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

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NOAA Marine and Aviation Operations  
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# Outline



- 
- Purpose
  - Issue
  - Background & Discussion
  - Alternatives
  - Coordination and Views
  - Output
  - Recommendation



# Purpose



- **Decision Briefing**
  - NOAA's Aviation Safety Policy
  - NOAA's Aviation Safety Program
- **Desired Decision(s)**
  - NOAA Executive Council Approval of:
    - Aviation Safety Policy (NOAA Administrative Order)
    - Aviation Safety Program
    - Funding Profile
- **Applicable Tasking**
  - NMAO will implement the Aviation Safety Program in accordance with the Aviation Safety NAO



# Issue



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

- Developed in response to:

- **41 CFR 102-33 Management of Government Aircraft**

- (published in Federal Register November 6, 2002) requires Federal Agencies to establish Flight Program Standards for all aircraft operations

- **FY06-FY10 Program Decision Memorandum** “Establish an Aviation Outsourcing Safety Program to include centralized aviation safety training, safety equipment maintenance and distribution and commercial aviation vendor evaluation. Develop NAO for new program. Fund from within existing resources”

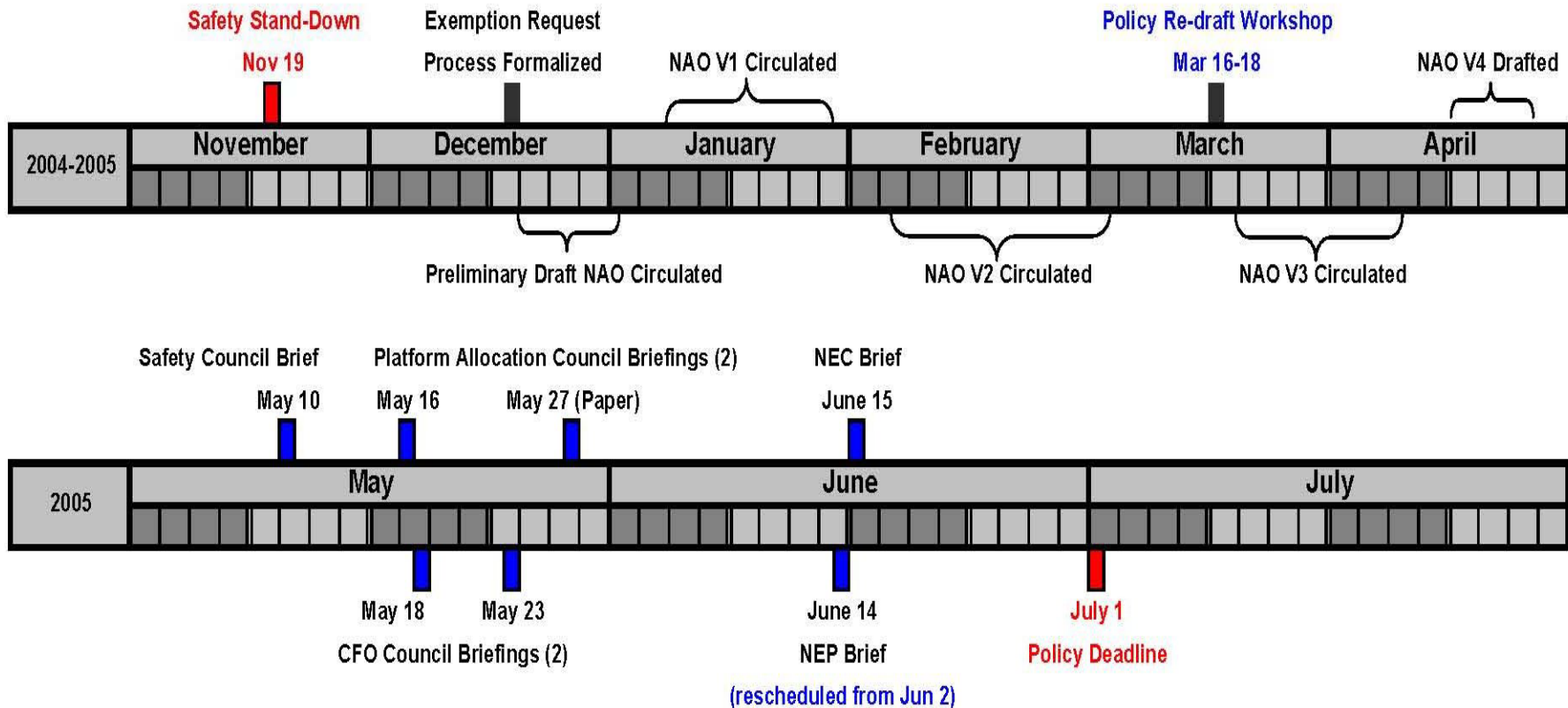
- **Safety Stand-Down Regarding Use of non-NOAA Aircraft**

- (issued November 19, 2004) “This stand-down shall remain in effect until a safety program for use of non-NOAA aircraft is approved by the NOAA Executive Council”



# Background

- Program and Policy Development Milestones





# NOAA Aviation Safety Policy

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NOAA has a responsibility to provide a safe working environment for its workforce and partners who are exposed to the risks associated with flying on behalf of the Agency. Aviation safety, a core value, is the number one priority for all aviation operations.



# NOAA Aviation Safety Policy



- **Draft NAO (version 5)**
  - Applies to aircraft owned or operated by NOAA
    - Aircraft operated by NOAA include:
      - rented, chartered, leased or owned by NOAA or NOAA personnel and used for official business; and
      - aircraft operated by public or private entities on behalf of NOAA through written support agreements
  - Does not apply to:
    - Use of scheduled air carrier for transportation
    - Use of aircraft for acquisition of products or data where no NOAA personnel fly on the aircraft
    - Use of aircraft for movement of cargo



# NOAA Aviation Safety Policy



- **Draft NAO (version 5)**
  - Reduces risk associated with aircraft operations by:
    - Ensuring contracted aircraft (listed on NOAA Aircraft Operator Database) meet NOAA airworthiness and operational safety standards
    - Requiring medical screening of personnel
      - To identify individuals 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)





# NOAA Aviation Safety Policy



- **Draft NAO (version 5)**
  - Establishes a corporate NOAA:
    - Aviation Safety Board
    - Aviation Safety Program
  - Ensures NOAA aviation safety standards are incorporated in procurement documents and written agreements for aviation services
  - Requires all NOAA pilots to meet the same certification, currency, and training standards to fly missions on behalf of NOAA



# NOAA Aviation Safety Policy



- **Policy Impact**

- **All NOAA personnel** in order to fly on **any aircraft** in the performance of their job (excluding travel on scheduled air carriers or Privately Owned Aircraft); and **All non-NOAA personnel**, in order to fly on **any aircraft owned or operated by NOAA** must have the following:

- NOAA Aeromedical Clearance Notice
- Aviation Safety Training listed in Appendix B of NAO
- Aviation Life Support Equipment listed in Appendix B of NAO



# NOAA Aviation Safety Policy



- **Policy Impact**

- NOAA personnel are authorized to fly when:

- **Aircraft is:**

- NOAA aircraft; or

- Non-NOAA aircraft

- » Contracted with air service provider on NOAA Aircraft Operator Database (NAOD);

- » Operated by United States government, or governments who meet the FAA International Safety Assessment Program Category 1 rating;

- » Used on a “Flight of Opportunity”; or

- » Privately owned aircraft (POA) and flown by NOAA employee for transportation only; and

- **Individual:**

- Possesses a NOAA Aeromedical Clearance Notice

- Completed aviation safety training in Appendix B of NAO

- Provided ALSE in Appendix B of NAO



# 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, PPI, Acquisitions and Grants, and Human Resources
- **Reports to the NOAA Safety Council**
- **Solicits the aviation safety needs of Line Offices**
- **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



# NOAA Aviation Safety Program



- **Program Highlights**

- Full-time aviation safety staff
- Provides aviation safety tools and training
- Maintains agreements with aviation safety training providers (commercial and government) for NOAA
- Centrally acquires, maintains and distributes ALSE
- Maintains NOAA Aircraft Operator Database (NAOD)
- Evaluates aircraft operators (listed on NAOD)
- Maintains NOAA Aviation Medical Screening Database
- Assists NOAA contracting officials with safety aspects of aviation services procurement
- Hosts annual aviation safety conference



# Funding Required



Aviation Safety Program Funding Required				
\$K (FY05 dollars)				
	FY05	FY06	FY07	FY08-FY12
Program Management	\$140	\$516	\$469	\$469
* Line Office Training & ALSE	\$0	\$509	\$240	\$96
<b>Total</b>	<b>\$140</b>	<b>\$1,025</b>	<b>\$710</b>	<b>\$566</b>

\* Line Office Training and ALSE cost estimates are based on [April 2005 Survey](#) data and are under the direct control of the Line Offices



# Funding Alternative #1



- **Entire Program funded by Fleet Services**

- FY06-FY10 PDM: “Establish an Aviation Outsourcing Safety Program to include centralized aviation safety training, safety equipment maintenance and distribution and commercial aviation vendor evaluation. Develop NAO for new program. **Fund from within existing resources.**” (Option A, B, C or combination)

<b>ONE POSSIBLE SCENARIO</b>		Impact to Aircraft Services Funded Hours				<b>ONE POSSIBLE SCENARIO</b>	
Projects (Hours Allocated)	FY06 (\$1,025)		FY07 (\$710)		FY08-FY12 (\$566)		
	- Hours	Dollars (\$K)	- Hours	Dollars (\$K)	- Hours	Dollars (\$K)	
Snow Survey (650)	-650	\$149	-650	\$149	-650	\$149	
Remote Sensing R&D (275)	-275	\$168	-275	\$168	-275	\$168	
Hurricane Research (P-3) (155)	-155	\$439	-100	\$300	-83	\$249	
Hurricane Research (G-IV) (120)	-120	\$260	-46	\$92			
<b>Totals</b>	<b>-1200</b>	<b>\$1,016</b>	<b>-1071</b>	<b>\$709</b>	<b>-1008</b>	<b>\$566</b>	

**A**

Snow Survey – NWS  
Remote Sensing R&D – NOS  
Hurricane Research – OAR

**B**

Impact to Marine Ops and Maintenance			
	FY06 (\$1,025)	FY07 (\$710)	FY08-FY12 (\$566)
Reduction in Operating Days	-85	-59	-47

Likely to have the greatest impact on NMFS if Operating Days reduced to support the Aviation Safety Program due to greatest % of Operating Days on the Fleet

**C**

Reduction in Fleet Services: Platform Maintenance, Augmentation Pool, or remove platform(s) from service





# Funding Alternative #2



- Fleet Services funds Program Management
- Line Offices fund their Training and ALSE

**ONE POSSIBLE SCENARIO** Impact to Aircraft Services Funded Hours **ONE POSSIBLE SCENARIO**

Projects (Hours Allocated)	FY06 (\$516)		FY07 (\$469)		FY08-FY12 (\$469)	
	-Hours	Dollars (\$K)	- Hours	Dollars (\$K)	- Hours	Dollars (\$K)
Snow Survey (650)	-650.00	\$149	-650.00	\$149	-650.00	\$149
Remote Sensing R&D (275)	-275.00	\$168	-275.00	\$168	-275.00	\$168
Hurricane Research (P-3) (155)	-70.00	\$198	-50	\$150	-50	\$150
Hurricane Research (G-IV) (120)						
<b>Totals</b>	<b>-995.00</b>	<b>\$515</b>	<b>-975</b>	<b>\$467</b>	<b>-975</b>	<b>\$467</b>

**A**

**B**

Impact to Marine Ops and Maintenance			
	FY06 (\$516)	FY07 (\$469)	FY08-FY12 (\$469)
Reduction in Operating Days	-43	-39	-39

**C**

Reduction in Fleet Services: Platform Maintenance, Augmentation Pool, or remove platform(s) from service

Training and ALSE Cost \$K in FY05 Dollars				
Line Office	FY05	FY06	FY07	FY08-FY12
NESDIS	\$0	\$7	\$4	\$2
NMFS	\$0	\$271	\$113	\$45
NOS	\$0	\$43	\$22	\$9
NWS	\$0	\$43	\$22	\$9
OAR	\$0	\$146	\$79	\$32
	<b>\$0</b>	<b>\$509</b>	<b>\$240</b>	<b>\$96</b>

← Line Office Training and ALSE





# Funding Alternative #3



- **Fleet Services funds Program Labor only.**
- **Line Offices fund their Training and ALSE and the remaining fixed costs for the Program**
  - Line Office Aviation Safety Program Fixed cost distribution based on combination % of overall hands-on training and total flight hours with LO personnel onboard

Program Management Cost Distribution Possibilities			
Line Office	% personnel requiring hands-on training	% total flight hours with NOAA Personnel on board	Combination of hands-on training and total flight hours
NESDIS	2%	2%	2%
NMFS	39%	58%	49%
NOS	13%	9%	11%
NWS	12%	23%	17%
OAR	34%	8%	21%

} Program remaining fixed cost distribution



# Funding Alternative #3



- Fleet Services funds Program Labor only. Line Offices fund their Training and ALSE and the remaining fixed costs for the Program

**A**

Projects (Hours Allocated)	Impact to Aircraft Services Funded Hours					
	FY06 (\$407)		FY07 (\$378)		FY08-FY12 (\$378)	
	-Hours	Dollars (\$K)	-Hours	Dollars (\$K)	-Hours	Dollars (\$K)
Snow Survey (650)	-650	\$149	-650	\$149	-650	\$149
Remote Sensing R&D (275)	-275	\$168	-275	\$168	-275	\$168
Hurricane Research (P-3) (155)	-30	\$90	-20	\$60	-20	\$60
Hurricane Research (G-IV) (120)						
<b>Totals</b>	<b>-955</b>	<b>\$407</b>	<b>-945</b>	<b>\$377</b>	<b>-945</b>	<b>\$377</b>

**B**

Impact to Marine Ops and Maintenance			
	FY06 (\$407)	FY07 (\$378)	FY08-FY12 (\$378)
Reduction in Operating Days	-34	-32	-32

- C** Reduction in Fleet Services (Platform Maintenance, Augmentation Pool, or remove platform(s) from service)

Line Office Cost Distribution \$K in FY05 Dollars				
Line Office	FY05	FY06	FY07	FY08-FY12
NESDIS	\$1	\$9	\$6	\$4
NMFS	\$26	\$325	\$158	\$90
NOS	\$6	\$55	\$32	\$19
NWS	\$9	\$61	\$37	\$24
OAR	\$11	\$169	\$98	\$51
	<b>\$53</b>	<b>\$618</b>	<b>\$332</b>	<b>\$188</b>

Line Office funds for Training/ALSE and remaining Program Fixed Cost (minus labor)



# Council Coordination & Views



- **NOAA Safety Council**
  - Approved Policy and Program
  - Requested continued coordination with Safety and Environmental Compliance Office (SECO) for:
    - Development of Risk Assessment Tools
    - Aviation Safety Awards
    - Aviation Accident/Incident Investigation and Tracking



# Council Coordination & Views



- **Platform Allocation Council**
  - Commented on Policy and Program
  - FY06-10 PDM directed Fleet Services to fund the Program out of existing resources
  - NMAO provided sample Line Office cost distribution for funding the Aviation Safety Program
    - Due to Allocation Council concern about potential impact to Fleet Services funded flight hours and operating days ([follow-up tasking from August 2004 Council meeting following release of FY06-10 PDM](#))
    - Council expressed wide ranging views about the funding options presented for Line Office cost distribution
      - Requested alternate cost distribution methods



# Council Views



- **CFO Council**

- Recommend the Under Secretary reconsider decision to direct Fleet Services to fund the entire Program and choose Alternative #2:
  - Fleet Services covers the cost associated with Program Management (NMAO functional area of expertise)
  - Line Offices pay for their aviation safety training and ALSE
    - Direct control over number of personnel who fly and subsequently need training and ALSE

Aviation Safety Program Funding Required				
\$K (FY05 dollars)				
	FY05	FY06	FY07	FY08-FY12
Program Management	\$140	\$516	\$469	\$469
Line Office Training & ALSE	\$0	\$509	\$240	\$96
<b>Total</b>	<b>\$140</b>	<b>\$1,025</b>	<b>\$710</b>	<b>\$566</b>



# NEP Views



- **NEP Briefing Scheduled June 14, 2005**
  - Aviation Safety Policy (Draft NAO) Approved
  - Funding Alternative #2 Approved
  - Lift the safety stand-down
    - Publish an “Interim Directive” that requires the policy and procedures implemented during the safety stand-down to remain in effect until the NAO can be fully implemented





# Output



- **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



# Aviation Safety Program 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					
Write Charter for Aviation Safety Board		X					
Aviation Safety Board begin meeting		X					
Set up IDIQs for ALSE and Training	Acquisitions & Grants	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			
Purchase ALSE			X	X	X	X	X
Plan first annual Aviation Safety Conference				X			
Contracts established with all training vendors				X	X		
Medical Screening				X	X	X	X
Aviation Safety Training for Personnel				X	X	X	X
Aircraft Operator Evaluations				X	X	X	X
Host first annual Aviation Safety Conference					X		
<b>NOAA in full compliance with Aviation Safety NAO</b>							★





# Recommendation



- **Reconsider decision (FY06-FY10 PDM) that requires Fleet Services to fund (the entire program) from within existing resources**
  - **Choose Funding Alternative #2**
    - **Fleet Services funds the Program Management for the Aviation Safety Program**
      - Compliance with FY06-FY10 PDM
      - Aviation Safety expertise resides in NMAO
    - **Line Offices fund their Training and ALSE requirements**
      - Line Offices
        - » already budget for training
        - » control the numbers of personnel sent to training
        - » control the amount of ALSE purchased to support their flight requirements



# Recommendation



- 
- **Approve Aviation Safety Policy (NAO)** with full implementation required by **1 October, 2006**
  - **Continue** “safety stand-down” policy and procedures (**Interim Directive**) until full program and policy implementation is possible



# Decision Request



- 
- **Request NOAA Executive Council Approval of:**
    - Aviation Safety Policy
    - Aviation Safety Program
    - Aviation Safety Program funding Alternative #2



# Additional Information





# Aviation Safety Survey Results



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

NOAA Personnel and Joint Research Partners/Visiting Scientists who may fly on official duty On other than Scheduled Air Carrier Aircraft				
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>



# Draft NAO (version 4)



- Aviation Safety Training Required (Appendix B)**  
(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
Transportation and Mission Operations over land	NOAA	√	√				
	Non-NOAA						
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





# 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>



# Draft NAO (version 4)



- **Aviation Life Support Equipment (ALSE) Required (Appendix B)** (NMAO Recommendations)

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





# 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>



# Training and ALSE



- PPBES Program Estimates for training and ALSE

Aviation Safety Program funding estimates for training and ALSE \$ Thousands (FY05 dollars)						
Mission Goal Program	FY06		FY07		FY08-FY12	
	Aviation Safety Training	Aviation Life Support Equipment	Aviation Safety Training	Aviation Life Support Equipment	Aviation Safety Training	Aviation Life Support Equipment
Satellite Services	\$7	\$0	\$4	\$0	\$2	\$0
Ecosystem Coastal and Marine Resources	\$6	\$4	\$4	\$1	\$2	\$0
Ecosystem Enforcement	\$35	\$52	\$23	\$13	\$9	\$5
Ecosystem Observation	\$74	\$111	\$49	\$28	\$20	\$11
Climate Forcing	\$102	\$44	\$67	\$11	\$27	\$4
Weather & Water Air Quality	\$2	\$1	\$2	\$0	\$1	\$0
Weather & Water LFW	\$20	\$11	\$13	\$3	\$5	\$1
Weather & Water Hydrology	\$2	\$1	\$2	\$0	\$1	\$0
Weather and Water STI	\$2	\$1	\$2	\$0	\$1	\$0
Commerce & Transportation Emergency Response	\$19	\$12	\$13	\$3	\$5	\$1
Commerce & Transportation Geodesy	\$1	\$0	\$0	\$0	\$0	\$0
Commerce & Transportation MTS	\$1	\$1	\$1	\$0	\$0	\$0
<b>Total</b>	<b>\$271</b>	<b>\$238</b>	<b>\$180</b>	<b>\$60</b>	<b>\$72</b>	<b>\$24</b>