

**Exhibit 300: Capital Asset Plan and Business Case Summary**

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

**Section A: Overview (All Capital Assets)**

1. Date of Submission:

2. Agency: Department of Commerce

3. Bureau: Noaa (Nws)

4. Name of this Capital Asset: NOAA/NWS/ COOP Historical Climate Network - Modernization (HCN-M)

5. Unique Project (Investment) Identifier: (For IT investment only, see section 53. For all other, use agency ID system.) 006-48-01-12-01-3117-00

6. What kind of investment will this be in FY 2010? (Please NOTE: Investments moving to O&M in FY 2010, with Planning/Acquisition activities prior to FY 2010 should not select O&M. These investments should indicate their current status.) Planning

7. What was the first budget year this investment was submitted to OMB? FY2002

8. Provide a brief summary and justification for this investment, including a brief description of how this closes in part or in whole an identified agency performance gap:

The Cooperative Observer Network (COOP), managed by the National Weather Service (NWS), was developed to provide observed meteorological data. These data are required to record the climate of the United States and to help measure long-term climate changes. The technology used in the current COOP is approaching obsolescence. The equipment is difficult to replace or repair and the quality of the observing sites are deteriorating. Attrition of human observers is 2-5% per year which requires stations to be closed or relocated. This attrition decreases the accuracy of the data and threatens the long term continuity of the observing sites. The Historical Climate Network (HCN) is a sub-network of COOP stations that have provided consistent climate data for over 80 years. Having a long-term data set at a specific site is necessary in order to look at climate trends over time.

COOP HCN Modernization (HCN-M) is a project to integrate a network of observing systems to sustain the Nation's climate record of land surface measurements essential to monitor and assess the surface climate. HCN observations are essential to scientific climate research, as well as a sought after data set by several sectors of the economy, in particular the water and energy resources management industries. HCN-M will establish confidence in the detection of precipitation and temperature and contribute to the outcome of a predictive understanding of the global climate system on time scales of weeks to decades with quantified uncertainties sufficient for making informed and reasoned decisions by detecting trends within each of the U.S. climate regions, as well as improve the National Climate Variance profile.

HCN-M Goals: 1) Enable continued monitoring and assessment of the national and regional climate variability; 2) Sustain the historical climate record; 3) Provide climate observational data and metadata; 4) Improve data quality; 5) Distribute data to customers for current and future use; 6) Provide a flexible and expandable architecture to integrate with NOAA's Global Earth Observing Integrated Data Environment (GEO-IDE); and 7) Optimize as well as modernize the HCN.

In order to retain the benefit of HCN-M over the long-term, it will be critical to establish an O&M funding source for operational sites. The plans detailed in this Exhibit 300 are developed with the assumption that an O&M funding line will be established for HCN-M sites beginning in FY11.

9. Did the Agency's Executive/Investment Committee approve this request? Yes

a. If "yes," what was the date of this approval? 10/1/2002

10. Did the Project Manager review this Exhibit? Yes

a. What is the current FAC-P/PM (for civilian agencies) or DAWIA (for defense agencies) certification level of the program/project manager? Senior/Expert/DAWIA-Level 3

b. When was the Program/Project Manager Assigned? 9/3/2007

c. What date did the Program/Project Manager receive the FAC-P/PM certification? If the certification has not been issued, what is the anticipated date for certification? 12/15/2008

12. Has the agency developed and/or promoted cost Yes

effective, energy-efficient and environmentally sustainable techniques or practices for this project?

a. Will this investment include electronic assets (including computers)? Yes

b. Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only) No

1. If "yes," is an ESPC or UESC being used to help fund this investment?

2. If "yes," will this investment meet sustainable design principles?

3. If "yes," is it designed to be 30% more energy efficient than relevant code?

13. Does this investment directly support one of the PMA initiatives? Yes

If "yes," check all that apply: Expanded E-Government

a. Briefly and specifically describe for each selected how this asset directly supports the identified initiative(s)? (e.g. If E-Gov is selected, is it an approved shared service provider or the managing partner?)

Data will be automatically collected at the HCN-M sites, relayed to the MADIS ingest and dissemination system then made available to the wide user community, replacing a manual paper-based process. Data will be free and open over NOAA satellite broadcast networks and telecommunication systems, the internet, and the NOAA weather wire family of services.

The availability of this is data set to the user will improve from an average of 60 days to daily following modernization of the HCN

14. Does this investment support a program assessed using the Program Assessment Rating Tool (PART)? (For more information about the PART, visit [www.whitehouse.gov/omb/part.](http://www.whitehouse.gov/omb/part.)) Yes

a. If "yes," does this investment address a weakness found during a PART review? No

b. If "yes," what is the name of the PARTed program?

c. If "yes," what rating did the PART receive? Moderately Effective

15. Is this investment for information technology? Yes

If the answer to Question 15 is "Yes," complete questions 16-23 below. If the answer is "No," do not answer questions 16-23.

For information technology investments only:

16. What is the level of the IT Project? (per CIO Council PM Guidance) Level 2

17. In addition to the answer in 11(a), what project management qualifications does the Project Manager have? (per CIO Council PM Guidance) (1) Project manager has been validated as qualified for this investment

18. Is this investment or any project(s) within this investment identified as "high risk" on the Q4 - FY 2008 agency high risk report (per OMB Memorandum M-05-23) No

19. Is this a financial management system? No

a. If "yes," does this investment address a FFMA compliance area?

1. If "yes," which compliance area:

2. If "no," what does it address?

b. If "yes," please identify the system name(s) and system acronym(s) as reported in the most recent financial systems inventory update required by Circular A-11 section 52

20. What is the percentage breakout for the total FY2010 funding request for the following? (This should total 100%)

Hardware 33

Software 0

- Services 53
- Other 14
21. If this project produces information dissemination products for the public, are these products published to the Internet in conformance with OMB Memorandum 05-04 and included in your agency inventory, schedules and priorities? N/A
23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval? Yes
- Question 24 must be answered by all Investments:
24. Does this investment directly support one of the GAO High Risk Areas? No

**Section B: Summary of Spending (All Capital Assets)**

1. Provide the total estimated life-cycle cost for this investment by completing the following table. All amounts represent budget authority in millions, and are rounded to three decimal places. Federal personnel costs should be included only in the row designated "Government FTE Cost," and should be excluded from the amounts shown for "Planning," "Full Acquisition," and "Operation/Maintenance." The "TOTAL" estimated annual cost of the investment is the sum of costs for "Planning," "Full Acquisition," and "Operation/Maintenance." For Federal buildings and facilities, life-cycle costs should include long term energy, environmental, decommissioning, and/or restoration costs. The costs associated with the entire life-cycle of the investment should be included in this report.

Table 1: SUMMARY OF SPENDING FOR PROJECT PHASES (REPORTED IN MILLIONS)									
(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)									
	PY-1 and earlier	PY 2008	CY 2009	BY 2010					
Planning:	7.341	2.061	1.143	1.115					
Acquisition:	6.678	1.572	2.073	2.083					
Subtotal Planning & Acquisition:	14.019	3.633	3.216	3.198					
Operations & Maintenance:	0.54	0	0	0					
TOTAL:	14.559	3.633	3.216	3.198					
<b>Government FTE Costs should not be included in the amounts provided above.</b>									
Government FTE Costs	1.877	0.5	0.518	0.536					
Number of FTE represented by Costs:	13	4	4	4					

Note: For the multi-agency investments, this table should include all funding (both managing partner and partner agencies). Government FTE Costs should not be included as part of the TOTAL represented.

2. Will this project require the agency to hire additional FTE's? No
- a. If "yes," How many and in what year?
3. If the summary of spending has changed from the FY2009 President's budget request, briefly explain those changes: Costs related to non-operational systems MADIS and NERON/New England were previously under "O&M", they have been changed to "Planning."

**Section C: Acquisition/Contract Strategy (All Capital Assets)**

1. Complete the table for all (including all non-Federal) contracts and/or task orders currently in place or planned for this investment. Total Value should include all option years for each contract. Contracts and/or task orders completed do not need to be included.

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Contracts/Task Orders Table:															* Costs in millions	
Contract or Task Order Number	Type of Contract/ Task Order (In accordance with FAR Part 16)	Has the contract been awarded (Y/N)	If so what is the date of the award? If not, what is the planned award date?	Start date of Contract/ Task Order	End date of Contract/ Task Order	Total Value of Contract/ Task Order (\$M)	Is this an Interagency Acquisition? (Y/N)	Is it performance based? (Y/N)	Competitively awarded? (Y/N)	What, if any, alternative financing option is being used? (ESPC, UESC, EUL, N/A)	Is EVM in the contract? (Y/N)	Does the contract include the required security & privacy clauses? (Y/N)	Name of CO	CO Contact information (phone/email)	Contracting Officer FAC-C or DAWIA Certification Level (Level 1, 2, 3, N/A)	If N/A, has the agency determined the CO assigned has the competencies and skills necessary to support this acquisition? (Y/N)
DG-133-W-05-BU-1035	FFP	Yes	9/1/2006	9/30/2006	5/31/2009	2	No	Yes	Yes	NA	No	Yes		Anita.R.Middleton@noaa.gov	Level 3	
45-EANA-0-00055	FFP	Yes	9/1/2006	9/30/2006	6/30/2010	1.2	No	No	Yes	NA	No	Yes		tom.genoves@noaa.gov	Level 3	

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:

Contract Summary

1. System engineering support for HCN-M and MADIS. FFP task order under an existing BPA with SAIC which was awarded without a requirement for EVM.
2. HCN-M project management support under ETOSS. Will be a FFP contract and will require EVM. Planned award is 4Q07.
3. HCN-M requirements definition support. FFP task order under existing BPA with STC which was awarded without a requirement for EVM.
4. HCN-M system development and deployment contract. This will probably be a FFP and Cost Plus contract. Planned award is 1Q10. This new contract will require EVM.

The contracts that do not require EVM are mostly support contracts that are level of effort and fixed price. Some were awarded before EVM was a requirement. For these contracts, the contractors provide actuals on a monthly basis. The Government determines percent complete or BCWP. These are simply handled as BCWS = BCWP = ACWP since the work can never be behind schedule or over cost. There is currently no DME contract active now for HCN-M. The previously active DME contract was for Prism Communications to install 100 modernized COOP sites in New England. That contract ended in December 2005.

In March 2006, the NEC/NOSC redefined HCN-M to be the modernization of only 1,000 Historical Climate Network (HCN) sites which was a change from the former scope which involved the modernization of 8,000 Cooperative Observer Program (COOP) sites. Due to this radical change in scope and a transition to a new project team, the EVM must be rebaselined to reflect the new project definition. This redefinition is underway. When the system development and deployment contract is awarded, a new baseline for EVM will be established. The last official EVM report was provided in April 2006 for data through March 2006.

3. Do the contracts ensure Section 508 compliance? Yes
- a. Explain why not or how this is being done? The Department of Commerce and NOAA Contracting Offices require the inclusion of Section 508 compliance language in the statement of work for all IT development service contracts. In order to procure all COTS equipment and software, requestors are required to include with their purchase order or file the Government purchase card invoices as well as the vendors statement of compliance (Voluntary Product Assessibility Template VPAT).
4. Is there an acquisition plan which reflects the requirements of FAR Subpart 7.1 and has been approved in accordance with agency requirements? No
- a. If "yes," what is the date?
1. Is it Current?
- b. If "no," will an acquisition plan be developed? Yes
1. If "no," briefly explain why: There are no active procurements for HCN. The acquisition strategy has not been developed. If procurements are needed in the future, an acquisition plan reflecting FAR Subpart 7.1 will be developed.

**Section D: Performance Information (All Capital Assets)**

In order to successfully address this area of the exhibit 300, performance goals must be provided for the agency and be linked to the annual performance plan. The investment must discuss the agency's mission and strategic goals, and performance measures (indicators) must be provided. These goals need to map to the gap in the agency's strategic goals and objectives this investment is designed to fill. They are the internal and external performance benefits this investment is expected to deliver to the agency (e.g., improve efficiency by 60 percent, increase citizen participation by 300 percent a year to achieve an overall citizen participation rate of 75 percent by FY 2xxx, etc.). The goals must be clearly measurable investment outcomes, and if applicable, investment outputs. They do not include the completion date of the module, milestones, or investment, or general goals, such as, significant, better, improved that do not have a quantitative or qualitative measure.

Agencies must use the following table to report performance goals and measures for the major investment and use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). Map all Measurement Indicators to the corresponding "Measurement Area" and "Measurement Grouping" identified in the PRM. There should be at least one Measurement Indicator for each of the four different Measurement Areas (for each fiscal year). The PRM is available at [www.egov.gov](http://www.egov.gov). The table can be extended to include performance measures for years beyond the next President's Budget.

Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
2006	3.1 Advance understanding and predict changes in the Earth&amp;amp;	Processes and Activities	Management and Innovation	Innovation and Improvement	Statement of need delivered for HCN-M system	0%	100%	100%



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Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
	Earth's environment to meet America's economic, social, and environmental needs.							
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Mission and Business Results	Environmental Management	Environmental Monitoring and Forecasting	Explain variance for annual average regional temperature using modernized HCN sites.	13%	60%	TBD
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Mission and Business Results	Environmental Management	Environmental Monitoring and Forecasting	Explain variance for annual average regional precipitation using modernized HCN sites.	12%	24%	TBD
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Processes and Activities	Management and Innovation	Innovation and Improvement	Complete Acquisition Plan for HCN-M project.	0%	100%	TBD
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Effectiveness	User Requirements	Technical Requirements for HCN-M approved	0%	100%	TBD
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Technology Improvement	Number of automated climate monitoring pilot sites deployed.	0	54	TBD
2010	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Customer Results	Timeliness and Responsiveness	Delivery Time	HCN sites providing climate data to customers within 24 hours	0%	11%	TBD
2010	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Mission and Business Results	Environmental Management	Environmental Monitoring and Forecasting	Number of climate-quality sites selected for HCN-M stations	0	90	TBD

Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
2010	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Mission and Business Results	Environmental Management	Environmental Monitoring and Forecasting	Explain variance for annual average regional temperature using modernized HCN sites.	13%	78%	TBD
2010	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Mission and Business Results	Environmental Management	Environmental Monitoring and Forecasting	Explain variance for annual average regional precipitation using modernized HCN sites.	12%	50%	TBD
2010	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Technology Improvement	Number of automated climate monitoring pilot sites deployed.	0	95	TBD

**Section E: Security and Privacy (IT Capital Assets only)**

8. Planning & Operational Systems - Privacy Table:					
(a) Name of System	(b) Is this a new system? (Y/N)	(c) Is there at least one Privacy Impact Assessment (PIA) which covers this system? (Y/N)	(d) Internet Link or Explanation	(e) Is a System of Records Notice (SORN) required for this system? (Y/N)	(f) Internet Link or Explanation
HCN-M Phase 1 - Southwest Climate Region	Yes	No	No, because the system will not contain, process, or transmit personal identifying information.	No	No because the system is not a Privacy Act system of records.
HCN-M Phase 2 - South Climate Region	Yes	No	No, because the system will not contain, process, or transmit personal identifying information.	No	No because the system is not a Privacy Act system of records.
HCN-M Phase 3 - Northwest Climate Region	Yes	No	No, because the system will not contain, process, or transmit personal identifying information.	No	No because the system is not a Privacy Act system of records.
HCN-M Phase 4 - South Climate Region	Yes	No	No, because the system will not contain, process, or transmit personal identifying information.	No	No because the system is not a Privacy Act system of records.
MADIS	Yes	No	No, because the system will not contain, process, or transmit personal identifying information.	No	No because the system is not a Privacy Act system of records.

**Details for Text Options:**  
 Column (d): If yes to (c), provide the link(s) to the publicly posted PIA(s) with which this system is associated. If no to (c), provide an explanation why the PIA has not been publicly posted or why the PIA has not been conducted.  
 Column (f): If yes to (e), provide the link(s) to where the current and up to date SORN(s) is published in the federal register. If no to (e), provide an explanation why the SORN has not been published or why there isn't a current and up to date SORN.  
 Note: Working links must be provided to specific documents not general privacy websites. Non-working links will be considered as a blank field.

**Section F: Enterprise Architecture (EA) (IT Capital Assets only)**

In order to successfully address this area of the capital asset plan and business case, the investment must be included in the agency's EA and Capital Planning and Investment Control (CPIC) process and mapped to and supporting the FEA. The business case must demonstrate the relationship between the investment and the business, performance, data, services, application, and

technology layers of the agency's EA.

1. Is this investment included in your agency's target enterprise architecture? Yes

a. If "no," please explain why?

2. Is this investment included in the agency's EA Transition Strategy? Yes

a. If "yes," provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment. Weather and Water/NOAA/NWS/COOP Historical Climate Network - Modernization

b. If "no," please explain why?

3. Is this investment identified in a completed and approved segment architecture? Yes

a. If "yes," provide the six digit code corresponding to the agency segment architecture. The segment architecture codes are maintained by the agency Chief Architect. For detailed guidance regarding segment architecture codes, please refer to <http://www.egov.gov>. 276-000

**4. Service Component Reference Model (SRM) Table:**  
Identify the service components funded by this major IT investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to <http://www.egov.gov>.

Agency Component Name	Agency Component Description	FEA SRM Service Domain	FEA SRM Service Type	FEA SRM Component (a)	Service Component Reused Name (b)	Service Component Reused UPI (b)	Internal or External Reuse? (c)	BY Funding Percentage (d)
WW-WWS-RDV Research, Development and Acquisition for Observations	Supports all NOAA missions which include environmental monitoring as a requirement. Develop and implement sub-orbital in-situ sensing observing systems. Focus on development and implementation of ISOS.	Back Office Services	Asset / Materials Management	Computers / Automation Management			No Reuse	43
CL-COA-OBS Observations	A tiered and integrated system of observing networks adhering to the NRC and GCOS Climate Monitoring Principles, that provides sustained global and U.S. monitoring of climate observation requirements, atmospheric, Ocean (coastal and open), and terrestrial variables, measured from In-situ, airborne, and satellite based sensors.	Back Office Services	Data Management	Meta Data Management			No Reuse	12
WW-WWS-RDV Research, Development and Acquisition of Observations	Supports all NOAA missions which include environmental monitoring as a requirement. Develop and implement sub-orbital in-situ	Back Office Services	Development and Integration	Instrumentation and Testing			No Reuse	33

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<b>4. Service Component Reference Model (SRM) Table:</b> Identify the service components funded by this major IT investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to <a href="http://www.egov.gov">http://www.egov.gov</a> .								
Agency Component Name	Agency Component Description	FEA SRM Service Domain	FEA SRM Service Type	FEA SRM Component (a)	Service Component Reused Name (b)	Service Component Reused UPI (b)	Internal or External Reuse? (c)	BY Funding Percentage (d)
	sensing observing systems. Focus on Development and implementation of ISOS.							
CT-SFX-STW Weather Information for Surface Transportation NSWOS	This capability underpins the Surface Weather Program's ability to help mitigate the impacts of weather on the Nation's surface transportation system. (Re-use of Gateway)	Support Services	Communication	Computer / Telephony Integration	Computer / Telephony Integration	006-48-01-16-01-3201-00	Internal	12

- a. Use existing SRM Components or identify as "NEW". A "NEW" component is one not already identified as a service component in the FEA SRM.
- b. A reused component is one being funded by another investment, but being used by this investment. Rather than answer yes or no, identify the reused service component funded by the other investment and identify the other investment using the Unique Project Identifier (UPI) code from the OMB Ex 300 or Ex 53 submission.
- c. 'Internal' reuse is within an agency. For example, one agency within a department is reusing a service component provided by another agency within the same department. 'External' reuse is one agency within a department reusing a service component provided by another agency in another department. A good example of this is an E-Gov initiative service being reused by multiple organizations across the federal government.
- d. Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the percentage of the BY requested funding amount transferred to another agency to pay for the service. The percentages in the column can, but are not required to, add up to 100%.

<b>5. Technical Reference Model (TRM) Table:</b> To demonstrate how this major IT investment aligns with the FEA Technical Reference Model (TRM), please list the Service Areas, Categories, Standards, and Service Specifications supporting this IT investment.				
FEA SRM Component (a)	FEA TRM Service Area	FEA TRM Service Category	FEA TRM Service Standard	Service Specification (b) (i.e., vendor and product name)
Computer / Telephony Integration	Service Access and Delivery	Delivery Channels	Virtual Private Network (VPN)	TBD in design/acquisition stage
Instrumentation and Testing	Service Platform and Infrastructure	Hardware / Infrastructure	Embedded Technology Devices	TBD in design/acquisition stage
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	TBD in design/acquisition stage
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Wide Area Network (WAN)	TBD in design/acquisition stage
Meta Data Management	Service Platform and Infrastructure	Support Platforms	Dependent Platform	TBD in design/acquisition stage

- a. Service Components identified in the previous question should be entered in this column. Please enter multiple rows for FEA SRM Components supported by multiple TRM Service Specifications
- b. In the Service Specification field, agencies should provide information on the specified technical standard or vendor product mapped to the FEA TRM Service Standard, including model or version numbers, as appropriate.

6. Will the application leverage existing components and/or applications across the Government (i.e., USA.gov, Pay.Gov, etc)?

a. If "yes," please describe.

**Exhibit 300: Part II: Planning, Acquisition and Performance Information**

**Section A: Alternatives Analysis (All Capital Assets)**

Part II should be completed only for investments identified as "Planning" or "Full Acquisition," or "Mixed Life-Cycle" investments in response to Question 6 in Part I, Section A above.

In selecting the best capital asset, you should identify and consider at least three viable alternatives, in addition to the current baseline, i.e., the status quo. Use OMB Circular A-94 for all investments and the Clinger Cohen Act of 1996 for IT investments to determine the criteria you should use in your Benefit/Cost Analysis.

1. Did you conduct an alternatives analysis for this project?      Yes
  - a. If "yes," provide the date the analysis was completed?      4/1/2005
  - b. If "no," what is the anticipated date this analysis will be completed?
  - c. If no analysis is planned, please briefly explain why:

3. Which alternative was selected by the Agency's Executive/Investment Committee and why was it chosen?

The Modernization of the Historical Climatological Network (HCN) was chosen. NOAA leadership does not agree that there is a requirement to modernize the entire COOP, but do agree that the HCN must be modernized in order to meet NOAAs strategic goals, meet stakeholder's needs and preserve the climate record of the nation. While the status quo is the cheapest method it is unsupportable as stations deteriorate, observers leave the program and equipment becomes unsupportable. Partner sites cannot be used to modernize the HCN as modernized stations must be located in close proximity to existing sites and there must be resources available for the long term. Partner sites are not likely to be located at current HCN sites and cannot guarantee long term viability. While there are undisputed benefits from modernizing the entire COOP the cost is prohibitive. It was decided that modernizing the HCN can meet the highest priorities and at the same time create the infrastructure for further modernization of the COOP in the future as agency priorities change or the budget scenarios improve. Incorporating MADIS into the HCN will leverage existing communication and quality control resources. In addition MADIS will support NOAA's goals in the area of surface transportation.

a. What year will the investment breakeven? (Specifically,      Beyond 2021  
when the budgeted costs savings exceed the cumulative costs.)

4. What specific qualitative benefits will be realized?

In 2003 the Western Governors' Association created the requirement for a National Integrated Drought Information System (NIDIS) calling a modernized COOP program as essential to mitigate the costs of drought. This report was produced by a cross-cutting team of experts assessing the wide spectrum of users of COOP data. The report requires stations spaced on a 20x20 mile grid across the US and calls for a modernized COOP program to form the core of NIDIS. This requirement will also meet the requirements of the World Meteorological Organization. An important subset of the current COOP is the Historical Climate Network (HCN). This database consists of observations from about 1000 sites with very long periods of record in some cases extending over 200 years. These stations suffer the same deficiencies of the COOP but are even more sensitive to proper siting and relocation. A priority of NERON is to modernize the HCN with redundant equipment. While the full benefits of NERON will not be met, the 1000 sites will provide a substantial step forward for NIDIS.

The NOAA strategic plan calls for NERON as a requirement to meet 3 of NOAA's four goals.

The National Research Council (NRC) wrote in 1998, "The NWS has the infrastructure and experience to continue operating the COOP successfully if the changes recommended in this report are made". The NRC noted in the report "The dispensation of \$500 million in federal drought insurance was decided by precipitation records from COOP stations during the 1988 drought in the Midwest. In one case, \$6 million was paid on the basis of records from one station."

Having COOP data on a same day basis can save up to \$50 million a year in just three river basins in the west by enhancing water management.

Modernization of HCN will allow the regional variability for temperature and precipitation to be explained. This will enhance the integrity and value of the COOP data. Weather and climate affect over 1/3 of the nations GDP. Information of the climate supports the insurance, agricultural and transportation industries. The losses to the surface transportation community due to lack of weather information runs in the billions of dollars and thousands of lives every year. The MADIS component of COOP Historical Climate Network - Modernization will decrease these losses substantially.

<b>5. Federal Quantitative Benefits</b>				
What specific quantitative benefits will be realized (using current dollars) Use the results of your alternatives analysis to complete the following table:				
	Budgeted Cost Savings	Cost Avoidance	Justification for Budgeted Cost Savings	Justification for Budgeted Cost Avoidance
PY - 1 2007 & Prior	0	0		
PY 2008	0	0		
CY 2009	0	0		
BY 2010	0	0.0002		Avoidance of labor associated with processing paper forms (WS Form B-91).

6. Will the selected alternative replace a legacy system in-part No or in-whole?

a. If "yes," are the migration costs associated with the migration to the selected alternative included in this investment, the legacy investment, or in a separate migration investment?

b. If "yes," please provide the following information:

5b. List of Legacy Investment or Systems		
Name of the Legacy Investment of Systems	UPI if available	Date of the System Retirement

**Section B: Risk Management (All Capital Assets)**

You should have performed a risk assessment during the early planning and initial concept phase of this investment's life-cycle, developed a risk-adjusted life-cycle cost estimate and a plan to eliminate, mitigate or manage risk, and be actively managing risk throughout the investment's life-cycle.

- 1. Does the investment have a Risk Management Plan? Yes
  - a. If "yes," what is the date of the plan? 8/28/2008
  - b. Has the Risk Management Plan been significantly changed since last year's submission to OMB? No
- c. If "yes," describe any significant changes:

- 2. If there currently is no plan, will a plan be developed?
  - a. If "yes," what is the planned completion date?
  - b. If "no," what is the strategy for managing the risks?

3. Briefly describe how investment risks are reflected in the life cycle cost estimate and investment schedule:  
 The project schedule and associated costs allows adequate time and funding for identifying risks and developing mitigation plans for these. By identifying risk (including IT security risks) early in the process, the project team will have necessary information to factor these risks into the system requirements, design and acquisition planning.

**Section C: Cost and Schedule Performance (All Capital Assets)**

EVM is required only on DME portions of investments. For mixed lifecycle investments, O&M milestones should still be included in the table (Comparison of Initial Baseline and Current Approved Baseline). This table should accurately reflect the milestones in the initial baseline, as well as milestones in the current baseline.

- 1. Does the earned value management system meet the criteria in ANSI/EIA Standard-748? Yes
- 2. Is the CV% or SV% greater than +/- 10%? (CV%= CV/EV x 100; SV%= SV/PV x 100) No
  - a. If "yes," was it the CV or SV or both?
  - b. If "yes," explain the causes of the variance:
  - c. If "yes," describe the corrective actions:
- 3. Has the investment re-baselined during the past fiscal year? Yes
  - a. If "yes," when was it approved by the agency head? 11/29/2006

## 4. Comparison of Initial Baseline and Current Approved Baseline

Complete the following table to compare actual performance against the current performance baseline and to the initial performance baseline. In the Current Baseline section, for all milestones listed, you should provide both the baseline and actual completion dates (e.g., "03/23/2003"/ "04/28/2004") and the baseline and actual total costs (in \$ Millions). In the event that a milestone is not found in both the initial and current baseline, leave the associated cells blank. Note that the 'Description of Milestone' and 'Percent Complete' fields are required. Indicate '0' for any milestone no longer active.

Milestone Number	Description of Milestone	Initial Baseline		Current Baseline				Current Baseline Variance		Percent Complete
		Planned Completion Date (mm/dd/yyyy)	Total Cost (\$M) Estimated	Completion Date (mm/dd/yyyy)		Total Cost (\$M)		Schedule (# days)	Cost (\$M)	
				Planned	Actual	Planned	Actual			
1.0	Pilot System: Planning (NERON/NE)	12/31/2017	\$14.982000	12/31/2017		\$14.982000	\$5.826000		-\$0.697661	34.23%
2.0	Pilot System: Acquisition (NERON/NE)	12/31/2017	\$36.190000	12/31/2017		\$36.190000	\$6.160000		-\$0.159698	16.58%
3.0	Pilot System: Operations & Maintenance (NERON/NE)	12/31/2017	\$17.558000	12/31/2017		\$17.558000	\$0.000000		\$0.000000	0%
4.0	Planning	10/1/2009	\$4.234000	10/1/2009	8/30/2008	\$10.600000	\$8.226200	397	-\$0.426720	73.58%
4.1	Needs Identification Complete (OSIP Gate 1)	3/6/2007	\$0.000000	3/6/2007	3/6/2007	\$1.288000	\$0.949600	0	\$0.338400	100%
4.2	Integrated Work Team (IWT) Established	9/30/2007	\$0.000000	9/30/2007	9/30/2007	\$0.278000	\$0.278000	0	\$0.000000	100%
4.3	Risk Management Plan Complete	12/31/2007	\$0.000000	11/15/2007	11/15/2007	\$0.278000	\$0.278000	0	\$0.000000	100%
4.4	Program Development Plan Complete	12/31/2007	\$1.288000	12/31/2007	12/11/2007	\$1.288000	\$2.224000	20	-\$0.936000	100%
4.5	Project Team Kick-Off	1/31/2008	\$0.000000	1/31/2008	1/31/2008	\$0.311000	\$0.311000	0	\$0.000000	100%
4.6	Solution Alternatives Identified (KDP Gate 2)	3/30/2008	\$0.000000	3/30/2008	3/30/2008	\$1.245000	\$1.245000	0	\$0.000000	100%
4.6	Communications Plan Complete	2/28/2007	\$0.000000	2/28/2007	2/28/2008	\$0.311000	\$0.311000	-365	\$0.000000	100%
4.7	System Design & Recommended Solution Complete (KDP Gate 3)	9/30/2008	\$1.875000	9/30/2008	8/30/2008	\$1.867000	\$1.867000	31	\$0.000000	100%
4.8	Acquisition Plan Complete (KDP Gate 4)	9/30/2009	\$1.071000	9/30/2009		\$3.734000	\$0.762600		\$0.170900	25%
4.9	Contract Award	10/1/2009	\$0.000000	10/1/2009		\$0.000000				0%