

## NOAA/NWS/ Advanced Weather Interactive Processing System (AWIPS)

### **INITIATIVE DEFINITION BY08**

#### *Initiative Definition BY08*

Template Name	IT Investment BY2008
Investment Name	NOAA/NWS/ Advanced Weather Interactive Processing System (AWIPS)
Investment Revision Number	12
Is this investment a consolidated business case?	No
Point of Contact	Smith, Natalie
Revision Comment	
Class	IT
Full UPI Code	006-48-01-12-01-3101-00
PY Full UPI Code	006-48-01-12-01-3101-00-108-023
Four Digit UPI Code	3101
Two Digit UPI Code	00
OMB Investment Type	01 - Major Investment
Budget Cycle Status:	OMB Passback Submission
Exhibit 53 Part	IT Investments by Mission Area
OMB Exhibit 53 Major Mission Area	NOAA - Weather and Water
OMB Short Description	AWIPS is a nationwide interactive computer and communications system that integrates all meteorological, hydrologic, satellite, and weather radar data to enable the forecaster to prepare and issue more accurate and timely forecasts and warnings.

### **I.A: OVERVIEW BY08**

#### *Descriptive Information BY08*

Date of Submission	12/29/2006
Agency	Department of Commerce
Bureau	NOAA (NWS)
Name of this Capital Asset	NOAA/NWS/ Advanced Weather Interactive Processing System (AWIPS)
Full UPI Code	006-48-01-12-01-3101-00
What kind of investment will this be in this Budget Year?	Mixed Life Cycle
What was the first budget year this investment was submitted to OMB?	FY2001 or earlier

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 Advanced Weather Interactive Processing System (AWIPS) is the cornerstone of a modernized National Weather Service (NWS). AWIPS hardware and software was deployed to Weather Forecast Offices (WFOs), River Forecast Centers (RFCs), and other NWS sites throughout the United States from 1996 to 1999. The system has been in its Operations and Maintenance phase of its lifecycle since 1999, and is critical to the National Weather Service's mission related to the preservation of life and property from severe weather and flooding events, and the enhancement of the national economy. AWIPS O&M funding is at approximately \$37.0 million per year. AWIPS is in the O&M phase of its lifecycle, but contains a PAC funded Continuous Technology Refresh (CTR) product improvement plan that includes the Linux Migration Project to increase processing capacity. AWIPS PAC funding is projected to be \$12.765 million for the next four years. PAC funds will be used to continue to infuse new science and technology into the AWIPS system. This technology infusion consists of separate projects that address three different areas of the AWIPS infrastructure: hardware, communications, and software. The hardware enhancements convert the original (dated) Hewlett-Packard Unix hardware to Linux based hardware to provide increased processing and mass storage capacity, and then continuously refresh the hardware on a cyclical basis; the communications enhancements increase satellite network bandwidth; and the software enhancement will re-engineer the AWIPS software suite into a standard Service Oriented Architecture making it easier and less expensive to integrate improved science and algorithms into AWIPS, while reducing software O&M costs. This AWIPS Product Improvement (API) strategy is designed to increase system performance while reducing maintenance costs and processing latency. AWIPS collects, communicates, processes, displays, and analyzes hydro-meteorological data that is fundamental to the conduct of the NWS mission. Technology infusion is essential for the future of AWIPS. Technology infusion will allow AWIPS to

accommodate the high volume, fine-scale data that are available from advanced satellite sensors, new radars, and other ground based automated observing systems, and advanced numerical weather prediction models. It will enable improved weather warning and forecast services and provide critical support to the agency in meeting its GPRA goals.

### Screening Questions BY08

Did the Agency's Executive/Investment Committee approve this request?	Yes
If "yes," what was the date of this approval?	6/17/2003
Did the Project Manager review this Exhibit?	Yes
Contact information of Project Manager?	

Project Manager Name

Piercy, Charles

Project Manager Phone Number (301) 713-3409 X106

Project Manager E-mail charles.piercy@noaa.gov

Identify the Product or Program Manager

Has the agency developed and/or promoted cost effective, energy efficient and environmentally sustainable techniques or practices for this project. Yes

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

Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only)

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

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

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

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

If "yes," check all of the PMA initiatives that apply: Budget Performance Integration, Competitive Sourcing, Expanded E-Government

Briefly describe how this asset directly supports the identified initiative(s)  
This investment supports Expanded Electronic Government (E-Gov) through direct applicability to the Disaster Management PMA E-Gov Initiative related to the HazCollect and All Hazards (Weather) Radio projects and the AWIPS Wide Area Network (WAN) and NOAAPort are important data sources for NWS web farms, which are accessible through www.firstgov.gov. AWIPS supports the PMA Budget Performance Integration initiative because PAC investments are closely tied to GPRA performance measures.

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.) Yes

Does this investment address a weakness found during the PART Review? No

If "yes," what is the name of the PARTed program? National Oceanic and Atmospheric Administration Weather and Related Programs

If "yes," what PART rating did it receive? Moderately Effective

Is this investment for information technology? Yes

### IT Screening Questions BY08

If the answer to Question: "Is this investment for information technology?" was "Yes," complete this sub-section. If the answer is "No," do not answer this sub-section.

What is the level of the IT Project? (per CIO Council PM Guidance) Level 3

What project management qualifications does the Project Manager have? (per CIO Council's PM Guidance): (1) Project manager has been validated as qualified for this investment

Is this investment identified as "high risk" on the Q4 - Yes

FY 2006 agency high risk report (per OMB's "high risk" memo)?

Is this a financial management system? No  
 If "yes", does this investment address a FFMIA compliance area? No  
 If "yes," which FFMIA compliance area? No  
 If "no," what does it address?  
 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

Provide the Percent Budget Formulation (BF) for the budget year 0  
 Provide the Percent Budget Execution (BE) for the budget year 0

Percent Financial - means an estimated percentage of the total IT Investment budget authority associated with the financial components. See the financial systems definition (section 53.4) for a description of financial functions. Exclude information about budget formulation and execution activities when determining this.

Provide the Percentage Financial Management for the budget year 0

What is the percentage breakout for the total FY2008 funding request for the following? (This should total 100%) 100

For budget year, what percentage of the total investment is for hardware? 45

For budget year, what percentage of the total investment is for software? 25

For budget year, what percentage of the total investment is for services? 11

For budget year, what percentage of the total investment is for other services? 19

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

Contact information of individual responsible for privacy related questions:

Privacy Officer Name  
 Carter-Johnson, Jean  
 Privacy Officer Phone Number (301) 713-3540 x209  
 Privacy Officer Title NOAA Privacy Act Officer  
 Privacy Officer E-mail Jean.Carter.Johnson@noaa.gov  
 Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval? No

**I.A.1 DOC SUPPLEMENTAL**

*Exhibit 53 Fields*

FEA BRM

BRM FEA Code	Line Of Business	BRM FEA Code	Sub Function	Primary Mapping to BRM
108	Environmental Management	108023	Environmental Monitoring and Forecasting	True
104	Disaster Management	104008	Disaster Preparedness and Planning	False
202	Knowledge Creation and Management	202070	General Purpose Data and Statistics	False

If this investment supports homeland security, Indicate Emergency Preparedness and Response by corresponding number which homeland security mission area(s) this investment supports?





On Ex.53: Yes																				
Total	DME	15939	16264	16264	16158	13985	12708	13280	16553	12764	12764	12764	12764	12764	12764	12764	12764	12764	236027	
Yearly Budgets	SS	32028	35318	37720	36264	37174	36695	33610	33994	37766	37766	37766	37766	37766	37766	37766	37766	37766	622697	
	Total	47967	51582	53984	52422	51159	49403	46890	50547	50530	50530	50530	50530	50530	50530	50530	50530	50530	858724	

**I.C: ACQUISITION/CONTRACT STRATEGY BY08**

*Contract/Task Order Table BY08*

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.

Contract/Task Orders Table

Has the contract been awarded?	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	Is this an Interagency Acquisition?	Is it performance based?	Competitively awarded?	What, if any, alternative financing option is being used?	Is EVM in the contract?	Does the contract include the required security and privacy clauses?	Name of CO	CO Contact info (phone/e)
Yes	8/17/2005	8/17/2005	8/16/2015	301900	No	Yes	Yes	NA	Yes	Yes	Middleton, Anita	301-713-0276 / Anita.R.Middleton

*Contract/Task Order Questions BY08*

If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:

Do the contracts ensure Section 508 compliance?	Yes
Explain why (508 Compliance)?	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)).
Is there an acquisition plan which has been approved in accordance with agency requirements?	Yes
What is the date of your acquisition plan?	6/1/2004
If "no," will an acquisition plan be developed?	
If "no," briefly explain why:	

**I.D: PERFORMANCE INFORMATION BY08**

*Performance Goals & Measures BY08*

Agencies must use the Performance Goals and Measures Table below for reporting performance goals and measures for all non-IT investments and for existing IT investments that were initiated prior to FY 2005. The table can be extended to include measures for years beyond FY 2006.

Performance Goals and Measures

Fiscal Year	Strategic Goal(s) Supported	Performance Measure	Actual/baseline (from Previous Year)	Planned Performance Metric (Target)	Performance Metric Results (Actual)
2003	Goal 3: Observe and Manage the Earth's Environment to Promote Sustainable Growth	Tornado Warning Lead Time	12 Minutes	12 Minutes	13 Minutes
2003	Goal 3: Observe and Manage the Earth's Environment to Promote Sustainable Growth	Flash Flood Warning Lead Time	52 Minutes	47 Minutes	41 Minutes
2003	Goal 3: Observe and Manage the Earth's Environment to Promote Sustainable Growth	Winter Storm Warning	13 Hours	13 Hours	14 Hours
2004	Goal 3: Observe and Manage the Earth's Environment to Promote Sustainable Growth	Tornado Warning Lead Time	13 minutes	12 minutes	13 minutes
2004	Goal 3: Observe and Manage the Earth's Environment to Promote Sustainable Growth	Flash Flood	41 minutes	50 minutes	47 minutes
2004	Goal 3: Observe and Manage the Earth's Environment to Promote Sustainable Growth	Winter Storm Warning	14 hours	14 hours	15 hours
2005	Goal 3: Observe and Manage the Earth's Environment to Promote Sustainable Growth	Tornado Warning Lead Time	13 minutes	13 Minutes	13 minutes
2005	Goal 3: Observe and Manage the Earth's Environment to Promote Sustainable Growth	Flash Flood	47 minutes	48 minutes	54 minutes
2005	Goal 3: Observe and Manage the Earth's Environment to	Winter Storm Warning	15 hours	15 hours	17 hours

Promote Sustainable Growth				
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FEA Performance Reference Model (PRM) BY08

FEA PRM

Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Planned Improvement to the Baseline	Actual Results
2006	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Customer Results	Customer Benefit	Customer Satisfaction	Customer Satisfaction Surveys	80%	No change	90%
2006	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	Disaster Management	Disaster Monitoring and Prediction	Lead Time for Tornado Warnings	13 minutes	No change	TBD
2006	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Message Latency	60 seconds	No change	TBD
2006	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Workstation Performance Ratings	116 seconds	No change	TBD
2007	3.1 Advance understanding	Customer Results	Customer Benefit	Customer Satisfaction	Customer Satisfaction	81%	2% better	-

	and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.				Surveys			
2007	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	Disaster Management	Disaster Monitoring and Prediction	Lead Time for Tornado Warnings	14 minutes	1 minute increase	-
2007	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Message Latency	60 seconds	-	-
2007	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Workstation Performance Ratings	110 seconds	5% better	-
2008	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Customer Results	Customer Benefit	Customer Satisfaction	Customer Satisfaction Surveys	82%	2% better	-
2008	3.1 Advance understanding and predict changes in the Earth's environment	Mission and Business Results	Disaster Management	Disaster Monitoring and Prediction	Lead Time for Tornado Warnings	15 minutes	1 minute increase	-

	to meet America's economic, social, and environmental needs.							
2008	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Message Latency	60 seconds	-	-
2008	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Workstation Performance Ratings	105 seconds	5% better	-
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Customer Results	Customer Benefit	Customer Satisfaction	Customer Satisfaction Surveys	84%	2% better	-
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	Disaster Management	Disaster Monitoring and Prediction	Lead Time for Tornado Warnings	15 minutes	-	-
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and	Technology	Efficiency	Response Time	Message Latency	60 seconds	-	-

	environmental needs.							
2009	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Workstation Performance Ratings	99.5 seconds	5.5% better	-
2010	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Customer Results	Customer Benefit	Customer Satisfaction	Customer Satisfaction Surveys	86%	1% better	-
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	Disaster Management	Disaster Monitoring and Prediction	Lead Time for Tornado Warnings	15 minutes	-	-
2010	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Message Latency	60 seconds	-	-
2010	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Workstation Performance Ratings	94.6 seconds	5% better	-
2011	3.1 Advance understanding	Customer Results	Customer Benefit	Customer Satisfaction	Customer Satisfaction	87%	1% better	-

	and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.				Surveys			
2011	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	Disaster Management	Disaster Monitoring and Prediction	Lead Time for Tornado Warnings	15 minutes	-	-
2011	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Message Latency	60 seconds	-	-
2011	3.1 Advance understanding and predict changes in the Earth's environment to meet America's economic, social, and environmental needs.	Technology	Efficiency	Response Time	Workstation Performance Ratings	90 seconds	5% better	-

All new IT investments initiated for FY 2005 and beyond must use Table 2 and are required to use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). Please use Table 2 and the PRM to identify the performance information pertaining to this major IT investment. 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 at least four different Measurement Areas (for each fiscal year). The PRM is available at [www.egov.gov](http://www.egov.gov).

***I.E: SECURITY AND PRIVACY BY08***

***Costs & Risks BY08***

In order to successfully address this area of the business case, each question below must be answered at the system/application level, not at a program or agency level. Systems supporting this investment on the planning and operational systems security tables should match the systems on the privacy table below. Systems on the Operational Security Table must be included on your agency FISMA system inventory and should be easily referenced in the inventory (i.e., should use the same name or identifier).

All systems supporting and/or part of this investment should be included in the tables below, inclusive of both agency owned systems and contractor systems. For IT investments under development, security and privacy

planning must proceed in parallel with the development of the system/s to ensure IT security and privacy requirements and costs are identified and incorporated into the overall lifecycle of the system/s.

Please respond to the questions below and verify the system owner took the following actions:

Have the IT security costs for the system(s) been identified and integrated into the overall costs of the investment? Yes

Provide the Percentage IT Security for the budget year 12.80

What is the total dollar amount allocated to IT security for this investment in this budget year? Please indicate whether an increase in IT security funding is requested to remediate IT security weaknesses, specifying the amount and a general description of the weakness.

\$6,472.702K is 12.8% of \$50,368K.

Is identifying and assessing security and privacy risks a part of the overall risk management effort for each system supporting or part of this investment. Yes

*Security: Planning Systems BY08*

Systems in Planning - Security

Name of System	Agency/ or Contractor Operated System?	Planned Operational Date	Planned or Actual C&A Completion Date
AWIPS NOAA - 8107	Contractor and Government	9/8/2008	8/8/2008

*Security: Operational Systems BY08*

Investment C&A Status 55 - All of the systems within this investment have been through a C&A Process and have been granted Full Authority to Operate

Operational Systems - Security

Name of System	Agency/ or Contractor Operated System?	NIST FIPS 199 Risk Impact level	Has C&A been Completed, using NIST 800-37?	Date C&A Complete	What standards were used for the Security Controls tests?	Date Complete(d): Security Control Testing	Date the contingency plan tested
AWIPS NOAA - 8107	Contractor and Government	High	Yes	8/8/2005	FIPS 200 / NIST 800-53	8/31/2006	8/3/2006

Do current security controls tests conform to NIST 800-53A?

*Security: Weaknesses & Contractor Procedures BY08*

Have any weaknesses, not yet remediated, related to any of the systems part of or supporting this investment been identified by the agency or IG? Yes

If "yes," have those weaknesses been incorporated into the agency's plan of action and milestone process? Yes

Indicate whether an increase in IT security funding is requested to remediate IT security weaknesses? No

If "yes," specify the amount, provide a general description of the weakness, and explain how the funding request will remediate the weakness.

How are contractor security procedures monitored, verified, and validated by the agency for the contractor

systems above?

The system is supported by a combination of contract and federal staff, federal-owned equipment, and resides in contractor and government facilities. The nature of contracted IT services is for system administration, systems engineering, and control testing support. In accordance with Commerce Procurement Memorandum 2003-09 issued November 17, 2003, Commerce Acquisition Regulation (CAR) 1352.239.73 - Security Requirements for Information Technology Resources has been incorporated into all IT services contracts. In addition, Commerce Acquisition Manual (CAM) 1337.70 - Security Processing Requirements for On-Site Service Contracts is implemented for personnel security. Security is incorporated into the investment's system life cycle in accordance with DOC IT Security Program Policy and the recommendations of NIST SP 800-64 - Security Considerations in the Information System Development Life Cycle. Contractor performance of required IT security management, operational, and technical controls is assessed in accordance with draft NIST SP 800-26 Revision 1, Security Self-Assessment Guide for Information Technology Systems, as part of the annual FISMA self-assessment of control effectiveness.

The AWIPS program manages security issues through the Configuration Control Board (CCB). The CCB, which includes the AWIPS Program Manager, meets regularly and reviews all issues related to AWIPS. Changes are implemented after prior approval from the CCB. AWIPS also utilizes its NCF Documentation to execute security policies, in which contractor security procedures are included. Comprehensive, standard Department of Commerce (DOC) contract clauses specifying "Security Processing Requirements for Contractor/Subcontractor Personnel Working in a DOC site" (C.3 1352.237-71) and "Security Requirements for Information Technology (IT) Resources" (C.5 1352.239-73) were included in Section C of the AWIPS contract. National Agency Check with Inquiries (NACI) background investigations are performed on contract AWIPS employees. Conformance to these contract clauses is the responsibility of the AWIPS Contracting Officer, the Contracting Officer's Technical Representatives, and the AWIPS IT Security Officer. Security control testing consisting of vulnerability scanning occurs on a quarterly basis using the Harris scan tool. Contingency plan testing including the activation of our Back-up Network Control Facility (BNCF) and Back-up Master Ground Station (BMGS) occurs every six months.

*Privacy: Planning & Operational Systems BY08*

Planning & Operational Systems - Privacy

Name of System	Is this a new system?	Is there a Privacy Impact Assessment (PIA) that covers this system?	Is the PIA available to the public?	Is a System of Records Notice (SORN) required for this system?	Was a new or amended SORN published in FY 06?
AWIPS-N8107	No	No, because the system does not contain, process, or transmit personal identifying information.	No, because a PIA is not yet required to be completed at this time.	No	No, because the system is not a Privacy Act system of records.

***1.F: ENTERPRISE ARCHITECTURE (EA) BY08***

*General EA Questions BY08*

In order to successfully address this area of the business case and capital asset plan you must ensure the investment is included in the agency's EA and Capital Planning and Investment Control (CPIC) process, and is mapped to and supports the FEA. You must also ensure the business case demonstrates the relationship between the investment and the business, performance, data, services, application, and technology layers of the agency's EA.

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

If "no," please explain why this investment is not included in your agency's target enterprise architecture?

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

If "yes," provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment. Advanced Weather Interactive Processing System (AWIPS)

If "no," please explain why this investment is not included in the agency's EA Transition Strategy?

*FEA SRM BY08*

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.whitehouse.gov/omb/egov/>.

Service Component Reference Model (SRM) Table

Agency Component Name	Agency Component Description	Service Domain	FEA SRM Service Type	FEA SRM Component	FEA Service Component Reused Name	FEA Service Component Reused UPI	Internal or External Reuse?	BY Funding Percentage
WWW-LFW-EIP, WWW-STI-Capability G	NWSRFS-Defines the set of capabilities that support the representation of the interaction between real-world objects.	Business Analytical Services	Analysis and Statistics	Mathematical			No Reuse	10
WWW-LFW-EIP, WWW-STI-Capability G	D2D, GFE, LAMP, & NWSRFS-Defines the set of capabilities that support the foretelling of something in advance by the use of data.	Business Analytical Services	Analysis and Statistics	Mathematical			No Reuse	10
WWW-LFW-EIP, WWW-STI-Capability G	D2D, GFE, LAMP, & NWSRFS-Defines the set of capabilities that support the use of mathematical functions and algorithms for the analysis of data.	Business Analytical Services	Analysis and Statistics	Mathematical			No Reuse	10
WWW-LFW-EIP, WWW-STI-Capability G	NWSRFS-Defines the set of capabilities that support the use of data flow and data modeling diagrams for applying systematic analysis of data.	Business Analytical Services	Analysis and Statistics	Structural / Thermal			No Reuse	10
		Business Analytical Services	Visualization	CAD			No Reuse	10
WWW-LFW-EIP, WWW-STI-Capability G	D2D, GFE, & NWSRFS-Defines the set of capabilities that support the presentation of information in the form of diagrams or tables.	Business Analytical Services	Visualization	Graphing / Charting			No Reuse	10
WWW-LFW-EIP, WWW-STI-Capability G	D2D, GFE, & NWSRFS-Defines the set of capabilities that support the	Business Analytical Services	Visualization	Imagery			No Reuse	10

	creation of film or electronic images from pictures, paper forms or graphics for static or dynamic use.							
WWW-LFW-EIP, WWW-STI-Capability G	D2D, GFE, & NWSRFS-Defines the set of capabilities that support the use of elevation, latitude, and longitude coordinates.	Business Analytical Services	Visualization	Mapping / Geospatial / Elevation / GPS			No Reuse	10
WWW-LFW-EIP, WWW-STI-Capability G	WAN, SBN-Defines the set of capabilities that support the connectivity between server hardware, software and telecommunications equipment into a single logical system.	Support Services	Communication	Computer / Telephony Integration			No Reuse	10
WWW-LFW-EIP, WWW-STI-Capability G	NCF, LDAD-Defines the set of capabilities that support the management of permissions for logging onto a computer or network.	Support Services	Security Management	Access Control			No Reuse	10

Use existing SRM Components or identify as "NEW". A "NEW" component is one not already identified as a service component in the FEA SRM.

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.

'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.

Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the funding level transferred to another agency to pay for the service.

#### FEA TRM BY08

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.

Technical Reference Model (TRM) Table

FEA SRM Component	FEA TRM Service Area	FEA TRM Service Category	FEA TRM Service Standard	Service Specification (i.e. vendor or product name)
Software Development	Component Framework	Business Logic	Platform Independent	JavaScript
Data Exchange	Component Framework	Data Interchange	Data Exchange	XML
Data Exchange	Component Framework	Data Management	Database Connectivity	Object Linking and Embedding/Database (OLE/DB)

Data Exchange	Component Framework	Data Management	Reporting and Analysis	XML for Analysis
Data Exchange	Component Framework	Presentation / Interface	Dynamic Server-Side Display	Java Server Pages (JSP)
Data Exchange	Component Framework	Presentation / Interface	Static Display	Hyper Text Markup Language (HTML)
Intrusion Prevention	Component Framework	Security	Certificates / Digital Signatures	Secure Sockets Layer (SSL)
Intrusion Prevention	Component Framework	Security	Supporting Security Services	Secure Shell (SSH)
Intrusion Prevention	Component Framework	Security	Supporting Security Services	Transport Layer Security (TLS)
Data Exchange	Service Access and Delivery	Access Channels	Collaboration / Communications	Facsimile (Fax)
Data Exchange	Service Access and Delivery	Access Channels	Other Electronic Channels	Uniform Resource Locator (URL)
Data Exchange	Service Access and Delivery	Access Channels	Other Electronic Channels	Web Service
Data Exchange	Service Access and Delivery	Access Channels	Web Browser	Netscape Communicator
Data Exchange	Service Access and Delivery	Delivery Channels	Intranet	AWIPS-based intranet
Access Control	Service Access and Delivery	Service Requirements	Legislative / Compliance	Section 508
Intrusion Prevention	Service Access and Delivery	Service Requirements	Legislative / Compliance	Security
Access Control	Service Access and Delivery	Service Requirements	Legislative / Compliance	Web Content Accessibility
Access Control	Service Access and Delivery	Service Transport	Service Transport	File Transfer Protocol (FTP)
Access Control	Service Access and Delivery	Service Transport	Service Transport	Hyper Text Transfer Protocol (HTTP)
Access Control	Service Access and Delivery	Service Transport	Service Transport	Internet Protocol (IP)
Access Control	Service Access and Delivery	Service Transport	Service Transport	Transport Control Protocol (TCP)
Access Control	Service Access and Delivery	Service Transport	Supporting Network Services	Directory Services (X.500)
Access Control	Service Access and Delivery	Service Transport	Supporting Network Services	Domain Name System (DNS)
Access Control	Service Access and Delivery	Service Transport	Supporting Network Services	Simple Network Management Protocol (SNMP)
Data Exchange	Service Interface and Integration	Integration	Enterprise Application Integration	Transformation and Formatting
Data Exchange	Service Interface and Integration	Integration	Middleware	Database Access: OPEN ANSI SQL/92
Data Exchange	Service Interface and Integration	Integration	Middleware	Remote Procedure Call (RPC)
Data Exchange	Service Interface and Integration	Interoperability	Data Format / Classification	eXtensible Markup Language (XML)
Data Exchange	Service Interface and Integration	Interoperability	Data Types / Validation	XML Schema
Data Exchange	Service Platform and Infrastructure	Database / Storage	Database	SQL Server
Data Exchange	Service Platform	Delivery Servers	Web Servers	Apache

	and Infrastructure			
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Embedded Technology Devices	Hard Disk Drive
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Embedded Technology Devices	Microprocessor
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Embedded Technology Devices	Random Access Memory (RAM)
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Embedded Technology Devices	Redundant Array of Independent Disks (RAID)
Computer / Telephony Integration	Service Platform and Infrastructure	Hardware / Infrastructure	Local Area Network (LAN)	Ethernet
Computer / Telephony Integration	Service Platform and Infrastructure	Hardware / Infrastructure	Local Area Network (LAN)	Token Ring
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Firewall
Computer / Telephony Integration	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Gateway
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Hub
Computer / Telephony Integration	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Integrated Services Digital Network (ISDN)
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Router
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Switch
Computer / Telephony Integration	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	T1/T3
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Peripherals	Printer
Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	Enterprise Server
Computer / Telephony Integration	Service Platform and Infrastructure	Hardware / Infrastructure	Wide Area Network (WAN)	Frame Relay
Change Management	Service Platform and Infrastructure	Software Engineering	Software Configuration Management	Change Management
Quality Management	Service Platform and Infrastructure	Software Engineering	Software Configuration Management	Defect Tracking
Program / Project Management	Service Platform and Infrastructure	Software Engineering	Software Configuration Management	Deployment Management
Program / Project	Service Platform	Software	Software	Requirements Management

Management	and Infrastructure	Engineering	Configuration Management	and Traceability
Program / Project Management	Service Platform and Infrastructure	Software Engineering	Software Configuration Management	Task Management
Program / Project Management	Service Platform and Infrastructure	Software Engineering	Software Configuration Management	Version Management
Quality Management	Service Platform and Infrastructure	Software Engineering	Test Management	Business Cycle Testing
Quality Management	Service Platform and Infrastructure	Software Engineering	Test Management	Configuration Testing
Quality Management	Service Platform and Infrastructure	Software Engineering	Test Management	Functional Testing
Quality Management	Service Platform and Infrastructure	Software Engineering	Test Management	Installation Testing
Performance Management	Service Platform and Infrastructure	Software Engineering	Test Management	Performance Profiling
Quality Management	Service Platform and Infrastructure	Software Engineering	Test Management	Reliability Testing
Quality Management	Service Platform and Infrastructure	Software Engineering	Test Management	Security and Access Control Testing
Quality Management	Service Platform and Infrastructure	Software Engineering	Test Management	Usability Testing (508 Testing)
Computers / Automation Management	Service Platform and Infrastructure	Support Platforms	Platform Independent	Java 2 Platform Enterprise Edition (J2EE)
Computers / Automation Management	Service Platform and Infrastructure	Support Platforms	Platform Independent	Linux

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

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.

#### *Reuse & Information Sharing BY08*

Will the application leverage existing components and/or No applications across the Government (i.e., FirstGov, Pay.Gov, etc)?

If "yes," please describe how the application will leverage existing components and/or applications across the Government.

Does this investment provide the public with access to a No government automated information system?

If "yes," does customer access require specific software (e.g., a specific web browser version)?

If "yes," provide the specific product name(s) and version number(s) of the required software and the date when the public will be able to access this investment by any software (i.e. to ensure equitable and timely access of government information and services).

#### *FEA Primary Mapping BY08*

FEA Primary Mapping

Reference Model: BRM  
 Business Area: Services For Citizens  
 Line of Business: Environmental Management  
 Sub Function: Environmental Monitoring and Forecasting  
 Mapping Code: 108023

**II: PLANNING, ACQUISITION, MIXED LIFE-CYCLE**

*Instructions*

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.

**II.A: ALTERNATIVES ANALYSIS BY08**

*Analysis Background BY08*

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.

Did you conduct an alternatives analysis for this project? Yes

If "yes," what is the date of the analysis? 5/1/2002

If "no," what is the anticipated date this analysis will be completed?

If no analysis is planned, please briefly explain why:

*Alternatives Table BY08*

Use the results of your alternatives analysis to complete the following table:

Alternatives Analysis Results

Send to OMB	Alternative Analyzed	Description of Alternative	Risk Adjusted Lifecycle Costs estimate	Risk Adjusted Lifecycle Benefits estimate
True	1 Migrate to LINUX	New Strategy - Ensure Capacity and Performance of Field Office to Keep Pace with Processing and Storage Demands - Complete AWIPS LINUX Evolution (Phase II) - Continuous Cyclical IT Refreshment Alternative 1 migrate existing components to multi-source mass market servers and workstations running the LINUX operating system. Mass market components provide more processing capability, more storage and more reliability at a fraction of the cost of a same-vendor Unix replacement components.	205.2	494.8
True	2 HP Replacement	Upgrade AWIPS Components with the Currently Available HP Boxes, Continue with UNIX Operating System Alternative 2 would upgrade the current system by replacing existing system components with new components produced by the same manufacturer or by upgrading existing system components by adding higher capacity processing and storage modules. This alternative would limit the AWIPS system to one manufacturer thus limit compatibility and the flexibility to take advantage of technology improvements.	230.3	469.7
True	3 Major IT Replacement	Replace AWIPS Through a Major IT Procurement Alternative 3 would be to replace the current AWIPS system in a major IT procurement. Without continuous IT refreshment, AWIPS equipment will reach end of life and be unsupported in 5 to 7 years and a full scale system acquisition will be necessary to replace the present system.	700	0

True	4	Status Quo	Leave system as deployed in 1997 - 1999 without refreshing software, communications, or hardware components.	700	0
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### Selected Alternative BY08

Which alternative was selected by the Initiative Governance process and why was it chosen?

Alternate 1 was selected. The initiative migrates the existing system components to multi-source mass market servers and workstations running the LINUX operating system. Mass market components provide more processing capability, more storage and more reliability at a fraction of the cost of a same-vendor UNIX replacement system for the current AWIPS components.

What specific qualitative benefits will be realized?

Allows for AWIPS capacity and performance to keep pace with projected demands.

## II.B: RISK MANAGEMENT BY08

### Risk Management Plan BY08

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.

Does the investment have a Risk Management Plan? Yes

What is the date of the risk management plan? 6/27/2005

Has the Risk Management Plan been significantly changed since last year's submission to OMB? Yes

If "yes," describe any significant changes to the Risk Management Plan:

As a result of the AWIPS Re-compete (AWIPS-R) O&M solicitation, a new prime contract was awarded to Raytheon Information Solutions (RIS) on August 17, 2005. Subsequently, a decision was made to incorporate the Risk Management Plan (RMP) provided as section 1.4 of the RIS AWIPS Technical Proposal. This replaced the previous Government developed risk management plan. Risks will be managed jointly with the contractor using the Risk Assessment, Management, and Planning (RAMP) tool. Risks will periodically be reviewed in the Partnership Integrated Product Team (IPT), which meets on a bi-weekly basis.

The risk inventory for AWIPS is dynamic and currently contains over 24 risks. Initial high impact programmatic risks include: 4 risks related to transition to the new contractor, 1 risk associated with O&M, and 2 risks in the technical/operational category.

If there currently is no risk plan, will a plan be developed?

If "yes," what is the planned completion date of the risk plan?

If "no," what is the strategy for managing the risks?

Briefly describe how investment risks are reflected in the life cycle cost estimate and investment schedule:

In accordance with the approach suggested in the Project Management Institute (PMBOK 3rd Edition, paragraph 11.5.2.2.3) the project cost and schedule baseline includes needed resources (time, funds, and other resources) to handle known threats or opportunities.

### Investment Risks BY08

Identify and prioritize the top risks of this investment along with their probability and impact.

The top risks affecting this investment in priority order are the following:

1) Ability of AWIPS to keep pace with projected demand for capacity and performance. Probability of occurrence: High. Impact: Medium

2) Risk the the AWIPS software re-engineering project will take longer than planned. Probability of occurrence: Medium. Impact: Medium

3) Delays in acquisition process. Probability of occurrence: Low. Impact Medium.

## II.C: COST AND SCHEDULE PERFORMANCE BY08

### Earned Value BY08

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.

Does the earned value management system meet the criteria in ANSI/EIA Standard - 748? Yes

Answer the following questions about current cumulative cost and schedule performance. The numbers reported below should reflect current actual information. (Per OMB requirements Cost/Schedule Performance information should include both Government and Contractor Costs):

What is the Planned Value (PV)?	27.97
What is the Earned Value (EV)?	27.95
What is the actual cost of work performed (AC)?	27.56
What costs are included in the reported Cost/Schedule Performance information (Government Only/Contractor Only/Both)?	Contractor and Government
EVMS "As of" date:	12/31/2006
What is the calculated Schedule Performance Index (SPI = EV/PV)?	1
What is the schedule variance (SV = EV-PV)?	-0.0130
What is the calculated Cost Performance Index (CPI = EV/AC)?	1.01
What is the cost variance (CV = EV-AC)?	0.3880

**Cost/Schedule Variance BY08**

Is the CV% or SV% greater than 10%? (CV%= CV/EV x 100; SV%= SV/PV x 100)	No
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If "yes," was it the CV or SV or both?

If "yes," explain the variance:

If "yes," what corrective actions are being taken?

What is the most current "Estimate at Completion"?	52.94
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**Performance Baseline BY08**

Have any significant changes been made to the baseline during the past fiscal year?	Yes
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If "yes," when was it approved by OMB?

The "Total Cost" figures in the Current Baseline reflect the 8/2005 award of our new AWIPS O&M contract. We have included costs for five option years which extend the contract period of performance. This does not reflect any program cost growth.

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.

**Comparison of Initial Baseline and Current Approved Baseline**

Milestone Number	Description of Milestone	Initial Baseline		Current Baseline				Current Baseline Variance		Percent Complete
		Planned Completion Date	Total Cost (Estimated)	Completion Date		Total Cost		Schedule (# days)	Cost	
				Planned	Actual	Planned	Actual			
1	Program Management	09/30/2010	\$21.509	08/16/2015		\$40.915	\$9.049		\$7.317	40%
2	Architecture Analysis	09/30/2010	\$5.170	08/16/2015		\$4.918	\$0.961		\$0.072	21%
3	IT Security	09/30/2010	\$8.450	09/30/2010	09/30/2005	\$8.450	\$2.632	1826	\$5.818	100%
4	Linux Migration	09/30/2010	\$15.885	09/30/2010		\$15.885	\$10.590		\$3.388	88%
5	SBN Enhancement	09/30/2010	\$4.241	09/30/2010	09/30/2005	\$4.241	\$0.563	1826	\$3.678	100%
6	H/W, S/W Licenses	09/30/2010	\$0.000	08/16/2015		\$2.692				0%
7	Hardware Refresh	09/30/2010	\$34.310	08/16/2015		\$82.650	\$0.951		(\$0.124)	1%
<b>Project Totals</b>		<b>09/30/2010</b>	<b>\$89.565</b>	<b>08/16/2015</b>	<b>09/30/2005</b>	<b>\$159.751</b>	<b>\$24.746</b>	<b>3607</b>	<b>\$20.149</b>	<b>28.10</b>

**III: OPERATIONS AND MAINTENANCE**

*Instructions*

Part III should be completed only for investments identified as "Operation and Maintenance" (Steady State) in response to Question 6 in Part I, Section A above.

**III.A: RISK MANAGEMENT BY08**

*Risk Management Plan BY08*

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.

Does the investment have a Risk Management Plan? Yes

What is the date of the risk management plan? 6/27/2005

Has the Risk Management Plan been significantly changed since last year's submission to OMB? Yes

If "yes," describe any significant changes to the Risk Management Plan:

As a result of the AWIPS Re-compete (AWIPS-R) O&M solicitation, a new prime contract was awarded to Raytheon Information Solutions (RIS) on August 17, 2005. Subsequently, a decision was made to incorporate the Risk Management Plan (RMP) provided as section 1.4 of the RIS AWIPS Technical Proposal. This replaced the previous Government developed risk management plan. Risks will be managed jointly with the contractor using the Risk Assessment, Management, and Planning (RAMP) tool. Risks will periodically be reviewed in the Partnership Integrated Product Team (IPT), which meets on a bi-weekly basis.

The risk inventory for AWIPS is dynamic and currently contains over 24 risks. Initial high impact programmatic risks include: 4 risks related to transition to the new contractor, 1 risk associated with O&M, and 2 risks in the technical/operational category.

If there currently is no risk plan, will a plan be developed?

If "yes," what is the planned completion date of the risk plan?

If "no," what is the strategy for managing the risks?

**III.B: COST AND SCHEDULE PERFORMANCE BY08**

*Operational Analysis BY08*

Was operational analysis conducted? Yes

If "yes," provide the date the operational analysis was completed. 6/22/2006

Please provide a brief summary of the operational analysis results.

The latest performance data is as of May 31, 2006. The data shows AWIPS is meeting or exceeding all of its performance goals, in fact the Message Latency, Workstation Performance Rating, and SBN Availability are all showing positive trends significantly exceeding their respective thresholds for April 2006.

If "no," please explain why it was not conducted and if there are any plans to conduct operational analysis in the future:

*Performance Baseline BY08*

Complete the following table to compare actual cost performance against the planned cost performance baseline. Milestones reported may include specific individual scheduled preventative and predictable corrective maintenance activities, or may be the total of planned annual operation and maintenance efforts.

What costs are included in the reported Cost/Schedule Performance Contractor and Government information (Government Only/Contractor Only/Both)?

Comparison of Plan vs. Actual Performance Table

Milestone Number	Description of Milestone	Planned		Actual		Variance	
		Completion Date	Total Cost	Completion Date	Total Cost	Schedule (# days)	Cost
1	Base O&M Period One	09/16/2006	\$0.013	09/16/2006	\$0.013	0	\$0.000
2	Software Maintenance & Support (SMS)	09/16/2006	\$0.002	09/16/2006	\$0.002	0	\$0.000
<b>Project Totals</b>		<b>09/16/2006</b>	<b>\$0.015</b>	<b>09/16/2006</b>	<b>\$0.015</b>	<b>0</b>	<b>\$0.000</b>

**IV: E-GOV AND LINES OF BUSINESS**

*Instructions*

Part IV should be completed only for investments identified as an E-Gov initiative or a Line of Business(LOB), i.e., selected the "E-Gov and LOB Oversight" choice in response to Question 6 in Part I, Section A above. Investments identified as "E-Gov and LOB Oversight"

will complete only Parts I and IV of the exhibit 300.

**IV.A: E-GOV AND LINES OF BUSINESS OVERSIGHT BY08**

*Partners BY08*

Multi-agency initiatives, such as E-Gov and LOB initiatives, should develop a joint exhibit 300.

As a joint exhibit 300, please identify the agency stakeholders. Provide the partner agency and partner agency approval date for this joint exhibit 300.

Stakeholder Table

Partner Agency Name	Partner Agency	Joint Exhibit Approval Date
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*Partnering Strategies BY08*

Provide the partnering strategies you are implementing with the participating agencies and organizations. Identify all partner agency capital assets supporting the common solution; Managing Partner capital assets should also be included in this joint exhibit 300. These capital assets should be included in the Summary of Spending table of Part I, Section B. (Partner Agency Asset UPIs should also appear on the Partner Agency's exhibit 53)

Partner Capital Assets within this Investment

Partner Agency Name	Partner Agency	Partner Agency Asset Title	Partner Agency Exhibit 53 UPI (BY2008)
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*Partner Funding BY08*

For jointly funded initiative activities, provide in the "Partner Funding Strategies Table": the name(s) of partner agencies; the UPI of the partner agency investments; and the partner agency contributions for CY and BY. Please indicate partner contribution amounts (in-kind contributions should also be included in this amount) and fee-for-service amounts. (Partner Agency Asset UPIs should also appear on the Partner Agency's exhibit 53. For non-IT fee-for-service amounts the Partner exhibit 53 UPI can be left blank)

Partner Funding Strategies

Partner Agency Name	Partner Agency	Partner exhibit 53 UPI (BY2008)	CY Contribution	CY Fee-for-Service	BY Contribution	BY Fee-for-Service
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*Analysis Background BY08*

An Alternatives Analysis for E-Gov and LOB initiatives should also be obtained. At least three viable alternatives, in addition to the current baseline (i.e., the status quo), should be included in the joint exhibit 300. 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.

Did you conduct an alternatives analysis for this project? Yes

If "yes," what is the date of the analysis? 5/1/2002

If "no," what is the anticipated date this analysis will be completed?

If no analysis is planned, please briefly explain why:

*Alternatives Table BY08*

Use the results of your alternatives analysis to complete the following table:

Alternatives Analysis Results

Send to OMB	Alternative Analyzed	Description of Alternative	Risk Adjusted Lifecycle Costs estimate	Risk Adjusted Lifecycle Benefits estimate
-------------	----------------------	----------------------------	--	---

True	1 Migrate to LINUX	New Strategy - Ensure Capacity and Performance of Field Office to Keep Pace with Processing and Storage Demands - Complete AWIPS LINUX Evolution (Phase II) - Continuous Cyclical IT Refreshment Alternative 1 migrate existing components to multi-source mass market servers and workstations running the LINUX operating system. Mass market components provide more processing capability, more storage and more reliability at a fraction of the cost of a same-vendor Unix replacement components.	205.2	494.8
True	2 HP Replacement	Upgrade AWIPS Components with the Currently Available HP Boxes, Continue with UNIX Operating System Alternative 2 would upgrade the current system by replacing existing system components with new components produced by the same manufacturer or by upgrading existing system components by adding higher capacity processing and storage modules. This alternative would limit the AWIPS system to one manufacturer thus limit compatibility and the flexibility to take advantage of technology improvements.	230.3	469.7
True	3 Major IT Replacement	Replace AWIPS Through a Major IT Procurement Alternative 3 would be to replace the current AWIPS system in a major IT procurement. Without continuous IT refreshment, AWIPS equipment will reach end of life and be unsupported in 5 to 7 years and a full scale system acquisition will be necessary to replace the present system.	700	0
True	4 Status Quo	Leave system as deployed in 1997 - 1999 without refreshing software, communications, or hardware components.	700	0

*Selected Alternative BY08*

Which alternative was selected by the Initiative Governance process and why was it chosen?

Alternate 1 was selected. The initiative migrates the existing system components to multi-source mass market servers and workstations running the LINUX operating system. Mass market components provide more processing capability, more storage and more reliability at a fraction of the cost of a same-vendor UNIX replacement system for the current AWIPS components.

What specific qualitative benefits will be realized?

Allows for AWIPS capacity and performance to keep pace with projected demands.

*Quantitative Benefits BY08*

What specific quantitative benefits will be realized (using current dollars) Use the results of your alternatives analysis to complete the following table:

Federal Quantitative Benefits

	Budgeted Cost Savings	Cost Avoidance	Justification for Budgeted Cost Savings	Justification for Cost Avoidance
PY - 6 2000	0	0		
PY - 5 2001	0	0		
PY - 4 2002	0	0		
PY - 3 2003	0	0		
PY - 2 2004	0	0		
PY - 1 2005	0	0		
PY 2006	0	0		

CY 2007	0	0		
BY 2008	0	0		
BY + 1 2009	0	0		
BY + 2 2010	0	0		
BY + 3 2011	0	0		
BY + 4 2012	0	0		
BY + 5 2013	0	0		
BY + 6 2014	0	0		
BY + 7 2015	0	0		
BY + 8 2016	0	0		
Total LLC Benefit	0	0		

#### **IV.B: RISK MANAGEMENT BY08**

##### *Risk Management Plan BY08*

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.

Does the investment have a Risk Management Plan? Yes

What is the date of the risk management plan? 6/27/2005

Has the Risk Management Plan been significantly changed since last year's submission to OMB? Yes

If "yes," describe any significant changes to the Risk Management Plan:

As a result of the AWIPS Re-compete (AWIPS-R) O&M solicitation, a new prime contract was awarded to Raytheon Information Solutions (RIS) on August 17, 2005. Subsequently, a decision was made to incorporate the Risk Management Plan (RMP) provided as section 1.4 of the RIS AWIPS Technical Proposal. This replaced the previous Government developed risk management plan. Risks will be managed jointly with the contractor using the Risk Assessment, Management, and Planning (RAMP) tool. Risks will periodically be reviewed in the Partnership Integrated Product Team (IPT), which meets on a bi-weekly basis.

The risk inventory for AWIPS is dynamic and currently contains over 24 risks. Initial high impact programmatic risks include: 4 risks related to transition to the new contractor, 1 risk associated with O&M, and 2 risks in the technical/operational category.

If there currently is no risk plan, will a plan be developed?

If "yes," what is the planned completion date of the risk plan?

If "no," what is the strategy for managing the risks?

##### *Investment Risks BY08*

#### **IV.C: COST AND SCHEDULE PERFORMANCE BY08**

##### *Earned Value BY08*

You should also periodically be measuring the performance of operational assets against the baseline established during the planning or full acquisition phase (i.e., operational analysis), and be properly operating and maintaining the asset to maximize its useful life. Operational analysis may identify the need to redesign or modify an asset by identifying previously undetected faults in design, construction, or installation/integration, highlighting whether actual operation and maintenance costs vary significantly from budgeted costs, or documenting that the asset is failing to meet program requirements.

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

