FY02 AVIATION SAFETY REPORT

The purpose of the Annual Aviation Safety Report is to inform and raise the awareness of Coast Guard aircrew members regarding aviation mishaps. Improving safety awareness is essential to improving operational performance and preventing aviation mishaps. Your ideas and suggestions related to this report or other safety issues are valuable. Please pass them to your unit Flight Safety Officer (FSO) or contact the Aviation Safety Staff at Headquarters (see last page for telephone numbers and email addresses). This report contains fiscal year 2002 mishap information as well as prior year and DOD data for comparison. We hope all can use this report to evaluate our aviation mishap experience and become more involved in mishap prevention.

NOTE: Unless otherwise indicated, only flight mishaps are used for the annual statistics, instead of all mishaps (flight, flight-related and ground). This is the traditional way of reporting annual numbers within the aviation industry. Using only flight mishaps for the annual statistics also eliminates some of the fluctuations in the mishap numbers due to reporting variations. The other categories of mishaps are still important, and are reviewed separately.

THE YEAR IN REVIEW, FROM THE HEADQUARTERS PERSPECTIVE

FY02 should be remembered as one of significant transformation for the Coast Guard. On the heels of the world-changing events of 9/11/01, Coast Guard Aviation began in earnest exploring a variety of operational capability options aimed at expanding Aviation's utility in countering the threat of terrorism. Among other things, these options included enhancement of maritime domain awareness, bolstering airborne use of force/rules of engagement capabilities, and working closely with the surface operations and marine safety communities to facilitate execution of their emerging maritime homeland security duties.

At the same time, the long-awaited Deepwater contract was awarded, effectively lifting the proverbial "cone of silence" between the Integrated Coast Guard Systems (ICGS) contractors and the Coast Guard proper, unveiling in increasing detail the long-term recapitalization plans for Coast Guard assets performing offshore missions (includes all of Coast Guard aviation).

Finally, the fate of the Coast Guard's 36-year tenure within the Dept of Transportation was the subject of debate within the federal government for the entire period, adding another element of uncertainty to an already wary workforce.

Despite the countless trials and tribulations these changes brought upon the Coast Guard, the Aviation community managed to persevere, succeeding in keeping strong focus on safe mission accomplishment. We experienced no Class A mishaps, and only one Class B which, while still under investigation, appears to have been the result of an undetectable material flaw.

TABLE OF CONTENTS

Furthermore, the total cost of flight, flight related, and ground mishaps was the lowest on record since 1985. Having said that, the $4.5 million aggregate of mishap costs still leaves us with a great deal of room for improvement. With emerging aviation missions posing the threat of diluting future training and standardization efforts, we must all remain constantly vigilant to ensure we are properly prepared to carry out our missions, and anticipate and definitively react to the commensurate risks.

Be Safe……CDR Chip Strangfeld
Chief Aviation Safety Division (G-WKS-1)

"0.0" CLASS A MISHAP RATE

Gotta love that heading! No Class A and only one Class B mishap over 108,687 flight hours in FY02. That's three 0.0 Class A mishap rates in the last five years. CG Auxiliary Aviation reported no Class A or B mishaps in FY02 (see Table 1 on the next page for aviation mishap class and category definitions). Note: Aux flight hours and mishaps are not used in figuring CG mishap rates in this report.

The credit for FY02's great mishap rates goes to the women and men of Coast Guard aviation, the hangar deck crews, the flight crews, the pilots, etc. -- each and everyone out there. You are the ones that have worked hard to keep the aircraft flying, to find and fix what's broken. You are the ones that are alert and call "stop" BEFORE things escalate into a more serious event. Thanks to your diligence and efforts, to do the right job right, to be alert and know when things aren't going right, to halt the process and break the chain, we have avoided more serious mishaps.

We must be careful not to become complacent or develop a false sense of security from not having any major incidents. Mishaps this year ran the gamut from ones that should not have happened to ones that could have easily been fatal. If we do not continue to stress safety, standardization, professionalism, and risk management in prosecuting all our daily missions, we cannot expect our present safety record to continue, let alone improve. We are all members of a team where everyone plays an extremely important part.

Safety is a total Command commitment. From the CO down to the hangar deck, every member must adopt the philosophy that safety pervades all we do, and must be considered in all activities. All must be committed to safety, and it must be a part of all aspects of the aviation program.

Everyone is encouraged to question processes and suggest improvements. New ideas are encouraged. A lack of mishaps is <u>not</u> confirmation that all is well. It is an indicator that we are doing our jobs well, but we must continue to look for hazards, identify the hazards, and correct them immediately. Remember as well, that safety is not limited to our job or our mission, but is part of everything we do. Keep up the good work!

CLASS B FLIGHT MISHAP REVIEW

Coast Guard Aviation had one Class B mishap in FY02. During a daytime MH-68A transition course flight, the crew experienced unusual vibrations and oscillations on touchdown from a hover. Upon landing, the vibrations and oscillations increased in magnitude. As the aircraft was shut down, the left main landing gear collapsed outward and the aircraft came to rest on the landing gear housing, left forward float and tailskid. The main rotor and tail rotors did not impact the ground. The crew safety egressed the aircraft. Review of the mishap investigation is still in progress.

NEW CLASS E MISHAP CATEGORY

The Class E mishap category was added in FY02. Class E mishaps are incidents of any cost that involve only engine damage. For the past decade or so, these incidents had been reviewed in annual reports and reported as Flight-Related in an attempt to separate them due to the often high dollar cost of engine damage and for tracking purposes. Generally, the more expensive ones showed up as (Class A or B) Flight-Related or Ground mishaps, and the minor ones were usually reported as Class C or D Flight-Related or Ground mishaps. Change 5 to the Safety and Environmental Health Manual corrected this situation and implemented the Class E mishap.

Beginning with the FY02 report, Class E mishaps will be more accurately accounted for as Flight or Ground mishaps, not as Flight-Related. This allows us to segregate the engine mishaps and review them separately, as well as account for them in a more appropriate method. The Class E Mishap analysis section on page 9 provides more details.

ANNUAL RECAP

Table 1 displays aviation mishap class and category definitions. **NOTE:** Table 1 reflects the new Mishap Class definitions promulgated in CH5 to the Safety and Environmental Health Manual COMDTINST M5100.47 (series).

Flight mishap costs for FY02 were $4,139,369, down from last year, but slightly elevated from previous years as can be seen in Figure 1 on pages 4. The new Class E (strictly engine related) mishaps account for some of the increase in annual Flight mishap costs. Flight Class E mishaps accounted for $1,746,686 of the FY02 total. Table 2 (next page) displays mishap data for FY02. Figures 1 and 2 display mishap cost data for the last ten years for Flight Mishaps only and for Total Aviation Mishaps (Flight, Flight-Related and Ground).

Total aviation mishap cost (Flight, Flight-Related and Ground) for FY02 was $4,517,928, down over 50% from last year, and still below the late 80's and early 90's total mishap costs (see Figure 2 on page 5). Of the 286 aviation mishaps reported this year, there were 63 ground and 27 flight-related incidents reported. The Class ABC flight mishap rate (per 100 flight hours) has fallen in the last decade from 0.08 in FY93 to 0.02 in FY02, and has been below 0.05 for the last six years. Figure 3 on page 5 displays our Class A Flight mishap history along with total flight hours since 1956. Figure 4 on page 6 displays the Coast Guard aviation Class A flight mishap rates for the past fifteen years. Finally, Figure 5 on page 6 provides a comparison of Coast Guard aviation Class A Flight Mishap Rates to the other military services.

MISHAP CLASS COST BREAKDOWN

FY02-

Class A $1,000,000 or greater or death
Class B $200,000 to $999,999 or serious injury
Class C $20,000 to $199,999 or minor injury
Class D Less than $20,000
Class E Engine damage only, regardless of cost

FY89-FY01

Class A $1,000,000 or greater or death
Class B $200,000 to $999,999 or serious injury
Class C $10,000 to $199,999 or minor injury
Class D Less than $10,000

MISHAP CATEGORIES

Flight Mishaps--Mishaps involving damage to Coast Guard aircraft and intent for flight existed at the time of the mishap. There may be other property damage, death, injury, or occupational illness involved.

Flight-Related Mishaps--Mishaps where intent for flight existed at the time of the mishap and there is **NO** Coast Guard aircraft damage, but there is death, injury, occupational illness, or other property damage.

Ground Mishaps--Mishaps involving Coast Guard aircraft or aviation equipment where **NO** intent for flight existed and the mishap resulted in aircraft damage, death, injury, occupational illness, or other property damage (e.g., towing, maintenance, repairing, ground handling, etc.)

Auxiliary Aviation Mishaps--Injuries or property damage sustained by an Auxiliarist while under official orders.

NOTE: Dollar values of mishap costs are actual annual costs -- not adjusted for inflation.

Table 1

MISHAP REPORTING

One of the great things about Coast Guard aviation is the safety culture, a culture with a positive attitude towards reporting mishaps, and one that learns from its experiences (and mistakes). We benefit from a vigorous and candid safety reporting and tracking system. Honest and open reporting is essential if we are to retain a healthy safety culture. Reporting mishaps that share close calls and lessons learned, and pass on what happened and what was done to reverse the action or prevent a recurrence are all important parts of preventing future mishaps.

When incidents are not reported, only the few directly involved learn from it. Reluctance to report is understandable. It may at times seem a waste of time and effort, or too embarrassing to "air dirty laundry", but this is a key strong point of the aviation culture. As hard as it sometimes is, it is the reporting and discussion of those small, seemingly insignificant events that may keep a similar incident from progressing to a crash, injury, or fatality. If your mishap report helps prevent a more serious incident, it will have been well worth the effort required to generate it. Also, each incident should serve as a warning that prevention efforts may need to be intensified.

We have a deeply engrained desire to learn from our mishaps -- it's our way of life, and a way to stay alive. In the interest of mishap prevention, loss control, mission readiness, and most important, the protection of our people, it is a vital

part of our effort in preventing mishaps. It is more palatable to share many lessons learned than to suffer and investigate just one Class A or B mishap. Remember, there is no such thing as "just a Class D" -- you may just have 'dodged the bullet' this time.

	FLIGHT	FLT-REL	GROUND	TOTAL
CLASS A MISHAPS	0	0	0	0
CLASS A COST	$0	$0	$0	$0
CLASS A RATE	0.00	0.00	n/a	0.00
TOTAL MISHAPS	196	27	63	286
TOTAL COST	$4,139,369	$35,716	$342,843	$4,517,928
TOTAL RATE	0.18	0.02	n/a	0.26
COST/MISHAP	$21,119	$1,323	$5,442	$15,797
A/B/C MISHAPS	18	2	4	24
A/B/C COST	$1,862,320	$18	$205,424	$2,067,762
A/B/C RATE	0.02	0.00	n/a	0.02
COST/MISHAP	$103,462	$9	$51,356	$86,157

Table 2

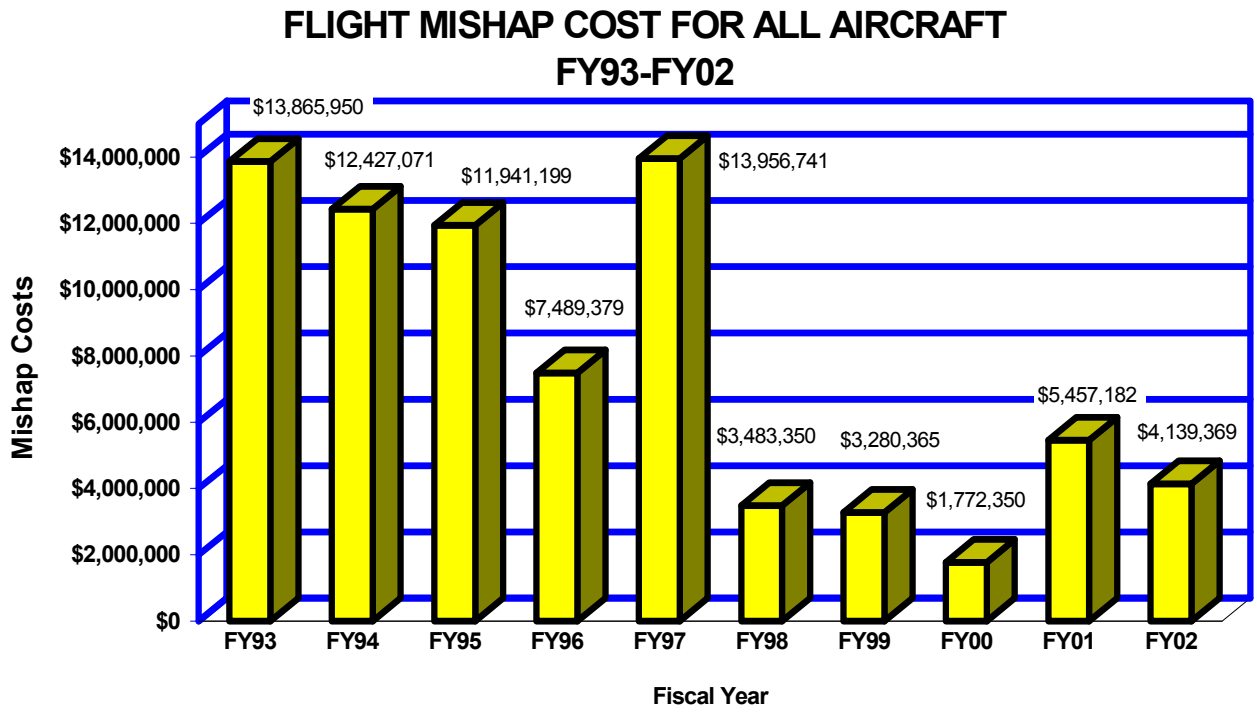

Figure 1

TOTAL MISHAP COSTS FOR AVIATION MISHAPS
FY92-FY01
(Flight, Flight-Related & Ground)

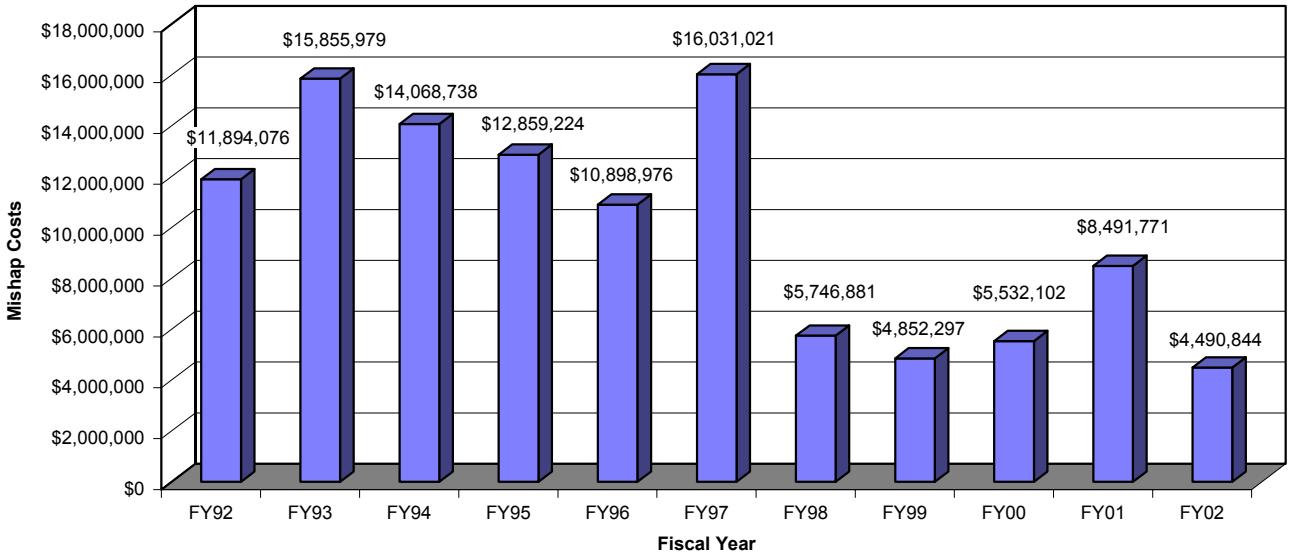

Figure 2

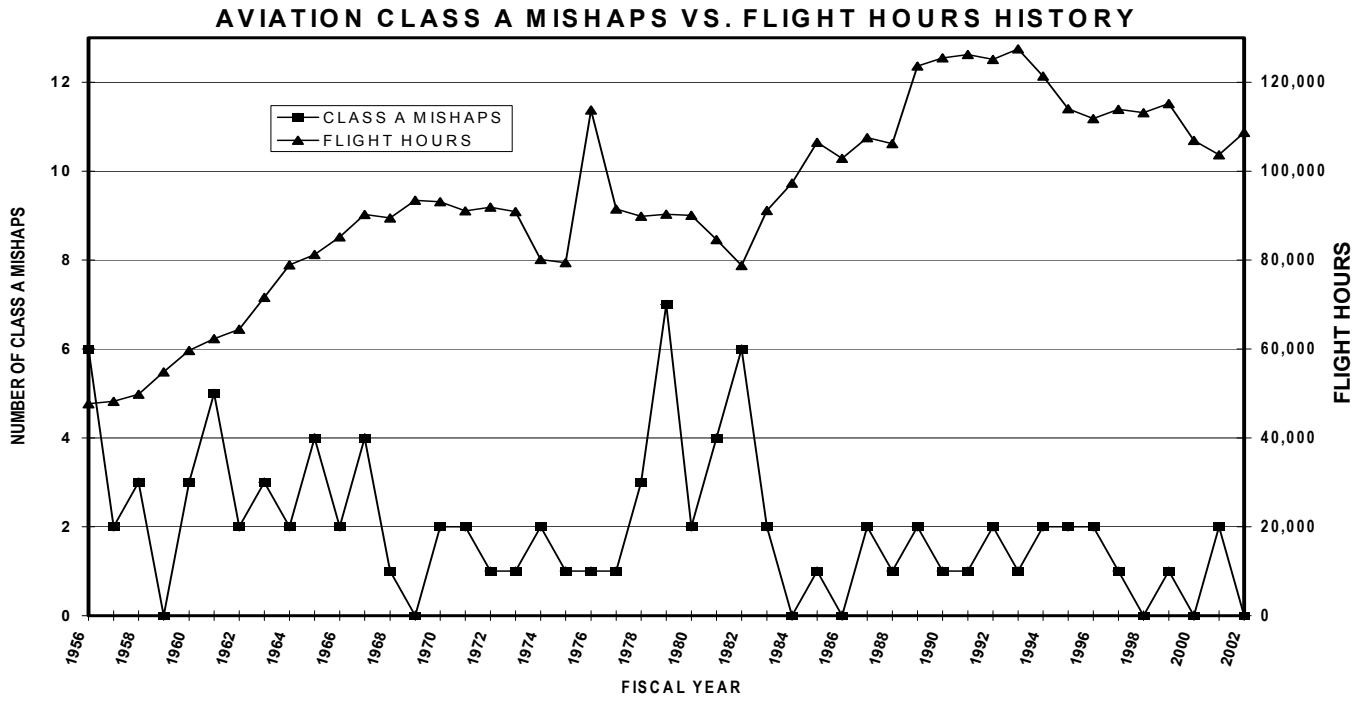

Figure 3

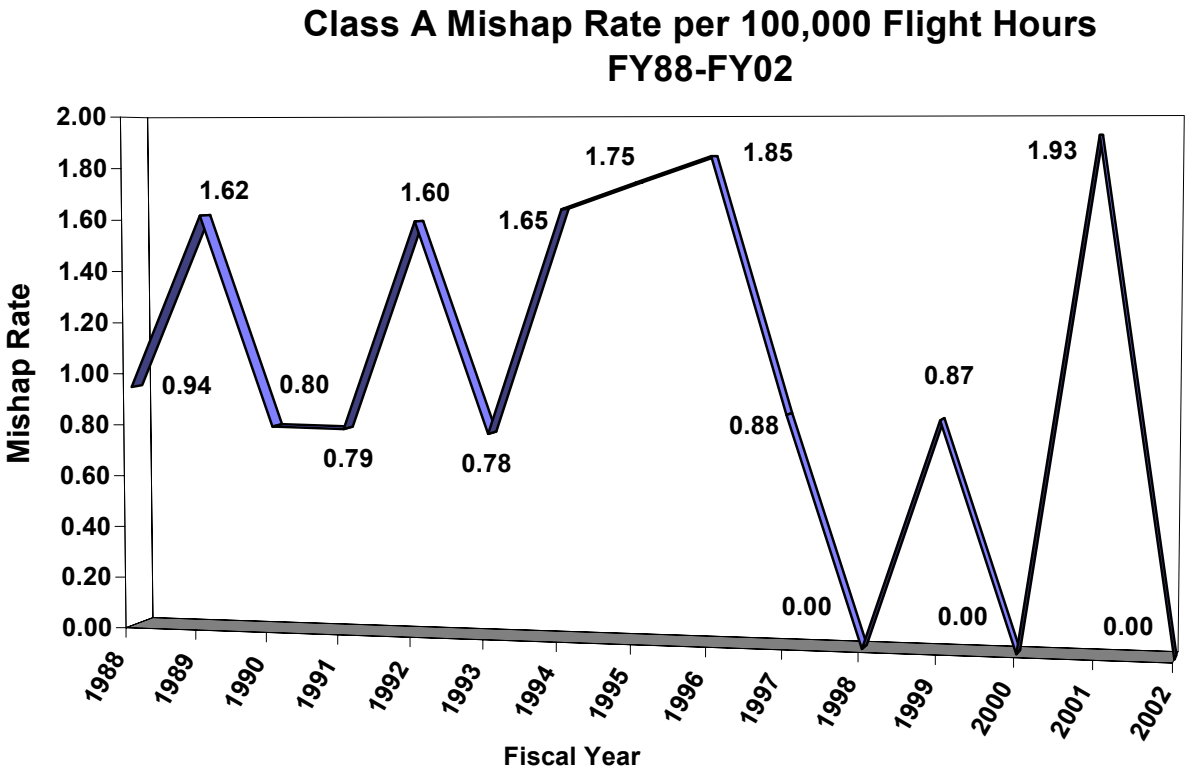

Figure 4

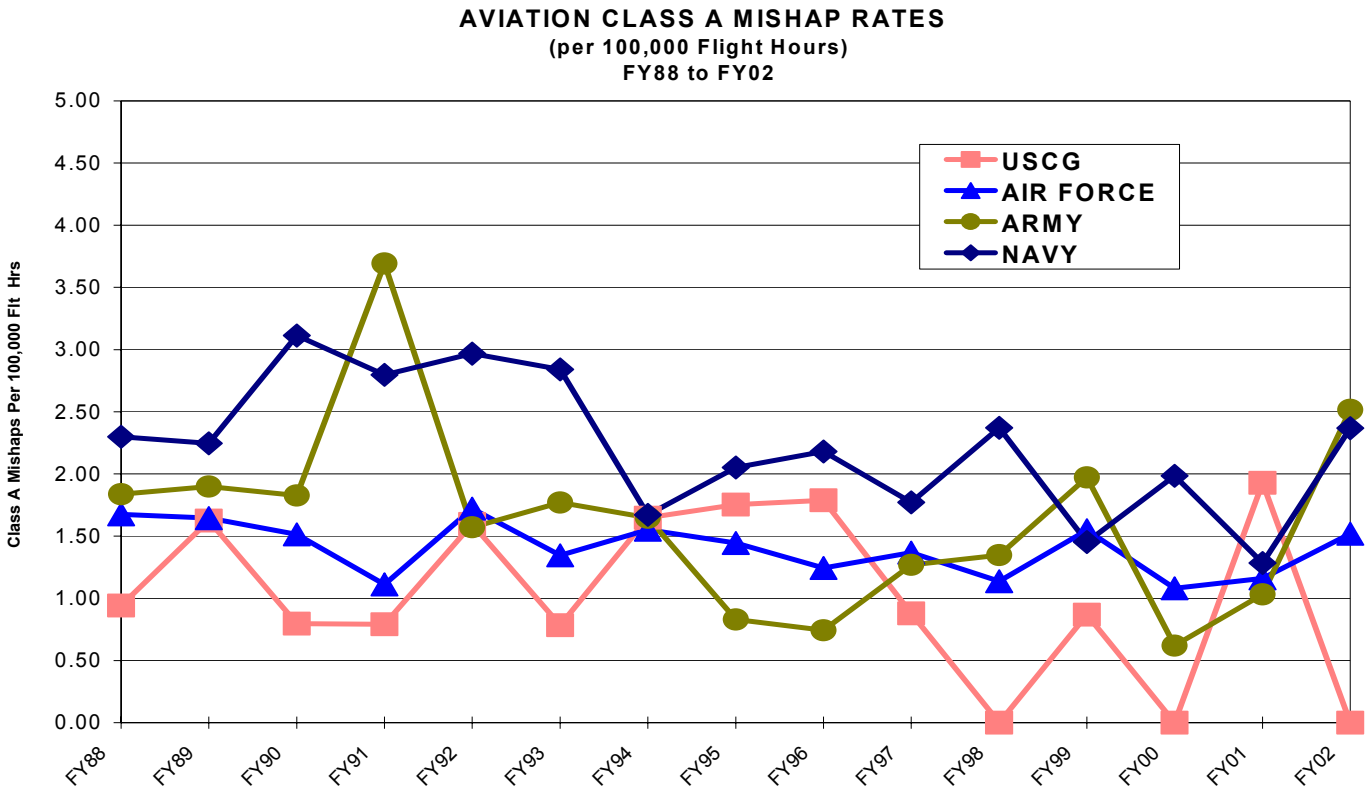

Figure 5

MAINTENANCE RESOURCE MANAGEMENT

The continued goal of the Maintenance Resource Management program is to improve operational readiness at aviation units by conserving human resources, equipment, and funds through a reduction of human errors in the maintenance evolution that can lead to maintenance-related aviation mishaps. The following summarizes where we are now with MRM and where we are going in the future.

Congratulations to all Aeronautical Engineering departments and the MRM Instructor cadre. Due to everyone's diligence, MRM Initial training has been successfully implemented across the fleet. Meeting the June 2002 100% training mandate, during a period of high operational tempo and significant change in the Coast Guard was a highly commendable feat. 'Hats off' to ATTC also -- MRM Initial Training is now an integral part of "A" school instruction and is taught at both ATTC and Spartan Aviation.

Following fleet survey results, we've established MRM training requirements similar to CRM requirements. ALMIS codes now reflect MRM Initial, MRM Training, and MRM Instructor Qualification (IQ). The "MRM Training" code represents the biennial MRM Refresher requirement. The MRM Instructor Qualification is valid for three years. MRM instructors can maintain their currency beyond the three-year mark by completing a follow-on MRM IQ course.

The implementation of MRM principles in commercial aviation has significantly reduced maintenance error, and in theory, implementation within the Coast Guard should reflect similar positive results. Review of FY02 maintenance related mishap data (Figure 6) provides some very positive evidence to that effect. The cost of MRM mishaps during FY02 dropped almost 50% after a huge drop in FY01, and the overall number of MRM mishaps decreased by 4%.

Now a question that may come to mind is, if the costs have dropped 50%, shouldn't the percentage of MRM type events also show a greater decrease than just 4%? Yes and No. Yes, if the cost of every MRM mishap were constant, but they're not. No, if we're catching events (breaking the links in the chain) before they become high dollar mishaps. Last years database indicates a significant decrease in high dollar maintenance related mishaps. Well done!

Laying the foundation with MRM training is essential to reducing the impact of human error during the maintenance evolution. Industry has seen the greatest success when MRM training is linked with trending causal factors and tracking the success (or failure) of error reduction strategies. Our goal is to keep pace with industry advances.

Future plans are to continue existing MRM training efforts (MRM Initial, Refresher & Instructor Qualification) while pursuing development of an MRM "Senior" course for E-6's and above. The "Senior" course will focus on the unique leadership challenges that aviation maintenance supervisors face. (To reduce training requirements, "Senior" course attendance would satisfy general MRM refresher training requirements).

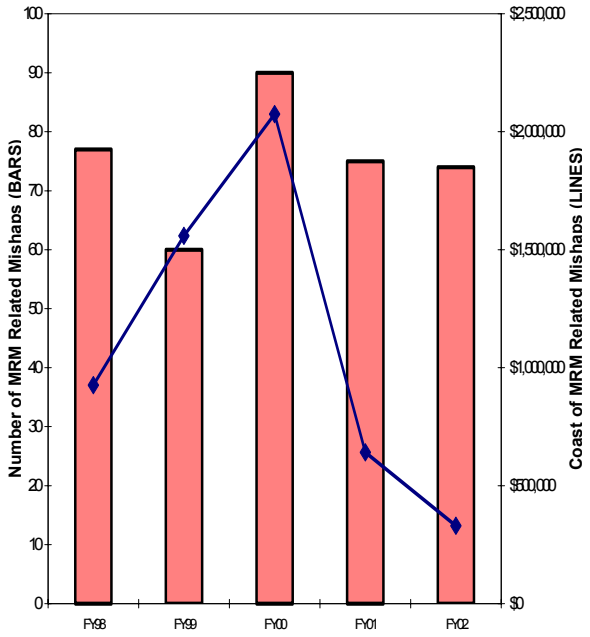

Figure 6

MAINTENANCE ERROR TREND ANALYSIS

MRM events are costly -- AVIATRS, the aviation mishap database, indicates the average for the past five years is $1.1M per year. The true costs are even greater, often three to four times greater. Mishap cost figures do not reflect the indirect costs or the man-hours associated with supervisory oversight such as QA inspections, rescheduling efforts both in Aeronautical Engineering and Operations departments, and the mishap investigation efforts themselves.

Additionally, the reported events captured in the AVIATRS database do not represent the full spectrum of maintenance related incidents. Using the iceberg analogy, reported MRM mishap events represent what lies above the waterline. We intuitively know that Class C and D mishap

reporting prevents Class A and B mishaps. Yet currently, despite the promise of more serious mishap prevention, air stations are not reporting many of the more minor human error events that do not directly lead to a mishap, perhaps due in part to the staff effort required to generate a mishap report.

Maintenance Error Trend Analysis (META) is an error investigation process, trend analysis and database tool designed specifically for Aeronautical Engineering use that provides a simpler means to track and act on those human error events that lay 'below the waterline' without directly leading to a mishap. META assists with identifying contributing factors (human error and otherwise) to aid in the development of error reduction strategies. It's the logical growth of MRM training. MRM training raises our awareness of the impact of human factors on the maintenance environment. META provides the tools to determine the "how", "why", "frequency" and "costs" associated with minor human error in the maintenance evolution.

META aids in analyzing and measuring the "cause & effect" impact of unresolved links or contributing mishap factors (cultural or systemic). Armed with the how and why, META data would enable the development of targeted measures to mitigate the casual factors and/or to reduce the potential consequence of human error. META further provides the database to capture and articulate the "total realized" costs associated with MRM events. In today's fiscal climate, it is difficult, if not impossible, to make a business case for a need when there isn't adequate data to support the request. META would capture this data.

WKS-1 is evaluating prototype META efforts within the Coast Guard, as well as already successful META examples in the commercial aviation industry. If a standardized META program emerges as a worthwhile and viable option for the Coast Guard, MRM could evolve to an Aviation Maintenance Risk Reduction (AMRR) Strategy that might build on the MRM program with the addition of a META tool, coupled with staffing of personnel (initially at larger air stations) to manage the overall AMRR effort.

Early indications suggest that META has good potential. However, it is only as good as the data that goes in, and requires effort to evaluate the data and develop sound error reduction strategies and recommendations. G-WKS-1 continues to pursue dedicated funding to support this effort, which holds the promise of markedly reducing human error and the costs associated with those errors, and could ultimately lead to work place efficiency, improved aircraft availability, and enhanced safety of operations.

AVIATION SAFETY POSTGRADUATE TRAINING

G-WKS-1 successfully competed for a dedicated, postgraduate Training Allocation Billet (TAB) for assignment year 2004. G-WKS-1 identified four key (coded) Aviation Safety billets and presented a compelling argument linking the description of duties with a need to possess postgraduate education in Safety Science (it certainly didn't hurt our efforts to have voting members from G-OCA & G-SEA on the TAB Peer Evaluation Group). The coded billets include FSO billets at ARSC & ATC Mobile, and the two Aviation Safety Program Managers at G-WKS-1 (the FSO billets are operational flying billets, and the G-WKS-1 billets are DIFPRO). Earning a dedicated TAB for '04 is a big victory for the Aviation Safety Program. It literally "gets our foot in the door" and moves us a step closer towards our goal of establishing an annual allocation trend. An annually recurring TAB provides a graduate to fill each of the four Aviation Safety coded billets as they become available through the normal assignment process.

The degree program we've chosen to fulfill our TAB is the Master of Science in Safety Science (MSSS) offered by Embry-Riddle Aeronautical University at Prescott, AZ. The MSSS arms the graduate with the knowledge and skills to lead and manage a comprehensive industrial and aviation safety program. We chose ERAU because their program provides a balanced emphasis on industrial safety, safety program management, and risk reduction/loss control strategies -- all with a keen focus on the aviation environment. For complete degree information visit: http://www.erau.edu/0Universe/01/01ma-safetyscience.html

Our target audience for the Aviation Safety TAB will be O-2 & O-3 Aircraft Commanders that are tour complete in 2004. Prior experience as a Flight Safety Officer or Ground Safety Officer are highly desired, but not required. Specific application criteria and guidance has been published in our solicitation message, ALCOAST 117/03, dtg R041322Z MAR 03.

RECOMMENDED ACTIONS

Unless you've worked at Headquarters, ATC, ARSC or one of the Stan Teams, you may never have heard of the Recommended Action Tracking System (a.k.a. "RATS"). RATS tracks recommendations made by Commandant assigned mishap investigations, unit (Class C & D) mishap messages, after action reports, etc. Most RATS are connected to an aviation mishap, but the system can track any safety-related recommendation.

Periodically, each headquarters aviation office is given a report of the new and pending recommendations in RATS. Each new recommendation is reviewed to verify that it is a valid or attainable recommendation. They are also reviewed to be sure that RATS is the appropriate way to accomplish the recommendation. Once it is determined that a recommendation will be taken for action, it becomes an active/pending recommendation. RATS then tracks the progress of the item until it is completed or closed out.

Since the inception of RATS in 1990, 914 recommendations have been addressed, and 136 of these are still pending some type of action. FY02 began with 136 pending RATS. During the year 95 new RATS were submitted, and 95 were closed out. Of the 136 pending RATS, some are being researched for a workable solution or funding is needed to implement the corrective action. Keep feeding the RATS; those in the field know best what needs to be changed to work safer.

CLASS E MISHAPS

As alluded to on page 2, Class E Mishap is a new category created to capture those mishaps involving damage to the engine only, with no collateral damage (parts do not exit the engine), regardless of cost. These mishaps often involve a high cost, and have the potential for becoming a catastrophic incident. Class E Mishaps can be Flight or Ground incidents. The Class E Mishap category will allow us to separate the engine mishaps and costs from the other Flight and Ground mishap data.

The effects on this year's annual report will be an increase in Flight Mishap costs, which in years past would have been included as Flight Related Mishap costs. Overall Total Mishap costs (Flight, Flight-Related and Ground) will not change. The HU25 Flight Mishap cost in FY02 is elevated because of this change, but it is primarily due to the five Class E mishaps costing over $1.2M.

Class E mishaps can have any dollar cost. However, if parts exit the engine or there is other aircraft damage or personal injuries, the incident should be reported as the appropriate Mishap Class based on damage cost or injury. FOD, birdstrikes and ground handling incidents where only the engine is damaged are included in this Class. Class E mishaps will normally be investigated at the unit like a Class C or D mishap. If deemed appropriate, a Commandant appointed Mishap Analysis Board (MAB) will be convened to investigate.

See the Safety and Environmental Health Manual COMDTINST M5100.47 (series), for more details. Expect to see modifications and refinements to the Class E mishap category. As always, we welcome comments, suggestions and questions.

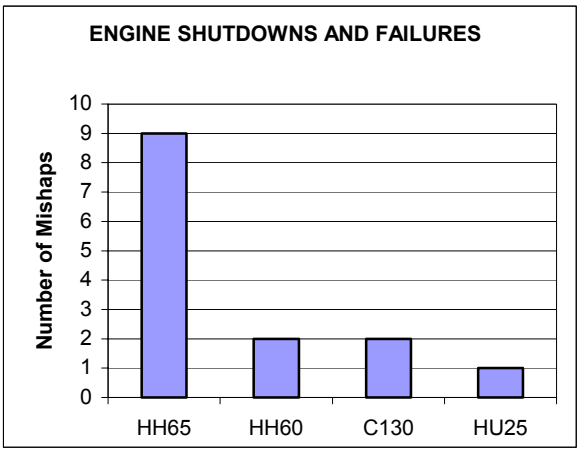

Figure 7

Fourteen engine failures, shutdowns or power losses occurred in FY02 resulting in $418,160 in mishap costs. Figure 7 shows that the HH65 experienced nine of these, while the HH60J and the HC130H had two each and the HU25 reported one. Overall, there were 25 Class E mishaps reported with an associated mishap cost of $1,746,686. Figure 8 illustrates the breakdown of these Class E mishaps by mishap and aircraft type.

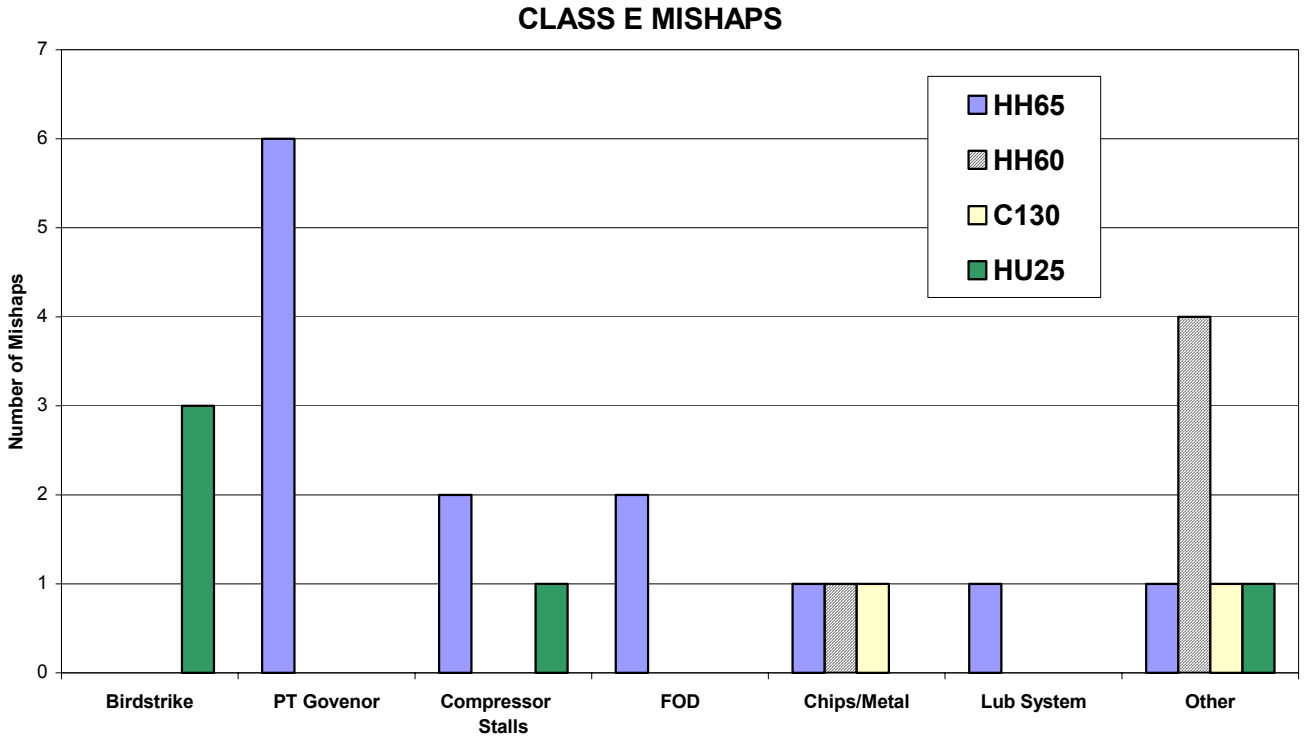

Figure 8

FLIGHT RELATED MISHAP REVIEW

Although not included as part of the annual aviation mishap rates, flight-related mishaps are nonetheless important. Flight-related mishaps are mishaps where there was intent for flight, but no aircraft damage. Included in this category are injuries (with no aircraft damage), near midair collisions, and other close calls or near mishaps. Flight-related mishap reports include no cost lessons learned, and any incident that may have value to the rest of the fleet. These reports are valuable mishap prevention tools.

Near Midair Collision

There were eight near midair collisions (NMAC) reported in FY02, up from the last two years. In general, reported NMAC's have decreased since Traffic Collision Avoidance Systems (TCAS) were installed in Coast Guard aircraft in the mid-nineties. Of the NMAC reported, three involved civilian aircraft, three involved other military aircraft, and two involved commercial aircraft.

Aviation Injury

There were 22 reported aviation related injury mishaps reported in FY02 involving injury to 29 Coast Guard aviation personnel. Almost half of these injuries involved improper procedures, the wrong tool or improper/poorly designed equipment. Inattention, complacency, awareness and motivation were factors in at least 70%.

Injuries included six people hurt during hoisting (five Rescue Swimmers and one Flight Mech), at least seven people were sprayed with or exposed to hydraulic fluid, paint or fuel. Eight people were hurt during some phase of maintenance on the

airframe, two people suffered electrical shock. Five incidents reported injuries to shoulders, backs or ribs, and four people received injuries to the face or eyes. Three people suffered head injuries after bending down to retrieve an item and hitting their heads while standing back up.

Birdstrikes

There were ten birdstrikes reported in FY02. There have not been this many birdstrikes reported since the mid 90's. As Figure 9 (on the next page) shows, birdstrikes resulted in damage to three engines, two radomes, two cowlings, and one rotor blade. The two airframe damage incidents involved a search light and wing damage. The total cost for birdstrikes this year was $1,439,080. The three HU25 engines alone cost $1,196,212.

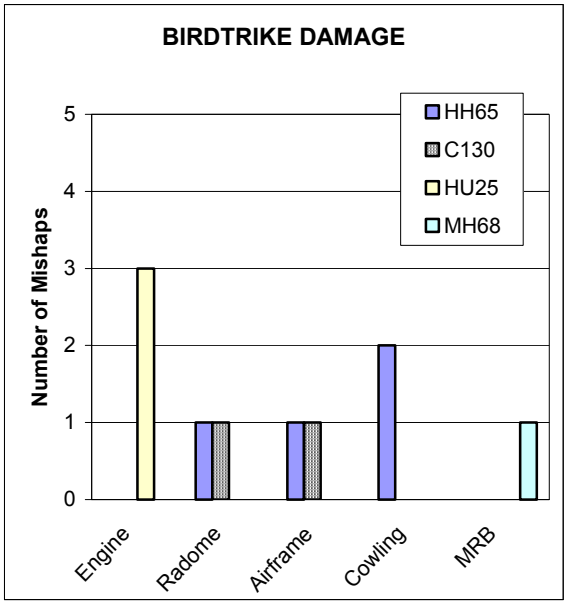

Figure 9

FOD

There were twelve Foreign Object Debris (FOD) incidents reported this year resulting in $110,864 in damage, down from previous years. As can be seen in Figure 10 below, FOD damaged three engines, two rotor systems, two flight controls, and two fuel systems. There were two reports where the FOD was found before any damage occurred, even though the rotor head was already turning in both cases. Seven HH65's suffered damage because of FOD as did two HH60's, two HC130's and one MH90.

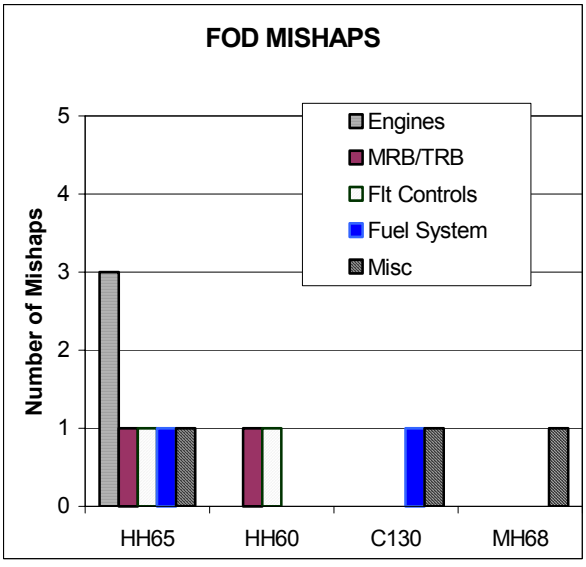

Figure 10

Looking at causal factors, of the twelve FOD incidents reported, eight were the result of a maintenance action (or lack of action). Two of these were the result of poor tool control; five resulted from maintenance supplies being left behind (rags, pads, aerosol cans, etc), and one incident result from extra parts being sealed up in the airframe. These incidents are illustrated in Figure 11.

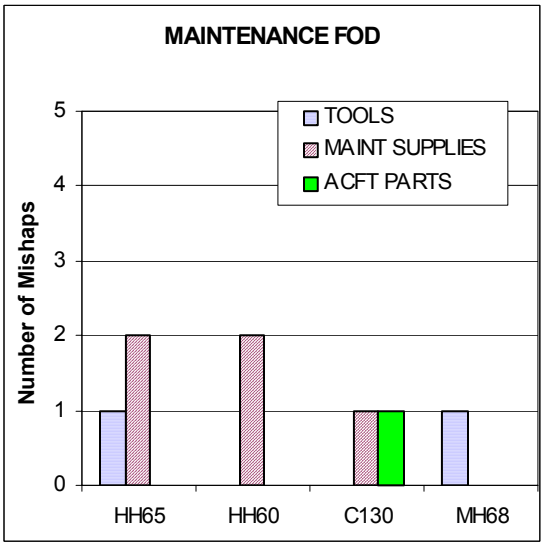

Figure 11

PHASE OF OPERATIONS

Typical of the aviation industry, the majority of Coast Guard aviation mishaps occurred during takeoff, landing, and low level operations, not enroute. In FY02, 48 mishaps (28% of reported flight mishaps) occurred during some phase of landing or takeoff, and 49 mishaps (28%) were during low-level ops (drops, hoist, hover, autos, search, etc). (see Figure 12). As expected, mission profiles that produce a larger number of takeoffs, landings or low-level operations increase the likelihood of a mishap. This is important to remember when making risk management decisions.

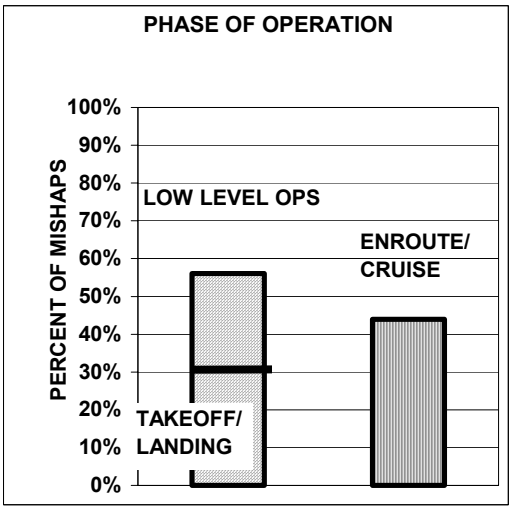

Figure 12

SHIP-HELO MISHAP REVIEW

There were twelve mishaps reported in FY02 (the lowest reported in the last decade) involving ship-helo operations, totaling $144,731 in mishap costs. Only four (1/3) of these mishaps were unique to the ship-helo environment (e.g., aircraft damage due to ship movement, portable hangar, HIFR mishaps, and tiedowns). The remaining eight were not the result of the ship-helo interface (e.g., landing gear problems, cabin door departing, engine fuel system, indicator problems, etc.).

Ship-helo related mishaps normally make up close to 10% of the total mishaps reported. This year they accounted for less that 5%, and less than 5% of total mishap costs.

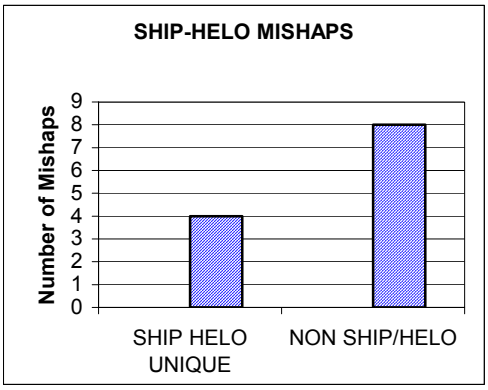

Figure 13

GROUND MISHAP REVIEW

Sixty-three aviation ground mishaps were reported in FY02 for a total mishap cost of $342,843. Although the number of ground mishaps was the highest in the last ten years, the cost was the lowest in six years. See Figure 14. While impossible to validate, this divergence could be the result of increased sensitivity to the need for ground mishap reporting brought about by the MRM program. Over 44% (28) of the ground mishaps reported, and almost 60% ($202,954) of the ground mishap costs, resulted from incidents involving Ground Support Equipment (GSE), towing, blade folding, fueling, washing or jacking. 84% of the ground mishaps listed some form of human factors as one of the cause factors. The wrong tool/equipment, the wrong part or incorrect procedures accounted for over half (58%) of the ground mishaps. Not surprising, more than a third of the ground mishaps list staffing, resources, insufficient personnel and lack of experience or knowledge as a cause factor. Insufficient Q/A, review or supervision was listed in 48% (31) of the mishaps. Over half of the mishaps listed awareness, complacency or inattention as a factor. Eleven mishaps listed norms, habits or culture as a factor.

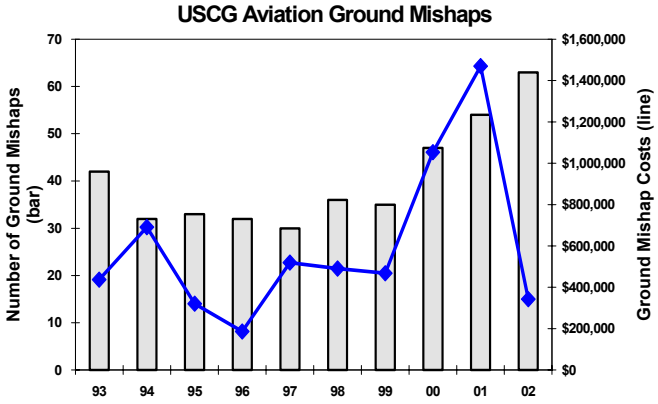

Figure 14

MAINTENANCE HUMAN ERROR MISHAPS

Seventy-four mishaps listed some type of maintenance human factor error as a cause factor. These mishaps included incomplete passdown, poor communications, inappropriate procedures, improperly followed procedures, lack of supervisor review or Q/A problems. Eighty-seven percent of the mishaps involved incomplete, improperly followed, inappropriate or unavailable procedures. Twenty-seven (37%) mishaps involved the wrong part, poor equipment/part design, or lack of parts (see Figure 15, on the next page). Inattention, complacency or awareness was a factor in 49 (66%) of the incidents reported in FY02. Poor passdown, incomplete checklist, or poor communications were also listed in 19% of the mishaps. Some form of inexperience, lack of training, or staffing issues were factors in over 28% of the incidents. Workload, feeling rushed, or lack of resources was mentioned in 26 (35%) of the mishaps. 58% of the mishaps cited Q/A review or supervision as a cause factor and 14% listed norms, habits or culture as a factor.

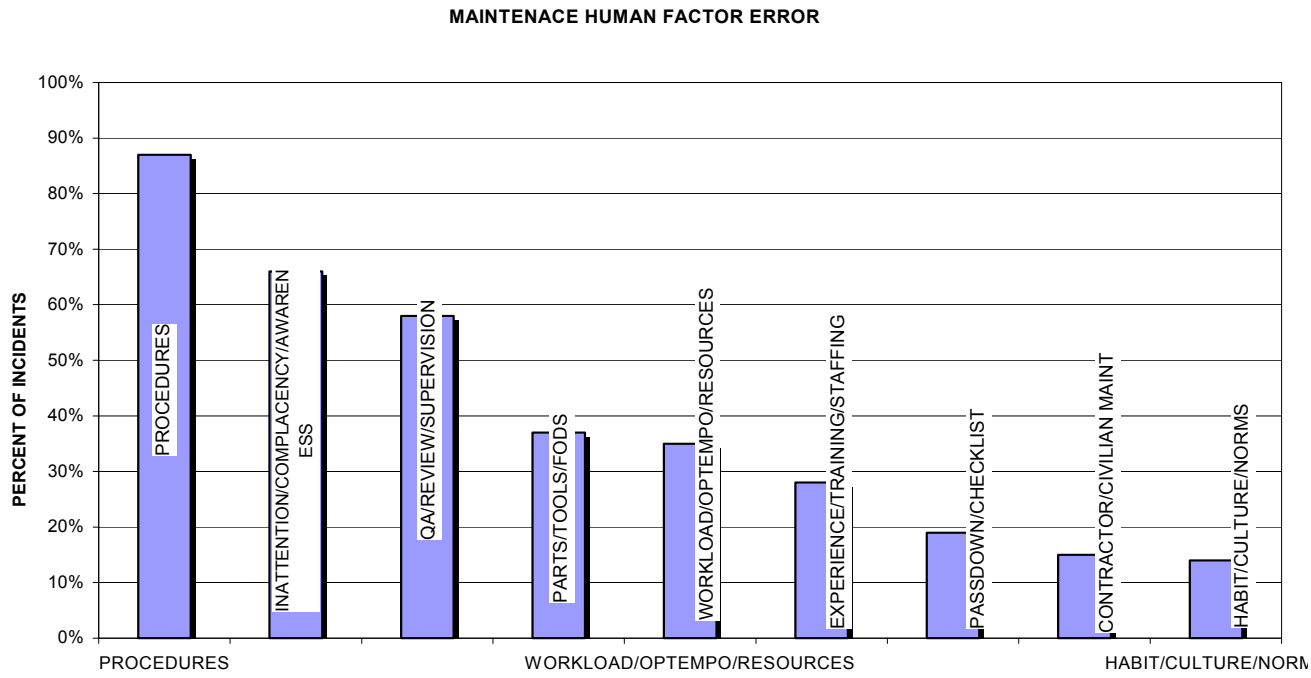

Figure 15

SUMMARY INFORMATION

Tables 3 and 4 display mishap summary information for FY02 associated with each of the four major airframes. The pie charts (Figures 16, 17 and 18) illustrate the percentage of total mishaps, flight hours and total mishap costs for each airframe. As can be seen in figures 16 and 17, each airframe represents roughly the same percentage of mishaps as flight hours. However, the percentage of mishap costs for each airframe is almost the reverse of the flight hours and number of mishap percentages.

AIRFRAME REVIEWS

The following four pages contain mishap data for each major aircraft type.

FY02 FLIGHT MISHAP PERCENTAGES				
CLASS	MISHAPS	% of TOTAL MISHAPS	COST	% of TOTAL COST
A	0	0%	$0	0%
B	1	1%	$763,690	18%
C	17	9%	$1,098,630	27%
D	153	78%	$530,363	13%
E	25	13%	$1,746,686	42%
TOTAL	196		$4,139,369	

Table 3

FY02 FLIGHT MISHAP PERCENTAGES						
AIRCRAFT	MISHAPS	% of TOTAL MISHAPS	COST	% of TOTAL COST	FLIGHT HOURS	% of FLIGHT HOURS
HH60	30	15%	$312,856	8%	23,668	22%
HH65	98	50%	$862,867	21%	50,061	46%
MH90	12	6%	$815,796	20%	2,872	3%
C130	23	12%	$542,822	13%	18,852	17%
HU25	31	16%	$1,596,952	39%	12,235	11%
VC4 &C20	2	1%	$8,076	0%	999	1%
TOTAL	196		$4,139,369		108,687	

Table 4

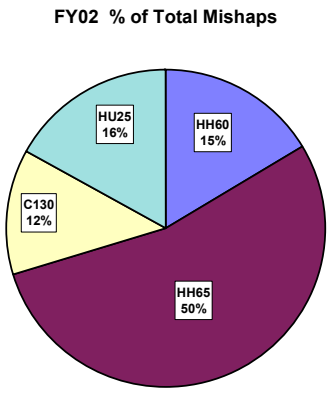

Figure 16

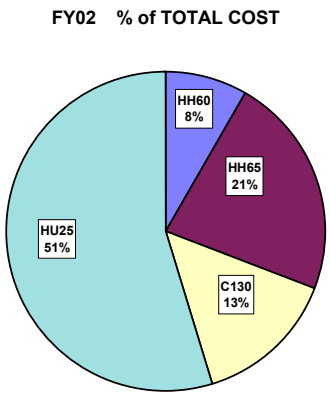

Figure 18

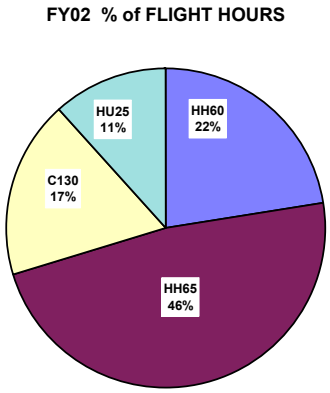

Figure 17

HH60J MEDIUM RANGE RECOVERY (MRR)

The HH60J flew 23,668 hours (22% of the total flight hours) and reported 30 flight mishaps (15% of total reported flight mishaps), the lowest number of reported mishaps since FY93. Mishaps costs ($312,856) were also the lowest since FY93 and the lowest in FY02 of all the major airframes. The HH60J ABCDE mishaps per 100 flight hours were 0.13, which been decreasing for the last eight years.

HH60J Flight Mishaps for FY02

Aircraft	Class	No. Mishaps	Cost
HH60J	A	0	$ 0
	B	0	$ 0
	C	2	$ 56,044
	D	26	$ 75,035
	E	2	$ 181,777
Totals		**30**	**$312,856**

Table 5

HH60 ABCDE	NO. MISHAPS	COST	FLIGHT HOURS	MISHAPS/ 100 FLIGHT HOURS	COST/ MISHAP	COST/ FLIGHT HOUR	HH60 ABC	NO. MISHAPS	COST	FLIGHT HOURS	MISHAPS/ 100 FLIGHT HOURS	COST/ MISHAP	COST/ FLIGHT HOUR
FY98	66	$734,948	25,266	0.26	$11,136	$29	FY98	13	$636,541	25,266	0.05	$48,965	$25
FY99	56	$791,300	25,207	0.22	$14,130	$31	FY99	14	$703,650	25,207	0.06	$50,261	$28
FY00	36	$568,351	23,684	0.15	$15,788	$24	FY00	8	$521,216	23,684	0.03	$65,152	$22
FY01	35	$2,304,901	21,903	0.16	$65,854	$105	FY01	7	$2,240,476	21,903	0.03	$320,068	$102
FY02	30	$312,856	23,668	0.13	$10,429	$13	FY02	2	$56,044	23,668	0.01	$28,022	$2

Table 6

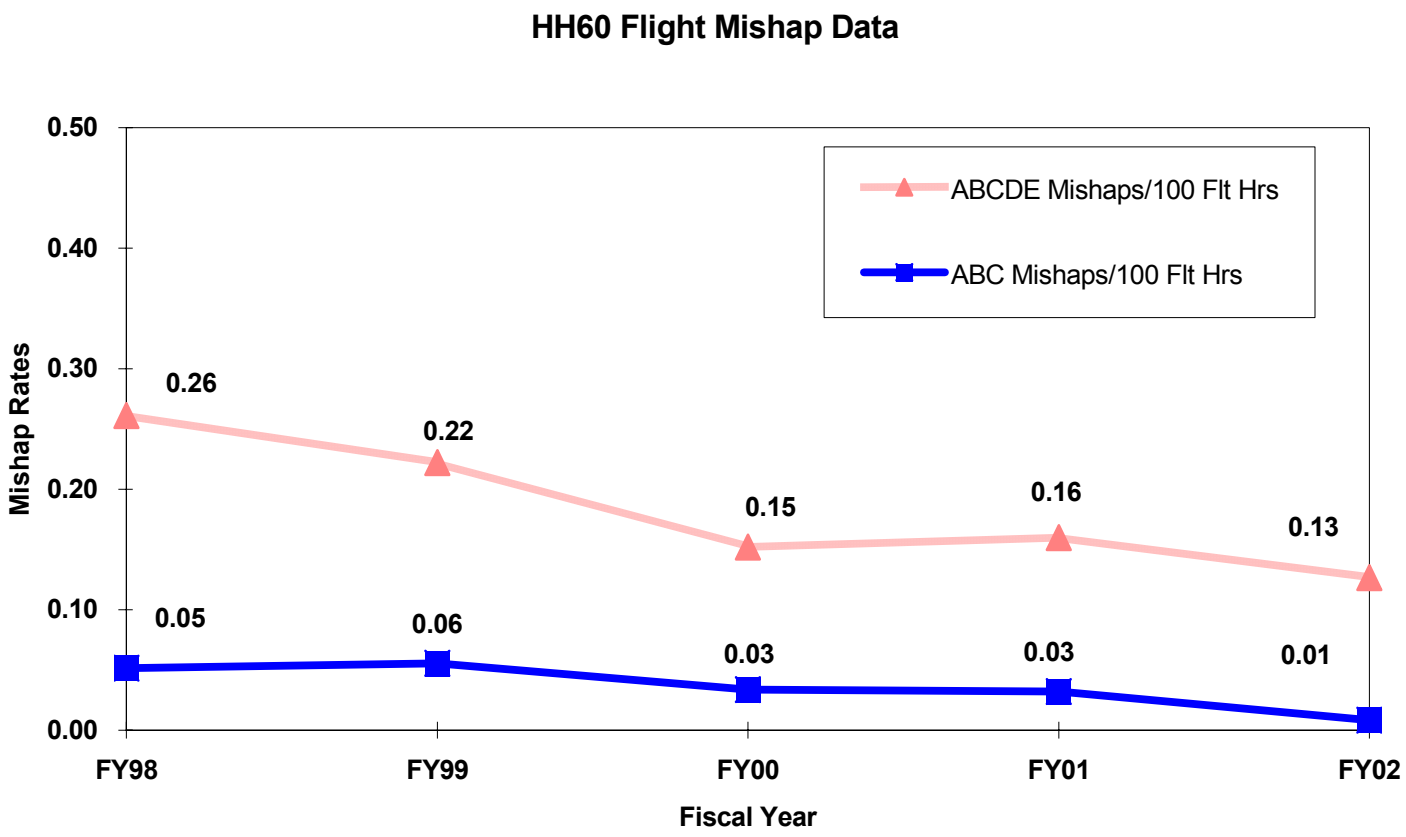

Figure 19

HH65 SHORT RANGE RECOVERY (SRR)

The HH65 flew 50,061 hours, the most hours the Coast Guard's Dauphin has flown in one year. This was almost half the hours (46%) flown by the Coast Guard. The HH65 reported 50% of the mishaps (98 mishaps), but reported less than a quarter (21%, $862,867) of the mishap cost. The HH65 ABCDE mishaps per 100 flight hours were 0.20 for FY02, the highest in four years. Mishaps involving engine control systems continued to be reported at unusually high levels.

HH65 Flight Mishaps for FY02

Aircraft	Class	No. Mishaps	Cost
HH65	A	0	$ 0
	B	0	$ 0
	C	7	$ 355,266
	D	75	$ 236,516
	E	16	$ 271,085
Totals		**98**	**$ 862,867**

Table 7

HH65 ABCDE	NO. MISHAPS	COST	FLIGHT HOURS	MISHAPS/ 100 FLIGHT HOURS	COST/ MISHAP	COST/ FLIGHT HOUR	HH65 ABC	NO. MISHAPS	COST	FLIGHT HOURS	MISHAPS/ 100 FLIGHT HOURS	COST/ MISHAP	COST/ FLIGHT HOUR
FY98	100	$1,084,566	48,540	0.21	$10,846	$22	FY98	19	$954,866	48,540	0.04	$50,256	$20
FY99	92	$790,066	49,780	0.18	$8,588	$16	FY99	17	$654,867	49,780	0.03	$38,522	$13
FY00	67	$536,361	45,620	0.15	$8,005	$12	FY00	13	$398,726	45,620	0.03	$30,671	$9
FY01	77	$2,617,720	45,095	0.17	$33,996	$58	FY01	22	$2,505,556	45,095	0.05	$113,889	$56
FY02	98	$862,867	50,061	0.20	$8,805	$17	FY02	7	$355,266	50,061	0.01	$50,752	$7

Table 8

HH65 Flight Mishap Data

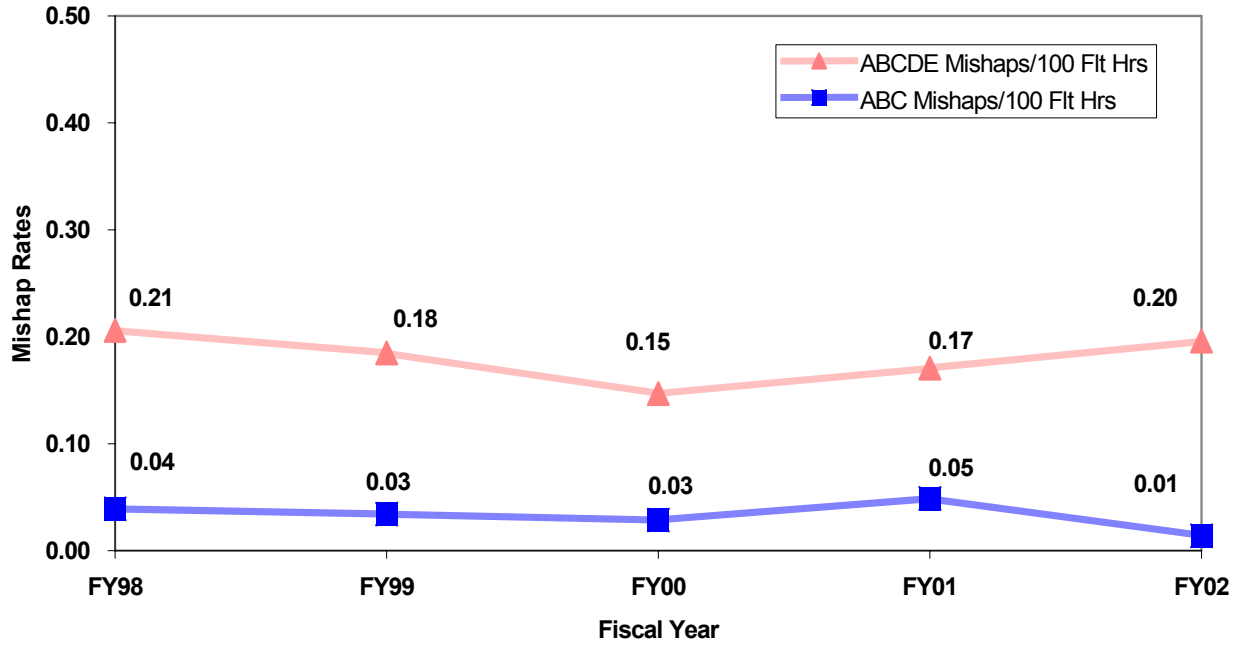

Figure 20

HC130H LONG RANGE SEARCH (LRS)

The HC130H flew 18,852 hours (17% of total flight hours) and reported the fewest flight mishaps (23), only 12% of reported flight mishaps. The Herc also had the fewest ABCDE mishaps per 100 flight hours (0.12) of all the airframes in FY02.

HC130H Flight Mishaps for FY02

Aircraft	Class	No. Mishaps	Cost
HC130	A	0	$ 0
	B	0	$ 0
	C	6	$ 397,848
	D	15	$ 58,192
	E	2	$ 86,782
Totals		**23**	**$ 542,822**

Table 9

C130 ABCDE	NO. MISHAPS	COST	FLIGHT HOURS	MISHAPS/ 100 FLIGHT HOURS	COST/ MISHAP	COST/ FLIGHT HOUR	C130 ABC	NO. MISHAPS	COST	FLIGHT HOURS	MISHAPS/ 100 FLIGHT HOURS	COST/ MISHAP	COST/ FLIGHT HOUR
FY98	37	$427,881	23,249	0.16	$11,564	$18	FY98	8	$342,018	23,249	0.03	$42,752	$15
FY99	27	$387,385	23,108	0.12	$14,348	$17	FY99	8	$352,058	23,108	0.03	$44,007	$15
FY00	23	$307,817	20,030	0.11	$13,383	$15	FY00	7	$257,712	20,030	0.03	$36,816	$13
FY01	16	$106,552	18,845	0.08	$6,660	$6	FY01	4	$76,754	18,845	0.02	$19,189	$4
FY02	23	$542,822	18,852	0.12	$23,601	$29	FY02	6	$397,848	18,852	0.03	$66,308	$21

Table 10

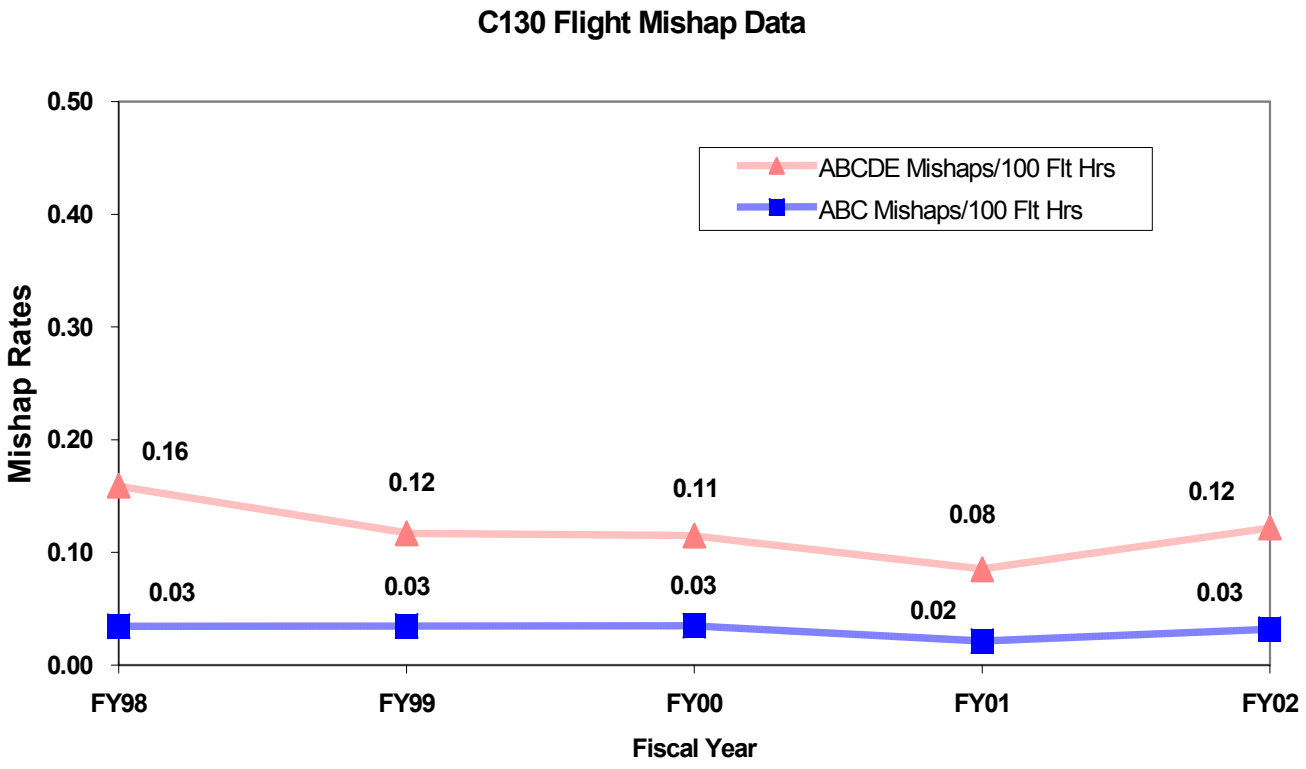

Figure 21

HU25 MEDIUM RANGE SEARCH (MRS)

Due to a budget-driven reduction in the number of operational airframes, the HU25 flew only 11% of the total flight hours (12,235 hours), the fewest flown in fifteen years. The Falcon experienced 0.25 ABCDE mishaps per 100 flight hours, the highest of the all the major airframes. This airframe reported 31 mishaps (16% of total mishaps). Mishap costs ($1,596,952) were also the highest of all the airframes in FY02, primarily due to three bird strike engine changes.

HU25 Flight Mishaps for FY02

Aircraft	Class	No. Mishaps	Cost
HU25	A	0	$ 0
	B	0	$ 0
	C	2	$ 289,472
	D	24	$ 100,438
	E	5	$ 1,207,042
Totals		**31**	**$ 1,596,952**

Table 11

HU25 ABCDE	NO. MISHAPS	COST	FLIGHT HOURS	MISHAPS/ 100 FLIGHT HOURS	COST/ MISHAP	COST/ FLIGHT HOUR	HU25 ABC	NO. MISHAPS	COST	FLIGHT HOURS	MISHAPS/ 100 FLIGHT HOURS	COST/ MISHAP	COST/ FLIGHT HOUR
FY98	57	$1,235,955	14,972	0.38	$21,683	$83	FY98	13	$1,109,861	14,972	0.09	$85,374	$74
FY99	35	$1,311,514	15,491	0.23	$37,472	$85	FY99	8	$1,244,893	15,491	0.05	$155,612	$80
FY00	35	$357,741	15,967	0.22	$10,221	$22	FY00	8	$311,057	15,967	0.05	$38,882	$19
FY01	44	$406,978	15,371	0.29	$9,250	$26	FY01	13	$350,662	15,371	0.08	$26,974	$23
FY02	31	$1,596,952	12,235	0.25	$51,515	$131	FY02	2	$289,472	12,235	0.02	$144,736	$24

Table 12

HU25 Flight Mishap Data

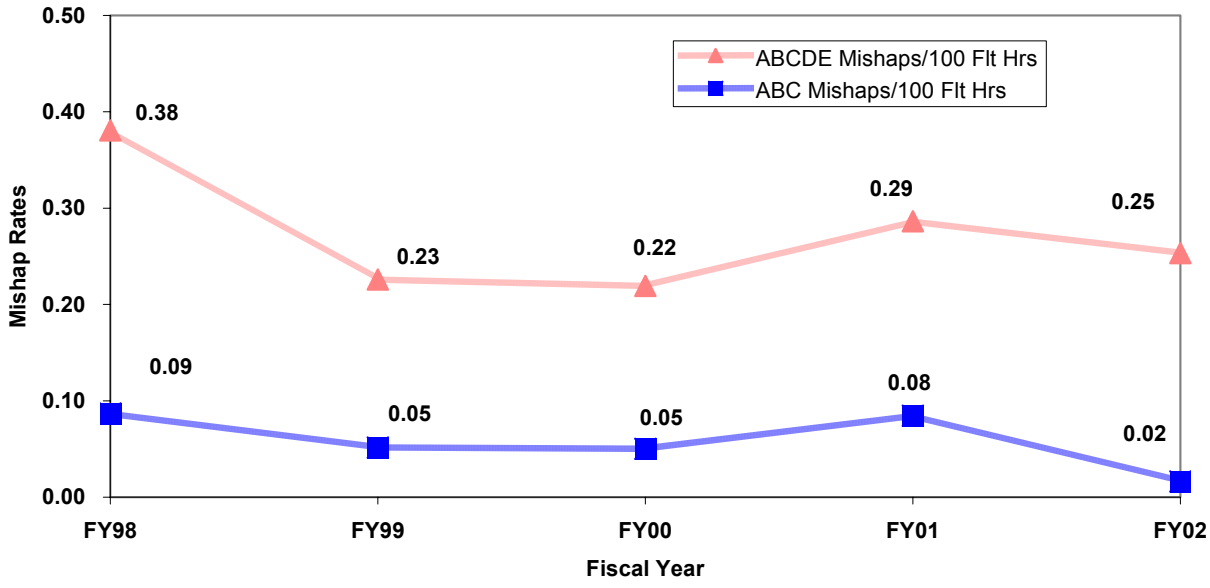

Figure 22

CLASS A MISHAP SUMMARY
FY93-FY02

DATE	ACFT	SUMMARY	CAUSE FACTORS*
AUG 1993	HH65	During daylight delivery of ATON personnel and equipment, aircraft crashed while landing on elevated helipad.	Aircrew Error, CRM, Training
JULY 1994	HH65	Aircraft impacted side of cliff in low visibility during night SAR mission to assist sailing/vessel aground.	Communications, CRM, Situational Awareness, Aircrew
AUG 1994	HH65	Hardlanding during daylight practice autorotation, aircraft impacted ground, slid and rolled on side.	Aircrew Error, CRM, Training
JAN 1995	HH65	During night pollution surveillance flight, with two MSO personnel on board, aircraft experienced engine fluctuations. While analyzing problem, aircraft flown into water.	Situational Awareness, CRM, Aircrew, Mechanical
AUG 1995	HH65	During daylight flight, deployed helo experienced rapid left yaw while conducting left pedal turn in a hover. Aircraft accelerated through wind line, spin could not be countered. Aircraft impacted water.	Design, CRM, Aircrew, Situational Awareness, Training
DEC 1995	RG-8	While conducting patrol, sensor operator and pilot detected smoke in cockpit. Pilot determined engine was on fire, secured engine and crew bailed out (as required by emergency procedures). Crew was recovered within an hour after entering water. Aircraft was lost at sea.	Cause of engine fire unknown, Training, Design
APR 1996	HH65	At end of 5-hour mission, pilot and aircrewman were practicing hover maneuvers over taxiway. During third hover, aircraft entered left turn; pilot was unable to counter. Aircraft continued spinning left and impacted ground.	Fatigue, Aircrew & Supervisory, Procedures, Design
JUN 1997	HH65	Night SAR in high winds and seas for sailboat taking on water. Shortly after arriving on scene, on scene resources lost comms with aircraft. Crew of four did not egress and the helicopter sank in 8,500 feet of water.	Trng, Assignment, Design, Aircrew & Supervisory, Material, Policy/ Procedures
AUG 1999	HU25	Rear compartment fire light illuminated during touch and go. Crew continued t/o and called out boldface procedures. Fire light remained illuminated, emergency declared. Rear compartment fire light extinguished approx 10 sec after fire extinguisher activated. Hyd sys light illuminated during “before landing checks”. Acft landed, crew egressed and fire dept extinguished fire. Major fire damage.	Maintenance, QA, Procedures, Trng, Mechanical, Supervision,
JAN 2001	HH60	Lightning strike during airway trainer. Investigation revealed damage to numerous components as well as widespread magnetization of airframe and components.	Environmental Conditions
JAN 2001	HH65	After fifth night shipboard landing, crew signaled for primary tiedowns. Prior to attachment of tiedowns, helo rolled to the right. Main rotor blades impacted flight deck and helo spun approx 140 degrees counter clockwise and came to rest on right side.	Mishap Investigation under review

* Note: Mishaps are seldom, if ever the result of a single cause. They are a combination of several cause factors. When viewed alone, each cause factor often appears insignificant. A mishap is a sequence of events (which may seem unrelated) that results in tragic consequences.

Table 13

CLASS B MISHAP SUMMARY
FY93-FY02

DATE	ACFT	SUMMARY	CAUSE FACTORS*
DEC 1992	HC130	Engine turbine wheel failed inflight. Damage limited to engine. Failure attributed to material fatigue and manufacturing processes.	Material, Procedures, Manufacture
MAR 1993	HH65	At end of offshore SAR, pilot misdiagnosed and improperly managed #2 engine indicating system failure and secured #2 engine. Situation further aggravated by series of uncoordinated inputs by both pilots. FM recognized situation, advanced FFCL, allowing the remaining engine to regain power.	Mechanical, Aircrew, CRM, Trng, Procedures
MAY 1993	HH65	During instrument approach to hover over water, rotorwash engulfed aircraft in salt spray. Pilots lost visual contact with surface resulting in MGB overtorque and overspeeding both engines during ITO.	Procedures, CRM, Darkness, Environment, Aircrew, Disorientation
AUG 1993	HH3	During flood relief support, MRBs contacted hangar, as crew completed turn into parking space. Crew had parked in same position several times.	CRM, Aircrew, Situational Awareness, Procedures
MAR 1994	HH65	Fenestron contacted runway during practice single engine landing for annual Stan check ride.	Awareness, Trng, Aircrew, & Supervisory
SEPT 1994	HU25 FltRel	Crew dropped a DMB to aid relocation of lone raft at sea and departed scene for fuel. Unknown to crew, DMB struck a female in the raft. Rafters were later rescued, female underwent surgery and recovered.	Supervisory & Aircrew Error, Procedures
APR 1995	HH60	Returning along coast from training flight in VFR conditions, crew felt abnormal vibration. Vibrations were so severe, pilots had difficulty reading instruments and controlling aircraft. Aircraft landed immediately on boulder-strewn beach damaging the aircraft. MRB tipcap departed inflight.	Material Failure
JUL 1995	HH65	Deployed aircraft taxied into side of Navy hangar. Five navy personnel inside hangar received minor shrapnel injuries. Aircraft sustained sudden stoppage damage and shrapnel damage.	CRM, Aircrew & Supervisory, Procedures, Distractions, Judgment
AUG 1995	HH65	PAC was attempting to park aircraft between two aircraft. MRB struck chain link fence. Two other aircraft and several buildings sustained shrapnel damage.	Aircrew, CRM, Distractions, SA
DEC 1996	HH60 FltRel	Aircraft was diverted from a routine training flight to assist F/V reporting taking on water and sinking. Two PIW were hoisted using a basket recovery, third PIW was recovered using rescue swimmer direct deployment. The victim's survival suit was improperly donned and filled with water. The added weight caused the victim to slip through the strop. FM and RS encountered difficulties trying to bring the victim into the cabin. The victim slipped out of the strop and fell to the water.	Environment, Procedures, Design, Equipment,
JAN 1997	HH65 FltRel	Aircraft was launched on early morning SAR to assist a F/V aground and breaking up. First victim was located lying face down in debris. The unconscious, unresponsive victim had improperly donned a PFD. As the victim was being brought into the cabin, the victim began to slip out of the quick-strop. FM and RS tried to hold the victim, but he slipped out of the PFD and the quick-strop.	Procedures, Aircrew, Training, Design
MAR 1998	HU25	Fan spinner departed in flight. Large section of fan spinner lodged in engine bellmouth, resulting in engine damage and damage to fuselage, wing and horizontal stabilizer.	Material, Design, Procedures, Aircrew
JUN 2002	MH68	During T- course day flight, the crew experienced unusual vibrations and oscillations on touchdown from a hover. Upon landing, vibrations and oscillations increased in magnitude. As aircraft was shutdown, left MLG collapse and aircraft came to rest on landing gear housing, left forward float and tailskid. MRB and TRB did not impact the ground. Crew safety egressed the aircraft.	Mishap Investigation under review

* Note: Mishaps are seldom, if ever the result of a single cause. They are a combination of several cause factors. When viewed alone, each cause factor often appears insignificant. A mishap is a sequence of events (which may seem unrelated) that results in tragic consequences.

Table 14

DOD CLASS "A" MISHAP RATES COMPARISON

Class A mishap rates for the DOD Services are compared in Table 15. When reviewing the DOD rates and comparing them to the Coast Guard, we need to consider the effect that our limited flight hours has on our mishap rate. While one Class A mishap can greatly impact the Coast Guard mishap rate, one more or one less mishap would have little effect on the DOD rates. To illustrate, the Coast Guard only had two Class A mishaps in FY01, but had the highest Class A mishap rate (1.93), while the Army had the lowest mishap rate (1.03) while reporting ten mishaps. (NOTE: U.S. Navy data includes U.S. Marine Corps mishaps).

FY01/FY02 CLASS A AVIATION MISHAP RATES FOR ALL SERVICES

Class A Rates	FY01 USCG	FY01 USAF	FY01 USA	FY01 USN	FY02 USCG	FY02 USAF	FY02 USA	FY02 USN
Total Class A Rate	1.93	1.16	1.02	1.28	0.00	1.52	2.51	2.27
Fixed Wing	0.0	1.20	1.52	1.38	0.00	1.13	0.76	1.71
Rotary Wing	2.92	0.0	0.95	1.01	0.00	13.25	2.77	3.84
HC130	0.00	0.73	N/A	0.00	0.00	0.97	N/A	3.71
HH60	4.57	0.0	0.73	0.00	0.00	10.79	1.77	2.47

Table 15

PILOT FLIGHT TIME REVIEW

Table 16 displays the flight time for Pilots in Command (PIC) and Copilots (CP) involved in Class A and B mishaps for the last twenty years.

PILOT-IN-COMMAND/COPILOT (PIC/CP) EXPERIENCE (CLASS A & B MISHAPS FY83--FY02)

TOTAL FLIGHT TIME			TOTAL FLIGHT TIME IN MISHAP AIRCRAFT TYPE		
HOURS	PIC	CP	HOURS	PIC	CP
0-500	0	1	0-500	5	12
501-1000	2	5	501-1000	10	7
1001-1500	8	10	1001-1500	9	8
1501-2001	5	4	1501-2001	8	2
2001-3000	10	5	2001-3000	3	3
3001-4000	8	6	3001-4000	1	0
OVER 4001	5	3	OVER 4001	0	0
UNKNOWN	1	1	UNKNOWN	3	3
TOTAL MISHAPS	39	*35	TOTAL MISHAPS	39	*35

*Four mishaps involved single piloted mission.

Table 16

The term CP used on this page refers to the pilot-not-in-command. It does not refer to the designation "copilot" or a particular seat position on the aircraft.

PRIVILEGE

Change 5 to the Safety and Environmental Health Manual (COMDTINST M5100.47) of 27 June 2001 clarified many issues related to safety privilege. Enclosure (10) to the manual now clearly describes the various investigations convened following a mishap, sharing of information, the Safety Privilege Concept, and Grants of Confidentiality.

The "Witness Statement Offer of Confidentiality Advisory Form" (found on page six of Enclosure (2) to the Safety and Environmental Health Manual) **must be used to document all offers of confidentiality by safety personnel.** Old "assumptions" of safety privilege being applied to any statements made to the Safety Officer are no longer valid or legally defendable. If, during a unit mishap investigation, a witness requests safeguarding of his spoken or written statement, this form must be used. If you are gathering statements immediately after a major mishap while awaiting arrival of the Commandant Mishap Board, use this form with the mishap crew.

Consistent with DoD, the Coast Guard recently clarified its policy on release of cockpit voice recorder information. The actual recording of the crew's voices will always remain safeguarded by safety professionals due to privacy concerns (privacy of both the mishap crew and next of kin). However, if a transcript is made for safety purposes of any relevant portions (i.e. comments made by the crew directly related to the conduct of the flight), the transcript can be requested and released outside of the Safety Program.

The data captured by the flight data recorder is considered factual and is releasable. If an animation based on flight data incorporates safety investigator judgment or mishap board speculation, it is considered pre-decisional and is considered privileged. Any animation that

includes the cockpit voice recording is safeguarded due to privacy concerns noted above.

FLIGHT SAFETY PROGRAM

To improve future aviation operational performance and safety, we are working on the following:

Training Courses

⇒ Traditional FSO training will continue with the Navy at NPGS Monterey, CA.

⇒ COs will continue to receive the Command Safety Course at NPGS Monterey, CA.

⇒ Advanced aviation safety training will be provided for selected FSO's as preparation for assignment to a Commandant convened mishap analysis board (MAB).

⇒ FSO Annual Refresher/Re-evaluation Training will be held in April 03.

Safety Standardization Visits

⇒ The frequency of G-WKS-1 safety visit/program audits are determined by CO turnover (every three years for O-6 commands and every two years for O-5 commands). To get these visits back on schedule, FY03 efforts are on pace to complete 14 site visits, up significantly from the five to nine per year over the past several years. Intent in future years is to try to complete all visits within nine months of each Air Station change of command.

⇒ The safety visits focus on flight safety program requirements contained in the Air Ops Manual, ORM Instruction and the Safety & Health Manual.

⇒ The checklist used during the aviation Safety Stan Visits is available on the G-WKS-1 Website. (http://www.uscg.mil/hq/G-W/g-wk/g-wks/g-wks-1/wks1.htm) See Chapter 2.F.4.c of COMDTINST M5100.47 for more information on Safety Stan Visits.

⇒ Units may request unscheduled or informal assist visits and safety training at any time.

CRM

The first CRM standardization conference was held in 2001. The results of the conference formed the "flight plan" for Coast Guard CRM. Since the conference, we've held our course and met several of our goals, some apparent to the fleet, some transparent. Here's a brief update on our progress.

⇒ CRM Initial courses at ATC, ATTC, and CAE (HC130H contract) have been standardized.

⇒ Error Management has been rolled into the CRM curriculum.

⇒ LT Ryan Griffin from ATC worked with the HC130H Standardization Team in the summer of 2002, qualifying their cadre to teach CRM Refresher. It's great to have their expertise back on the CRM team.

⇒ G-WKS-1 has sponsored sending members of the CRM cadre to Human Factors training, TCT/Facilitator training, and the Navy's CRM Instructor course. Our objective is to capture the "latest and greatest" advances for incorporation into our CRM training.

⇒ For 2003, look for the principles of Aeronautical Decision Making and Leadership to be incorporated into your CRM Refresher course. This addition reflects the research and advances in CRM teachings achieved by the University of Texas at Austin. We are incorporating Decision Making & Leadership into our CRM program to keep pace with the best that industry has to offer.

⇒ During the multiple edits of the Air Operations Manual, COMDTINST M3710.E, a few changes to CRM Initial & Refresher were captured incorrectly. We're working closely with G-OCA to provide correct guidance.

- M3710.E, paragraph 8. I.9.b. states that CRM Initial may be taught by the HC130H Stan Team, this is in error. The HC130H Stan Team has been qualified to teach CRM Refresher. Their qualification to teach CRM Refresher achieves parity with the other ATC Standardization Teams. None of the Stan teams are qualified to teach CRM Initial.
- Paragraph 8. I.9.b. also indicates that CRM Initial is required within three yrs of

pilot/aircrew assignment. The text should have stated within one year of assignment as a CG pilot or aircrew.

⇒ These corrections will be reflected in the next change to M3710.E.

Crew Voice Recorders And Flight Data Recorders (CVR/FDR)

⇒ An FY03 Resource Proposal (RP) for CVR/FDR upgrade for fixed-wing aircraft was funded at $2.7M. The RP funds the engineering and design aspects of the project, purchases hardware (boxes, sensor, wire kits, etc.). This will initiate the install on a flying prototype in FY03.

⇒ Installation of digital FDR in the HC130H involves significant engineering and labor intensive tasks as sensors and analog-to-digital converters will have to be installed on the aircraft.

⇒ For the HU25, the FDR portion of the dual-purpose CVR/FDR box being installed is operational upon installation, whereas the CVR portion will be "standing by" waiting aircraft microphone wiring, which should occur within the next two years.

⇒ The goal of the CVR/FDR upgrade for the fixed-wing community is to achieve mishap investigation and aircraft health monitoring capabilities on par with the HH65 & HH60J VADR capabilities. These capabilities have enabled us to develop effective loss control and error management strategies, and enhance the evaluation and management of component lifecycles.

⇒ With all four major airframes now or soon to be CVR/FDR equipped, WKS-1 is exploring options and potential funding to go back and upgrade the helo CVR/FDRs, expanding CVR recording time frame from 30 minutes to two hours. An additional goal is to increase the FDR parameters captured in the H60, expanding the VADR database to mirror that of the H65.

⇒ A reminder that requests for VADR downloads are made through AR&SC in consultation with G-WKS-1. Msg DTG 232036ZNOV98 (posted on theG-WKS-1 website) establishes procedures for using the HH60J/HH65 VADR's for non-mishap situations.

⇒ A review of the protected nature of VADR data can be found in the Privilege section of this report and the Safety and Environmental Health Manual.

⇒ The VADR Download Process Guide can be found on the following website: http;//cgweb.eisd.arsc.uscg.mil/avi/vfdr/vfdrindex.html.

G-WKS -1.COM

⇒ A reminder that the G-WKS Website (http://www.uscg.mil/hq/G-W/g-wk/g-wks/g-wks-1/wks1.htm) is available from any internet-capable computer. Accordingly, WKS-1 carefully reviews content for general-public viewing, and can only post internet-releasable, non-privileged information. This includes:

- Safety and health manuals and instructions, including the latest changes.
- Anthropometric measurements and related information.
- Aviation Safety power points, Safety standdowns and training ideas.
- ORM, CRM and MRM information.
- Mishap investigation and reporting requirements.
- Cockpit voice and flight data recorders information.
- Unit photographs of mishaps.
- Information on the Safety Stan Visit Program, including updated safety standardization checklists.
- Past Annual Aviation Safety Reports.
- Links to military and civilian aviation sites. Links to the DOD service's Safety Center and risk management websites.
- Links to the NTSB database.
- Aeronautical Information Manual (AIM)

AVIation Accident TRacking System (AVIATRS)

⇒ It's coming, look for ***E-AVIATRS***. Coming this fall to a desktop near you.

⇒ Change 8 to the Safety and Environmental Health Manual (COMDTINST M5100.47), released on 10 Dec 02, implemented the new E-Mishap reporting system for non-aviation mishaps.

⇒ G-WKS-1 began work with the MLC in early 2003 to convert ***AVIATRS*** to the E-Mishap reporting system.

⇒ Plans are to have the new ***E-AVIATRS*** ready by October 2003.

⇒ No major changes are planned. The message format will not change and the same data will still be collected.

⇒ ***E-AVIATRS*** will continue to capture all the information in the aviation mishap message. All information reported in the message can be searched and retrieved.

⇒ There will be standard pull down menus for non-text fields.

⇒ All aviation mishaps will still be sent to the appropriate AIG. E-mishap will auto-generate the CGMS message from the data entered.

⇒ E-Mishaps has a built in reviewer tracking program for use by the units.

⇒ G-WKS-1 will still maintain and review the aviation mishaps.

⇒ Air Stations will have access to the data and will be able to do standard queries. G-WKS-1 will still be available for assistance or non-standard data queries.

⇒ There will canned graphs and charts available online.

⇒ Until ***E-AVIATRS*** comes on line, contact G-WKS-1 for data searches and aviation mishap summaries from ***AVIATRS.***

Your Coast Guard Aviation Safety Staff

CDR Chip Strangfeld 202-267-2971
(cstrangfeld@comdt.uscg.mil)
Cathie Zimmerman 202-267-2966
(czimmerman@comdt.uscg.mil)
LCDR Rick Christoffersen 202-267-2972
(rchristoffersen@comdt.uscg.mil)
LCDR Val Welicka 202-267-1884
(vwelicka@comdt.uscg.mil)
ENS Chuck Engbring 202-267-0241
(cengbring@comdt.uscg.mil)

http://www.uscg.mil/hq/G-W/g-wk/g-wks/g-wks-1/wks1.htm

Hail and Farewell: In February 02, the Aviation Safety Division welcomed ENS Engbring, former AMT from Airsta North Bend. We said farewell to CDR Dan Abel in June 02 and welcomed CDR Chip Strangfeld in August 02.