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Modernized Selected Acquisition Report (MSAR)

OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Littoral Combat Ship Mission Modules (LCS MM)

FY 2025 President's Budget

Effective: December 31, 2023

Defense Acquisition Visibility Environment

Table of Contents

Common DoD Abbreviations	3
Program Description	5
Responsible Office	6
Executive Summary	7
Schedule	9
Performance	12
Acquisition Budget Estimate	14
Unit Costs	17
Life-Cycle Costs	19
Technologies and Systems Engineering	22
Performing Activities and Contracts	23
Production	26
Deliveries and Expenditures	27

(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

Littoral Combat Ship Mission Modules

PNO

443

Lead Component

Department of the Navy

Joint Program

No

Adaptive Acquisition Pathway

No Data

Acquisition Category

IC

Major System

No

Acquisition Status Active Acquisition

Mission

NO Milestone

Milestone Decision Authority
Component Acquisition Executive

Program Executive Office

PEO Unmanned and Small Surface

Combatants

Short Name

LCS MM

Acquisition Type

Major Defense Acquisition Program

MDAP/ACAT I Equivalent

No

Acquired Systems

LCS Anti-Submarine Warfare Mission

Package, LCS MM, LCS Mine

Countermeasures Mission Package, LCS

Surface Warfare Mission Package

Program remains rated Yellow for Performance pending approval of CDD in January 2021.

(U) Responsible Office

Program Executive Officer
PEO Unmanned and Small Surface Combatants
Littoral Combat Ship Mission Modules PMO
No Data

(U) Executive Summary

Program Highlights Since Last Report

Significant Accomplishments:

On 31 March 2023, the LCS MM Program achieved one of its top priorities when the Navy declared Initial Operational Capability (IOC) of the Mine Countermeasures (MCM) Mission Package (MP). The Program of Record (PoR) will field capabilities as approved in the budget and in phase with ship deliveries. The LCS MM quantities remain the same as the PB for the FY 2023 submission. These include:

- · 24 Mine Countermeasures (MCM) MPs 15 for LCS and 9 for Vessels Of Opportunity (VOOs)
- 10 Surface Warfare (SUW) MPs
- · 1 Anti-Submarine Warfare (ASW) MP previously procured with FY 2020 and FY 2021 funds. The 24 deployable MCM MPs will support 15 Independence variant LCS and the Chief of Naval Operations direction to use other Navy platforms (VOOs). The 10 deployable SUW MPs procured from FY 2010 to FY 2018 will support 8 LCS.

SUW MP

- Surface-to-Surface Missile Module (SSMM) supporting deployments on USS Indianapolis (LCS 17).
- All five SSMM production units delivered in FY 2024.
- SUW MP is operating in the Fleet today supporting 5th and 6th Fleet deployments.
- FY23 OPN recission delayed Navy's incorporation of tech refresh ECPs required for SSMM Hatch and Cover into FY 2025.

MCM MP

- Declared IOC for the Mine Countermeasures Mission Package (MCM MP) in March 2023.
- Declared IOC for the AN/AQS-20C Minehunt Sonar in March 2023.
- Six MCM Unmanned Surface Vehicles (MCM USVs) are undergoing backfit to correct Initial Operational Test and Evaluation (IOT&E) deficiencies. These backfits will be applied to all future Unmanned Surface Vehicles (USVs).
- MCM USV approved for Full Rate Production in September 2023.
- Awarded a follow-on contract option to Bollinger Shipyards for a total of nine MCM USVs in production.

ASW MP

- Pursuant to the Navy's decision to divest the ASW MP as enacted by FY 2023 budget, the Program completed actions for an orderly close out of ASW MP.
- Program completed its contract with Raytheon. It underwent actions including acceptance of the one Low-Rate Initial Production (LRIP) Dual-mode Array Transmitter (DART) Variable Depth Sonar (VDS) unit.
- Program debarked ASW equipment from the Navy's ASW MP test ship, LCS 3.

(U) History of Significant Developments Since Program Inception

Date	Description
December 2022	With completion of 2022 Gate 6 review, LCS MM was directed to update its current APB to reflect Procurement Quantity Changes outlined in 'LCS Procurement Quantity Changes' letter from N9 to PEO USC. (Reductions: AMNS 48 to 20, ALMDS 24 to 12, COBRA BIk I 24 to 5, SSMM 10 to 5, ASW EDM 10 to 1, ASW EMM EDM 1, ASW AVMM 10 to 0).

April 2022 With the PB 2023 submission, the Navy reduced MP quantities to 35 MPs (24 MCM MP: 10 SUW MPs, 1 ASW MP), and 5 non-deployable EDMs (1 MCM MP; 2 SUW MPs, 2 ASW MPs), 40 total MPs based on the planned LCS ship decommissionings and ASW MP divestment from LCS. January 2021 JROC approved revised Navy requirements in a new MCM MP Capabilities Development Document. February 2020 MDA signed ADM of February 14, 2020 increasing LRIP authority to 44 Mission Package September 2018 MDA approved the LCS MM Program re-baseline via APB Change 1. August 2018 MDA signed ADM of August 20, 2018 increasing quantity of developmental ASW MPs from one to two resulting in a total of 5 non-deployable EDM MPs. In addition, this ADM authorized removal of the LRIP decision (Milestone C) for the LCS MM Program on the basis that 12 of the 13 mission systems that comprise the LCS MM Program will achiev independent LRIP decisions as separate ACAT programs. February 2018 With the PB 2019 submission, the Navy reduced MP quantities (from 64 to 48 total MPs consisting of 44 deployable and 4 non-deployable Engineering Development Model (EDM MPs) based upon the total planned 32 LCS class ships, pending FY 2018 and FY 2019 budget approvals, and CNO direction to use other Navy platforms (Vessels of Opportunit to host the Mine Countermeasures (MCM) MP to comply with Section 1046 of the FY 2018 NDAA which prohibits the retirement of legacy MCM forces until the Navy has identified a replacement capability and procured a quantity of such systems to meet combatant MCM operational requirements that are currently being met by legacy forces The PB 2020 submission supports procurement of 24 MCM MPs, 10 Surface Warfare (SUW) MPs, and 10 Anti-Submarine (ASW) MPs. February 2016 Chief of Naval Operations (CNO) directed the establishment of the LCS Review Team to review the LCS operations and sustainment strategy and number of mission packages required to support the LCS Seaframes. December 2015	
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December 2015 Secretary of Defense Memo of December 14, 2015 directed the Navy to build no more	
than 40 LCS and Frigate and to down select to one variant no later than FY 2019. Navy submitted a 40 ship SAR (29 LCS / 11 Frigate), consistent with PB 2017 and SECDEF guidance. Navy initiated review of the LCS Mission Package quantities based on update LCS quantities.	ed.
January 2014 The program achieved Milestone B approving entry into the EMD phase and procuremer of five developmental MPs and up to 27 LRIP MPs.	nts
November 2013 USD(AT&L) approved the APB based on a Resources & Requirements Review Board conducted August 6, 2013. Initial APB included a quantity 64 deployable mission packages (MPs).	
October 2012 USD(AT&L) signed ADM of October 3, 2012 re-designating the LCS MM program as an ACAT IC program.	
April 2011 ADM signed splitting the LCS Seaframe and LCS MMs into two separate MDAPs.	
March 2004 Milestone A / Program Initiation for the LCS Seaframes and Mission Modules.	

(U) Schedule

(U) Schedule Events

Events		9/28/	nange 1 rent) /2018 / Threshold	Current Estimate 12/31/2023	Actual
Milestone A (Combined LCS program)	MS A	May 2004	May 2004	May 2004	-
Mission MP, Production, and Assembly contract award	FF0	Mar 2006	Mar 2006	Mar 2006	-
First MCM MP delivery	First Asset Delivery	Sept 2007	Sept 2007	Sept 2007	-
First SUW MP delivery	First Asset Delivery	Jul 2008	Jul 2008	Jul 2008	-
Milestone A Prime	MS A	Aug 2009	Aug 2009	Aug 2009	-
Milestone B	MS B	Jan 2014	Jan 2014	Jan 2014	-
SUW MP IOC	IOC	Nov 2014	Nov 2014	Nov 2014	-
ASW MP IOC	IOC	Sept 2020	Sept 2021	-	-
MCM MP IOC	IOC	Jun 2022	Jun 2023	Mar 2023	-

Notes

(Ch-1) Anti-Submarine Warfare (ASW) Mission Package (MP) IOC changed from June 2020 to N/A as the ASW MP was divested in FY 2023. With this divestment, the LCS MM Program will no longer have an ASW MP requirement.

Mine Countermeasures (MCM) MP IOC changed from June 2022 to March 2023 due to revised MCM MP test schedules driven by Unmanned Influence Sweep System (UISS) Initial Operational Test and Evaluation (IOT&E) delays and completion of system-level MCM Unmanned Surface Vehicle (USV) Minehunting contractor verification testing and availability of Sea Frame to complete testing. OPNAV declared MCM MP IOC on 31 MAR 2023.

Threshold dates for ASW MP and MCM MP IOC are set to 12 months vice 6 months to be consistent with the Milestone B APB. The test schedule is heavily reliant on ship availability and the duration of testing for the ASW and MCM MPs is approximately a year. Any small deviation in schedule would likely result in a schedule breach if objective to threshold remained at 6 months.

Items are listed as N/A above due to revision of Schedule Events when the APB was updated with LCS MM APB Change 1. Milestone C was removed because nearly all of the LCS mission systems that comprise the LCS MM Program's MPs achieve independent Milestone C decisions in separate acquisition programs. Additionally, the IOC dates for each MP were consolidated to a single IOC date for each warfare area instead of multiple increments.

Schedule Baseline Deviation Explanation

On June 7, 2021, the LCS MM Program notified the MDA of a schedule breach to the ASW MP IOC date due to delays completing formal ASW MP testing as a result of system hydrodynamic

instability, system availability, ship availability, and limited availability of submarine test assets for testing in FY 2020 and FY 2021.

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

Event	Date	Description
Current	12/31/2023	The MCM MP and AN/AQS-20C declared IOC in March 2023. The program is addressing the effectiveness and suitability findings of the minehunting system and are on-track for an FY24 MCM MP delivery to support first deployments.
Current	12/13/2022	Completion of MCM MP IOT&E occurred in Aug 2022. PMS 420 received final IOT&E report in Jan 2023. OPNAV will declare MCM MP IOC following Fleet endorsement of recommendation to declare MCM MP expected in Q2 of FY 2023. In addition, the Minehunt MM will also declare IOC in Q2 of FY 2023. MCM MP IOC would still be in advance of the APB threshold of June 2023. The RMH Module, the final Mission Module to go through Individual Program of Record testing, including the MCM USV with the Minehunt PDS towing the AN/AQS-20C sonar, completed system operational testing in Q1 FY 2023. Based on initial information gathered from both MCM MP IOT&E and Minehunting operation testing, the Program has initiated and completed root cause assessments on findings impacting both the effectiveness and suitability of the minehunting system. PMS420 has provides a POA&M on addressing each of these findings with its recommendation for declaration of IOC of the AQS-20C sonar.
Current	12/13/2022	The Program has incurred production delays due to extended material lead times, sub-tier suppliers experiencing raw material shortages, and related labor complications as a result of the COVID-19 pandemic increasing schedule risk for mission system and support equipment/container hardware deliveries. For example, the Surface to Surface Missile Module (SSMM) Prime Contractor has indicated a potential schedule delay for the four SSMM in production because of COVID-19 impacts due to availability of Honeycomb panels as a result of the original supplier of the core material going out of business. The Program has accounted for this delay and is working with Fleet to establish a plan for deployment of the modules. The Fleet plans to continue to embark and deploy Surface Warfare (SUW) MPs with SSMMs as they deliver from the production line. The Program delivered the first production SSMM in February 2022 which was embarked on LCS 17 in support toa a deployment in Q3 FY 2023, 10 deployable SUW MP with Gun Mission Modules (GMM), Maritime Security (MSM), and Aviation assets are operational and available to the Fleet.
Current	12/31/2021	The Program is tracking schedule risk to complete all entry criteria to support achieving MCM MP IOC in 4Q FY 2022. The Navy is currently conducting Minehunting testing at the system-level with the MCM USV, AQS-20 sonar, and Minehunting PDS. Based on testing progress, additional Minehunting Data Collection may be necessary to complete all test objectives planned at the system-level prior to MCM MP IOT&E. MCM MP End-to-End IOT&E is scheduled to complete in late 4Q FY 2022 with cyber security testing in 1Q FY 2023. Based on nominal test reporting timelines by OPTEVFOR and DOT&E, the outputs of which support IOC, the Program may not receive approved test reports until late 1Q FY 2023 resulting in a delay to MCM MP IOC. MCM MP IOC would still be in advance of the APB threshold of June 2023.
Current	12/31/2021	The Program has incurred production delays due to extended material lead times, sub-tier suppliers experiencing raw material shortages, and related labor complications as a result of the COVID-19 pandemic increasing schedule risk for mission system and support equipment/container hardware deliveries. For example, the Surface to Surface Missile Module (SSMM) Prime Contractor has

		indicated a potential schedule delay for the four SSMM in production because of COVID-19 impacts due to availability of Honeycomb panels as a result of the original supplier of the core material going out of business. The Program has accounted for this delay and working with Fleet to establish a plan for deployment of the modules. The Fleet plans to continue to embark and deploy Surface Warfare (SUW) MPs with SSMMs as they deliver from the production line. The Program has delivered the first production SSMM in February 2022 which will be ready for deployment in Q3 FY 2022, as well as all 10 deployable SUW MP with Gun Mission Modules (GMM), Maritime Security (MSM), and Aviation assets to the Fleet.
Current	12/31/2021	Completing testing for the ASW MP has high schedule risk. ASW MP maturation continued with design improvements and testing. Program schedule has been impacted by system reliability/hydrodynamic stability, LCS 3 (test platform) materiel availability, and submarine (target) availability during FY 2021. Program focus has been on maturing the underwater vehicle's hydrodynamic stability through the rapid implementation of active roll controls. Hydro maturation efforts are expected to last through July 2022. In part due to assessed high risk of the hydrodynamic corrective actions as well as transducer reliability and performance, PB 2023 divests the ASW mission for LCS. With this divestment, the Program will conduct an orderly shutdown of the ASW MP. Discussions are ongoing with the Original Equipment Manufacturer on the contractual way ahead.
Other	9/1/2018	The Program did not report any schedule risks in APB Change 1.
MS B	1/1/2014	Program is delivering mission systems as able to under sequestration-level budget constraint. Congressional Marks adversely impact ability to procure systems, delaying delivery of capability to the fleet to meet operational needs.

(U) Performance

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

(U) Performance Attributes

SUW MP				
Materiel Availability (1)			KPP	
Current Estimate 12/31/2023		.85	·	
Demonstrated Performance 1/22/2024		.78 (Operational Embarked	data 22 Jan 2024)	
APB Change 1 (Current)	Objective	.712		
9/28/2018	Threshold	.64		
Train-to-Certify: A trained crev	v is required for MP Bille	ts / Watch Stations (1)	KPP	
Current Estimate 12/31/2023		Trained-to-Certify at all Tear levels	m (Watch Section)	
Demonstrated Performance -		TBD		
APB Change 1 (Current)	Objective	Trained-to-Certify at all Tear levels	ກ (Watch Section)	
9/28/2018	Threshold	Trained-to-Certify at all Team (Watch Section levels		
MCM MP				
Materiel Availability (2)			KPP	
Current Estimate 12/31/2023		.78	·	
Demonstrated Performance -		TBD		
APB Change 1 (Current)	Objective	.712		
9/28/2018	Threshold	.64		
Train-to-Certify: A trained crev	v is required for MP Bille	ts / Watch Stations (2)	KPP	
Current Estimate 12/31/2023		Trained-to-Certify at all Tear levels	n (Watch Section)	
Demonstrated Performance -		-		
APB Change 1 (Current)	Objective	Trained-to-Certify at all Tear levels	m (Watch Section)	
9/28/2018	Threshold	Trained-to-Certify at all Tear levels	m (Watch Section)	
ASW MP				
Materiel Availability (3)			KPP	
Current Estimate 12/31/2023		N/A		
Demonstrated Performance		-		

-				
APB Change 1 (Current)	Objective	.712		
9/28/2018	Threshold	.64		
Train-to-Certify: A trained crew is	required for MP Billets / Watc	h Stations (3)	KPP	
Current Estimate 12/31/2023		N/A	,	
Demonstrated Performance -		-		
APB Change 1 (Current)	Objective	Trained-to-Certify at all Team (Watch Section levels		
9/28/2018	Threshold	Trained-to-Certify at all Team (Watch Secti levels		

(U) Requirement Source:

Sponsor(s): None

 Document Type Not Provided Notes: LCS Flight 0 Capability Development Document (CDD) dated May 25, 2004 and LCS Flight 0+ CDD dated June 17, 2008

Notes

Reflects APB Change 1 requirements.

OPNAV declared IOC for the MCM MP on 31 March 2023. The MCM MP IOT&E concluded in August 2022, and MCM MP received an Operationally effective and suitable report from Operational Test and Evaluation Force (OPTEVFOR) in January 2023. Separate from the MCM MP, a letter recommending the declaration of IOC for the AN/AQS-20 Mine Detection Set was issued on 31 March 2023, addressing findings from the AN/AQS-20 Operational Test report, and will contain a similar POA&M.

By IOC, the MCM MP met the majority of KPPs and Key System Attributes (KSAs) in the approved MCM MP CDD (Capability Development Document). The Survivability KPP will be met at Full Operational Capability (FOC). The Train-to-Certify KSA will be met by Q3 FY 2025. Interoperability Information Exchange Requirement KPP replaced by Net Ready KPP. Classified Performance is available in Classified Annex.

Performance Deviation Explanation

None

(U) Acquisition Budget Estimate

(U) Total Acquisition Estimates and Quantities

Category (\$M) Base Year: 2010	APB Change 1 (Current) 9/28/2018 CY\$ obs Objective / Threshold		2025	
RDT&E	2,369.3	2,606.2	2,365.7	2,539.1
Procurement	3,279.6	3,634.3	2,293.1	3,057.4
MILCON	36.1	39.7	34.0	44.4
O&M	0.0	0.0	0.0	0.0
R&MF	-	-	0.0	0.0
Total Acquisition	5,685.0	-	4,692.8	5,640.9
Program Acquisition Unit Cost	116.020	128.168	117.320	141.023
Average Procurement Unit Cost	74.536	84.519	65.517	87.354
Program End-Item Quantity				
Development	5		5	
Procurement	44		35	
O&M-Acquired	-		-	

Budget Notes

RDT&E, Navy; Other Procurement, Navy (OP,N); and Weapons Procurement, Navy (WP,N) costs associated with replacement, attrition, and technology refresh (RAT) costs are accounted for in O&S per the LCS MM APB.

- ? RDT&E, Navy reflects PB 2025 budget controls, however, RDT&E,N for this SAR submission deviates from the PB 2025 budget due to RAT costs for the development associated with obsolescence/technology refreshes for the Mission Package Computing System (MPCE) and Multiple Vehicle Communications System (MVCS), which are being captured under O&S. RDT&E,N further deviates from budget in this SAR to fully account for divestment of the ASW MP.
- ? OP,N reflects PB 2025 controls, however, OP,N for this SAR submission deviates from the PB 2025 budget due to RAT costs for Airborne Mine Neutralization System, Airborne Laser Mine Detection System, Gun Module Modernization, and 11m Rigid Hull Inflatable Boats, Surface Warfare Mission Package Obsolescence, MPCE, Mission Package Portable Control Station (MPPCS), MVCS, and Common Mission Package Trainer obsolescence/technology refreshes which are being captured under O&S. OP,N further deviates from budget in this SAR to fully account divestment of the ASW MP.
- ? WP,N includes initial procurement costs for the Longbow Hellfire missiles for the Surface to Surface Missile Module (SSMM). WP,N costs for replenishment missiles accounted for in O&S.

Quantity Notes

of mission modules, plus a mission crew detachment and supporting aircraft. The program provides funding to other programs for the purpose of procuring mission systems (MS). These MS (offboard vehicles, sensors, and weapons) are then combined with common mission modules equipment. For the purposes of Congressional visibility into program execution, the annual PB submission breaks out these MS procurements in detail.

The PB 2024 quantities follows that of the FY 2023 submission, when the Navy revised the LCS MM Program quantities to align with the proposed LCS decommissionings and to reflect the planned divestment of the ASW MP from LCS. The revised quantities include a total of 35 MPs as follows:

- ? 24 MCM MPs for LCS and Vessels Of Opportunity (VOOs)
- ? 10 Surface Warfare (SUW) MPs
- ? 1 Anti-Submarine Warfare (ASW) MP? previously procured with FY 2020 and FY 2021 funds. The 24 deployable MCM MPs will support the 15 Independence variant LCS (LCS 10-38) and the Chief of Naval Operations direction to use other Navy platforms (VOOs) to comply with Section 1046 of the FY 2018 National Defense Authorization Act (NDAA) (P.L. 115-91), as modified by the FY 2021 NDAA (P.L. 116-283), which prohibits the retirement of legacy MCM forces until the Navy has identified a replacement capability, and OSD Director, Operational Test & Evaluation (DOT&E) has certified that capability, and procured a quantity of such systems to meet combatant MCM operational requirements that are currently being met by legacy forces. The 10 deployable SUW MPs procured from FY 2010 to FY 2018 will support 6 Freedom variant LCS? LCS 21, 23, 25, 27, 29, and 31. All 10 SUW MPs will remain in-service to support LCS deployments until MCM MPs are delivered in quantities sufficient to support LCS 10-38.

The 35 MPs along with five non-deployable EDM MPs equate to 40 total MPs. The 35 MPs are comprised of deployable, production representative systems (one deployable SUW MP was procured with both RDT&E, Navy and Other Procurement, Navy (OPN) and is included in the inventory objective of 10 SUW MPs), as well as the one production ASW MP procured with FY 2020-FY 2021 OPN funds. The five non-deployable EDM assets are comprised of one MCM MP, two SUW MPs, and two ASW MP, which are not included in the deployable MP quantities.

Cost Baseline Deviation Explanation

None

(U) Risk and Sensitivity Analysis

Current Procurement Estimate Risks (12/31/2023)

The Program has incurred production delays due to extended material lead times, sub-tier suppliers experiencing raw material shortages, and related labor complications as a result of increasing risk for procurement cost overruns for mission systems, support equipment, and support container hardware.

Current Baseline Risks (9/28/2018)

In support of the FY 2018 program re-baseline, a Program Life Cycle Cost Estimate (PLCCE) was developed as the cost baseline for the revised APB (APB Change 1 approved September 2018). The program performed a risk assessment on the remaining drivers of acquisition cost impacting Program Acquisition Unit Cost (PAUC) and Average Procurement Unit Cost (APUC). The risk assessment resulted in a point estimate above the 50th percentile for the areas assessed. The program established APB Change 1 based on the point estimate results as any risk adjustment would underfund known costs for mature systems or underfund systems with more technical risk. The Navy is working to address any funding shortfalls identified between the current estimate and the PB 2021 budget.

Original Baseline Risks (11/27/2013)

Navy accepted full funding responsibility in accordance with the Service Cost Position policy in support of the FY 2014 – FY 2018 FYDP.

(U) Unit Costs

(U) Current Estimate Compared with Current Baseline

Category (CY\$M) Base Year: 2010	Current Baseline 09/28/2018	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	5,685.0	4,692.8	
Program Quantity	49	40	
PAUC	116.020	117.320	1.12%
Average Procurement Unit Cost			
Procurement Cost	3,279.6	2,293.1	
Procurement Quantity	44	35	
APUC	74.536	65.517	-12.10%

(U) Current Estimate Compared with Original Baseline

Category (CY\$M) Base Year: 2010	Original Baseline 11/27/2013	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	6,379.5	4,692.8	
Program Quantity	64	40	
PAUC	99.680	117.320	17.70%
Average Procurement Unit Cost			
Procurement Cost	4,116.7	2,293.1	
Procurement Quantity	59	35	
APUC	69.775	65.517	-6.10%

(U) Cost Growth Details

Impacts of Schedule Changes on Unit Cost

Not provided in SAR.

Impacts of Performance Changes on Unit Cost

Not provided in SAR.

Actions taken or Proposed to Control Future Cost Growth

Not provided in SAR.

Status of Each Major Contract and Significant Factors Contributing to Cost and Schedule Variance; Projected Effects on Future Program Costs

See Contracts section.

Notes

None

(U) Life-Cycle Costs

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

Category (\$M) Base Year: 2010	APB Change 1 (Current) 9/28/2018 CY\$ obs Objective / Threshold		Current Estimate CY\$ obs / TY\$ obs	
Total O&S	16,819.9	18,501.9	11,088.0	17,844.0
Total Disposal	-	-	-	-

(U) Current Cost Estimate Sources

Operating and Support Cost

Type: Program Office Estimate

Approved by: D, CAPE, September 28, 2018

Operating and Support Baseline Deviation Explanation

None

Cost Notes

- a. Disposal/Demilitarization Cost Estimate and Source of Estimate:
- Current Baseline of \$152.4M (APB Change 1 Program Life Cycle Cost Estimate)
- Current Estimate of \$118.0M (Program Office Estimate)
- b. Sustainment Strategy:

The Navy has decided to focus the San Diego homeported Independence Variant Hulls to an MCM MP focused configuration. While Mayport homeported Freedom Variant Hulls will be SUW MP configured. Until enough MCM MPs are delivered to outfit all Independence Variant Hulls, some West Coast ships will be outfitted with the SUW MP or a partial Maritime Security Module (MSM) configuration. Once embarked, the modular MPs provide the main warfighting capability to mitigate gaps in littoral MCM and SUW missions. The LCS Seaframes retain the flexibility to adjust this division structure as needed to address changing Fleet operational requirements. Division structure has been modified over the past two years to support fleet tasking. The concept of employment for LCS, which includes routine deployments overseas and prepositioned support facilities in potential theaters of operation [Forward Operating Sites, contributes to strategic deterrence and maintaining material availability.

Based on crew size the LCS has limited onboard resources to maintain and at times repair the mission systems that make up the MPs. Because of this, maintenance and repair work is assigned to an off-ship, shore-based workforce which is also utalized to execute the embarkations and debarkations of the MPs from the ships The LCS MMs are maintained, stored, and centrally managed through the Mission Package Support Facility (MPSF). The MPSF executes and managess maintenance, provides technical support, manages spares, and ensures components (mission systems, mission modules, support containers, support equipment, or other equipment) are

delivered to the Fleet. The MPSF plans, arranges, schedules, coordinates, and manages the execution of all maintenance tasks. The MPSF receives requests from the deployed or embarked MPs and translates the requests into required actions – this results in a seamless process and a single MP support interface to Fleet units. Individual mission systems maintenance plans describe specific mission system requirements and tasks necessary to sustain, maintain, or restore operational capability. Maintenance is performed by the crew, by the MPSF staff, by organic Navy resources, or by a contractor, as appropriate. The MPSF workforce is comprised of government and contractor personnel and has the ability to handle surge, low volume, and specialized tasks via other Government or Contractor resources.

Subordinate to the MPSF, the LCS MM Program established Mission Module Readiness Centers (MMRCs) at Continental United States (CONUS) sites and forward Outside Continental United States (OCONUS) locations to directly support deployed operations. The MMRCs are staffed and outfitted execute appropriate maintenance, administrative, and storage capabilities at the homeports and FOS Locations. The MMRCs provide support for specific location operations (e.g., embarkation/ debarkation evolutions corrective maintenance, and preventative maintenance availabilities (PMAVs)).

The LCS MM Program has a dedicated Product Support Manager (PSM) who responsible for managing the support functions to ensure the mission modules that make-up and MPs are available. The PSM monitors and reports failures of system-level performance against Participating Acquisition Resource Manager (PARM)-initiated support contract requirements, assessing existing contractual requirements against needs and experiences, and seeks alternatives where contractual adjustments are not possible or feasible to improve performance. The PSM is responsible data identification, collection, and analysis that correlates hardware and sustainment systems performance. This analysis determines which issues demand product and/or process improvement, what near-term mitigation is possible, and what long-term solutions are needed. In addition to the system contracts made available by the PARMs, the LCS MM Program utilizes In-Service Engineer Agents (ISEAs) and other organic Navy support to provide maintenance planning, technical documentation, engineering services, training support and development, and spares/material support. The LCS MM Program has different transition timelines for each system within a MP from interim to full MPSF support based on development schedule, production deliveries and maturity of logistics documentation. Interim support for a system is/has been provided by the Original Equipment Manufacturer (OEM) or the Government Technical Design Activity (TDA).

- c. For Each Acquired System or System Variant:
- i. Quantity to Sustain: 34 (24 Deployable MCM MPs, 10 Deployable SUW MPs)
- ii. First Operational Fiscal Year: FY 2009
- iii. Final Operational Fiscal Year: FY 2049
- iv. Unit Expected Service Life: 25 Years
- d. Antecedent System(s) O&S Costs: no antecedent

(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: 2010

System	Unit-Level Manpower	Unit Operations	Maintenance	Sustaining Support	Continuing System Improvements	Other	Total
LCS MM	1,732.1	143.8	4,520.6	603.3	3,170.2	918.0	11,088.0
Program	1,732.1	143.8	4,520.6	603.3	3,170.2	918.0	11,088.0

(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) Technologies and Systems Engineering

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

Event	Date	Description
Current	12/1/2023	MCM USV obstacle avoidance and link loss serious Hazard Assessment Reports (HARs) being developed and staffed to address immediate and long- term mitigating actions for operational use.
Other	9/1/2018	The Program did not report any technical risks in APB Change 1.
MS B	1/1/2014	Risk that Mine Countermeasures (MCM) Mission Package (MP) Deep Volume Focused Minehunting (DVFMH) Sustained Area Coverage Rate (ACRS) will be below requirements if the individual Program of Record (PoR) mission systems do not achieve their required performance, or if the System of System (SOS) assumptions are incorrect.

(U) Performing Activities and Contracts

(U) External Government Activities

None

CAGE:

(U) Contracts and Efforts

Contract Title	Contract Number / Effort	Contractor	Phase
Anti-Submarine Warfare Rapid Technology Insertion (RTI)	N66604-15-C-086C	Raytheon Company	Development
Design, Engineering, Production & Sustainment	N00024-17-C-6311	NORTHROP GRUMMAN SYSTEMS CORPORATION	Production
Mission Package Computing, Software, and Trainers	N00024-19-C-6311	ADVANCED ACOUSTIC CONCEPTS, LLC	Production

Strategy:

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

Contract Number: N66604-15-C-086C Order Number: N/A

Contract Title: Anti-Submarine Warfare Rapid

Technology Insertion (RTI)

94404 - Raytheon Company Contracting Office: -

City, State/Province: Portsmouth, RI

Effort Number: - Supported Phase: Development

Type: Firm-Fixed-Price Award Date: July 22, 2015

Latest Modification Date: - Definitization Date:
Latest Modification No.: P00074 Work Start Date: -

Technical Data Rights: -

Notes: Contract Notes:

Target Price reflects funded value on contract. Initial Target Price includes funded value for CLINs awarded on contract at time of award. Current Target Price includes funded value for all CLINs exercised on contract due date. Ceiling Price reflects total value of the contract if all available options are exercised. Current Target and Ceiling Prices reflect inclusion of additional labor hours and other direct costs for test and integration, engineering change proposals and period of performance extensions, as well as inclusion of additional hardware production stepladders for Variable Depth Sonar

procurements. Cost Variance:

Cost Variances are not reported for this contract, because all active non-level of effort CLINs are firm fixed priced and no EVM reporting is required because the threshold requirements for EVM reporting are not met.

Schedule Variance:

Schedule Variances are not reported for this contract, because all active non-level of effort CLINs are firm fixed priced and no EVM reporting is required because the threshold requirements for EVM reporting are not met.

26,717,000.0 101,914,173.0 101,733,174.0 173,005,923.0 - - - - - - -

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

Contract Number: N00024-17-C-6311 Order Number: N/A

Contract Title: Design, Engineering, Strategy: -

Production & Sustainment

CAGE: 26512 - NORTHROP Contracting Office: -

GRUMMAN SYSTEMS

CORPORATION

City, State/Province: Bethpage, NY

Effort Number: - Supported Phase: Production

Type: Firm-Fixed-Price Award Date: March 16, 2017

Latest Modification Date: Definitization Date: March 16, 2017

Latest Modification No.: P00098 Work Start Date: -

Technical Data Rights: -

Notes: Contract Notes:

Target Price reflects funded value on contract. Initial Target Price includes funded value for CLINs awarded on contract at time of award. Current Target Price includes funded value for all CLINs exercised on contract due date. Ceiling Price reflects total value of

the contract if all available options are exercised. Cost Variance:

Cost Variances are not reported for this contract, because all active non-level of effort CLINs are firm fixed priced and no EVM reporting is required because the threshold

requirements for EVM reporting are not met.

Schedule Variance:

Schedule Variances are not reported for this contract, because all active non-level of effort CLINs are firm fixed priced and no EVM reporting is required because the

threshold requirements for EVM reporting are not met.

Initial Price (TY\$M) Current Price (TY\$M) Estimate at Completion (TY\$M) Initial Current Delivered Target / Ceiling Contractor / PM Quantity Quantity

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

Contract Number: N00024-19-C-6311 Order Number: -

Contract Title: Mission Package Computing, Strategy:

Software, and Trainers

CAGE: 4GPS8 - ADVANCED Contracting Office: -

ACOUSTIC CONCEPTS, LLC

City, State/Province: Hauppauge, NY

Effort Number: - Supported Phase: Production

Type: Firm-Fixed-Price Award Date: September 27, 2019

Latest Modification Date: - Definitization Date: - Latest Modification No.: P00017 Work Start Date: -

Technical Data Rights: -

Notes:

Target Price reflects funded value on contract. Initial Target Price includes funded value for CLINs awarded on contract at time of award. Current Target Price includes funded value for all CLINs exercised on contract due date. Ceiling Price reflects total value of

the contract if all available options are exercised.

Cost Variance:

Cost Variances are not reported for this contract, because all active non-level of effort CLINs are firm fixed priced and no EVM reporting is required because the threshold

requirements for EVM reporting are not met.

Schedule Variance:

Schedule Variances are not reported for this contract, because all active non-level of effort CLINs are firm fixed priced and no EVM reporting is required because the

threshold requirements for EVM reporting are not met.

Initial Price (TY\$M) C Target / Ceiling

Current Price (TY\$M)
Target / Ceiling

Estimate at Completion (TY\$M)

Contractor / PM

Initial Quantity **Current Quantity** Delivered Quantity

(U) Production

(U) Low-Rate Initial Production

	Original LRIP Determination	Current LRIP Determination
Total LRIP Quantity	27	44
Date	1/7/2014	2/14/2020
Reference	Milestone B ADM	ADM
LRIP Period	FY 2006 - 2018	FY 2006 - 2032
Total Procurement Quantity	59	35
LRIP Percentage of Total	45.8%	125.7%

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

The Current Total LRIP Quantity is more than 10% of the total production quantity due to leveraging several individual Programs of Record (PoRs) as separate ACAT programs.

LRIP Notes

The Navy determined there is no meaningful FRP decision needed for the LCS MM Program since systems are in production as part of individual PoRs. As such, the Navy increased the authorized LRIP quantity in February 2020 to 44 MPs (24 Mine Countermeasures (MCM) Mission Package (MP), 10 Anti-Submarine Warfare (ASW) MP, and 10 Surface Warfare (SUW) MP) based on the certified quantity in the PB 2019 submission.

(U) Deliveries and Expenditures

(U) Acquisition Funding

	Total Estimate	Actual to Date	Actual, Percent Complete
Years Appropriated	32	20	62.5%
Appropriations (TY, \$M)	5,640.9	4,603.9	81.6%
Expenditures (TY, \$M)	5,640.9	3,862.0	68.5%

(U) End Items Delivered

	Total Required	Planned to Date	Actual to Date	Actual, Percent Complete
Development	5			
LCS MM		5	5	
Procurement	35			
LCS MM		11	11	
Total	40	16	16	40.0%

Notes

10 Surface Warfare (SUW) Mission Packages (MPs) and 1 Mine Countermeasures (MCM) MP already delivered and included in production deliveries.

With completion of 2022 Gate 6 review, LCS MM was directed to update its current APB to reflect Procurement Quantity Changes outlined in 'LCS Procurement Quantity Changes' letter from N9 to PEO USC. (Reductions: AMNS 48 to 20, ALMDS 24 to 12, COBRA Blk I 24 to 5, SSMM 10 to 5, ASW EDM 10 to 1, ASW EMM EDM 1, ASW AVMM 10 to 0). Due to these reductions from the 2021 report to the 2022 report, the total acquisition cost has significantly decreased.

UNCLASSIFIED



Modernized Selected Acquisition Report Supplement

Littoral Combat Ship Mission Modules (LCS MM)

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
Littoral Combat Ship Mission Modules

Short Name
LCS MM

PNO Lead Component

443 Navy

AAF Pathway Acquisition Type

MCA MDAP

Acquired Systems

LCS MM; LCS Mine Countermeasures Mission Package; LCS Surface Warfare Mission Package

Related Programs

Full Name	DNO	Dath	T	ACAT/	Acquisition	_	n SAR?
Full Name	PNO	Pathway	Type	BCAT	Status	Acq	O&S
AN/AQS-20A SONAR MINE		MCA	AP	II	Active	No	No
DETECTING SET							
SURFACE MINE		MCA	AP	II	Active	No	No
COUNTERMEASURE							
UNMANNED UNDERSEA							
VEHICLE (Knifefish)							
MINE COUNTERMEASURES		MCA	AP	II	Active	No	No
UNMANNED SURFACE VEHICLE							
BARRACUDA MINE		MCA	AP	II	Active	No	No
NEUTRALIZATION SYSTEM							

Program Use of the Adaptive Acquisition Framework

This acquisition is accomplished by a single program in the Major Capability Acquisition Pathway

Technologies and Systems Engineering

Littoral Combat Ship Mission Modules

Major Software Efforts

Title	Status	Fielding Date	Description

Major Engineering Changes

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

Funding Sources (Acquisition)

Acquisition Funding Notes

None

Littoral Combat Ship Mission Modules

Category	Account	ВА	Line Item	Program Element	RDT&E Project	Shared	Sunk
RDT&E	1319N	04	0603596N - LCS Mission Modules	0603596N	2550 - Mine Countermeasure (MCM) Mission Package		
RDT&E	1319N	04	0603596N - LCS Mission Modules	0603596N	2552 - Surface Warfare (SUW) Mission Package		
RDT&E	1319N	04	0603596N - LCS Mission Modules	0603596N	3129 - LCS Mission Package Development		
Procurement	1810N	01	1600 - LCS Common Mission Modules Equipment	0204230N	-		
Procurement	1810N	01	1601 - LCS MCM Mission Modules	0204230N	-		
Procurement	1810N	01	1602 - LCS ASW Mission Modules	0204230N	-		х
Procurement	1810N	01	1603 - LCS SUW Mission Modules	0204230N	-		
Procurement	1507N	04	4221 - LCS Module Weapons	0204230N	-		

Funding Sources (Operating and Support)

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

Operating and Support Funding Notes

None

Littoral Combat Ship Mission Modules

				Drawram			
Category	Account	ВА	Line Item	Program Element	RDT&E Project	Shared	Sunk
O&M	1804N	01	1B1B - Mission and Other Ship Operations	0204230N	-		
O&M	1804N	01	1C1C - Combat Communications and Electronic Warfare	0204230N	-		
O&M	1804N	01	1C1C - Combat Communications and Electronic Warfare	0702898N	-		
O&M	1804N	01	1B4B - Ship Depot Maintenance	0204230N	-		
O&M	1804N	01	1D4D - Weapons Maintenance	0708017N	-	Х	

Acquisition Estimate and Quantity Summary

Littoral Combat Ship Mission Modules

Acquisiton Estimates	;	Current Base Year	Original Base Year	Report Fiscal Year
Category PB 2025	TY (\$M)	CY2010 (\$M)	CY2010 (\$M)	CY2024 (\$M)
RDT&E	2,539.1	2,365.2	2,365.2	3,285.0
Procurement	3,057.4	2,291.9	2,291.9	3,183.2
MILCON	44.4	34.0	34.0	47.2
O&M	-	-	-	-
Total Acquisition	5,640.8	4,691.1	4,691.1	6,515.4
PAUC	141.021	117.278	117.278	162.886
APUC	87.355	65.483	65.483	90.949

Acquisiton End-Item Quantities

System	PB 2025	Development		Procurement
LCS MM		5	5	35
LCS Mine Counterme	easures Mission Package	-		-
LCS Surface War	fare Mission Package	-		-
Total		5	5	35

Unit Description

The LCS MM Program uses Mission Packages (MP) as its quantity unit of measure. A MP consists of mission modules, plus a mission crew detachment and supporting aircraft. The program provides funding to other programs for the purpose of procuring mission systems (MS). These MS (offboard vehicles, sensors, and weapons) are then combined with common mission modules equipment. For the purposes of Congressional visibility into program execution, the annual PB submission breaks out these MS procurements in detail.

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

						J , (То	
Appropriation	Prior	2024	2025	2026	2027	2028	2029	Complete	Total
RDT&E	2,452.9	17.8	15.2	18.3	11.5	11.6	11.8	-	2,539.1
Procurement	1,694.8	143.5	182.9	140.2	95.4	89.1	93.4	618.0	3,057.4
MILCON	44.4	-	-	-	-	-	-	-	44.4
O&M	-	-	-	-	-	-	-	-	-
PB 2025 Total	4,192.1	161.3	198.1	158.5	106.9	100.7	105.2	618.0	5,640.8

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Littoral Combat Ship Mission Modules

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 CY2010 (\$M)		
Total	2,539.1	2,539.1	-	2,365.2		
2004	42.700	42.7	0.894705	47.7		
2005	81.300	81.3	0.918253	88.5		
2006	193.900	193.9	0.946866	204.8		
2007	167.300	167.3	0.970057	172.5		
2008	98.100	98.1	0.987752	99.3		
2009	167.900	167.9	1.000436	167.8		
2010	157.700	157.7	1.015442	155.3		
2011	80.600	80.6	1.039687	77.5		
2012	140.680	140.7	1.056930	133.1		
2013	196.880	196.9	1.068029	184.3		
2014	204.220	204.2	1.083120	188.5		
2015	172.800	172.8	1.096748	157.6		
2016	188.900	188.9	1.117104	169.1		
2017	116.420	116.4	1.138005	102.3		
2018	120.200	120.2	1.165880	103.1		
2019	84.841	84.8	1.188335	71.4		
2020	95.166	95.2	1.232034	77.2		
2021	54.086	54.1	1.287407	42.0		
2022	66.608	66.6	1.354664	49.2		
2023	22.631	22.6	1.394993	16.2		
2024	17.822	17.8	1.426838	12.5		
2025	15.223	15.2	1.457105	10.4		
2026	18.293	18.3	1.487705	12.3		
2027	11.453	11.5	1.518946	7.5		
2028	11.554	11.6	1.550844	7.5		
2029	11.790	11.8	1.583412	7.4		

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Littoral Combat Ship Mission Modules

	1810N - Other 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 CY2010 (\$M)		
Total	2,775.1	-		187.3	-	-	2,962.4	-	2,230.6		
2004	-			-			-	0.904060	-		
2005	-			-			-	0.929514	-		
2006	35.270			-			35.3	0.960313	36.7		
2007	77.741			-			77.7	0.981218	79.2		
2008	-			-			-	0.997164	-		
2009	7.242			-			7.2	1.010309	7.2		
2010	80.772			-			80.8	1.029836	78.4		
2011	43.712			4.115			47.8	1.044894	45.8		
2012	65.466			1.737			67.2	1.061519	63.3		
2013	88.883			0.413			89.3	1.076055	83.0		
2014	90.700			9.162			99.9	1.090375	91.6		
2015	56.741			10.428			67.2	1.106099	60.7		
2016	121.637			6.335			128.0	1.126122	113.6		
2017	63.406			4.105			67.5	1.150042	58.7		
2018	85.379			5.426			90.8	1.176250	77.2		
2019	136.554			3.176			139.7	1.204793	116.0		
2020	130.329			8.754			139.1	1.247216	111.5		
2021	267.929			13.229			281.2	1.308231	214.9		
2022	81.306			14.888			96.2	1.363715	70.5		
2023	130.770			8.964			139.7	1.403194	99.6		
2024	128.455			11.804			140.3	1.435000	97.7		
2025	164.201			16.215			180.4	1.465431	123.1		
2026	127.871			10.085			138.0	1.496205	92.2		
2027	84.424			8.753			93.2	1.527626	61.0		
2028	77.567			9.231			86.8	1.559706	55.7		
2029	78.312			12.734			91.0	1.592460	57.2		
2030	99.514			4.399			103.9	1.625901	63.9		
2031	95.957			4.303			100.3	1.660045	60.4		
2032	85.975			4.106			90.1	1.694906	53.1		
2033	76.604			3.869			80.5	1.730499	46.5		
2034	57.406			3.181			60.6	1.766840	34.3		
2035	50.411			2.949			53.4	1.803943	29.6		
2036	40.110			2.292			42.4	1.841826	23.0		
2037	25.806			1.526			27.3	1.880504	14.5		
2038	17.820			1.119			18.9	1.919995	9.9		
2039	0.588			-			0.6	1.960315	0.3		
2040	0.274			-			0.3	2.001482	0.1		

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Littoral Combat Ship Mission Modules

	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 CY2010 (\$M)		
Total	95.0	-				-	95.0	-	61.3		
2004	-						-	0.912760	-		
2005	-						-	0.937973	-		
2006	-						-	0.961525	-		
2007	-						-	0.982459	-		
2008	-						-	0.998005	-		
2009	-						-	1.012343	-		
2010	-						-	1.029631	-		
2011	-						-	1.049338	-		
2012	-						-	1.065134	-		
2013	-						-	1.080270	-		
2014	-						-	1.095308	-		
2015	-						-	1.113175	-		
2016	-						-	1.134088	-		
2017	2.776						2.8	1.158643	2.4		
2018	4.189						4.2	1.190463	3.5		
2019	11.350						11.4	1.225415	9.3		
2020	10.998						11.0	1.274027	8.6		
2021	4.253						4.3	1.332162	3.2		
2022	2.121						2.1	1.384191	1.5		
2023	4.580						4.6	1.419987	3.2		
2024	3.264						3.3	1.451163	2.2		
2025	2.463						2.5	1.481789	1.7		
2026	2.266						2.3	1.512906	1.5		
2027	2.258						2.3	1.544678	1.5		
2028	2.322						2.3	1.577116	1.5		
2029	2.368						2.4	1.610235	1.5		
2030	2.461						2.5	1.644050	1.5		
2031	2.513						2.5	1.678575	1.5		
2032	1.851						1.9	1.713825	1.1		
2033	1.525						1.5	1.749816	0.9		
2034	1.557						1.6	1.786562	0.9		
2035	1.590						1.6	1.824079	0.9		
2036	1.624						1.6	1.862385	0.9		
2037	1.658						1.7	1.901495	0.9		
2038	1.692						1.7	1.941427	0.9		
2039	1.728						1.7	1.982197	0.9		
2040	1.764						1.8	2.023823	0.9		

Littoral Combat Ship Mission Modules

	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 CY2010 (\$M)		
2041	1.801						1.8	2.066323	0.9		
2042	1.839						1.8	2.109716	0.9		
2043	1.878						1.9	2.154020	0.9		
2044	1.917						1.9	2.199254	0.9		
2045	1.958						2.0	2.245439	0.9		
2046	1.999						2.0	2.292593	0.9		
2047	2.041						2.0	2.340737	0.9		
2048	2.083						2.1	2.389893	0.9		
2049	2.127						2.1	2.440080	0.9		
2050	2.172						2.2	2.491322	0.9		

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Littoral Combat Ship Mission Modules

	205N - Military Construction, Navy			
fiscal year	Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY2010 (\$M)
Total	44.4	44.4	-	34.0
2004		-	0.912325	-
2005		-	0.938218	-
2006		-	0.963666	-
2007		-	0.983263	-
2008		-	1.000021	-
2009		-	1.013723	-
2010		-	1.039094	-
2011		-	1.062434	-
2012		-	1.078132	-
2013		-	1.093490	-
2014		-	1.109891	-
2015		-	1.141174	-
2016	16.159	16.2	1.167770	13.8
2017	-	-	1.197849	-
2018	-	-	1.242303	-
2019	-	-	1.290093	-
2020	-	-	1.344569	-
2021	19.910	19.9	1.391293	14.3
2022	8.289	8.3	1.422584	5.8

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Littoral Combat Ship Mission Modules

13	1319N - Research, Development, Test & Eval, Navy									
fiscal year	LCS MM	LCS Mine Countermeasure s Mission Package	LCS Surface Warfare Mission Package	Total						
Total	5	-	-	5						
Undistributed				-						
2005	1			1						
2006	1			1						
2007				-						
2008	1			1						
2009				-						
2010	1			1						
2011				-						
2012				-						
2013				-						
2014				-						
2015				-						
2016	1			1						
2017				-						

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Littoral Combat Ship Mission Modules

	1810N -	Other Procure	ment, Navy	
fiscal year	LCS MM	LCS Mine Countermeasure s Mission Package	LCS Surface Warfare Mission Package	Total
Total	35	-	-	35
Undistributed				-
2005				-
2006				-
2007				-
2008				-
2009				-
2010	1			1
2011	1			1
2012	1			1
2013	2			2
2014	1			1
2015				-
2016	2			2
2017	1			1
2018	1			1
2019				-
2020	3			3
2021	1			1
2022	1			1
2023	2			2
2024	3			3
2025	1			1
2026	2			2
2027	1			1
2028	1			1
2029	1			1
2030	1			1
2031	1			1
2032	1			1
2033	1			1
2034	1			1
2035	1			1
2036	1			1
2037	1			1

Littoral Combat Ship Mission Modules

1810N - Other Procurement, Navy									
fiscal year	LCS MM	LCS Mine Countermeasure s Mission Package	LCS Surface Warfare Mission Package	Total					
2038	1				1				

Nuclear Costs

Littoral Combat Ship Mission Modules

Program's Use of Department of Energy ResourcesNone

Operational Fielding Plan

Littoral Combat Ship Mission Modules

System: LCS MM

Fielding and Inventory Notes

None

LCS MM Fielding Plan and Inventory

fiscal year	Store	Field	Expend/Loss	Decommission	Inventory
2023					22
2024	-	3	-	-	25
2025	-	3	-	-	28
2026	-	3	-	-	31
2027	-	1	-	-	32
2028	-	2	-	-	34
2029	-	1	-	-	35

O&S Independent Cost Estimate

Littoral Combat Ship Mission Modules

Independent and Current Cost Estimate Comparison

Category	CY2010 (\$M)	Independent Cost Estimate	Current Estimate 9/28/2018	Variance with ICE (%)
Unit-Level M	lanpower	1,732.1	1,732.1	0%
Unit Operati	ons	143.8	143.8	0%
Maintenance	е	4,520.6	4,520.6	0%
Sustaining S	Support	603.3	603.3	0%
Continued S	System Improvements	3,170.2	3,170.2	0%
Other		918.0	918.0	0%
Total O&S		11,088.0	11,088.0	0%

Independent Cost Estimate Source

Event: SAR

Type: Independent Cost Estimate

Approved by:

Current Cost Estimate Source

Type: Program Office Estimate

Approved by: OSD Cost Assessment & Program Evaluation, September 28, 2018

Cost Estimate Variance Explanation

Cost Estimate provided by SEA05C as part of annual update for SAR

Annual Operating and Support Estimates by Cost Element

Littoral Combat Ship Mission Modules

System: LCS MM

Source for TY-CY Conversion: SEA 05C PB24 Joint Inflation Calculator

		Оре	erating and Si	upport 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 CY2010 (\$M)
Total	1,732.1	143.8	4,520.6	603.3	3,170.2	918.0	11,088.0
2008	-	-	8.049	-	-	-	8.0
2009	-	-	13.236	-	-	-	13.2
2010	-	-	10.112	-	-	-	10.1
2011	-	-	9.118	-	-	-	9.1
2012	-	-	19.128	-	-	-	19.1
2013	-	-	22.607	-	-	-	22.6
2014	-	-	83.739	-	-	-	83.7
2015	-	-	119.725	-	3.760	-	123.5
2016	-	-	148.341	-	1.786	-	150.1
2017	-	-	169.862	-	5.868	-	175.7
2018	-	-	195.796	-	11.776	-	207.6
2019	-	-	240.153	-	20.327	-	260.5
2020	-	-	273.489	-	45.388	-	318.9
2021	-	-	298.317	-	31.171	-	329.5
2022	122.161	3.777	64.709	25.400	37.945	38.122	292.1
2023	116.135	3.944	69.170	23.454	65.014	39.780	317.5
2024	95.415	4.112	72.063	24.552	75.949	29.687	301.8
2025	65.369	4.064	77.212	24.552	71.677	29.982	272.9
2026	65.369	4.800	83.128	24.575	65.289	37.680	280.8
2027	65.369	4.823	90.356	24.598	73.365	37.843	296.4
2028	65.369	4.845	95.160	24.598	76.341	37.924	304.2
2029	65.369	4.849	96.698	24.598	71.725	37.995	301.2
2030	65.369	5.392	100.944	24.598	68.373	37.995	302.7
2031	65.369	5.949	110.820	24.598	91.762	37.995	336.5
2032	65.369	6.091	120.700	24.598	133.721	37.995	388.5
2033	65.369	6.217	129.108	24.598	107.344	37.995	370.6
2034	66.381	6.336	134.056	24.598	160.109	38.115	429.6
2035	66.381	6.336	134.078	24.598	117.251	38.115	386.8
2036	66.381	6.336	133.977	24.598	155.750	38.115	425.2
2037	65.778	6.221	131.009	24.220	165.650	37.822	430.7
2038	65.176	6.094	128.474	23.905	166.269	37.529	427.4
2039	64.573	6.042	125.549	23.601	184.059	37.289	441.1
2040	64.001	5.951	120.332	23.149	127.917	36.996	378.3

System: LCS MM

Source for TY-CY Conversion: SEA 05C PB24 Joint Inflation Calculator

	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 CY2010 (\$M)				
2041	64.001	5.825	120.332	23.149	188.432	36.996	438.7				
2042	61.995	5.710	117.912	22.846	108.199	35.863	352.5				
2043	55.423	4.813	112.915	22.394	183.288	32.548	411.4				
2044	48.247	4.737	109.985	22.091	130.973	28.924	345.0				
2045	43.028	4.697	107.481	17.703	163.627	26.097	362.6				
2046	36.903	4.325	98.000	17.263	124.903	22.924	304.3				
2047	29.454	4.325	97.539	14.505	83.498	18.806	248.1				
2048	8.837	3.397	67.100	-	29.237	8.710	117.3				
2049	3.535	3.025	60.078	-	22.461	2.130	91.2				
2050	-	0.742	-	-	-	-	0.7				