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# **NOAA Aviation Safety Policy and NOAA Aviation Safety Program**

Lieutenant Commander Debora Barr  
NOAA Marine and Aviation Operations  
May 16, 2005



# Outline



- 
- Purpose
  - Issue
  - Background & Discussion
  - Recommendation
  - Decision Request



# Purpose



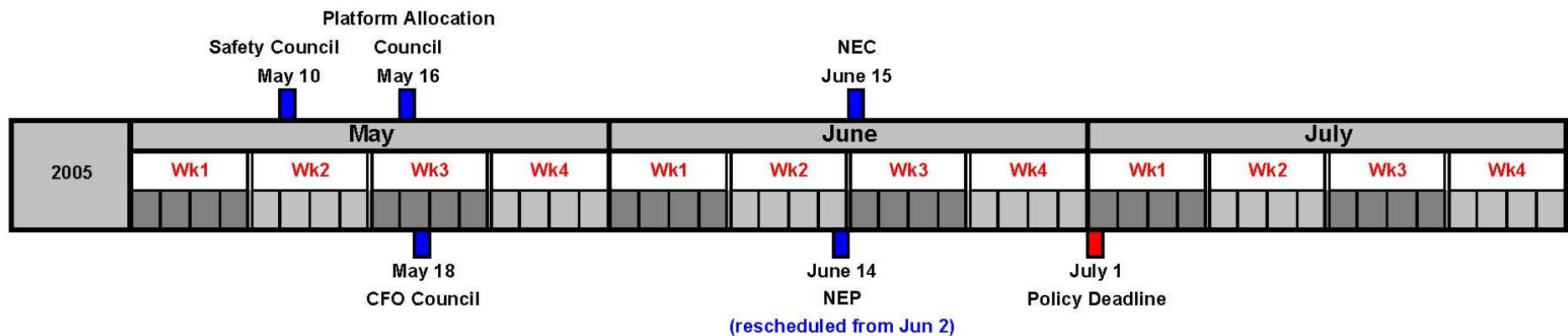
- **Decision Briefing**
  - NOAA's Aviation Safety Policy Update
  - NOAA's Aviation Safety Program
  
- **Desired Decision**
  - NOAA Platform Allocation Council Endorsement
    - Draft Aviation Safety Policy
    - Proposed Aviation Safety Program



# Issue



- **NOAA's Aviation Safety Policy and Aviation Safety Program briefing schedule**





# Background



- **Safety Stand-Down Regarding Use of non-NOAA Aircraft**
  - Safety Stand-down issued November 19, 2004
  - Proactive vs. Reactive management of a safety concern
- **41 CFR 102-33 Management of Government Aircraft** (published in the Federal Register on November 6, 2002)
  - Requires NOAA to develop and implement “Flight Program Standards” for all aircraft operations



# Background



- **Exemption Request Process set up by NMAO**
  - Use of Interagency Agreement with DOI
  - U.S. Military and Coast Guard aircraft
  - Application for Exemption
    - Signed by Line Office AA, DAA, or Staff Office Director
    - Aviation Operational Risk Assessment Board Recommendations
    - NOAA General Counsel review
    - Director NMAO grant or deny the exemption based on recommendations



# Background



- Exemption Request Statistics**

Requests for Exemption to the Safety Stand-down (Nov 04 - May 12, 2005)						
Requests for NOAA Mission Support	Line Office	Total Requests	Number Granted without restrictions	Number Granted with restrictions	Number Denied	Pending
<b>Use of Privately Owned Aircraft</b>	NMFS	2			2	
<b>Interagency Agreement with DOI</b>	NMFS	23	23			
	NOS	4	4			
	NWS	5	5			
	OAR	2	2			
<b>Application for Exemption (or request prior to application development)</b>	NMFS	12	9	2	1	
	NOS	10	7	3		
	NWS	5	1			4
	OAR	3	3			
<b>Total</b>		<b>66</b>				



# Background



- **Policy Development**

- Draft NAO Circulated (3 times)
  - NOAA and Labor Unions
- Aviation Safety Survey circulated (2 times)
  - To determine training and ALSE requirements
- May 16-18 Policy Re-Draft Workshop [Details](#)
  - 26 participants from all Line Offices, Acquisitions and Grants, NOAA General Counsel, NOAA Safety





# Background



- **Remaining Line Office Concerns** (After circulation of Draft NAO Version 3)
  - **“The Devil’s in the details”**
    - Aircraft Operator Evaluations
      - Criteria and frequency of inspection/evaluation
    - Emergency waiver process
      - Turn-around time
    - NOAA’s minimum aviation safety standards
      - Can NOAA programs request higher standards?
    - Medical Screening
      - Question the need for/concerns about turn-around time
    - NOAA Aviation Safety Board representation from Line Offices
      - Request for “weighted” representation
    - All NOAA pilots required to meet AOC standards
      - Cost prohibitive for “volunteer” pilots in the Line Offices



# Draft NAO (version 4)



- **Aviation Safety Policy Highlights**

- Reduces risk associated with aircraft operations by
  - Ensuring aircraft meet NOAA airworthiness and operational safety standards\*
  - Requiring medical screening of personnel
    - To identify personnel that could be placed in a work environment (flight) with the potential to aggravate existing medical conditions
  - Providing personnel with appropriate Aviation Safety Training\* and Aviation Life Support Equipment (ALSE)\*

\* Major cost drivers for the Aviation Safety Program



# Draft NAO (version 4)



- Aviation Safety Training**  
(NMAO Recommendations)

Aviation Safety Training							
Training Method		NOAA E-Learning		Egress Video	Classroom and Hands-on	Classroom and Hands-on	Classroom and Hands-on
Training Frequency		annual	annual	once every 5 years		one time	one time
Flight Purpose and Environmental Conditions		Personnel	NOAA Aviation Policy and Procedures	Basic Aviation Safety and Survival	Water Ditching and Survival	High Altitude Physiology (Altitude Chamber)	Aviation Crash and Cold Weather Survival
Passenger Transportation	NOAA	√	√				
	Non-NOAA						
Passenger Transportation over water	NOAA	√	√	√			
	Non-NOAA						
Mission Operations Overwater	NOAA	√	√		√		
	Non-NOAA		√		√		
Mission Operations in Cold Weather (<32F)	NOAA	√	√				√
	Non-NOAA		√				√
Mission Operations above 10,000 feet	NOAA	√	√			√	
	Non-NOAA		√			√	

Note: NOAA Personnel may request more frequent training than what is listed above



# Draft NAO (version 4)



- **Aviation Life Support Equipment (ALSE)**  
(NMAO Recommendations)

<b>Aviation Life Support Equipment (ALSE) required to be carried in the aircraft or worn by personnel</b>				
<b>Flight Purpose and Environmental Conditions</b>	<b>Life Raft of sufficient capacity for all aircraft occupants</b>	<b>Personal Floatation Device (PFD) (Life Vest)</b>	<b>Emergency Locator Transmitter (406MHz)</b>	<b>Anti-Exposure Suit</b>
<b>Passenger Transportation over water</b>	√	√	√	
<b>Mission Operations Overwater</b>	√	√	√	
<b>Mission Operations in Cold Weather (&lt;32F air temp or &lt;59F water temp)</b>				√



# Draft NAO (version 4)



- **Aviation Safety Policy Highlights (continued)**
  - Establishes a corporate NOAA
    - Aviation Safety Board
    - Aviation Safety Program
  - Ensures NOAA aviation safety standards are incorporated in aviation services procurement documents
  - Establishes requirement for all NOAA employee/pilots to meet the same operational safety standards to fly missions on behalf of NOAA



# Aviation Safety Program



- **Program Highlights**

- Full-time aviation safety staff [Details](#)
- NOAA Aviation Safety Board (Reports to NOAA Safety Council)
- Provides aviation safety tools and training
- Acquire, distribute, and maintain ALSE
- Evaluates aircraft operators
- NOAA Aircraft Operator Database (NAOD)
- Host annual aviation safety conference
- NOAA aviation safety awards program
- Aircraft accident and incident database
- Assists NOAA contracting officials with safety aspects of aviation services procurement





# Aviation Safety Board



- **NOAA Aviation Safety Board**
  - Voting Members
    - Aviation Safety Program Manager (Chair)
    - One Rep from each Line Office and NOAA Safety
  - Non-voting Observers
    - NOAA General Counsel, Acquisitions and Grants, Human Resources, and PPI
  - Reports to the NOAA Safety Council (Via NMAO Rep to Council)



# Aviation Safety Board



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- **NOAA Aviation Safety Board (Continued)**

- Reviews:

- Findings from NOAA's aviation accidents and serious incidents
- Results of NOAA aviation safety audits

- Approves:

- Aviation safety training and ALSE requirements
- Aviation safety standards for NOAA contractual agreements
- Aviation risk assessment tools and mishap response plans

- Solicits the aviation safety needs of Line Offices

- Recommends to the NOAA Safety Council:

- policy, guidance, standards, training, funding and staffing to promote program safety, efficiency, and expertise.





# Aviation Safety Survey Results



- **Personnel who fly for NOAA**  
(as of April 30, 2005)

<b>NOAA Personnel and Joint Research Partners/Visiting Scientists who may fly on official duty</b> <b>On other than Scheduled Air Carrier Aircraft</b>				
Line Office	NOAA Employee	NOAA Contractor	Other	Total
NESDIS	2	2	2	6
NMFS	258	110	3	371
NOS	78	20	0	98
NWS	2,919	0	0	2,919
OAR	71	11	49	131
<b>Total</b>	<b>3,328</b>	<b>143</b>	<b>54</b>	<b>3,525</b>



# Aviation Safety Survey Results



- **Training Gap**  
(April 2005 Survey Data)

Aviation Safety Training Provided by Line Office or AOC					
Line Office	Training received within previous 5 years				
	Number of Personnel Identified in Survey	Basic Aviation Safety	Water Survival Training	Cold Weather Survival Training	Altitude Chamber Training
NESDIS	6	0	0	0	0
NMFS	371	44	37	0	NA
NOS	98	57	55	0	2
NWS	2919	22	0	22	NA
OAR	131	53	0	0	0
<b>Total</b>	<b>3525</b>	<b>176</b>	<b>92</b>	<b>22</b>	<b>2</b>

**Additional Training Required**



Training Required by Line Office				
Total Number of Personnel				
Line Office	Basic Aviation Safety (NOAA E-Learning)	Water Survival Training	Cold Weather Survival Training	Altitude Chamber Training
NESDIS	6	6	6	6
NMFS	371	276	24	0
NOS	98	30	66	3
NWS	2919	40	56	0
OAR	131	92	73	99
<b>Total</b>	<b>3525</b>	<b>444</b>	<b>225</b>	<b>108</b>



# Aviation Safety Survey Results



- **Aviation Life Support Equipment Gap** (April 2005 Survey Data)

Line Offices Reported some ALSE purchased by Staff Offices and available at the Unit level (not standardized across NOAA)

**Additional ALSE Required**



ALSE Required by Line Office					
Total Number of Units					
Line Office	Switlick Vest	PLB	Near-Shore Raft	Offshore Raft	Anti-Exposure Suit
NESDIS	0	0	0	0	0
NMFS	100	19	5	4	73
NOS	12	3	1	0	9
NWS	11	3	0	0	11
OAR	27	7	0	2	10
	<b>150</b>	<b>32</b>	<b>6</b>	<b>6</b>	<b>103</b>



# Funding Options

- **Proposed Method for dividing Program cost among the Line Offices**
  - Each LO funds their training and ALSE requirements
  - Program Management cost divided among the LO's based on their percentage of overall personnel requiring hands-on training

Hands-On Training Required by Line Office				
Total Number of Personnel				
Line Office	Water Survival Training	Cold Weather Survival Training	Altitude Chamber Training	% of total Personnel
NESDIS	6	6	6	2%
NMFS	276	24	0	39%
NOS	30	66	3	13%
NWS	40	56	0	12%
OAR	92	73	99	34%
	<b>444</b>	<b>225</b>	<b>108</b>	

} % of total Program Management cost charged to each Line Office



# Funding Options



- **Option #1**
  - Includes travel funds for Line Office personnel to participate in required training
- **Option #2**
  - No travel funds for Line Office personnel incorporated in the cost estimate





# Funding Required



<b>Aviation Safety Program Funding Required</b>				
<b>\$K (FY05 dollars)</b>				
	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08-FY12</b>
<b>Option #1</b>	\$173	\$2,089	\$1,487	\$963
<b>Option #2</b>	\$173	\$1,139	\$853	\$709

Option #1 includes travel for Line Office personnel training

Option #2 does not include travel for Line Office personnel training



# Funding Options



- Breakout by Line Office

Aviation Safety Program Funding Required									
\$ Thousands (FY05 dollars)									
Line Office	% of Total	FY05		FY06		FY07		FY08-FY12	
		Option #1	Option #2	Option #1	Option #2	Option #1	Option #2	Option #1	Option #2
<b>NESDIS</b>	<b>2%</b>	\$3	\$3	\$42	\$19	\$32	\$17	\$20	\$14
<b>NMFS</b>	<b>39%</b>	\$67	\$67	\$863	\$517	\$583	\$352	\$376	\$284
<b>NOS</b>	<b>13%</b>	\$22	\$22	\$259	\$125	\$191	\$102	\$124	\$89
<b>NWS</b>	<b>12%</b>	\$21	\$21	\$245	\$118	\$180	\$95	\$116	\$82
<b>OAR</b>	<b>34%</b>	\$59	\$59	\$682	\$360	\$502	\$287	\$326	\$240
<b>Total</b>		<b>\$173</b>	<b>\$173</b>	<b>\$2,089</b>	<b>\$1,139</b>	<b>\$1,487</b>	<b>\$853</b>	<b>\$963</b>	<b>\$709</b>

Option #1 includes travel for Line Office personnel training

Option #2 does not include travel for Line Office personnel training



# Implementation Plan



Aviation Safety Program Implementation Plan							
Task	Coordination	FY05	FY06				FY07
		Q4	Q1	Q2	Q3	Q4	Q1
Process NAO for formal clearance	CAO	X					
Secure FY05 Funding		X					
Write Charter for Aviation Safety Board		X					
Hire Staff	Human Resources	X	X				
Draft Aviation Contract Language	Acquisitions & Grants	X	X	X			
Develop Aircraft Operator Evaluation Criteria	Aviation Safety Board	X	X				
Develop on-line databases (medical and aircraft operator)		X	X	X			
Develop NOAA E-Learning Modules	Training	X	X	X			
Develop Aviation Safety Awards Program	NOAA Safety		X				
Develop Aviation Accident/Incident Database	NOAA Safety		X				
Develop Risk Assessment/Mishap Response Tools	Aviation Safety Board		X	X			
Plan first annual Aviation Safety Conference				X			
Contracts established with training vendors				X	X		
Medical Screening				X	X	X	X
Aviation Safety Training for Personnel				X	X	X	X
Purchase ALSE				X	X	X	X
Aircraft Operator Evaluations				X	X	X	X
Host first annual Aviation Safety Conference					X		
<b>Lift Safety Stand-down</b>							★





# Aviation Safety Management



- **NOAA Aviation Safety Policy (NAO)**
  - Brings NOAA into compliance with 41 CFR 102-33 Management of Government Aircraft
  - Standardized aviation safety policy for NOAA
  - Aviation Safety Management
- **Corporate NOAA Aviation Safety Program**
  - Reduce risk associated with NOAA's aviation operations
  - Creates safe 'aviation' work environment for NOAA personnel
  - Manages the components of an effective aviation safety program



# Recommendation to NEC



- **Upon NEC approval of Program and Policy**
  - Approve funding transfer - 1 July 2005
  - Approve Aviation Safety Policy with full implementation required by **1 October, 2006**
  - Continue “safety stand-down” policy and procedures until full program and policy implementation is possible
  - Allow NMAO to send draft NAO (version 4) to CAO for formal clearance process



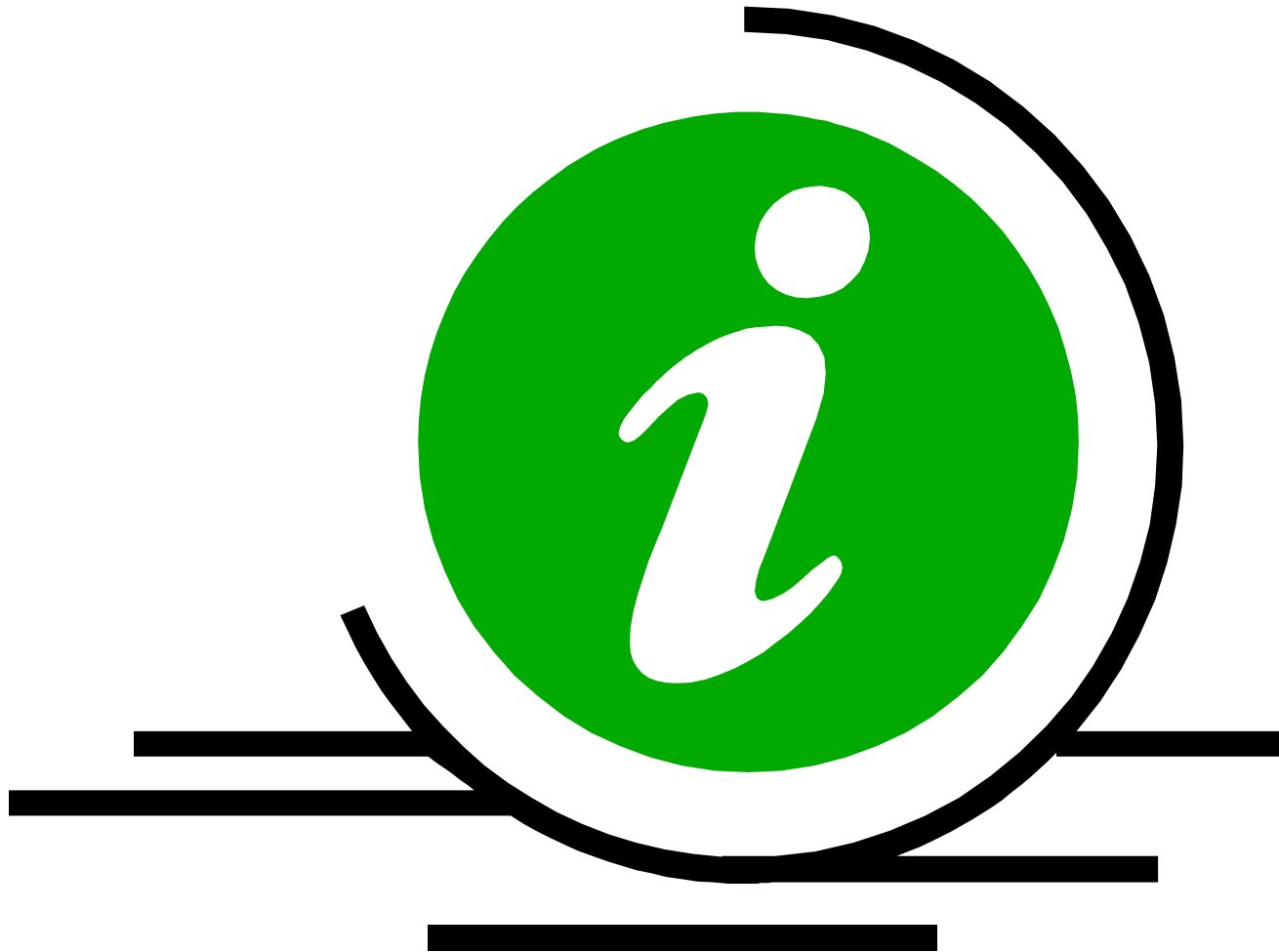
# Decision Request



- 
- **Request NOAA Platform Allocation Council Endorsement**
    - Aviation Safety Policy
    - Aviation Safety Program



# Additional Information





# Background



- **March 16-18 Policy Redraft Workshop**
  - **Major Issues Discussed (version 2) Consensus Agreements**
    1. Scope of NAO (applies to AOC aircraft/does not apply to Grants)
    2. NOAA Aircraft Operator Database (reciprocity with other Agencies)
    3. Complexity of Program Structure (remove management layers)
    4. Aviation Safety Board Membership and Authority (defined)
    5. Transportation vs. Operations (defined)
    6. Medical Screening (required for all/develop on-line form)
    7. Privately Owned Aircraft (not authorized for Mission Support)
    8. NOAA Scientists/Pilots (same standard for all NOAA pilots)
    9. Accident/Incident Reporting (aircraft operator responsible)
    10. Observer Participation (medical screening, pre-flight brief, ALSE)
    11. Appendix B – NOAA Minimum Aviation Safety Standards (remove)
    12. Aviation Safety Training/ALSE (Aviation Safety Board determine\*)<sub>29</sub>

\* NMAO made recommendations and Safety Board can review when established

Back



# Program Management



- **Labor (5 FTE)**
  - Program Manager (NOAA Corps O-4)
    - Program management and reporting
    - Supervise employees
    - Develop and implement policies and procedures
    - Develop on-line aviation safety training
    - Chair Aviation Safety Board
    - Accident/Incident investigation and analysis
    - Strategic Planning and Communication
  - Program Analyst (GS 12)
    - Schedule Training of Line Office Personnel
    - Coordinate Aircraft Operator Evaluations
    - Maintain website and databases
    - Coordinate/Plan annual aviation safety conference



# Program Management



- **Labor (5 FTE)**
  - **Contract Specialist (GS 11)**
    - Contracts for Aviation Safety Training
    - Contracts for Aircraft Operator Evaluations
    - Assist NOAA Programs with drafting aviation contracts
    - Source selection board advisor (evaluate offeror's aviation credentials)
  - **ALSE Technician (Contractor)**
    - Purchase, Maintain and Distribute ALSE
    - Provide ALSE training
    - Maintain database to track ALSE
  - **Administrative Assistant (GS 7)**
    - Travel authorization and vouchers
    - T&A for staff
    - Filing and Correspondence



# Funding Required



- FY05 (4<sup>th</sup> quarter)**

NOAA Aviation Safety Program \$Thousands (in FY 2005 Dollars)			
Cost Item	What is Purchased	FY05 (4th qtr) Option #1	FY05 (4th qtr) Option #2
Labor	5 FTE (O-4, GS12, GS11, GS7, contractor)	\$115.752	\$115.752
Aviation Safety Training		\$0.000	\$0.000
Aircraft Operator Evaluation		\$0.000	\$0.000
Aviation Life Support Equipment Purchase		\$0.000	\$0.000
Travel (Safety Office Staff)	staff travel	\$4.500	\$4.500
Office Equipment and Supplies	computers, software, publications	\$14.000	\$14.000
Web Database Development	online medical screening/ NAOD database	\$35.000	\$35.000
Annual Safety Conference/Awards/Publications/Tools	10 underwater egress videos	\$3.250	\$3.250
	<b>ProgramTotal</b>	<b>\$172.502</b>	<b>\$172.502</b>

GS Employee Salary calculations include:

Benefits (28% of salary)

Comp time/overtime/awards (5% of salary)

Office Costs/Incidentals/Training (4% salary and benefits)

Option #1 includes travel for Line Office personnel training

Option #2 does not include travel for Line Office personnel training

Labor	<b>\$115.752</b>	<b>\$115.752</b>
Line Office Training and ALSE	<b>\$0.000</b>	<b>\$0.000</b>
Program Management	<b>\$56.750</b>	<b>\$56.750</b>





# Funding Required



- FY06**

NOAA Aviation Safety Program \$Thousands (in FY 2005 Dollars)			
Cost Item	What is Purchased	FY06 Option #1	FY06 Option #2
Labor	5 FTE (O-4, GS12, GS11, GS7, contractor)	\$463.008	\$463.008
Aviation Safety Training	75% of training identified in April 2005 Survey	\$1,221.357	\$271.295
Aircraft Operator Evaluation	15 Aircraft Operators	\$37.500	\$37.500
Aviation Life Support Equipment Purchase	100% of ALSE identified in April 2005 Survey	\$238.060	\$238.060
Travel (Safety Office Staff)	staff travel	\$16.500	\$16.500
Office Equipment and Supplies	computers, software, publications, supplies	\$25.000	\$25.000
Web Database Development	online medical screening/ NAOD database	\$0.000	\$0.000
Annual Safety Conference/Awards/Publications/Tools	Safety Conference for 75 participants, Awards, Tools	\$88.000	\$88.000
<b>ProgramTotal</b>		<b>\$2,089.425</b>	<b>\$1,139.363</b>

**GS Employee Salary calculations include:**

Benefits (28% of salary)

Comp time/overtime/awards (5% of salary)

Office Costs/Incidentals/Training (4% salary and benefits)

Option #1 includes travel for Line Office personnel training

Option #2 does not include travel for Line Office personnel training

Labor	<b>\$463.008</b>	<b>\$463.008</b>
Line Office Training and ALSE	<b>\$1,459.417</b>	<b>\$509.355</b>
Program Management	<b>\$167.000</b>	<b>\$167.000</b>



# Funding Required



- FY07**

NOAA Aviation Safety Program \$Thousands (in FY 2005 Dollars)			
Cost Item	What is Purchased	FY07 Option #1	FY07 Option #2
Labor	5 FTE (O-4, GS12, GS11, GS7, contractor)	\$463.008	\$463.008
Aviation Safety Training	50% of training identified in April 2005 Survey	\$814.238	\$180.863
Aircraft Operator Evaluation	10 Aircraft Operators	\$25.000	\$25.000
Aviation Life Support Equipment Purchase	25% of ALSE identified in April 2005 Survey	\$59.515	\$59.515
Travel (Safety Office Staff)	staff travel	\$16.500	\$16.500
Office Equipment and Supplies	computers, software, publications, supplies	\$23.500	\$23.500
Web Database Development	online medical screening/ NAOD database	\$0.000	\$0.000
Annual Safety Conference/Awards/Publications/Tools	Safety Conference for 75 participants, Awards, Tools	\$85.000	\$85.000
<b>ProgramTotal</b>		<b>\$1,486.761</b>	<b>\$853.386</b>

**GS Employee Salary calculations include:**

Benefits (28% of salary)

Comp time/overtime/awards (5% of salary)

Office Costs/Incidentals/Training (4% salary and benefits)

Option #1 includes travel for Line Office personnel training

Option #2 does not include travel for Line Office personnel training

Labor	<b>\$463.008</b>	<b>\$463.008</b>
Line Office Training and ALSE	<b>\$873.753</b>	<b>\$240.378</b>
Program Management	<b>\$150.000</b>	<b>\$150.000</b>



# Funding Required



- FY08-FY12**

NOAA Aviation Safety Program \$Thousands (in FY 2005 Dollars)			
Cost Item	What is Purchased	FY08 - FY12 Option #1	FY08 - FY12 (Option #2)
Labor	5 FTE (O-4, GS12, GS11, GS7, contractor)	\$463.008	\$463.008
Aviation Safety Training	20% of training identified in April 2005 Survey	\$325.695	\$72.345
Aircraft Operator Evaluation	10 Aircraft Operators	\$25.000	\$25.000
Aviation Life Support Equipment Purchase	10% of ALSE identified in April 2005 Survey	\$23.806	\$23.806
Travel (Safety Office Staff)	staff travel	\$16.500	\$16.500
Office Equipment and Supplies	computers, software, publications, supplies	\$23.500	\$23.500
Web Database Development	online medical screening/ NAOD database	\$0.000	\$0.000
Annual Safety Conference/Awards/Publications/Tools	Safety Conference for 75 participants, Awards, Tools	\$85.000	\$85.000
<b>ProgramTotal</b>		<b>\$962.509</b>	<b>\$709.159</b>

**GS Employee Salary calculations include:**

Benefits (28% of salary)

Comp time/overtime/awards (5% of salary)

Office Costs/Incidentals/Training (4% salary and benefits)

Option #1 includes travel for Line Office personnel training

Option #2 does not include travel for Line Office personnel training

Labor	<b>\$463.008</b>	<b>\$463.008</b>
Line Office Training and ALSE	<b>\$349.501</b>	<b>\$96.151</b>
Program Management	<b>\$150.000</b>	<b>\$150.000</b>