Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force											Date: February 2018	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305111F / *Weather Service*							
COST ($ in Millions)	**Prior Years**	**FY 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
Total Program Element	-	24.193	26.654	26.942	3.000	29.942	27.497	27.975	28.550	29.072	Continuing	Continuing
672738: *Weather Service*	-	24.193	26.654	26.942	3.000	29.942	27.497	27.975	28.550	29.072	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, sustain, and enhance segments of Air Force Weather Services (AFWS). Activities also include research and analysis to support current program planning. Management Service costs include Federally Funded Research and Development Centers (FFRDC) and Advisory and Assistance Service (A&AS). AFWS provides timely, accurate, consistent and relevant space and atmospheric (a.k.a. terrestrial) weather information for global battlespace situational awareness. AFWS supports worldwide operations of Air Force and Army warfighters, Special Operation Forces, and other government agencies with weather observing and forecasting capabilities at in-garrison and deployed locations, as well as centralized, reach-back capabilities. Additionally, these funds integrate DoD, government agency, and commercial and international partners environmental data with AFWS information system equipment for processing, storing, exploiting and disseminating weather information for analysis, forecasting, and mission integration at the strategic, operational, and tactical levels. Weather system technological upgrades provide critical support to modern air and space combat operations. These systems enhance the lethality, effectiveness, and survivability of AF weapon systems and precision munitions by accurately predicting environmental impacts to optimize mission execution and planning, targeting, weaponeering, and battle damage assessment, as well as both AF and government agency space systems operations and effectiveness.

AFWS aligns activities 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. Of these four capability areas, two (Weather Data Analysis and Dissemination and Weather Forecasting) are addressed by APPN 3600, BA 07, PE 0305111F, Project 672738 - Weather Service.

1. Weather Data Analysis and Dissemination provides centralized Weather Web Service capability, increased availability of weather impacts and products, improved global, regional, and theater-level forecasts, specific mission-tailored weather data on demand, and finally increased weapon system interoperability which shortens the Combatant Commander kill chain through machine to machine interfaces. This is accomplished through large-scale data processing, product generation, a presentation system utilizing Open Geo-spatial Consortium (OGC) services architecture and providing the capability to ingest, process, store, access, and disseminate meteorological oceanographic (METOC) data. The Weather Data Analysis and Dissemination capability area includes activities for Weather Data Analysis and its follow-on increment, Weather Data Analysis Increment 5 (WDA and WDA-Inc 5).

2. Weather Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission execution, rehearsal, and planning. Weather Forecasting includes activities for Numerical Weather Modeling (NWM); Weather Services - Live, Virtual, Constructive (WS-LVC), and Space Weather Analysis and Forecast System (SWAFS). SWAFS is a suite of programs consisting of Global Assimilation of Ionosphere Measurement-Full Physics (GAIM-FP), and (in FY2019) Space Weather Analysis and Forecast System-Radiation Exposure (SWAFS-RadEx). SWAFS provides decision makers with 1) Satellite operations, 2) Predictions of HF & UHF/SHF (SATCOM) communications outages, 3) GPS inaccuracies in navigation & targeting, 4) Tracking objects like satellites,

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force	Date: February 2018
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*

debris, projectiles in space and forecasts for radar outages and early warning radar false launch indications, 5) National, strategic, operational & tactical intelligence collection, 6) Radiation forecasts for high altitude/space flight operations.

The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, and 0605898F.

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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	19.974	26.654	27.144	0.000	27.144
Current President's Budget	24.193	26.654	26.942	3.000	29.942
Total Adjustments	4.219	0.000	-0.202	3.000	2.798
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	5.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-0.050	0.000			
• SBIR/STTR Transfer	-0.731	0.000			
• Other Adjustments	0.000	0.000	-0.202	3.000	2.798

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2017	FY 2018
Project: 672738: *Weather Service*		
Congressional Add: *Commercial Weather Data Pilot Program*	5.000	0.000
Congressional Add Subtotals for Project: 672738	5.000	0.000
Congressional Add Totals for all Projects	5.000	0.000

Change Summary Explanation

The FY17 Appropriation Bill placed the five million dollar Congressional add into PE 0604422F, Weather System Follow-On, but a technical adjustment was completed to place the money into PE 0305111F, Weather Services, in accordance with the FY17 NDAA.

FY17 Combat Survivor/Evader Locater BTR Reprogramming -$0.050M.

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force	Date: February 2018
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Weather Data Analysis (WDA) ***Description:*** WDA-Inc 4 provides a net-centric infrastructure that assimilates worldwide sources of atmospheric and space weather data and produces decision-quality information for warfighters. ***FY 2018 Plans:*** - Develops and implements Increment 4 (Inc 4), Build D, Release 17B/C/D, as well as Release 18A/B. to ingest, process, store, access, and disseminate meteorological/oceanographic data via upgrades to the web services architecture. - Expand Open Geospatial Consortium services and upgrades large-scale data processing to accommodate new environmental satellite and numerical weather modeling data. - Optimized AFW-WEBS to provide authoritative weather products and services to support warfighter operations. ***FY 2019 Base Plans:*** - Implement and develop Increment (Inc) 4, Build D, Release 18D and Release 19A/B/C/D to enhance the capability to ingest, process, store, access, and disseminate meteorological/oceanographic data via upgrades to the web services architecture. - Continue to expand the Open Geospatial Consortium services and upgrade for the large-scale data processing to accommodate new environmental satellite and numerical weather modeling data as well as begin efforts to implement an Air Force Weather Weapon System Single Services Baseline. - AFW-WEBS builds will be on the same schedule with combined development and testing schedules. - Evolve AFW-WEBS into the single web interface optimized for accessing authoritative AF meteorological information and services in geospatially-enabled formats for direct integration into warfighter systems and decision cycles. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding decreased due to funds realigned to WDA INC 5	9.573	10.239	9.613	-	9.613
Title: Weather Data Analysis Increment 5 (WDA-Inc 5) ***Description:*** WDA-Inc 5 Description: WDA-Inc 5 is the mechanism for the WDA Program to migrate to cloud-based computing through the implementation of Modular Open System Architecture (MOSA) guideline-compliant open architecture. Per MOSA guidelines, WDA-Inc 5 will be modular, flexible, responsive, expandable, and cost effective, facilitating easy "plug-and-play" of Government off-the-shelf (GOTS) and commercial off-the-shelf (COTS) hardware and software products in a virtual environment. WDA-Inc 5 will also adhere to the Air Force Weather roadmap infrastructure architecture through the continued consolidation of servers and functions,	0.000	0.000	1.000	-	1.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*	

C. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
elimination of duplication, and standardizing interfaces. Finally, the program will provide both classified and unclassified production environments that communicate directly with C2 customers through (MOSA) guideline-compliant open architecture. All of this will be achieved using latest state-of-the-art technology. ***FY 2018 Plans:*** N/A ***FY 2019 Base Plans:*** - Server consolidation to expedite cloud transition and - Transition to Open System Architecture - Expand Secret/SCI enclave bandwidth/capability - Ingest of new commercial/government space-based environmental data ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding increased due to WDA funding transitioning to WDA-Inc 5.					
Title: Numerical Weather Modeling (NWM) ***Description:*** NWM provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. ***FY 2018 Plans:*** - Develop and implement Cloud Depiction Forecast System Version 2.0 (CDFS II) hardware and software, exploiting new satellite data sources. - Continue to develop cloud characterization and aerosol products. - Develop an explicit numerical weather prediction (NWP) cloud capability. - Develop and implement a High Performance Computing development and test enclave in support of DFY19 Prod 11 operations. ***FY 2019 Base Plans:*** - Develop software to exploit dynamic aerosols. - Continue software development for exploitation of new satellite data sources while continuing to advance NWM-based cloud forecasting capability. - Continue development of explicit NWP (modeled) cloud capability. ***FY 2019 OCO Plans:***	6.930	12.371	11.998	3.000	14.998

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force	Date: February 2018
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Will develop a Global Synthetic Weather Radar capability in order to mitigate gaps in the US CENTRAL COMMAND and other AORs. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding increased due to award of OCO funds for Global Synthetic Weather Radar capability.					
Title: Space Weather Analysis and Forecast System-Radiation Exposure (SWAFS-RadEx) ***Description:*** Space Weather Analysis and Forecast System - Radiation Exposure (SWAFS-RadEx) provides radiation forecasts for high altitude/space flight operations. SWAFS-RadEx will design, develop, and integrate an upgrade to the current Radiation Exposure Model (High-Flyer), in order to meet METOC ICD (18 Nov 2009, Annex A of Appendix D) stated requirements to sense, obtain, analyze, and predict particle environments responsible for radiation threats to aircrews. ***FY 2018 Plans:*** N/A ***FY 2019 Base Plans:*** - Develop and integrate new SWAFS-RadEx models into the SWAFS baseline. - Expand upon the latest atmospheric radiation modeling, and extend capabilities (to include a future forecasting/ mission planning aspect) to support DoD warning thresholds and associated timeliness criteria. - Develop software to sense, obtain, analyze, and predict particle environments responsible for radiation threats to aircrews. - Calculate a map of background cosmic radiation dosages between latitudes S80-N80 and altitudes 50-70 kft, expanding on the current High Flyer Model used by the U2s and in support of hypersonics ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY2019 increase compared to FY2018 by $3.585M. Justification for this increase is described in plans above.	0.000	0.000	3.585	-	3.585
Title: Weather Services-Live, Virtual Constructive (WS-LVC) ***Description:*** WS-LVC provides environmental representations to the DoD Modeling and Simulation community. This effort was formerly called Environmental Data Cube System Support (EDCSS) and included in Weather Forecasting. ***FY 2018 Plans:*** - Transitions to a cloud computing environment in support of the Rapid Innovation Fund cloud proof of concept.	0.580	0.744	0.746	0.000	0.746

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*	

C. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
- Develops next generation forward-deployed Distributor capability and investigates the use of Air Force Weather Open Geospatial Consortium (OGC) services for live weather feeds in support of Live and Constructive simulations. ***FY 2019 Base Plans:*** - Provide software enhancements to current meteorological capabilities in order to provide consistent weather behaviors/environmental impacts across large scale exercises. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding increased due to inflation					
Title: SWAFS GAIM-FP ***Description:*** Modification of Global Assimilation of Ionospheric Measurements GAIM Full Physics model (SWAFS GAIM-FP), to satisfy current requirements, including the development of other new models and science algorithms that do not currently exist and processing space weather data that is not currently available. Capabilities provided: Return to service; corrective, adaptive, and capability improvement maintenance for the operational software baseline SWAFS accepts space weather data and uses models and/or algorithms to create and disseminate specified space weather analysis and forecast products. Users: COCOMs, MAJCOMs, Space Defense Operations Center (SPADOC), NRO, Navy and Army. ***FY 2018 Plans:*** - Develop and integrate current Radiation Exposure model into the SWAFS baseline. - Finalize visualization of Full-Physics models for incorporation into the Weather Data Analysis System. ***FY 2019 Base Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY 2019 decrease compared to FY 2018 by $3.300M. Future funding will be covered under the SWAFS-Radiation Exposure element of the SWAFS system.	2.110	3.300	0.000	-	0.000
Accomplishments/Planned Programs Subtotals	19.193	26.654	26.942	3.000	29.942

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force	Date: February 2018
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*

	FY 2017	FY 2018
Congressional Add: Commercial Weather Data Pilot Program	5.000	0.000
FY 2017 Accomplishments: N/A		
FY 2018 Plans: N/A		
Congressional Adds Subtotals	5.000	0.000

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• OPAF 03 Line Item 833070: *Weather Observation Forecast*	21.667	40.116	48.362	-	48.362	31.855	35.613	33.010	33.605	Continuing	Continuing
• OPAF 03 Line Item 838010: *Comm Elect Mods*	8.646	10.155	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPAF 05 Line Item 86190A: *Spares and Repair Parts*	0.719	0.941	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

AF Weather utilizes spiral and incremental development efforts using multiple contracts supporting a family of ACAT III Programs of Record through development, fielding, and sustainment.

Cost Plus contracts are utilized for software development and sustainment and Fixed Firm Price contracts for COTS systems and Contract Logistics Support (CLS) efforts. Pre-competed GSA and Defense MicroElectronics Activity (DMEA) contract vehicles are leveraged when appropriate, and competitive and small-business awards are favored.

The Air Force Program Executive Officer for Battle Management (AFPEO BM) and the Air Force Program Executive Officer for Space (AFPEO SP) are the PEOs for the AFWS. AFPEO BM manages the ground-based atmospheric sensing and data analysis, atmospheric forecast systems, and product tailoring warfighter applications. AFPEO SP manages the ground-based segments of space weather collection platforms as well as the Space Weather Analysis and Forecasting System. Both the AFPEO BM and AFPEO SP are their respective program's Milestone Decision Authority (MDA).

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force			Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305111F / *Weather Service*	Project (Number/Name) 672738 / *Weather Service*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
WDA 1, Develop centralized web service capability (WDA 4C)	C/CPIF	Northrop Grumman : Bellevue, NE	-	4.084	Dec 2016	5.351	Dec 2017	5.364	Jul 2019	-		5.364	Continuing	Continuing	-
WDA 1, Develop centralized web service capability (WDA 5C)	C/CPAF	Not specified. : TBD	-	-		-		0.800	Sep 2019	-		0.800	Continuing	Continuing	-
WDA 2, Development and integration of weather analysis software (AFW-WEBS)	C/CPFF	Raytheon : Long Beach, CA	-	3.991	Dec 2016	2.868	Dec 2017	2.899	Jul 2019	-		2.899	Continuing	Continuing	-
Commercial Weather Pilot Program	C/FFP	Various : Various	-	5.000	Jan 2018	-		-		-		-	Continuing	Continuing	-
NWM 1 - Perform software enhancements to the mesoscale production model	MIPR	NCAR : Boulder, CO	-	0.123	Feb 2017	0.129	Feb 2018	0.491	Feb 2019	-		0.491	Continuing	Continuing	-
NWM 2 - Improve land information system (LIS) application, providing earth surface boundary characterization for numerical modeling	MIPR	NASA : Greenbelt, MD	-	0.949	Feb 2017	0.703	Feb 2018	1.604	Feb 2019	-		1.604	Continuing	Continuing	-
NWM 3 - Develop model data assimilation application ensemble forecast procedures and convective scale resolution model capability.	C/CPIF	Northrop Grumman : Bellevue, NE	-	4.146	Jan 2017	10.169	Jan 2018	9.547	Jun 2019	-		9.547	Continuing	Continuing	-
NWM 4 - Deliver a Synthetic Weather Radar Capability mitigating gaps in the Central Command and other AORs.	MIPR	MIT Lincoln Labs : TBD, MA	-	-		-		0.000		3.000	Apr 2019	3.000	Continuing	Continuing	-
WS-LVC	C/CPIF	NWACT : Orlando, FL	-	0.176	Apr 2017	0.627	Apr 2018	0.512	Apr 2019	-		0.512	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*	**Project (Number/Name)** 672738 / *Weather Service*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NEXRAD	MIPR	NOAA/NWS : Silver Spring, MD	-	-		-		-		-		-	Continuing	Continuing	-
SWAFS development integration and sustainment of the GAIM-full physics version	C/CPIF	Northrop Grumman : Bellevue, NE	-	1.989	Oct 2016	3.000	Apr 2018	-		-		-	Continuing	Continuing	-
SWAFS-2- perform verification and validation report on the GAIM-full physics model	C/CPAF	Northrop Grumman : Bellevue, NE	-	0.000		0.159	Jan 2018	-		-		-	Continuing	Continuing	-
SWAFS-RadEx	C/CPIF	Northrop Grumman : Bellevue, NE	-	-		-		2.429	May 2019	-		2.429	Continuing	Continuing	-
SWAFS-RadEx verification and validation report	TBD	AFRL : Wright Patterson AFB, OH	-	-		-		0.800	May 2019	-		0.800	Continuing	Continuing	-
		Subtotal	-	20.458		23.006		24.446		3.000		27.446	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
46th TS/JITC AFLCMC	WR	46 TS : Offutt AFB, NE	-	1.292	Nov 2016	0.834	Nov 2017	0.463	Nov 2018	-		0.463	Continuing	Continuing	-
		Subtotal	-	1.292		0.834		0.463		-		0.463	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration AFLCMC	C/CPFF	AFLCMC : Hanscom AFB, MA	-	1.858	Oct 2016	2.098	Oct 2017	0.929	Oct 2018	-		0.929	Continuing	Continuing	-
FFRDC SMC	RO	Aerospace Corp : El Segundo, CA	-	0.585	Oct 2016	0.716	Oct 2017	1.104	Oct 2018	-		1.104	Continuing	Continuing	-
		Subtotal	-	2.443		2.814		2.033		-		2.033	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force			Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305111F / *Weather Service*	Project (Number/Name) 672738 / *Weather Service*	

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	24.193		26.654		26.942		3.000		29.942	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*	**Project (Number/Name)** 672738 / *Weather Service*

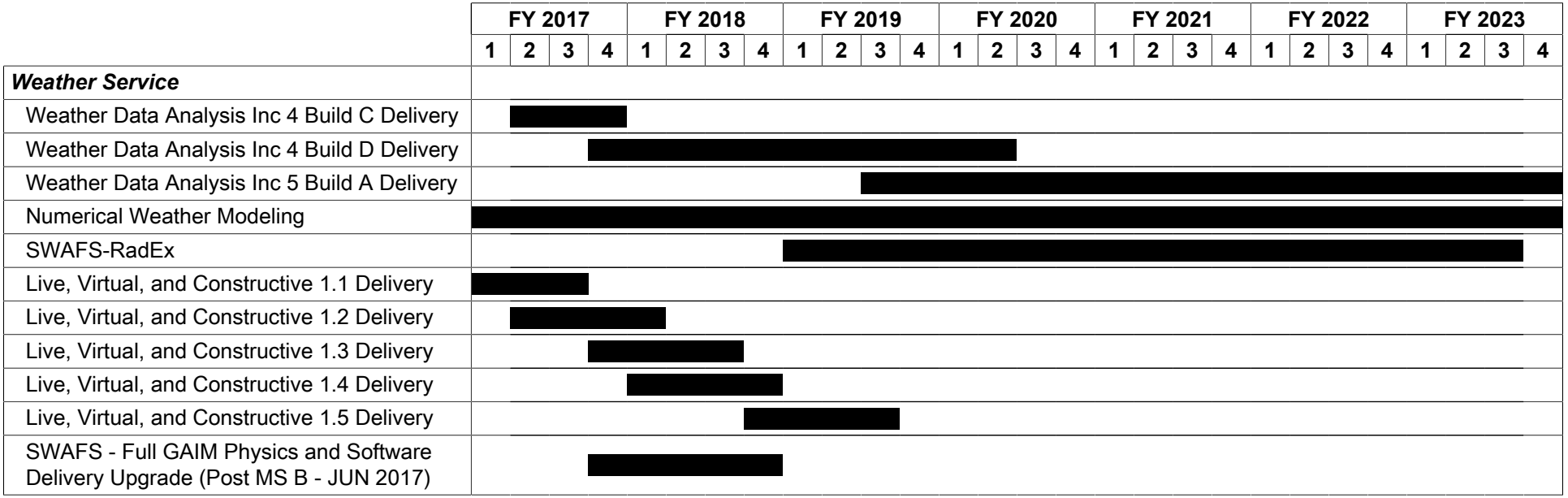

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305111F / *Weather Service*	**Project (Number/Name)** 672738 / *Weather Service*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Weather Service				
Weather Data Analysis Inc 4 Build C Delivery	2	2017	4	2017
Weather Data Analysis Inc 4 Build D Delivery	4	2017	2	2020
Weather Data Analysis Inc 5 Build A Delivery	3	2019	4	2023
Numerical Weather Modeling	1	2017	4	2023
SWAFS-RadEx	1	2019	3	2023
Live, Virtual, and Constructive 1.1 Delivery	1	2017	3	2017
Live, Virtual, and Constructive 1.2 Delivery	2	2017	1	2018
Live, Virtual, and Constructive 1.3 Delivery	4	2017	3	2018
Live, Virtual, and Constructive 1.4 Delivery	1	2018	4	2018
Live, Virtual, and Constructive 1.5 Delivery	4	2018	3	2019
SWAFS - Full GAIM Physics and Software Delivery Upgrade (Post MS B - JUN 2017)	4	2017	4	2018