



## HELICOPTER SAFETY ADVISORY CONFERENCE

May 24, 2012

Hilton Lafayette

Lafayette, LA

## MINUTES

### INTRODUCTION

- Chairman Mark Fontenot called the meeting to order at 08:30 and welcomed members and guests.
- Read Antitrust Statement and presented safety information for emergency evacuation.
- Introduction by Attendees

## HSAC WORK GROUP COMMITTEE REPORTS

### Recommended Practices (RP) / Safety Committee – Terry Kaufman

- Glen Girard discussed revision to RP 2004-02, “Jet Fuel Quality Control Procedures” (*attachment #1*)
- RP 92.1, “Helideck/Heliport Operational Hazard Warning(s) and Procedure (s)” and RP 92.5, “Closed Helidecks/Heliports” will be deleted and removed. RPs are superseded by RP 2008-1 “Gulf of Mexico Helideck Markings.”
- RP 2005-01, “Helicopter Tiedown Practices,” remove “that will be left unattended for more than 1-hour.” (*attachment #2*)
- Area Agreement Maps will be removed. Difficult to keep information updated.
- “Green Deck” means the location is prepared to conduct helicopter operations. The aircraft is authorized to land, start engines, take-off, or maneuver on the helideck. When reporting a “Green Deck,” do not use qualifiers. The helideck is either **GREEN** or **RED**.
- Recommend providing first responder training for HLOs.



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- Terry Kaufman introduced **Mr. Steve Rauch, BSSE Aviation Safety Manager**, Bureau of Safety and Environmental Enforcement  
707-787-1763 w  
571-594-8383 c  
[Stephen.Rauch@bsse.gov](mailto:Stephen.Rauch@bsse.gov)
- Hurricane Briefing (University of Colorado) – Terry Kaufman ([attachment #3](#))
- HSAC Safety Statistics – Bob Williams, ExxonMobil Aviation Advisor ([attachment #4](#))
  - No fatal accidents for 2010 and 2011

#### **Flight Following / ADSB – Terry Gambill**

- Flight Following / ADSB Committee Notes ([attachment #5](#))

#### **Western Air Defense Sector – LTC** ([attachment #6](#))

#### **Lockheed Martin – Martha Wood**

- Lockheed Martin (LM) cannot update a flight plan filed on DUAT. There is no interface. LM would have to file a new flight plan.
- LM is located at Alliance Airport and welcomes visitors to tour the center.

#### **Technical Committee – Pat Roberts**

- Draft RP, “Fatigue Management” – in progress ([attachment #7](#))
- Draft RP, “Quality Assurance and Control” – in progress ([attachment #8](#))
- RP, “Working at Heights” – approved ([attachment #9](#))
- “War Stories” ([attachment #10](#))

#### **Aerial Observation Committee (AOC) – Cort Andrews**

- AOC Committee Minutes ([attachment #11](#))
- Estimate 70,000 patrol flight hours for 2012
- Maintenance RP completed
- Need to have more people involved on the Committee and increase standards



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### **HSAC Committee Reports**

- Treasurer's Report ([attachment #12](#))

### **Government Liaison – Jon Conrad for Steve Smeltzer**

- **THE HURRICANE HUNTERS** ([attachment #13](#))  
LTC Jeff Ragusa, USAF Reserve – Keesler AFB, MS  
Chief of Safety, 403d Wing  
17017 Canary Palm Dr.  
Biloxi, MS 39532  
(w) 228-377-4033  
(c) 985-807-3030  
[jjragusa@gmail.com](mailto:jjragusa@gmail.com)  
[Jeffrey.Ragusa@us.af.mil](mailto:Jeffrey.Ragusa@us.af.mil)
  - Dropsonde is a small computer that transmits once per second wind direction, wind speed, barometric pressure, altitude, and temperature.
  - Dropsonde cost \$700.00.
  - Dropsonde falls at 2,500 ft/min and drogue chute is for stabilization.
  - Dropsonde is deployed from the HC130J at 5,000 and 10,000 feet.
  - US only country in the world with hurricane hunter aircraft
  - There are 12 aircraft certified to fly into storms: ten (10) C-130s Hercules and two (2) P-3 Orions used by NOAA.
  - The HC-130J has instrumentation on the outer wing that measures wave heights by sensing the microwave energy produced from the bubbles popping on top of the white caps.

### **GCR – Mike Flores**

- FAA Airport Master Record Program ([attachment #14](#))

### **Bell Helicopter Chief Flight Safety – Tony Randall**

- New windshield slated for production BH407 third quarter of 2013.
- IHST Compendium Report at [www.ihst.org](http://www.ihst.org)



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**Glenn Meier**  
**Project Lead CSA Surveillance & Broadcast Service**  
[Glenn.Meier@faa.gov](mailto:Glenn.Meier@faa.gov) ([attachment #15](#))

**Heliport and Airways – Ken Kersker**

- API RP2L Work Group met in April and next meeting is June 13, 2012.
- HSAC will assist with financial support for a technical writer.
- Bob Williams will be source expert to API on helidecks.

**Fish Spotters – Joe Fain; Omega Protein; (337.258.5552); j\_c\_fain@yahoo.com**

- A sincere plea to all helicopter pilots to call their altitude and fly at the designated altitude before crossing the beach.
- **Caution:** There will be a concentration of birds around the boats. Look for and around the airplanes for BIG birds, in particular pelicans, not just seagulls.

**Next HSAC Meeting will be October 3<sup>rd</sup> and 4<sup>th</sup> – Sheraton Houston; 15700 JFK Blvd;  
Houston, TX (281.442.5100)**



## HSAC Recommended Practice (RP) #2004-02

### Jet Fuel Quality Control Procedures

Revision 1

24 May 2012

#### Background

Over the years, HSAC Member Organizations have experienced aircraft engine related events as a result of jet fuel contamination. With this in mind, HSAC has researched industry best practices and procedures and applicable references in the development of this Recommended Practice. This document is intended to provide guidance to the user covering the safe storage and distribution of quality jet fuel as currently practiced in the commercial aviation industry. Due to the wide diversity of fueling operations, this document is not intended to be all-inclusive. HSAC members should consider the application of the recommendations in this RP for both design and daily operation of jet fuel systems.

#### Recommended Practices

##### 1. Responsibilities

###### a. Pilots and Helicopter Operators

- 1) Hazard/Non-Conformity reports should be submitted for any fuel system defects and follow-up actions initiated.
- 2) Verify before fuel is used that the quality control checks have been completed.

###### b. Fuel System Owners or Operators

- 1) Ensure a written quality control system covering the minimal requirements in this RP and applicable references/regulations is provided. Included should be necessary forms /checklists used in the routine system checks.
- 2) Before approving installation of new fuel systems, review the applicable specifications in the list of references at the end of this document and review the plans with the helicopter operator/Aviation Advisory personnel.
- 3) Coordinate inspection of all fuel systems, ensure defects are remedied and hazards reported to helicopter operators.
- 4) Ensure properly qualified personnel perform quality control checks and refueling operations.

##### 2. Fuel System Operation Inspection Interval and Inspectors

- a. All refueling systems should be inspected annually as a minimum using an appropriate checklist (sample attached to this text).
- b. These inspections may be completed either by the helicopter operator or Aviation Advisory personnel, who also develop follow-up actions to remedy any discrepancies.

##### 3. General System Guidelines

- a) All fuel delivery systems are required to have a filter/separator equipped with a water defense system that will stop fuel flow or alert operating personnel when actuated by high water level.
- b) Fuel filter canisters should be clearly marked with the next date of change or inspection cycle and data recorded in an appropriate inspection record.
- c) All filters should be replaced at nominated pressure differentials as annotated on the filter housing or as recommended by the manufacturer, but should be replaced annually.
- d) All fuel storage supplies should be allowed to settle 1 hour for each 1 foot of fuel depth before use and samples are taken and checked for water content. When fuel transport tanks have been allowed to settle for 1 hour per foot prior to transfer, no additional settling is required for the main tank.

- e) All steel tanks should be lined with an approved epoxy liner unless the tanks are constructed of stainless steel and the preferred tank design should include floating suction.
- f) All fuel supply tanks should be installed with a slope and have a sump drain at the tank low point for sampling purposes and a method of checking fuel quantity.
- g) The preferred plumbing for fuel systems is stainless steel and connections welded.
- h) All fuel system static grounds should have continuity checks performed annually as a minimum.
- i) It is recommended that frangible "witness" seals be used on transport tank openings after filling, to allow verification that contents are untampered.

#### 4. Fuel System Sampling Guidelines

- a) All required fuel samples should be completed prior to first refueling of the day.
- b) Each of the following should be sampled into an appropriate container and checked for water or other contaminants: Tank sump(s), filter(s), and fuel nozzle(s).

#### 5. General Fuel System Maintenance and Documentation

(The following items should be documented in fuel system quality control records.)

- a) **Daily** – A Daily Log will be used to record the following items:
  - 1) Sample and water inspection results from fuel tank sumps, all filters/monitors, and fuel nozzles.
  - 2) Differential pressure readings, if installed.
- b) **Annually**
  - 1) The interior of all tanks, tank seals, and pressure relief valves should be inspected, all gauges/pressure relief valves should be calibrated (unless the manufacturer specifies differently) and fuel filters changed.
  - 2) Tanks, when inspected, should include a check for build-up of sediment or evidence of microbial growth. If the tank has an internal epoxy coating, inspect coating for evidence of chipping, flaking, or other deterioration. Maintain a record of tank inspection and cleaning using ATA Form 103.01D or similar form.
- c) **Hoses** – All aircraft refueling hoses should be marked as complying with the specifications of API 1529 and maintained in accordance with the hose manufacturer specifications.
- d) **Portable Offshore Fuel Transport Tanks** – Information on transporter tanks may be obtained from the Code of Federal Regulations (U.S. CFR 49, Part 173.32 and Part 180). A 5-year hydrostatic test is required on the transporters. The data plate on the tank should state the test pressure requirement and the tank should be appropriately marked for Jet Fuel use.

#### Reference Publications

- ATA Specification 103 Standards for Jet Fuel Quality Control at Airports
- NFPA 407/30A Standard for Aircraft Fuel Servicing/Flammable and Combustible Liquids Code
- Oil and Gas Producers (OGP) Aircraft Management Guide
- API/IP 1581 and 1583 Specifications and Qualification Procedures for Aviation Fuel Filter/Monitors with Absorbent Type Elements and for Aviation Jet Fuel Filter/Separators
- ASTM D1655 and D1298 Standard Specification for Aviation Turbine Fuels and Standard Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method
- 46 CFR and 49 CFR
- DOT Federal Motor Carrier Safety Regulations
- FAA Advisory Circular 150/5230-4 Aircraft Fuel Storage, Handling, and Dispensing on Airports

Recommended Practices (RP) are published under the direction of the Helicopter Safety Advisory Conference (HSAC), P.O. Box 60220, Houston, Texas, 77205. RPs are a medium for discussion of aviation operational safety pertinent to the energy exploration and production industry in the Gulf of Mexico. RPs are not intended to replace individual engineering or corporate judgment nor to replace instruction in company manuals or government regulations. Suggestions for subject matter are cordially invited.

## HSAC Recommended Practice (RP) # 2005-01 Helicopter Tiedown Practices

### Background

Over the past ten years there have been five accidents in the GoM attributable to pilots attempting to takeoff with the aircraft tied down to the helideck. All the aircraft were either substantially damaged or destroyed and one pilot was fatally injured. Tiedown accidents are preventable provided the operator has an effective tiedown policy in effect and pilots follow the guidelines.

### Recommended Practices

1. All offshore aircraft should be equipped with helideck tiedowns designed for that particular model helicopter and capable of securing the aircraft to the deck at four points.
2. Aircraft should have provisions for safe stowage of the tiedowns when not in use that will not present a hazard to the aircraft should they become loose in flight. Stowage locations should be standardized by aircraft model.
3. Aircraft tiedowns should be inspected on a daily basis and replaced when any evidence of excessive wear or significant deterioration is noted. Interconnecting ribbons or lanyards should not be removed or cut.
4. Whenever an aircraft is required to be tied down to the deck, all tiedowns will be used to include all main rotor tiedowns.
5. The addition of brightly colored streamers to the tiedowns will greatly increase their visibility to both pilots and passengers.
6. The addition of a sock, secured to the tiedowns and placed over the cyclic will add another reminder to the pilot that the tiedowns are installed.
7. Aircraft should be tied to the heliport/deck/ramp whenever the following conditions exist:
  - When severe weather exists.
  - When severe weather is imminent or forecast.
  - When thunderstorms or squall lines are in close proximity.
  - When winds may exceed 40 knots.
  - When medium or large helicopters land on or depart from an offshore helideck occupied by another helicopter, the other helicopter will be tied to the deck.
  - Helicopters remaining offshore and helicopters remaining outside overnight should be tied down using the entire tiedown kit.
  - When thunderstorms or squall lines are forecast, consideration should be given to tying down helicopters ~~that will be left unattended for more than one hour.~~
8. Never start the aircraft with the intent of flight without first performing a walk-around inspection and confirming that all tiedowns have been removed.
9. As with all sequenced events, if interrupted while removing the tiedowns, start from the beginning.
10. Tiedown practices and procedures should be adequately covered in the pilot new hire training syllabus and reviewed as a topic during annual recurrent training.

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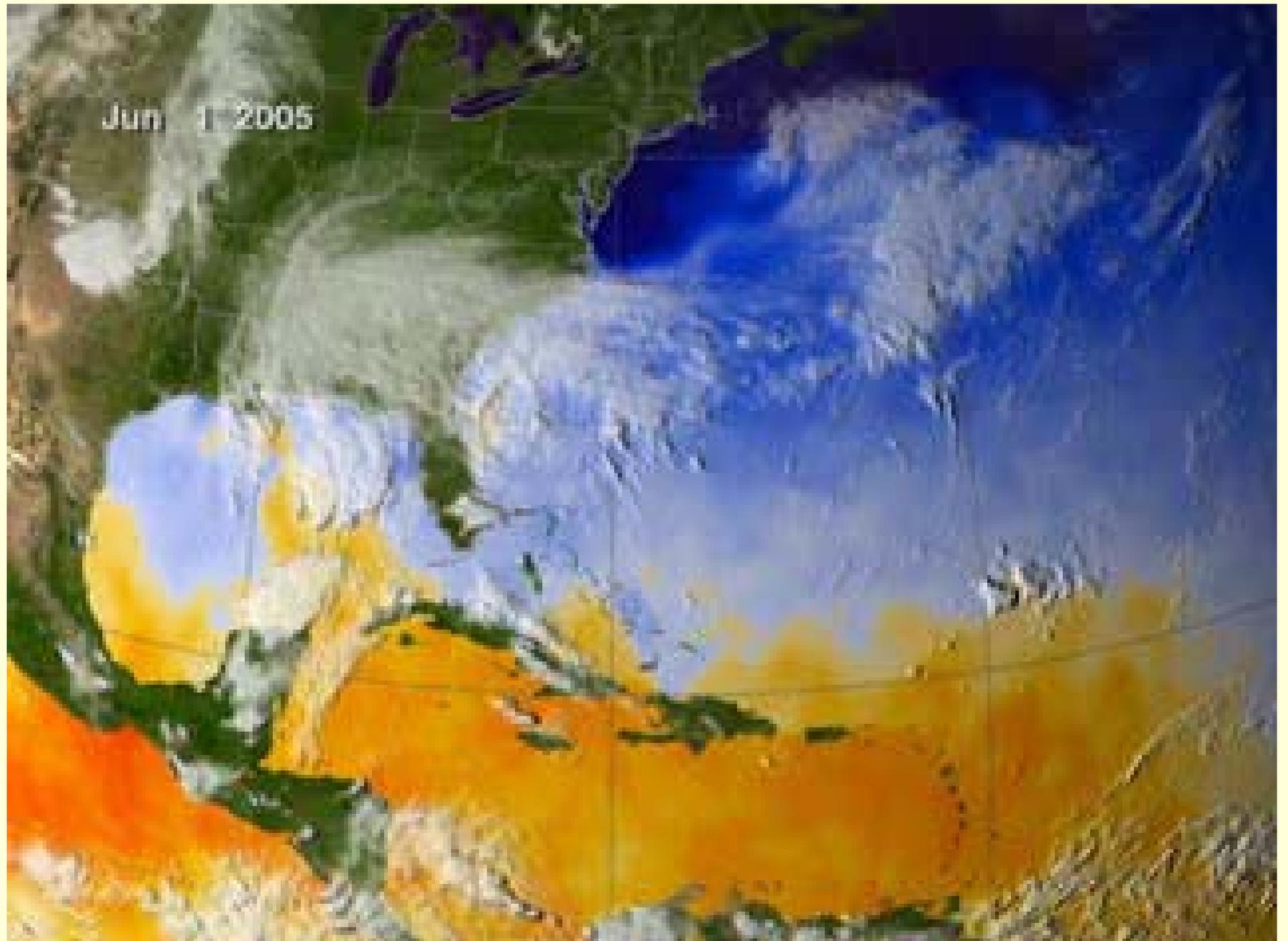
# 2012 HURRICANE SEASON EXTENDED RANGE FORECAST

*“...it only takes one  
hurricane making landfall to  
make it an active  
season...”*

# 2012 HURRICANE SEASON

- Each year since 2005 we have presented info for the current Hurricane Season.
  - Last year's numbers
  - This year's forecast
  - Planning
  - **WHY?**

Jun 1 2005



# 2012 HURRICANE SEASON

- All information from Klotzbach and Gray studies conducted at:  
Department of Atmospheric Science  
Colorado State University  
Fort Collins, CO 80523  
<http://hurricane.atmos.colostate.edu/Forecasts>

# 2011 HURRICANE SEASON

- Actual Activity for 2011 Season
  - Named Storms 19
  - Named Storm Days 89.75
  - Hurricanes 7
  - Hurricane Days 26
  - Major Hurricanes 4
  - Major Hurricane Days 4.5

# 2012 HURRICANE SEASON

- Anticipate a below-average probability for major hurricanes making landfall along the U.S. coastline and in the Caribbean.

# 2012 HURRICANE SEASON

- Seasonal Forecast for 2012
  - Named Storms 10
  - Named Storm Days 40
  - Hurricanes 4
  - Hurricane Days 16
  - Major Hurricanes 2
  - Major Hurricane Days 3

# 2012 HURRICANE SEASON

- Probabilities for at least one major (Cat.3-4-5) hurricane landfall on each of the following coastal areas:
  - Entire U.C. coastline – 42%
  - U.S. East Coast including Peninsula Florida – 24%
  - Gulf Coast from the Florida Panhandle westward to Brownsville – 24%
- Probability for at least one major (Cat 3-4-5) hurricane tracking into the Caribbean – 34%

# 2012 HURRICANE SEASON

- Seasonal Updates for 2012 Hurricane Season
  - Friday, 1 June
  - Friday, 3 August

Available at:

<http://hurricane.atmos.colostate.edu/Forecasts>.

# 2012 HURRICANE SEASON

- Plan early
- Aggressively manage assets
- Communicate

# **HSAC GULF OF MEXICO OFFSHORE HELICOPTER OPERATIONS AND SAFETY REVIEW 2012**

**HAI Offshore Committee  
Lafayette, Louisiana**

**Prepared by Bob Williams**

May 2012

**HELICOPTER SAFETY ADVISORY CONFERENCE  
(HSAC)**



# HSAC Helicopter Operations and Safety Performance



## EXTRACT 2011 HSAC OPERATIONAL PERFORMANCE REPORT

The average number of accidents per year in the GoM since 1984 has been 8.1 per year with the last 10 years averaging 6.7 per year, with 5\* for 2011. The 2011 GoM oil industry helicopter **accident rate** per 100,000 flight hours was **1.58** with a total of 5 accidents compared to a 28-year annual average accident rate of **1.75**. The **fatal accident rate** per 100,000 flight hours during 2011 was **0.00** with no fatal accidents compared to a 28-year average of **0.44**.

\*Note - There were two (2) ditchings in 2011 -> 1 due to loss of power and 1 due to fuel management that were not recorded as accidents by the NTSB. Had these been classified as accidents by the NTSB (as would have been the case in most other countries), the accident rate would have been **2.21** per 100k hours and 0.79 per 100k flights

In the last 5 years, there have been 22 accidents of which 4 were fatal (18%), resulting in 16 fatalities and 12 injuries. The leading causes, not all inclusive, of the accidents since 1999 have been:

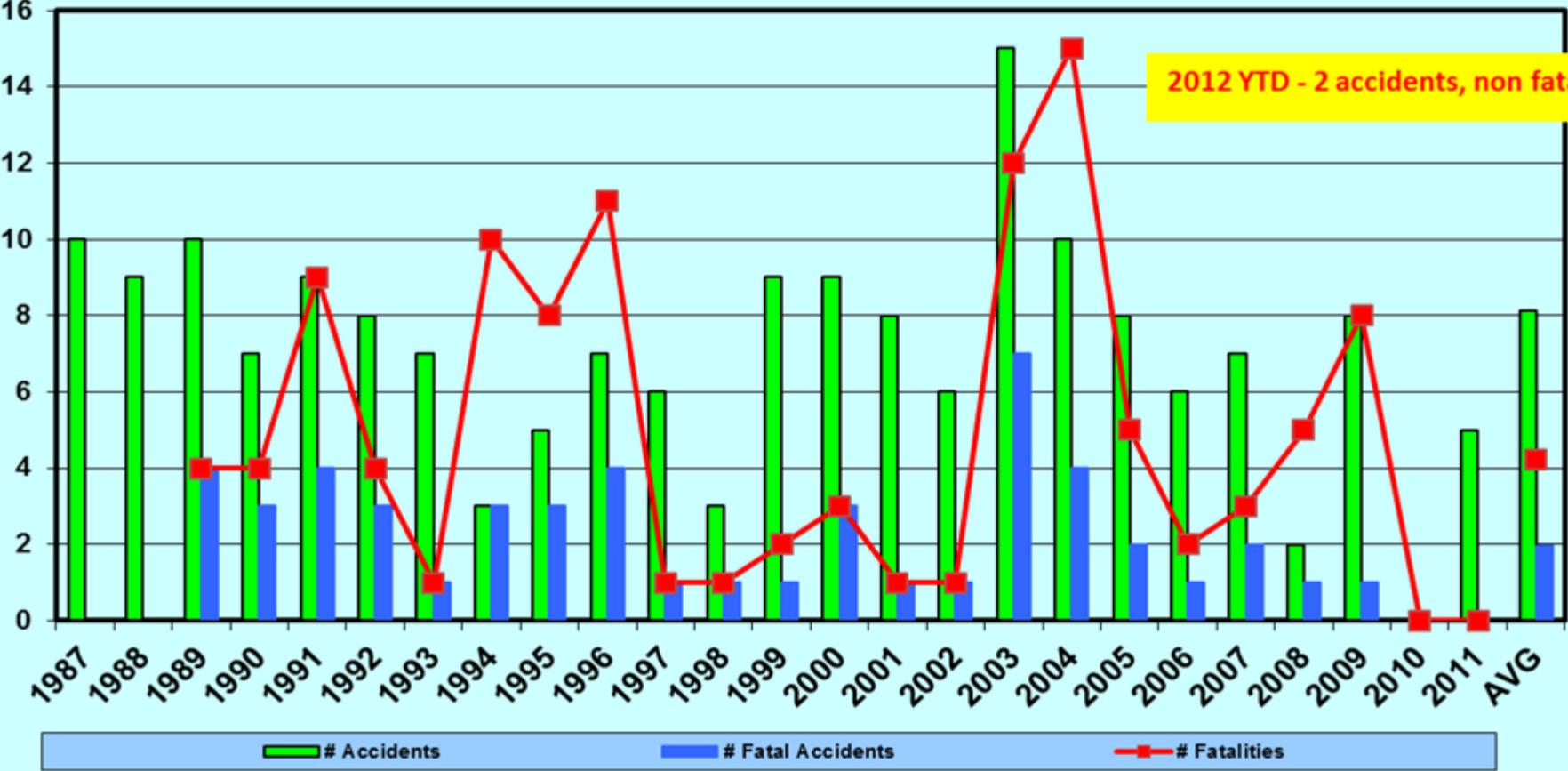
- 20 engine related,
- 18 loss of control or improper procedures,
- 16 helideck obstacle strikes,
- 10 controlled flight into terrain

YEAR	PASSENGERS CARRIED	HOURS FLOWN	NUMBER OF FLIGHTS
2007	2,953,484	410,797	1,294,141
2008	2,936,772	410,321	1,245,770
2009	2,477,834	344,817	1,195,667
2010	2,330,527	334,067	938,690
2011*	2,202,894	316,785	891,172

# HSAC Helicopter Operations and Safety Performance



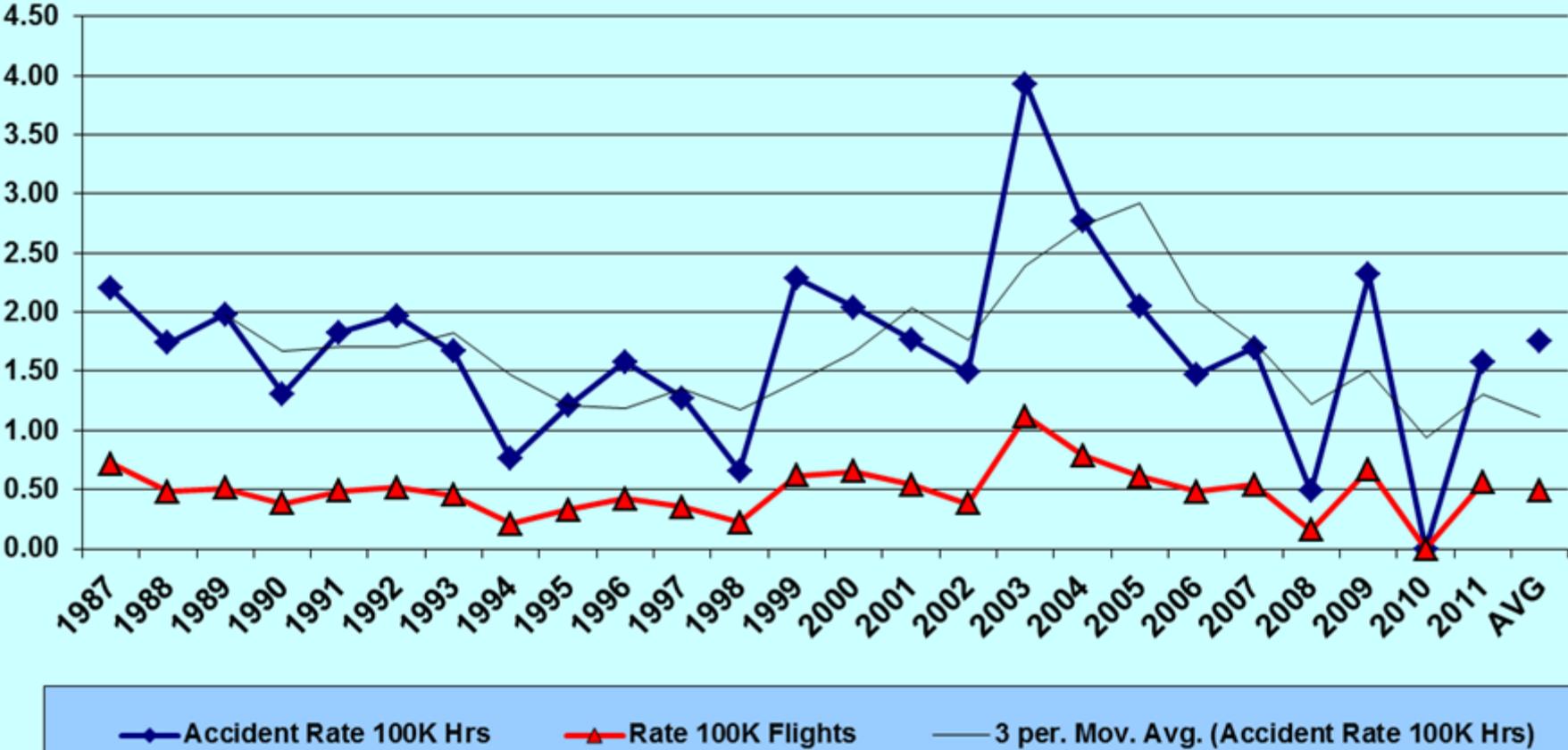
## GoM Accidents and Fatalities



# HSAC Helicopter Operations and Safety Performance



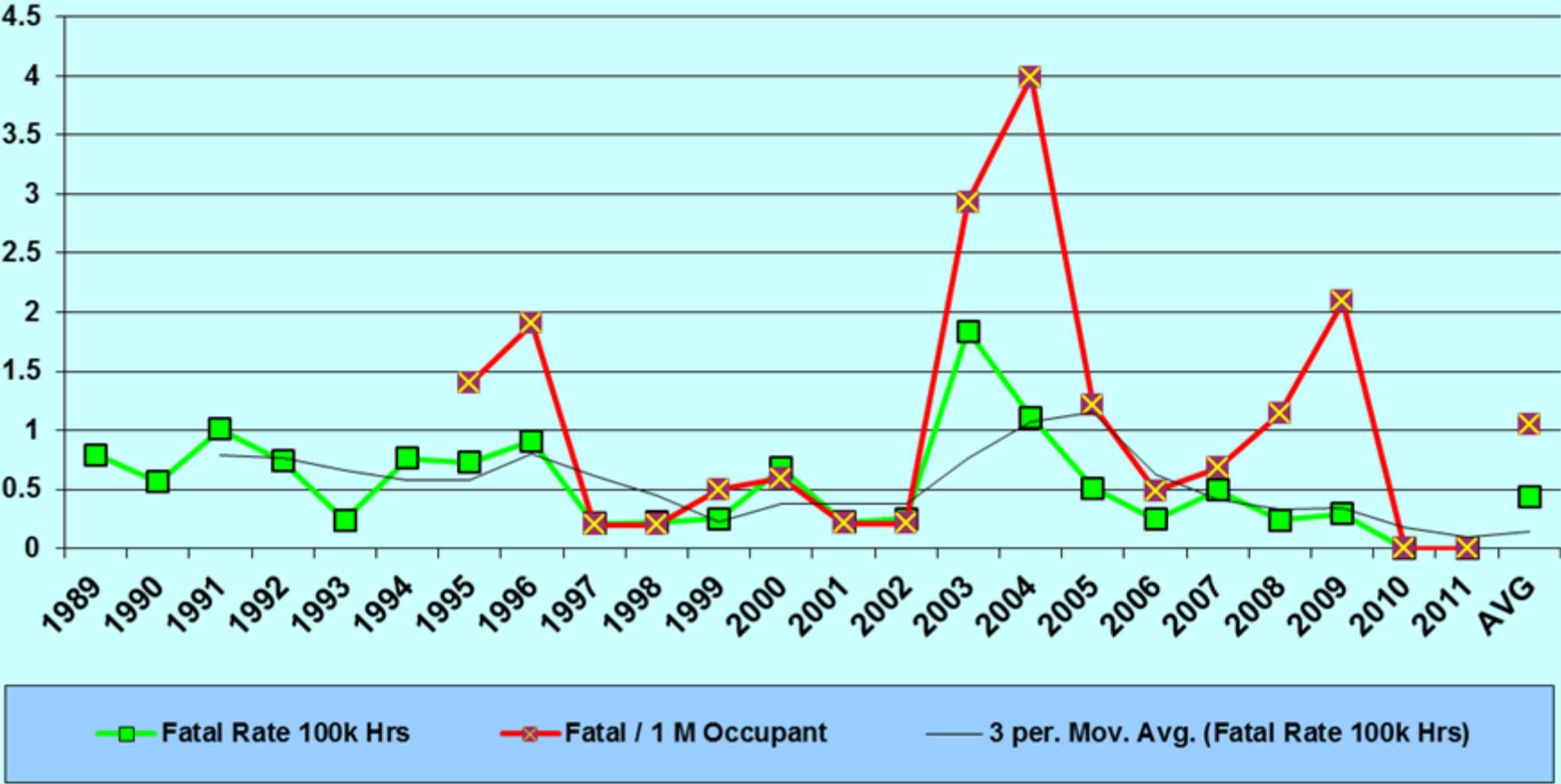
### GoM Accident Rates by Year



# HSAC Helicopter Operations and Safety Performance



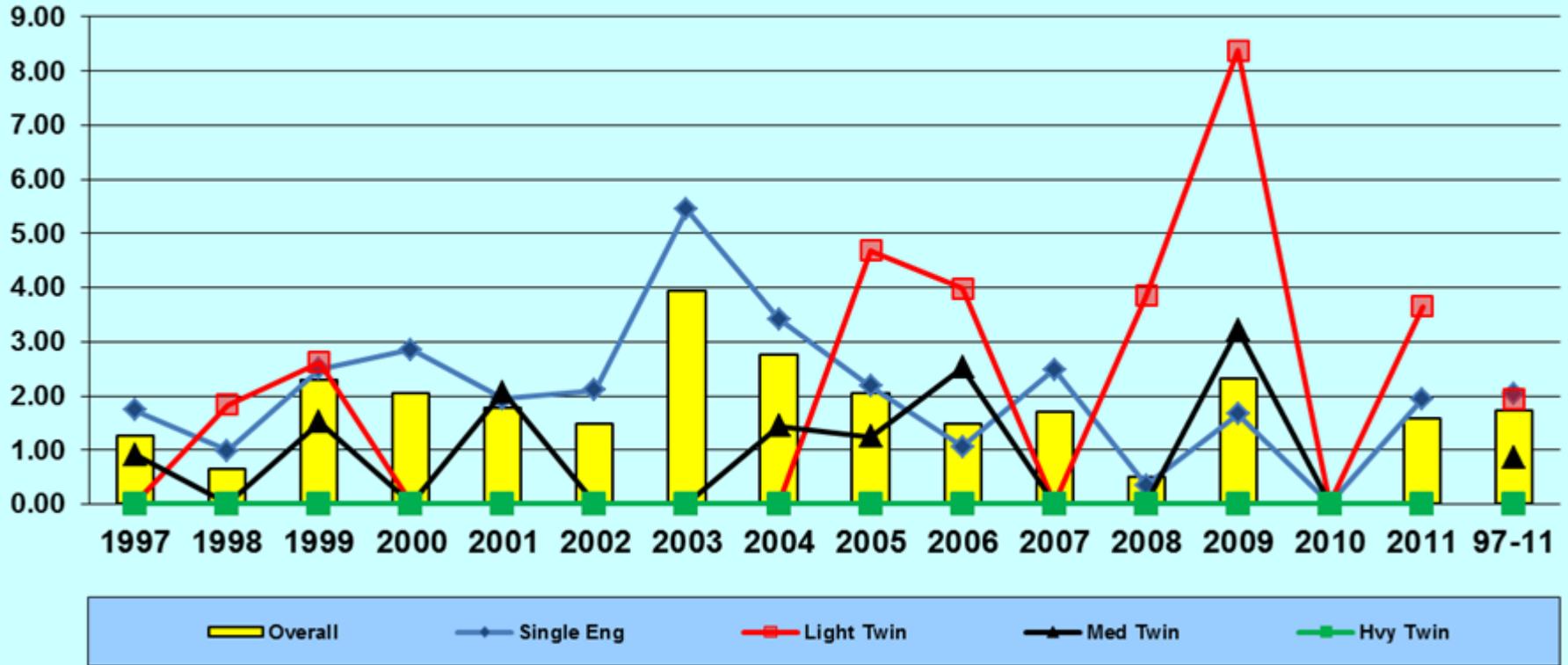
### GoM Fatal Accident Rates by Year



# HSAC Helicopter Operations and Safety Performance



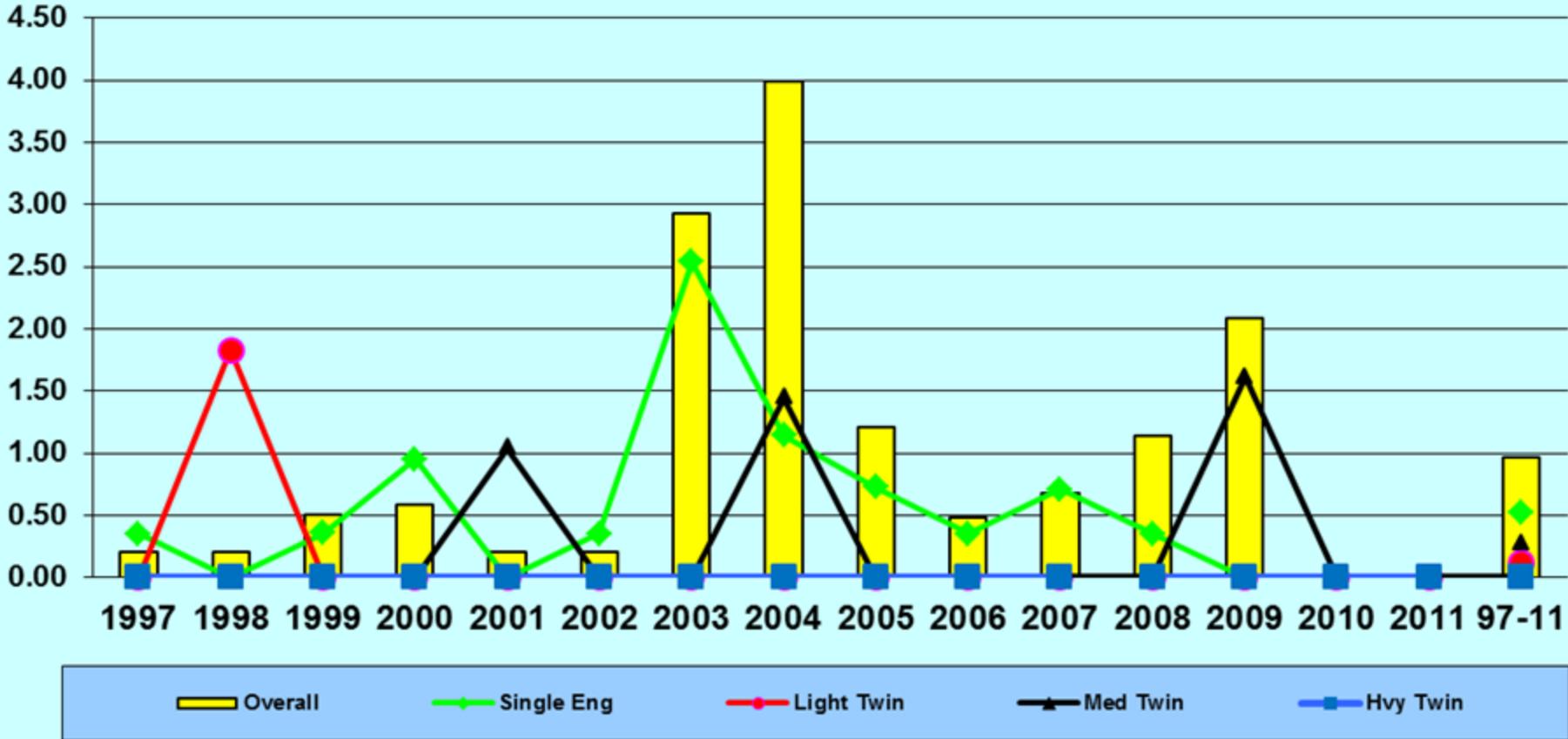
### GoM Accident Rate / 100,000 Hours by Type Helo



# HSAC Helicopter Operations and Safety Performance



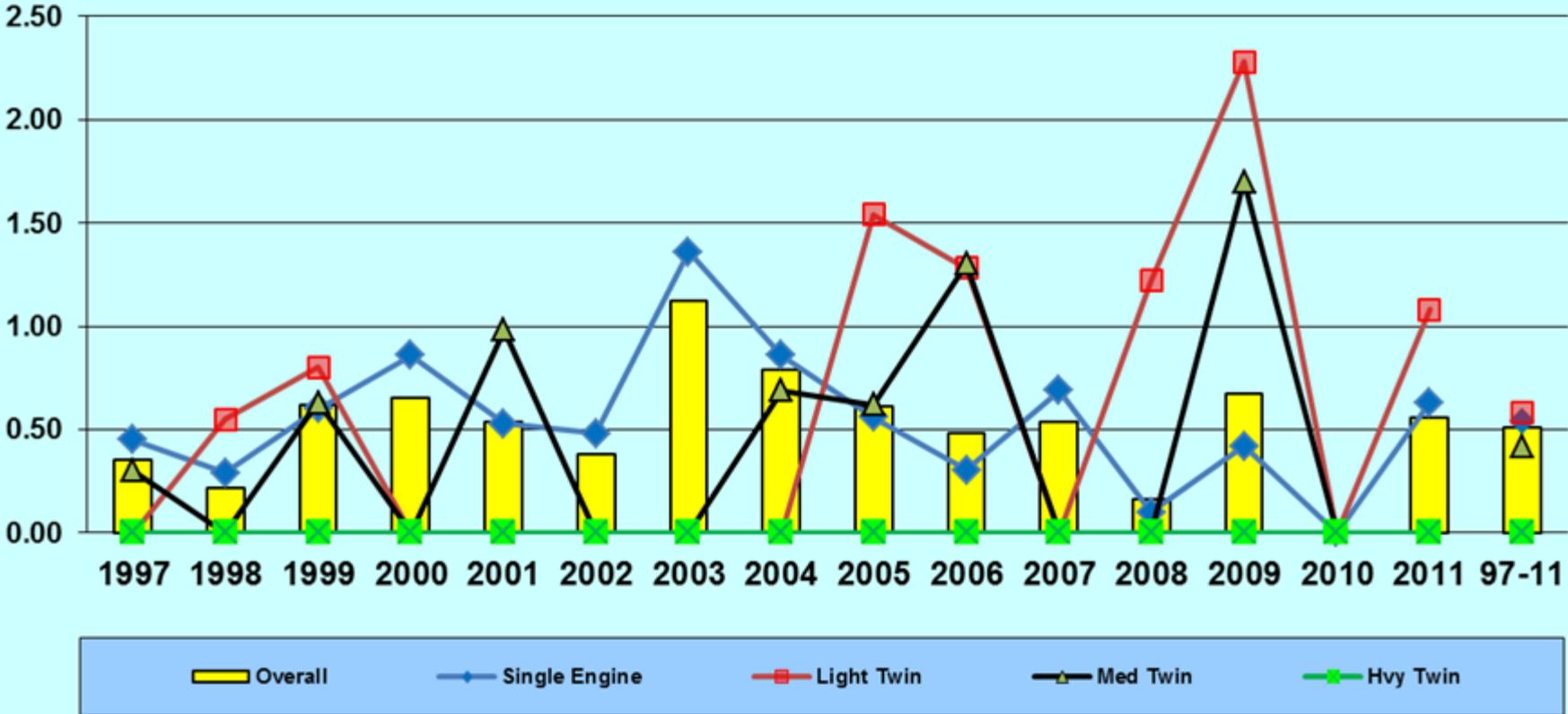
### GoM Fatal Accident Rate / 100,000 Hours by Type Helo



# HSAC Helicopter Operations and Safety Performance



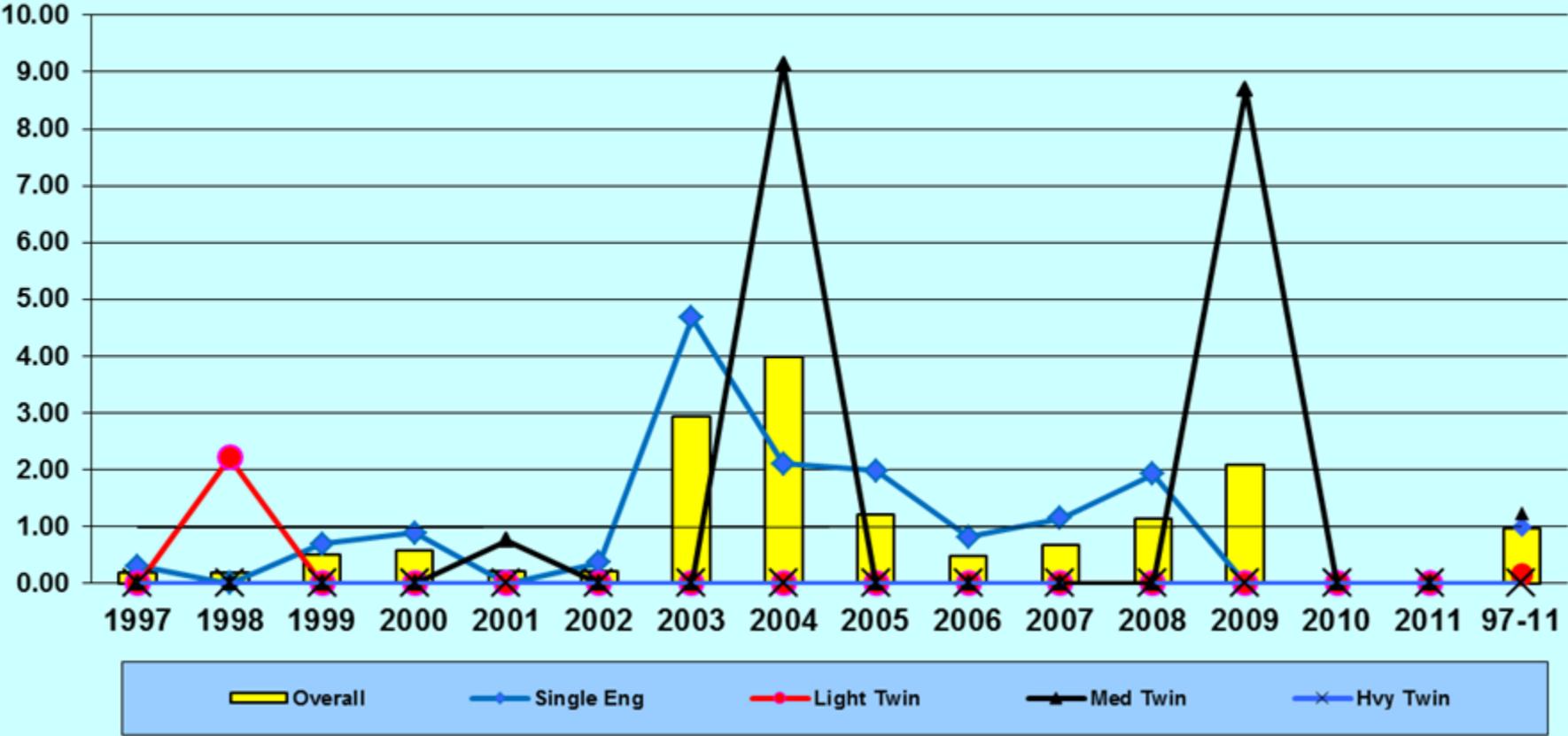
GoM Accident Rate / 100,000 Flights by Type Helo



# HSAC Helicopter Operations and Safety Performance



GoM Offshore Fatal Occupant Rate/1M Carried by Type Helo

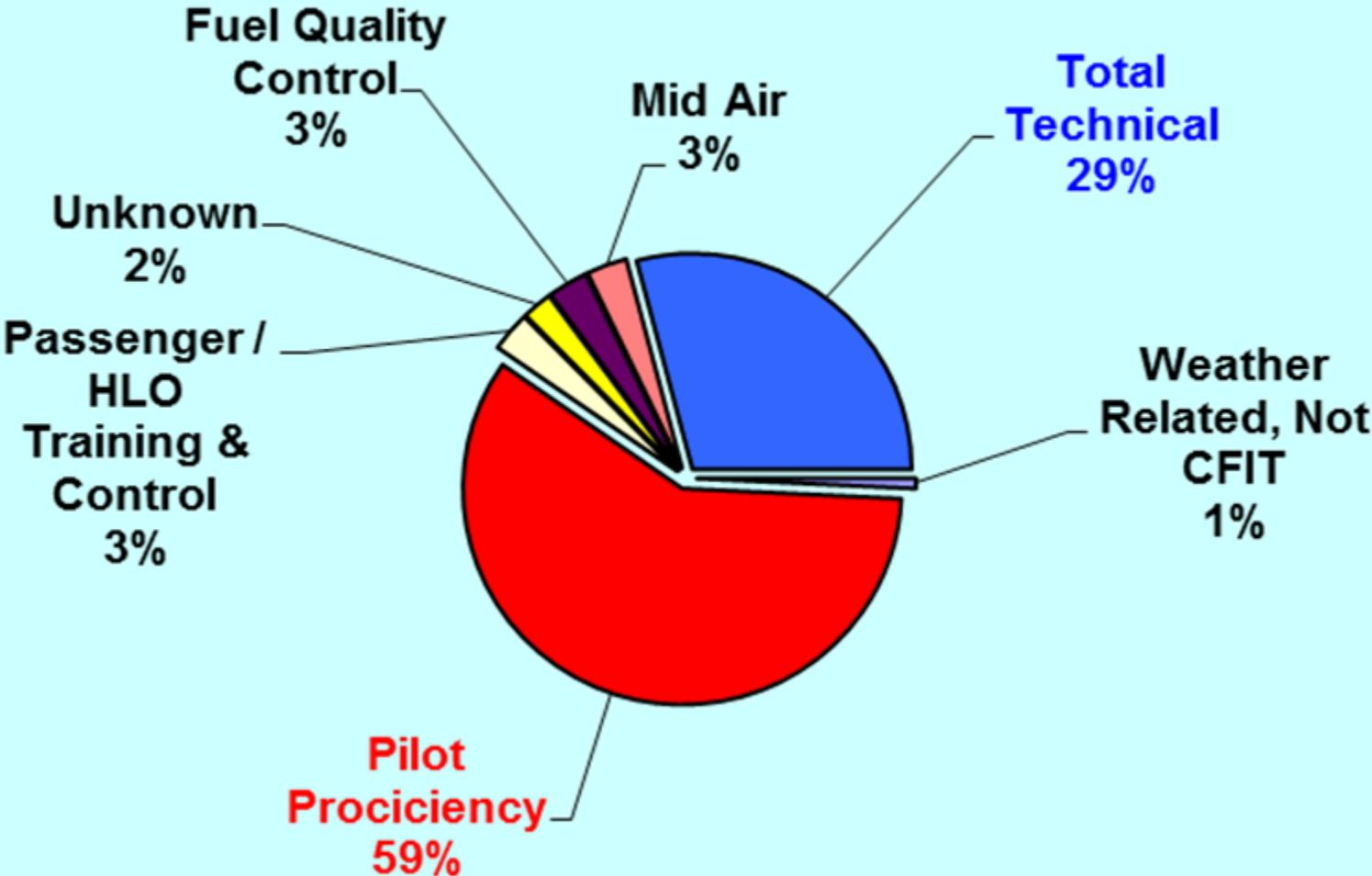




## ACCIDENT CAUSES

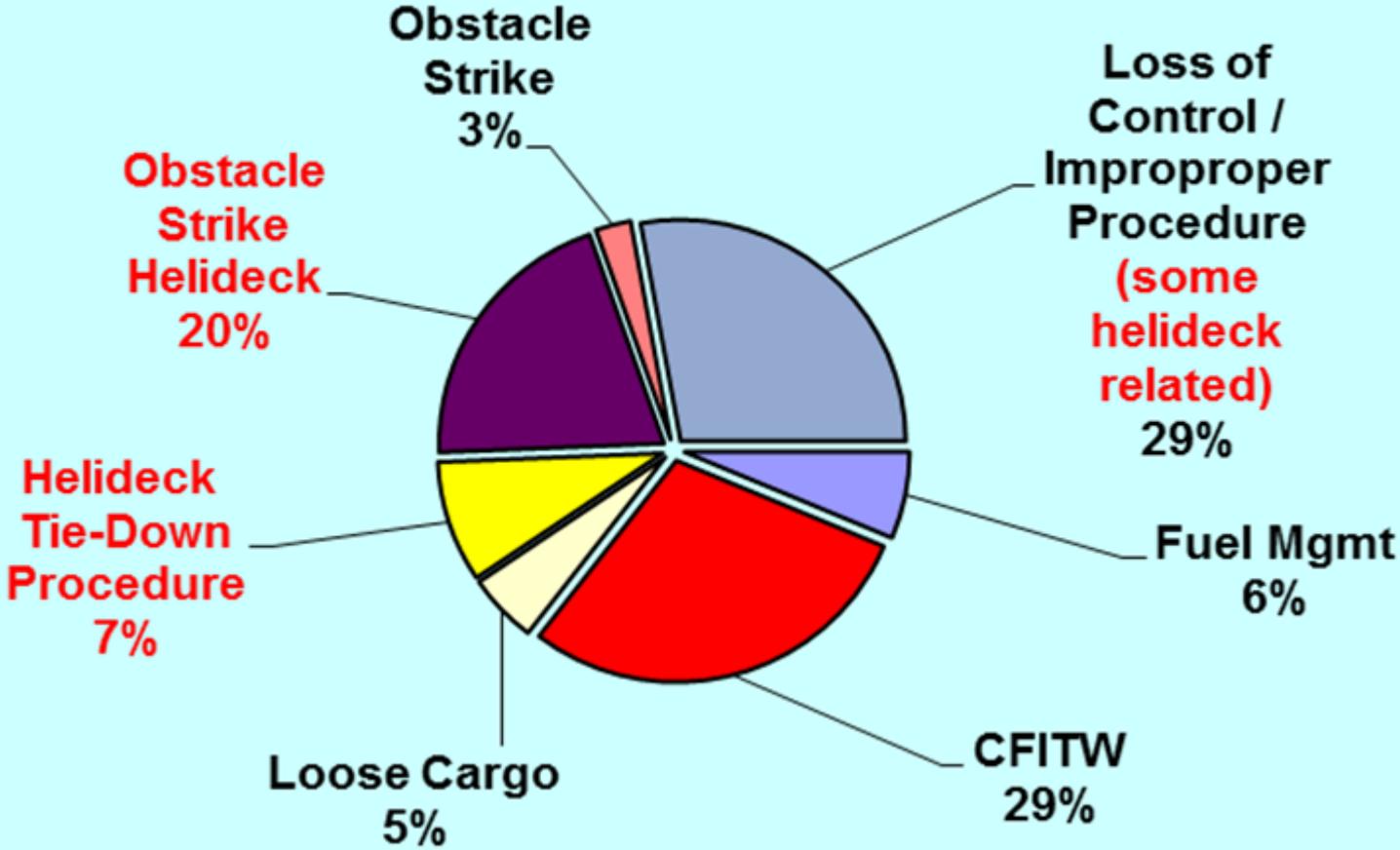


## GoM Accident Causes 1992-2012 (134 Total)



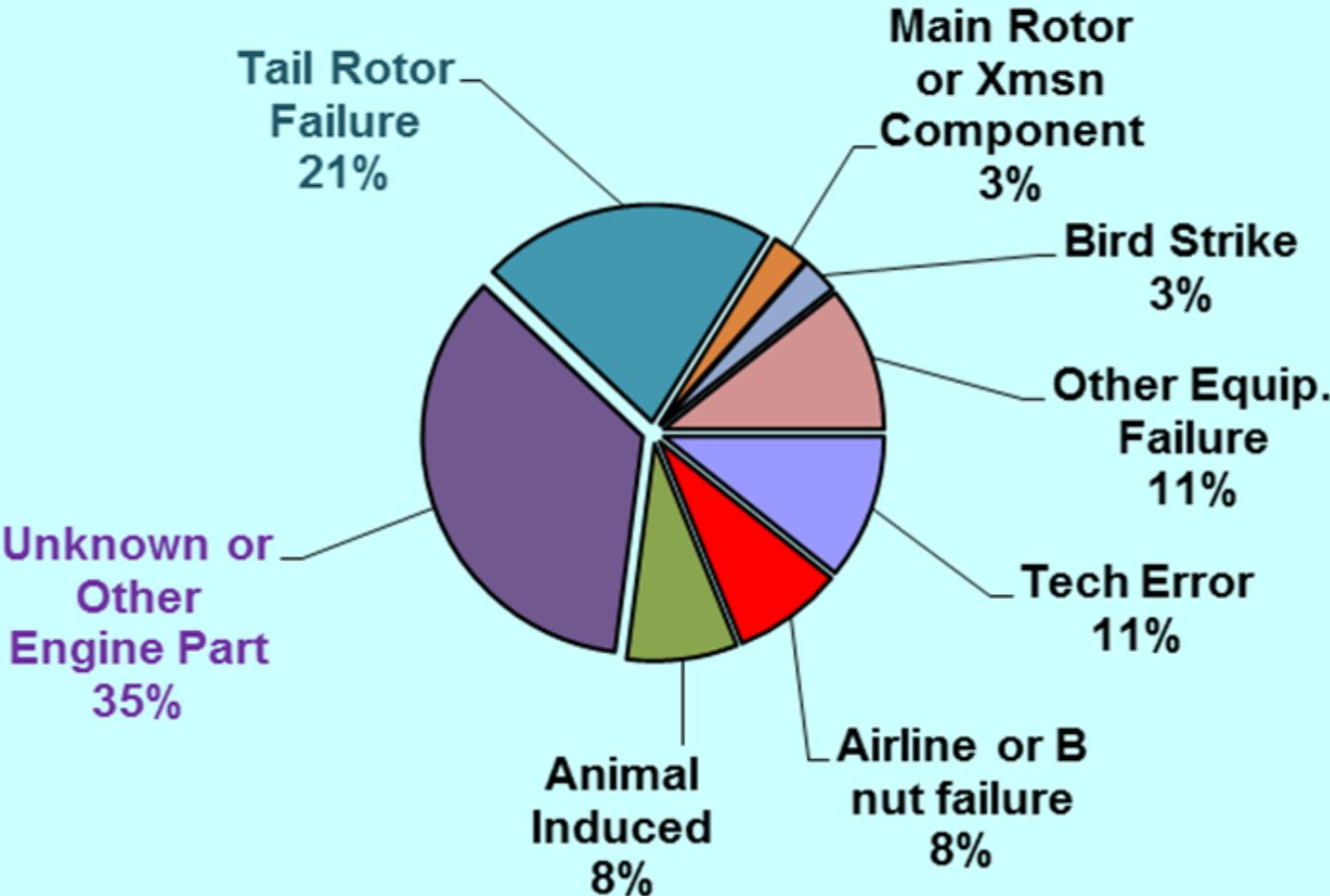


## GoM Pilot Procedure Causes 1992-2012 (79 Total)





## GoM Technical Accident Causes 1992-2012 (39 Total)

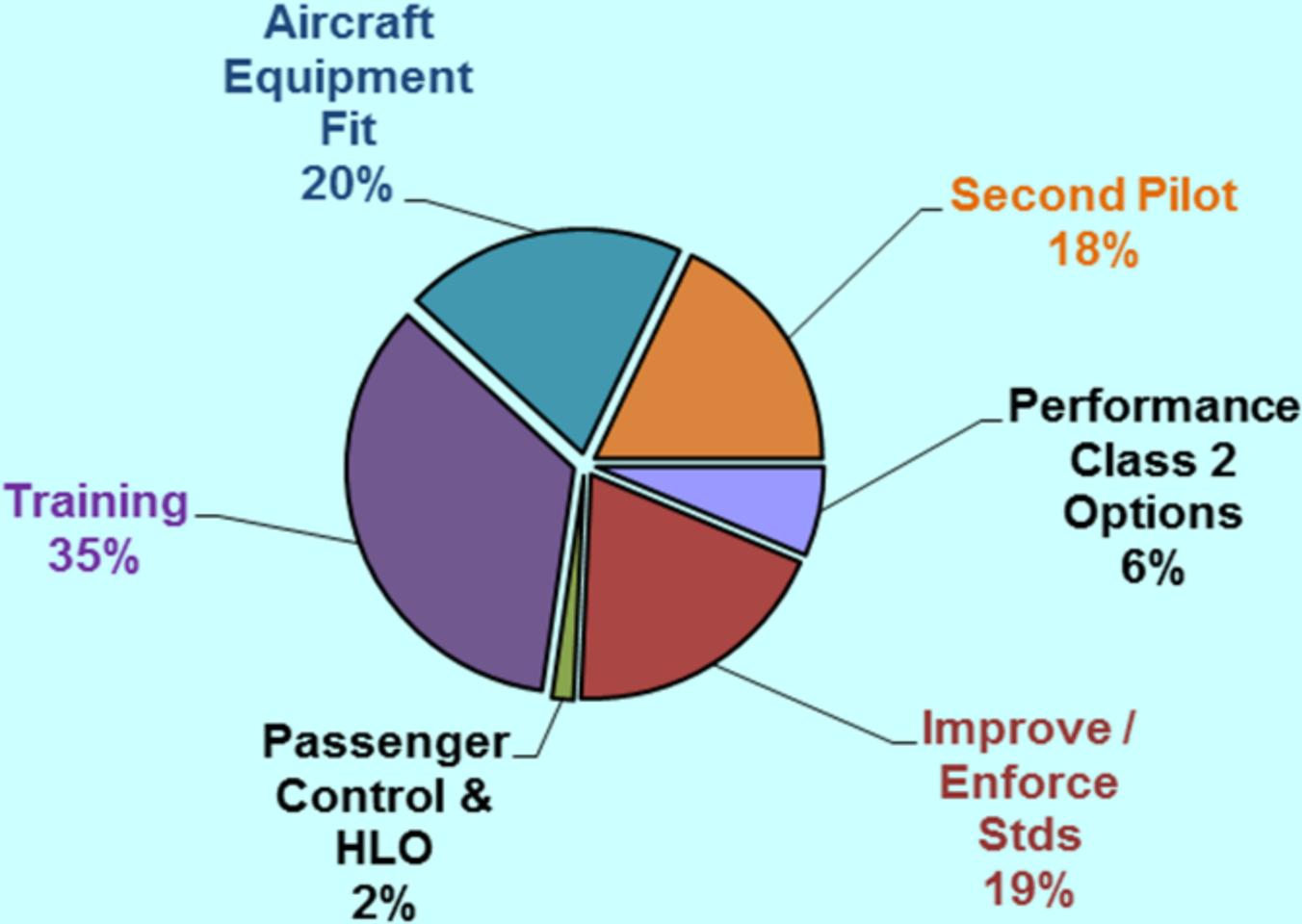




## POTENTIAL MITIGATION

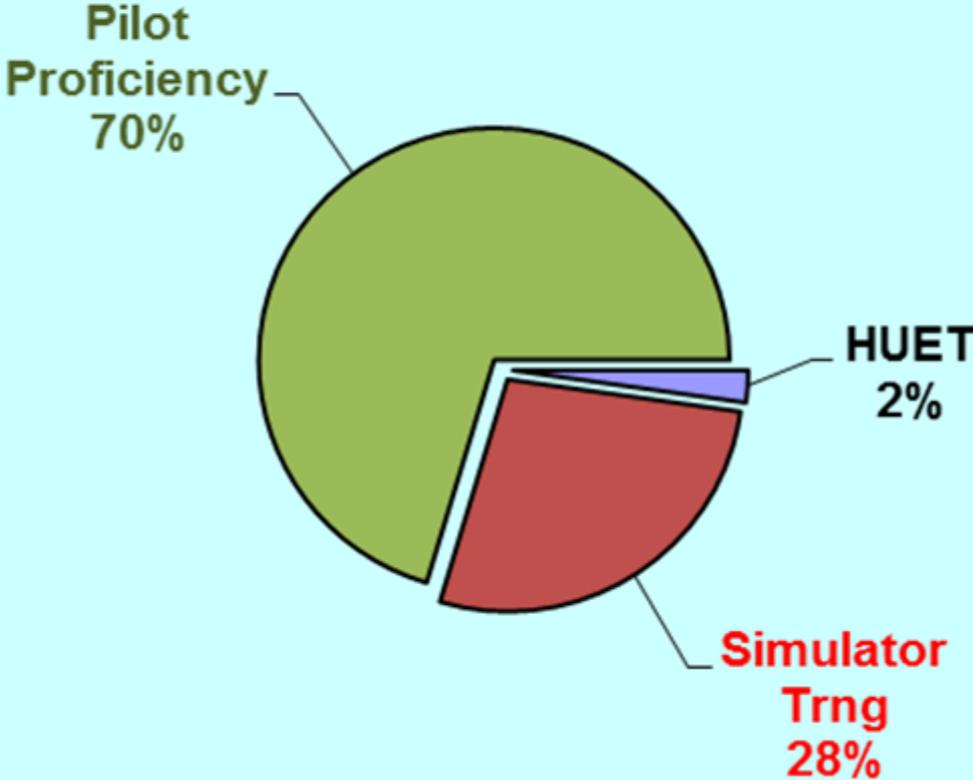


## GoM Potential Mitigating Actions 1995-2012



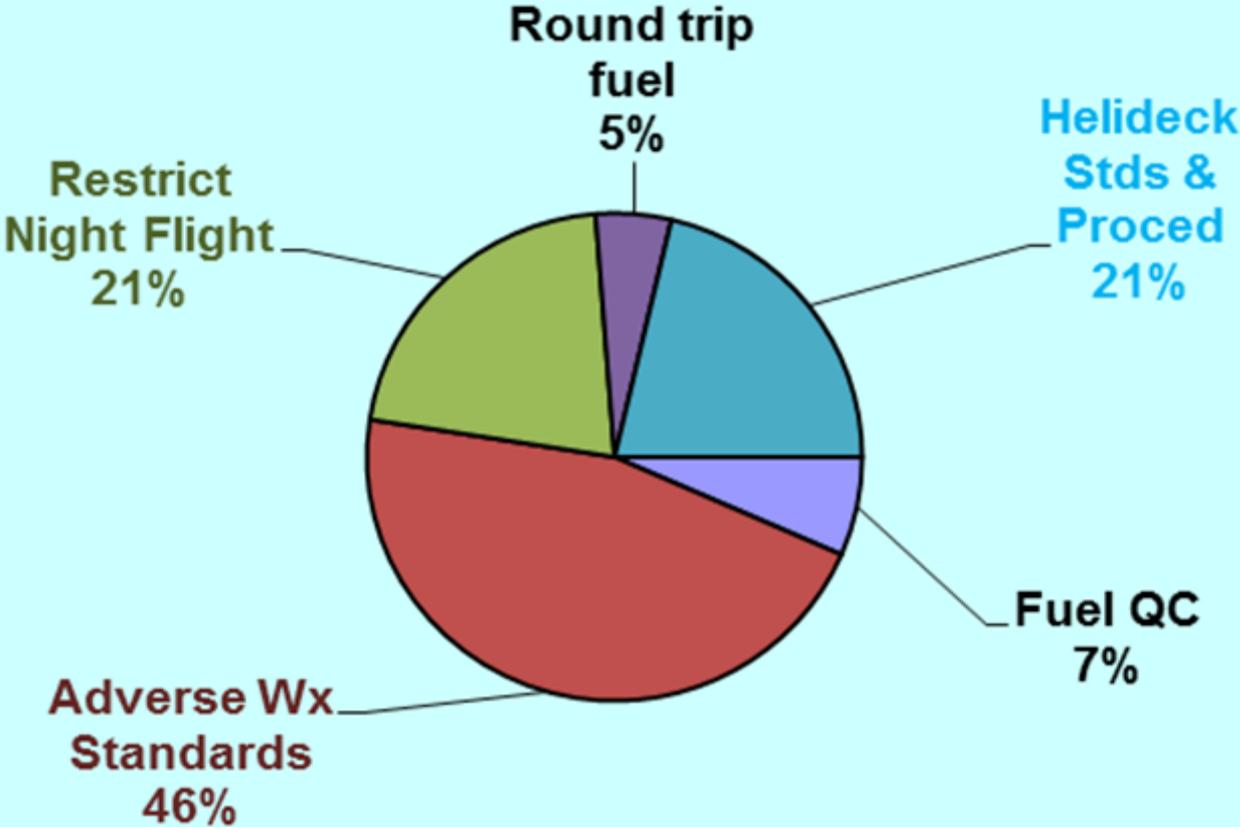


## GoM Potential Mitigating Actions - Training 1995-2012



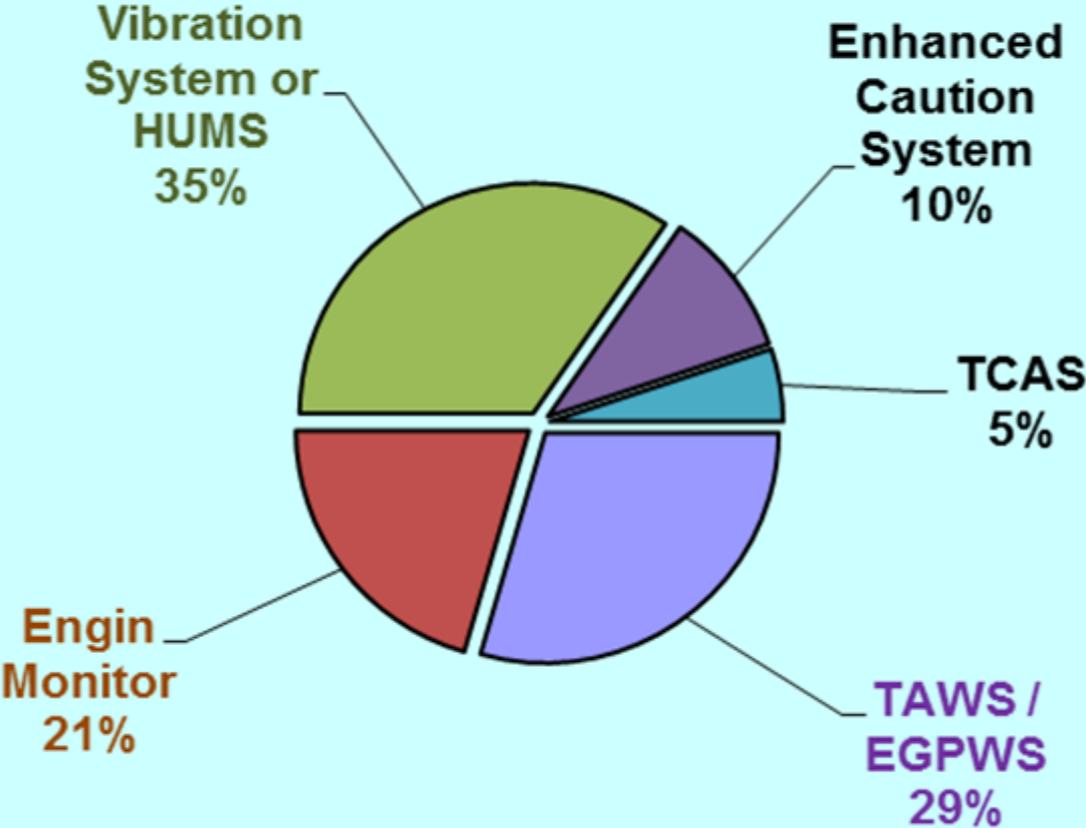


## GoM Potential Mitigating Actions Enforcing / Improving Standards 1995-2012





## GoM Potential Mitigating Actions Equipment Fit 1995-2012



# HSAC Helicopter Operations and Safety Performance



What actions will HSAC take now to make a step change in safety?



**Questions?**

# **HSAC GULF OF MEXICO OFFSHORE HELICOPTER OPERATIONS AND SAFETY REVIEW 2012**

**HAI Offshore Committee  
Lafayette, Louisiana**

**Prepared by Bob Williams**

May 2012

**HELICOPTER SAFETY ADVISORY CONFERENCE  
(HSAC)**



Flight Following/ADS-B Workgroup

Minutes

May 23, 2012 Meeting

Aeronautical Frequency Committee Meeting – March 6-8, Orlando

We discussed several issues that are being addressed by the AFC. These issues include protecting bandwidth for aviation frequencies from several groups that are looking for bandwidth.

NANO and PICO satellites are very small satellites that will be launched for specific purposes, and will only be in orbit for a couple of days before returning to the earth's atmosphere

The FAA has created a device called "Minnow" to counter GPS Jammers. It has been used in conjunction with law enforcement to catch violators around the Newark airport.

The ITU Radio Assembly is discussing the leap second and whether the atomic clock would be better than the current clocks. A change to the atomic clock would affect every piece of software used in aviation and communication.

Direct TV is asking for a LightSquared type waiver for broadband.

Bristow has interference on 130.875 is the MC-474 area. PHI has a similar situation on the Sabine en route.

TOI/TFR Violation Meeting – Week of May 7, Tyndall AFB

Terry Gambill briefed the workgroup on security meetings at Tyndall AFB. The main topic of interest was the number of TFR violations. The group was tasked by the Secretaries of Defense, Homeland Security, and Transportation, to come up with some measures to cut the number of Tracks of Interest (TOI) and TFR violations. HSAC has been asked to come up with an RP or other plan to help get the word out when TFRs are in effect in our flying areas.

Coast Guard Exercise, June 5 – 14, Off of Dauphine Island.

The Coast Guard and the UK are conducting rescue exercises. This exercise will involve boats pulling tethered balloons and kites, and aircraft flying low in the northeast corner of Warning Area 453.

## ADS-B

Glenn Meier briefed the workgroup on several issues involving AWOS in the GOM.

## HSAC Frequency Cards

Recommended changes to the frequency card need to be turned in by the October HSAC meeting. The absolute deadline is Thanksgiving.

David Robinson brought to our attention a problem he has with operators not responding to requests for changes and updates.

We will recommend removing the phone numbers from the ADS-B AWOS portion of the card.

Terry A. Gambill  
Workgroup Chairman



## WADS - RADES Radar Status Light Board - 10k' MSL Coverage

For Official Use Only

### ARSR



### TARS - Aerostat



84 RADES/OLAD

For Official Use Only

13 Sep 2011



# Radar Coverage 1k' AGL



For Official Use Only



For Official Use Only

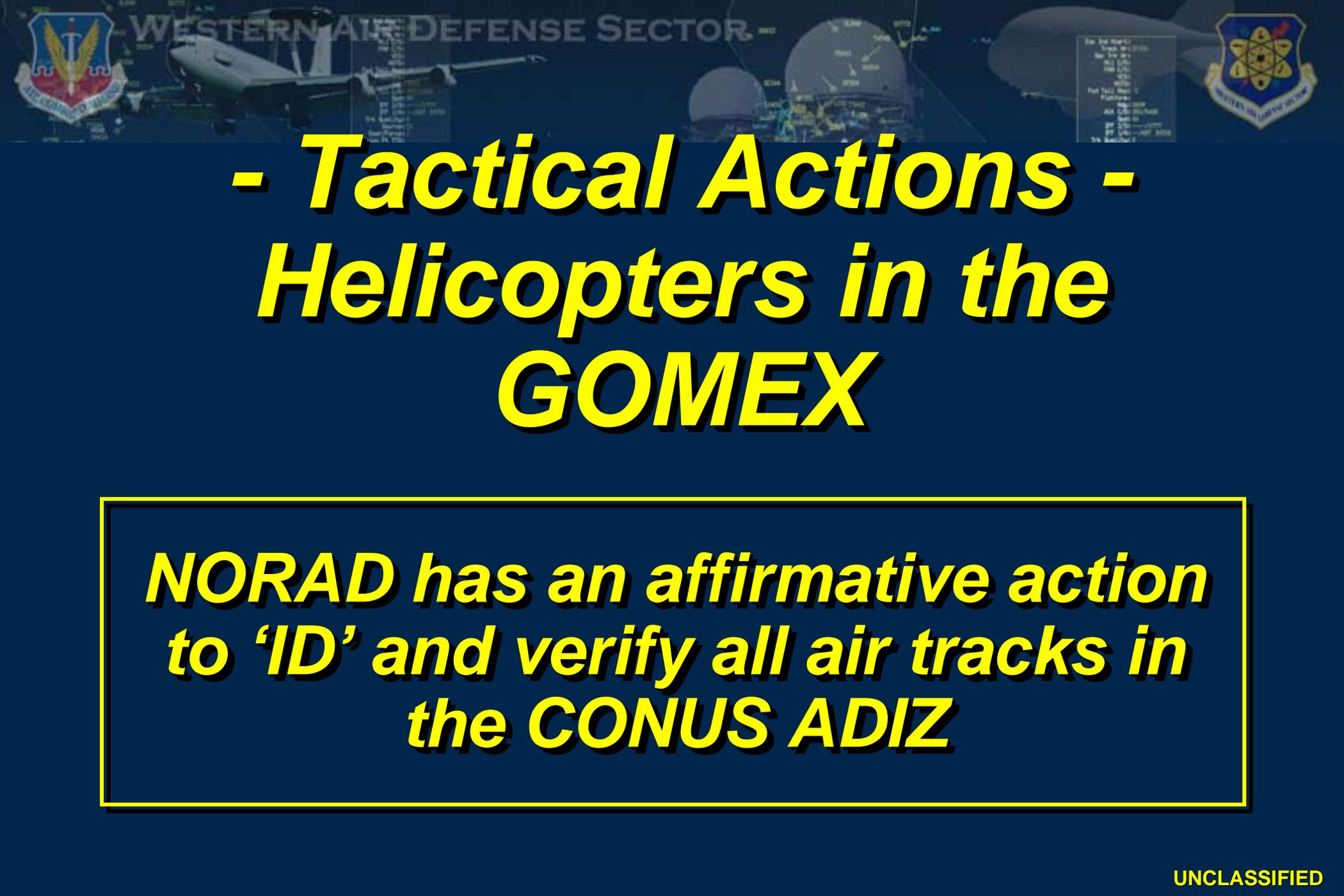
84 RADES

UNCLASSIFIED









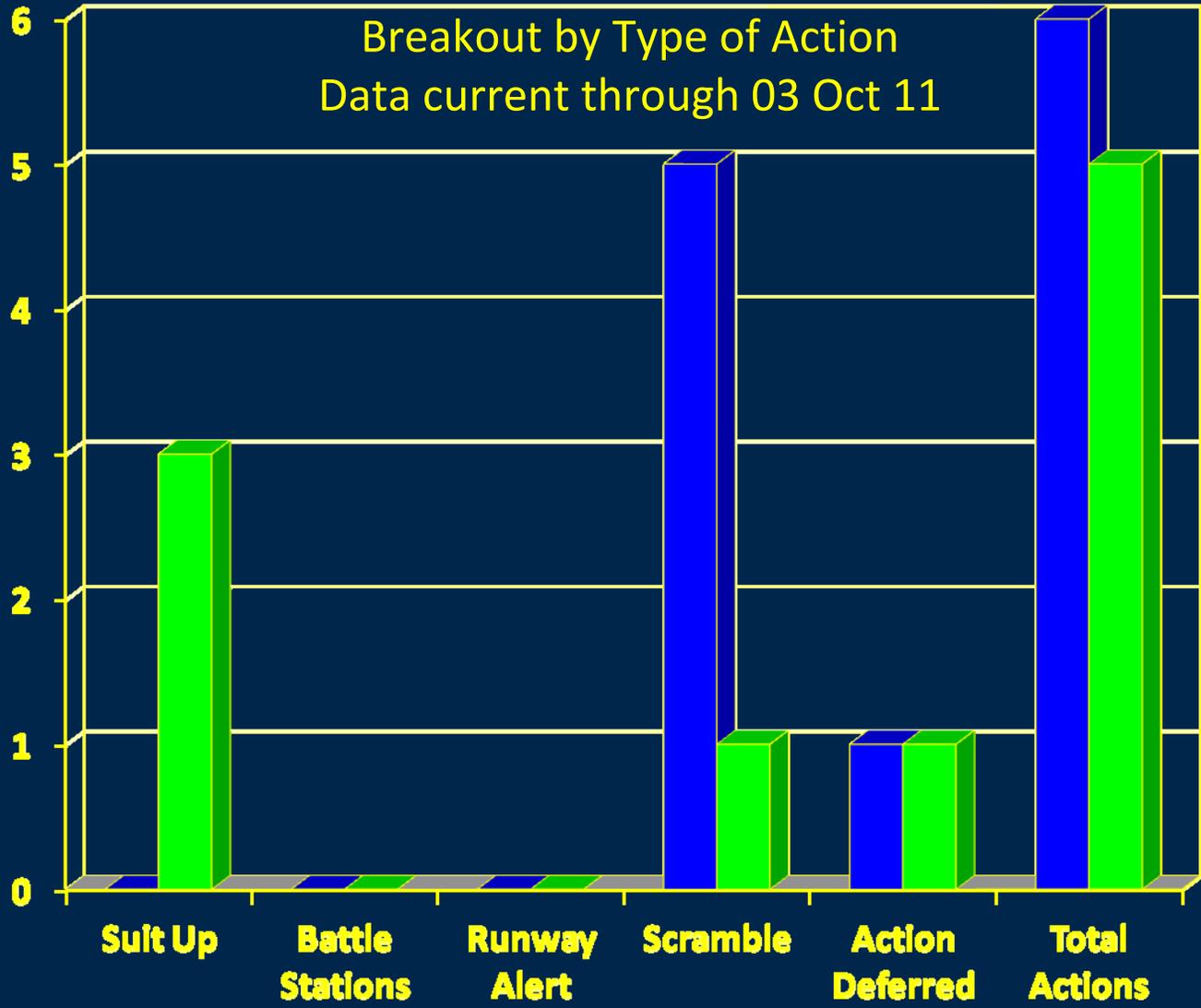
***- Tactical Actions -  
Helicopters in the  
GOMEX***

***NORAD has an affirmative action  
to 'ID' and verify all air tracks in  
the CONUS ADIZ***



# Tactical Actions against Oil Rig Helos CY

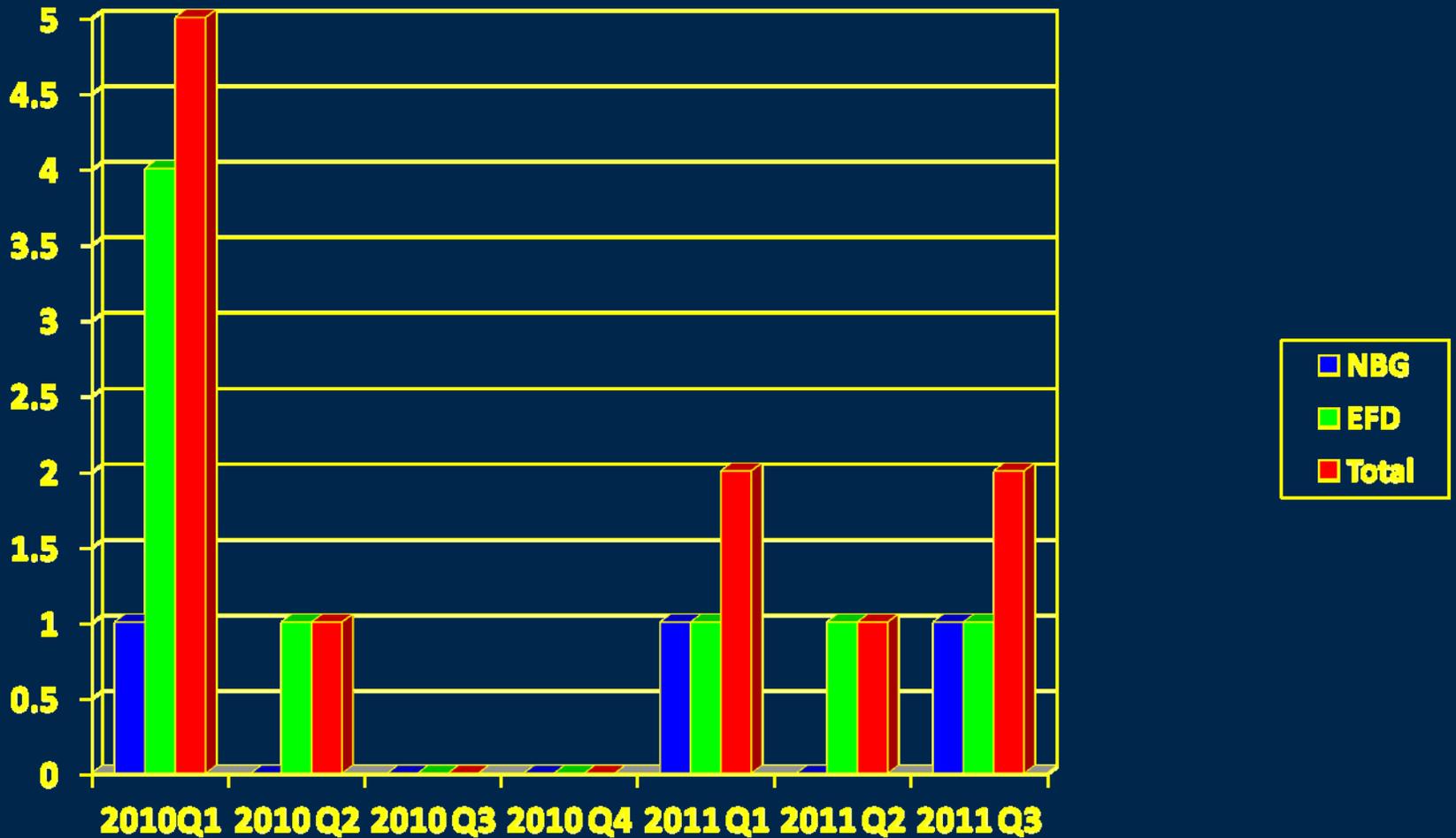
## 2010-2011



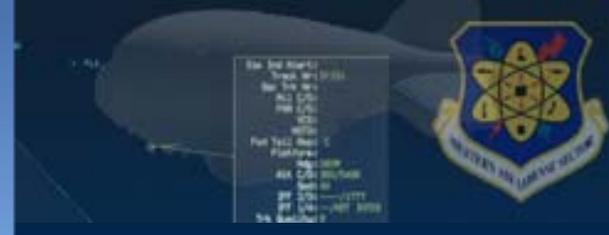
2010  
2011

# Total Number of Tactical Actions on Oil Rig Helos CY 2010-2011

Breakout by Alert Base and Quarter  
Data current through 03 Oct 11







Aircraft you might see in your daily routine !





**HSAC – RP –  
2012 -1  
Fatigue  
Management**

**Background**

Aviation maintenance personnel face a particular risk of fatigue due to night shift work, the potential for long and unregulated duty times, and the sleep disruption that can result from these working conditions. Most countries do not have regulations or policies that address duty limits for maintenance personnel.

Aviation companies should develop a fatigue management plan that addresses duty time for maintenance personnel. This plan should be part of a comprehensive Safety Management System (SMS) model, through which hazards are identified and risk is managed.

**Recommended  
Practices**

- 1. The following guidelines cover areas which may be considered when developing a pro- active fatigue management program.**
  - Total work periods should not exceed 12 hours in any 24-hour period.
  - No shift should be extended beyond 13 hours by overtime
  - A break of at least 11 hours should occur between shifts
  - There should be a work break every four hours
  - Each full working shift should be followed by a minimum 8-hour rest period.

Detailed guidance can be found on the FAA web site:

<http://www.faa.gov/library/reports/medical/oamtechreports/2010s/media/201110.pdf>



**HSAC – RP – 2012-3  
Quality Assurance  
and Quality Control**

**Background**

Each operator should have and internal Quality Assurance, Quality Control and internal Audit process in place

**Recommended Practices**

**1. The following guidelines cover areas which may be considered when developing a Quality Assurance and Internal Audit program.**

- A process that outlines a procedure to audit third party vendors
- A internal audit function that verifies that each section of the maintenance and overhaul department are following established and approved procedures.
- A posted internal audit schedule outlining which department will be reviewed, when and by whom
- Quality Control program for the acceptance of parts received from OEM's or qualified PMA parts suppliers, to include verifiable historical records of the component .
- The operator and should work with each vendor to communicate to them what their expectation are as it related to receiving of components, new or overhauled
- Verification that all documents related to the part e.g. time life , cycles, overhaul dates etc. are accurate and traceable
- Documented procedures to ensure that parts leaving the operators maintenance facility have gone through a qualified inspection program prior to shipping.
- Shipping and parts handling procedures that outline proper care of the parts to ensure that no damage is incurred during the shipping process.

- Can steps be taken to reduce the hazard of a fall i.e. can a work platform be used instead of having to work on the aircraft itself?
- Only remain at height long enough to perform the task required.
- Minimize the height above ground level that you are working at.
- Helmets should be made available to individuals while working at height.
- Is it possible to reduce the hazards should a fall occur i.e. removable objects, debris on the ground, suitable supervision or assistance?

PETZL Helmets - <http://www.petzl.com/en/outdoor/mountaineering-and-climbing-helmets/meteor-iii>

How to choose a helmet <http://www.rei.com/expertadvice/articles/climbing+helmet.html>

Rock Helmets.com [http://www.rockhelmets.com/alpinismo\\_climb.html](http://www.rockhelmets.com/alpinismo_climb.html)

DRAFT



## **HSAC – RP – 2011 -1 Working at Heights**

### **Background**

Falls from aircraft, working surfaces, maintenance stands, while accessing aircraft or undertaking any activity which requires working at or moving through height, are potential sources of injuries and fatalities. Some operations, which expose personnel to falls from heights, include:

- Aircraft pre-flight inspection
- cleaning and painting
- Maintenance, inspections, aircraft servicing
- Aircraft washing operations

In a 2004 article published in The American Journal of Forensic Medicine and Pathology it stated “severe head injuries predominantly occurred in falls from heights below 30 feet (84%) and above 75feet (90%)”.

### **Recommended Practices**

#### **1. The following guidelines cover areas which may be considered when developing a pro- active working at height program**

- Plan your work.
- Select equipment that will aid working safely.
- Consider the work area for access and hazards.
- Do the weather conditions contribute to additional risk?
- Is the person carrying out work at height properly supervised and trained?
- If the person at work is undergoing training is he/she adequately supervised?
- Has a risk assessment been done on the activity planned? Can the task be carried out on the ground?

- Can steps be taken to reduce the hazard of a fall i.e. can a work platform be used instead of having to work on the aircraft itself?
- Only remain at height long enough to perform the task required.
- Minimize the height above ground level that you are working at.
- Helmets should be made available to individuals while working at height.
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Attachment #10

# **HSAC TECHNICAL COMMITTEE**

## **“WAR STORIES”**

**May 23, 2012**

# **We like to share a war stories**

This is what we've learned over the years the hard way.

It's important that we don't make the same mistakes.

The new mechanic or pilot thinks, *“why should I listen to this, he had to make lots of mistakes and learned it the hard way?”*

# Why Do These Incidents Keep Reoccurring

Anyone can share a war story or two to make a point. The discussion which follows is informative and entertaining.

**But did we make our point?**

**Not Always**

Each of us has a professional responsibility as well as a moral responsibility.

Your job is unique in that regards.

Lives depend upon every flight and every maintenance action

# The Big Picture

Just as important as it is to train personnel on each aircraft system, it is just as important to train them on how to develop a vision, a vision to see each step in the **Operation or Maintenance Process** as it relates to the Big Picture.

You must see each step as it relates to the entire aircraft and all of it's systems while envisioning what precautions must be taken while **ensuring safety in this environment.**

# Communications

Having gain experience over the years makes us what we are today.

Cowlings unlatched

Engine plugs not removed

Oil caps left off

PC lines left off

Proper Tie Down Procedures

Contaminated fuel

Having the ability to communicate that experience and make a difference will make us what we are tomorrow.

# Communications Tools

Communications, Attitude, Training, Creativity and Imagination are the tools you are working with.

**Do you have a plan?** *Metrics, Goals, Mission Statements, Safety Meetings, Field Visits, Understand Customers' Expectations.*

# Do you have a Vision?

Vision is a skill developed by thought, **communications**, creativity, **communications**, imaginations, **communications**, and most of all a working environment which encourages information sharing and a system to recognize new ideas.

# Three Types Of Communications

I used the word communications three times in the last slide because, there are three directions to communicate.

- Upward communications
- Downward communications
- Lateral communications

Thank You

Patrick Robert

RPAJ@Chevron.com



# HSAC

Helicopter Safety Advisory Conference

Safety Through Cooperation  
Since 1978

## Aerial Observation Committee Meeting Minutes

Wednesday, May 23, 2012

08:30: Meeting start and Facility Orientation	Cort- Barr Air Patrol
08:35: Introductions	
08:35: Safety Contact	Greg- Barr Air Patrol
08:40: Flight Hours/Accident Rate	Cort- Barr Air Patrol
New accident discussed: Cessna 172 forced landing near San Jacinto Monument (TX)	
08:45: Maintenance RP discussion and finalization	Group
09:50: Break	
10:05: Maintenance RP discussion and finalization	Group
11:00: Break	
11:10: New Business	Cort- Barr Air Patrol
Recommended RP for Equipment Fit: Will email to attendees for review	Nick- KCSI
OQ/Training for aerial observation	Melissa- Marathon
Group attendance and location discussion	Group
Action item: develop list of operators and send invitations for next mtg.	Patrick- Shell
Action item: develop brochure/questionnaire/invitation for patrol contractors	Cort- Barr Air Patrol
Action item: develop presentation for benefits of attendance/membership in AOC	Greg-Barr Air Patrol
Action item: develop survey of operators/contractors	Melissa- Marathon

Next Meeting: October 3-4 2012, Sheridan Hotel (JFK Ave), Houston, TX



## HSAC Contributors – 2011

Apache Corporation	\$ 1,000
BHP Billiton Petroleum	\$ 1,000
BP Americas	\$ 1,000
Bristow U.S. LLC	\$ 1,000
ENI US Operating	\$ 1,000
Era Helicopters LLC.	\$ 1,000
Exxon Mobil Corporation	\$ 1,000
Greater Lafourche Port Commission	\$ 1,000
Hess Corporation	\$ 1,000
PHI, Inc.	\$ 1,000
Rotorcraft Leasing Co. LLC (2010 & 2011)	\$ 2,000
Skynet Satellite Communications	\$ 500
Tennessee Gas Pipeline	\$ 1,000
Trans Canada Pipeline	\$ 1,000

Total: \$ 14,500



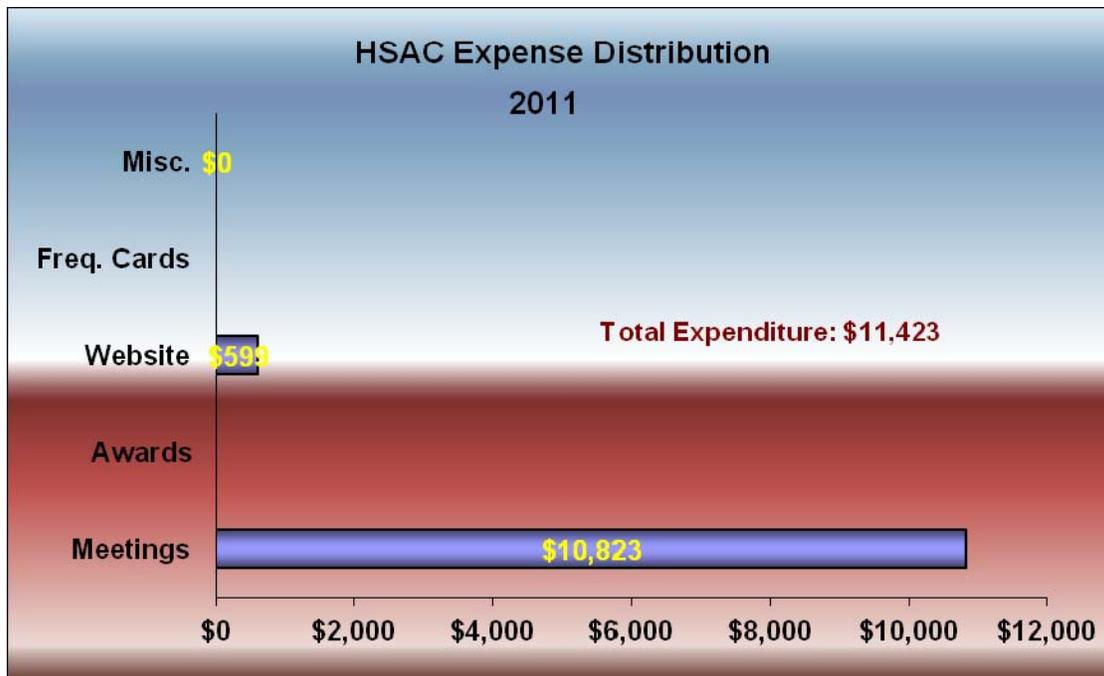
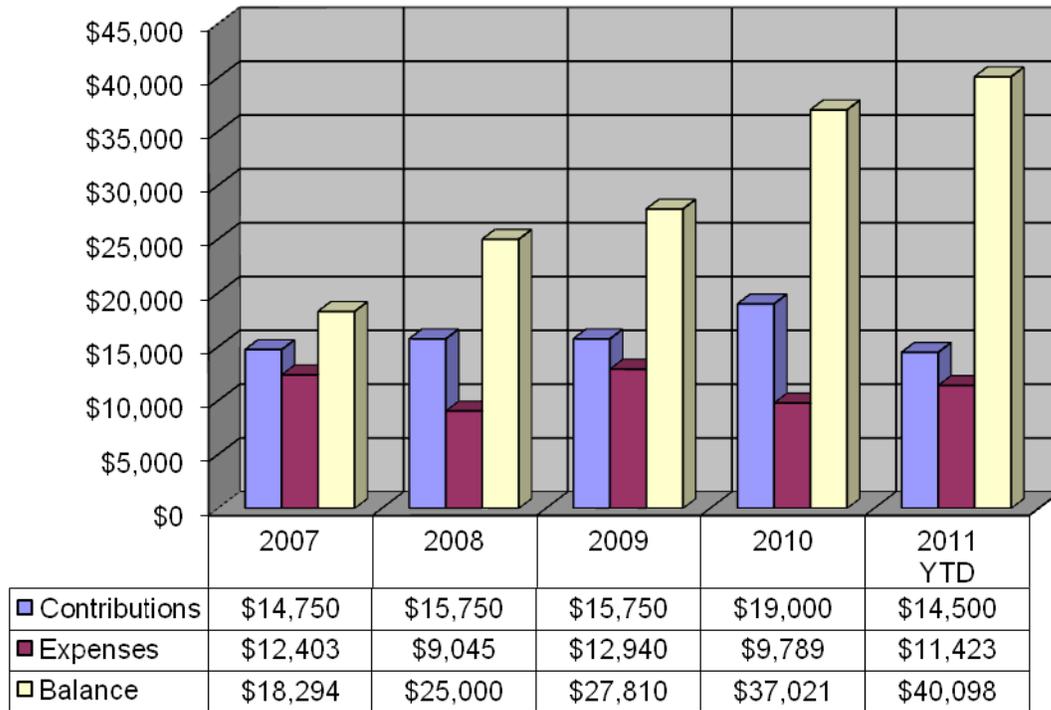
## 2011 HSAC Bank Account Activity 1 Jan – 31 Dec

<b>Opening Year Balance</b>	<b>\$ 37,020.60</b>
<b>Contributions</b>	<b>\$ 14,500.00</b>
<b>Expenditures</b>	<b>\$ 11,422.55</b>
<b>To Date Balance</b>	<b>\$ 40,098.05</b>
<b>Net Difference</b>	<b>+\$ 3,077.45</b>



# 2011 Summary

## HSAC Contributions vs. Expenses





## HSAC Contributors – 2012

Apache Corporation	\$ 1,000
Blue Sky Innovations, LLC	\$ 500
PHI, Inc.	\$ 1,000

Total: \$ 2,500



## 2012 HSAC Bank Account Activity 1 Jan – 15 Jan

**Opening Year Balance**                      **\$ 40,098.05**

**Contributions**                                      **\$ 2,500.00**

**Expenditures**                                      **\$ 967.52**

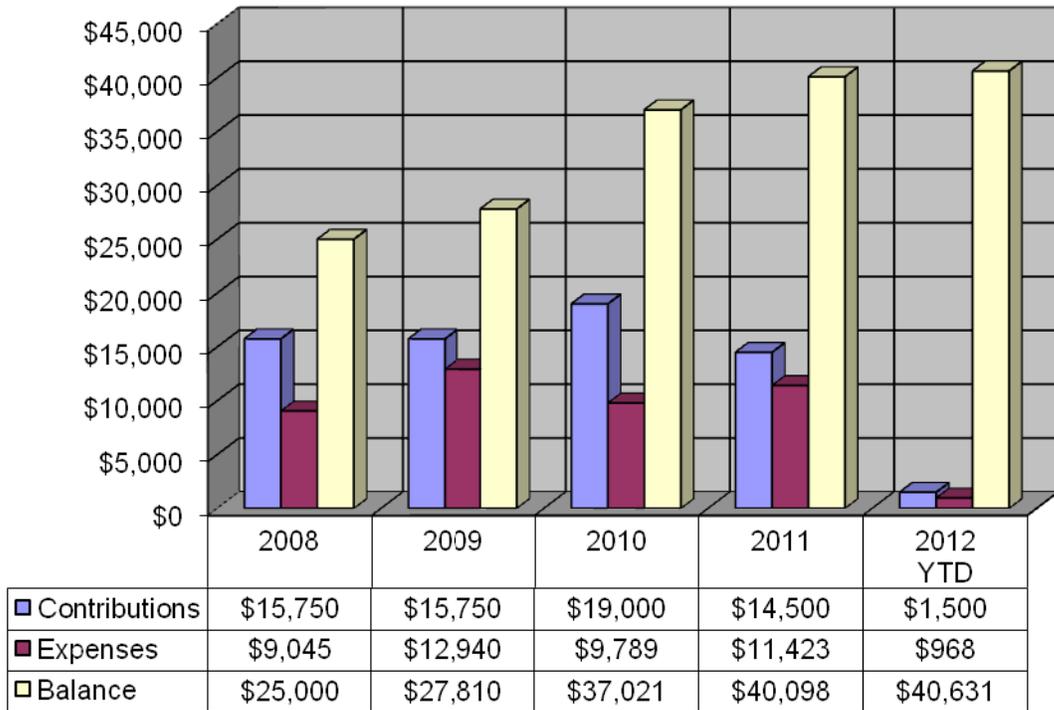
**To Date Balance**                              **\$ 41,630.53**

**Net Difference**                                      **+\$ 1, 532.48**



# 2012 Summary

## HSAC Contributions vs. Expenses





U.S. AIR FORCE

# 53rd Weather Reconnaissance Squadron “The Hurricane Hunters”



## 2012 Mission Brief



Lt Col Jeff Ragusa – Instructor Pilot



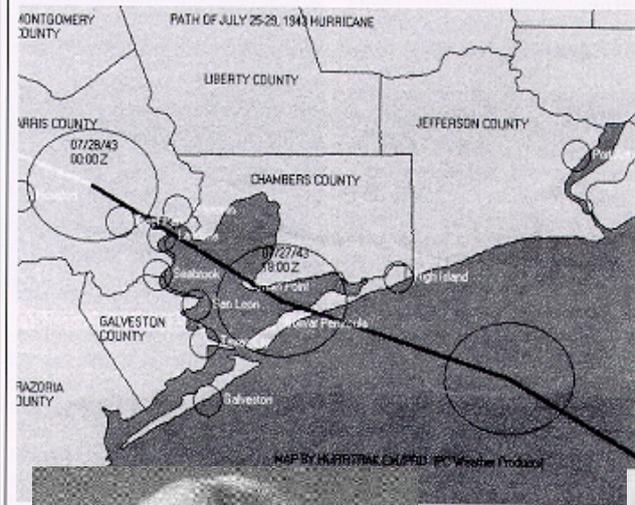
U.S. AIR FORCE

# On a Wing and a "Dare"

## Pilot Joe Duckworth, Nav Ralph O'Hair, and Wx Ofcr William Jones-Burdick Bryan TX, Jul '43



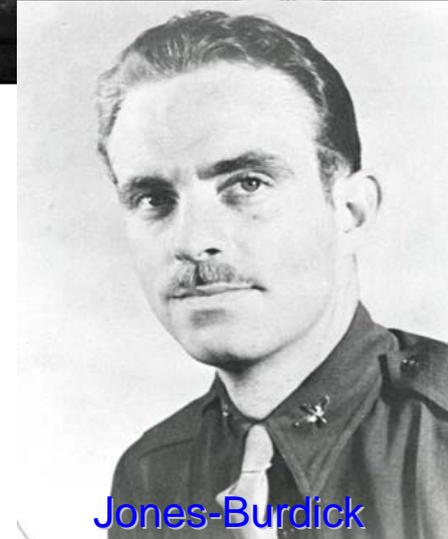
1943 Hurricane Path



Duckworth



O'Hair



Jones-Burdick

*Integrity - Service - Excellence*



# WC-130J





U.S. AIR FORCE

# Personnel: 5 Person Crew



Pilot, Copilot,  
Navigator



ARWO, DSO/Loadmaster



10 Full Time ART crews  
10 Traditional Reserve crews

*Integrity - Service - Excellence*



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# Area of Responsibility



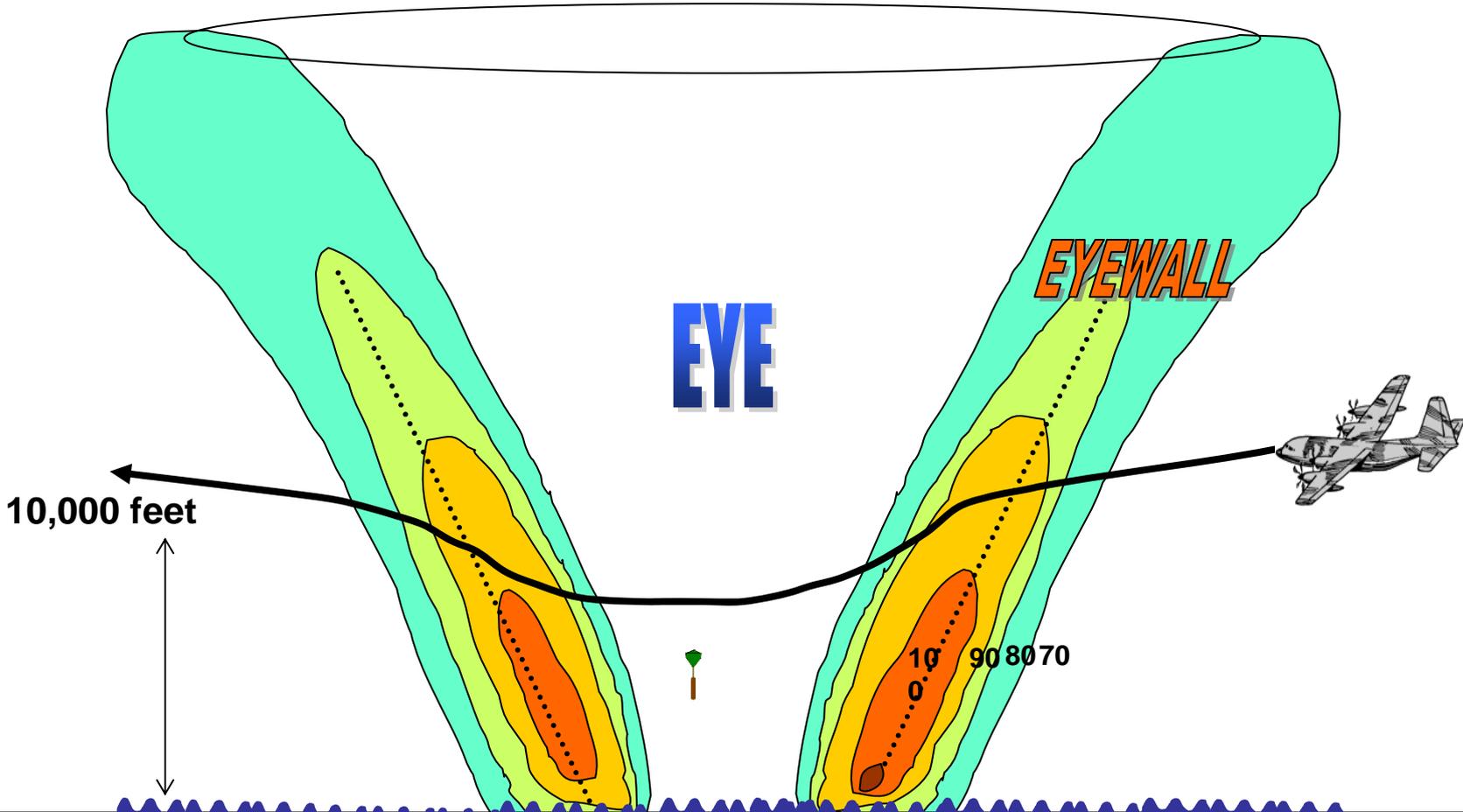
## Mid-Atlantic (55W) – Int'l Dateline





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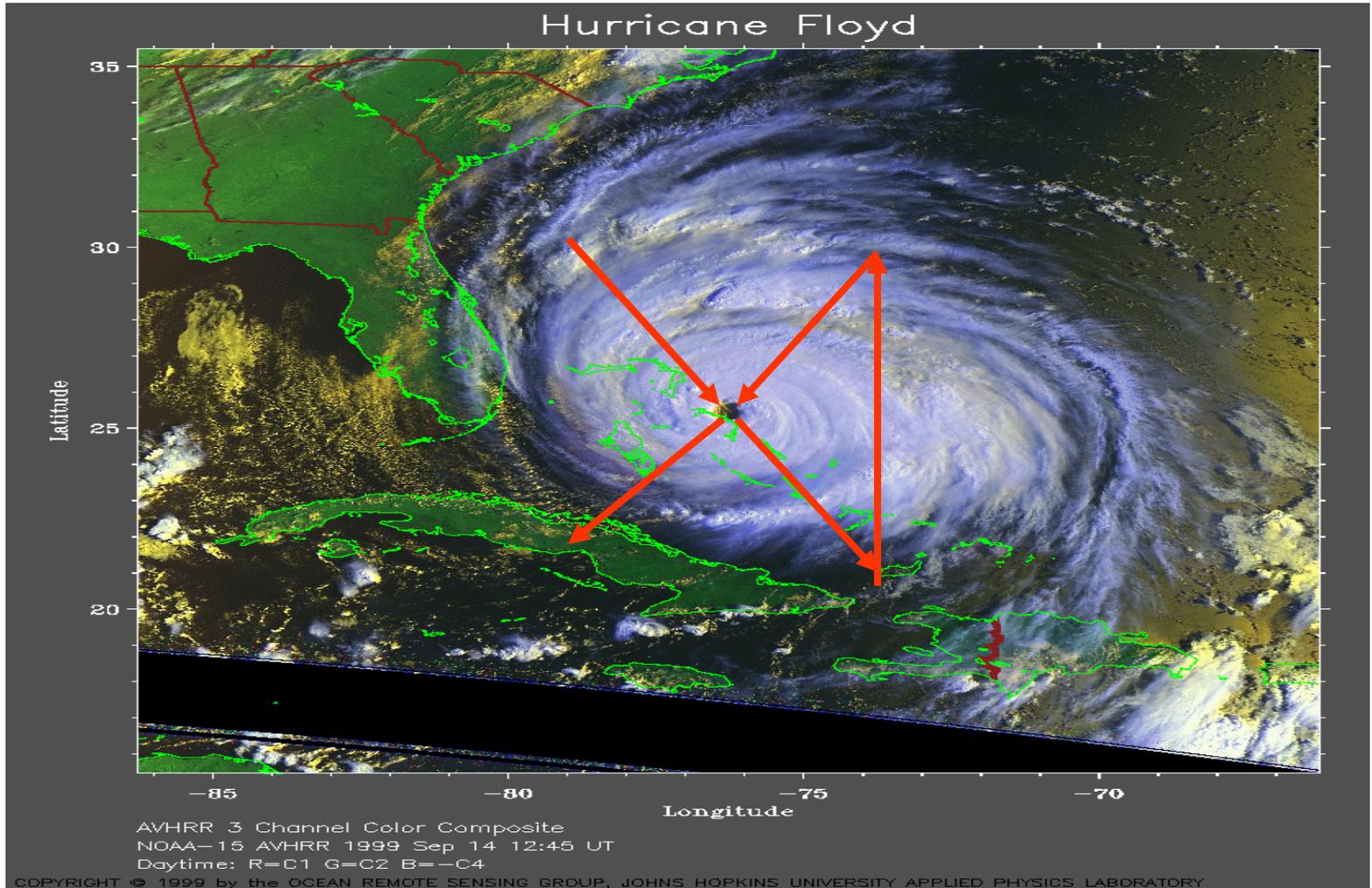
# Dropsonde Releases





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# Storm Flight Pattern



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# Low-Level Mission: Birth of a Storm



**500' to 1500' above water – Use sea state to  
determine rotation**



U.S. AIR FORCE

# National Winter Storm Operations Plan



“to reduce uncertainty in 24-96 hour forecasts for specific weather events associated with potentially large societal impact over the CONUS and Alaska.”



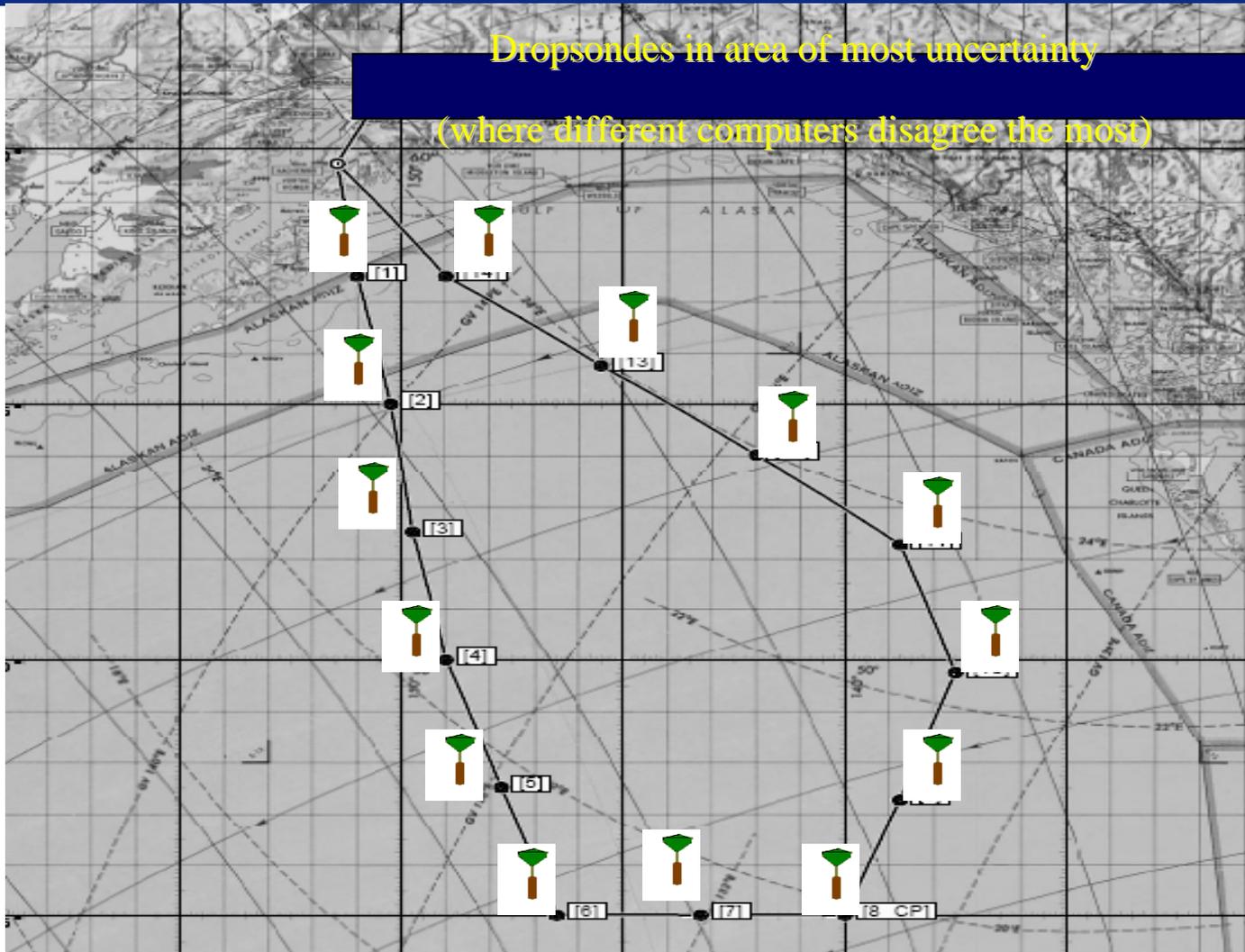
**December - April**





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# “Targeted Obs”



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U.S. AIR FORCE

# When we aren't hunting hurricanes



We have combat trained Pilots and loadmasters.  
This is me while deployed for Operations Iraqi  
Freedom and Enduring Freedom.



*Integrity - Service - Excellence*









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# Airspace Issues



## From our Aircrew In-flight Guide:

- Beware of fish spotters between the months of April-October at or below 2000' AGL. When departing Rwy 21, broadcast intentions on VHF 130.65.
- OFF-SHORE DRILLING PLATFORMS  
Based on the information provided by the Shell Oil Company the tallest structures in the Gulf of Mexico are operated by Shell. Most structures are less than 300 feet MSL but the following list contains most of the highest structures:

<u>STRUCTURE NAME</u>	<u>LAT/LONG</u>	<u>HEIGHT (MSL)</u>
AUGER	N27-32.6 W092-26.6	515
MARS	N28-10.1 W089-13.2	350
RAM POWELL	N29-04.2 W088-06.2	350
BULLWINKLE	N27-53.1 W090-54.2	350

- **NOTE** The U.S. Gulf Coast VFR Aeronautical Chart, commonly referred to as the "oil rig map", contains the printed statement "MAXIMUM ELEVATION FIGURES ARE BELIEVED NOT TO EXCEED 400 FEET." Obviously this statement is incorrect (reference pt AUGER), and crews should CHUM their charts

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# Airspace Issues



From our Aircrew In-flight Guide (Cont'd):

- From our Ingress Checklists:  
TACTICAL PLOTS - "Set" (for Oil Rigs over 300') N  
RADIO- "Set" (for Oil Rigs/Choppers)  
PM
- Petroleum Helicopters (PHI)  
800-235-2452  
337-235-2452  
F1357
- Air Logistics Helicopters (Air Log)  
800-365-6771  
318-365-6771  
F6152



U.S. AIR FORCE



# Airspace Issues

## From our Published Guidance:

- **WARNING:** Due to the high concentration of offshore oil drilling platforms and high density helicopter traffic, crews flying low level investigative or fix missions tasked to operate within 60NM of the US coastline, beginning at 88°00'w longitude and extending westward to 97°30'w longitude, will not fly below FL048.
- **Exception:** At the aircraft commander's discretion, these missions may be flown below FL048 providing day VMC can be maintained. Exercise extreme vigilance for helicopter and seaplane traffic. It is highly encouraged to make periodic "in the blind" broadcasts on common helicopter, fish spotter and guard frequencies to announce aircraft position, altitude and direction of flight.



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# Airspace Issues



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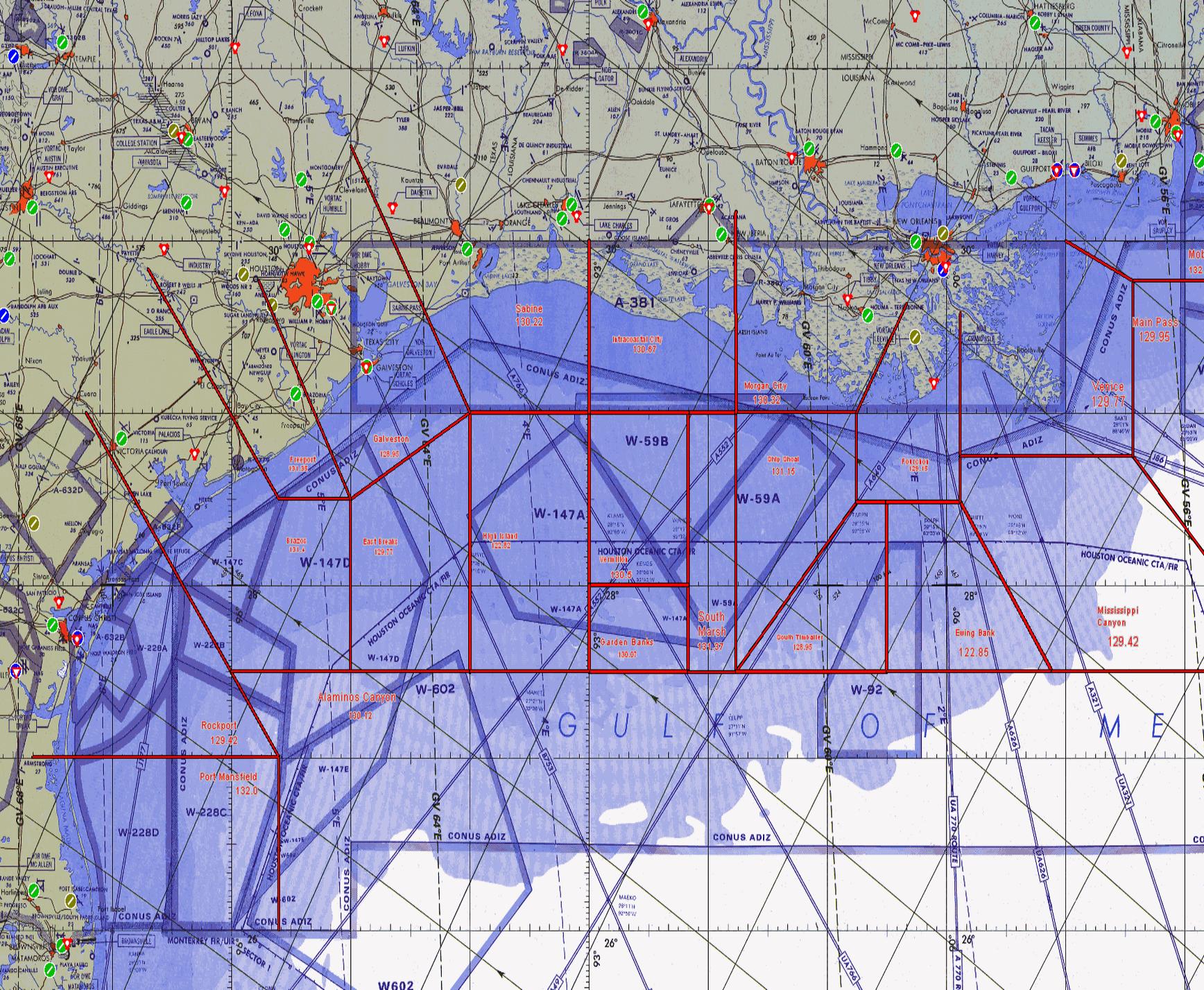
From the National Hurricane Operations Plan  
(NHOP):

## Release of Dropsondes:

- When ATC has radar contact with the aircraft, they will notify the aircrew of any known traffic below them that might be affected.
- The aircraft commander is solely responsible for release of the instrument after clearing the area by all means available.
- During NHOP missions, commencing five (5) minutes prior to release from FL190 or higher, the aircrew will broadcast in the blind on radio frequencies 121.5 MHZ and 243.0 MHZ to advise any traffic in the area of the impending drop.

## Operations in Uncontrolled Airspace (Class F and G):

- ATC is not authorized to assign altitudes in, nor provide separation between aircraft in uncontrolled airspace. While in uncontrolled airspace, aircrews will advise ATC of their planned altitudes and the Aircraft Commander is the IFR clearance authority.





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# Questions



[www.hurricanehunters.com](http://www.hurricanehunters.com)

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