

## Business Case: Capital Asset Summary

### Part I: Summary Information and Justification (All Capital Assets)

#### Section A: Overview & General Information

**Date Investment First Submitted:** 2017-09-14  
**Date of Last Change to Activities:** 2021-08-11  
**Investment Auto Submission Date:**  
**Date of Last Investment Detail Update:** 2021-04-27  
**Date of Last Business Case Update:** 2021-04-27  
**Date of Last Revision:** 2021-08-11

**Agency:** 006 - Department of Commerce      **Bureau:** 48 - National Oceanic and Atmospheric Administration

**1. Name of this Investment:** NOAA/NWS/ NWS Central Processing

**2. Unique Investment Identifier (Ull):** 006-000313000

#### Section B: Investment Detail

- 1. Provide at least one Agency Strategic objective code ([A-11 Section 230](#)) and/or Agency Priority Goal code ([A-11 Section 250](#)) that this investment aligns to on performance.gov. If this investment aligns to more than one Agency strategic objective code and/or Agency Priority goal code list all that apply. If your agency does not report to performance.gov please use "0". This is required for Agency IT Portfolio Summary Part 1 and Part 2 Investments, not for Part 3 Investments.**

Agency Strategic Objective(s):

006SO18031: Reduce Extreme Weather Impacts

Agency Priority Goal(s):

- 2. Briefly describe the investment's return on investment, including benefits internal and external to the government and outcomes achieved or planned.**  
Central Processing is absolutely critical not only for tornadoes, hurricanes, and floods, but also for man-made and terrorist disasters where our services are called upon to defend our homeland security. Operating 24/7, 365 days a year and providing mechanisms for the NWS meteorologists and hydrologists to issue numerous watch, warning, and advisory products allowing the fulfillment of the NWS' mission to protect lives and property. Central Processing supports River Flood Forecasting and the operational National Water Model, both of which are included within the DOC, NOAA and NWS Strategic Plans. Central Processing enables the operational production of the model runs from which the weather, climate, ocean and space weather forecasts are made. Central Processing also assists in the coordination of application development across numerous organizations including NOAA and NWS offices/centers; Department of Defense (DoD); international meteorological centers; and other organizations linked to environmental modeling. According to the American Meteorological Bulletin article

entitled "300 Billion Served: Sources, Perceptions, Uses, and Values of Weather Forecasts"\*, the American public collectively receives \$31.5 billion in benefits from weather services each year. This \$31.5 billion includes both NWS and private sector contributions. If we assume that the NWS contribution is 50% (which is probably low) of this amount and the AWIPS contribution is 5%\*\* of the NWS contribution, then the ROI is 1332% per year. Using base-case assumptions and average total benefits from various sectors, the share of economic benefits from improved forecasting that is directly attributable to a new supercomputer is valued at \$116 million (in 2002 dollars). The estimated WCCIS ROI is the following: FY13: 281%; FY14: 350%; FY15: 351%; FY16: 390%; FY17: 406%; FY18: 475%. The ROI for WCOSS is 507%.

3. **If this investment will result in the elimination or the reduction of another major or non-major investment(s), please complete the following:**

Table I.B.1 Affected Investment Information	
Investment UII	To Be Status
NONE	

4. **Does the Investment currently include an intra- or inter-Agency shared service (common, shared, or centralized solution)?:**  
YES
5. **Does the Investment plan to include an Intra- or Inter-Agency shared service that it does not currently include (common, shared, or centralized solution)?:**  
NO
6. **If systems contained in this Investment collect data from the public, please identify the OMB Control Numbers which authorize that data collection as per the Paperwork Reduction Act. Use [Reginfo](#) at the following link to identify information collection requests and OMB control numbers. Agencies can work with their Records Officers to determine the applicability.**
7. **Provide the name of the Investment-level project manager:**  
Olga Brown-Leigh
8. **Select the qualification/experience level of the Investment-level project manager (select one):**  
1 - FAC-P/PM(DAWIA-3)- Senior

## Section C: Life Cycle Costs

1. Provide the total estimated life cycle costs for the investment in millions. Note: Do not enter information in the grey cells as these will be calculated.

Table I.C.1 Life Cycle Costs				
	PY-1 & Prior	PY 2021	CY 2022	BY 2023
Planning Costs:	0	0	0	0
DME (Excluding Planning) Costs:	\$14.169000	\$13.901000	\$14.608000	\$14.118000
DME (Including Planning) Govt. FTEs:	\$2.484000	\$2.787000	\$2.297000	\$2.787000
Sub-Total DME (including Internal Labor (Govt. FTE)):	\$16.653000	\$16.688000	\$16.905000	\$16.905000
O & M Costs:	\$79.283000	\$78.063010	\$76.500000	\$76.707010
O & M Internal Labor (Govt. FTE):	\$13.787000	\$15.191000	\$16.329000	\$16.121990
Sub-Total O & M Costs (Including Internal Labor (Govt. FTE)):	\$93.070000	\$93.254010	\$92.829000	\$92.829000
Total Cost (Including Internal Labor (Govt. FTE)):	\$109.723000	\$109.942010	\$109.734000	\$109.734000
Total Cost Internal Labor (Govt. FTE) costs:	\$16.271000	\$17.978000	\$18.626000	\$18.908990
# of FTE rep by costs:	154	151	151	151
Total change from prior year final President's Budget (\$)		\$109.942010	\$109.734000	
Total change from prior year final President's Budget		0.00%	0.00%	

Table I.C.1 Life Cycle Costs

	PY-1 & Prior	PY 2021	CY 2022	BY 2023
(%)				

2.
  - a. In which year did or will this investment begin? (specify year - e.g., PY-1= 2019)  
2017
  - b. In which year will this investment reach the end of its estimated useful life? (specify year - e.g., FY+5 = 2027)  
2025
3. Compare the funding levels for PY and CY to the final FY 2022 President's Budget for those same years. Briefly explain any significant changes. When making comparisons, ensure that you compare same-year-to-same-year (e.g., the FY20 level for 2020 versus the FY21 level for 2020):  
CY - WCOSS budget will decrease by \$1M.

## Business Case Detail: Performance Measurement Report

### Section A1: General Information

1. **Name of this Investment:** NOAA/NWS/ NWS CENTRAL PROCESSING
2. **Unique Investment Identifier (UII):** 006-000313000

## Section C1: Projects Table

Projects Table C.1

Unique Project ID	Project Name	Project Goal	Project Start Date	Project Completion Date	Project Lifecycle Cost (\$M)	Software Project?
3101D07001	N-AWIPS Migration	Migrate National Centers AWIPS (NAWPS) functions to AWIPS II SOA.	10/01/2007	09/30/2019	\$8.9	
3101D11001	Information Generation	Streamlined information generation dissemination and access for partners to support decision assistance.	10/01/2010	06/18/2021	\$16.9	Yes
3101M19001	FY19-AWIPS - Sustainment	"Project" to allow accounting of FY19 costs associated with Program sustainment.	10/01/2018	09/30/2019	\$40.0	
3104M19001	FY19-WCOSS Operations and Maintenance	Continue O&M of existing IBM supercomputer systems , facilities, and support services. Obtain 2 capacity upgrades (Phase 3 and Phase 4) of the IBM systems.	10/01/2018	09/30/2019	\$42.3	
3113M19003	FY19-WCCIS Operations and Maintenance	Ongoing operations and maintenance activities that support NCEP's Central Operations mission.	10/01/2018	09/30/2019	\$13.6	
3115M19001	FY19-Water Prediction - Operations and Maintenance	Operations and maintenance required to keep the system fully operational. Funding will be used to address issues and system change requests submitted by users and the technical staff.	10/01/2018	09/30/2019	\$3.3	
3101D07101	FY20-N-AWIPS Migration	Migrate National Centers AWIPS (NAWPS) functions to AWIPS II SOA.	10/01/2019	06/30/2021	\$3.1	Yes
3101M20001	FY20-AWIPS - Sustainment	"Project" to allow accounting of FY20 costs associated with Program sustainment.	10/01/2019	09/30/2020	\$40.0	No
3104M20001	FY20-WCOSS Operations and Maintenance	Continue O&M of existing IBM supercomputer systems , facilities, and support services. Obtain 2 capacity upgrades (Phase 3 and Phase	10/01/2019	09/30/2020	\$42.3	No

Projects Table C.1

Unique Project ID	Project Name	Project Goal	Project Start Date	Project Completion Date	Project Lifecycle Cost (\$M)	Software Project?
		4) of the IBM systems.				
3113M20003	FY20-WCCIS Operations and Maintenance	Ongoing operations and maintenance activities that support NCEP's Central Operations mission.	10/01/2019	09/30/2020	\$13.6	No
3115M20001	FY20-Water Prediction - Operations and Maintenance	Operations and maintenance required to keep the system fully operational. Funding will be used to address issues and system change requests submitted by users and the technical staff.	10/01/2019	09/30/2020	\$3.3	No
3104M20002	FY21-WCOSS Operations and Maintenance	Continue O&M of existing IBM supercomputer systems , facilities, and support services. Obtain 2 capacity upgrades (Phase 3 and Phase 4) of the IBM systems.	10/01/2020	09/30/2021	\$42.3	No
3101M20002	FY21-AWIPS - Sustainment	"Project" to allow accounting of FY21 costs associated with Program sustainment.	10/01/2020	09/30/2021	\$38.8	No
3115M20002	FY21-Water Prediction - Operations and Maintenance	Operations and maintenance required to keep the system fully operational. Funding will be used to address issues and system change requests submitted by users and the technical staff.	10/01/2020	09/30/2021	\$3.3	No
3113M20004	FY21-WCCIS Operations and Maintenance	Ongoing operations and maintenance activities that support NCEP's Central Operations mission.	10/01/2020	09/30/2021	\$13.6	No
3101D07102	FY21-N-AWIPS Migration	Migrate National Centers AWIPS (NAWPS) functions to AWIPS II SOA.	10/01/2019	09/30/2023	\$6.2	Yes

## Section C2: Project Activities

1. Provide all non-agile project activities for projects in Table C.1 that started in a previous FY (PY and earlier) and that have not been completed by the beginning of the CY, as well as activities that are scheduled to start in the current FY and BY.

Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
3101D07001	FY17-N-AWIPS Migration	Requirements Gathering	3101D07001.1	2007-10-01	2007-10-01	2007-10-01	2019-03-31	2019-09-30	2019-09-30	6.566128	8.903000	7.716721
3101M19001	1st Half - Program Support FY19	Programmatic support for the AWIPS Program	3101M19001.1 .1	2018-10-01	2018-10-01	2019-02-01	2019-03-31	2019-03-31	2019-03-31	0.820500	0.820500	0.048380
3101M19001	AWIPS 1st Half - FY19 Operations and Maintenance	O&M support costs	3101M19001.2 .1	2018-10-01	2018-10-01	2018-10-01	2019-03-31	2019-03-31	2019-03-31	11.295000	11.295000	8.133450
3101M19001	Comms -1st Half - Satellite Broadcast Network (FY19)	Network and Communication costs for the AWIPS Program	3101M19001.3 .1	2018-10-01	2018-10-01	2018-10-01	2019-03-31	2019-03-31	2019-03-31	1.827000	1.827000	0.508680
3101M19001	IT Security 1st Half - FY19	FY19 IT security activities for the first half of the fiscal year.	3101M19001.4 .1	2018-10-01	2018-10-01	2018-11-01	2019-03-31	2019-03-31	2019-03-31	0.948500	0.948500	0.328420
3101M19001	Software Projects 1st Half - FY19	AWIPS Software Development Projects	3101M19001.5 .1	2018-10-01	2018-10-01	2018-10-01	2019-03-31	2019-03-31	2019-03-31	4.229000	4.229000	0.599450
3101M19001	Hardware 1st Half - FY19	Hardware sustainment activities	3101M19001.6 .1	2018-10-01	2018-10-01	2019-02-01	2019-03-31	2019-03-31	2019-03-31	0.857000	0.857000	0.374690
3104M19001	WCOS 1st Half - FY19 Operations and Maintenance	WCOS 1st Half - FY19 Operations and Maintenance	3104M19001.1 .1	2018-10-01	2018-10-01	2018-10-01	2019-03-31	2019-03-31	2019-03-31	21.150000	21.150000	17.832000
3113M19003	WCCIS - 1st Half - FY19 Operations and	WCCIS - 1st Half - FY19 Operations and	3113M19003.1 .1	2018-10-01	2018-10-01	2018-10-01	2019-03-31	2019-03-31	2019-03-31	6.797500	6.797500	6.846000



Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
	Maintenance	Maintenance										
3115M19001	Water Prediction - 1st Half - FY19 Operations and Maintenance	Water Prediction - 1st Half - FY19 Operations and Maintenance	3115M19001.1 .1	2018-10-01	2018-10-01	2018-10-01	2019-03-31	2019-03-31	2019-03-31	1.630500	1.630500	0.801000
3101M19001	Program Support (FY19)	Programmatic support for the AWIPS Program	3101M19001.1	2018-10-01	2018-10-01	2019-02-01	2019-09-30	2019-09-30	2019-09-30	1.641000	1.641000	1.568060
3101M19001	2nd Half - Program Support FY19	Programmatic support for the AWIPS Program	3101M19001.1 .2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	0.820500	0.820500	1.519680
3101M19001	Operations & Maintenance (FY19)	O&M support costs	3101M19001.2	2018-10-01	2018-10-01	2018-10-01	2019-09-30	2019-09-30	2019-09-30	22.590000	22.590000	22.725930
3101M19001	AWIPS 2nd Half - FY19 Operations and Maintenance	O&M support costs	3101M19001.2 .2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	11.295000	11.295000	14.592480
3101M19001	Comms - Satellite Broadcast Network (FY19)	Network and Communication costs for the AWIPS Program	3101M19001.3	2018-10-01	2018-10-01	2018-10-01	2019-09-30	2019-09-30	2019-09-30	3.654000	3.654000	3.323740
3101M19001	Comms - 2nd Half - Satellite Broadcast Network (FY19)	Network and Communication costs for the AWIPS Program	3101M19001.3 .2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	1.827000	1.827000	2.815060
3101M19001	IT Security (FY19)	IT security activities	3101M19001.4	2018-10-01	2018-10-01	2018-11-01	2019-09-30	2019-09-30	2019-09-30	1.897000	1.897000	0.824550
3101M19001	IT Security 2nd Half - FY19	IT security activities for the second half of FY19.	3101M19001.4 .2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	0.948500	0.948500	0.496130
3101M19001	Software Projects	AWIPS Software	3101M19001.5	2018-10-01	2018-10-01	2018-10-01	2019-09-30	2019-09-30	2019-09-30	8.458000	8.458000	6.014830

Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
Development Projects												
3101M19001	Software Projects 2nd Half - FY19	AWIPS Software Development Projects	3101M19001.5.2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	4.229000	4.229000	5.415380
3101M19001	Hardware (FY19)	Hardware sustainment activities	3101M19001.6	2018-10-01	2018-10-01	2019-02-01	2019-09-30	2019-09-30	2019-09-30	1.714000	1.714000	1.192400
3101M19001	Hardware 2nd Half - FY19	Hardware sustainment activities	3101M19001.6.2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	0.857000	0.857000	0.817710
3104M19001	FY19-WCOSS Operations and Maintenance	FY19-WCOSS Operations and Maintenance	3104M19001.1	2018-10-01	2018-10-01	2018-10-01	2019-09-30	2019-09-30	2019-09-30	42.300000	42.300000	41.431000
3104M19001	WCOSS 2nd Half - FY19-Operations and Maintenance	WCOSS 2nd Half - FY19-Operations and Maintenance	3104M19001.1.2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	21.150000	21.150000	23.599000
3113M19003	FY19-WCCIS-Operations and Maintenance	FY19-WCCIS-Operations and Maintenance	3113M19003.1	2018-10-01	2018-10-01	2018-10-01	2019-09-30	2019-09-30	2019-09-30	13.595000	13.595000	13.692000
3113M19003	WCCIS - 2nd Half - FY19 Operations and Maintenance	WCCIS - 2nd Half - FY19 Operations and Maintenance	3113M19003.1.2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	6.797500	6.797500	6.846000
3115M19001	FY19-Water Prediction-Operations and Maintenance	FY19-Water Prediction-Operations and Maintenance	3115M19001.1	2018-10-01	2018-10-01	2018-10-01	2019-09-30	2019-09-30	2019-09-30	3.261000	3.261000	2.403000
3115M19001	Water Prediction - 2nd Half - FY19 Operations and Maintenance	Water Prediction - 2nd Half - FY19 Operations and Maintenance	3115M19001.1.2	2019-04-01	2019-04-01	2019-04-01	2019-09-30	2019-09-30	2019-09-30	1.630500	1.630500	1.602000
3101M20001	1st Half - Program Support FY20	Programmatic support for the AWIPS	3101M20001.1.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	1.396689	1.396689	1.486360

Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
Program												
3101M20001	AWIPS 1st Half - FY20 Operations and Maintenance	O&M support costs	3101M20001.2.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	11.731360	18.652430	18.652430
3101M20001	Comms -1st Half - Satellite Broadcast Network (FY20)	Network and Communication costs for the AWIPS Program	3101M20001.3.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	0.969420	0.969420	1.383710
3101M20001	IT Security 1st Half - FY20	IT security activities	3101M20001.4.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	0.594200	0.694000	0.693710
3101M20001	Software Projects 1st Half - FY20	AWIPS Software Development Projects	3101M20001.5.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	2.978900	2.978900	2.342300
3101M20001	Hardware 1st Half - FY20	Hardware sustainment activities	3101M20001.6.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	1.706880	1.706880	0.757606
3104M20001	WCOS 1st Half - FY20 Operations and Maintenance	FY20-WCOS Operations and Maintenance	3104M20001.1.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	21.150000	21.150000	14.862000
3113M20003	WCCIS - 1st Half - FY20 Operations and Maintenance	FY20-WCCIS Operations and Maintenance	3113M20003.1.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	6.797500	6.797500	6.748000
3115M20001	Water Prediction - 1st Half - FY20 Operations and Maintenance	FY20-Water Prediction-Operations and Maintenance	3115M20001.1.1	2019-10-01	2019-10-01	2019-10-01	2020-03-31	2020-03-31	2020-03-31	1.630500	1.630500	0.016800
3101D07101	FY20-N-AWIPS Migration	User Acceptance Testing	3101D07101.2	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	1.824000	1.824000	1.821130
3101M20001	Program Support (FY20)	Programmatic support for the AWIPS Program	3101M20001.1	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	2.793378	2.793378	2.465570

Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
3101M20001	2nd Half - Program Support FY20	Programmatic support for the AWIPS Program	3101M20001.1.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	1.396689	1.396689	0.979210
3101M20001	Operations & Maintenance (FY20)	O&M support costs	3101M20001.2	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	23.462720	30.383790	23.477980
3101M20001	AWIPS 2nd Half - FY20 Operations and Maintenance	O&M support costs	3101M20001.2.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	11.731360	11.731360	4.825550
3101M20001	Comms - Satellite Broadcast Network (FY20)	Network and Communication costs for the AWIPS Program	3101M20001.3	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	1.938840	1.938840	1.739350
3101M20001	Comms -2nd Half - Satellite Broadcast Network (FY20)	Network and Communication costs for the AWIPS Program	3101M20001.3.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	0.969420	0.969420	0.355640
3101M20001	IT Security (FY20)	IT security activities	3101M20001.4	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	1.188400	1.288200	1.120560
3101M20001	IT Security 2nd Half - FY20	IT security activities	3101M20001.4.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	0.594200	0.594200	0.426850
3101M20001	Software Projects	AWIPS Software Development Projects	3101M20001.5	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	5.957800	5.957800	7.459070
3101M20001	Software Projects 2nd Half - FY20	AWIPS Software Development Projects	3101M20001.5.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	2.978900	2.978900	5.116770
3101M20001	Hardware (FY20)	Hardware sustainment activities	3101M20001.6	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	3.413760	3.413760	0.757606
3104M20001	FY20-WCOSS Operations and Maintenance	FY20-WCOSS Operations and Maintenance	3104M20001.1	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	42.300000	42.300000	29.724000

Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
3104M20001	WCOS 2nd Half - FY20 Operations and Maintenance	FY20-WCOS Operations and Maintenance	3104M20001.1.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	21.150000	21.150000	14.862000
3113M20003	FY20-WCCIS-Operations and Maintenance	FY20-WCCIS-Operations and Maintenance	3113M20003.1	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	13.595000	13.595000	13.594000
3113M20003	WCCIS - 2nd Half - FY20 Operations and Maintenance	FY20-WCCIS-Operations and Maintenance	3113M20003.1.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	6.797500	6.797500	6.846000
3115M20001	FY20-Water Prediction-Operations and Maintenance	FY20-Water Prediction-Operations and Maintenance	3115M20001.1	2019-10-01	2019-10-01	2019-10-01	2020-09-30	2020-09-30	2020-09-30	3.261000	3.261000	0.016800
3115M20001	Water Prediction - 2nd Half - FY20 Operations and Maintenance	FY20-Water Prediction-Operations and Maintenance	3115M20001.1.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	1.630500	1.630500	0.000000
3101M20001	Hardware 2nd Half - FY20	Hardware sustainment activities	3101M20001.6.2	2020-04-01	2020-04-01	2020-04-01	2020-09-30	2020-09-30	2020-09-30	1.706880	1.706880	0.000000
3104M20002	FY21-WCOS 1st Half - Operations & Maintenance	FY21-WCOS Operations and Maintenance	3104M20002.1.1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-03-31		21.150000	21.150000	
3101M20002	1st Half - Program Support FY21	Programmatic support for the AWIPS Program	3101M20002.1.1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-05-31		1.400070	1.400070	
3101M20002	AWIPS 1st Half - FY21 O&M	O&M Support Costs	3101M20002.2.1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-05-31		11.723841	11.723841	
3101M20002	Comms -1st Half - Satellite Broadcast Network (FY21)	Network and Communication costs for the AWIPS Program	3101M20002.3.1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-05-31		0.836747	0.836747	

Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
3101M20002	IT Security 1st Half - FY21	IT Security Activities	3101M20002.4 .1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-05-31		0.335404	0.335404	
3101M20002	Software Projects 1st Half - FY21	AWIPS Software Development Projects	3101M20002.5 .1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-05-31		3.884288	3.884288	
3101M20002	Hardware 1st Half - FY21	Hardware sustainment activities	3101M20002.6 .1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-05-31		1.198528	1.198528	
3115M20002	FY21-Water Prediction O&M - 1st Half	FY21-Water Prediction-Operations and Maintenance	3115M20002.1 .1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-05-31		1.630500	1.630500	
3113M20004	FY21-WCCIS-O&M - 1st Half	FY21-WCCIS-Operations and Maintenance	3113M20004.1 .1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-03-31		5.705000	6.797500	
3101D07102	FY21-N-AWIPS Migration - 1st Half	Migrate National Centers AWIPS (NAWPS) functions to AWIPS II SOA for FY21	3101D07102.1 .1	2020-10-01	2020-10-01	2020-10-01	2021-03-31	2021-05-31		0.870000	0.870000	
3101D11001	FY17-Information Generation - Activities	Project to allow accounting of costs associated with Program sustainment	3101D11001.1	2010-10-01	2010-10-01	2010-10-01	2021-06-18	2021-06-18		14.295004	14.294000	
3104M20002	FY21-WCOSS Operations & Maintenance	FY21-WCOSS Operations and Maintenance	3104M20002.1	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		42.300000	42.300000	
3104M20002	FY21-WCOSS 2nd Half - Operations & Maintenance	FY21-WCOSS Operations and Maintenance	3104M20002.1 .2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		21.150000	21.150000	
3101M20002	Program Support (FY21)	Programmatic support for the AWIPS	3101M20002.1	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		2.800141	2.800141	

Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
		Program										
3101M20002	2nd Half - Program Support FY21	Programmatic support for the AWIPS Program	3101M20002.1.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		1.400071	1.400071	
3101M20002	Operations & Maintenance (FY20)	O&M Support Costs	3101M20002.2	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		23.447682	23.447682	
3101M20002	AWIPS 2nd Half - FY21 O&M	O&M support costs	3101M20002.2.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		11.723841	11.723841	
3101M20002	Comms - Satellite Broadcast Network (FY21)	Network and Communication costs for the AWIPS Program	3101M20002.3	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		1.673494	1.673494	
3101M20002	Comms -2nd Half - Satellite Broadcast Network (FY21)	Network and Communication costs for the AWIPS Program	3101M20002.3.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		0.836747	0.836747	
3101M20002	IT Security (FY21)	IT Security Activities	3101M20002.4	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		0.670809	0.670809	
3101M20002	IT Security 2nd Half - FY21	IT Security Activities	3101M20002.4.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		0.335405	0.335405	
3101M20002	Software Projects (FY21)	AWIPS Software Development Projects	3101M20002.5	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		7.768577	7.768577	
3101M20002	Software Projects 2nd Half - FY21	AWIPS Software Development Projects	3101M20002.5.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		3.884289	3.884289	
3101M20002	Hardware (FY21)	Hardware sustainment activities	3101M20002.6	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		2.397056	2.397056	
3101M20002	Hardware 2nd Half - FY21	Hardware sustainment activities	3101M20002.6.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		1.198528	1.198528	

Project Activity Table C.2.1

Unique Project ID	Activity Name	Activity Description	Structure ID	Planned Start Date	Projected Start Date	Actual Start Date	Planned Completion Date	Projected Completion Date	Actual Completion Date	Planned Total Costs	Projected Total Costs	Actual Total Costs
3115M20002	FY21-Water Prediction-O&M	FY21-Water Prediction-Operations and Maintenance	3115M20002.1	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		3.261000	3.261000	
3115M20002	FY21-Water Prediction-2nd Half - O&M	FY21-Water Prediction-Operations and Maintenance	3115M20002.1.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		1.630500	1.630500	
3113M20004	FY21-WCCIS-O&M	FY20-WCCIS-Operations and Maintenance	3113M20004.1	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		11.410000	13.595000	
3113M20004	FY21-WCCIS-O&M - 2nd Half	FY21-WCCIS-Operations and Maintenance	3113M20004.1.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		5.705000	6.797500	
3101D07102	FY21-N-AWIPS Migration	Migrate National Centers AWIPS (NAWPS) functions to AWIPS II SOA in FY21	3101D07102.1	2020-10-01	2020-10-01	2020-10-01	2021-09-30	2021-09-30		1.740000	1.740000	
3101D07102	FY21-N-AWIPS Migration - 2nd Half	Migrate National Centers AWIPS (NAWPS) functions to AWIPS II SOA for FY21	3101D07102.1.2	2021-04-01	2021-04-01	2021-04-01	2021-09-30	2021-09-30		0.870000	0.870000	

## Section D: Operational Data

1. Provide the date and results of the last Operational Analysis (for operational and mixed life cycle systems/Investments):

1. Date of Analysis:



## 2. Analysis Results:

## 3. Analysis Conclusion: continue as is

## 2. Report a minimum of 5 metrics using the following table to provide metrics and actual results for each individual metric:

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
27722	Percent of time operational system is available.	Percent (%)	2 - Strategic and Business Results	99.990000	99.900000	99.900000	Over target	Monthly	006SO18031 : Reduce Extreme Weather Impacts	No
Metric ID	Actual Result ID	Actual Result	Date of Actual Result	Comment						
27722	289544	99.970000	06/30/2021							
27722	287745	99.910000	05/31/2021							
27722	287744	99.990000	04/30/2021							
27722	283732	100.000000	03/31/2021							
27722	281518	99.990000	02/28/2021							
27722	278558	99.990000	01/31/2021							
27722	276646	99.680000	12/31/2020							
27722	275186	100.000000	11/30/2020							
27722	274225	99.940000	10/31/2020							

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27722	271413	100.000000	09/30/2020		
					27722	270698	100.000000	08/31/2020		
					27722	265947	99.930000	07/31/2020		
					27722	265946	100.000000	06/30/2020		
					27722	265945	100.000000	05/31/2020		
					27722	265944	99.990000	04/30/2020		
					27722	265943	100.000000	03/31/2020		
					27722	265942	100.000000	09/30/2016		
					27722	265941	100.000000	08/31/2016		
					27722	265940	99.980000	04/30/2016		
					27722	265939	100.000000	03/31/2016		
					27722	265938	100.000000	02/29/2016		
					27722	265937	100.000000	01/31/2016		
					27722	265936	100.000000	12/31/2015		
					27722	265935	100.000000	11/30/2015		
					27722	265934	99.880000	10/31/2015		
					27722	265933	100.000000	08/31/2015		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27722	258061	99.990000	02/29/2020		
					27722	256436	99.960000	12/31/2019		
					27722	256435	99.990000	01/31/2020		
					27722	253328	99.990000	11/30/2019		
					27722	251630	100.000000	10/31/2019		
					27722	250117	99.680000	09/30/2019		
					27722	246565	100.000000	07/31/2019		
					27722	246564	100.000000	08/31/2019		
					27722	244357	100.000000	05/31/2019		
					27722	242507	99.930000	04/30/2019		
					27722	241468	100.000000	02/28/2019		
					27722	241467	99.970000	03/31/2019		
					27722	239594	100.000000	12/31/2018		
					27722	239593	100.000000	01/31/2019		
					27722	237161	99.990000	11/30/2018		
					27722	234298	99.910000	10/31/2018		
					27722	232189	100.000000	09/30/2018		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27722	229406	99.990000	08/31/2012		
					27722	229405	99.990000	09/30/2012		
					27722	229404	99.950000	10/31/2012		
					27722	229403	99.950000	11/30/2012		
					27722	229402	99.980000	12/31/2012		
					27722	229401	99.980000	01/31/2013		
					27722	229400	99.900000	02/28/2013		
					27722	229399	99.950000	03/31/2013		
					27722	229398	99.980000	04/30/2013		
					27722	229397	99.730000	05/31/2013		
					27722	229396	99.940000	06/30/2013		
					27722	229395	99.890000	07/31/2013		
					27722	229394	100.000000	08/31/2013		
					27722	229393	100.000000	09/30/2013		
					27722	229392	100.000000	10/31/2013		
					27722	229391	99.950000	11/30/2013		
					27722	229390	100.000000	12/31/2013		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27722	229389	100.000000	01/31/2014		
					27722	229388	100.000000	02/28/2014		
					27722	229387	100.000000	03/31/2014		
					27722	229386	100.000000	04/30/2014		
					27722	229385	100.000000	05/31/2014		
					27722	229384	100.000000	06/30/2014		
					27722	229383	100.000000	07/31/2014		
					27722	229382	100.000000	08/31/2014		
					27722	229381	100.000000	09/30/2014		
					27722	229380	100.000000	10/31/2014		
					27722	229379	100.000000	11/30/2014		
					27722	229378	100.000000	12/31/2014		
					27722	229377	100.000000	01/31/2015		
					27722	229376	100.000000	02/28/2015		
					27722	229375	100.000000	03/31/2015		
					27722	229374	100.000000	04/30/2015		
					27722	229373	100.000000	05/31/2015		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27722	229372	100.000000	06/30/2015		
					27722	229371	100.000000	07/31/2015		
					27722	229370	99.310000	09/30/2015		
					27722	229369	99.980000	05/31/2016		
					27722	229368	100.000000	06/30/2016		
					27722	229367	100.000000	07/31/2016		
					27722	229366	100.000000	10/31/2016		
					27722	229365	100.000000	11/30/2016		
					27722	229364	99.960000	12/31/2016		
					27722	229363	99.960000	01/31/2017		
					27722	229362	100.000000	02/28/2017		
					27722	229361	99.840000	03/31/2017	Queue and File system issues	
					27722	229360	99.950000	04/30/2017		
					27722	229359	100.000000	05/31/2017		
					27722	229358	100.000000	06/30/2017		
					27722	229357	100.000000	07/31/2017		
					27722	229356	100.000000	09/30/2017		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27722	229355	100.000000	10/31/2017		
					27722	229354	99.920000	11/30/2017		
					27722	229353	100.000000	12/31/2017		
					27722	229352	100.000000	01/31/2018		
					27722	229351	100.000000	02/28/2018		
					27722	229350	99.990000	03/31/2018		
					27722	229349	99.990000	04/30/2018		
					27722	229348	99.730000	05/31/2018		
					27722	229347	99.830000	06/30/2018		
					27722	229346	100.000000	07/31/2018		
					27722	229345	100.000000	08/31/2018		
27721	Percent of time that the NCEP Production Suite generates results within 15 minutes of target completion time.	Percent	2 - Strategic and Business Results	99.000000	99.000000	99.000000	Over target	Monthly	006SO18031 : Reduce Extreme Weather Impacts	No
					Metric ID	Actual Result ID	Actual Result	Date of Actual Result	Comment	
					27721	289545	99.880000	06/30/2021		
					27721	287747	99.780000	05/31/2021		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27721	287746	99.970000	04/30/2021		
					27721	283733	99.740000	03/31/2021		
					27721	281519	99.910000	02/28/2021		
					27721	278559	99.720000	01/31/2021		
					27721	276647	99.320000	12/31/2020		
					27721	275187	99.230000	11/30/2020		
					27721	274226	99.930000	10/31/2020		
					27721	271414	99.980000	09/30/2020		
					27721	270699	99.960000	08/31/2020		
					27721	265964	99.990000	07/31/2020		
					27721	265963	99.870000	06/30/2020		
					27721	265962	99.930000	05/31/2020		
					27721	265961	99.670000	04/30/2020		
					27721	265960	99.480000	03/31/2020		
					27721	265959	99.590000	09/30/2016		
					27721	265958	99.990000	08/31/2016		
					27721	265957	99.980000	04/30/2016		



Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27721	265956	99.340000	03/31/2016		
					27721	265955	99.960000	02/29/2016		
					27721	265954	99.990000	01/31/2016		
					27721	265953	99.960000	12/31/2015		
					27721	265952	99.740000	11/30/2015		
					27721	265951	97.990000	10/31/2015	Model issues during Hurricane Joaquin event, disk issue, and load sharing facility issue all contributed to lower product delivery %	
					27721	265949	99.620000	08/31/2015		
					27721	258060	99.440000	02/29/2020		
					27721	256434	99.960000	12/31/2019		
					27721	256433	99.900000	01/31/2020		
					27721	253327	99.990000	11/30/2019		
					27721	251629	99.890000	10/31/2019		
					27721	250116	99.140000	09/30/2019		
					27721	246563	99.850000	07/31/2019		
					27721	246562	99.770000	08/31/2019		
					27721	245596	99.960000	05/31/2019		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27721	245595	99.910000	06/30/2019		
					27721	244356	99.650000	04/30/2019		
					27721	241466	99.910000	02/28/2019		
					27721	241465	99.560000	03/31/2019		
					27721	239592	99.820000	12/31/2018		
					27721	239591	99.910000	01/31/2019		
					27721	237160	99.970000	11/30/2018		
					27721	234297	99.970000	10/31/2018		
					27721	232188	99.800000	09/30/2018		
					27721	229344	98.580000	08/31/2012	08/16 & 08/17: A write cache issue occurred on Stratus (Primary System), following a memory DIM replacement on Stratus FastT3, which resulted in significant production delays during the 18Z cycle on 08/16, as well as downstream impacts during the 00Z cycle on 08/17. 08/28 & 08/29: An IBM accounting process that runs on every node nearly filled up a staging directory, resulting in significant delays during the 00Z/06Z/12Z cycles on 08/28 and the 00Z cycle on 08/29.	
					27721	229343	99.950000	09/30/2012		
					27721	229342	100.000000	10/31/2012		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27721	229341	99.960000	11/30/2012		
					27721	229340	99.990000	12/31/2012		
					27721	229339	100.000000	01/31/2013		
					27721	229338	99.933000	02/28/2013		
					27721	229337	99.880000	03/31/2013		
					27721	229336	99.920000	04/30/2013		
					27721	229335	99.860000	05/31/2013		
					27721	229334	99.910000	06/30/2013		
					27721	229333	99.790000	07/31/2013		
					27721	229332	99.940000	08/31/2013		
					27721	229331	99.890000	09/30/2013		
					27721	229330	99.950000	10/31/2013		
					27721	229329	99.030000	11/30/2013		
					27721	229328	99.670000	12/31/2013		
					27721	229327	99.670000	01/31/2014		
					27721	229326	99.090000	02/28/2014		
					27721	229325	99.940000	03/31/2014		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27721	229324	99.600000	04/30/2014		
					27721	229323	99.970000	05/31/2014		
					27721	229322	99.660000	06/30/2014		
					27721	229321	99.930000	07/31/2014		
					27721	229320	99.990000	08/31/2014		
					27721	229319	99.350000	09/30/2014		
					27721	229318	99.750000	10/31/2014		
					27721	229317	99.940000	11/30/2014		
					27721	229316	99.860000	12/31/2014		
					27721	229315	99.790000	01/31/2015		
					27721	229314	99.740000	02/28/2015		
					27721	229313	99.670000	03/31/2015		
					27721	229312	99.960000	04/30/2015		
					27721	229311	98.080000	05/31/2015	Recurring battery failures on storage devices resulted in late product delivery	
					27721	229310	99.890000	06/30/2015	Result not available until second or third business day of new month	
					27721	229309	99.000000	07/31/2015	Results not available at time of reporting	
					27721	229308	99.540000	09/30/2015		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27721	229307	99.980000	05/31/2016		
					27721	229306	99.990000	06/30/2016		
					27721	229305	99.970000	07/31/2016		
					27721	229304	99.810000	10/31/2016		
					27721	229303	99.990000	11/30/2016		
					27721	229302	99.980000	12/31/2016		
					27721	229301	99.630000	01/31/2017	1/30/2016: There was a hardware failure of a GXMS server on Gyre causing delays submitting jobs for a short time. It impacted several models: NAM: 23-29 minutes HRRR: 7-32 minutes RAP:21-35 minutes	
					27721	229300	99.990000	02/28/2017		
					27721	229299	99.580000	03/31/2017		
					27721	229298	99.880000	04/30/2017		
					27721	229297	99.980000	05/31/2017		
					27721	229296	99.990000	06/30/2017		
					27721	229295	99.990000	07/31/2017		
					27721	229294	99.990000	09/30/2017		
					27721	229293	99.990000	10/31/2017		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
27721					27721	229292	99.990000	11/30/2017		
					27721	229291	99.710000	12/31/2017		
					27721	229290	99.990000	01/31/2018		
					27721	229289	99.960000	02/28/2018		
					27721	229288	99.570000	03/31/2018		
					27721	229287	99.820000	04/30/2018		
					27721	229286	99.510000	05/31/2018		
					27721	229285	99.930000	06/30/2018		
					27721	229284	99.990000	07/31/2018		
					27721	229283	99.470000	08/31/2018		
27720	The percentage of times that the Network Control Facility restores service in under 10 minutes based on a user ticket during non-critical weather.	Percent	1 - Customer Satisfaction (Process Results)	95.000000	95.000000	95.000000	Over target	Monthly	006SO18031 : Reduce Extreme Weather Impacts	No
					Metric ID	Actual Result ID	Actual Result	Date of Actual Result	Comment	
					27720	289546	99.320000	06/30/2021		
					27720	287749	99.510000	05/31/2021		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27720	287748	99.490000	04/30/2021		
					27720	283734	99.380000	03/31/2021		
					27720	281520	99.580000	02/28/2021		
					27720	278560	99.310000	01/31/2021		
					27720	276648	99.720000	12/31/2020		
					27720	275188	98.780000	11/30/2020		
					27720	274227	99.180000	10/31/2020		
					27720	271415	99.590000	09/30/2020		
					27720	270700	98.110000	08/31/2020		
					27720	265969	97.900000	07/31/2020		
					27720	265968	98.860000	06/30/2020		
					27720	265967	98.630000	05/31/2020		
					27720	265966	98.860000	04/30/2020		
					27720	265965	98.610000	03/31/2020		
					27720	258059	99.200000	02/29/2020		
					27720	256432	99.500000	12/31/2019		
					27720	256431	99.500000	01/31/2020		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27720	253326	99.200000	11/30/2019		
					27720	251628	98.500000	10/31/2019		
					27720	250115	98.660000	09/30/2019		
					27720	246561	98.590000	07/31/2019		
					27720	246560	98.580000	08/31/2019		
					27720	245594	98.400000	06/30/2019		
					27720	244355	98.800000	05/31/2019		
					27720	242506	99.000000	04/30/2019		
					27720	241464	98.270000	03/31/2019		
					27720	239590	99.320000	12/31/2018		
					27720	239589	99.390000	01/31/2019		
					27720	239588	99.380000	02/28/2019		
					27720	237159	99.400000	11/30/2018		
					27720	234296	99.630000	10/31/2018		
					27720	232187	97.100000	09/30/2018		
					27720	229282	99.200000	08/30/2012		
					27720	229281	99.200000	10/31/2012		



Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27720	229280	99.300000	11/30/2012		
					27720	229279	99.300000	12/31/2012		
					27720	229278	99.400000	01/31/2013		
					27720	229277	99.400000	02/28/2013		
					27720	229276	99.300000	03/31/2013		
					27720	229275	99.300000	04/30/2013		
					27720	229274	99.300000	05/31/2013		
					27720	229273	99.300000	06/30/2013		
					27720	229272	99.300000	07/31/2013		
					27720	229271	99.400000	08/30/2013		
					27720	229270	99.500000	09/30/2013		
					27720	229269	99.500000	10/31/2013		
					27720	229268	99.600000	11/30/2013		
					27720	229267	99.600000	12/31/2013		
					27720	229266	99.600000	01/31/2014		
					27720	229265	99.600000	02/28/2014		
					27720	229264	99.700000	03/31/2014		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27720	229263	99.700000	04/30/2014		
					27720	229262	99.600000	05/31/2014		
					27720	229261	99.600000	06/30/2014		
					27720	229260	99.700000	07/31/2014		
					27720	229259	99.600000	08/31/2014		
					27720	229258	99.700000	09/30/2014		
					27720	229257	99.700000	10/31/2014		
					27720	229256	99.600000	11/30/2014		
					27720	229255	99.600000	12/31/2014		
					27720	229254	99.980000	01/30/2015		
					27720	229253	99.800000	02/28/2015		
					27720	229252	99.700000	03/31/2015		
					27720	229251	99.600000	04/30/2015		
					27720	229250	99.700000	05/31/2015		
					27720	229249	99.800000	06/30/2015		
					27720	229248	99.700000	07/31/2015		
					27720	229247	99.700000	08/31/2015		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27720	229246	99.800000	09/30/2015		
					27720	229245	99.800000	10/31/2015		
					27720	229244	99.700000	11/30/2015		
					27720	229243	99.700000	12/31/2015		
					27720	229242	99.600000	01/31/2016		
					27720	229241	100.000000	02/29/2016		
					27720	229240	99.700000	03/31/2016		
					27720	229239	99.700000	04/30/2016		
					27720	229238	99.700000	05/31/2016		
					27720	229237	99.800000	06/30/2016		
					27720	229236	99.600000	07/31/2016		
					27720	229235	99.800000	08/31/2016		
					27720	229234	99.800000	09/30/2016		
					27720	229233	99.700000	10/31/2016		
					27720	229232	99.600000	11/30/2016		
					27720	229231	99.800000	12/30/2016		
					27720	229230	99.800000	01/31/2017		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27720	229229	99.700000	02/28/2017		
					27720	229228	99.800000	03/31/2017		
					27720	229227	99.700000	04/30/2017		
					27720	229226	99.800000	05/31/2017		
					27720	229225	99.800000	06/30/2017		
					27720	229224	99.700000	07/31/2017		
					27720	229223	99.800000	08/31/2017		
					27720	229222	97.800000	10/31/2017		
					27720	229221	97.700000	11/30/2017		
					27720	229220	97.900000	12/31/2017		
					27720	229219	97.700000	01/31/2018		
					27720	229218	97.800000	02/28/2018		
					27720	229217	98.100000	03/31/2018		
					27720	229216	97.800000	04/30/2018		
					27720	229215	98.000000	05/31/2018		
					27720	229214	97.900000	06/30/2018		
					27720	229213	99.540000	07/31/2018		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27720	229212	98.200000	08/31/2018		
27719	The percentage of times that the Network Control Facility restores service in under 4 minutes based on a user ticket during critical weather.	Percent	1 - Customer Satisfaction (Process Results)	90.000000	90.000000	90.000000	Over target	Monthly	006SO18031 : Reduce Extreme Weather Impacts	No
					Metric ID	Actual Result ID	Actual Result	Date of Actual Result	Comment	
					27719	289547	97.500000	06/30/2021		
					27719	287751	98.260000	05/31/2021		
					27719	287750	97.480000	04/30/2021		
					27719	283735	95.290000	03/31/2021		
					27719	281521	98.210000	02/28/2021		
					27719	278561	97.890000	01/31/2021		
					27719	276649	98.580000	12/31/2020		
					27719	275189	97.430000	11/30/2020		
					27719	274228	98.420000	10/31/2020		
					27719	271416	97.840000	09/30/2020		
					27719	270702	97.650000	08/31/2020		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27719	265974	98.570000	07/31/2020		
					27719	265973	98.610000	06/30/2020		
					27719	265972	98.980000	05/31/2020		
					27719	265971	99.200000	04/30/2020		
					27719	265970	98.930000	03/31/2020		
					27719	258058	98.500000	02/29/2020		
					27719	256430	98.600000	12/31/2019		
					27719	256429	98.200000	01/31/2020		
					27719	253325	97.610000	11/30/2019		
					27719	251627	99.500000	10/31/2019		
					27719	250114	99.360000	09/30/2019		
					27719	246559	99.770000	07/31/2019		
					27719	246558	99.420000	08/31/2019		
					27719	245593	99.400000	06/30/2019		
					27719	244354	99.500000	05/31/2019		
					27719	242505	99.000000	04/30/2019		
					27719	241463	99.130000	03/31/2019		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27719	239587	98.980000	12/31/2018		
					27719	239586	99.760000	01/31/2019		
					27719	239585	99.060000	02/28/2019		
					27719	237158	98.670000	11/30/2018		
					27719	234295	98.920000	10/31/2018		
					27719	232186	100.000000	09/30/2018		
					27719	229211	91.300000	08/30/2012		
					27719	229210	100.000000	10/31/2012		
					27719	229207	100.000000	01/31/2013		
					27719	229201	100.000000	07/31/2013		
					27719	229200	100.000000	08/30/2013		
					27719	229199	100.000000	09/30/2013		
					27719	229198	100.000000	10/31/2013		
					27719	229197	100.000000	11/30/2013		
					27719	229196	100.000000	12/31/2013		
					27719	229195	100.000000	01/31/2014		
					27719	229194	100.000000	02/28/2014		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27719	229193	100.000000	03/31/2014		
					27719	229192	100.000000	04/30/2014		
					27719	229191	100.000000	05/31/2014		
					27719	229190	100.000000	06/30/2014		
					27719	229189	100.000000	07/31/2014		
					27719	229188	100.000000	08/31/2014		
					27719	229187	100.000000	09/30/2014		
					27719	229186	100.000000	10/31/2014		
					27719	229185	100.000000	11/30/2014		
					27719	229184	100.000000	12/31/2014		
					27719	229183	100.000000	01/30/2015		
					27719	229182	100.000000	02/28/2015		
					27719	229181	100.000000	03/31/2015		
					27719	229180	100.000000	04/30/2015		
					27719	229179	100.000000	05/31/2015		
					27719	229178	100.000000	06/30/2015		
					27719	229177	100.000000	07/31/2015		



Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27719	229176	100.000000	08/31/2015		
					27719	229175	100.000000	09/30/2015		
					27719	229174	100.000000	10/31/2015		
					27719	229173	100.000000	11/30/2015		
					27719	229172	100.000000	12/31/2015		
					27719	229171	100.000000	01/31/2016		
					27719	229170	100.000000	02/29/2016		
					27719	229169	100.000000	03/31/2016		
					27719	229168	100.000000	04/30/2016		
					27719	229167	100.000000	05/31/2016		
					27719	229166	100.000000	06/30/2016		
					27719	229165	100.000000	07/31/2016		
					27719	229164	100.000000	08/31/2016		
					27719	229163	100.000000	09/30/2016		
					27719	229162	100.000000	10/31/2016		
					27719	229161	100.000000	11/30/2016		
					27719	229160	100.000000	12/30/2016		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27719	229159	100.000000	01/31/2017		
					27719	229158	100.000000	02/28/2017		
					27719	229157	100.000000	03/31/2017		
					27719	229156	100.000000	04/30/2017		
					27719	229155	100.000000	05/31/2017		
					27719	229154	100.000000	06/30/2017		
					27719	229153	100.000000	07/31/2017		
					27719	229152	100.000000	08/31/2017		
					27719	229151	100.000000	10/31/2017		
					27719	229150	100.000000	11/30/2017		
					27719	229149	100.000000	12/31/2017		
					27719	229148	100.000000	01/31/2018		
					27719	229147	100.000000	02/28/2018		
					27719	229146	100.000000	03/31/2018		
					27719	229145	100.000000	04/30/2018		
					27719	229144	100.000000	05/31/2018		
					27719	229143	100.000000	06/30/2018		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
27718	The percentage of uptime for the Satellite Broadcast Network Master Ground Station.	Percent	2 - Strategic and Business Results	99.950000	27719	229142	100.000000	07/31/2018		
					27719	229141	100.000000	08/31/2018		
					99.950000	99.950000	Over target	Monthly	006SO18031 : Reduce Extreme Weather Impacts	No
					Metric ID	Actual Result ID	Actual Result	Date of Actual Result	Comment	
					27718	289548	100.000000	06/30/2021		
					27718	287753	100.000000	05/31/2021		
					27718	287752	100.000000	04/30/2021		
					27718	283736	100.000000	03/31/2021		
					27718	281522	100.000000	02/28/2021		
					27718	278562	100.000000	01/31/2021		
27718	276650	100.000000	12/31/2020							
27718	275190	100.000000	11/30/2020							
27718	274229	99.990000	10/31/2020							
27718	271417	99.990000	09/30/2020							
27718	270705	99.990000	08/31/2020							

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27718	265979	100.000000	07/31/2020		
					27718	265978	99.990000	06/30/2020		
					27718	265977	100.000000	05/31/2020		
					27718	265976	100.000000	04/30/2020		
					27718	265975	99.990000	03/31/2020		
					27718	258057	100.000000	02/29/2020		
					27718	256428	100.000000	12/31/2019		
					27718	256427	100.000000	01/31/2020		
					27718	253324	100.000000	11/30/2019		
					27718	251626	100.000000	10/31/2019		
					27718	250113	100.000000	09/30/2019		
					27718	246557	100.000000	07/31/2019		
					27718	246556	100.000000	08/31/2019		
					27718	245592	99.990000	06/30/2019		
					27718	244353	100.000000	05/31/2019		
					27718	242504	100.000000	04/30/2019		
					27718	241462	100.000000	03/31/2019		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27718	239584	100.000000	12/31/2018		
					27718	239583	99.980000	01/31/2019		
					27718	239582	100.000000	02/28/2019		
					27718	237157	99.990000	11/30/2018		
					27718	234294	100.000000	10/31/2018		
					27718	232185	100.000000	09/30/2018		
					27718	229140	100.000000	09/20/2012		
					27718	229139	100.000000	10/31/2012		
					27718	229136	99.980000	01/31/2013		
					27718	229130	99.980000	07/31/2013		
					27718	229129	100.000000	08/30/2013		
					27718	229128	100.000000	09/30/2013		
					27718	229127	100.000000	10/31/2013		
					27718	229126	99.990000	11/30/2013		
					27718	229125	100.000000	12/31/2013		
					27718	229124	100.000000	01/31/2014		
					27718	229123	100.000000	02/28/2014		

Metrics Definitions and Actual Results Table D.2 / D.3										
Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27718	229122	100.000000	03/31/2014		
					27718	229121	100.000000	04/30/2014		
					27718	229120	99.990000	05/31/2014		
					27718	229119	100.000000	06/30/2014		
					27718	229118	99.370000	07/31/2014		
					27718	229117	99.970000	08/31/2014		
					27718	229116	99.990000	09/30/2014		
					27718	229115	99.980000	10/31/2014		
					27718	229114	100.000000	11/30/2014		
					27718	229113	100.000000	12/31/2014		
					27718	229112	99.300000	01/30/2015		
					27718	229111	100.000000	02/28/2015		
					27718	229110	100.000000	03/31/2015		
					27718	229109	100.000000	04/30/2015		
					27718	229108	100.000000	05/31/2015		
					27718	229107	100.000000	06/30/2015		
					27718	229106	100.000000	07/31/2015		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27718	229105	100.000000	08/31/2015		
					27718	229104	100.000000	09/30/2015		
					27718	229103	100.000000	10/31/2015		
					27718	229101	100.000000	12/31/2015		
					27718	229100	100.000000	01/31/2016		
					27718	229099	100.000000	02/29/2016		
					27718	229098	100.000000	03/31/2016		
					27718	229097	100.000000	04/30/2016		
					27718	229096	100.000000	05/31/2016		
					27718	229095	100.000000	06/30/2016		
					27718	229094	100.000000	07/31/2016		
					27718	229093	100.000000	08/31/2016		
					27718	229092	100.000000	09/30/2016		
					27718	229091	100.000000	10/31/2016		
					27718	229090	100.000000	11/30/2016		
					27718	229089	100.000000	12/30/2016		
					27718	229088	99.990000	01/31/2017		

Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27718	229087	99.990000	02/28/2017		
					27718	229086	99.990000	03/31/2017		
					27718	229085	100.000000	04/30/2017		
					27718	229084	100.000000	05/31/2017		
					27718	229083	100.000000	06/30/2017		
					27718	229082	100.000000	07/31/2017		
					27718	229081	100.000000	08/31/2017		
					27718	229080	100.000000	10/31/2017		
					27718	229079	99.990000	11/30/2017		
					27718	229078	100.000000	12/31/2017		
					27718	229077	99.990000	01/31/2018		
					27718	229076	100.000000	02/28/2018		
					27718	229075	99.980000	03/31/2018		
					27718	229074	100.000000	04/30/2018		
					27718	229073	100.000000	05/31/2018		
					27718	229072	100.000000	06/30/2018		
					27718	229071	99.990000	07/31/2018		



Metrics Definitions and Actual Results Table D.2 / D.3

Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	Agency Baseline Capability	2020 Target	2021 Target	Measurement Condition	Reporting Frequency	Agency Strategic Objective / Agency Priority Goal	Is Metric Retired?
					27718	229070	100.000000	08/31/2018		