RCS: DD-A&T(Q&A)823-334

P-8A Poseidon Multi-Mission Maritime Aircraft (P-8A)

As of FY 2021 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President's Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)

Program Information

Program Name
P-8A Poseidon Multi-Mission Maritime Aircraft (P-8A)

DoD Component
Navy

Responsible Office

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References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Progam Baseline (APB) dated October 22, 2010

Approved APB

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated February 7, 2018

Mission and Description

The primary roles of P-8A Poseidon Multi-mission Maritime Aircraft (P-8A) are persistent Anti-Submarine Warfare and Anti-Surface Warfare. The P-8A is the replacement system for the P-3C, Orion. The P-8A, is based on the 737-800 ERX developed by The Boeing Company. The management of the contracted effort is located at The Boeing Company in Seattle, Washington. The system requirements are based on the P-8A CPD #791-88-09, validated and approved on June 22, 2009. The P-8A system will sustain and improve the armed maritime and littoral Intelligence, Surveillance, and Reconnaissance capabilities for United States Naval forces in traditional, joint and combined roles to counter changing and emerging threats. The P-8A program is structured on an evolutionary systems replacement approach that aligns the processes employed for requirements definition, acquisition strategy, and system development into a dynamic and flexible means to attain the strategic vision for tomorrow's Naval forces. The P-8A is part of the Maritime Patrol and Reconnaissance Force Family of Systems that also includes the MQ-4C Triton Unmanned Aircraft System, the EP-3, and the Tactical Operations Center.

Executive Summary

Program Highlights Since Last Report

In 2019, the Maritime Patrol & Reconnaissance Aircraft program office remained focused on P-8A aircraft production, development and integration of incremental upgrades to system capabilities, fleet sustainment, and strengthening P-8A partnerships with our allies.

P-8A is DoD's only long-range full spectrum Anti-Submarine Warfare, cue-to-kill platform, with substantial Anti-Surface Warfare and networked ISR capabilities. The warfighting requirement is 138 aircraft, providing for four P-8A Quick Reaction Capability (QRC) aircraft and U.S. Naval Reserve recapitalization. The PB 2021 P-8A aircraft procurement funding profile is 120 aircraft.

P-8A employs an evolutionary acquisition strategy, designed since inception to deliver baseline capabilities in three increments in order to expedite a Maritime Patrol airframe replacement of the P-3C due to degrading material condition. Increment Three, comprised of four Engineering Change Proposals (ECPs) is on track to deliver and field the final ECP in FY 2025, which will provide warfighting critical ASW Signals Intelligence (ASW SIGINT), Higher than Secret (HTS) processing, enhanced track management (Minotaur) and an Enhanced Multi-static Active Coherent (MAC-E) ASW capability.

P-8A aircraft deliveries continued on schedule in support of the U.S. Navy (USN) fleet squadron transition from P-3C to P-8A. Ten of eleven planned aircraft production lots and associated logistics and training support are on contract with Boeing Defense Space and Security. As of January 31, 2020 USN fleet squadrons have taken delivery of 91 of 111 contracted P-8A aircraft, with deliveries averaging three weeks early. P-8A fleet transition training is complete for eleven of twelve fleet squadrons and one fleet replacement squadron. Fleet transition training remains on track to complete in FY 2020.

As of January 31, 2020 the P-8A Cooperative Partner and Foreign Military Sales (FMS) activities continue on track. The Royal Australian Air Force, partnered with the U.S. as a Joint Program has taken delivery of 12 P-8A aircraft. The FMS United Kingdom program have taken delivery of two of nine P-8A aircraft.

There are no significant software-related issues with this program at this time.

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation	
Date	**Significant Development Description**
February 2000	The Broad Area Maritime and Littoral Armed Intelligence Surveillance and Reconnaissance Mission Needs Statement was validated and approved by the JROC.
April 2000	The P-8A Poseidon (formerly Multi-Mission Maritime Aircraft (MMA)) program received Milestone 0 approval to enter Concept Exploration.
January 2002	P-8A received approval to enter the Component Advanced Development (CAD) work effort on January 18, 2002. CAD included competitively awarded contracts to Lockheed Martin for the Orion 21 concept (P-3 derivative) and to Boeing for the military derivative of the 737 aircraft.
December 2003	The MMA ORD/CDD was validated and approved by JROC.
June 2004	Milestone (MS) B ADM signed and the System Development and Demonstration contract awarded to Boeing for the 737-800 ERX based system.
June 2007	The P-8A program conducted the Critical Design Review.
December 2008	The Record of Decision was approved for basing 12 P-8A squadrons and one FRS at Naval Air Station (NAS) Jacksonville, Florida, NAS Whidbey Island, Washington, and Marine Corps Base Hawaii at Kaneohe Bay, Hawaii.
April 2009	Australia joined as a cooperative partner of P-8A Increment 2 (Inc 2). The Inc 2 Memorandum of Understanding (MOU) authorizes Australian participation in P-8A Inc 2 development.
April 2009	The P-8A program completed the Interim Program Review and awarded the Advance Acquisition Contract for LRIP Advance Procurement (AP).
August 2010	The USD (AT&L) signed the MS C ADM granting authorization to: proceed with LRIP Lots I through III that included six aircraft in FY 2010,seven aircraft in FY 2011, and 11 aircraft in FY 2012. In addition, the MS C ADM approved the request to obligate FY 2012 AP funding for FRP and authorized the Navy to proceed with Automatic Identification System, Multi-Static Active Coherent, High Altitude ASW Weapon Capability, Rapid Capability Insertion, Acoustics Algorithms, and Tactical Operations Center updates.
January 2011	The LRIP Lot I contract was definitized for six aircraft.
November 2011	The LRIP Lot II contract was definitized for seven aircraft.
March 2012	The Production, Sustainment, and Follow-on Development MOU authorizes Australian procurement of Inc 2 capable P-8A aircraft, participation in development of common sustainment strategies for the life of the aircraft, and participation in development of new platform capabilities.
September 2012	The LRIP Lot III contract was definitized for 11 aircraft.
July 2013	In order to maintain fleet transition rates, the USD (AT&L) approved a change to the P-8A Acquisition Strategy to add a fourth lot of 13 LRIP aircraft in FY 2013.
July 2013	The LRIP Lot IV contract was definitized for 13 aircraft.
November 2013	The P-8A achieved IOC.
December 2013	The P-8A commenced first Fleet operational deployment.
January 2014	The USD (AT&L) signed the FRP ADM approving the FRP decision.
February 2014	The Australian government announced its plan to purchase eight P-8A aircraft and supporting infrastructure.
February 2014	The FRP I (Lot V) contract was definitized for 16 aircraft.

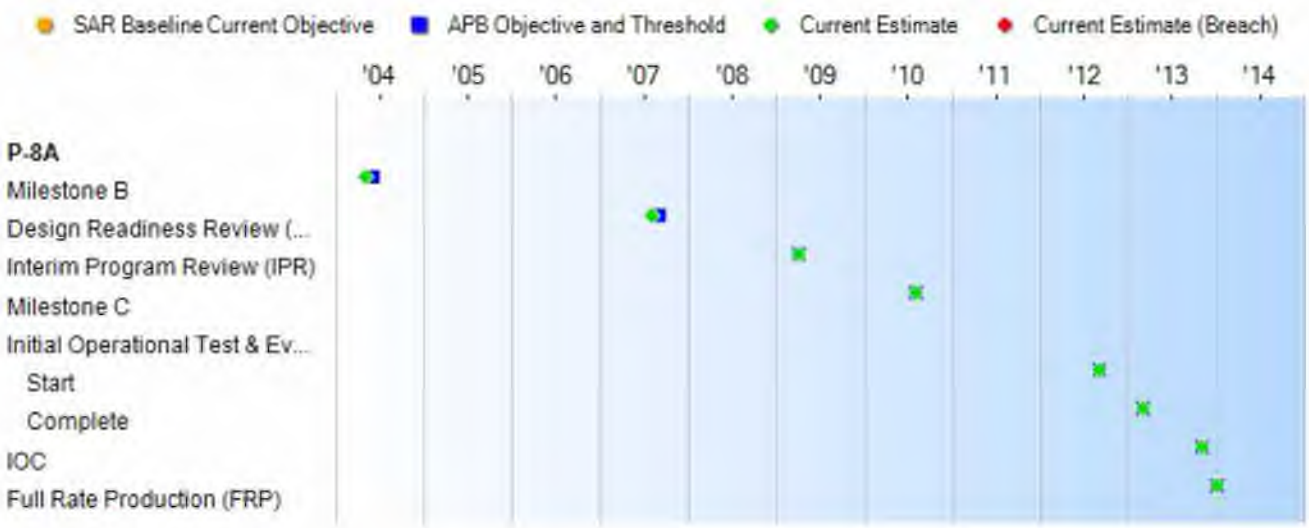
August 2015	The FRP II Lot VI P-8A production contract definitized for nine USN and four Royal Australian Air Force (RAAF) Lot VI aircraft.
January 2016	P-8A FRP Lot VII (FY 2016 Aircraft Procurement, Navy (APN)-1, quantity of 16 USN and four RAAF aircraft) production contract option awarded.
February 2016	Two additional USN P-8A FRP Lot VII aircraft procured following the Department of the Navy's Congressional notification of the use of Buy to Budget authority under 10 United States Code 2308 received on February 22, 2016. One aircraft was procured using FY 2014 APN-1, and oneaircraft was procured using FY 2016 APN-1.
March 2016	USD (AT&L) approved an updated P-8A Acquisition Strategy, incorporating the Inc 3capabilities into the baseline program as a series of Engineering Change Proposals.
April 2016	USD (AT&L) signed the ADM for P-8A Inc 3.
May 2016	The P-8A was re-designated to an ACAT 1C program by USD (AT&L).
June 2016	ASN (RDA) signed the APB to support the Inc 3 strategy change.
August 2016	United Kingdom (UK) Embassy informed Navy International Programs Office that UK signed P-8A Letters of Offer and Acceptance (LOAs) provided in June 2016. The FMS cases provides for nine P-8A aircraft, initial logistics support and maintenance trainer suite.
October 2016	The first RAAF aircraft delivered October 19, 2016 (~6 weeks early) in Boeing Seattle and repositioned to Canberra, Australia on November 15, 2016 Australian Eastern Daylight Time.
December 2016	U.S. Navy/Boeing signed a Memorandum of Agreement for P-8A production unit pricing for FRP Lots VIII-X for 49 aircraft (31 USN, four RAAF, nine UK, and five Norway).
March 2017	Norway P-8A LOA signature by the Director, Norway Defense Material Agency completed during a ceremony in Oslo, Norway on March 29, 2017 with US Embassy leadership in attendance. The FMS case provides for five P-8A aircraft, associated services and equipment.
March 2017	The FRP Lot VIII (FY2017 APN-1, quantity of 11 USN, four RAAF and two UK aircraft) production contract awarded.
December 2017	The P-8A FRP Lot IX (FY2018 APN-1, quantity of seven USN and three UK aircraft and segregable efforts) contract awarded.
February 2018	Awarded competitive seven year, $2 billion P-8A Engine/Airframe Depot Repair/Overhaul contracts on February 1, 2018. First fleet P-8A inducted into the airframe depot on March 28, 2018 and completed September 2018. The first engine repair contract/induct conducted April 2018.
April 2018	Fleet successfully employed Air to Air Refueling (AAR) capability. First deployment of AAR capable P-8A's commenced April 2018.
April 2018	Navy Resources and Requirements Review Board set warfighting inventory requirement at 138 P-8A aircraft, providing for Quick Reaction Capability aircraft and U.S. Naval Reserve recapitalization.
February 2019	P-8A acquisition strategy change was signed by the Assistant Secretary of the Navy (Research, Development and Acquisition) on February 25, 2019 approving changes to the March 2016 P-8A Acquisition Strategy to execute the P-8A technical data Memorandum of Agreement/Special Licensing Agreement (MOA/SLA) with The Boeing Company. The MOA/SLA provides government access to P-8A technical data for the life of the program
December 2019	Increment 3 ECP 6 Critical Design Review successfully completed.

Threshold Breaches

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Schedule



Schedule Events				
Events	**SAR Baseline Production Estimate**	**Current APB Production Objective/Threshold**		**Current Estimate**
Milestone B	May 2004	Jun 2004	Jun 2004	May 2004
Design Readiness Review (DRR)	Jul 2007	Sep 2007	Sep 2007	Aug 2007
Interim Program Review (IPR)	Apr 2009	Apr 2009	Apr 2009	Apr 2009
Milestone C	May 2010	Aug 2010	Aug 2010	Aug 2010
Initial Operational Test & Evaluation (IOT&E)				
Start	Apr 2012	Sep 2012	Sep 2012	Sep 2012
Complete	Feb 2013	Mar 2013	Mar 2013	Mar 2013
IOC	Jul 2013	Nov 2013	Nov 2013	Nov 2013
Full Rate Production (FRP)	Apr 2013	Jan 2014	Jan 2014	Jan 2014

Change Explanations

None

Performance

Performance Characteristics				
SAR Baseline Production Estimate	**Current APB Production Objective/Threshold**		**Demonstrated Performance**	**Current Estimate**
Mission Radius/Endurance Subsurface attack (nm)				
>=1,600/>=4	>=1,600/>=4	1,200/4	1,262/4	1,262/4
Mixed Stores Loadout (ASW)(lbs)				
12,500	12,500	10,000	13,275	25,000
Initial On-station Altitude (ft)				
49,000	49,000	25,000	39,000	39,000
Operational Availability (ASW)				
.8	(O = T) .8	.8	TBD	.8
Force Protection (%)				
100	(O = T) 100	100	100	100
Net-Ready				
Fully support execution of joint operational activities	Fully support execution of joint operational activities	Fully support execution of joint critical operational activities	Met initial NR KPP compliance per MS-B exit criteria. Demonstration of full NR compliance is TBD.	Fully support execution of joint critical operational activities by Increment 3 IOC.
Net Enabled ASUW Weapon				
N/A	Capability to act in the CC and 3PS roles in the NEW architecture including launching the weapon, in-flight control of the weapon, terminal guidance of the weapon, transferring/receiving control to/from another platform, and designating or acting as a 3PS.	Capability to act in the CC role in the NEW architecture including launching the weapon, in-flight control of the weapon, and terminal guidance of the weapon.	TBD	Capability to act in the CC and 3PS roles in the NEW architecture including launching the weapon, in-flight control of the weapon, terminal guidance of the weapon, transferring/receiving control to/from another platform, and designating or acting as a 3PS.
Operational Availability (Ao ASUW)				
N/A	Ao ASUW > 0.8	Ao ASUW = 0.8	TBD	Ao ASUW > 0.8

Classified Performance information is provided in the classified annex to this submission.

Requirements Reference

CPD (Increment 1), Change 2, dated May 8, 2012 and CDD (Increment 2 and 3) dated April 4, 2016

Change Explanations

None

Notes

P-8A Operational Availability (Ao) ASW performance of 0.67 was measured during IOT&E against a Ao ASW requirement of 0.6. Reported P-8A deployed fleet squadron Ao ASW is 0.7.

Acronyms and Abbreviations

3PS - Third Person Source
Ao - Operational Availability
ASUW - Anti-Surface Warfare
ASW - Anti-Submarine Warfare
CC - Current Controller
FOT&E - Follow-on Test and Evaluation
ft - Feet
JITC - Joint Interoperability Test Command
lbs - Pounds
NEW - Network Enabled Weapon
nm - Nautical miles

Track to Budget

General Notes

The RDT&E cost parameters include the costs associated with Project Unit 2696 (Inc 1 System Development and Demonstration), Project Unit 3181 (Inc 2 next Phase of Capabilities (previously called Spiral One)), and Project Unit 3218 (P-8A Inc 3 (previously called Spiral Two)). Inc 2 capabilities were integrated into the P-8A through Engineering Change Proposals (ECPs) as approved in the Milestone C ADM, dated August 27, 2010. These ECPs are: Automatic Identification System; Multi-static Active Coherent (MAC); High Altitude Anti-submarine Warfare Weapon Capability and Sensors; Rapid Capability Insertion; and Tactical Operations Center updates. Inc 3 capability integration includes: ECP 4 Ultra High Frequency Satellite Communications (SATCOM) Demand Assigned Multiple Access integrated waveform & Targeting Capability upgrades; ECP 5 includes Link-16 message [Net Enabled Weapon (J11), third party targeting (J12), and Electronic Warfare coordination (J14)], High Frequency radio Internet Protocol, Integrated Broadcast Service (IBS) filtering, new IBS receiver, and Harpoon II+ upgrade; ECP 6 incorporates Net Ready KPP, a Combat System architecture upgrade, ASW Signals Intelligence, Higher than Secret processing, enhanced track management (Minotaur) and Wideband SATCOM; and ECP 7 incorporates Enhanced MAC capabilities via the Combat System architecture.

RDT&E

Appn	BA	PE
Navy	05	0605500N

Project	Name
2696	Multi-mission Maritime Aircraft (Shared)
3181	P-8A Spiral One Development (Shared) (Sunk)
Notes:	P-8A Multi-mission Maritime Aircraft Increment 2 (formerly Spiral 1)
3218	P-8A Spiral Two Development (Shared) (Sunk)
Notes:	P-8A Multi-mission Maritime Aircraft Increment 3 (formerly Spiral 2)

Appn	BA	PE
Navy	05	0605504N

Project	Name
3218	P-8A Spiral Two Development
Notes:	P-8A Multi-mission Maritime Aircraft Increment 3 (formerly Spiral 2)

Procurement

Appn	BA	PE
Navy	01	0204251N

Line Item	Name
0193	P-8A Poseidon

Appn	BA	PE
Navy	06	0204251N

Line Item	Name	
0605	Spares and Repair Parts	(Shared)

MILCON

Appn	BA	PE
Navy	01	0203176N

Project	Name	
P512	AAS Tactical Operations Center	(Sunk)
Notes:	AAS TOC (COMFLTACT Okinawa)	

Navy 1205 01 0212176N

Project	Name	
P116	P-8A Detachment Support Facility	(Sunk)
Notes:	Joint Base Pearl Harbor Hickam	
P253	AAS Fleet Support Activity	(Sunk)
Notes:	AAS Fleet Support Activity (NAS WI)	
P259	P-8A Aircraft Apron and Support Facility	(Sunk)
Notes:	Naval Air Station Whidbey Island	
P334	P-8 Fleet Support Facility Addition	(Sunk)
Notes:	Naval Air Station Jacksonville	
P659	P-8 Training and Parking Apron Expansion	(Sunk)
Notes:	Naval Air Station Jacksonville Integrated Training Center	

Navy 1205 01 0703676N

Project	Name	
P630	P-8/MMA Facilities Modification	(Sunk)
Notes:	Naval Air Station Jacksonville (Facilities Modifications)	
P654	P-8A Hangar Upgrades	(Sunk)
Notes:	Naval Air Station Jacksonville	

Navy 1205 01 0712876N

Project	Name	
P655	P-8A Hangar & Training Facility	(Sunk)
Notes:	Naval Air Station Sigonella	
P955	P-8A Hangar & Training Facility	(Sunk)
Notes:	Naval Support Activity Bahrain	
P992	AAS Fleet Maintenance Activity & TOC	(Sunk)
Notes:	AAS Fleet Maintenance Activity & TOC	

Navy 1205 01 0805376N

Project	Name	
P146	MMA Test Facilities, Renovation & Modernization	(Sunk)

	Notes:	Multi-mission Maritime Hangar Test Facility Modifications Naval Air Station Patuxent River	
	P147	MMA Technical Supt Facs, Pax River MD	(Sunk)
	Notes:	Multi-mission Maritime Hangar Test Facility Build Naval Air Station Patuxent River	
Navy	1205 01	0805976N	
	Project	**Name**	
	P623	MMA Simulator Training Building	(Sunk)
	Notes:	Naval Air Station Jacksonville (Build of Integrated Training Center)	
Navy	1205 01	0815976N	
	Project	**Name**	
	P251	P-8A Hangar & Training Facility	(Sunk)
	Notes:	Naval Air Station Whidbey Island	
	P624	P-8A Training Facility	(Sunk)
	Notes:	Naval Air Station Jacksonville	
Navy	1205 03	0901211N	
	Project	**Name**	
	P044	AAS MILCON Design Funds	(Sunk)
	Notes:	AAS MILCON Design Funds	

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2010 $M			BY 2010 $M	TY $M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	8019.1	9232.5	10155.8	9407.9	7951.7	9406.2	9664.5
Procurement	23519.1	21508.5	23659.4	22460.8	25654.7	23833.9	25043.3
Flyaway	--	--	--	18507.6	--	--	20669.5
Recurring	--	--	--	17852.5	--	--	19917.9
Non Recurring	--	--	--	655.1	--	--	751.6
Support	--	--	--	3953.2	--	--	4373.8
Other Support	--	--	--	3422.3	--	--	3796.1
Initial Spares	--	--	--	530.9	--	--	577.7
MILCON	807.7	365.8	402.4	343.0	894.3	406.4	380.1
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	32345.9	31106.8	N/A	32211.7	34500.7	33646.5	35087.9

Current APB Cost Estimate Reference

The POE is an update to the P-8A FRP SCP and is supported by the methods employed by the Naval Air Systems Command Cost Team (AIR-4.2). The estimate reference is dated March 01, 2016

Cost Notes

No cost estimate for the program has been completed in the previous year.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	5	5	5
Procurement	117	109	120
Total	122	114	125

Quantity Notes

In April 2018, Navy Resources and Requirements Review Board set warfighting inventory requirement at 138 P-8A aircraft, providing for Quick Reaction Capability aircraft and U.S. Naval Reserve recapitalization. PB-2021 reflects an increase of three production aircraft from 117 to 120.

Cost and Funding

Funding Summary

Appropriation Summary FY 2021 President's Budget / December 2019 SAR (TY$ M)									
Appropriation	Prior	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
RDT&E	8808.5	133.5	182.9	163.0	139.5	123.7	113.4	0.0	9664.5
Procurement	23294.8	1668.1	80.4	0.0	0.0	0.0	0.0	0.0	25043.3
MILCON	380.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.1
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2021 Total	32483.4	1801.6	263.3	163.0	139.5	123.7	113.4	0.0	35087.9
PB 2020 Total	32596.5	1383.9	225.5	123.5	126.0	133.6	0.0	0.0	34589.0
Delta	-113.1	417.7	37.8	39.5	13.5	-9.9	113.4	0.0	498.9

Quantity Summary FY 2021 President's Budget / December 2019 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Development	5	0	0	0	0	0	0	0	0	5
Production	0	111	9	0	0	0	0	0	0	120
PB 2021 Total	5	111	9	0	0	0	0	0	0	125
PB 2020 Total	5	111	6	0	0	0	0	0	0	122
Delta	0	0	3	0	0	0	0	0	0	3

Cost and Funding

Annual Funding By Appropriation

Annual Funding 1319 | RDT&E | Research, Development, Test, and Evaluation, Navy							
		TY $M					
Fiscal Year	Quantity	End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2002	--	--	--	--	--	--	37.0
2003	--	--	--	--	--	--	65.3
2004	--	--	--	--	--	--	66.3
2005	--	--	--	--	--	--	470.9
2006	--	--	--	--	--	--	927.0
2007	--	--	--	--	--	--	1100.0
2008	--	--	--	--	--	--	860.0
2009	--	--	--	--	--	--	1089.7
2010	--	--	--	--	--	--	1125.7
2011	--	--	--	--	--	--	895.6
2012	--	--	--	--	--	--	580.8
2013	--	--	--	--	--	--	377.7
2014	--	--	--	--	--	--	247.4
2015	--	--	--	--	--	--	282.8
2016	--	--	--	--	--	--	227.6
2017	--	--	--	--	--	--	160.1
2018	--	--	--	--	--	--	132.7
2019	--	--	--	--	--	--	161.9
2020	--	--	--	--	--	--	133.5
2021	--	--	--	--	--	--	182.9
2022	--	--	--	--	--	--	163.0
2023	--	--	--	--	--	--	139.5
2024	--	--	--	--	--	--	123.7
2025	--	--	--	--	--	--	113.4
Subtotal	5	--	--	--	--	--	9664.5

Annual Funding 1319 | RDT&E | Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2010 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2002	--	--	--	--	--	--	43.1
2003	--	--	--	--	--	--	75.0
2004	--	--	--	--	--	--	74.1
2005	--	--	--	--	--	--	512.8
2006	--	--	--	--	--	--	979.0
2007	--	--	--	--	--	--	1134.0
2008	--	--	--	--	--	--	870.7
2009	--	--	--	--	--	--	1089.2
2010	--	--	--	--	--	--	1108.6
2011	--	--	--	--	--	--	861.4
2012	--	--	--	--	--	--	549.5
2013	--	--	--	--	--	--	353.6
2014	--	--	--	--	--	--	228.4
2015	--	--	--	--	--	--	257.8
2016	--	--	--	--	--	--	203.9
2017	--	--	--	--	--	--	140.8
2018	--	--	--	--	--	--	114.0
2019	--	--	--	--	--	--	136.4
2020	--	--	--	--	--	--	110.3
2021	--	--	--	--	--	--	148.1
2022	--	--	--	--	--	--	129.4
2023	--	--	--	--	--	--	108.6
2024	--	--	--	--	--	--	94.4
2025	--	--	--	--	--	--	84.8
Subtotal	5	--	--	--	--	--	9407.9

Annual Funding 1506 | Procurement | Aircraft Procurement, Navy							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	109.1	--	--	109.1	--	109.1
2010	6	1360.6	--	54.3	1414.9	383.9	1798.8
2011	7	1382.0	--	31.5	1413.5	492.3	1905.8
2012	11	1977.5	--	29.3	2006.8	280.8	2287.6
2013	13	2252.9	--	32.3	2285.2	454.4	2739.6
2014	17	2603.6	--	54.0	2657.6	558.6	3216.2
2015	9	1312.7	--	62.8	1375.5	795.8	2171.3
2016	17	2714.0	--	72.5	2786.5	444.8	3231.3
2017	11	1635.3	--	78.1	1713.4	269.6	1983.0
2018	10	1601.6	--	84.7	1686.3	264.0	1950.3
2019	10	1617.5	--	85.5	1703.0	198.8	1901.8
2020	9	1351.1	--	86.5	1437.6	230.5	1668.1
2021	--	--	--	80.1	80.1	0.3	80.4
Subtotal	120	19917.9	--	751.6	20669.5	4373.8	25043.3

Annual Funding 1506 | Procurement | Aircraft Procurement, Navy							
Fiscal Year	Quantity	BY 2010 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	107.8	--	--	107.8	--	107.8
2010	6	1317.1	--	52.6	1369.7	371.7	1741.4
2011	7	1311.8	--	29.9	1341.7	467.3	1809.0
2012	11	1850.5	--	27.4	1877.9	262.8	2140.7
2013	13	2085.7	--	29.9	2115.6	420.6	2536.2
2014	17	2379.3	--	49.3	2428.6	510.5	2939.1
2015	9	1181.8	--	56.5	1238.3	716.5	1954.8
2016	17	2394.1	--	64.0	2458.1	392.3	2850.4
2017	11	1414.4	--	67.6	1482.0	233.2	1715.2
2018	10	1360.1	--	71.9	1432.0	224.3	1656.3
2019	10	1346.9	--	71.2	1418.1	165.6	1583.7
2020	9	1103.0	--	70.6	1173.6	188.2	1361.8
2021	--	--	--	64.2	64.2	0.2	64.4
Subtotal	120	17852.5	--	655.1	18507.6	3953.2	22460.8

FY 2021 Non-Recurring Flyaway reflects $80.1 (TY $M) in Production Line Shutdown cost.

Cost Quantity Information 1506 | Procurement | Aircraft Procurement, Navy		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2010 $M**
2009	--	--
2010	6	1272.1
2011	7	1306.5
2012	11	1779.6
2013	13	2036.5
2014	17	2371.5
2015	9	1424.4
2016	17	2216.7
2017	11	1529.0
2018	10	1349.2
2019	10	1308.4
2020	9	1258.6
2021	--	--
Subtotal	120	17852.5

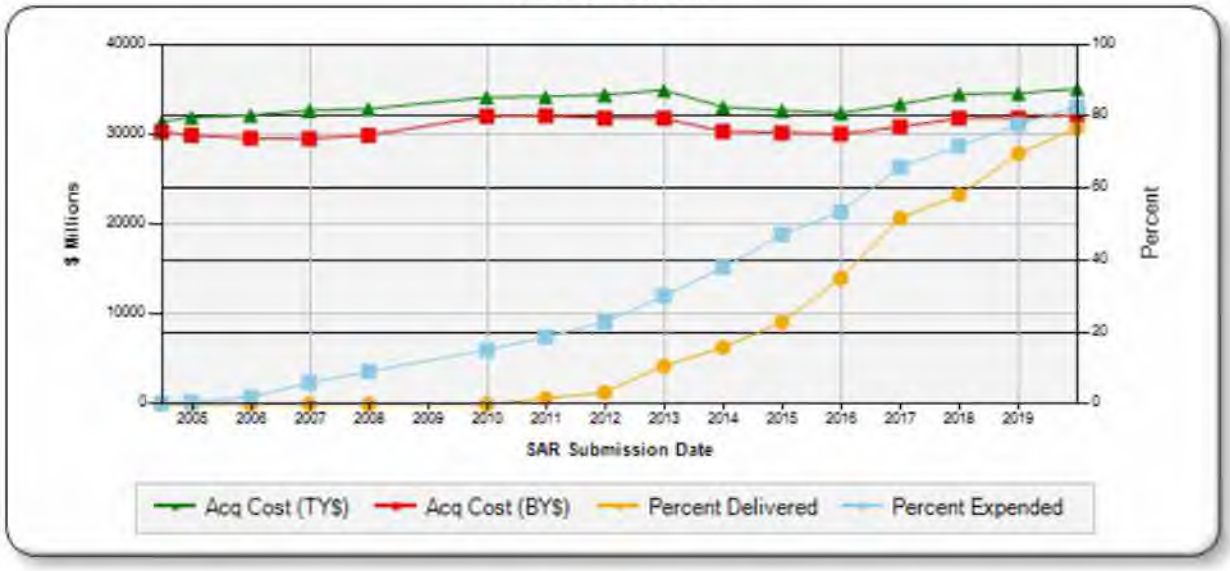
Annual Funding 1205 | MILCON | Military Construction, Navy and Marine Corps	
Fiscal Year	TY $M Total Program
2006	5.7
2007	16.3
2008	--
2009	48.2
2010	5.9
2011	--
2012	31.2
2013	--
2014	100.7
2015	56.2
2016	83.2
2017	--
2018	4.2
2019	28.5
Subtotal	380.1

Annual Funding 1205 | MILCON | Military Construction, Navy and Marine Corps	
Fiscal Year	BY 2010 $M
	Total Program
2006	5.9
2007	16.6
2008	--
2009	47.5
2010	5.7
2011	--
2012	28.9
2013	--
2014	90.8
2015	49.4
2016	71.7
2017	--
2018	3.5
2019	23.0
Subtotal	343.0

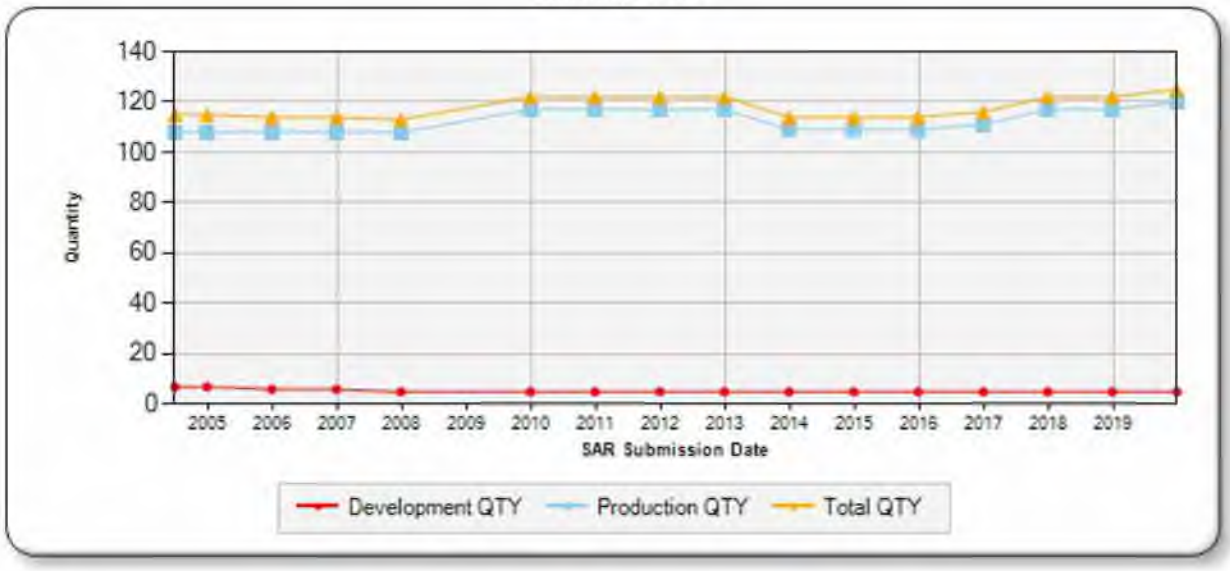
Charts

P-8A first began SAR reporting in June 2004

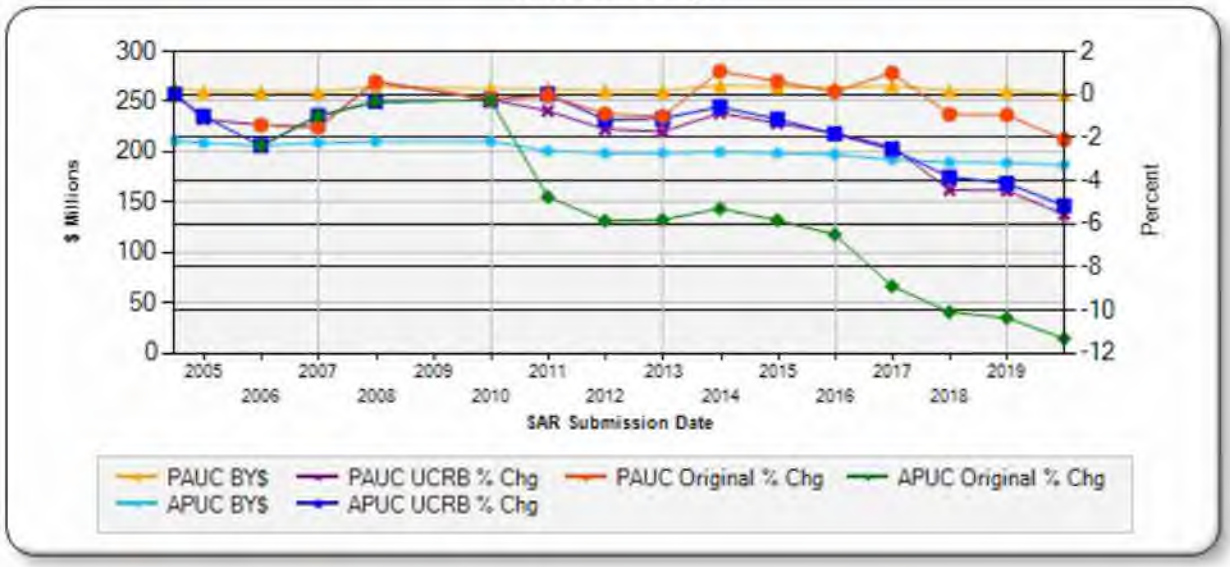
Program Acquisition Cost - P-8A
Base Year 2010 $M



Quantity - P-8A



Unit Cost - P-8A
Base Year 2010 $M



Risks

Significant Schedule and Technical Risks

Significant Schedule and Technical Risks	
Milestone B (June 2004)	
1.	Potential inability to meet key performance parameter for range/time on station requirements due to weight growth impacts.
2.	P-3 to P-8 fleet transition inability to achieve targeted FY 2013 IOC.
3.	Insufficient funding delays IOC until FY 2014.
Milestone C (August 2010)	
1.	Airflow analysis predicts higher than expected horizontal tail buffet loads.
2.	Separation of internal weapons not flight tested yet.
3.	Aging P-3 retirements require a July 2013 IOC to meet fleet mission requirements.
Current Estimate (December 2019)	
1.	April 2018 OPNAV P-8A Requirements and Resources Review Board (R3B) decision set P-8A inventory at 138 aircraft (PB21 funded to 120). USN ranked the procurement of 2 additional P-8A aircraft as #1 for Lethality and #11 overall on the FY20 Unfunded Priority List addressing the P-8A R3B requirements.
2.	Boeing is understaffed to support concurrent P-8 USN and FMS software (SW) development requirements (A/C production, Inc 3 integration and Training). Boeing continues to pursue new SW hires; but struggles to outpace current manpower attrition (global marketplace issue).

Risks

Risk and Sensitivity Analysis

Risks and Sensitivity Analysis	
Current Baseline Estimate (February 2018)	
1.	P-8A Production line stability associated with Boeing Commercial Aircraft (BCA) 737-800 transition to the 737MAX (2019 in progress) and final USN/COOP/FMS pricing requirements continue at risk beyond FY 2020.
Original Baseline Estimate (June 2004)	
1.	The Cost Analysis Improvement Group Independent Cost Estimate for Multi-mission Maritime Aircraft Program Milestone B Review memorandum dated May 26, 2004 covered the program risks and sensitivity analysis areas of procurement costs due to labor and material, engineering effort, and software development.
Revised Original Estimate (N/A)	
None	
Current Procurement Cost (December 2019)	
1.	Production and Fleet transition continues on schedule and on budget. P-8A Production line stability being actively coordinated with BDS and new allied customers to mitigate risk associated with BCA transition to the 737 MAX (on-going since 2019). Reduce P-8A build rate or MSR at Boeing during 737MAX transition to extend line for FY21 funding consideration. Additional FMS buys (New Zealand approved July 2018, South Korea approved November 2018, TBD Saudi Arabia and TBD India). Ability to re-open the P-8A production line once closed is unlikely.

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	6/4/2004	7/15/2013
Approved Quantity	34	37
Reference	Milestone B ADM	LRIP Lot IV ADM
Start Year	2010	2010
End Year	2012	2013

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the necessity to establish the initial production base and to achieve an orderly and efficient increase in both the production rate and industry workforce. All 37 LRIP aircraft have been delivered.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Description
South Korea	11/28/2018	6	1615.7	The South Korea Letter of Offer and Acceptance for six aircraft and initial support was signed November 28, 2018.
New Zealand	7/9/2018	4	1097.0	The New Zealand Letter of Offer and Acceptance for four aircraft and training devices was signed July 9, 2018.
Norway	3/29/2017	5	1246.8	The Norway FMS Letter of Offer and Acceptance for five aircraft, associated services and equipment was signed March 29, 2017.
United Kingdom	7/26/2016	9	2385.2	Total cost based on Letter of Offer and Acceptance signed July 26, 2016. FMS Case UK-P-SAN provides for the procurement of nine aircraft and initial support. FMS Case UK-P-LVK provides for trainers and FMS Case UK-P-TGO provides for training.

Notes

The five Norway FMS P-8A aircraft will deliver in late calendar year (CY) 2021 / early 2022.

The UK FMS P-8A aircraft delivery schedule is two P-8A Lot VIII aircraft, the 1st aircraft delivered in October 2019 and the 2nd aircraft delivered in January 2020, three P-8A Lot IX aircraft (CY 2020), and four P-8A Lot X aircraft (CY 2021).

The four New Zealand FMS P-8A Lot XI aircraft deliveries will occur in CY 2022 / 2023.

The six South Korea FMS P-8A Lot XI aircraft deliveries will begin in late 4th quarter of CY 2022.

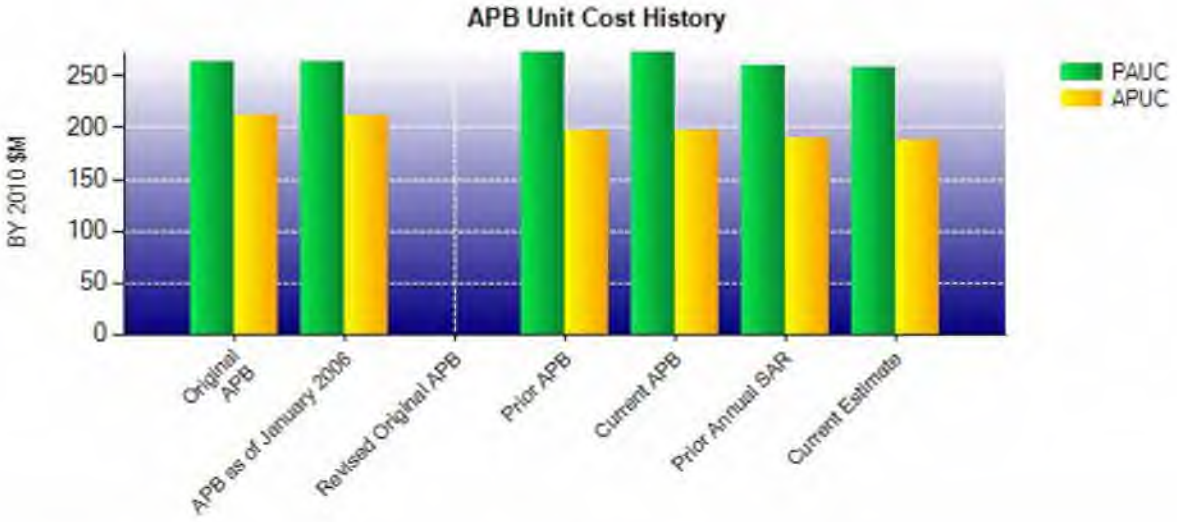
Nuclear Costs

None

Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2010 $M Current UCR Baseline (Feb 2018 APB)	BY 2010 $M Current Estimate (Dec 2019 SAR)	% Change
Program Acquisition Unit Cost			
Cost	31106.8	32211.7	
Quantity	114	125	
Unit Cost	272.867	257.694	-5.56
Average Procurement Unit Cost			
Cost	21508.5	22460.8	
Quantity	109	120	
Unit Cost	197.326	187.173	-5.15

Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2010 $M Original UCR Baseline (Jun 2004 APB)	BY 2010 $M Current Estimate (Dec 2019 SAR)	% Change
Program Acquisition Unit Cost			
Cost	30271.9	32211.7	
Quantity	115	125	
Unit Cost	263.234	257.694	-2.10
Average Procurement Unit Cost			
Cost	22791.2	22460.8	
Quantity	108	120	
Unit Cost	211.030	187.173	-11.31



APB Unit Cost History					
Item	Date	BY 2010 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Jun 2004	263.234	211.030	273.292	225.149
APB as of January 2006	Jun 2004	263.234	211.030	273.292	225.149
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Jun 2016	272.446	197.326	294.627	218.660
Current APB	Feb 2018	272.867	197.326	295.145	218.660
Prior Annual SAR	Dec 2018	260.696	189.197	283.516	210.762
Current Estimate	Dec 2019	257.694	187.173	280.703	208.694

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY $M)									
Initial PAUC Development Estimate	Changes								PAUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
273.292	3.671	-4.044	5.221	10.630	-17.830	0.000	11.853	9.501	282.793

Current SAR Baseline to Current Estimate (TY $M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
282.793	2.189	-2.406	3.653	8.185	-13.021	0.000	-0.690	-2.090	280.703

Initial SAR Baseline to Current SAR Baseline (TY $M)									
Initial APUC Development Estimate	Changes								APUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
225.149	1.793	-3.468	5.332	0.000	-21.894	0.000	12.359	-5.878	219.271

Current SAR Baseline to Current Estimate (TY $M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
219.271	1.802	-0.917	3.673	1.164	-15.580	0.000	-0.719	-10.577	208.694

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	May 2004	May 2004	May 2004
Milestone C	N/A	May 2010	May 2010	Aug 2010
IOC	N/A	Jul 2013	Jul 2013	Nov 2013
Total Cost (TY $M)	N/A	31428.6	34500.7	35087.9
Total Quantity	N/A	115	122	125
PAUC	N/A	273.292	282.793	280.703

Cost Variance

Summary TY $M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	7951.7	25654.7	894.3	34500.7
Previous Changes				
Economic	+38.9	+231.0	+15.7	+285.6
Quantity	--	-22.5	--	-22.5
Schedule	+14.7	+411.5	+1.1	+427.3
Engineering	+1198.0	+130.4	-314.6	+1013.8
Estimating	+320.2	-1728.2	-190.1	-1598.1
Other	--	--	--	--
Support	--	-17.8	--	-17.8
Subtotal	+1571.8	-995.6	-487.9	+88.3
Current Changes				
Economic	+2.9	-14.8	-0.1	-12.0
Quantity	--	+570.3	--	+570.3
Schedule	--	+29.3	--	+29.3
Engineering	--	+9.3	--	+9.3
Estimating	+138.1	-141.4	-26.2	-29.5
Other	--	--	--	--
Support	--	-68.5	--	-68.5
Subtotal	+141.0	+384.2	-26.3	+498.9
Total Changes	+1712.8	-611.4	-514.2	+587.2
Current Estimate	9664.5	25043.3	380.1	35087.9

Summary BY 2010 $M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	8019.1	23519.1	807.7	32345.9
Previous Changes				
Economic	--	--	--	--
Quantity	--	+8.8	--	+8.8
Schedule	+17.9	+69.1	-0.4	+86.6
Engineering	+1023.2	+109.2	-280.3	+852.1
Estimating	+244.5	-1464.2	-162.8	-1382.5
Other	--	--	--	--
Support	--	-106.0	--	-106.0
Subtotal	+1285.6	-1383.1	-443.5	-541.0
Current Changes				
Economic	--	--	--	--
Quantity	--	+465.6	--	+465.6
Schedule	--	+23.9	--	+23.9
Engineering	--	+7.6	--	+7.6
Estimating	+103.2	-115.9	-21.2	-33.9
Other	--	--	--	--
Support	--	-56.4	--	-56.4
Subtotal	+103.2	+324.8	-21.2	+406.8
Total Changes	+1388.8	-1058.3	-464.7	-134.2
Current Estimate	9407.9	22460.8	343.0	32211.7

Previous Estimate: December 2018

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+2.9
Adjustment for current and prior escalation. (Estimating)	-1.2	-1.5
Additional funding for P-8A Inc 3 integration change to support associated Ground Station requirements. (Estimating)	+32.6	+41.6
Revised estimate for FY 2020 PB funding realignment. (Estimating)	-41.3	-49.8
Revised estimate for continued P-8A Inc 3 integrated development and testing activities. (Estimating)	+113.1	+147.8
RDT&E Subtotal	+103.2	+141.0

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-14.8
Total Quantity variance resulting from an increase of three aircraft from 117 to 120. (Subtotal)	+396.6	+485.8
Quantity variance resulting from an increase of three aircraft from 117 to 120. (Quantity)	(+465.6)	(+570.3)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+23.9)	(+29.3)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+7.6)	(+9.3)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-100.5)	(-123.1)
Adjustment for current and prior escalation. (Estimating)	+10.4	+12.4
Revised estimate due to cost estimating methodology updates for Airframe, Contractor Furnished Equipment (CFE), Government Furnished Equipment (GFE), Ancillary Equipment, and Engineering Change Orders. (Estimating)	-25.8	-30.7
Adjustment for current and prior escalation. (Support)	+1.9	+2.2
Revised estimate reflects decrease in Other Support due to updated estimates for support costs. (Support)	-29.9	-36.4
Revised estimate reflects decrease in Initial Spares due to updated estimates for spares. (Support)	-28.4	-34.3
Procurement Subtotal	+324.8	+384.2

(QR) Quantity Related

MILCON	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.1
Revised estimate reflects decrease in MILCON for AAS Fleet Maintenance Facility (P992). (Estimating)	-21.3	-26.3
Adjustment for current and prior escalation. (Estimating)	+0.1	+0.1
MILCON Subtotal	-21.2	-26.3

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: Increment 3 Critical Design Review Capabilities Integration
Contractor: The Boeing Company
Contractor Location: 7755 East Marginal Way South
Seattle, WA 98108
Contract Number: N00019-16-G-0001/1
Contract Type: Cost Plus Fixed Fee (CPFF)
Award Date: June 30, 2016
Definitization Date: August 05, 2016

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
71.6	N/A	0	205.8	N/A	0	185.9	189.3

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional awards to Boeing Defense Space and Security for Increment 3 (Inc 3) Wideband (WB) Satellite Communications (SATCOM) Radome development efforts.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/19/2019)	+2.7	-2.5
Previous Cumulative Variances	-13.4	-2.4
Net Change	+16.1	-0.1

Cost and Schedule Variance Explanations

The favorable net change in the cost variance is due to the System Engineering team and the unique development of products and support for monthly Technical Interchange Meetings requiring less support than expected.

The unfavorable net change in the schedule variance is due to the Communications team and is primarily due to supplier delays for 13 SDRLs and the CI-CDR ICS NRE effort.

Notes

This contract (Cost-Plus-Fixed-Fee Delivery Order against Boeing Basic Ordering Agreement) supports the development of P-8A Inc 3 Engineering Change Proposal (ECP) 4 that provides Ultra High Frequency SATCOM Demand Assigned Multiple Access integrated waveform and Targeting Capability upgrades and ECP 5 that provides Link-16 message [Net Enabled Weapon (J11), third party targeting (J12), and Electronic Warfare coordination (J14)], High Frequency radio Internet Protocol, Integrated Broadcast Service (IBS) filters and new IBS receiver, and Harpoon II+. The contract was modified to include Inc 3 Block 2 and WB SATCOM Radome.

This contract is more than 90% complete; therefore, this is the final report for this contract.

Contract Identification

Appropriation: RDT&E
Contract Name: Increment 3 Platform Integration
Contractor: The Boeing Company
Contractor Location: 7755 East Marginal Way South
Seattle, WA 98108
Contract Number: N00019-16-G-0001/2
Contract Type: Cost Plus Fixed Fee (CPFF)
Award Date: March 19, 2019
Definitization Date: March 19, 2019

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
326.3	N/A	0	326.3	N/A	0	294.2	294.2

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/19/2019)	+1.3	-0.5
Previous Cumulative Variances	--	--
Net Change	+1.3	-0.5

Cost and Schedule Variance Explanations

The favorable cumulative cost variance is due to the System Test & Evaluation Mock-Up efforts and completing the WSIL drawings with less support than planned.

The unfavorable cumulative schedule variance is due to delays within the System Test & Evaluation Mock-Up efforts and not executing tasks in accordance with the baselined plan.

Notes

This contract (Cost-Plus-Fixed-Fee Delivery Order against Boeing Basic Ordering Agreement) supports the development of P-8A Inc 3 Platform Integration.

Contract Identification

Appropriation: Procurement
Contract Name: P-8A Production Contract for FRP Lot VIII
Contractor: The Boeing Company
Contractor Location: 7755 East Marginal Way South
Seattle, WA 98108
Contract Number: N00019-14-C-0067/3
Contract Type: Firm Fixed Price (FFP)
Award Date: April 05, 2016
Definitization Date: March 30, 2017

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
235.3	N/A	0	1525.2	N/A	11	1525.2	1525.2

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional awards to Boeing Defense Space and Security for Advanced Procurement and FRP Lot VIII and associated spares, support equipment, technical data/publications, tools, training devices, and long lead materials.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

P-8A FRP Lot VIII Firm Fixed Price aircraft production contract awarded for 11 USN aircraft on March 30, 2017.

As of January 2020, all 11 FRP Lot VIII aircraft have delivered to the USN fleet.

This contract is more than 90% complete; therefore, this is the final report for this contract.

Contract Identification

Appropriation: Procurement
Contract Name: P-8A Production Contract for FRP Lot IX
Contractor: The Boeing Company
Contractor Location: 7755 East Marginal Way South
Seattle, WA 98108
Contract Number: N00019-14-C-0067/4
Contract Type: Firm Fixed Price (FFP)
Award Date: April 05, 2016
Definitization Date: May 24, 2018

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
858.2	N/A	7	1274.6	N/A	10	1274.6	1274.6

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to adding three FY 2018 Congressional Add aircraft to the P-8A aircraft production contract.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

P-8A FRP Lot IX Firm Fixed Price aircraft production contract awarded for seven USN aircraft on December 21, 2017.

USN contract awarded May 24, 2018 adding three FY 2018 Congressional Add aircraft to the P-8A aircraft production contract.

The first FRP Lot IX aircraft delivery to the USN fleet is expected in March 2020.

Contract Identification

Appropriation: Procurement
Contract Name: P-8A Production Contract for FRP Lot X
Contractor: The Boeing Company
Contractor Location: 7755 East Marginal Way South
Seattle, WA 98108
Contract Number: N00019-14-C-0067/5
Contract Type: Firm Fixed Price (FFP)
Award Date: January 25, 2019
Definitization Date: January 25, 2019

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1388.3	N/A	10	1388.3	N/A	10	1388.3	1388.3

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

P-8A FRP Lot X Firm Fixed Price aircraft production contract awarded for ten USN aircraft on January 25, 2019.

The first FRP Lot X aircraft delivery to the USN fleet is expected in November 2020.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	5	5	5	100.00%
Production	91	91	120	75.83%
Total Program Quantity Delivered	96	96	125	76.80%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	35087.9	Years Appropriated	19
Expended to Date	29019.7	Percent Years Appropriated	79.17%
Percent Expended	82.71%	Appropriated to Date	34285.0
Total Funding Years	24	Percent Appropriated	97.71%

The above data is current as of February 10, 2020.

Notes

Although RDT&E deliveries commenced with the first flight test aircraft (airworthiness, T-1), it is not included in the Planned or Actual deliveries since it is not a fully configured end item. The RDT&E delivered quantities include: the second flight test aircraft (mission equipped, T-2); the third flight test aircraft (mission equipped for weapon separation testing, T-3); and T-4, T-5 and T-6, System Development and Demonstration Stage II production representative aircraft. The fleet has taken delivery of 91 total production aircraft supporting fleet transition training and operational deployment. All aircraft have been delivered early or on-time to contracted delivery dates.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	February 11, 2020
Source of Estimate:	POE
Quantity to Sustain:	120
Unit of Measure:	Aircraft
Service Life per Unit:	25.00 Years
Fiscal Years in Service:	FY 2012 - FY 2047

All five of the P-8A RDT&E-funded development aircraft will remain as test articles (SDD aircraft) and will be sustained with RDT&E funding. The quantity to sustain number of 120 reflects the 120 procurement funded aircraft.

Flight hours per aircraft per year are: P-8A = 589. The calculation is based on summing the total operational flight hours and dividing by total operational aircraft. P-8A operations are based on: one Fleet Replacement Squadron (12 aircraft), one Reserve Squadron (3 aircraft), and 12 Fleet squadrons (7 aircraft each).

The total operating aircraft years of 2,528 is computed by summing the number of operational aircraft in each year of the "Fiscal Years in Service" period which includes delivery ramp-up, steady-state operation, and aircraft retirement ramp-down phases.

Sustainment Strategy

The P-8A O&S costs are based on limited 3-level maintenance. Post-Material Support Date contracts will be managed by Naval Supply Systems Command and the Defense Logistics Agency. Intermediate-level maintenance is currently estimated for 51 parts with additional intermediate-level capability assessments in work.

Antecedent Information

The Antecedent System is the P-3C aircraft. P-3C O&S costs are based on a 3-level maintenance system. P-3C data was pulled from the Naval Visibility and Management of Operating and Support Cost database Aircraft Type Model Series Report in November 2016 (BY 2010 dollar average for FY 2004-FY 2014). Aircraft quantities: P-3C = 150 Total Aircraft Inventory and 141 Primary Authorized Aircraft. Flight hours per aircraft per year are: P-3C = 502. The calculation is based on summing the total operational flight hours and dividing by total operational aircraft.

Indirect support for P-3C was estimated based on a ratio of mission personnel and intermediate maintenance government labor. Indirect support calculation now in alignment with P-8A calculation, by multiplying the Mission Personnel cost by a factor of 55.4%, which was determined by dividing the annual steady state P-8A Indirect Cost by the P-8A Mission Personnel cost.

Annual O&S Costs BY2010 $M		
Cost Element	**P-8A Average Annual Cost Per Aircraft**	**P-3C (Antecedent) Average Annual Cost Per Aircraft**
Unit-Level Manpower	3.918	3.733
Unit Operations	2.429	1.559
Maintenance	3.737	2.874
Sustaining Support	0.920	0.188
Continuing System Improvements	1.625	1.801
Indirect Support	2.170	2.067
Other	0.000	0.000
Total	14.799	12.222

Item	Total O&S Cost $M			
	P-8A			P-3C (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	38060.1	41866.1	37412.2	30898.4
Then Year	54490.4	N/A	55817.0	N/A

Equation to Translate Annual Cost to Total Cost

The annual cost per aircraft is derived by taking the total O&S cost and dividing it by the total operating aircraft years. ($37,412.2 BY 2010 $M Total O&S Cost / 2,528 P-8A aircraft years = $14.8 BY 2010 $M Cost per operating aircraft per year).

O&S Cost Variance		
Category	**BY 2010 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Dec 2018 SAR	37348.1	
Programmatic/Planning Factors	1257.4	Update to PB 2021 flying hour program estimates and quantity inputs, recapitalization of one P-3C Reserve squadron, phasing of engine depot induction schedule changes and intermediate-level part repair strategy changes.
Cost Estimating Methodology	-82.6	Update for continuing baseline budget submissions and implementation of wideband streaming L-band requirement.
Cost Data Update	505.5	Update to repairable and consumable parts pricing, engine life limited parts pricing, training device refresh and replacement costs, inflation, and including an additional year of P-8A cost data (FY 2019) into VAMOSC averages.
Labor Rate	-14.4	Update to FY 2020 Military Composite Pay rates.
Energy Rate	34.5	Update to PB 2021 fuel cost per gallon rates.

Technical Input	-1636.3	Update for reliability and maintainability projections, engine life limited parts quantity reduction and intermediate-level manpower reduction.
Other	0.0	
Total Changes	64.1	
Current Estimate	37412.2	

Disposal Estimate Details

Date of Estimate: February 11, 2020

Source of Estimate: POE

Disposal/Demilitarization Total Cost (BY 2010 $M): 30.6

This Rough Order of Magnitude estimate will be refined as the System Disposal Plan Annex to the Life Cycle Sustainment Plan is developed.