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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0305111F I Weather Service							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	25.868	20.643	25.102	-	25.102	34.205	31.958	30.057	30.627	Continuing	Continuing
672738: Weather Service	-	25.868	20.643	25.102	-	25.102	34.205	31.958	30.057	30.627	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

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. Program Management Administration costs include Federally Funded Research and Development Centers, and Advisory and Assistance Service. AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for global battlespace situational awareness. AFWWS supports worldwide operations of Air Force and Army warfighters, Special Operation Forces, and other government agencies with weather observing and forecasting capabilities at home station and deployed locations as well as centralized, reach-back centers. AFWWS activities align under four capability areas: Weather Data Collection, Weather Data Analysis and Dissemination, Weather Forecasting, and Product Tailoring/Warfighter Applications. This alignment ensures an integrated and systems-oriented approach to program management decisions.

Weather Data Collection provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide. Projects include Next Generation Radar and Upper Air Observing Follow-On. FY15 funding will enhance computations based on dual-polarization technology for improved severe weather detection and rainfall amount forecasting and will begin operationalizing new upper air sounding capability using laser technology.

Weather Data Analysis and Dissemination provides a net-centric infrastructure that assimilates worldwide sources of terrestrial and space weather data and produces decision-quality information for warfighters. Improved analysis of real-time weather information supports DoD's Warfighting and Enterprise Information Environment Mission Areas as well as DoD's role in transformation of the National Airspace System through the Next Generation Air Transportation System and, finally, enhances Air Force energy security plans. In FY15 Air Force Weather-Web Services (AFW-WEBS) moves into this capability area from Weather Forecasting to better align its function of integration of net-centric capabilities. FY15 funding will continue development of incremental software enhancements and integration of improved analysis capabilities including processing of data from new environmental sensing satellite sources for DoD Data Center 14866.

Weather Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission execution, rehearsal, and planning. Weather Forecasting includes projects for Numerical Weather Modeling, Environmental Data Cube Support System, and the Space Weather Analysis and Forecast System. FY15 funding will continue development of software to integrate advanced terrestrial and space weather forecast capabilities to improve models for warfighter operations. Additionally, Weather Forecasting capabilities will be expanded to integrate and exploit data from new environmental sensing satellite sources for DoD Data Center 14866.

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Product Tailoring/Warfighter Applications 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, including weather forces, in conduct of combat operations. Supports the 'train as you fight' concept by assuring fixed and deployable systems have an equivalent operator look and feel via the Joint Environmental Toolkit. FY15 funding will continue development of software for warfighter tailoring and exploitation products and integration of regional and tactical weather systems with warfighter Command and Control (C2) systems within DoD Data Centers 14866, 14861, 17037, and 17038. These efforts will enhance the availability and integration of weather information in multiple Wings, Squadrons, Air and Space Operations Centers, Army decision processes, Air Traffic Control operations, and exploitation of weather at global, regional, and tactical levels.						
This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.						
B. Program Change Summary (\$ in Millions)		FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget		29.048	24.667	31.681	-	31.681
Current President's Budget		25.868	20.643	25.102	-	25.102
Total Adjustments		-3.180	-4.024	-6.579	-	-6.579
• Congressional General Reductions		-0.038	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-0.706	-			
• Other Adjustments		-2.436	-4.024	-6.579	-	-6.579
Change Summary Explanation						
FY13/14/15 decreases in "Other Adjustment Row" due to higher Air Force priorities.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2013	FY 2014	FY 2015
Title: Next Generation Radar (NEXRAD)				0.189	0.189	0.19
Description: NEXRAD is a tri-agency program that manages a nation-wide doppler weather radar network to provide radar data and products for flight operations and resource protection. This effort formerly included in "Weather Data Collection."						
FY 2013 Accomplishments:						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Participated with National Weather Service and Federal Aviation Administration in Product Improvement Plans for national radar assets. FY 2014 Plans: Participating with National Weather Service and Federal Aviation Administration in Product Improvement Plans for national radar assets. FY 2015 Plans: Will participate with National Weather Service and Federal Aviation Administration in Product Improvement Plans for national radar assets.				
Title: Upper Air Follow-On Description: Will provide measurements of environmental conditions up to 40K feet including factors such as wind speed and direction, pressure, temperature, and humidity to support warfighter operations. This effort formerly included in "Weather Data Collection." FY 2013 Accomplishments: N/A FY 2014 Plans: Developing efforts to operationalize laser technology to gather upper air environmental data. FY 2015 Plans: Will continue development efforts to operationalize laser technology to gather upper air environmental data.		-	0.200	0.595
Title: Weather Data Analysis (WDA) Description: WDA provides a net-centric infrastructure that assimilates worldwide sources of terrestrial and space weather data and produces decision-quality information for warfighters. Beginning in FY15, this effort includes AF Weather Web Services (AFW-WEBS) which was formerly included in "Weather Forecasting." FY 2013 Accomplishments: Continued incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites. FY 2014 Plans:		3.437	3.569	5.500

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Continuing incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.				
FY 2015 Plans: Will continue incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.				
Title: Numerical Weather Modeling (NWM) Description: Provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. This effort was formerly titled "Weather Forecasting" and included efforts that are now identified separately. FY 2013 Accomplishments: Continued integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites. FY 2014 Plans: Continuing integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites. FY 2015 Plans: Will continue integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.		14.543	7.896	6.384
Title: Space Weather Analysis and Forecast System (SWAFS) Description: SWAFS provides the sole operational DoD source for space weather data, models, and forecasts. This effort was formerly included in "Weather Forecasting." FY 2013 Accomplishments: Continued incremental development of capabilities to ingest, process, store, and disseminate space environmental data. FY 2014 Plans: Continuing incremental development of capabilities to ingest, process, store, and disseminate space environmental data. FY 2015 Plans: Will continue incremental development of capabilities to ingest, process, store, and disseminate space environmental data.		3.889	4.604	6.483
Title: Environmental Data Cube Support System (EDCSS)		0.250	0.500	0.690

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Description: EDCSS provides environmental representations to the DoD Modeling and simulation community. This effort was formerly included in "Weather Forecasting." FY 2013 Accomplishments: Continued incremental development of a correlated and realistic natural environment for use in tailorable scenarios to create specific effects for warfighter models and simulations. FY 2014 Plans: Continuing incremental development of a correlated and realistic natural environment for use in tailorable scenarios to create specific effects for warfighter models and simulations. FY 2015 Plans: Will continue incremental development of a correlated and realistic natural environment for use in tailorable scenarios to create specific effects for warfighter models and simulations.				
Title: Joint Environmental Toolkit (JET) Description: JET 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. This effort was formerly titled "Product Tailoring/Warfighter Applications." FY 2013 Accomplishments: Continued software development and integration of regional and tactical weather systems and integration with warfighter Command, Control, Communications, Computers and Intelligence (C4I) systems. FY 2014 Plans: Continuing software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. FY 2015 Plans: Will continue software development and integration of regional and tactical weather systems and integration with warfighter C4I systems.		3.560	3.685	5.259
Accomplishments/Planned Programs Subtotals		25.868	20.643	25.102

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D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833070: Weather Observation Forecast	16.637	16.171	16.348	-	16.348	16.806	17.632	18.581	18.910	Continuing	Continuing
• OPAF: BA07: Line Item # 837100: Tactical C-E Equipment	0.411	-	-	-	-	-	-	-	-	Continuing	Continuing
• OPAF: BA07: Line Item # 838010: Comm Elect Mods	6.379	9.617	12.121	-	12.121	11.041	10.900	10.455	10.642	Continuing	Continuing
• OPAF: BA07: Line Item # 86190A: Spares and Repair Parts	1.476	1.146	1.605	-	1.605	2.296	2.063	1.914	1.949	Continuing	Continuing
Remarks											
E. Acquisition Strategy											
AF Weather 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.											
F. 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-4, RDT&E Schedule Profile: PB 2015 Air Force

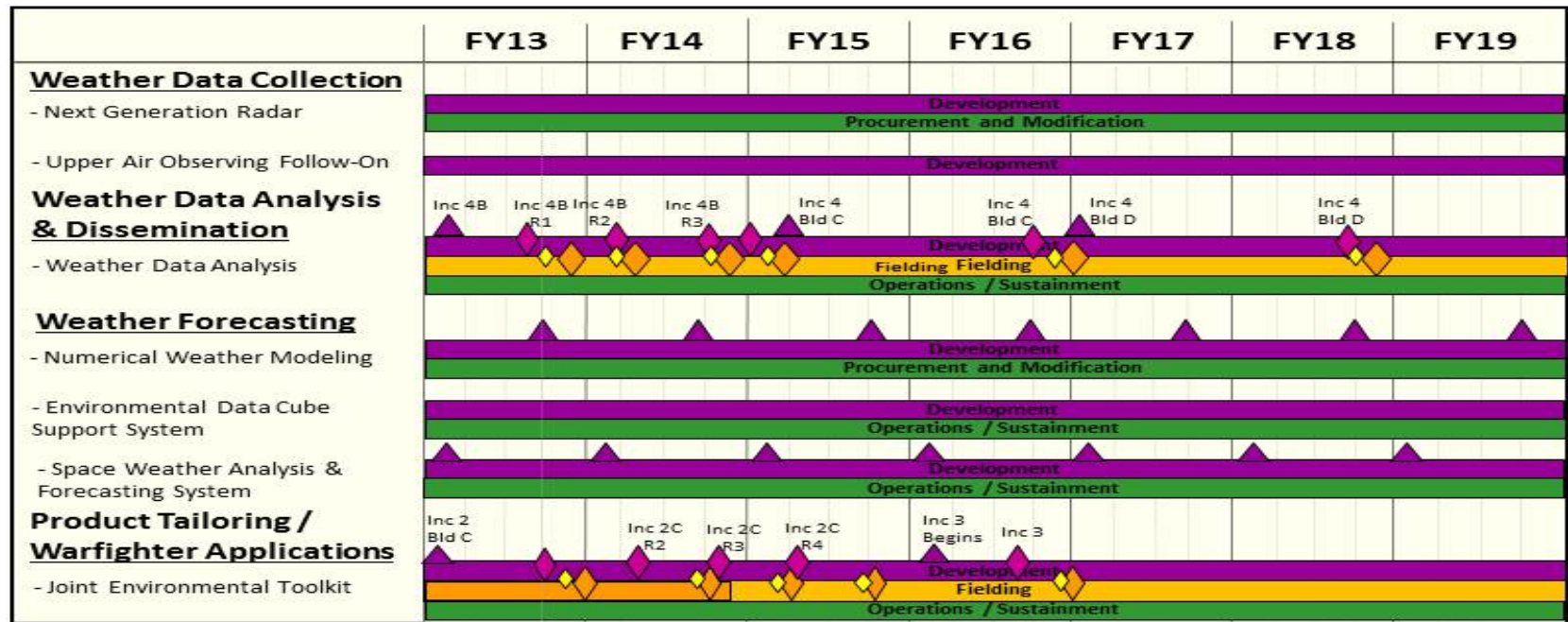
Date: March 2014

Appropriation/Budget Activity
3600 / 7

R-1 Program Element (Number/Name)
PE 0305111F / Weather Service

Project (Number/Name)
672738 / Weather Service

Weather Services Schedule



Concept activities
Production / fielding

Design / development
Operations / sustainment

Integration / test
Key events