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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305111F: WEATHER SERVICE							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	45.918	33.291	32.373	0.000	32.373	32.260	33.079	32.944	33.547	Continuing	Continuing
672738: Weather Service	45.918	33.291	32.373	0.000	32.373	32.260	33.079	32.944	33.547	Continuing	Continuing

A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, sustain, and enhance 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 (presently 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 terrestrial and space 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 February 2009 the Land Information System (LIS) achieved Initial Operational Capability, beginning replacement of 20+ year old legacy systems. LIS software unifies surface characterizations from multiple sources and provides consistent, high resolution soil profile, moisture, and temperature information needed to support, for example, Army tactical decisions aids and initialization of weather forecast models. In August 2009 implementation of the Joint Meteorology and Oceanography (METOC) Space Environment and Solar Segment (JMSESS) database replaced legacy databases and marked an initial step toward net-centric capabilities for space environmental monitoring and command and control operators vital to space situational awareness. Fielding of the Joint Environmental Toolkit (JET), Increment 1, by the Electronic Systems Center continued during FY 2009 with more than 140 sites installed by the end of September. JET is enhancing the availability of weather

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information for use in Wings, Squadrons, and Air and Space Operations Centers, integration with Army decision processes, and exploitation of weather at global, regional, and tactical levels.					
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.					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	45.918	33.531	0.000	0.000	0.000
Current President's Budget	45.918	33.291	32.373	0.000	32.373
Total Adjustments	0.000	-0.240	32.373	0.000	32.373
• Congressional General Reductions		-0.240			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	32.373	0.000	32.373
Change Summary Explanation					
In FY11: funding decreases from FY09 due to higher Air Force priorities.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT			
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				PE 0305111F: WEATHER SERVICE				672738: Weather Service			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
672738: Weather Service	45.918	33.291	32.373	0.000	32.373	32.260	33.079	32.944	33.547	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

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information for use in Wings, Squadrons, and Air and Space Operations Centers, integration with Army decision processes, and exploitation of weather at global, regional, and tactical levels.					
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.					
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide. FY 2009 Accomplishments: In FY 2009: Participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar. FY 2010 Plans: In FY 2010: Participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar. FY 2011 Base Plans: In FY 2011: Participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar. FY 2011 OCO Plans: In FY2011 OCO: N/A	0.338	0.270	0.270	0.000	0.270
MAJOR THRUST: WDA provides a net-centric infrastructure that assimilates worldwide sources of terrestrial and space weather data and produces decision-quality information for warfighters. FY 2009 Accomplishments: In FY 2009: Continues incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.	8.546	8.128	9.207	0.000	9.207

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY 2010: Continues incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.						
FY 2011 Base Plans: In FY 2011: Continues incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution.		17.894	13.287	13.729	0.000	13.729
FY 2009 Accomplishments: In FY2009: Continues integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.						
FY 2010 Plans: In FY 2010: Continues integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.						
FY 2011 Base Plans: In FY 2011: Continues integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
		19.140	11.606	9.167	0.000	9.167

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B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: 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 w... FY 2009 Accomplishments: In FY 2009: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. FY 2010 Plans: In FY 2010: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. FY 2011 Base Plans: In FY 2011: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. FY 2011 OCO Plans: In FY 2011 OCO: N/A											
Accomplishments/Planned Programs Subtotals							45.918	33.291	32.373	0.000	32.373
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0305111F: Weather Service, (OPAF)	74.853	39.049	37.743	0.000	37.743	37.160	35.253	35.044	35.013	0.000	0.000
	140.917	141.158	137.638	0.000	137.638	126.179	135.213	137.455	139.924	0.000	0.000

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C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
<ul style="list-style-type: none"> • PE 0305111F (1): <i>Weather Service, (O&M)</i> 											
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.											
E. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
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Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Northrop Grumman	C/CPAF	Northrop Grumman Bellevue, NE	22.706	4.802	Jan 2010	5.835	Jan 2011	0.000		5.835	Continuing	Continuing	Continuing
Raytheon Technical Services	C/CPFF	Raytheon Long Beach, CA	5.542	7.354	Mar 2010	6.467	May 2011	0.000		6.467	Continuing	Continuing	Continuing
Raytheon Information & Intelligence Systems	C/CPAF	Raytheon Bellevue, NE	44.473	7.429	Feb 2010	5.671	Oct 2010	0.000		5.671	Continuing	Continuing	Continuing
National Center for Atmospheric Research	MIPR	NCAR Boulder, CO	19.214	4.408	Feb 2010	5.381	Jan 2011	0.000		5.381	Continuing	Continuing	Continuing
National Aeronautics & Space Administration	MIPR	NASA Greenbelt, MD	3.722	1.700	Feb 2010	1.050	Jan 2011	0.000		1.050	Continuing	Continuing	Continuing
Various	Various/ Various	Various Various	3.704	2.885	Oct 2009	2.494	Oct 2010	0.000		2.494	Continuing	Continuing	Continuing
Subtotal			99.361	28.578		26.898		0.000		26.898			
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Electronic Systems Center	TBD/TBD	ESC	6.162	4.683	Oct 2009	5.445	Oct 2010	0.000		5.445	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>				PROJECT 672738: <i>Weather Service</i>					
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Hanscom AFB, MA											
Space & Missile Systems Center	TBD/TBD	SMC Los Angeles AFB, CA	0.020	0.030	Oct 2009	0.030	Oct 2010	0.000		0.030	Continuing	Continuing	Continuing
Air Force Weather Agency	TBD/TBD	AFWA Offutt AFB, NE	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Subtotal			6.182	4.713		5.475		0.000		5.475			
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			105.543	33.291		32.373		0.000		32.373			
Remarks Total Prior Years Cost may include only FY 2009 data.													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

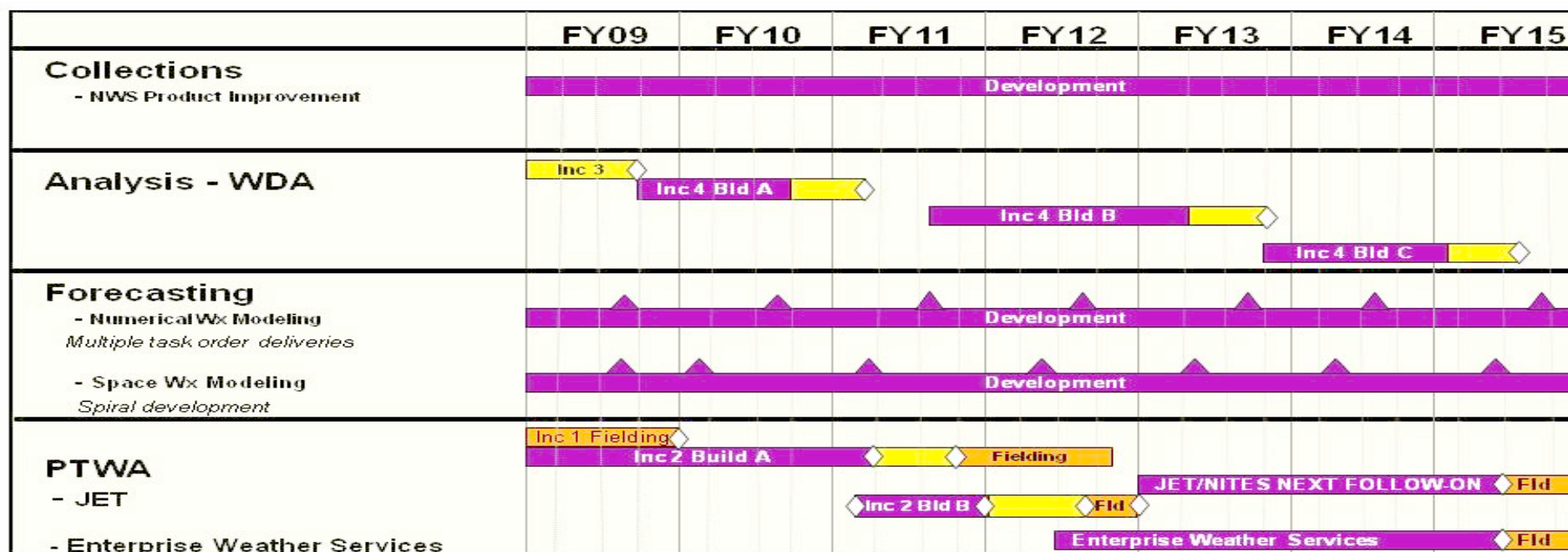
PE 0305111F: WEATHER SERVICE

PROJECT

672738: Weather Service

PE 0305111F Weather Service

As of Feb 10



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.

Design / development
Production / fielding

Integration / test
Software delivery
Fielding decision

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
WDC NWS Product Improvement Effort (Note 1)	1	2009	4	2011
WDA Increment 3 Delivery	3	2009	3	2009
WDA Increment 4 Build A Delivery	1	2011	1	2011
Forecasting Tasks	1	2009	4	2011
PT/WA - JET Increment 1 Fielding Complete	4	2009	4	2009
PT/WA - JET Increment 2 Build A Fielding Begins	4	2011	4	2011
JET Increment 2 Build B	1	2011	4	2011

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