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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Modernized Selected Acquisition Report (MSAR)

Tactical Tomahawk RGM-109E/UGM-109E Missile (TACTOM)

FY 2025 President's Budget

Effective: December 31, 2023

Defense Acquisition Visibility Environment

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(U) Common DoD Abbreviations

\$B	Billions of Dollars
\$K	Thousands of Dollars
\$M	Millions of Dollars
ACAT	Acquisition Category
Acq O&M	Acquisition-Related Operations and Maintenance
ADM	Acquisition Decision Memorandum
APA	Additional Performance Attribute
APB	Acquisition Program Baseline
APPN	Appropriation
APUC	Average Procurement Unit Cost
BA	Budget Authority or Budget Activity
Blk	Block
BY	Base Year
CAE	Component Acquisition Executive
CAPE	Cost Assessment and Program Evaluation
CARD	Cost Analysis Requirements Description
CCE	Component Cost Estimate
CCP	Component Cost Position
CDD	Capability Development Document
CLIN	Contract Line Item Number
CPD	Capability Production Document
CY	Calendar Year or Constant Year
DAB	Defense Acquisition Board
DAE	Defense Acquisition Executive
DAES	Defense Acquisition Executive Summary
DAVE	Defense Acquisition Visibility Environment
DoD	Department of Defense
DSN	Defense Switched Network
EMD	Engineering and Manufacturing Development
EVM	Earned Value Management
FD	Full Deployment
FDD	Full-Deployment Decision
FMS	Foreign Military Sales
FOC	Full Operational Capability
FRP	Full-Rate Production
FY	Fiscal Year
FYDP	Future Years Defense Program
ICD	Initial Capabilities Document
ICE	Independent Cost Estimate
Inc	Increment
IOC	Initial Operational Capability
IT	Information Technology
JROC	Joint Requirements Oversight Council
KPP	Key Performance Parameter
KSA	Key System Attribute

LRIP	Low-Rate Initial Production
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisition Program
MILCON	Military Construction
N/A	Not Applicable
O	Objective
O&M	Operations and Maintenance
O&S	Operating and Support
ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense
PAUC	Program Acquisition Unit Cost
PB	President's Budget
PE	Program Element
PEO	Program Executive Officer
PM	Program Manager
POE	Program Office Estimate
R&MF	Revolving and Management Funds
RDT&E	Research, Development, Test, and Evaluation
SAR	Selected Acquisition Report
SCP	Service Cost Position
T	Threshold
TBD	To Be Determined
TY	Then Year
U.S.	United States
U.S.C	United States Code
UCR	Unit Cost Reporting
USD(A&S)	Under Secretary of Defense (Acquisition and Sustainment)

(U) Program Description**Full Name**Tactical Tomahawk RGM-109E/UGM-109E
Missile**PNO**

289

Lead Component

Department of the Navy

Joint Program

No

Adaptive Acquisition Pathway

Major Capability Acquisition

Acquisition Category

IC

Acquisition Status

Active Acquisition

Short Name

TACTOM

Decision Authority

Component Acquisition Executive

Program Executive Office

PEO Unmanned Aviation & Strike Weapons

International Partners

Australia, United Kingdom

Acquisition Type

Major Defense Acquisition Program

Acquired Systems

No Data

Subprograms

Full Name	Short Name	Acquisition Status	In Report?	Acquired Systems
Maritime Strike Tomahawk	MST	Active Acquisition	Yes	MST Kits
Navigation/Communication Upgrade	NAV/COMM Upgrade	Active Acquisition	Yes	NAV/COMM Upgrade Kits
Tactical Tomahawk Production	TACTOM Production	Sustainment (Full Capability)	No	No Data

Mission

The Tactical Tomahawk (TACTOM) RGM/UGM-109E missile is the U.S. Navy's surface and subsurface launched, long-range, precision strike standoff weapon. At launch, a solid-propellant Rocket Motor (RM) accelerates the missile until the cruise engine takes over for the remainder of the flight. The missile's small size and low-altitude flight capability enables a high probability of survival enroute to highly defended targets. Both Block III and IV missiles are combat-proven systems. Block IV missiles have incorporated innovative technologies to provide new operational capabilities while dramatically reducing acquisition, operations, and support costs. Block V missiles introduce an Advanced Communications Architecture (ACA), Maritime Strike capability (Block Va), and a new Joint Multiple Effects Warhead System (JMEWS) (Block Vb).

(U) Responsible Office**Program Executive Officer**

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(U) Executive Summary

Program Highlights Since Last Report

MDA designation of three major subprograms in FY 2023 under the TACTOM ACAT IC MDAP: (1) TACTOM Production, (2) Navigation Communication (NAV/COMM) Upgrade, and (3) Maritime Strike Tomahawk (MST). The history of the TACTOM program resides in the TACTOM Production Subprogram. The TACTOM Production Subprogram remains 90% or more delivered and out of reporting.

(U) History of Significant Developments Since Program Inception

Date	Description
May 2023	TACTOM APB approved - restructured into three subprograms.
April 2023	Designation of MST as a major subprogram.
December 2022	Designation of TACTOM Production and NAV/COMM Upgrade as major subprograms.
November 2017	Contract awarded for FRP14 (196 missiles plus identified spares). All deliveries are scheduled to be complete in August 2019.
December 2016	Contract awarded for FRP13 (214 missiles to include the 47 Overseas Contingency Operations (OCO) missiles). All deliveries are scheduled from December 2017 to August 2018.
September 2014	During Operation Inherent Resolve (OIR), the U.S. Navy fired 47 TACTOM missiles from aboard the USS Arleigh Burke and USS Philippine Sea. Additional FY 2015 OCO supplemental funds were appropriated by Congress for the replenishment of those combat expenditures.
September 2014	Contract awarded for FRP11 (231 missiles, and FRP12 (214 missiles). All deliveries were scheduled from November 2015 to August 2017.
September 2014	FRP contract awarded for 231 Block IV Tactical Tomahawk All-Up-Round (AUR) missiles. The FY 2014 procurement includes 196 surface and subsurface launched AURs, 20 Torpedo Tube Launched AURs as part of the United Kingdom (UK) FMS Case, and 15 surface AURs (FY 2013 funded through Buy-to-Budget). The FY 2015 option includes 96 surface AURs and ten surface AURs (FY 2014 funded through Buy-to-Budget).
June 2012	FRP contract awarded for base year plus one option to procure up to 740 Block IV Tactical Tomahawk AUR missiles.
September 2011	Additional FY 2011 funding was received through OMNIBUS reprogramming action to replenish the 221 Tomahawk missile expenditures during Operation Odyssey Dawn.
March 2009	FRP contract awarded for base year plus two options, for up to 1050 Block IV Tactical Tomahawk AUR missiles.
September 2004	An in-depth Production Verification Test of randomly selected Block IV Tactical Tomahawk AUR LRIP missile was successfully completed at the Naval Surface Weapons Center, Indian Head Division.
August 2004	FRP contract awarded. A Multi-Year Procurement contract (FY 2004-FY 2008) was signed with Raytheon Missile Systems for a base plus four options, for up to 2200 Block IV Tactical Tomahawk AUR missiles.
August 2004	Operational Requirements Document for Tomahawk Weapons Systems Baseline IV signed. TACTOM is authorized in Chapter 2 of this system level document.
August 2004	Entered the Production and Deployment Phase based on Milestone III ADM issued by the

Date	Description
	Assistant Secretary of the Navy (Research, Development, and Acquisition).
May 2004	IOC achieved.
March 2004	LRIP-3 contract awarded for 210 missiles. Late FY 2003, a Congressional plus-up provided for an LRIP-3 procurement to accelerate the replenishment of inventory lost during Operation Iraqi Freedom.
March 2004	Successful Operational Evaluation (OPEVAL) completed. OPEVAL included two surface and two underwater test launches, numerous mission planning exercises, and a complete 96-hour end-to-end operational scenario.
October 2003	Technical Evaluation completed.
January 2003	LRIP-2 contract awarded for 167 missiles.
October 2002	LRIP-1 contract awarded for 25 missiles.
August 2002	First Developmental Flight Test successfully completed.
June 1998	Milestone II development contract award.

Maritime Strike Tomahawk Subprogram

Program Highlights Since Last Report

First reporting for this major subprogram.

(U) History of Significant Developments Since Program Inception

Date	Description
May 2023	Original/Current APB approved for subprogram.
April 2023	Designation of subprogram.

Navigation/Communication Upgrade Subprogram

Program Highlights Since Last Report

First reporting for this major subprogram.

(U) History of Significant Developments Since Program Inception

Date	Description
May 2023	Original/Current APB approved for subprogram.
December 2022	Designation of subprogram.

(U) Schedule**Maritime Strike Tomahawk Subprogram**

(U) Schedule Events

Events		Production APB Change 5 (Milestone) 5/1/2023 Objective	Production APB Change 5 (Current) 5/1/2023 Objective / Threshold			Current Estimate 12/31/2023	Actual
Operational Test	OT&E	Oct 2024	Oct 2024	Oct 2025		Oct 2024	-
Initial Operational Capability	IOC	Dec 2024	Dec 2024	Dec 2025		Sept 2027*	-

* Baseline Deviation

Notes

None

Schedule Baseline Deviation Explanation

OPNAV N96 will accept an EOC to be delivered to the Fleet 4QFY25. IOC will occur in 4QFY27. The PM notified DASN Air/Ground of this challenge in a brief given 02/14/2024. Updates to the APB and Acquisition Strategy are planned once costs stabilize after delivery and Government acceptance of the first two lots of production (Low Rate Production (LRP) Lots 1 and 2) planned 4QFY24.

(U) Current Significant Schedule Risks and Risks Identified at Milestones/Decisions

None

Navigation/Communication Upgrade Subprogram

(U) Schedule Events

Events		Production APB Change 5 (Milestone) 5/1/2023 Objective	Production APB Change 5 (Current) 5/1/2023 Objective / Threshold			Current Estimate 12/31/2023	Actual
Complete at sea Operational Test	OT&E	Dec 2020	Dec 2020	Feb 2021		-	1 Dec 2020

Fleet Release	Other	Mar 2021	Mar 2021	May 2021	-	1 Mar 2021
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Notes

None

Schedule Baseline Deviation Explanation

None

(U) Current Significant Schedule Risks and Risks Identified at Milestones/Decisions

None

(U) Performance**(U) Maritime Strike Tomahawk Subprogram**

Additional information for this section is provided in the classified annex to this submission.

(U) Performance Attributes

No Data

(U) Requirement Source:

Sponsor(s): United States Navy

1. Operational Requirements Document, *Tomahawk Weapon Systems (TWS)*, serial number 641-76-04
Validated By: Joint Requirements Oversight Council, August 11, 2004

Notes

None

Performance Deviation Explanation

None

(U) Navigation/Communication Upgrade Subprogram**(U) Performance Attributes**

Missile Reliability (%)			KPP
Current Estimate 12/31/2023		-	
Demonstrated Performance 8/6/2015		0.91	
Production APB Change 5 (Current) 5/1/2023	Objective	0.90	
	Threshold	0.86	
Production APB Change 5 (Milestone) 5/1/2023	Objective	0.90	
Cruise Reliability (%)			KPP
Current Estimate 12/31/2023		-	
Demonstrated Performance 8/6/2015		0.96	

Production APB Change 5 (Current) 5/1/2023	Objective	0.96
	Threshold	0.94
Production APB Change 5 (Milestone) 5/1/2023	Objective	0.96

(U) Requirement Source:

Sponsor(s): United States Navy

1. Operational Requirements Document, *Tomahawk Weapon Systems (TWS)*, serial number 641-76-04
Validated By: Joint Requirements Oversight Council, August 11, 2004

Notes

None

Performance Deviation Explanation

None

(U) Acquisition Budget Estimate**(U) Maritime Strike Tomahawk Subprogram****(U) Total Acquisition Estimates and Quantities**

Category (\$M) Base Year: 1999	Production APB Change 5 (Milestone) 5/1/2023 CY\$ obs Objective	Production APB Change 5 (Current) 5/1/2023 CY\$ obs Objective / Threshold		Current Estimate PB 2025 CY\$ obs / TY\$ obs	
RDT&E	605.8	605.8	666.4	578.2	917.8
Procurement	1,886.5	1,886.5	2,075.1	1,767.1	3,536.1
Total Acquisition	2,492.2	2,492.2	-	2,345.3	4,453.9
Program Acquisition Unit Cost	1.819	1.819	2.001	1.719	3.265
Average Procurement Unit Cost	1.396	1.396	1.536	1.314	2.629
Program End-Item Quantity					
Development	19	19		19	
Procurement	1351	1351		1345	
O&M-Acquired	-	-		-	

Budget Notes

Budget aligns with PB25, and FY24 enactment.

Quantity Notes

Quantity aligns with PB25, and FY24 enactment.

Cost Baseline Deviation Explanation

None

(U) Risk and Sensitivity Analysis

Current Procurement Estimate Risks (12/31/2023)
None
Current Baseline Risks (5/1/2023)
None
Original Baseline Risks (5/1/2023)
None

(U) Navigation/Communication Upgrade Subprogram**(U) Total Acquisition Estimates and Quantities**

Category (\$M) Base Year: 1999	Production APB Change 5 (Milestone) 5/1/2023 CY\$ obs Objective	Production APB Change 5 (Current) 5/1/2023 CY\$ obs Objective / Threshold	Current Estimate PB 2025 CY\$ obs / TY\$ obs
RDT&E	91.5	91.5 100.7	97.6 150.2
Procurement	597.6	597.6 657.4	538.2 1,021.9
Total Acquisition	689.2	689.2 -	635.8 1,172.1
Program Acquisition Unit Cost	0.173	0.173 0.190	0.159 0.294
Average Procurement Unit Cost	0.150	0.150 0.165	0.135 0.256
Program End-Item Quantity			
Development	0	0	-
Procurement	3992	3992	3992
O&M-Acquired	-	-	-

Budget Notes

Budget aligns with PB25, and FY24 enactment.

Quantity Notes

Quantity aligns with PB25, and FY24 enactment.

Cost Baseline Deviation Explanation

None

(U) Risk and Sensitivity Analysis

Current Procurement Estimate Risks (12/31/2023)
None
Current Baseline Risks (5/1/2023)
None
Original Baseline Risks (5/1/2023)
None

(U) Unit Costs**(U) Maritime Strike Tomahawk Subprogram**

(U) Current Estimate Compared with Current Baseline

Category (CY\$M) Base Year: 1999	Current Baseline 05/01/2023	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	2,492.2	2,345.3	
Program Quantity	1,370	1,364	
PAUC	1.819	1.719	-5.48%
Average Procurement Unit Cost			
Procurement Cost	1,886.5	1,767.1	
Procurement Quantity	1,351	1,345	
APUC	1.396	1.314	-5.91%

(U) Current Estimate Compared with Original Baseline

Category (CY\$M) Base Year: 1999	Original Baseline 05/01/2023	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	2,492.2	2,345.3	
Program Quantity	1,370	1,364	
PAUC	1.819	1.719	-5.48%
Average Procurement Unit Cost			
Procurement Cost	1,886.5	1,767.1	
Procurement Quantity	1,351	1,345	
APUC	1.396	1.314	-5.91%

Notes

None

(U) Navigation/Communication Upgrade Subprogram

(U) Current Estimate Compared with Current Baseline

Category (CY\$M) Base Year: 1999	Current Baseline 05/01/2023	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	689.2	635.8	
Program Quantity	3,992	3,992	
PAUC	0.173	0.159	-7.74%
Average Procurement Unit Cost			
Procurement Cost	597.6	538.2	
Procurement Quantity	3,992	3,992	
APUC	0.150	0.135	-9.95%

(U) Current Estimate Compared with Original Baseline

Category (CY\$M) Base Year: 1999	Original Baseline 05/01/2023	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	689.2	635.8	
Program Quantity	3,992	3,992	
PAUC	0.173	0.159	-7.74%
Average Procurement Unit Cost			
Procurement Cost	597.6	538.2	
Procurement Quantity	3,992	3,992	
APUC	0.150	0.135	-9.95%

Notes

None

(U) Life-Cycle Costs**(U) Maritime Strike Tomahawk Subprogram****(U) Operating and Support and Disposal Cost Estimates Compared with Baseline**

Category (\$M) Base Year: 1999	Production APB Change 5 (Milestone) 5/1/2023 CY\$ obs Objective	Production APB Change 5 (Current) 5/1/2023 CY\$ obs Objective / Threshold		Current Estimate CY\$ obs / TY\$ obs	
Total O&S	103.4	103.4	113.7	103.4*	229.2
Total Disposal	-	-	-	-	-

* Baseline Deviation

(U) Current Cost Estimate Sources**Operating and Support Cost**

Type: Program Office Estimate

Approved by: Component, May 01, 2023

Note: Represents software O&S labor only on Block Va (MST variant of TACTOM missiles). Other O&S costs are captured as part of the TACTOM total ownership costs under the TACTOM Production subprogram.

Disposal/Demilitarization Cost

Type: No estimate. Not Required

Operating and Support Baseline Deviation Explanation

Production APB Change 5 is the original and current APB for MST.

Cost Notes

O&S costs are captured as part of the TACTOM total ownership costs under the TACTOM Production subprogram.

(U) Operating and Support Variance with Prior Estimate

No Data

(U) Operating and Support Cost Element Structure Estimates by Acquired System

(CY\$M) Base Year: 1999

System	Unit-Level Manpower	Unit Operations	Maintenance	Sustaining Support	Continuing System Improvements	Other	Total
MST Kits	-	-	-	-	103.4	-	103.4
Program	-	-	-	-	103.4	-	103.4

(U) Annual Operating and Support Costs per Unit Compared with Antecedent System

No Data

(U) Operating and Support Cost Estimate Assumptions

No Data

Additional O&S Estimate Assumptions

None

Antecedent Estimate Assumptions

None

O&S Annual Cost Calculation Memo

None

(U) Navigation/Communication Upgrade Subprogram

(U) Operating and Support and Disposal Cost Estimates Compared with Baseline

No Data

(U) Current Cost Estimate Sources

Operating and Support Cost

Type: No estimate. Not Required

Disposal/Demilitarization Cost

Type: No estimate. Not Required

Operating and Support Baseline Deviation Explanation

None

Cost Notes

O&S costs are captured as part of the TACTOM total ownership costs under the TACTOM Production subprogram.

(U) Operating and Support Variance with Prior Estimate

No Data

(U) Operating and Support Cost Element Structure Estimates by Acquired System

No Data

(U) Annual Operating and Support Costs per Unit Compared with Antecedent System

No Data

(U) Operating and Support Cost Estimate Assumptions

No Data

Additional O&S Estimate Assumptions

None

Antecedent Estimate Assumptions

None

O&S Annual Cost Calculation Memo

None

(U) Performing Activities and Contracts**(U) Maritime Strike Tomahawk Subprogram****(U) External Government Activities**

None

(U) Contracts and Efforts

Contract Title	Contract Number / Effort	Contractor	Phase
MST Production, Integration, Test	N0001919C0079	Ratheon Company	Production

(U) Contract and Effort Identification, Price, Quantity and Performance

Contract Number:	N0001919C0079	Order Number:	-
Contract Title:	MST Production, Integration, Test	Strategy:	-
CAGE:	-- Ratheon Company	Contracting Office:	-
City, State/Province:	-		
Effort Number:	-	Supported Phase:	Production
Type:	Cost Plus Incentive Fee (Cost Based)	Award Date:	-
Latest Modification Date:	-	Definitization Date:	-
Latest Modification No.:	-	Work Start Date:	-
Technical Data Rights:	-		
Notes:	None		

Initial Price (TY\$M) Target / Ceiling	Current Price (TY\$M) Target / Ceiling	Est. Price at Completion (TY\$M) Contractor / PM	Initial Quantity	Current Quantity	Delivered Quantity
349.0 -	632.9 -	672.4 672.4	-	-	-

Work Completed (%): 70.05%

Cost Variance (TY\$M): -81.3

Schedule Variance (TY\$M): -27.5

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Cost variance is due to technical and integration challenges with the Ultra processor, Seeker Power Interface Unit, Primary Power Interface Unit, and Passive sensor. These components went through several unplanned design iterations leading to cost increases for both development and production. In addition, there has been significant cost growth on the development contract line-item number due to software/hardware integration challenges between the Active and Passive Sensors with the Ultra processor.

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Schedule variance is due to design iterations with seeker hardware, test equipment and software/hardware integration challenges. The design iterations have also contributed to longer than planned lead times for production hardware which delays delivery of completed seeker suites.

(U) Navigation/Communication Upgrade Subprogram**(U) External Government Activities**

None

(U) Contracts and Efforts

Contract Title	Contract Number / Effort	Contractor	Phase
MST Production, Integration, Test	N0001919C0079	Ratheon Company	Production

(U) Contract and Effort Identification, Price, Quantity and Performance

Contract Number:	N0001919C0079	Order Number:	-
Contract Title:	MST Production, Integration, Test	Strategy:	-
CAGE:	-- Ratheon Company	Contracting Office:	-
City, State/Province:	-		
Effort Number:	-	Supported Phase:	Production
Type:	Cost Plus Incentive Fee (Cost Based)	Award Date:	-
Latest Modification Date:	-	Definitization Date:	-
Latest Modification No.:	-	Work Start Date:	-
Technical Data Rights:	-		
Notes:	None		

Initial Price (TY\$M) Target / Ceiling	Current Price (TY\$M) Target / Ceiling	Est. Price at Completion (TY\$M) Contractor / PM	Initial Quantity	Current Quantity	Delivered Quantity
90.0 -	75.9 -	75.9 75.9	-	-	-

(U) Production**(U) Maritime Strike Tomahawk Subprogram**

(U) Low-Rate Initial Production

	Original LRIP Determination	Current LRIP Determination
Total LRIP Quantity	77	77
Date	5/1/2023	12/31/2023
Reference	APB	APB
LRIP Period	FY 2021 - 2023	FY 2021 - 2023
Total Procurement Quantity	1,351	1,345
LRIP Percentage of Total	5.7%	5.7%

Rationale if LRIP Quantity Exceeds 10% of Total Procurement Quantity (Current Determination)

None

LRIP Notes

The U.S. Navy has a documented Urgent Operational Need for MST. Due to production lead times and Initial Operational Test & Evaluation schedules, the program is unable to conduct a Full Rate Production Decision Review until FY27 at the earliest. However, the Navy has determined that the need for the fleet is to procure as many MST missiles (even as LRIPs) as the budget will allow to provide to the fleet to deter the threat posed by our adversaries.

(U) Navigation/Communication Upgrade Subprogram

(U) Low-Rate Initial Production

No Data

Rationale if LRIP Quantity Exceeds 10% of Total Procurement Quantity (Current Determination)

None

LRIP Notes

NAV/COMM designated a subprogram post FRP decision.

(U) Deliveries and Expenditures**(U) Maritime Strike Tomahawk Subprogram**

(U) Acquisition Funding

	Total Estimate	Actual to Date	Actual, Percent Complete
Years Appropriated	20	8	40.0%
Appropriations (TY, \$M)	4,453.9	922.7	20.7%
Expenditures (TY, \$M)	4,453.9	769.9	17.3%

(U) End Items Delivered

	Total Required	Planned to Date	Actual to Date	Actual, Percent Complete
Development	19			
MST Kits		10	10	
Procurement	1,345			
Total	1,364	10	10	0.7%

Notes

None

(U) Navigation/Communication Upgrade Subprogram

(U) Acquisition Funding

	Total Estimate	Actual to Date	Actual, Percent Complete
Years Appropriated	24	11	45.8%
Appropriations (TY, \$M)	1,172.1	307.2	26.2%
Expenditures (TY, \$M)	1,172.1	186.9	15.9%

(U) End Items Delivered

	Total Required	Planned to Date	Actual to Date	Actual, Percent Complete
--	----------------	-----------------	----------------	--------------------------

	Total Required	Planned to Date	Actual to Date	Actual, Percent Complete
Procurement	3,992			
NAV/COMM Upgrade Kits		375	375	
Total	3,992	375	375	9.4%

Notes

None

(U) International Program Aspects

Additional information for this section is provided in the classified annex to this submission.

General Memo

None

Exportability and Business Issues

Details held at a higher classification level.

Is design for international exportability planned?	Yes	Industry/Partner Exportability Cost-Sharing?	No
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Program Protection: Technology Security and Foreign Disclosure Issues

Details held at a higher classification level.

(U) Agreements

No International Agreements have been defined for TACTOM

(U) Maritime Strike Tomahawk Subprogram

No Data

(U) Navigation/Communication Upgrade Subprogram

Additional information for this section is provided in the classified annex to this submission.

General Memo

None

Exportability and Business Issues

Details held at a higher classification level.

Is design for international exportability planned?	Yes	Industry/Partner Exportability Cost-Sharing?	No
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Program Protection: Technology Security and Foreign Disclosure Issues

Details held at a higher classification level.

(U) Agreements

No International Agreements have been defined for NAV/COMM Upgrade



UNCLASSIFIED

Modernized Selected Acquisition Report Supplement

Tactical Tomahawk RGM-109E/UGM-109E Missile (TACTOM)

FY 2025 President's Budget
As of: December 31, 2023

UNCLASSIFIED

MSAR Supplement Sections

Program Description

Program Use of the Adaptive Acquisition Framework

Technologies and Systems Engineering

Funding Sources (Acquisition)

Funding Sources (Operating and Support)

Acquisition Estimate and Quantity Summary

Annual Acquisition Estimates by Appropriation Account

Acquired System Annual End-Item Quantities by Appropriation Account

Nuclear Costs

Operational Fielding Plan

O&S Independent Cost Estimate

Annual Operating and Support Estimates by Cost Element

Program Description

Full Name

Tactical Tomahawk RGM-109E/UGM-109E Missile

Short Name

TACTOM

PNO

289

Lead Component

Navy

AAF Pathway

MCA

Acquisition Type

MDAP

Acquired Systems
Subprograms

Full Name	Short Name	Acquired Systems
Navigation/Communication Upgrade	NAV/COMM Upgrade	NAV/COMM Upgrade Kits
Maritime Strike Tomahawk	MST	MST Kits

Related Programs

Full Name	PNO	Pathway	Type	ACAT/ BCAT	Acquisition Status	Costs in SAR?	
						Acq	O&S
TACTICAL TOMAHAWK MISSILE RECERTIFICATION		MCA	AP	II	Active	No	No

Program Use of the Adaptive Acquisition Framework

The TACTOM program was initiated in DEC 1997 as a result of changed operational requirements from Fleet Commanders requesting a more flexible, more responsive, and more affordable missile identified in Desert Storm, Bosnia, and Desert Fox. The Block (BLK) IV All-Up-Round (AUR) (includes the missile in a canister for surface launch or in a capsule for submarine launch) was built upon the legacy of the Tomahawk Baseline Improvement Program (TBIP), but provided a missile with improved flexibility and increased responsiveness. TACTOM completed Initial Operating Capability (IOC) in 2004, and went out of reporting in FY18 as the AUR were over 90% delivered.

The TACTOM major subprograms were designated in FY23 under the MDAP. The TACTOM program has become an “umbrella” ACAT IC program with all prior APB parameters absorbed in the TACTOM Production subprogram.

The TACTOM Production subprogram encompasses the baseline production missile, plus ready variants and modernization upgrades upon their completed IOC. BLK V is the current variant. The NAV/COMM Upgrade subprogram encompasses BLK V upgrades on the BLK IV recertification line only (Recertification is a separate program of record). The MST subprogram variant encompasses the BLK Va upgrades on BLK V recertified missiles.

Technologies and Systems Engineering

Navigation/Communication Upgrade Subprogram

Major Software Efforts

Title	Status	Fielding Date	Description
OES 0078	Deployment	Mar 2021	BLK V (Nav/Comms) IOC software

Major Engineering Changes

Title	Original Need Date	Fielding Date	Description, Rationale and Program Impacts
BLK V	5/31/2021	Apr 2021	BLK V (Nav/Comms) IOC

Technologies and Systems Engineering

Maritime Strike Tomahawk Subprogram

Some data for this section cannot be provided in an unclassified report

Major Software Efforts

Title	Status	Fielding Date	Description
OES 5.3	Development	Sep 2025	Early Operational Capability (EOC) software for MST deployment

Major Engineering Changes

Title	Original Need Date	Fielding Date	Description, Rationale and Program Impacts

Funding Sources (Acquisition)**Acquisition Funding Notes**

None

Navigation/Communication Upgrade Subprogram

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
RDT&E	1319N	07	0204229N - Tomahawk and Tomahawk Mission Planning Center (TMPC)	0204229N	4032 - NAV/COMMS		
Procurement	1507N	02	2301 - Tomahawk Mods	0204229N	-	x	
RDT&E	1319N	07	0204229N - Tomahawk and Tomahawk Mission Planning Center (TMPC)	0204229N	0545 - Tomahawk	x	x
Procurement	1507N	02	2101 - Tomahawk	0204229N	-	x	x

Funding Sources (Acquisition)**Acquisition Funding Notes**

None

Maritime Strike Tomahawk Subprogram

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
RDT&E	1319N	07	0204229N - Tomahawk and Tomahawk Mission Planning Center (TMPC)	0204229N	4034 - Maritime Strike		
Procurement	1507N	02	2301 - Tomahawk Mods	0204229N	-	x	
Procurement	1507N	02	2421 - Industrial Preparedness	0204229N	-	x	x
Procurement	1507N	06	6120 - Spares and Repair Parts	0204229N	-	x	
Procurement	1109N	03	2101 - Tomahawk	0204229M	-	x	
RDT&E	1319N	07	0204229N - Tomahawk and Tomahawk Mission Planning Center (TMPC)	0204229N	0545 - Tomahawk	x	x

Note: Budget lines fund activities executed by the Program Office or Sustainment Office.

Operating and Support Funding Notes

O&S costs are captured as part of the TACTOM total ownership costs under the TACTOM Production subprogram.

Navigation/Communication Upgrade Subprogram

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
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Note: Budget lines fund activities executed by the Program Office or Sustainment Office.

Operating and Support Funding Notes

MST fielding plan represents software O&S labor only on BLK Va missiles. Other O&S costs are captured as part of the TACTOM total ownership costs under the TACTOM Production subprogram.

Maritime Strike Tomahawk Subprogram

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
O&M	1804N	01	1D4D - Weapons Maintenance	0204229N	-	x	

Acquisition Estimate and Quantity Summary**Navigation/Communication Upgrade Subprogram****Acquisiton Estimates**

Category	PB 2025	Current Base Year		Original Base Year	Report Fiscal Year
		TY (\$M)	CY1999 (\$M)	CY1999 (\$M)	CY2024 (\$M)
RDT&E		150.2	97.6	97.6	165.8
Procurement		1,021.9	538.2	538.2	914.7
MILCON		-	-	-	-
O&M		-	-	-	-
Total Acquisition		1,172.1	635.8	635.8	1,080.6
PAUC		0.294	0.159	0.159	0.271
APUC		0.256	0.135	0.135	0.229

Acquisiton End-Item Quantities

System	PB 2025	Development	Procurement
NAV/COMM Upgrade Kits		-	3,992
Total		-	3,992

Unit Description

NAV/COMM Upgrade kits delivery for install

Current and Future Years Defense Program Summary, TY(\$M)

Appropriation	Prior	2024	2025	2026	2027	2028	2029	To Complete	Total
RDT&E	88.4	3.0	20.9	27.1	7.9	1.5	1.5	-	150.2
Procurement	218.8	42.1	24.2	100.0	96.9	57.9	121.3	360.7	1,021.9
MILCON	-	-	-	-	-	-	-	-	-
O&M	-	-	-	-	-	-	-	-	-
PB 2025 Total	307.2	45.0	45.1	127.1	104.8	59.4	122.8	360.7	1,172.1

Acquisition Estimate and Quantity Summary

Maritime Strike Tomahawk Subprogram

Acquisiton Estimates

Category	PB 2025	Current Base Year		Original Base Year	Report Fiscal Year
		TY (\$M)	CY1999 (\$M)	CY1999 (\$M)	CY2024 (\$M)
RDT&E		917.8	578.2	578.2	982.7
Procurement		3,536.1	1,767.1	1,767.1	3,003.2
MILCON		-	-	-	-
O&M		-	-	-	-
Total Acquisition		4,453.9	2,345.3	2,345.3	3,985.9
PAUC		3.265	1.719	1.719	2.922
APUC		2.629	1.314	1.314	2.233

Acquisiton End-Item Quantities

System	PB 2025	Development	Procurement
MST Kits		19	1,345
Total		19	1,345

Unit Description

MST Kits delivery for install

Current and Future Years Defense Program Summary, TY(\$M)

Appropriation	Prior	2024	2025	2026	2027	2028	2029	To Complete	Total
RDT&E	693.1	54.4	82.1	29.6	19.1	19.6	20.0	-	917.8
Procurement	197.6	123.3	127.4	234.7	200.9	199.7	221.5	2,231.1	3,536.1
MILCON	-	-	-	-	-	-	-	-	-
O&M	-	-	-	-	-	-	-	-	-
PB 2025 Total	890.7	177.6	209.5	264.2	220.0	219.3	241.5	2,231.1	4,453.9

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Navigation/Communication Upgrade Subprogram

Source for TY\$-CY\$ Conversion: ASN FMB-6 Inflation Rates and Outlay Factors for DA, DoN and DW accounts: 17 Jan 2024

1319N - Research, Development, Test & Eval, Navy					
fiscal year		Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY1999 (\$M)
Total		150.2	150.2	-	97.6
2014		2.400	2.4	1.324015	1.8
2015		10.100	10.1	1.340675	7.5
2016		21.800	21.8	1.365558	16.0
2017		25.600	25.6	1.391108	18.4
2018		19.200	19.2	1.425182	13.5
2019		4.600	4.6	1.452631	3.2
2020		3.900	3.9	1.506050	2.6
2021		0.800	0.8	1.573738	0.5
2022		-	-	1.655954	-
2023		-	-	1.705253	-
2024		2.969	3.0	1.744180	1.7
2025		20.920	20.9	1.781179	11.7
2026		27.073	27.1	1.818584	14.9
2027		7.876	7.9	1.856774	4.2
2028		1.475	1.5	1.895766	0.8
2029		1.505	1.5	1.935577	0.8

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Navigation/Communication Upgrade Subprogram

Source for TY\$-CY\$ Conversion: ASN FMB-6 Inflation Rates and Outlay Factors for DA, DoN and DW accounts: 17 Jan 2024

1507N - Weapons Procurement, Navy									
fiscal year	End Item Recurring Flyaway	Non-End Item Recurring Flyaway	Non-Recurring Flyaway	Initial Spares	Depot Activation	Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY1999 (\$M)
Total	-	952.6	-	-	-	69.3	1,021.9	-	538.2
2014							-	1.338914	-
2015							-	1.360756	-
2016							-	1.386319	-
2017							-	1.416336	-
2018		2.270				6.930	9.2	1.455233	6.3
2019		30.753				5.101	35.9	1.497959	23.9
2020		35.641				11.550	47.2	1.557382	30.3
2021		33.110				5.353	38.5	1.628447	23.6
2022		32.724				2.436	35.2	1.692048	20.8
2023		50.487				2.485	53.0	1.735805	30.5
2024		39.524				2.546	42.1	1.773915	23.7
2025		21.673				2.482	24.2	1.811352	13.3
2026		97.568				2.440	100.0	1.849391	54.1
2027		94.429				2.475	96.9	1.888228	51.3
2028		55.333				2.590	57.9	1.927881	30.0
2029		118.640				2.668	121.3	1.968366	61.6
2030		53.500				2.721	56.2	2.009702	28.0
2031		44.581				2.775	47.4	2.051906	23.1
2032		45.507				2.831	48.3	2.094996	23.1
2033		46.452				2.888	49.3	2.138990	23.1
2034		48.366				2.946	51.3	2.183909	23.5
2035		49.334				3.005	52.3	2.229771	23.5
2036		50.320				3.065	53.4	2.276597	23.4
2037		2.366				-	2.4	2.324405	1.0

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Maritime Strike Tomahawk Subprogram

Source for TY\$-CY\$ Conversion: ASN FMB-6 Inflation Rates and Outlay Factors for DA, DoN and DW accounts: 17 Jan 2024

1319N - Research, Development, Test & Eval, Navy					
fiscal year		Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY1999 (\$M)
Total		917.8	917.8	-	578.2
2014			-	1.324015	-
2015			-	1.340675	-
2016			-	1.365558	-
2017		18.000	18.0	1.391108	12.9
2018		55.252	55.3	1.425182	38.8
2019		169.486	169.5	1.452631	116.7
2020		179.532	179.5	1.506050	119.2
2021		123.347	123.3	1.573738	78.4
2022		73.679	73.7	1.655954	44.5
2023		73.783	73.8	1.705253	43.3
2024		54.371	54.4	1.744180	31.2
2025		82.145	82.1	1.781179	46.1
2026		29.562	29.6	1.818584	16.3
2027		19.072	19.1	1.856774	10.3
2028		19.597	19.6	1.895766	10.3
2029		19.988	20.0	1.935577	10.3

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Maritime Strike Tomahawk Subprogram

Source for TY\$-CY\$ Conversion: ASN FMB-6 Inflation Rates and Outlay Factors for DA, DoN and DW accounts: 17 Jan 2024

1109N - Procurement, Marine Corps									
fiscal year	End Item Recurring Flyaway	Non-End Item Recurring Flyaway	Non- Recurring Flyaway	Initial Spares	Depot Activation	Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY1999 (\$M)
Total	-	100.4	-	-	-	-	100.4	-	55.1
2014							-	1.334606	-
2015							-	1.354882	-
2016							-	1.380131	-
2017							-	1.408678	-
2018							-	1.437778	-
2019							-	1.474944	-
2020							-	1.532817	-
2021							-	1.608996	-
2022							-	1.679362	-
2023							-	1.724422	-
2024							-	1.762623	-
2025		42.120					42.1	1.799857	23.4
2026		58.300					58.3	1.837654	31.7

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Maritime Strike Tomahawk Subprogram

Source for TY\$-CY\$ Conversion: ASN FMB-6 Inflation Rates and Outlay Factors for DA, DoN and DW accounts: 17 Jan 2024

1507N - Weapons Procurement, Navy									
fiscal year	End Item Recurring Flyaway	Non-End Item Recurring Flyaway	Non- Recurring Flyaway	Initial Spares	Depot Activation	Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY1999 (\$M)
Total	-	3,343.1	12.6	26.1	-	53.9	3,435.7	-	1,711.9
2014							-	1.338914	-
2015							-	1.360756	-
2016							-	1.386319	-
2017							-	1.416336	-
2018							-	1.455233	-
2019							-	1.497959	-
2020							-	1.557382	-
2021		19.595					19.6	1.628447	12.0
2022		40.721		1.093		3.749	45.6	1.692048	26.9
2023		113.310	12.594	2.364		4.158	132.4	1.735805	76.3
2024		117.042		1.913		4.310	123.3	1.773915	69.5
2025		80.940		1.440		2.851	85.2	1.811352	47.1
2026		171.595		1.936		2.828	176.4	1.849391	95.4
2027		196.141		1.950		2.830	200.9	1.888228	106.4
2028		194.774		1.989		2.962	199.7	1.927881	103.6
2029		216.416		2.031		3.052	221.5	1.968366	112.5
2030		404.837		2.183		3.650	410.7	2.009702	204.3
2031		413.419		2.229		3.723	419.4	2.051906	204.4
2032		433.248		2.276		3.797	439.3	2.094996	209.7
2033		441.914		2.321		3.873	448.1	2.138990	209.5
2034		445.815		2.368		3.951	452.1	2.183909	207.0
2035		26.903				4.030	30.9	2.229771	13.9
2036		26.475				4.110	30.6	2.276597	13.4

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Navigation/Communication Upgrade Subprogram

1507N - Weapons Procurement, Navy				
fiscal year	NAV/COMM Upgrade Kits			Total
Total	3,992			3,992
Undistributed				-
2018	5			5
2019	112			112
2020	156			156
2021	156			156
2022	166			166
2023	274			274
2024	215			215
2025	111			111
2026	508			508
2027	479			479
2028	245			245
2029	515			515
2030	150			150
2031	150			150
2032	150			150
2033	150			150
2034	150			150
2035	150			150
2036	150			150

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Maritime Strike Tomahawk Subprogram

1319N - Research, Development, Test & Eval, Navy				
fiscal year	MST Kits			Total
Total	19			19
Undistributed				-
2018				-
2019	19			19

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Maritime Strike Tomahawk Subprogram

1109N - Procurement, Marine Corps				
fiscal year	MST Kits			Total
Total	43			43
Undistributed				-
2018				-
2019				-
2020				-
2021				-
2022				-
2023				-
2024				-
2025	18			18
2026	25			25

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Maritime Strike Tomahawk Subprogram

1507N - Weapons Procurement, Navy				
fiscal year	MST Kits			Total
Total	1,302			1,302
Undistributed				-
2018				-
2019				-
2020				-
2021	11			11
2022	24			24
2023	42			42
2024	50			50
2025	32			32
2026	68			68
2027	78			78
2028	78			78
2029	86			86
2030	167			167
2031	167			167
2032	167			167
2033	167			167
2034	165			165

Nuclear Costs

Navigation/Communication Upgrade Subprogram

Program's Use of Department of Energy Resources

None

Nuclear Costs

Maritime Strike Tomahawk Subprogram

Program's Use of Department of Energy Resources

None

Operational Fielding Plan

Navigation/Communication Upgrade Subprogram

System:

Fielding and Inventory Notes

None: Operating and Support (O&S) costs are captured as part of the TACTOM total ownership costs under the TACTOM Production subprogram.

Fielding Plan and Inventory

fiscal year	Store	Field	Expend/Loss	Decommission	Inventory
2023					
2024					-
2025					-
2026					-
2027					-
2028					-
2029					-

Operational Fielding Plan

Maritime Strike Tomahawk Subprogram

System:

Fielding and Inventory Notes

MST fielding plan represents software O&S labor only on BLK Va missiles. Other O&S costs are captured as part of the TACTOM total ownership costs under the TACTOM Production subprogram.

Fielding Plan and Inventory

fiscal year	Store	Field	Expend/Loss	Decommission	Inventory
2023					
2024					-
2025		35			35
2026		42			77
2027		39			116
2028		50			166
2029		93			259

O&S Independent Cost Estimate

Maritime Strike Tomahawk Subprogram

Independent and Current Cost Estimate Comparison

Category	CY1999 (\$M)	Independent Cost Estimate	Current Estimate 5/1/2023	Variance with ICE (%)
Unit-Level Manpower				-
Unit Operations				-
Maintenance				-
Sustaining Support				-
Continued System Improvements			103.4	-
Other				-
Total O&S		-	103.4	-

Independent Cost Estimate Source

Event:

Type:

Approved by:

Current Cost Estimate Source

Type: Program Office Estimate

Approved by: Component, May 1, 2023

Annual Operating and Support Estimates by Cost Element

Maritime Strike Tomahawk Subprogram

System: MST Kits

Source for TY-CY Conversion:

Operating and Support Cost Elements							
fiscal year	1.0 Unit-Level Manpower	2.0 Unit Operations	3.0 Maintenance	4.0 Sustaining Support	5.0 Continuing System Improvements	Other	Total CY1999 (\$M)
Total	-	-	-	-	103.4	-	103.4
2024					2.690		2.7
2025					2.690		2.7
2026					2.690		2.7
2027					2.690		2.7
2028					2.690		2.7
2029					2.690		2.7
2030					2.690		2.7
2031					2.690		2.7
2032					2.690		2.7
2033					2.690		2.7
2034					2.690		2.7
2035					2.690		2.7
2036					2.690		2.7
2037					2.690		2.7
2038					2.690		2.7
2039					3.080		3.1
2040					3.500		3.5
2041					3.260		3.3
2042					3.250		3.3
2043					3.280		3.3
2044					3.300		3.3
2045					3.320		3.3
2046					4.450		4.5
2047					4.450		4.5
2048					4.450		4.5
2049					4.450		4.5
2050					4.450		4.5
2051					4.400		4.4
2052					2.690		2.7
2053					2.690		2.7
2054					2.690		2.7
2055					2.690		2.7
2056					2.690		2.7