

**UNCLASSIFIED**

PE NUMBER: 0305111F  
 PE TITLE: WEATHER SERVICE

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2007</b>
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<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0305111F WEATHER SERVICE</b>
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	27.505	35.701	39.747	47.829	43.492	39.150	39.754	41.075	Continuing	TBD
2738 Weather Service	27.505	35.701	39.747	47.829	43.492	39.150	39.754	41.075	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). The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for 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. Air Force Weather (AFW) programs are aligned 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, 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.

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 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	28.222	34.899	41.555	52.545
(U) Current PBR/President's Budget	27.505	35.701	39.747	47.829
(U) Total Adjustments	-0.717	0.802		
(U) Congressional Program Reductions		-0.014		
Congressional Rescissions		-0.135		
Congressional Increases		1.000		
Reprogrammings	-0.020			
SBIR/STTR Transfer	-0.697			
(U) <b><u>Significant Program Changes:</u></b>				
FY07: Congressional plus-up of \$1.0M for Airborne Meteorological Data Reporting Modernization				

**Exhibit R-2a, RDT&E Project Justification**

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BUDGET ACTIVITY <b>07 Operational System Development</b>					PE NUMBER AND TITLE <b>0305111F WEATHER SERVICE</b>			PROJECT NUMBER AND TITLE <b>2738 Weather Service</b>		
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2738 Weather Service	27.505	35.701	39.747	47.829	43.492	39.150	39.754	41.075	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

**(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). The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for 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. Air Force Weather (AFW) programs are aligned 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, 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.

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 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Accomplishments/Planned Program				
(U) WDC: Includes 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	0.338	0.338
(U) WDA: Continues incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.	6.479	11.844	9.996	10.740
(U) Forecasting: Continues integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.	12.894	14.367	12.145	16.388
(U) PT/WA: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. In FY08/09 realigned funds within PE 0305111F in response to government cost estimates and March 06 contract award--no increase in total program funding.	7.794	8.152	17.268	20.363

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**Exhibit R-2a, RDT&E Project Justification**

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<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0305111F WEATHER SERVICE</b>	<b>PROJECT NUMBER AND TITLE</b> <b>2738 Weather Service</b>
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(U) <b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Airborne Meteorological Data Reporting Modernization: Develops airborne weather sensors on Unmanned Aerial Vehicles (UAVs)		1.000		
(U) Total Cost	27.505	35.701	39.747	47.829

(U) <b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>										
	<u>FY 2006</u>	<u>FY 2007</u>	<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>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)	47.851	54.754	50.408	60.536	46.155	46.732	44.364	42.509	Continuing	TBD
(U) Operations and Maintenance Includes congressional plus-up of \$3.3M of Other Procurement, AF in FY07.	126.654	135.066	142.978	148.236	156.044	157.384	160.524	164.388	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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<b>07 Operational System Development</b>				<b>0305111F WEATHER SERVICE</b>						<b>2738 Weather Service</b>				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 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	0.000	5.556	Feb-06	5.932	Nov-06	2.427	Nov-07	2.417	Nov-08	Continuing	TBD	TBD
Raytheon Technical Services	C/CPFF	Bellevue, NE	3.793	3.542	Aug-06	6.223	Oct-06	1.665	Oct-07	1.909	Oct-08	Continuing	TBD	TBD
Raytheon Information & Intelligence Systems	C/CPAF	Bellevue, NE	0.000	5.543	Mar-06	5.332	Jun-07	14.200	Jun-08	17.200	Jun-09	Continuing	TBD	TBD
Harris Corporation	C/FFP	Bellevue, NE	0.000	1.694	Jun-06			4.667	Jan-08	5.100	Jan-09	0.000	1.694	TBD
TBD [METSAT Data Exploitation]												Continuing	TBD	TBD
TBD [C2 Integration]						3.167	May-07					0.000	3.167	TBD
TBD [Airborne Meteorological Data Reporting Modernization]						1.000	Jun-07					0.000	1.000	TBD
National Center for Atmospheric Research	MIPR	Boulder, CO	1.215	3.565	Mar-06	3.684	Jan-07	4.500	Jan-08	6.646	Jan-09	Continuing	TBD	TBD
National Aeronautics & Space Administration	MIPR	Greenbelt, MD	0.000	1.414	Feb-06	1.800	Jan-07	2.400	Jan-08	2.500	Jan-09	Continuing	TBD	TBD
Various	various	various	7.844	3.323	Oct-05	4.929	Oct-06	3.887	Oct-07	5.691	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			12.852	24.637		32.067		33.746		41.463		Continuing	TBD	TBD
Remarks:														
(U) <u>Management</u>														
Electronic Systems Center		Hanscom AFB, MA	5.841	2.483	Oct-05	3.224	Oct-06	5.581	Oct-07	5.896	Oct-08	Continuing	TBD	TBD
Space & Missile Systems Center		Los Angeles AFB, CA	0.450	0.095	Oct-05	0.020	Oct-06	0.020	Oct-07	0.020	Oct-08	Continuing	TBD	TBD
Air Force Research Laboratory		Hanscom AFB, MA	0.235	0.290	Oct-05	0.390	Oct-06	0.400	Oct-07	0.450	Oct-08	Continuing	TBD	TBD
Subtotal Management			6.526	2.868		3.634		6.001		6.366		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			19.378	27.505		35.701		39.747		47.829		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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February 2007

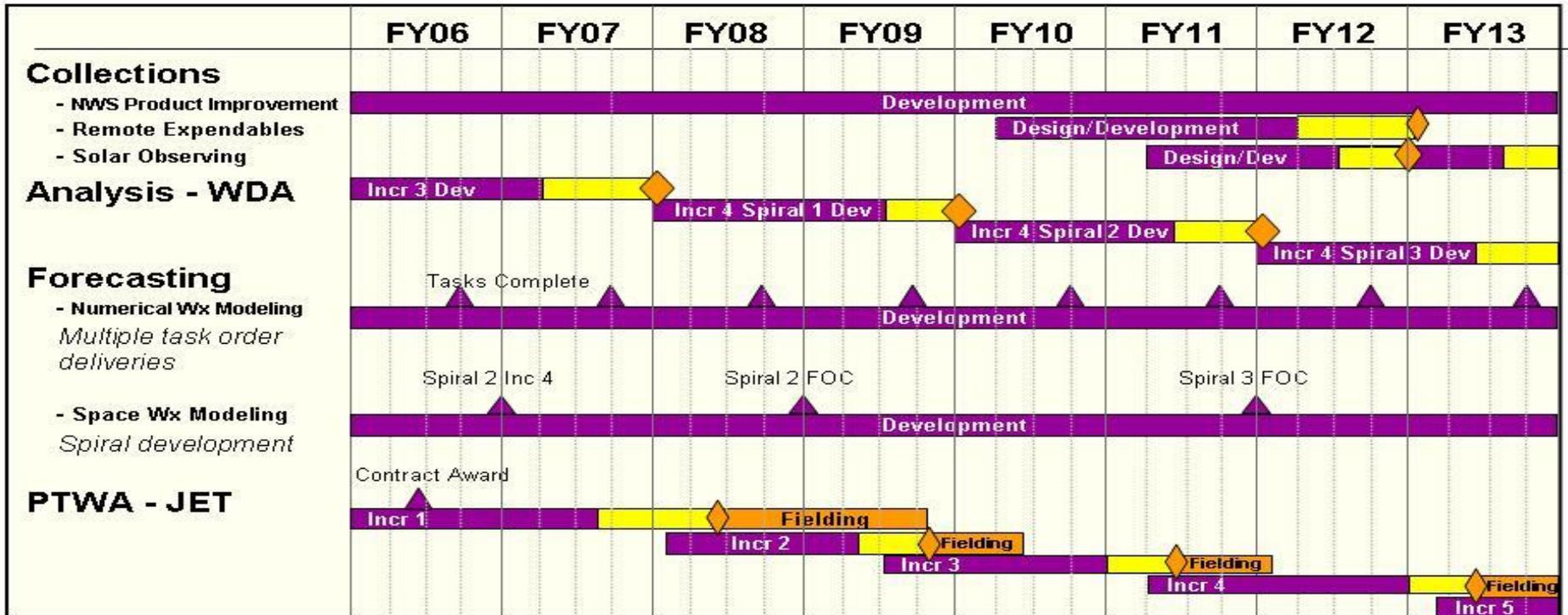
BUDGET ACTIVITY  
07 Operational System Development

PE NUMBER AND TITLE  
0305111F WEATHER SERVICE

PROJECT NUMBER AND TITLE  
2738 Weather Service

# PE 0305111F Weather Service

As of 10 Jan 07



Note: NWS product improvements, Forecasting, and SWAFS are operational and being upgraded through incremental development activities.



**Exhibit R-4a, RDT&E Schedule Detail**

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(U) <b>Schedule Profile</b>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) WDC NWS Product Improvement Effort (Note 1)	1-4Q	1-4Q	1-4Q	1-4Q
(U) WDA Increment 3 Delivery			1Q	
(U) Forecasting Tasks Complete	3Q	3Q	3Q	3Q
(U) Forecasting - SWAFS Spiral 2 Increment 4 IOC	4Q			
(U) Forecasting - SWAFS Spiral 2 Full Operational Capability			4Q	
(U) PT/WA Final JET Down-Select	2Q			
(U) PT/WA - JET Increment 1 IOC			2Q	
(U) PT/WA - JET Increment 2 IOC			4Q	

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).