

# Fiscal Year 2024 Budget Estimates

## Missile Defense Agency



March 2023

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2024 Budget Estimates**

**Operation and Maintenance, Defense-Wide Summary (\$ in thousands)  
Budget Activity (BA) 4: Administration and Service-Wide Activities**

	<u>FY 2022 Actuals</u>	<u>Price Change</u>	<u>Program Change</u>	<u>FY 2023 Enacted</u>	<u>Price Change</u>	<u>Program Change</u>	<u>FY 2024 Estimate</u>
MDA	510,065	10,557	21,165	541,787	11,898	10,393	564,078

**I. Description of Operations Financed:**

Provides the following Ballistic Missile Defense (BMD) unique sustainment support:

**A. Aegis Ballistic Missile Defense (BMD).** Provides BMD unique sustainment support for deployed Aegis BMD ships, Standard Missile (SM-3), BMD Aegis Weapons System (AWS), and Aegis Ashore sites.

SM-3 missile sustainment includes recertification/repair/second destination transportation of missiles, installation of software and hardware updates, modeling and simulation and logistics efforts.

BMD AWS sustainment support includes:

- Technical and engineering services for in-service BMD ships and sites Missile Defense System test infrastructure maintenance to ensure in-service BMD AWS baselines maintain directed operational availability.
- BMD Engineering Agent technical support and operational analysis for BMD units for casualty correction, technical issues, improvements, maintenance, certification, and delivery of BMD AWS computer program updates to the Fleet
- Aegis software maintenance corrections in the common source library
- Test site infrastructure and maintenance
- Integrated logistics support of BMD unique parts including technical documentation review and updates, diminishing manufacturing sources, and obsolete materiel surveillance, identification, and resolution
- AEGIS BMD mission planner re-host to fleet warfighters

Aegis Ashore sustainment support includes:

- Operation and maintenance of Aegis Weapons System
- Facilitate Data Management efforts:
  - o Oversight for collection, storage, and distribution of technical data and documentation required for sustainment of the Aegis Ashore sites
  - o Retention and maintenance of the established data repository

**B. Ground-Based Midcourse (GMD).** Sustainment support for operational Ground-Based Interceptors and GMD systems based at Fort Greely, AK (FGA), and Vandenberg Space Force Base (VSFB), CA, Schriever Space Force Base (SSFB), CO, Fort Drum, NY (FDN) and Eareckson AS (EAS), AK, including urgently needed repairs and improvements previously deferred on aging support facilities at FGA and interceptor processing and integration facilities at VSFB critical to the GMD mission.

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**I. Description of Operations Financed: (Cont.)**

Funding also ensures GMD assets are properly maintained and crews are trained to meet Combatant Commanders' needs. Specific activities include:

1. Weapon system sustainment support, equipment maintenance, operations support, and sustaining engineering.
2. Mission support, network operations and defense, and integrated logistics support.
3. GMD unique Base Operations Support (BOS), facility maintenance and repairs, facility restoration and modernization, and communication support at FGA, VSFB, FDN, and EAS as outlined in respective Support Agreements. The respective Services are responsible for common use areas and common use items.
4. Utilities for facilities that GMD occupies at VSFB, FDN, and EAS and in the FGA cantonment area as outlined in the associated Support Agreements. This cantonment area does not include the FGA Missile Defense Complex.
5. Configuration management and control for the fielded weapon system.

**C. Missile Defense Systems Radars.** Funding provides sustainment support for twelve Army Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) Forward Based Mode (FBM) and Terminal High Altitude Area Defense (THAAD) configured Terminal Mode (TM) radars to include supply support, repair, maintenance, modernization, transportation, parts, storage, special tools and test equipment, recurring and delta training, technical interface, training device maintenance, engineering support, interactive electronic technical manual (IETM) updates, software user guide updates, software revision certification, and Depot Level Maintenance (DLM) for MDA's missile defense unique equipment. Funding also provides Cooling Equipment Unit (CEU) refurbishments and retrofit at Letterkenny Army Depot (LEAD) and continuation of Gallium Nitride (GaN) Transmit/Receive Integrated Microwave Module (T/RIMM) to replace obsolete equipment, incorporate updates to servers, and enhance radar capabilities. Additionally, funding provides contributions to sustainment unique to the MDA Missile Defense mission for the five Upgraded Early Warning Radars (UEWRs) and COBRA DANE radar that are in the U.S. Space Force's Global Command, Control, Communication, Intelligence (C3I) & Early Warning program, who is the responsible organization for the UEWR and COBRA DANE force structure, radar operators and maintainers, and operations and maintenance.

**D. Terminal High Altitude Area Defense (THAAD).** MDA is responsible for the sustainment of the THAAD missile defense unique and development items, while the U.S. Army is responsible for the operations and sustainment of the common items. MDA funding provides sustainment for all fielded THAAD Batteries, ensures THAAD assets are properly maintained and crews are trained to meet Combatant Commanders needs including:

1. Field and sustainment level supply, maintenance, modernization, hazardous materials/waste disposal, and depot-level maintenance for THAAD missile defense unique equipment.
2. Spares, Interceptor spares, repair parts, and maintenance capability at the location of each THAAD battery.
3. Engineering support for the THAAD missile defense unique equipment.

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**I. Description of Operations Financed: (Cont.)**

4. Deployment software support for fielded software to include: deficiency report reviews, error correction, incremental capability improvements, and hardware/system interface compatibility maintenance.
5. Missile transportation and handling from the missile storage location to the site of the THAAD launchers.
6. Interactive Electronic Technical Manual (IETM) updates, software users' guide updates, and software revision certification.
7. Maintenance and upkeep for all THAAD training devices.
8. Supply maintenance and transportation support for all new equipment training, and sustainment training relating to design changes and equipment upgrades.

**II. Force Structure Summary:**

N/A

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**III. Financial Summary (\$ in Thousands):**

	<b>FY 2022 <u>Actuals</u></b>	<b>Budget <u>Request</u></b>	<b>FY 2023</b>			<b>Current <u>Enacted</u></b>	<b>FY 2024 <u>Estimate</u></b>
			<b><u>Congressional Action</u></b>				
			<b><u>Amount</u></b>	<b><u>Percent</u></b>	<b><u>Appropriated</u></b>		
<b><u>A. BA Subactivities</u></b>							
<b>4. Administrative and Servicewide Activities</b>	<b>\$510,065</b>	<b>\$541,787</b>	<b>\$0</b>	<b>0.00%</b>	<b>\$541,787</b>	<b>\$541,787</b>	<b>\$564,078</b>
Aegis BMD Program	\$77,170	\$69,071	\$0	0.00%	\$69,071	\$69,071	\$72,224
Ground-Based Midcourse Program	\$156,623	\$185,564	\$0	0.00%	\$185,564	\$185,564	\$174,789
Missile Defense System Radars Program	\$190,715	\$200,207	\$0	0.00%	\$200,207	\$200,207	\$227,768
THAAD Program	<u>\$85,557</u>	<u>\$86,945</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$86,945</u>	<u>\$86,945</u>	<u>\$89,297</u>
<b>Total</b>	<b>\$510,065</b>	<b>\$541,787</b>	<b>\$0</b>	<b>0.00%</b>	<b>\$541,787</b>	<b>\$541,787</b>	<b>\$564,078</b>

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**III. Financial Summary (\$ in Thousands): (Cont.)**

<b><u>B. Reconciliation Summary</u></b>	<b><u>Change</u></b>	<b><u>Change</u></b>
	<b><u>FY 2023/FY 2023</u></b>	<b><u>FY 2023/FY 2024</u></b>
<b>BASELINE FUNDING</b>	<b>\$541,787</b>	<b>\$541,787</b>
Congressional Adjustments (Distributed)	0	
Congressional Adjustments (Undistributed)	0	
Adjustments to Meet Congressional Intent	0	
Congressional Adjustments (General Provisions)	0	
<b>SUBTOTAL APPROPRIATED AMOUNT</b>	<b>541,787</b>	
Fact-of-Life Changes (2023 to 2023 Only)	0	
<b>SUBTOTAL BASELINE FUNDING</b>	<b>541,787</b>	
Supplemental	0	
Reprogrammings	0	
Price Changes		11,898
Functional Transfers		0
Program Changes		10,393
<b>CURRENT ESTIMATE</b>	<b>541,787</b>	<b>564,078</b>
Less: Supplemental	0	
<b>NORMALIZED CURRENT ESTIMATE</b>	<b>\$541,787</b>	<b>\$564,078</b>

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**III. Financial Summary (\$ in Thousands): (Cont.)**

<b>FY 2023 President's Budget Request (Amended, if applicable)</b> .....	<b>\$541,787</b>
1. Congressional Adjustments .....	\$0
a) Distributed Adjustments.....	\$0
b) Undistributed Adjustments .....	\$0
c) Adjustments to Meet Congressional Intent.....	\$0
d) General Provisions .....	\$0
<b>FY 2023 Appropriated Amount</b> .....	<b>\$541,787</b>
2. Supplemental Appropriations .....	\$0
a) Supplemental Funding.....	\$0
3. Fact-of-Life Changes.....	\$0
a) Functional Transfers.....	\$0
b) Technical Adjustments .....	\$0
c) Emergent Requirements.....	\$0
<b>FY 2023 Baseline Funding</b> .....	<b>\$541,787</b>
4. Reprogrammings (Requiring 1415 Actions).....	\$0
a) Increases .....	\$0

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**III. Financial Summary (\$ in Thousands): (Cont.)**

b) Decreases .....	\$0
<b>Revised FY 2023 Estimate</b> .....	<b>\$541,787</b>
5. Less: Item 2, Supplemental Appropriation and Item 4, Reprogrammings .....	\$0
a) Less: Supplemental Funding .....	\$0
<b>FY 2023 Normalized Current Estimate</b> .....	<b>\$541,787</b>
6. Price Change .....	\$11,898
7. Functional Transfers .....	\$0
a) Transfers In .....	\$0
b) Transfers Out .....	\$0
8. Program Increases .....	\$46,452
a) Annualization of New FY 2023 Program .....	\$0
b) One-Time FY 2024 Increases .....	\$0
c) Program Growth in FY 2024 .....	\$46,452
1) Aegis Ballistic Missile Defense Program .....	\$8,606
\$5,745 increase provides repair/recertification of SM-3 Block IA and IB All Up Rounds (AURs) for the growing quantity of delivered missiles and to meet projected fleet requirements.	
\$2,237 increase provides BMD 4.x software changes in support of Mission Planner (MP) console upgrade and Mission and Threat Database re-architecture.	

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**III. Financial Summary (\$ in Thousands): (Cont.)**

\$624 increase provides additional spares to extend deployment of SM-3 Block IA Rounds for an additional 4 years to prevent significant reduction in Fleet missile capacity and global BMD capability.  
(FY 2023 Baseline: \$69,071 thousand)

2) Ground-Based Midcourse Defense Program ..... \$9,054

\$4,739 increase provides urgently needed facility and infrastructure repairs at Fort Greely, AK and Vandenberg Space Force Base (VSFB), CA to include Heating, Ventilation and Air Conditioning (HVAC) and electrical repairs and upgrades, Environmental Control Unit (ECU) replacements, missile field paving and drainage improvements. Facilities targeted for improvement are aging support and processing facilities critical to the GMD mission. These repairs and improvements are required to meet mission readiness, equipment availability, quality of life standards, and safety requirements.

\$4,315 increase provides Ground-based Midcourse Defense (GMD) site power upgrades to include Uninterruptable Power Supply (UPS), Generator, Secondary Unit Substation repairs and replacements, and power resiliency measures. These improvements are required to ensure GMD system availability and missile defense readiness for the Warfighter.

(FY 2023 Baseline: \$185,564 thousand)

3) Missile Defense System Radars Program ..... \$28,349

\$21,431 increase procures Gallium Nitride (GaN) Transmit Receive Integrated Microwave Modules (TRIMM) spares to support the modernization of the AN/TPY-2 radar fleet; replaces obsolete Gallium Arsenide (GaAs) TRIMM inventory and provides mission-critical and fleet spares. These efforts maintain inventories at radar sites to reduce radar downtime and provide optimum operational capability.

\$6,918 increase provides AN/TPY-2 Cooling Equipment Unit (CEU) Depot Level Maintenance (DLM) to address obsolescence and maintain the reliability of the radar systems.  
(FY 2023 Baseline: \$200,207 thousand)

4) THAAD Program.....\$443

\$443 Increase reflects updated cost estimates for THAAD Battery sustainment.  
(FY 2023 Baseline: \$86,945 thousand)

9. Program Decreases .....\$-36,059

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**III. Financial Summary (\$ in Thousands): (Cont.)**

a) Annualization of FY 2023 Program Decreases ..... \$0

b) One-Time FY 2023 Increases ..... \$0

c) Program Decreases in FY 2024 ..... \$-36,059

1) Aegis Ballistic Missile Defense Program ..... \$-6,970

- \$4,637 decrease reflects a reduction in number of BMD 5.x Software Change Requests from 1,050 to 800.

- \$1,478 decrease reflects a reduction in required lab hours at Combat System Engineering Development Site (CSEDS) and Surface Combat Systems Center Wallops Island test sites in support of Aegis BMD baselines.

- \$855 decrease reflects transition of Aegis Ashore Poland operations to Navy funding responsibility.

(FY 2023 Baseline: \$69,071 thousand)

2) Ground-Based Midcourse (GMD) Program ..... \$-23,904

- \$23,904 decrease reflects updated cost estimates in Performance Based Logistics (PBL) based on the competitively awarded GMD System Integration, Test and Readiness (SITR) and GMD Weapon System (GWS) contracts.

(FY 2023 Baseline: \$185,564 thousand)

3) Missile Defense System Radars Program ..... \$-5,185

- \$5,185 decrease reflects reduction in site sustainment, maintenance for radar systems, facilities, and support equipment.

(FY 2023 Baseline: \$200,207 thousand)

**FY 2024 Budget Request ..... \$564,078**

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**IV. Performance Criteria and Evaluation Summary:**

	FY 2022 <u>Actuals</u>	FY 2023 <u>Enacted</u>	FY 2024 <u>Estimate</u>
<b>1. Operational Support</b>	<b>510,065</b>	<b>541,787</b>	<b>564,078</b>
Aegis Program	77,170	69,071	72,224
Ground-Base Midcourse Program	156,623	185,564	174,789
Missile Defense System Radars Program	190,715	200,207	227,768
THAAD Program	86,557	86,945	89,297
<b>Total Operations and Maintenance, Defense Wide</b>	<b>510,065</b>	<b>541,787</b>	<b>564,078</b>

The MDA Ballistic Missile Defense (BMD) mission is to deliver an enduring, operationally effective and supportable BMD capability to defend the nation, deployed forces, friends and allies.

A. Aegis BMD. The Aegis BMD element of the Missile Defense System capitalizes upon and evolves from the existing U. S. Navy Aegis Weapons System (AWS) and Standard Missile (SM) infrastructures. Aegis BMD provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges, and the ability to destroy short-range, medium-range, and intermediate-range ballistic missiles in the midcourse phase of flight and shorter range missile in terminal phase. Aegis BMD also provides a long range surveillance and track (LRS&T) capability to the Missile Defense System. By the end of FY 2024, there will be 53 total BMD capable ships requiring maintenance support.

B. Ground-Based Midcourse (GMD). The GMD fielded weapon system is under the command of U.S. Northern Command (USNORTHCOM) and is operated by Soldiers from the 100th Missile Defense Brigade (five crews) headquartered at Schriever Space Force Base (SSFB), Colorado, and its 49th Missile Defense Battalion (five crews) at Fort Greely, Alaska (FGA) and the 100th Missile Defense Brigade Det. 1 (7 Soldiers) at Vandenberg Space Force Base (VSFB), California. In FY 2024, MDA will support operationally deployed Ground-Based Interceptors located at FGA and VSFB. Each Ground-Based Interceptor delivers a single Exo-atmospheric Kill Vehicle (EKV) to defeat threat warheads in space during the midcourse phase of the ballistic trajectory. The GMD Fire Control System consists of redundant fire control nodes at FGA (two each) and the Missile Defense Integration and Operations Center (MDIOC) (two each) at SSFB. In-Flight Interceptor Communications System (IFICS) Data Terminals (IDTs) are currently located at FGA (two each); VSFB (two each); Eareckson Air Station, Alaska (EAS); and Fort Drum, New York.

C. Missile Defense Systems Radars Program. The MDA continues to provide sustainment support for twelve Army Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) radars. Five Forward Based Mode (FBM) radars at fixed radar sites operate continuously 24 hours a day, 7 days a week, 365 days a year. Seven radars operate in Terminal Mode (TM) when integrated with the THAAD battery. Two of the seven TM radars are permanently stationed at OCONUS sites. The operational tempo is met utilizing military personnel and contractor logistics support (CLS) to operate and maintain the radars. FY 2024 includes AN/TPY-2 operations and maintenance execution and Depot Level Maintenance (DLM) for Cooling Equipment Unit (CEU) and continuation of Gallium Nitride (GaN) Transmit/Receive Integrated Microwave Module (T/RIMM) sustainment due to vehicle life expectancy, obsolescence improvements, and high operational tempo use in corrosive environments. MDA also

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**IV. Performance Criteria and Evaluation Summary:**

provides contributions to sustainment unique to the MDA Missile Defense mission for the five Upgraded Early Warning Radars (UEWRs) and COBRA DANE radar that are in the U.S. Space Force's Global Command, Control, Communication, Intelligence (C3I) & Early Warning program, who is the responsible organization for the UEWR and COBRA DANE force structure, radar operators and maintainers, and operations and maintenance funding

D. Terminal High Altitude Area Defense (THAAD). Army force structure for THAAD is currently set at seven batteries with six launchers operated by 95 Soldiers. The battery is organized to conduct 120-day deployments (45 days of entry operations and 75 days of 17-hour/day combat operations). During actual deployments, batteries have been operating at a 24 hours a day, 7 days a week, 365 days a year operational tempo, with increased CLS costs. This increased tempo has been sustained through the increase of appropriate attachments and support. Additionally, increasing OCONUS stationing of THAAD Batteries by the Army drives an increase in costs for deployed contractor support, increased transportation costs for spares/repair parts and increased quantities of stocks to support separate locations.

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**V. Personnel Summary:**

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>Change FY 2022/ FY 2023</u>	<u>Change FY 2023/ FY 2024</u>
<b>Contractor FTEs (Total)</b>	790	830	830	40	0

**Personnel Summary Explanations:**

No change from FY 2023 to FY 2024.

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**VI. OP 32 Line Items as Applicable (Dollars in thousands):**

	FY 2022 Program	Change from FY 2022 to FY 2023		FY 2023 Program	Change from FY 2023 to FY 2024		FY 2024 Program
		Price Growth	Program Growth		Price Growth	Program Growth	
308 TRAVEL OF PERSONS	150	3	-148	5	0	-5	0
<b>0399 TOTAL TRAVEL</b>	<b>150</b>	<b>3</b>	<b>-148</b>	<b>5</b>	<b>0</b>	<b>-5</b>	<b>0</b>
401 DLA ENERGY (FUEL PRODUCTS)	1,593	-119	-223	1,251	-144	186	1,293
<b>0499 TOTAL DEFENSE WORKING CAPITAL FUND SUPPLIES AND MATERIALS</b>	<b>1,593</b>	<b>-119</b>	<b>-223</b>	<b>1,251</b>	<b>-144</b>	<b>186</b>	<b>1,293</b>
611 NAVY SURFACE WARFARE CTR	0	0	0	0	0	486	486
677 DISA TELECOMM SVCS - REIMBURSABLE	130	0	3,787	3,917	255	-3,810	362
<b>0699 TOTAL OTHER FUND PURCHASES</b>	<b>130</b>	<b>0</b>	<b>3,787</b>	<b>3,917</b>	<b>255</b>	<b>-3,324</b>	<b>848</b>
771 COMMERCIAL TRANSPORT	7,443	156	1,814	9,413	188	-4,933	4,668
<b>0799 TOTAL TRANSPORTATION</b>	<b>7,443</b>	<b>156</b>	<b>1,814</b>	<b>9,413</b>	<b>188</b>	<b>-4,933</b>	<b>4,668</b>
913 PURCHASED UTILITIES (NON-FUND)	2,376	50	-2,358	68	1	2,954	3,023
914 PURCHASED COMMUNICATIONS (NON-FUND)	2,052	43	-1,970	125	3	887	1,015
915 RENTS (NON-GSA)	261	5	-23	243	5	7	255
920 SUPPLIES & MATERIALS (NON-FUND)	64,448	1,353	-22,502	43,299	953	30,415	74,667
922 EQUIPMENT MAINTENANCE BY CONTRACT	284,320	5,971	21,789	312,080	6,866	-29,938	289,008
923 FACILITIES SUST, REST, & MOD BY CONTRACT	39,705	834	16,013	56,552	1,244	8,239	66,035
925 EQUIPMENT PURCHASES (NON-FUND)	1,745	37	-1,205	577	13	-590	0
930 OTHER DEPOT MAINTENANCE (NON-FUND)	85,898	1,804	5,901	93,603	2,059	11,300	106,962
932 MGT PROF SUPPORT SVCS	0	0	1,279	1,279	28	-1,307	0
933 STUDIES, ANALYSIS & EVAL	0	0	0	0	0	1,501	1,501
934 ENGINEERING & TECH SVCS	1,700	36	-1,076	660	15	-675	0
936 TRAINING AND LEADERSHIP DEVELOPMENT (OTHER CONTRACTS)	9,275	195	-9,470	0	0	6,006	6,006
984 EQUIPMENT CONTRACTS	25	1	98	124	3	-20	107
987 OTHER INTRA-GOVT PURCH	8,430	177	362	8,969	197	-476	8,690
989 OTHER SERVICES	222	5	9,395	9,622	212	-9,834	0
990 IT CONTRACT SUPPORT SERVICES	292	6	-298	0	0	0	0

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**VI. OP 32 Line Items as Applicable (Dollars in thousands):**

	FY 2022 <u>Program</u>	<u>Change from FY 2022 to FY 2023</u>		FY 2023 <u>Program</u>	<u>Change from FY 2023 to FY 2024</u>		FY 2024 <u>Program</u>
		<u>Price Growth</u>	<u>Program Growth</u>		<u>Price Growth</u>	<u>Program Growth</u>	
0999 TOTAL OTHER PURCHASES	500,749	10,517	15,935	527,201	11,599	18,469	557,269
9999 GRAND TOTAL	510,065	10,557	21,165	541,787	11,898	10,393	564,078