

Exhibit 300: Capital Asset Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview & Summary Information

Date Investment First Submitted: 2009-06-30
Date of Last Change to Activities: 2012-04-30
Investment Auto Submission Date: 2012-02-28
Date of Last Investment Detail Update: 2012-02-28
Date of Last Exhibit 300A Update: 2012-06-29
Date of Last Revision: 2012-08-16

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

Investment Part Code: 01

Investment Category: 00 - Agency Investments

1. Name of this Investment: NOAA/NWS/ National Weather Service Telecommunication Gateway (NWSTG) System (Legacy, Replacement, and Critical Infrastructure Protection)

2. Unique Investment Identifier (UII): 006-000310600

Section B: Investment Detail

- 1. Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

The NWSTG is the Nation's hub for the collection and distribution of weather data and products. It provides national and global real-time exchange services using automated communications resources to collect and distribute a wide variety of environmental data such as observations, analysis, and forecast products. The NWSTG is the data source for the Family of Services data distribution and the data broadcast for the Emergency Manager's Weather Information Network. These time perishable products are distributed ensure the fastest availability of the information. The NWSTG is operated 24x7 to acquire data, process observations, construct messages, and disseminate messages and files of observations, model analysis, and forecast products. The NWSTG facilitates every NWS GPRA goal including: Tornado Warning Lead Time, Flash Flood Warning Lead Time, Winter Storm Warnings Lead Time, and Hurricane Track Forecasts. Thousands of customers worldwide use data distributed by the NWSTG and these data affect a wide range of economic and emergency management decisions. NWSTG is vulnerable to natural disasters, human error, computer viruses, hacker attackers, and terrorism. If the NWSTG failed, more than 90% of the in situ weather observations necessary for numerical weather prediction models would be lost and forecast accuracy would be degraded. The Backup Telecommunications Gateway mitigates to a degree the NWSTG as a single point of failure by providing limited backup

operations for the primary systems within 12 hours of a failure. This limited backup capability is currently inadequate and efforts are underway to implement a full backup capability by FY13. Projected volumes of observational and weather forecast and warning information cannot be managed with the current system architecture. The projected data processing requirements dictate a new, scalable system architecture with the inherent design flexibility to expand to process increased environmental products resulting from programs including Next Generation Air Transportation System, Dual Polarization, Geostationary Operational Environmental Satellite-R Series and Joint Polar Satellite System. The aging infrastructure, along with the significant increase in processing requirements, represent a major threat to disrupt or degrade the availability, accuracy, and timeliness of critical products and services that emergency managers and the public rely on during severe weather and electromagnetic events.

2. How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an assessment of the program impact if this investment isn't fully funded.

This investment allows NOAA to ensure that the NWSTG reliably meets performance demands and will allow the NWS to maintain operations should the NWSTG primary system fail. This investment provides the NWSTG sufficient performance and capacity to meet current and near-term demands for data throughput and message transit times. Five year projections for daily NWSTG system throughput indicate an almost threefold increase in data volume from 1.2TB to 3.1TB. The investment was approved by NOAA IT Review Board and Commerce IT Review Board. It has been identified as an essential government resource in Presidential Decision Directive - 67 Enduring Constitutional Government and Continuity of Government Operations. This investment ensures uninterrupted delivery of critical meteorological data necessary for the protection of life and property, and the economic well being of the Nation. In FY 2011, the NWSTG received overall rating of 2.5 (red) in OMB's IT Dashboard from the Department of the Commerce Chief Information Office. This overall rating was based on: aging infrastructure, limited backup capabilities, and the inability to support increased data volume projections. To address these deficiencies, a two part strategy was developed and a request for funding included in the FY13 President's Budget: Technology Re-alignment (FY11-FY13) and Technology Re-architecture (FY11-FY15). Without this investment, the NWSTG will not have the capacity to meet customer and operational requirements and address the deficiencies identified in OMB's IT Dashboard assessment. The aging infrastructure, along with the significant increase in processing requirements, represent a major threat to disrupt or degrade the availability, accuracy, and timeliness of critical products and services that emergency managers and the public rely on during severe weather and electromagnetic events. Also, without the implementation of the proposed corrective actions, the NWSTG will continue to be a single point failure to collect and disseminate time-perishable products to and from thousands of customers worldwide due to limited backup capabilities of the current infrastructure. If the NWSTG failed, more than 90% of the in-situ weather observations necessary for numerical weather prediction models would be lost and forecast accuracy would be degraded.

3. Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added, or operational efficiency achieved.

1. Conducted as-is analysis and developed corrective action plan the NWSTG. 2. Acquired IT support services for Technology Re-alignment and Technology Re-architecture design projects. 3. Validated and finalized functional and technical requirements for Technology Re-alignment project. 4. Developed a notional architecture and bill of materials for the Technology Re-alignment project. 5. Acquired implementation services and infrastructure for the Technology Re-alignment Project. .

4. Provide a list of planned accomplishments for current year (CY) and budget year (BY).

For FY12: 1. Acquire infrastructure for Technology Re-alignment Project. 2. Develop implementation and test plans for Technology Re-alignment Project. 3. Build development and test environment for the Technology Re-alignment Project. 4. Validate and finalize functional, technical, network, and facilities requirements for Technology Re-architecture. 5. Develop acquisition plan for implementation services and infrastructure for the Technology Re-architecture Project. For FY13: 1. Build Staging Environment for Technology Re-alignment Project. 2. Develop Test Plan and Test Scripts for Technology Re-alignment Project. 3. Conduct system, integration, performance testing for Technology Re-alignment. 4. Conduct operations test and evaluation for Technology Re-alignment. 5. Conduct Certification and Accreditation for Technology Re-alignment. 6. Transition Technology Re-alignment architecture into Operations and Maintenance phases. 7. Acquire implementation services and infrastructure for Technology Re-architecture Project. 8. Develop technical design and implementation plan for Technology Re-architecture Project. 9. Identify facility site A for Technology Re-architecture.

5. Provide the date of the Charter establishing the required Integrated Program Team (IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.

2010-02-14

Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	\$0.0	\$1.5	\$0.0	\$0.0
DME (Excluding Planning) Costs:	\$22.6	\$4.0	\$0.0	\$7.0
DME (Including Planning) Govt. FTEs:	\$0.0	\$0.0	\$0.0	\$0.0
Sub-Total DME (Including Govt. FTE):	\$22.6	\$5.5	0	\$7.0
O & M Costs:	\$95.3	\$6.1	\$11.0	\$13.5
O & M Govt. FTEs:	\$62.3	\$7.8	\$7.7	\$7.8
Sub-Total O & M Costs (Including Govt. FTE):	\$157.6	\$13.9	\$18.7	\$21.3
Total Cost (Including Govt. FTE):	\$180.2	\$19.4	\$18.7	\$28.3
Total Govt. FTE costs:	\$62.3	\$7.8	\$7.7	\$7.8
# of FTE rep by costs:	640	64	64	64
Total change from prior year final President's Budget (\$)		\$-1.9	\$-2.6	
Total change from prior year final President's Budget (%)		-8.90%	-12.20%	

2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:

The FY11 PAC funding amount was increased \$4M, from \$1.195M to \$5.195M, to reflect a PAC reprogramming action.

Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value (\$M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
Awarded	1330	DOCDG133W1 1NC0036	DOCDG133W1 1NC0036	4730							
Awarded	1330	DG133W11CN0 160	DG133W11CN0 160	4730							

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:
 For the current O&M program, EVM is not used as all services contracts are labor hour support contracts for O&M that have no measurable deliverables or milestones. This is also the case for the planned Tech Re-alignment effort. The planned Tech Re-architecture effort will use EVM.

Exhibit 300B: Performance Measurement Report

Section A: General Information

Date of Last Change to Activities: 2012-04-30

Section B: Project Execution Data

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost (\$M)
1	NWSTG Technology Re-alignment Project	The NWSTG Technology Re-alignment project will replace aging and unsupportable hardware and software of the primary system and increase the capability of the backup system to be fully operational within 12 hours of primary system failure.			
2	NWSTG Technology Re-architecture Project	The NWSTG Technology Re-architecture project will implement a totally new system architecture to support significant increases in data volumes from programs ranging from satellite to climate and implement redundant backup capabilities (hot/hot disaster recovery model).			

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities (\$M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance (\$M)	Cost Variance (%)	Total Planned Cost (\$M)	Count of Activities

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities (\$M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance (\$M)	Cost Variance (%)	Total Planned Cost (\$M)	Count of Activities
1	NWSTG Technology Re-alignment Project							
2	NWSTG Technology Re-architecture Project							

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
2	Design	Develop a design for a to-be architecture with options including an active-active design between redundant dissemination sites	2011-10-31	2011-10-31		213	-305	-143.19%
1	Design	This activity will develop a design for the NWSTG realignment	2012-02-13	2012-02-13		122	-200	-163.93%
1	Phase 1	Initial procurement of long-lead items	2012-02-28	2012-02-28		137	-185	-135.04%
2	Phase 1	Initial hardware procurement	2012-04-30	2012-04-30		181	-123	-67.96%
1	Procure	This activity will procure hardware and software	2012-06-13	2012-06-13	2011-09-22	120	265	220.83%
1	Phase 2	Final procurement	2012-06-13	2012-06-13		133	-79	-59.40%
1	Build	Assemble procured hardware and software	2012-11-01	2012-11-01		140	0	0.00%
1	Build	Assemble procured hardware and software	2012-11-30	2012-11-30		169	0	0.00%

Section C: Operational Data

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
Number of NWSTG functions that can be stood up at the BTG in 12 hours or less	number	Mission and Business Results - Services for Citizens	Under target	4.000000	4.000000	4.000000	7.000000	Monthly
Maximum transit time for warning messages (system latency) 1 second or less	seconds	Process and Activities - Cycle Time and Timeliness	Over target	3.000000	3.000000	7.000000	3.000000	Monthly
System availability of the NWSTG 99.99% or better	percent	Customer Results - Timeliness and Responsiveness	Over target	99.990000	99.990000	99.600000	99.990000	Monthly
10% or less of POAMs over 120 days past due	percent	Technology - Reliability and Availability	Under target	10.000000	10.000000	0.000000	10.000000	Monthly
Average 24 hour peak CPU utilization of 60% or less for the 5 NWSTG core systems.	Percentage	Technology - Effectiveness	Over target	60.000000	60.000000	65.000000	60.000000	Monthly