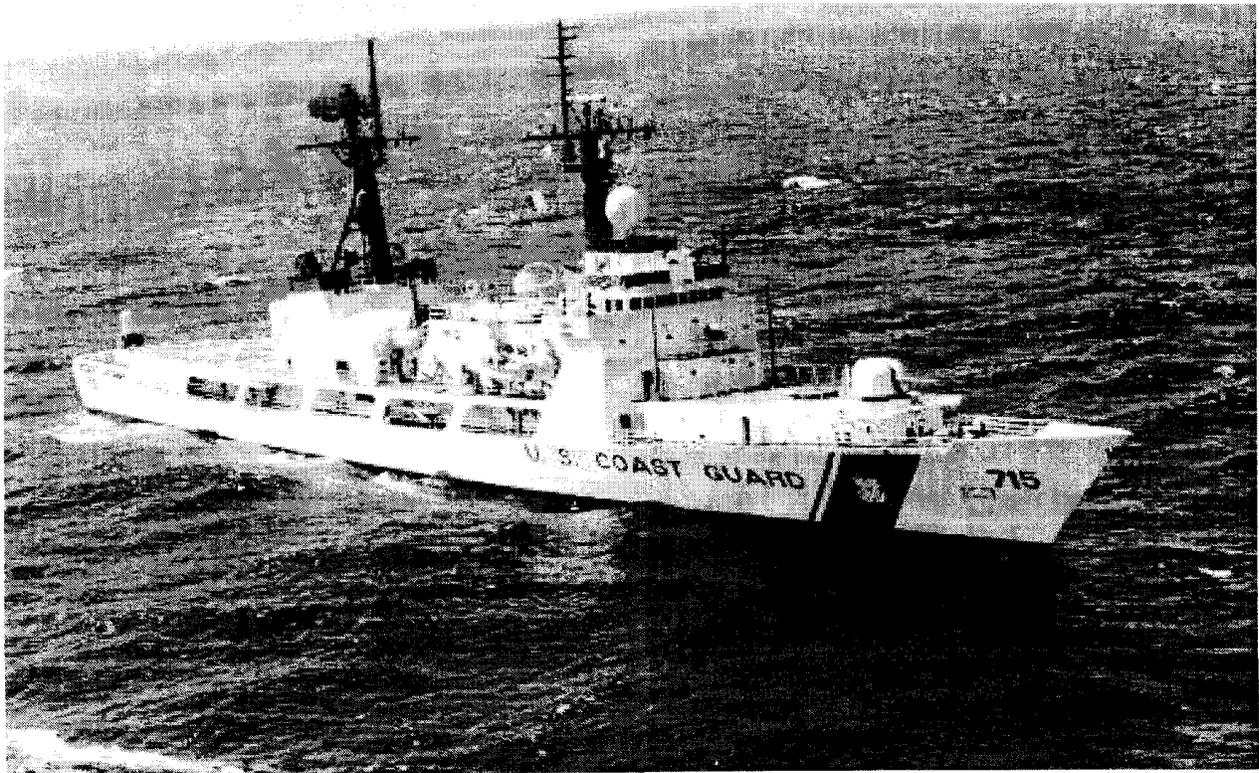
### CLASS A AND B MISHAP SUMMARY FY97 – FY01

DATE	CL	NARRATIVE	CAUSE
02/12/97	A	WHILE CONDUCTING RESCUE OF SAILING VESSEL, 44' UTB CAPSIZED CAUSING THE DEATH OF 3 OF 4 CREWMEMBERS AND DESTRUCTION OF THE BOAT.	POOR JUDGMENT, LOSS OF SITUATIONAL AWARENESS, FLAWED RISK ASSESSMENT.
03/08/98	A	WHILE REPLACING A LIGHT ON A 41' UTB, CG MBR APPEARS TO HAVE SLIPPED, HIT HIS HEAD AND FALLEN INTO THE WATER. THERE WERE NOT WITNESSES TO THIS ACCIDENT. THE DIVE TEAM RECOVERED MBR'S BODY, AND WAS PRONOUNCED DEAD.	DROWNING. THE EXACT CAUSE IS UNKNOWN, BUT NO EVIDENCE EXISTS TO SUGGEST THIS WAS ANYTHING OTHER THAN AN ACCIDENT.
06/11/98	A	CG MBR WAS ALOFT ON THE MAINMAST WITH TOOLS TO PERFORM MAINTENANCE AND FELL APPROX. 100 FT FROM THE RIGGING. NO WITNESSES TO INITIAL FALL. MBR WAS PRONOUNCED DEAD WHILE ON A HELO EN ROUTE TO HOSPITAL.	NO EVIDENCE TO DETERMINE THE EXACT CAUSE OF FALL OR TO SUGGEST THAT THERE WAS ANY FAILURE OF EQUIPMENT OR RIGGING. HUMAN ERROR PRIMARY FACTOR IN THAT MBR APPARENTLY DID NOT PROPERLY CLIP TO A SECURE POINT.
10/04/98	A	DURING SAR RESPONSE, RHI LOST PROPULSION AND CAPSIZED IN THE SURF. BOAT WAS STRANDED FOR MORE THAN 24 HOURS.	ENGINES STALLED DUE TO EXCESSIVE SEA CONDITIONS, RESULTING IN CAPSIZE. BREAKDOWN IN OVERALL DECISION-MAKING PROCESS, LOSS OF SITUATIONAL AWARENESS.
02/24/00	A	WHILE MOORING AT HOMEPORT PIER, WHEC EXPERIENCED 2 FT BY 4-INCH GASH IN PORT SIDE, FLOODING ENG ROOM AND DESTROYING THE GAS TURBINE ENGINE (ESTIMATED DAMAGE OVER \$1M). GASH CAUSED BY PROTRUDING FENDER ANCHOR BOLT.	INADEQUATE PIER FENDERING, CREW FATIGUE, CREW DISTRACTION.
03/23/01	A	WHILE UNDERWAY FOR A MLE PATROL, A RHI STRUCK A WAVE AND CAPSIZED. 2 OF 4 POB DROWNED AND THE SURVIVERS SUFFERED HYPOTHERMIA.	INABILITY TO SAFELY MANUEVER IN EXISTING SEA STATE, SAR DELAY DUE TO VESSEL'S DEVIATION FROM ORIGINAL PLAN, EXTENDED EXPOSURE TO COLD WATER.
05/14/97	B	WLB COLLIDED WITH A 757 FT CONTAINER SHIP IN REDUCED VISIBILITY CAUSING APPROX \$890K IN DAMAGE.	HUMAN ERROR BY THE PILOT OF THE CONTAINER SHIP IN NAVIGATING HIS VESSEL, INCLUDING EXCESSIVE SPEED AND LOSING AWARENESS OF THE EBBING CURRENT DURING THE TURN. POOR COMMUNICATIONS AND NEAR ZERO VISIBILITY CONTRIBUTED TO THE MISHAP.
07/26/98	B	CG MBR PLACED BOILER FUEL CONTROLS IN MANUAL, ALLOWING FUEL TO ENTER THE COMBUSTION CHAMBER WHILE FILLING THE BOILER W/ FEEDWATER. BOILER EXPLODED CAUSING BURNER ACCESS DOOR TO VIOLENTLY SWING OPEN, STRIKING AND INJURING MBR.	FAILURE TO FOLLOW ESTABLISHED PROCEDURES FOR LIGHTING OFF BOILER AND TAG-OUT, LACK OF QUALIFIED SUPERVISION, INADEQUATE DIRECTION IN NIGHT ORDERS.
10/02/98	B	DURING A SAR RESPONSE, RHI WAS STRUCK ABEAM BY A WAVE CAUSING IT TO CAPSIZE. THE RHI LATER WASHED UP ON SHORE WITH ESTIMATED DAMAGE OF \$50K.	SUDDEN, UNANTICIPATED WORSENING OF SEA STATE AND LIMITED VISIBILITY.
11/17/98	B	WHILE AT ATON DETAIL, MBR CAUGHT GLOVED HAND BETWEEN A BLOCK AND WIRE ROPE, SEVERING PARTS OF THREE FINGERS AND CAUSING TENDON DAMAGE IN FOREARM.	LACK OF SITUATIONAL AWARENESS, INATTENTION.
08/22/99	B	TWO TPSB'S COLLIDED NEARLY BOW ON WHILE TRANSITTING CHANNEL IN VICINITY OF CATALINA ISLAND FERRY.	FAILURE TO CONDUCT PRE-MISSION BRIEF, FAILURE TO COMMUNICATE WITH OTHER VESSELS IN THE AREA, FAILURE TO MAINTAIN PROPER DISTANCE FROM THE FERRY AND MANUEVER SAFELY IN THE CHANNEL.

**CLASS A AND B MISHAP SUMMARY (cont.)**

10/31/99	B	CRANKCASE EXPLOSION TO NO. 2 MDE ON WPB WHILE TRANSITTING ON ELT PATROL. ESTIMATED DAMAGE \$414K.	MECHANICAL FAILURE.
03/09/00	B	WHILE DRYING OUT A CRACK IN THE HULL OF A RHI, CG MBR IGNITED GASOLINE FUMES TRAPPED IN THE BILGE, CAUSING THE BOAT TO EXPLODE.	UNFAMILIARITY WITH CONSTRUCTION OF RHI, INADEQUATE TRAINING IN REPAIR PROCEDURES.
10/01/00	B	CG MBR EJECTED FROM RHI AND SUBSEQUENTLY STRUCK IN THE HEAD BY SKEG AND PROP FROM RUNAWAY RHI.	COXSWAIN ERROR CAUSED INITIAL MISHAP OF CREW EJECTION AND RUNAWAY OF RHI; INAPPROPRIATE RISK ASSESSMENT TO STOP THE RUNAWAY RHI.
11/25/00	B	WHILE PREPARING TO LAUNCH A MSB FOR A LE BOARDING, AFT DAVIT ARM SNAPPED, EVENTUALLY CAUSING THE MSB TO ROLL TO PORT AND CAPSIZE AFTER ENTERING WATER. THE CREW WAS EJECTED, BUT SUBSEQUENTLY RECOVERED WITH NO SERIOUS INJURIES. MSB COULD NOT BE RECOVERED, SO IT WAS ABANDONED AND DECLARED A HAZARD TO NAVIGATION.	UNFORESEEABLE METALLURGICAL FAILURE DUE TO METAL FATIGUE OF THE AFT DAVIT ARM.
01/10/01	B	WHILE CONDUCTING A LE MISSION, DPB SUBJECTED TO SUDDEN WX CHANGE. HEAVY WAVE ACTION FLOODED THE ENGINE COMPARTMENT DAMAGING BOTH ENGINES.	WX CONDITIONS, POTENTIAL DESIGN FLAW IN DPB, INATTENTION BY BOAT CREW.
02/10/01	B	WHILE CROSSING THE BAR, VESSELS STERN WAS LIFTED 20 DEGREES BY A SWELL CAUSING BOTH GENERATORS AND MDES TO STALL AND STEERING TO FAIL. VESSEL THEN STRUCK THE JETTY, CAUSING DAMAGE TO THE BOW AND FORWARD AREAS.	PARTIALLY AIR BOUND FUEL SYSTEM DUE TO LOW FUEL LEVEL AND WEATHER CONDITIONS.

**Table 1**



# **AFLOAT SAFETY INITIATIVES**

## **Team Coordination Training**

The Team Coordination Training (TCT) program continues to evolve and improve in response to the needs of program managers and the field. ALCOAST 044/01 established the qualification code "CT" for qualified TCT facilitators who have conducted at least five TCT sessions. The most recent TCT policy change recognizes the TCT taught by the PACAREA Station Training Group as meeting Commandant TCT requirements per COMDTINST 1541.1. The biennial TCT unit-level requirement has been modified to include separate initial (two-day) and refresher (one-day) training sessions, dependent upon unit needs. Certain programs/schools are also recognized for integrating a significant amount of TCT into their curricula, thereby meeting the "initial" training standards. Once the initial training is successfully completed, only the one-day refresher training is required thereafter on a biennial basis. If more than 24 months elapse since the last TCT session, initial training must be repeated. See ALCOAST 574/01 for more details.

Significant progress has been made on the web-based TCT measurement tool. One purpose of this multi-benefit, application-oriented tool is to enable units to take a snapshot assessment of their personnel's ability to apply TCT skills on the job. TCT facilitators and various headquarters, area and district staff members may also benefit by querying the database. This tool supports pre- and post-test assessments and for performance trend analysis. More details are forthcoming, and service-wide implementation is expected by spring 2002.

Most recently, the American Council on Education (ACE) just finished reviewing the TCT Correspondence Course (course # 0652) and recommended 3 semester hours of upper level credit in decision-making and problem solving. The ACE identification number is CG-1406-0011 and is effective for classes attended since March of 1996.

TCT statistics for FY01 are as follows:

- Total number of students receiving exportable, TCT unit-level training (as reported by district administrators and area training teams): 6949 (4099 active duty, 597 reservists, 2253 Auxiliarists)
- Total number of active district TCT facilitators is 98 (does not include area training team instructors).
- The exportable, TCT unit-level training program averaged about \$19.00/quota, which keeps it competitive for limited training dollars.
- Total number of students receiving TCT resident training: 130 (77 Cutter Operations (includes those attending Prospective Operations Officer course), 25 Group Operations, 28 Facilitator course)

Current (as of Feb 02) district TCT administrators (and work phone numbers) are listed below for reference:

D1(reserve):	CDR M. Cicalese	(617) 227-3979
D5(oax):	CWO W. Orvis	(757) 398-6509
D7(oax):	CWO R. Flynn	(305) 415-7053
D8(oax):	CWO B. Barr	(504) 589-6620
D9(osr):	LT N. Novotny	(216) 902-6118
D11(osr):	QMC S. Tierney	(510) 437-5366
D13(cc):	LT R. Howes	(206) 220-7001
D14(osr):	LCDR J. Rendon	(808) 541-2312
D17(oan)	MCPO D. Coffman	(907) 463-2266

Helpful web site information:

- Afloat Safety (G-WKS-4) and TCT/ORM links:  
[www.uscg.mil/hq/G-W/g-wk/g-wks/g-wks-4/index.htm](http://www.uscg.mil/hq/G-W/g-wk/g-wks/g-wks-4/index.htm)

# Operational Risk Management

The Operational Risk Management (ORM) program, as described in COMDTINST 3500.3, continues to flourish. This Instruction provides a standard risk management process to guide all Coast Guard missions and daily activities. The Afloat Safety Division continues to focus its efforts on ORM by facilitating policy implementation, with the help of MLC safety staffs. In essence, our goal is to help units *put into practice* the concepts that programs such as TCT and Crew Resource Management have been *teaching*. Job aids to assist units integrate ORM into their daily missions and activities are included in the ORM link to the Afloat Safety Division web site. Afloat Safety is building a list of ORM “success stories”, built largely from the results of voluntary ORM integration visits into PACAREA by a “tiger team” of Afloat Safety and MLCPAC staff personnel in FY00. This list will be added to our web site by Spring 2002. Similar visits to various LANTAREA operational units were scheduled but put on hold due to the impact on unit availability because of the September 2001 terrorist attacks. Future visits to units interested in this type of assistance are possible, funds permitting. Shore and afloat MLC compliance checklists have also been modified to help the MLCs evaluate ORM integration efforts in the field.



## Common Mishap Discrepancies

### *Failure to use the proper message format*

The format for submitting mishap message reports was changed in June of 2001 and promulgated in change 5 to the Safety & Environmental Health Manual, COMDTINST M5100.47. This change can be downloaded from the G-WKS web-site at the link provided on the last page of the report.

### *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.

### *Failure to include the cost of property damage*

Mishaps have an economic impact on the service... replacement 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. HIPOs range from those events in which nothing short of divine intervention prevent a mishap from occurring to ones in which ORM or strong team skills broke the error chain. Please consider sharing your HIPOs with the field.

## What are the Mishap Descriptions?

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

# CONTACT US

Your comments of this report, how to improve it's content, and any other suggestions concerning the afloat safety program will be greatly appreciated. Please feel free to call, fax, or e-mail (preferred) us with any comments, questions or concerns.

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LCDR Dennis Becker	(202) 267-2965
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## MAINTENANCE & LOGISTICS COMMAND SAFETY POCs

### MLC ATLANTIC (kse)

Mr. Vincent Andreone	(757) 628-4412
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<a href="http://cgweb.lant.uscg.mil/KDiv/kseHomePage.htm">http://cgweb.lant.uscg.mil/KDiv/kseHomePage.htm</a>	

### MLC PACIFIC (kse)

Mr. Kenneth Koutz	(510) 437-5928
<a href="http://cgweb.mlcpac.uscg.mil/mlcpk/SafEnvHlthBran.htm">http://cgweb.mlcpac.uscg.mil/mlcpk/SafEnvHlthBran.htm</a>	



## CASE STUDY PRESENTATION OUTLINE

*"Take warning from the misfortunes of others,  
that others need not have to take warning from your own."*  
Saadi, 13<sup>th</sup> Century

### Objectives & Guidelines:

- Gain practice identifying and applying the elements of Team Coordination Training and Operational Risk Management.
- Remember you are the instructors...quality of instruction depends on you...your classmates are counting on you!
- Everyone in the group should participate and speak.
- Make assumptions if it helps you complete your analysis.
- Be sure to discuss what the class should learn and take away from the case study....what's in it for them!
- Allow no longer than 20 minutes for presentations, with 10 minutes to follow for questions & discussion.

**Available Resources & Accessories:** (you are encouraged to use any of the following media in your presentation)

- Powerpoint
- Handouts
- Dry-erase Board
- Audio-Visual
- Overhead Projector
- Nautical Charts
- Easel

**Steps to a Successful Case Study Presentation:** (use these as general guidelines for conducting your presentation)

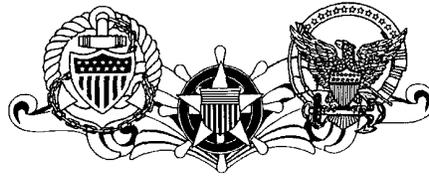
1. **Summarize the MISHAP. DO NOT JUST READ FROM THE CASE STUDY!**
  - Use visual aids to help you paint the big picture for the class
  - Describe the basic Mission
  - Describe the Asset. Any known cutter or crew limitations?
  - Give a short narrative of what happened (news at eleven version)
2. Using either the GREEN-AMBER-RED (GAR) or SEVERITY-PROBABILITY-EXPOSURE (SPE) Risk Models, what is your **evaluation of risk at the beginning** of the evolution? The following questions may help when describing to the class how you evaluated the risk:
  - Supervision: Was there a safety observer designated?
  - Planning: How much planning was involved? Were briefings conducted? If so, who was involved?
  - Crew Selection: Who was assigned? Were they qualified? Experienced?
  - Crew Fitness: Was the crew rested? What was the quality/quantity of rest? What was the stress level?
  - Environment: What was the weather like? Winds, seas, currents? Was it day or night? What was the proximity of other hazards and traffic?
  - Event/Evolution Complexity: Was there clear guidance for the mission or would it require innovation?

3. Describe the events and circumstances **leading up to the MISHAP** after the initial GAR.
4. What things went right in this case? If things went right, why did they go right...was it by accident, or was it planned that way? Emphasize the positive.
5. How well did key personnel maintain situational awareness? Were you able to identify any clues to the loss of situational awareness from the list below? If so, did they have any influence on the MISHAP itself?
  - Confusion or “gut feeling”
  - No one watching for hazards
  - Use of improper procedures (unit or CG)
  - Departure from regulations
  - Failure to meet planned targets
  - Unresolved discrepancies
  - Ambiguity
  - Fixation or preoccupation
6. Using either the GREEN-AMBER-RED (GAR) or SEVERITY-PROBABLILTY-EXPOSURE (SPE) Risk Models, what is your **evaluation of risk just prior** to the mishap?
  - Discuss why the evaluation of risk may have changed from the beginning of evolution to just prior to the mishap.
7. Discuss risk management options.
  - What could have been done to avoid or reduce the risks involved?
  - Would these steps have been likely to affect the outcome of this MISHAP?
  - Did these issues apply to the initial risk assessment?
8. Discuss Risk vs. Gain for this evolution.
  - How well did the risk assessment (High, Medium, Low) match the perceived gain?
    - Low Gain – Situation with intangible benefits or a low probability of providing concrete results
    - Medium Gain – Situation that provides immediate tangible benefits
    - High Gain – Situation that provides immediate tangible benefits that if ignored could result in loss of life
  - How should this comparison affect the unit’s decisions?
9. What were the primary causal factors of the mishap? (*discuss only those that apply*)
  - What were the human errors involved?
  - What slips, mistakes, and errors were committed?
  - What kind of decision making was being made?
  - Was there a loss of situational awareness?
  - Was there a breakdown in communications?
  - Was the team able to adapt to changes?
  - Was there any demonstration of assertive, aggressive, or non-assertive behavior?
  - Was there a breakdown in leadership?
  - Was there equipment breakdown?
10. What is the lesson learned? Discuss the three most important “take-aways” that you want the class to have learned from this mishap.



## **Tips for Successful Public Speaking:**

1. Be Prepared! Know how you will begin your talk and how will you end it! Create a strong introduction and conclusion.
2. Use appropriate gestures. Gestures help you to relax. Moving around helps you to burn off anxiety. Don't hide behind the podium.
3. Make eye contact with your audience.
4. Avoid reading your script.
5. Use correct grammar and enunciation...don't mumble.
6. Beware of distracting mannerisms ("ahhh", "ummm", hands in pockets, rattling change, screen face).
7. Be enthusiastic. Vary your intonation and volume. Use "vocal variety". Be careful not to speak too quickly!
8. Ensure visual aids are timely, easily read and can be seen by all in the room, and effectively translate verbal material into visual terms.
9. Keep your hands out of your pockets while speaking, and avoid rattling change.
10. Keep the other members of your group off to the side or seated while you're speaking. Bring them front and center only when it's their turn.



## Tips for Successful Briefings

1. If it has already been said...don't repeat it! This just wastes time.
2. Make your point once. Too often we say something, someone else will say something similar (but not quite), we repeat what we said so they will understand it better, then someone else says something (but they just don't quite seem to understand what we've said either), so, we repeat it again! There is no need to keep saying the same thing. You're not at the brief to convince anyone that you're right. You are at the brief to say what you observed. Don't worry whether or not you get the last word.
3. Focus on the objectives. Do not allow superfluous information to clutter the brief. Stick to the written objectives.
4. Be factual. State what you heard or observed. Don't speculate on what might have happened...say what did happen. Remember why you're giving the briefings.
5. Don't rationalize. It is human nature to act defensively and want to say why we did something a certain way. When we hear things that we did wrong, do not try to excuse it or defend it. Accept it. Only when you know what you may have done wrong can you begin to do it right.
6. Do you know when you are rationalizing?
  - You begin your sentence with: "I did that because..." or
  - You begin thinking about how to respond to a statement rather than listening to the entire statement.
7. If it can wait until after the brief for you to handle a "one on one" with someone, let it wait. Don't waste the whole group's time with something that is better done after the brief.
8. Have an agenda. Training teams will often have a critique sheet. The critique might include: significant positive events, areas for improvement, emergent training needs, etc. Stick with an agenda and don't stray off the desired path.
9. If you have nothing to say, then say nothing. You do not impress anyone by bringing up points already made, repeating your own points, rationalizing, straying from the objectives, etc. The whole group appreciates it when you speak only when you have something important to say and only when it is needed.
10. Make your point briefly and concisely. If it takes you more than three sentences, you're probably rambling. Many of us are thinking while we are talking, so we go on and on. Think first, then speak briefly. Pause, if you need to, to collect your thoughts.
11. Only one person speaks at a time. Simple courtesy, yet it is imperative to gain group understanding and performance. Side conversations are distracting and rude. If you think of a point while someone else is talking, write it down and come back to it later when it is your turn to talk. Maybe you won't need to bring up the point because someone else covered it.

Revised: 10/30/01

12. Don't argue, and don't complain. The brief is not the time or place for it. Ask for clarification or assist someone when a point really needs elaboration. Once explained, leave it alone. Disagreeing wastes time, produces ill will, and does not get results.
13. Be well organized going into the brief. Provide handouts to all personnel if appropriate.
14. Don't allow interruptions. If it isn't an emergency, it can probably wait.
15. Set a time limit, then stick to it. It's called a "brief" for reason. It's not called a "long".
16. Keep things moving. Be considerate of your shipmates and give them more time by keeping your briefs their absolute briefest.
17. Focus on what to improve on. Avoid using negative terminology. For example, don't say: "We did that wrong...." Instead try: "We can improve the way we did that last evolution...."
18. Be a good listener. Practice listening more than talking. We were given two ears and one mouth...consider using them in that proportion. Think about what the speaker is saying and internalize it. After it has been your turn to speak, keep quiet. Give others a chance before you say anything else.
19. If you are getting bogged down on a point, then table it, and move on. Return to it at a future meeting when you have more time to discuss it and people have had time to research the item.
20. Don't think aloud unless it contributes to the discussion at hand. Thinking aloud can be distracting and time consuming. It is better to think first, then talk only if absolutely necessary.
21. Beware of distracting mannerisms. Working on other projects, taking phonecalls, walking out of the room, drumming your fingers, etc, can all be very distracting acts and can be rude to the person who is talking.
22. Make it routine. Have the briefing take place at the same time, every time, and preferably in the same location. For example, if you debrief one mooring evolution, perhaps you should debrief every mooring evolution.
23. Seniors should consider going last. Personnel are likely to keep things moving to allow the senior person enough time to speak. Allowing junior personnel to speak first lets them feel empowered. If the junior personnel have spoken to all the important issues, the senior individual in the group may be left with nothing to add, other than perhaps: "Good job"...or..."Good briefing". This type of leadership can have long lasting and positive benefits.
24. Focus on what went right! Finding the positive outcome in every evolution is important to our personnel. Positive praise is powerful. Find something that went well, no matter how insignificant. If things went well, discuss why they went well....was it by planning, or by accident?