

UNCLASSIFIED

PE NUMBER: 0305111F
 PE TITLE: WEATHER SERVICE

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE
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Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	39.830	47.219	33.531	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
2738 Weather Service	39.830	47.219	33.531	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain segments of the Air Force Weather Weapon System (AFWWS). Activities also include studies and analysis to support both current program planning and execution and future program planning. The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for global battlespace situational awareness. The AFWWS supports worldwide operations of Air Force and Army warfighters, Special Operation Forces (SOF), and other government agencies with weather observing and forecasting capabilities at in-garrison and deployed locations as well as centralized, reach-back capabilities. Air Force Weather (AFW) programs align under the five capability areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination (relies on Commercial-off-the-Shelf products and so does not use RDT&E funding). Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions.

WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide. WDA provides a net-centric infrastructure that assimilates worldwide sources of space and terrestrial weather data and produces decision-quality information for warfighters. Weather Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. Additionally, WDA and Forecasting capabilities will be expanded to integrate and exploit data from a new generation of environmental sensing satellites. PT/WA provides timely, local and regional target-scale weather information to operational commanders for a given Area of Responsibility, and at tactical levels, provides front-line weather information to warfighters in support of combat operations. PT/WA supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel.

In FY08, the Electronic Systems Center began fielding of Joint Environmental Toolkit (JET), Increment 1. JET will help AFW store information for use in Air and Space Operations Centers, integrate weather information with Army decision processes, and integrate and exploit weather at strategic, operational and tactical levels. In addition, the Space and Missile Systems Center developed software for the Joint Meteorology and Oceanography (METOC) Space Environment and Solar Segment (JMSESS) database providing initial net-centric capability for space weather and command and control operators.

This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

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(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	40.959	47.347	42.906
(U) Current PBR/President's Budget	39.830	47.219	33.531
(U) Total Adjustments	-1.129	-0.128	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.128	
Congressional Increases	1.600		
Reprogrammings			
SBIR/STTR Transfer	-2.729		

(U) **Significant Program Changes:**

In FY08: Congressional plus-up of \$800K for Operational Risk Management (ORM) visualization and integration and \$800K for airborne meteorological data reporting modernization via Tropospheric Airborne Meteorological Data Reporting (TAMDAR) system integration and performance evaluation on Unmanned Aerial Systems (UAS).

In FY10: funding decreases from FY09 due to higher Air Force priorities.

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0305111F WEATHER SERVICE			PROJECT NUMBER AND TITLE 2738 Weather Service		
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
2738 Weather Service	39.830	47.219	33.531	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

(U) B. Accomplishments/Planned Program (\$ in Millions)	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Accomplishments/Planned Program			
(U) WDC: Includes but is not limited to AF participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar.	0.338	0.338	0.670

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(U) B. Accomplishments/Planned Program (\$ in Millions)	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) WDA: Continues incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.	9.863	10.740	8.026
(U) Forecasting: Continues integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.	11.890	15.778	13.126
(U) PT/WA: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems.	16.139	20.363	11.709
(U) Tropospheric Airborne Meteorological Data Reporting develops airborne weather sensors on Unmanned Aerial Vehicles (UAVs) and Operational Risk Management develops visualization and integration tools.	1.600		
(U) Total Cost	39.830	47.219	33.531

(U) C. Other Program Funding Summary (\$ in Millions)	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) Other Procurement, AF, Weather Service (PE 0305111F WSC 833070, 838010, and 86190A)	60.640	62.895	39.167						Continuing	TBD
(U) Operations and Maintenance	127.405	145.164	152.458						Continuing	TBD

(U) D. Acquisition Strategy
AFWWS employs an incremental development strategy with a series of incremental Initial Operational Capabilities (IOCs) and software releases to enable rapid development and fielding of capabilities using full and open competition.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE			
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(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u>												
Northrop Grumman	C/CPAF	Bellevue, NE	11.308	3.375	Dec-07	4.148	Jan-09	4.345	Jan-10	Continuing	TBD	TBD
Raytheon Technical Services	C/CPFF	Bellevue, NE	14.999	4.374	May-08					Continuing	TBD	TBD
TBD (Weather Data Analysis)	C/TBD	TBD				7.520	Jun-09	4.834	Nov-09	Continuing	TBD	TBD
Raytheon Information & Intelligence Systems	C/CPAF	Bellevue, NE	16.211	11.700	Apr-08	15.774	Nov-08	8.090	Feb-10	Continuing	TBD	TBD
National Center for Atmospheric Research	MIPR	Boulder, CO	9.303	3.711	Mar-08	5.836	Jan-09	4.332	Jan-10	Continuing	TBD	TBD
National Aeronautics & Space Administration	MIPR	Greenbelt, MD	1.875	0.549	Mar-08	2.257	Jan-09	1.251	Jan-10	Continuing	TBD	TBD
University Corporation for Atmospheric Research	MIPR	Boulder, CO		0.772	Mar-08	1.200	Jan-09	0.650	Jan-10	Continuing	TBD	TBD
Various	various	various	21.322	7.619	Oct-07	3.408	Oct-08	3.937	Oct-09	Continuing	TBD	TBD
Subtotal Product Development			75.018	32.100		40.143		27.439		Continuing	TBD	TBD
Remarks:												
(U) <u>Management</u>												
Electronic Systems Center		Hanscom AFB, MA	10.467	7.078	Oct-07	6.796	Oct-08	5.787	Oct-09	Continuing	TBD	TBD
Space & Missile Systems Center		Los Angeles AFB, CA	0.565	0.015	Oct-07	0.020	Oct-08	0.030	Oct-09	Continuing	TBD	TBD
Air Force Research Laboratory		Rome Labs, NY	0.000	0.637	Oct-07					Continuing	TBD	TBD
Air Force Weather Agency		Offutt AFB, NE	0.000	0.000		0.260	Feb-09	0.275	Oct-09	Continuing	TBD	TBD
Subtotal Management			11.032	7.730		7.076		6.092		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			86.050	39.830		47.219		33.531		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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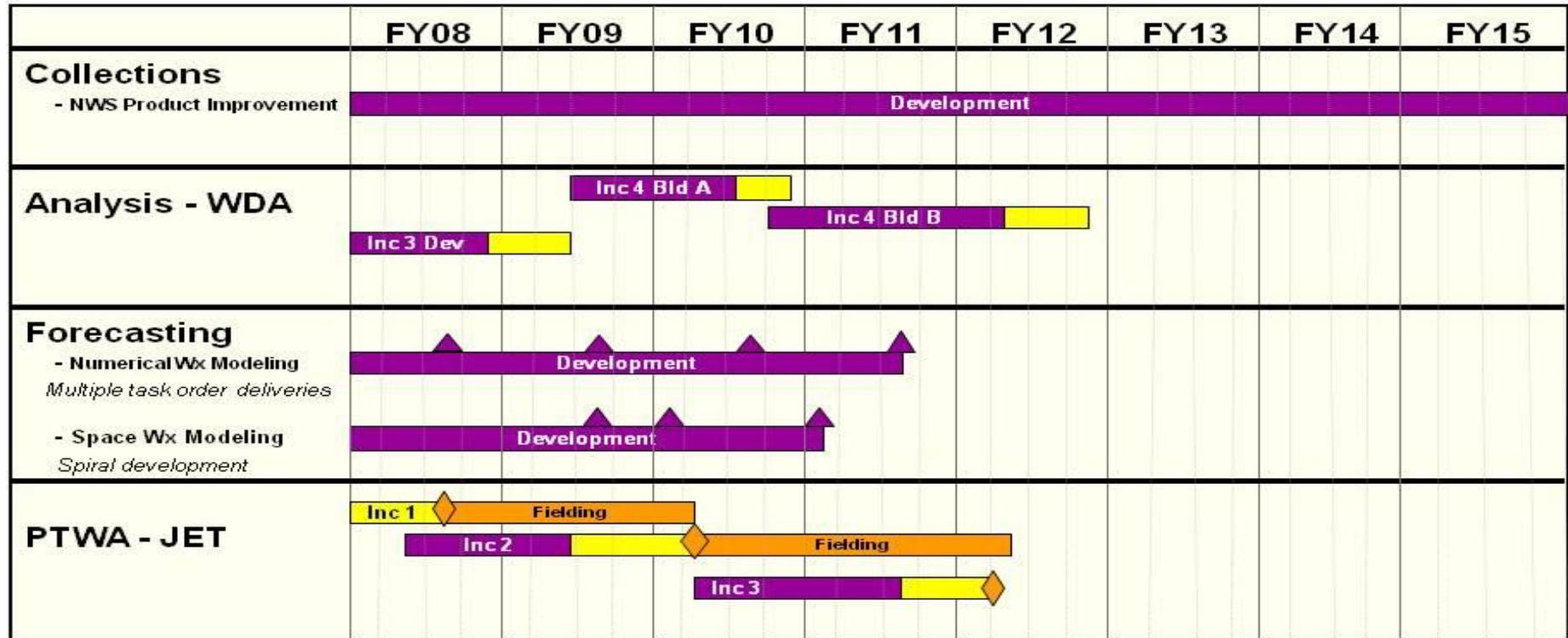
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PROJECT NUMBER AND TITLE
2738 Weather Service

PE 0305111F Weather Service

As of Apr 09



Note: AF Weather Weapon System, aligned with NWS product improvements, Forecasting, and Space Weather Modeling are operational and being upgraded through incremental development activities improving operational capabilities.

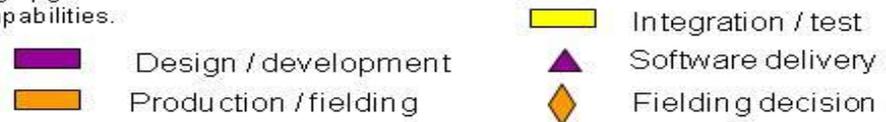


Exhibit R-4a, RDT&E Schedule Detail	DATE May 2009
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	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) <u>Schedule Profile</u>			
(U) WDC NWS Product Improvement Effort (Note 1)	1-4Q	1-4Q	1-4Q
(U) WDA Increment 3 Delivery		2Q	
(U) WDA Increment 4 Build A Delivery			4Q
(U) Forecasting Tasks Complete	3Q	3Q	3Q
(U) PT/WA - JET Increment 1 Initial Operational Capability		1Q	
(U) PT/WA - JET Increment 2 Initial Operational Capability			2Q

Note 1: AF participation with National Weather Service (NWS) and Federal Aviation Administration (FAA) in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar (NEXRAD).

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