

ICCAGRA Meeting  
21 October 2008, Palmdale, CA

NOAA Aircraft Operations Center

MacDill AFB, FL



Atlantic Tropical Cyclone Activity

So, what were you doing this summer?



48-hour formation potential:  Low <20%  Medium 20-50%  High >50%

# *NOAA Aircraft Operations Center*



## *Overview of NOAA's Aircraft Operations Center's Manned Aircraft Program*





# NOAA Aircraft

## 8 Types – 13 Aircraft



**Lockheed WP-3D Orion (3)**



**Gulfstream Jet Prop (1)**



**Rockwell Aero  
Commander (2)**



**Gulfstream IV-SP (G-IV) (1)**



**Cessna Citation II (1)**



**King Air 350\***



**DeHavilland Twin Otter (4)**



**Lake Seawolf (1)**

**\*Note: King Air 350 will replace Citation in FY09**



# Current Aircraft Capabilities

Aircraft Type	GIV-SP	WP-3D	CE-550	AC-695A	DHC-6	AC500S	LA-27	LR-1
Manufacturer	<b>Gulfstream</b>	<b>Lockheed</b>	<b>Cessna</b>	<b>Gulfstream</b>	<b>DeHavilland</b>	<b>Rockwell</b>	<b>Lake</b>	<b>Beech</b>
Common Name		<b>P-3</b>	<b>Citation</b>	<b>JetProp Cdr</b>	<b>Twin Otter</b>	<b>Shrike</b>		<b>King Air</b>
Number Owned	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>
Year Built	<b>1994</b>	<b>1975</b>	<b>1978</b>	<b>1984</b>	<b>1981</b>	<b>1975</b>	<b>1991</b>	<b>2008</b>
(Age in FY06)	<b>(14)</b>	<b>1976</b> <b>1981</b> <b>(33,32,27)</b>	<b>(30)</b>	<b>(24)</b>	<b>1980</b> <b>1985</b> <b>1982</b> <b>(27,28,23,26)</b>	<b>1977</b> <b>(33 &amp; 31)</b>	<b>(17)</b>	<b>(1)</b>
Total Time flight hours Oct 08	<b>4300</b>	<b>103700</b> <b>9300</b> <b>(18058.1) to 0</b>	<b>9300</b>	<b>5300</b>	<b>15700</b> <b>18700</b> <b>9300</b> <b>8700</b>	<b>13700</b> <b>10500</b>	<b>2000</b>	<b>(0)</b>
Max Range	<b>4000NM</b>	<b>3000NM</b>	<b>1610NM</b>	<b>1950NM</b>	<b>840NM</b>	<b>860NM</b>	<b>1500NM</b>	<b>2000NM</b>
Max Endurance	<b>10.3 hrs</b>	<b>11.5 hrs</b>	<b>5 hrs</b>	<b>6 hrs</b>	<b>7.5 hrs</b>	<b>4.5 hrs</b>	<b>8 Hrs</b>	<b>8 Hrs</b>
Operational Speeds	<b>Mach .76 – Mach .88</b>	<b>180-350</b>	<b>350</b>	<b>120 – 250</b>	<b>80-160</b>	<b>90–160</b>	<b>135</b>	<b>150-210</b>
Service Ceiling	<b>45,000'</b>	<b>*KIAS</b> <b>30,000'</b>	<b>*KIAS</b> <b>43,000'</b>	<b>*KIAS</b> <b>35,000'</b>	<b>*KIAS</b> <b>12,500' or 25,000' w/O<sub>2</sub></b>	<b>*KIAS</b> <b>12,500' or 18,000 w/O<sub>2</sub></b>	<b>*KIAS</b> <b>12,500'</b>	<b>KIAS</b> <b>35,000'</b>
Mission Payload	<b>2500lbs</b>	<b>7,000lbs</b>	<b>1,200lbs</b>	<b>1,070lbs</b>	<b>1,825lbs</b>	<b>750lbs</b>	<b>350lbs</b>	<b>1,919 lbs</b>
Crew (pilots-crew)	<b>2-13</b>	<b>4-20</b>	<b>2-4</b>	<b>2-7</b>	<b>2-8</b>	<b>2-7</b>	<b>1-4</b>	<b>2-4</b>

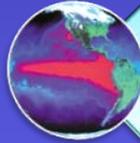


# NOAA's Mission Goals

## NOAA Mission Goals



**Ecosystem approach to management**



**Climate variability and change**



**Weather and water**



**Commerce and transportation**

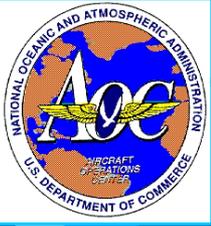


**Critical support for NOAA's Mission**



# Flight Hour Funding

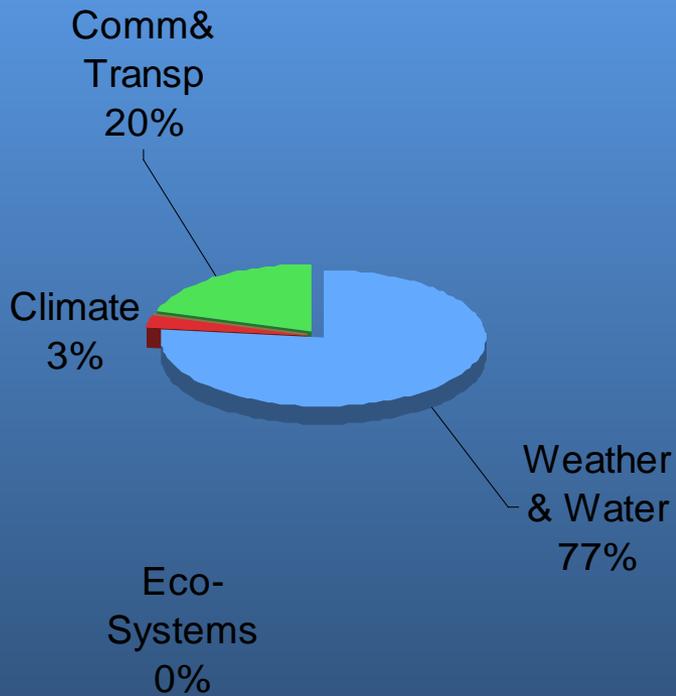
- **Aircraft Services Hours**
- **Program Funded Hours**
- **Reimbursable Hours**



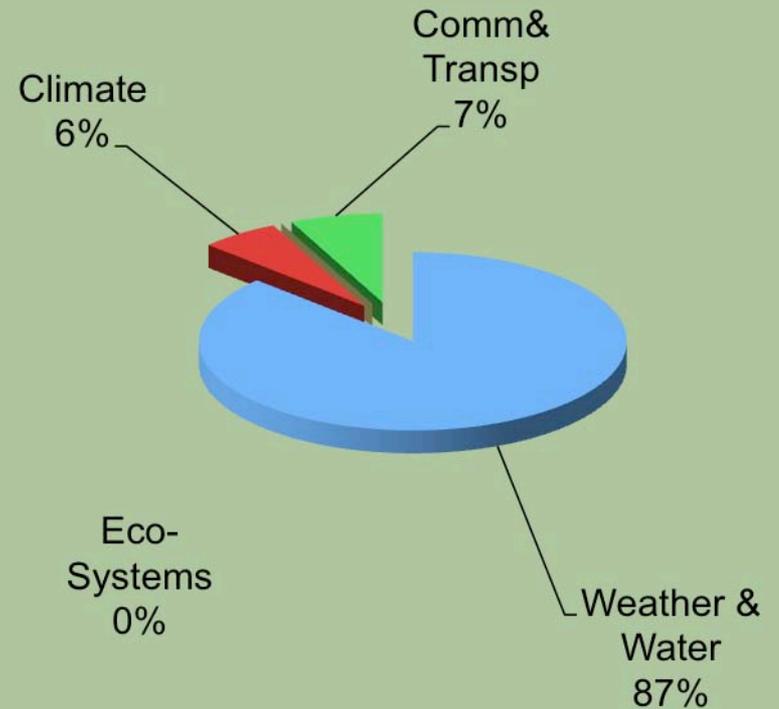
# NOAA Airborne Platform Flight Hour Requirements

## \*\*\* Aircraft Services Funded \*\*\*

### FY08 Flight Hours



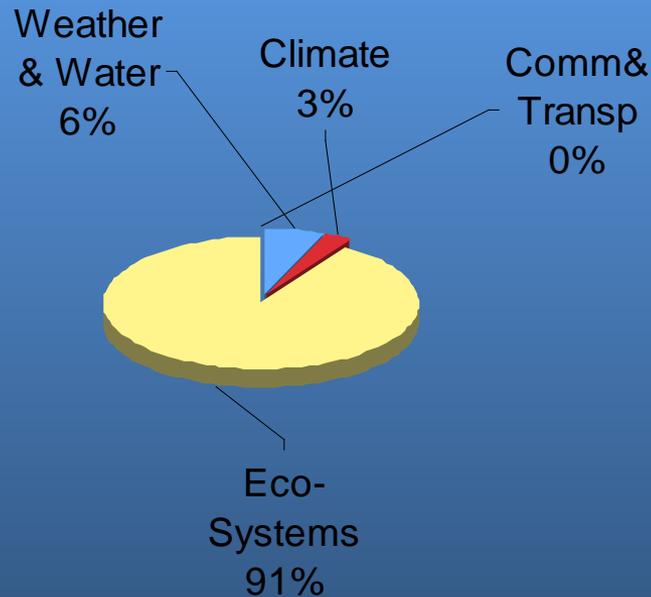
### FY08 Flight Hour Percent of Aircraft Services Budget





# NOAA Airborne Platform Flight Hour Requirements \*\*\*Program Services Funded\*\*\*

## FY08 Flight Hours

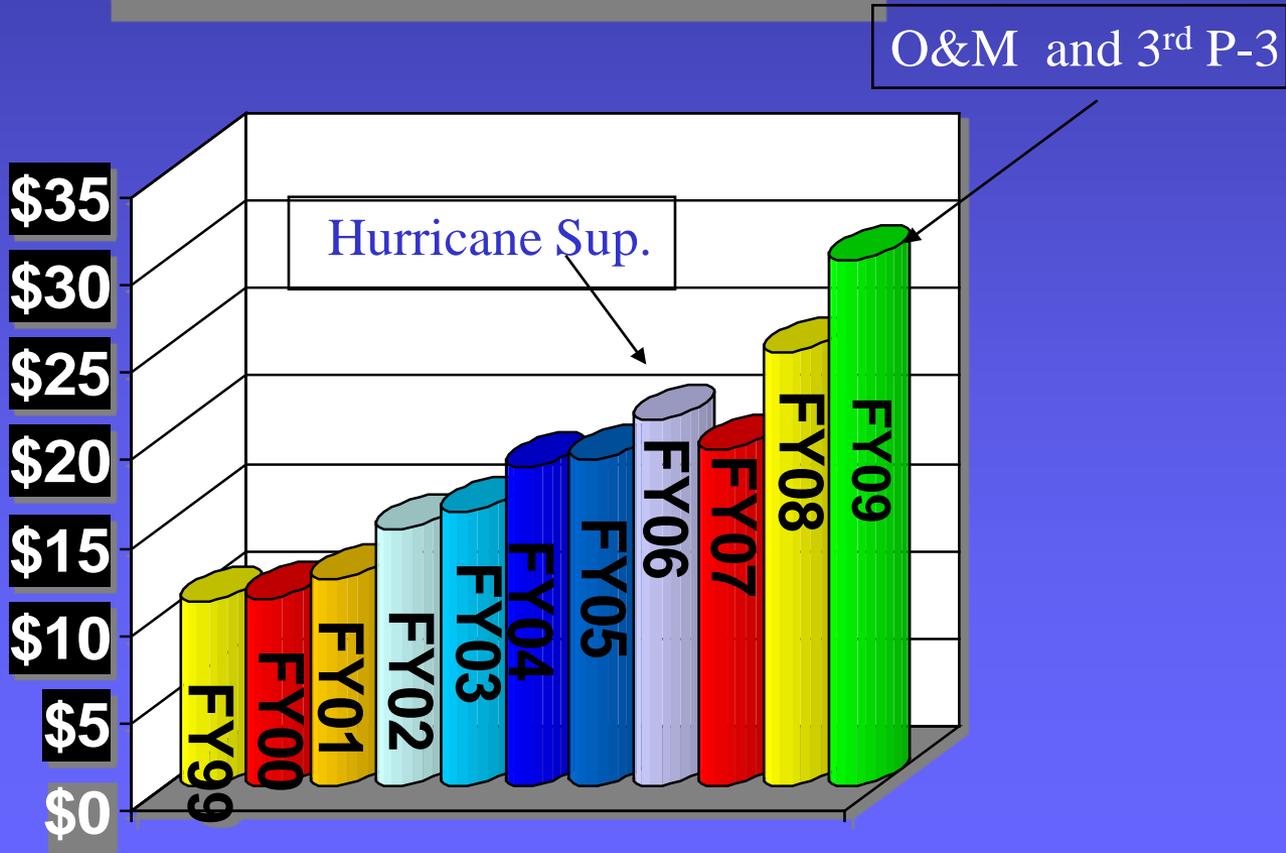


**Funds are received  
from Programs  
to pay variable cost  
of Flight Hours**



# Aircraft Services Budget

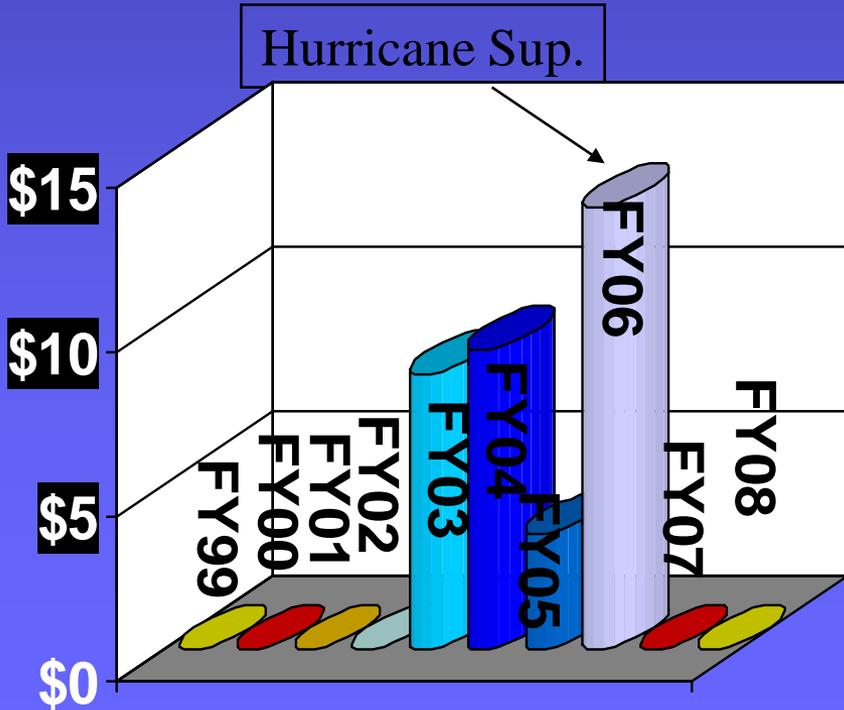
## Aircraft Services ORF





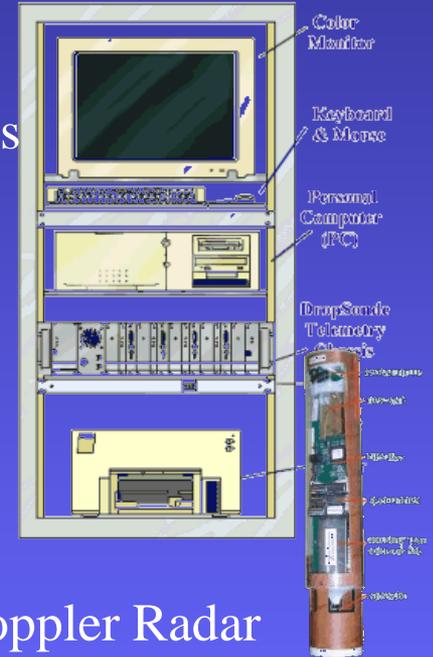
# Aircraft Services Budget

## Aircraft Replacement PAC



## Data Collection & Transmission Upgrades

### P-3 Radar Data System Upgrade



### G-IV Tail Doppler Radar





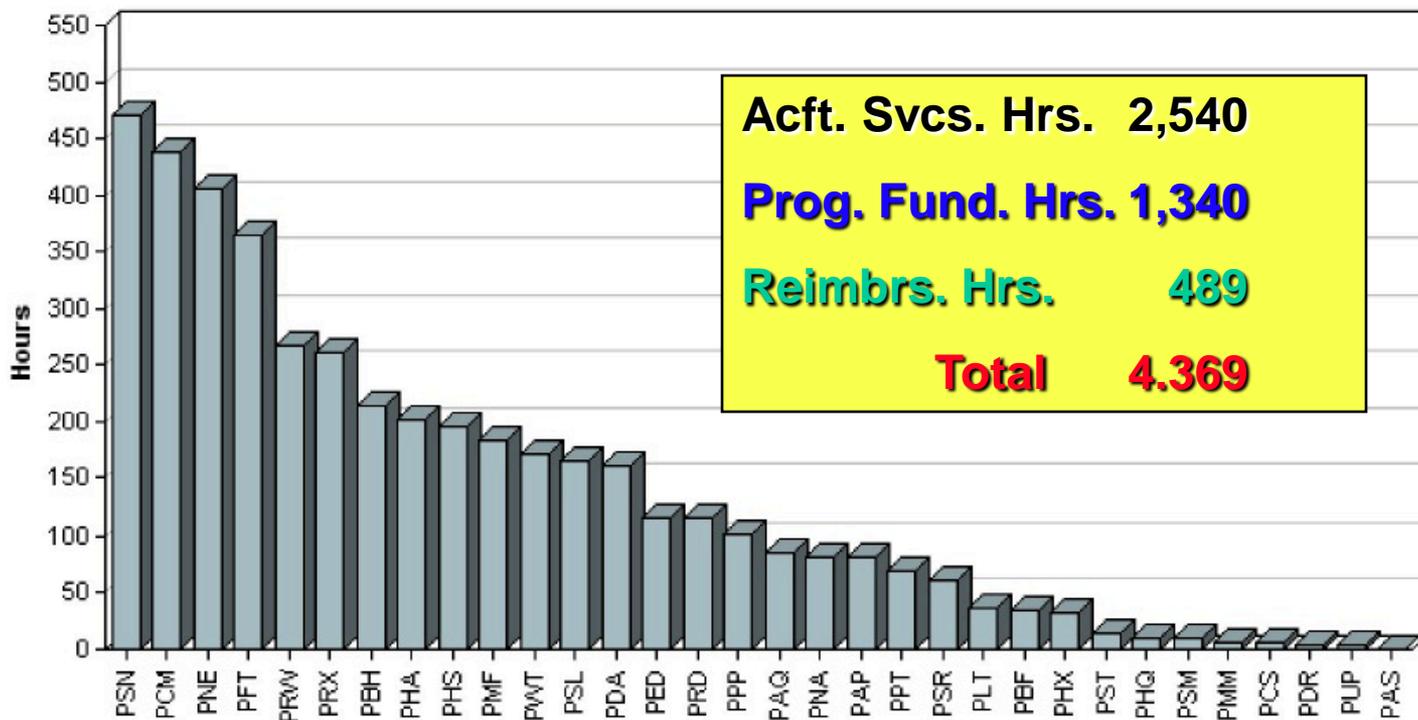
# FY08 Accomplishments

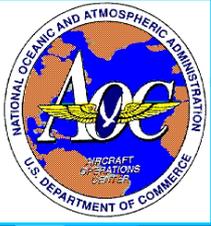
- **FY08 was a busy year at AOC with 1,385 flights totaling 4,369 hours.**
- **AOC aircraft engaged in a very active hurricane season flying missions related to 6 named storms - Dolly, Faye, Gustav, Hanna, Ike and Kyle.**
- **Twin Otters support Ecosystem programs from the Atlantic Ocean to Adak, AK.**



# FY08 Accomplishments

Total Hours by Project





# Lockheed Orion, WP-3D



## Air Quality Program

- 4 Engine Turboprop
- Tail Doppler Radar
- Lower Fuselage Radar
- Dropwindsonde
- Sonobuoy
- Multiple Mission capable
- Carries a crew of up to 20

## N42RF, N43RF, N44RF

- Hurricane Reconnaissance – 261 hrs
- Hurricane Research – 33 hrs
- Ocean Winds – 116 hrs
- Winter Storm – 170 hrs

## N43RF

- Air Chemistry - 85 hrs/FY08





# Gulfstream IV-SP

- Twin Turbofan Jet
- High Altitude, High Speed
- Dropwindsonde
- Multiple Mission capable
- Carries a crew of up to 13

## N49RF

- Hurricane Surveillance – 195 hrs
- Average Use (FY99-04) = 450 hrs/yr
- New Tail installed for Tail Doppler Radar in FY08.





# Rockwell Shrike Commanders, AC500

## Weather and Water Programs



N47RF



N51RF





# Rockwell Shrike Commanders

- Twin Engine, Piston
- High-wing, Bubble window
- Airport surveys
- Remote sensing
- Marine mammal surveys



## N47RF

- Harbor Seal – 78 hrs
- Coastal Mapping – 15 hrs

## N51RF

- Snow Survey – 191 hrs
- Harbor Seal – 46 hrs
- Allocated 272 hrs/FY08
- Average Use (FY99-04) = 355 hrs/yr



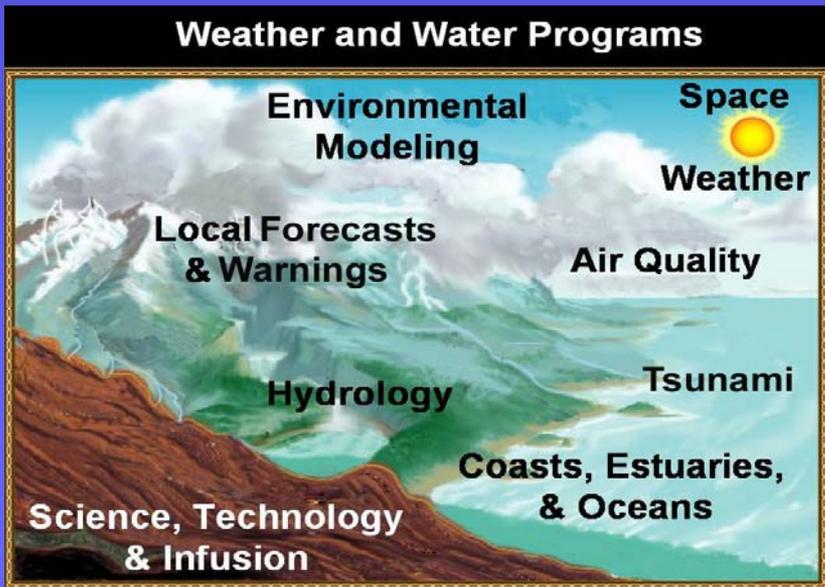


## *Gulfstream Jetprop Commander*

- Twin Engine, turboprop
- High-wing, camera port
- Airport surveys
- Remote sensing
- Snow Survey

### N45RF, Jetprop Commander

- Snow Survey – 340 hrs
- Coastal Mapping – 15 hrs
- Hurricane Damage Assessment – 26 hrs
- Airport Surveys – 1 hr





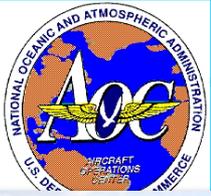
Protect and restore healthy coastal marine ecosystems; and  
Enable the sustained use of marine resources

- **Twin Otter**
  - Work Horse of the Fleet
- **Air Chemistry Programs (BRACE)**
- **Ecosystem Programs**
- **Commerce & Transportation Programs**



**Commerce & Transportation Programs**





# DeHavilland Twin Otters



- Twin Engine, turboprop
- High-wing, camera port
- Marine Mammal surveys
- Air Chemistry
- Remote Sensing



## N46RF, N48RF, N57RF, N56RF

- Right Whales – 672 hrs
- Bowhead Whale Survey – 409 hrs
- Steller Sea Lions – 164 hrs
- Remote Sensing – 130 hrs
- Harbor Seal - 79 hrs
- Turtle Photo – 77 hrs
- Air Chemistry - 32 hrs
- Average Use (FY99-04) = 550 hrs/yr



# Citation II, CE-550 Future – King Air 350

## Commerce & Transportation Programs



Hurricane Damage Photography



## *Citation II, CE-550*

- Twin Engine, Jet
- Dual (stereo) camera ports
- Shoreline Surveys
- Aeronautical Obstruction
- Remote Sensing

## N52RF

- Coastal Mapping – 393 hrs
- Airport Surveys – 79 hrs
- Hurricane Damage Assessment– 49 hrs





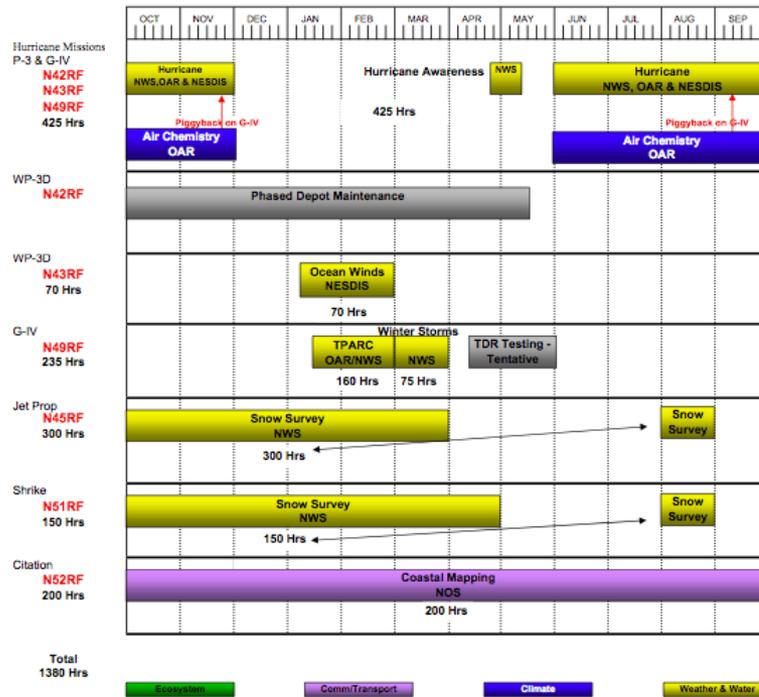
# FY09 Goals

- **AOC focuses *FY09* on the Service *Depot Level Maintenance* of the WP-3D *N42RF*, installation of *P-3* and *G-IV radar* modifications, upgrades to *P-3 high-speed satcom* system, installation of the new *aircraft data systems*, integration of the *new dropsonde system*, completion of the *3<sup>rd</sup> P-3 overhaul*, rollout of the Citation replacement *King Air 350*, and *integration* of these two aircraft in *FY 09*.**



# FY09 Aircraft Services Hours

## FY09 Allocation Plan NOAA AIRCRAFT SERVICES FUNDED PROJECTS



Approved by: \_\_\_\_\_ Date: \_\_\_\_\_





# FY09 Issues

- **G-IV Doppler Radar ??**
- **3rd P-3 Delivery ??**



UNITED STATES DEPT. OF COMMERCE



UNITED STATES DEPT. OF COMMERCE

# Foam (AFFF) Incident at IMP May 18, 2008



Picture Taken Sunday night by Dave Gossen  
He was one of the First Responders

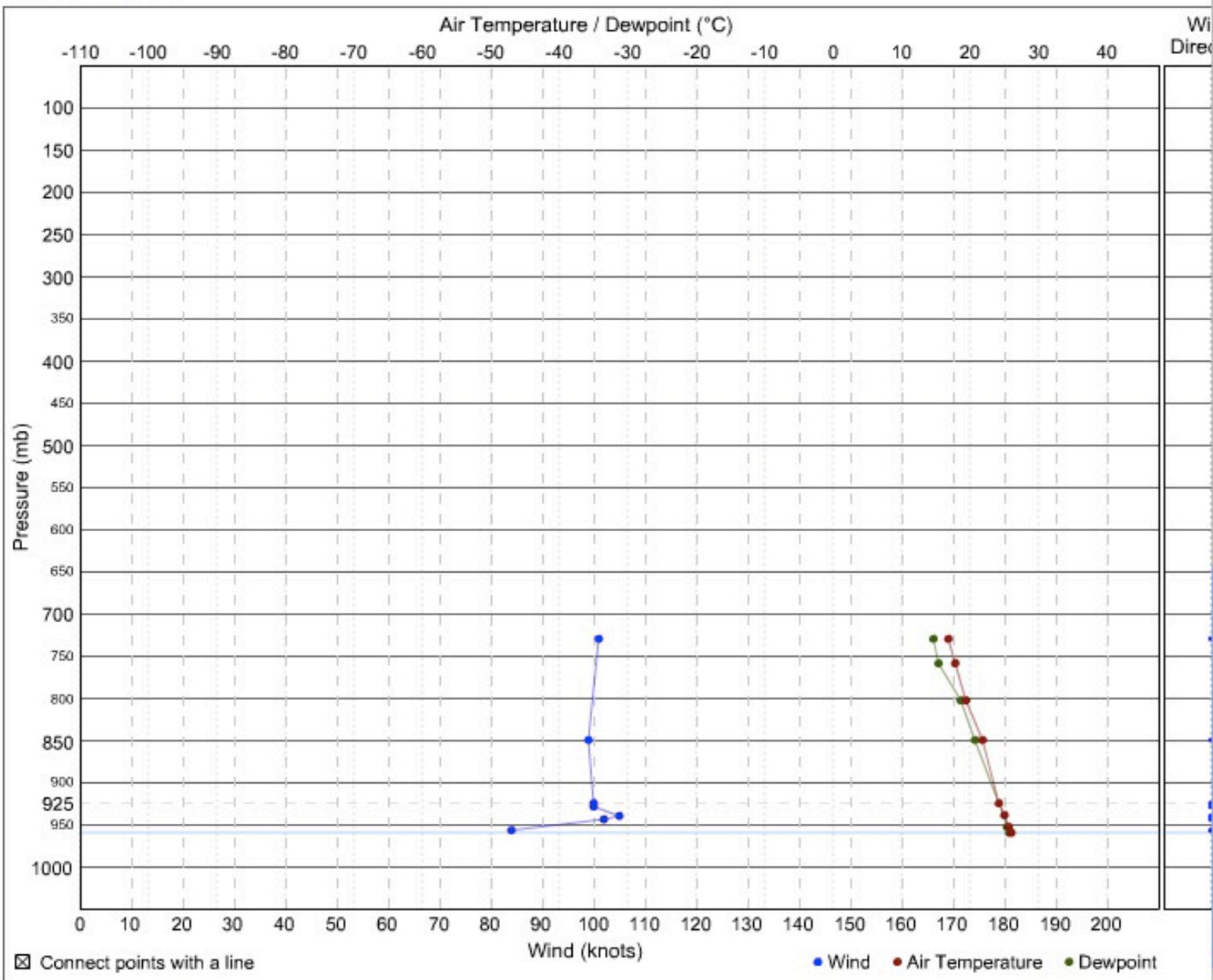


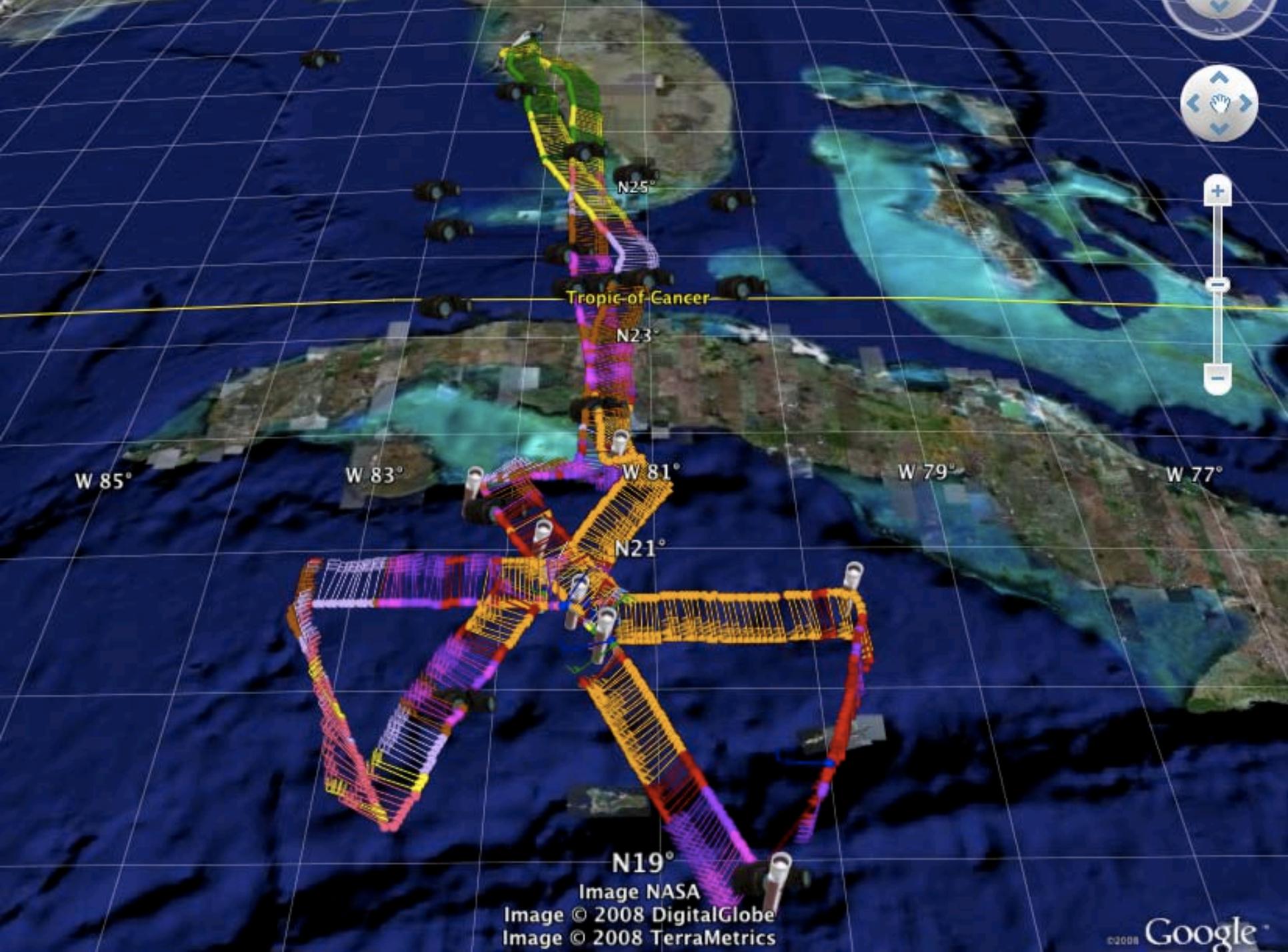
# Aircraft Operations Center Key Staff

- **Commanding Officer**
  - Capt Brian Taggart
    - » 813-828-3310 x 3001
- **Executive Officer**
  - Mr. Don Aiken
    - » 813-828-3310 x 3041
- **Chief, Operations Division**
  - CDR Michele Finn
    - » 813-828-3310 x 3026
- **Chief, Science & Engineering Division**
  - Mr. Alan Goldstein
    - » 813-828-3310 x 3031
- **Chief, Programs & Projects Staff**
  - Dr. Jim McFadden
    - » 813-828-3310 x3076
- **Chief Administrative Offices**
  - CDR John Longenecker
    - » 813-828-3310 x 3084
- **Chief, Budget and Management Staff**
  - Mr. Jim Wierzbicki
    - » 813-828-3310 x 3010

Location  
Aircraft Operations Center  
7917 Hangar Loop Drive  
Hangar 5  
MacDill AFB, Florida 33621-5401

Dropsonde Diagram:





N25°

Tropic of Cancer

N23°

W 85°

W 83°

N21°

N19°

Image NASA

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