| Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy | | | | | | | | | | DATE: February 2011 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | | | | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | | | | | | | |
| **COST ($ in Millions)** | **FY 2010** | **FY 2011** | **FY 2012 Base** | **FY 2012 OCO** | **FY 2012 Total** | **FY 2013** | **FY 2014** | **FY 2015** | **FY 2016** | **Cost To Complete** | **Total Cost** |
| Total Program Element | 25.144 | 8.249 | 7.915 | - | 7.915 | 8.125 | 8.268 | 8.472 | 8.556 | Continuing | Continuing |
| 0490: *Airborne Acoustic Intelligence (AAI)* | 3.479 | - | - | - | - | - | - | - | - | 0.000 | 3.479 |
| 1292: *Adv ASW Sensors & Proc* | 9.771 | 5.739 | 5.454 | - | 5.454 | 5.669 | 5.819 | 6.019 | 6.080 | Continuing | Continuing |
| 3222: *Advanced High Altitude ASW* | 2.837 | 2.510 | 2.461 | - | 2.461 | 2.456 | 2.449 | 2.453 | 2.476 | Continuing | Continuing |
| 9999: *Congressional Adds* | 9.057 | - | - | - | - | - | - | - | - | 0.000 | 9.057 |

**A. Mission Description and Budget Item Justification**

Includes RDT&E funds for advanced development and developmental testing of airborne anti-submarine warfare (ASW) systems, including aircraft, equipment, and devices for use against all types of submarine targets; and advanced, high-performance, underwater, mobile target for use in fleet ASW training exercises and for the operational evaluation of the MK-30 torpedo and the MK-48 torpedo weapons system improvement program; and Project BEARTRAP. Definition of Project BEARTRAP is classified.

Excludes civilian and military manpower and their related costs and military construction cost which are included in appropriated management and support elements in this program. Project 0490 moved to new Military Intelligence Program (MIP) Program Element (0303354N) in FY 2011 and beyond.

| B. Program Change Summary ($ in Millions) | FY 2010 | FY 2011 | FY 2012 Base | FY 2012 OCO | FY 2012 Total |
|---|---|---|---|---|---|
| Previous President's Budget | 25.553 | 8.249 | 8.438 | - | 8.438 |
| Current President's Budget | 25.144 | 8.249 | 7.915 | - | 7.915 |
| Total Adjustments | -0.409 | - | -0.523 | - | -0.523 |
| • Congressional General Reductions | | - | | | |
| • Congressional Directed Reductions | | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | | - | | | |
| • Congressional Directed Transfers | | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | -0.083 | - | | | |
| • Program Adjustments | - | - | -0.442 | - | -0.442 |
| • Section 219 Reprogramming | -0.318 | - | - | - | - |
| • Rate/Misc Adjustments | - | - | -0.081 | - | -0.081 |
| • Congressional General Reductions Adjustments | -0.008 | - | - | - | - |

| Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy | DATE: February 2011 |
|---|---|
| **APPROPRIATION/BUDGET ACTIVITY**<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | **R-1 ITEM NOMENCLATURE**<br>PE 0603254N: *ASW Systems Development* |

| Congressional Add Details ($ in Millions, and Includes General Reductions) | FY 2010 | FY 2011 |
|---|---|---|
| **Project:** 9999: *Congressional Adds* | | |
| Congressional Add: *Air Readiness/Effectiveness Measurement Program* | 1.593 | - |
| Congressional Add: *Marine Mammal Detection System* | 1.992 | - |
| Congressional Add: *Marine Species Mitigation* | 2.285 | - |
| Congressional Add: *Marine Mammal Alert System* | 2.390 | - |
| Congressional Add: *Sonobouy Wave-Energy Module* | 0.797 | - |
| Congressional Add Subtotals for Project: 9999 | 9.057 | - |
| Congressional Add Totals for all Projects | 9.057 | - |

**Change Summary Explanation**

Technical: Not applicable.

Schedule:

3222. The OPNAV (N882C1C) sponsor focused the initial study for the Analysis of Alternatives (AoA) for the implementation of the High Altitude ASW mission on the P-8A aircraft. This project focus is for studies and analyses of capabilities to better perform the High Altitude mission on the P-8A Aircraft vice the complete development of a specific capability. As a result, the following schedule changes were made. Precision Placement statement removed. Choose system concepts for Technology Demos removed from 1Q/11. HW/SW Product Development removed from 2Q/11 thru 4Q/15. Experimentation and Technology Demos removed from 4Q/11 thru 1Q/15. Transition Decisions removed from 3Q/15. Deliveries removed from 4Q/12, 4Q/13 and 4Q/14. Trade studies will continue from 2Q/13 thru 4Q/16.

| Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy | | | DATE: February 2011 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>0490: *Airborne Acoustic Intelligence (AAI)* | |

| COST ($ in Millions) | FY 2010 | FY 2011 | FY 2012 Base | FY 2012 OCO | FY 2012 Total | FY 2013 | FY 2014 | FY 2015 | FY 2016 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0490: *Airborne Acoustic Intelligence (AAI)* | 3.479 | - | - | - | - | - | - | - | - | 0.000 | 3.479 |
| Quantity of RDT&E Articles | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

**A. Mission Description and Budget Item Justification**

The mission of Airborne Acoustic Intelligence (AAI), Chief of Naval Operations (CNO) Project K-0416, is to provide Sound Pressure Level (SPL) quality recordings of targets of interest and an associated new technology, rapid prototyping mechanism for the application of state-of-the-art collection sensors. The program will develop and rapidly deploy new technology concepts in hardware and software to effectively address emerging littoral threats and to improve the present Undersea Warfare capability in support of Sea Shield/Sea Trial Initiatives. AAI also provides a measurement analysis capability to reconstruct, analyze and develop active target strength measurement validation. The AAI data collection program provides passive and active acoustic and non-acoustic data essential for the design and development of environmental models, sensors, weapons, software algorithms, and tactical decision aids. AAI employs developmental and prototypical hardware installed in uniquely configured ASW aircraft to collect data of interest, and specially configured ground support facilities to conduct reconstruction and analysis of this data. AAI includes calibrated recording systems, advanced detection and tracking systems, special sensors, advanced processing systems and techniques and specially derived operational tactics. The 2 RDT&E articles consist of aircraft calibration units, SPL collection suites, and post mission processors that will support the collection mission.

Military Intelligence Program (MIP) funding previously contained in this PE and Project, moved to a new Program Element (0303354N) in FY 2011 and beyond for enhanced MIP tracking.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2010 | FY 2011 | FY 2012 |
|---|---|---|---|
| ***Title:*** Systems Engineering / Aircraft Mods Active Acoustic Program | 2.329 | - | - |
| ***Articles:*** | 2 | | |
| ***FY 2010 Accomplishments:***<br>Engineering supported SPL Recording. Post mission processor upgrade and engineering supported aircraft calibration unit enhancements for active target strength. Engineering development of Target Strength processing will continue, however, the prototype processor is on hold due to funding reprioritization. | | | |
| ***Title:*** Data Collection and Analysis | 0.750 | - | - |
| ***Articles:*** | 0 | | |
| ***FY 2010 Accomplishments:***<br>Data collection was supported at Operational Wings. Collection of high interest acoustic and non-acoustic data supported Measurement/Measuring and Signature Intelligence (MASINT)/Office of Naval Intelligence (ONI) threat assessment requirements. | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>0490: *Airborne Acoustic Intelligence (AAI)* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2010 | FY 2011 | FY 2012 |
|---|---|---|---|
| Reduction, Analysis and Fleet Rapid Feedback. Conducted airborne special operations support. Essential performance modeling and evaluation for advanced technology sensor systems design and Fleet tactics development. | | | |
| ***Title:*** Active Measurement Validation | 0.400 | - | - |
| ***Articles:*** | 0 | | |
| ***FY 2010 Accomplishments:***<br>Active Measurement Validation of targets of interest. Provided the acoustic analysis of echo characterization (which includes: signal excess (SE) measurements, peak frequency (PF), trend analysis and pulse duration measurements) and target strength. | | | |
| **Accomplishments/Planned Programs Subtotals** | 3.479 | - | - |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**D. Acquisition Strategy**

AAI is a CNO Special Project (K-0146). The included technology developments are primarily in-house with contractor participation through existing vehicles.

**E. Performance Metrics**

Continued engineering to support SPL recording. Continue data collection support at operation wings. Continued Active Measurement validation of targets of interest.

| Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy | | | DATE: February 2011 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>1292: *Adv ASW Sensors & Proc* | |

| COST ($ in Millions) | FY 2010 | FY 2011 | FY 2012 Base | FY 2012 OCO | FY 2012 Total | FY 2013 | FY 2014 | FY 2015 | FY 2016 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1292: *Adv ASW Sensors & Proc* | 9.771 | 5.739 | 5.454 | - | 5.454 | 5.669 | 5.819 | 6.019 | 6.080 | Continuing | Continuing |
| Quantity of RDT&E Articles | 300 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 100 | | |

**A. Mission Description and Budget Item Justification**

This program provides Air Anti-Submarine Warfare (ASW) platform effectiveness through development of advanced hardware and software associated with airborne acoustic and non-acoustic systems. This includes sensors, processing, post-processing, data recording and display capabilities to address regional threat scenarios against surfaced or submerged conventionally and nuclear powered submarines. Key objectives are platform accommodations of advanced active and passive sensors, improved detection, classification, localization, tracking, and increased capacity and flexibility to handle multi-sensor data loads. Programs being funded during the FYDP will investigate technologies such as: Over the Horizon (OTH) Communications, Distributed Netted Sensors, transient signals, and source and receiver improvement technologies that will enhance passive and Multi-static Active Sensor Systems capabilities. Other programs being funded during the FYDP will provide for the development of persistent tactical search technologies that will allow transition to the localization and attack phase in all operationally relevant environments. In addition, the program will provide for the development and subsequent experimentation, including data collection and engineering measurement, of Multi-static Active Coherent (MAC) sources and receivers, laser technologies, electro-optical and Multi-Spectral camera technologies, Radar, and Magnetic Anomaly Detection sensors. The test articles, which consist of passive/active sensors and associated processors, will support at-sea trials and experiments.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2010 | FY 2011 | FY 2012 |
|---|---|---|---|
| ***Title:*** System performance assessments | 9.771 | 5.739 | 5.454 |
| ***Articles:*** | 300 | 100 | 100 |
| ***FY 2010 Accomplishments:***<br>Performed system performance assessments for Multi-Static Active (Coherent) ASW algorithms and other Acoustic and Non-Acoustic system enhancements. The test articles, which consist of passive/active sensors and associated processors, supported at-sea trial and experiments. | | | |
| ***FY 2011 Plans:***<br>System performance assessments for Multi-Static Active (Coherent) ASW algorithms and other Acoustic and Non-Acoustic system enhancements. The test articles, which consist of passive/active sensors and associated processors, will support at-sea trial and experiments. | | | |
| ***FY 2012 Plans:***<br>System performance assessments for Multi-Static Active (Coherent) ASW algorithms and other Acoustic and Non-Acoustic system enhancements. The test articles, which consist of passive/active sensors and associated processors, will support at-sea trial and experiments. | | | |
| **Accomplishments/Planned Programs Subtotals** | 9.771 | 5.739 | 5.454 |

| Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>1292: *Adv ASW Sensors & Proc* |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**D. Acquisition Strategy**

The included technology development are primarily in-house with contractor participation through existing vehicles.

**E. Performance Metrics**

Perform system assessments for MAC ASW algorithms and other Acoustic and Non-Acoustic system enhancements.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>1292: *Adv ASW Sensors & Proc* |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Hdw Development | Various | VARIOUS:VARIOUS | 0.516 | 0.400 | Nov 2010 | 0.400 | Dec 2011 | - | | 0.400 | 1.350 | 2.666 | 2.666 |
| | | **Subtotal** | 0.516 | 0.400 | | 0.400 | | - | | 0.400 | 1.350 | 2.666 | 2.666 |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Software Development | WR | NAWCAD:PATUXENT RIVER, MD | 3.425 | - | | - | | - | | - | 0.000 | 3.425 | |
| Studies & Analysis | WR | NAWCAD:PATUXENT RIVER, MD | 5.181 | - | | - | | - | | - | 6.525 | 11.706 | |
| | | **Subtotal** | 8.606 | - | | - | | - | | - | 6.525 | 15.131 | |

**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dev Test & Eval | Various | VARIOUS:VARIOUS | 14.931 | 0.750 | Nov 2010 | 0.500 | Dec 2011 | - | | 0.500 | 0.000 | 16.181 | 16.181 |
| | | **Subtotal** | 14.931 | 0.750 | | 0.500 | | - | | 0.500 | 0.000 | 16.181 | 16.181 |

**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contractor Eng Spt | Various | VARIOUS:VARIOUS | 10.930 | 3.308 | Nov 2010 | 3.327 | Dec 2011 | - | | 3.327 | 8.895 | 26.460 | 26.460 |
| ENG & TECH SVCS (NON-FFRDC) | Various | VARIOUS:VARIOUS | 2.582 | 0.100 | Nov 2010 | 0.100 | Dec 2011 | - | | 0.100 | 1.316 | 4.098 | 4.098 |
| MGT & PROF SVCS (FFRDC) | Various | VARIOUS:VARIOUS | 0.202 | 0.214 | Nov 2010 | 0.214 | Dec 2011 | - | | 0.214 | 0.800 | 1.430 | 1.430 |
| Government Eng Spt | WR | NAWCAD:PATUXENT RIVER, MD | 54.832 | 0.892 | Nov 2010 | 0.847 | Dec 2011 | - | | 0.847 | 4.376 | 60.947 | |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>1292: *Adv ASW Sensors & Proc* |

**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Travel | Various | VARIOUS:VARIOUS | 0.052 | 0.075 | Nov 2010 | 0.066 | Dec 2011 | - | | 0.066 | 0.325 | 0.518 | |
| | | **Subtotal** | 68.598 | 4.589 | | 4.554 | | - | | 4.554 | 15.712 | 93.453 | |

| | Total Prior Years Cost | FY 2011 | | FY 2012 Base | | FY 2012 OCO | | FY 2012 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 92.651 | 5.739 | | 5.454 | | - | | 5.454 | 23.587 | 127.431 | |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| **APPROPRIATION/BUDGET ACTIVITY**<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | **R-1 ITEM NOMENCLATURE**<br>PE 0603254N: *ASW Systems Development* | **PROJECT**<br>1292: *Adv ASW Sensors & Proc* |

| Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| **APPROPRIATION/BUDGET ACTIVITY**<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | **R-1 ITEM NOMENCLATURE**<br>PE 0603254N: *ASW Systems Development* | **PROJECT**<br>1292: *Adv ASW Sensors & Proc* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Proj: 1292 - Adv ASW Sensors & Processors*** | | | | |
| Performance Assessment: Multi-Static Target Recognition | 1 | 2010 | 4 | 2010 |
| Performance Assessment: Concurrent Processing/Battery Technology | 1 | 2011 | 4 | 2012 |
| Performance Assessment: Distributed Netted Sensors | 1 | 2013 | 4 | 2014 |
| Performance Assessment: OTH Communications | 1 | 2010 | 4 | 2011 |
| Performance Assessment: Engineering Measurement | 1 | 2012 | 4 | 2016 |
| Transition Decision: Multi-Static Target Recognition | 4 | 2010 | 4 | 2010 |
| Transition Decision: OTH Communications | 4 | 2011 | 4 | 2011 |
| Transition Decision: Concurrent Processing/Battery Technology | 4 | 2012 | 4 | 2012 |
| Transition Decision: Distributed Netted Sensors | 4 | 2014 | 4 | 2014 |
| Software: Software Development | 1 | 2010 | 4 | 2016 |
| Experiment/Exercise Participation: Experiment/Exercise Participation | 1 | 2010 | 4 | 2016 |
| Deliveries: Deliveries (1) | 1 | 2010 | 1 | 2010 |
| Deliveries: Deliveries (2) | 1 | 2011 | 1 | 2011 |
| Deliveries: Deliveries (3) | 1 | 2012 | 1 | 2012 |
| Deliveries: Deliveries (4) | 1 | 2013 | 1 | 2013 |
| Deliveries: Deliveries (5) | 1 | 2014 | 1 | 2014 |
| Deliveries: Deliveries (6) | 1 | 2015 | 1 | 2015 |
| Deliveries: Deliveries (7) | 1 | 2016 | 1 | 2016 |

| Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy | | | DATE: February 2011 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>3222: *Advanced High Altitude ASW* | |

| COST ($ in Millions) | FY 2010 | FY 2011 | FY 2012 Base | FY 2012 OCO | FY 2012 Total | FY 2013 | FY 2014 | FY 2015 | FY 2016 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3222: *Advanced High Altitude ASW* | 2.837 | 2.510 | 2.461 | - | 2.461 | 2.456 | 2.449 | 2.453 | 2.476 | Continuing | Continuing |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

**A. Mission Description and Budget Item Justification**

Advanced High Altitude Anti-Submarine Warfare (AHAASW) program performs studies and analyses to better perform the ASW mission on the P-8A aircraft. The P-8A aircraft, a commercial derivative Boeing 737 airframe, operates most efficiently at high altitudes. These studies are to explore technologies, which may lead to additional high altitude ASW capabilities. The Analysis of Alternatives (AoA) effort is the first study for the implementation of High Altitude ASW on a P-8A aircraft.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2010 | FY 2011 | FY 2012 |
|---|---|---|---|
| ***Title:*** Provide precision delivery of sonobuoys | 2.837 | 2.510 | 2.461 |
| ***Articles:*** | 0 | 0 | 0 |
| ***FY 2010 Accomplishments:***<br>AHAASW contributed resources to support an initial Effectiveness and Suitability Study and AoA currently in progress by NAVAIR (AIR-4.10) for the implementation of High Altitude Anti-Submarine Warfare (HAASW) on the P-8A aircraft. | | | |
| ***FY 2011 Plans:***<br>FY11 efforts are planned to be a continuation of support to the AHAASW and HAASW AoA initiated in FY10. In addition, it is planned to initiate a Technology Development Strategy (TDS) and fund initiation of additional studies for the execution of ASW at High Altitude. | | | |
| ***FY 2012 Plans:***<br>FY12 is scheduled to complete the AHAASW AoA and TDS and other studies initiated in FY11. | | | |
| **Accomplishments/Planned Programs Subtotals** | 2.837 | 2.510 | 2.461 |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**D. Acquisition Strategy**

Develop modifications to incorporate capability into current sonobuoy sensors and integration into P-8A as the lead aircraft.

**E. Performance Metrics**

Perform Analysis of Alternatives (AoA) for the Advanced HAASW program.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>3222: *Advanced High Altitude ASW* |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Hdw Development | Various | VARIOUS:VARIOUS | - | 1.370 | Feb 2011 | - | | - | | - | 0.000 | 1.370 | 1.370 |
| A/C HW/SW Integration | Various | VARIOUS:VARIOUS | - | - | | - | | - | | - | 0.600 | 0.600 | 0.600 |
| | | **Subtotal** | - | 1.370 | | - | | - | | - | 0.600 | 1.970 | 1.970 |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Program Documentation | Various | VARIOUS:VARIOUS | - | - | | - | | - | | - | 0.500 | 0.500 | 0.500 |
| Studies & Analysis | WR | NAWCAD:PATUXENT RIVER, MD | 0.700 | 0.150 | Nov 2010 | 0.100 | Nov 2011 | - | | 0.100 | 0.200 | 1.150 | |
| Studies & Analysis | Various | VARIOUS:VARIOUS | 0.765 | 0.300 | Nov 2010 | 1.245 | Nov 2011 | - | | 1.245 | 3.051 | 5.361 | 5.361 |
| | | **Subtotal** | 1.465 | 0.450 | | 1.345 | | - | | 1.345 | 3.751 | 7.011 | |

**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Field Tests | WR | NAWCAD:PATUXENT RIVER, MD | - | 0.050 | Aug 2011 | 0.100 | Nov 2011 | - | | 0.100 | 0.150 | 0.300 | |
| Field Tests | Various | VARIOUS:VARIOUS | - | - | | - | | - | | - | 0.500 | 0.500 | 0.500 |
| | | **Subtotal** | - | 0.050 | | 0.100 | | - | | 0.100 | 0.650 | 0.800 | |

**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contractor Eng Spt | Various | VARIOUS:VARIOUS | 0.150 | 0.050 | Nov 2010 | 0.385 | Nov 2011 | - | | 0.385 | 0.950 | 1.535 | 1.535 |
| ENG & TECH SVCS (NON-FFRDC) | Various | VARIOUS:VARIOUS | 0.150 | 0.080 | Nov 2010 | 0.150 | Nov 2011 | - | | 0.150 | 0.421 | 0.801 | 0.801 |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>3222: *Advanced High Altitude ASW* |

**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government Eng Spt | WR | NAWCAD:PATUXENT RIVER, MD | 1.057 | 0.500 | Nov 2010 | 0.472 | Nov 2011 | - | | 0.472 | 3.417 | 5.446 | |
| Travel | Various | VARIOUS:VARIOUS | 0.015 | 0.010 | Nov 2010 | 0.009 | Nov 2011 | - | | 0.009 | 0.045 | 0.079 | |
| | | **Subtotal** | 1.372 | 0.640 | | 1.016 | | - | | 1.016 | 4.833 | 7.861 | |

| | Total Prior Years Cost | FY 2011 Cost | FY 2011 Award Date | FY 2012 Base Cost | FY 2012 Base Award Date | FY 2012 OCO Cost | FY 2012 OCO Award Date | FY 2012 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 2.837 | 2.510 | | 2.461 | | - | | 2.461 | 9.834 | 17.642 | |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| **APPROPRIATION/BUDGET ACTIVITY**<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | **R-1 ITEM NOMENCLATURE**<br>PE 0603254N: *ASW Systems Development* | **PROJECT**<br>3222: *Advanced High Altitude ASW* |

| Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| **APPROPRIATION/BUDGET ACTIVITY**<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | **R-1 ITEM NOMENCLATURE**<br>PE 0603254N: *ASW Systems Development* | **PROJECT**<br>3222: *Advanced High Altitude ASW* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Proj: 3222 Advanced High Altitude ASW*** | | | | |
| Contract Awards: Study Contract | 1 | 2010 | 1 | 2010 |
| Contract Awards: Technology Development Contract | 2 | 2011 | 2 | 2011 |
| Trade Studies: Trade Studies | 1 | 2010 | 4 | 2016 |

| Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy | | | DATE: February 2011 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | R-1 ITEM NOMENCLATURE<br>PE 0603254N: *ASW Systems Development* | PROJECT<br>9999: *Congressional Adds* | |

| COST ($ in Millions) | FY 2010 | FY 2011 | FY 2012 Base | FY 2012 OCO | FY 2012 Total | FY 2013 | FY 2014 | FY 2015 | FY 2016 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9999: *Congressional Adds* | 9.057 | - | - | - | - | - | - | - | - | 0.000 | 9.057 |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

**A. Mission Description and Budget Item Justification**

9999. Congressional Adds.

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2010 | FY 2011 |
|---|---|---|
| ***Congressional Add:*** Air Readiness/Effectiveness Measurement Program<br>***FY 2010 Accomplishments:*** 10C091: Conducted an Air Readiness/Effectiveness Measurement (AIREM) effort, enabling platforms to more effectively counter the current submarine threat. | 1.593 | - |
| ***Congressional Add:*** Marine Mammal Detection System<br>***FY 2010 Accomplishments:*** 10C092: Developed aircraft Intelligence, Surveillance, and Reconnaissance (ISR) systems and acoustics optimized for detecting and tracking marine mammals. | 1.992 | - |
| ***Congressional Add:*** Marine Species Mitigation<br>***FY 2010 Accomplishments:*** 10C093: Deployed acoustic arrays in the pending Shallow Water Test Range planned for construction off the Atlantic coast of Florida. | 2.285 | - |
| ***Congressional Add:*** Marine Mammal Alert System<br>***FY 2010 Accomplishments:*** 9B53A: Marine Mammal Awareness & Alert Response System (MMAARS). Supported concept development for demonstration of systems to link airborne sensor data with databases to help predict low risk zones for Airborne ASW testing and training. | 2.390 | - |
| ***Congressional Add:*** Sonobouy Wave-Energy Module<br>***FY 2010 Accomplishments:*** 9D18A: Sonobuoy Wave-Energy Module. Supported the development of a wave-energy module to harvest energy from ocean waves to replace or supplement sonobuoy batteries to extend the life of ocean sensing sonobuoy systems. | 0.797 | - |
| **Congressional Adds Subtotals** | 9.057 | - |

| Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy | | DATE: February 2011 |
|---|---|---|
| **APPROPRIATION/BUDGET ACTIVITY**<br>1319: *Research, Development, Test & Evaluation, Navy*<br>BA 4: *Advanced Component Development & Prototypes (ACD&P)* | **R-1 ITEM NOMENCLATURE**<br>PE 0603254N: *ASW Systems Development* | **PROJECT**<br>9999: *Congressional Adds* |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**D. Acquisition Strategy**

Not required for Congressional Adds.

**E. Performance Metrics**

Not required for Congressional Adds.