2013 AOC Seasonal Hurricane Summary and Future Plans

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AGENDA

• The Fleet

• Tasking Protocols

• 2013 Seasonal Flight Time – 6-Yr. Comparison

• Reasons for the Change

• 2014 Mitigation Plan

• P-3 Service Life Extension Program
TASKING PROTOCOLS

OPERATIONAL TASKING

• P-3 Tasking by NHC thru CARCAH for Recon.
• G-IV Tasking by NHC thru CARCAH for Surveillance

RESEARCH TASKING

• P-3 Tasking by EMC thru CARCAH for TDR
• P-3/G-IV Tasking by HRD/OAR for Research
• P-3 Tasking by NESDIS for Ocean Winds
2013 Hurricane Season
2013 Hurricane Summary

- P-3 145.8 hours
- G-IV 58.2 hours

Total 204.0 hrs.
Hurricane Hours Flown
2008-2013

- Weather
- Funding
- Agency Needs
• P-3 Tasking by NHC thru CARCAH for Recon
  0 Flights  0 Hours

• G-IV Tasking by NHC thru CARCAH for Surveillance
  1 Flights  7.8 Hours
NOAA G-IV Flight Track Drop Locations for KAREN (AL122013)

On 2013010412 the storm was centered at 25.4,-89.4
2014 Hurricane Season
### FY14 Aircraft Allocation Plan - February 24, 2014

| Aircraft | Services Base Hours | Program Hours | Reimbursable Hours | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|----------|---------------------|---------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| P-3 N42RF | 418 Hrs | 40 Hrs | Arctic Flux | Ocean Winds | Winter | 90 Base Hrs | Engine Testing | 48 N. Hrs | Hurricane Ops/Research (cont.) | 175 Base Hrs | Ocean Winds Summer | 60 Base Hrs. |
| N43RF | 202 Hrs | 31 Hrs | Hurr. Ops / Rosch., Ocean Winds | EcosAR Inlet | | | | | | | |
| G-IV N49RF | 438 Hrs | | Hurricane Surveillance/Research | Atmos. Rivers | 15 B. Hrs | | | | | | | | |
| Twin Otter N46RF | 182 Hrs | 120 Hrs | Convulsion Inspection / Paint | SE AMAPPS | 120 Prog. Hours | Snow Survey / Water Resources | 125 Base Hrs. | | | | | | |
| N48RF | 328 Hrs | 75 Hrs | Snow Survey / Water Rscs | Fugitive Emission | 218 Base Hrs. | | | | | | | | |
| N56RF | 50 Hrs | 565 Hrs | | SERW | 300 Prog Hrs | Coastal Mapping LIDAR | | | | | | | | |
| N57RF | 520 Hrs | 75 Hrs | NE Right Whale | 150 Prog. Hrs | | | | | | | | | | |
| King Air N68RF | 550 Hrs | | | Coastal Mapping/Em. Response | | | | | | | | | | |
| Jet Prop N45RF | 500 Hrs | 200 Hrs | 150 hflAMOC/Airloce | Snow Survey / Water Resources | | | | | | | | |
| UAS Puma 0481 | | | Manufacturer Type Certification | | | | | | | | | | |
| UAS Puma 0482 | | | | | | | | | | | | | |
| Quadrocopter | | | | | | | | | | | | | |

**Subtotal Hours:** 4294 Hrs

**NOTES:** Flight hours allocated for Q2-4. Plan based on current budget guidance and is subject to change.

Arctic Flux remaining funds reallocated to other projects. Other hours unused in Q3 will carry forward for use later in the FY.

Project beginning and end dates subject to change to accommodate instrumentation, transit and maintenance as necessary.

* Project depends on getting ship time - dates may shift to accommodate.

**Approved by:**

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<tr>
<th>NESDIS</th>
<th>Date</th>
<th>NMFS</th>
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<td>NWS</td>
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### FY14 Heavy Aircraft Flight Hours

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<th>Aircraft</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
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<td>N42RF</td>
<td>Ocean Winds Winter 90 B. Hrs.</td>
<td>Engine Testing - 40 K. Hrs.</td>
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<td>N43RF</td>
<td>EcoSAR (NASA) 31 RL</td>
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<td>N49RF</td>
<td>Atmos. Rivers 90 B. Hrs.</td>
<td>Ops 2/Paint work</td>
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<td>Hurricane Surveillance/Research 200/38 Base Hrs.</td>
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- **Total Flight Hours**: 780 hrs.
WP-3D SERVICE LIFE EXTENSION
WP-3D Service Life Extension – Executive Summary

• $326M to NOAA to Address Sandy Mitigation Efforts ($42.3M to OMAO after sequestration)

• OMAO: Four (4) multi-year projects requiring collaboration with multiple governmental groups and commercial industry

• Project Areas:
  – WP-3D Re-Wing Kits
    • Outer Wing
    • Horizontal Stabilizer
  – Re-Wing Kit Installation
  – T56-A-14 Engine Refresh
    • Overhaul to Zero Time
    • Series III Reliability Enhancements
    • Series 3.5 Engine Enhancement Package
  – Avionics Upgrades
WP-3D Service Life Extension – Rewing Kits

Scope
• New Outer wing assemblies
• New Center Wing front and rear beam and upper surface
• New Horizontal Stabilizer
• Digital Fuel Quantity System
• New EF5992 Fuel Tank Sealant

Timeline
• Rewing Kit #1 Delivery December 2014
• Installation on N42RF January 2015-January 2016
• Rewing Kit #2 Delivery NLT July 2016
• Installation on N43RF August 2016-August 2017

Partners
• NAVAIR PMA-290 (Interagency Agreement for Assisted Acquisition) for Contracting
• L-3 Systems for Rewing Kit Build
• Navy Fleet Readiness Center Southeast for Installation

Benefits
• Additional 7,500 Flight Hours
• Additional 15-20 years of Service Life
• Elimination of extra Special Structural Inspections (SSI)
• Reduce future costs of Depot Level Maintenance events
WP-3D Service Life Extension – Engine Upgrade

Scope
• Completely overhauled “zero time” engines
• Series III Reliability Enhancements
• Series 3.5 Enhancement Package

Timeline
• Overhauled and Upgraded Test Engine – February 2014
• Test Program Instrumentation – March 2014
• Ground Testing – April 2014
• Flight Testing – April/May 2014
• Airworthiness Determination – September 2014
• Overhaul, upgrade and install on N43RF complete – March 2015
• Overhaul, upgrade and install on N42RF complete – October 2015

Partners
• Rolls-Royce (Engine OEM)
• Lockheed Martin (Aircraft OEM)
• Segers Aero (Engine Overhauls)
• USAF Test Squadron (Technical Support)
• NAVAIR (Technical Support and Flight Support)

Benefits
• 10% Increase in Fuel Efficiency
• 10% Increase in Operational Flight Time
• 20% Reduction in Maintenance Costs
• NOAA leading the P-3 community
WP-3D Service Life Extension – Avionics Upgrades

Scope
• Replace aging, obsolete, and high maintenance subsystems with systems that will be sustainable for the extended airframe life.
• Four main focus areas:
  • Communications Systems – HF Radios, High Speed Iridium Satcom, Intercom Repalcement, ADS-b (traffic avoidance/awareness)
  • Avionics Infrastructure – Scientific power upgrade, Cloud Physics Pylons, Equipment rack replacement, Floor load enhancement
  • Flight Instruments – Flight display replacement, Autopilot replacement, Flight data recorders, Nose radar replacement, Wing monitoring system
  • Scientific Radar – Tail Doppler Radar Upgrade, Lower Fuselage Radar replacement

Timeline
• Funding available – March 2014
• Acquisitions complete – July 2015
• Installation – some during re-winging, some sooner

Partners
• P-3 Sustainment Community (Navy, Customs, IOSC)
• Research and Operational Users (NWS, OAR)

Benefits
• Long term viability
• Reduced Maintenance Cost
• Improved Scientific Capabilities
Tail Doppler Radar Upgrade

Current System
1500 m spacing
~5 dBz sensitivity

Proposed System
750 m spacing
<0 dBz sensitivity
QUESTIONS?