Fiscal Year 2023 Budget Estimates

Missile Defense Agency

April 2022

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

	FY 2021 Actuals	Price Change	Program Change	FY 2022 Enacted	Price Change	Program Change	FY 2023 Request
MDA	572,886	17,304	-87,772	502,418	10,435	28,934	541,787

*The total amount of the FY 2023 request reflects $0.0 thousand for Overseas Operations Costs.

I. Description of Operations Financed:
Provides the following Ballistic Missile Defense (BMD) unique sustainment support:

A. **Aegis Ballistic Missile Defense (BMD).** Provides MD 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 BMDS 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:

- Aegis Ashore Poland engineering site presence
- Operation and maintenance of Aegis Weapons System
- Provides for potential unidentified design deficiencies in MDA provided equipment, buildings, and systems as Aegis Ashore Poland Deckhouse transitions to the Navy.

B. **Ground-Based Midcourse (GMD).** Funding sustainment support for operational Ground-Based Interceptors (GBIs) and GMD systems based at Fort Greely, AK and Vandenberg Space Force Base (VSFB), CA, Schriever Space Force Base (SSFB), CO, Fort Drum, NY and

I. Description of Operations Financed: (Cont.)
Eareckson AS, AK, including urgently needed major repairs and improvements previously deferred on 65-year-old maintenance facilities critical to the GMD mission at Fort Greely, AK.

Funding also ensures GMD assets are properly maintained and crews are trained to meet Combatant Commanders' needs including:

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, communication support, and utilities at Vandenberg SFB, CA, Fort Drum, NY, and Eareckson, AS, AK as outlined in respective Support Agreements.
4. Utilities for facilities that GMD occupies in the Fort Greely, AK cantonment area as outlined in the associated Support Agreement. This area does not include the Missile Defense Complex.
5. Configuration management and control for the fielded weapon system.

C. **Ballistic Missile Defense Systems (BMDS) 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 and continuation of Gallium Nitride (GaN) Transmit/Receive Integrated Multichannel Module (T/RIMM) sustainment at Letterkenny Army Depot (LEAD) to replace obsolete equipment, incorporate updates to servers, and enhance radar capabilities. Additionally, funding provides sustainment unique to the MDA Missile Defense mission for the five Upgraded Early Warning Radars (UEWRs) and COBRA DANE Radar, which MDA sustains and operates in conjunction with the U.S. Space Force.

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.

4. Deployment software support for fielded software to include: deficiency report reviews, error correction, incremental capability improvements, and hardware/system interface compatibility maintenance.

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

Fiscal Year (FY) 2023 Overseas Operations Costs funding accounted for in the Base budget include:

- Operation INHERENT RESOLVE (OIR) [$0 thousand].
- Operation European Deterrence Initiative (EDI) [$0 thousand].
- Other theater requirements and related missions [$0 thousand].

II. Force Structure Summary:
N/A

III. Financial Summary ($ in Thousands):

		FY 2022					
			Congressional Action				
A. BA Subactivities	FY 2021 Actuals	Budget Request	Amount	Percent	Appropriated	Current Enacted	FY 2023 Request
4. Administrative and Servicewide Activities	**$572,886**	**$502,450**	**$-32**	**-0.01%**	**$502,418**	**$502,418**	**$541,787**
Aegis BMD Program	$77,195	$68,293	$0	0.00%	$68,293	$68,293	$69,071
BMDS Radars Program	$257,244	$190,706	$-32	-0.02%	$190,674	$190,674	$200,207
Ground-Based Midcourse Program	$148,741	$156,623	$0	0.00%	$156,623	$156,623	$185,564
THAAD Program	$89,706	$86,828	$0	0.00%	$86,828	$86,828	$86,945
Total	**$572,886**	**$502,450**	**$-32**	**-0.01%**	**$502,418**	**$502,418**	**$541,787**

*Overseas Operations costs accounted for in the base budget: $0.0 thousand.

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

B. Reconciliation Summary	Change FY 2022/FY 2022	Change FY 2022/FY 2023
BASELINE FUNDING	**$502,450**	**$502,418**
Congressional Adjustments (Distributed)	0	
Congressional Adjustments (Undistributed)	0	
Adjustments to Meet Congressional Intent	0	
Congressional Adjustments (General Provisions)	-32	
SUBTOTAL APPROPRIATED AMOUNT	**502,418**	
Fact-of-Life Changes (2022 to 2022 Only)	0	
SUBTOTAL BASELINE FUNDING	**502,418**	
Supplemental	0	
Reprogrammings	0	
Price Changes		10,435
Functional Transfers		0
Program Changes		28,934
CURRENT ESTIMATE	**502,418**	**541,787**
Less: Supplemental	0	
NORMALIZED CURRENT ESTIMATE	**$502,418**	**$541,787**

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

FY 2022 President's Budget Request (Amended, if applicable)	**$502,450**
1. Congressional Adjustments	$-32
a) Distributed Adjustments	$0
b) Undistributed Adjustments	$0
c) Adjustments to Meet Congressional Intent	$0
d) General Provisions	$-32
1) Reduction to Federally Funded Research and Development Centers (FFRDC) funding, Section 8207	$-32
FY 2022 Appropriated Amount	**$502,418**
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
FY 2022 Baseline Funding	**$502,418**
4. Reprogrammings (Requiring 1415 Actions)	$0

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

a) Increases $0

b) Decreases $0

Revised FY 2022 Estimate $502,418

5. Less: Item 2, Supplemental Appropriation and Item 4, Reprogrammings $0

a) Less: Supplemental Funding $0

FY 2022 Normalized Current Estimate $502,418

6. Price Change $10,435

7. Functional Transfers $0

a) Transfers In $0

b) Transfers Out $0

8. Program Increases $40,518

a) Annualization of New FY 2022 Program $0

b) One-Time FY 2023 Increases $0

c) Program Growth in FY 2023 ..... $40,518

1) Aegis BMD Program $4,300
$3,260 increase provides purchasing additional spares in support of extended deployment of the SM-3 Block IA Rounds for an additional 4 years. Prevents significant reduction in Fleet missile capacity and global BMD capability.

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

$1,040 increase provides additional anticipated lab hours at Combat System Engineering Development Site (CSEDS) and SCSC Wallops Island test sites in support of Aegis BMD baselines in sustainment.
(FY 2022 Baseline: $68,293 thousand)

2) BMDS Radars Program $10,528
$10,528 increase provides for site specific maintenance required due to the high optempo and exposure to corrosive environments to ensure 24 hours a day, 365 days per year availability.
(FY 2022 Baseline: $190,706 thousand)

3) Ground-Based Midcourse Defense Program $25,690

$16,738 increase provides for urgently needed major facility repairs at Fort Greely, AK to include electrical, fire suppression, lighting and HVAC upgrades; ceiling, interior wall and floor repairs; and asbestos and mold abatement. Facilities targeted for improvement are 65-year-old maintenance facilities critical to the GMD mission. Increase also provides additional funding to address remote site Eareckson Air Station, AK new Base Operating Support (BOS) contract increased rates as well as needed facility repairs and upgrades, new support equipment and vehicle purchases. These repairs and improvements help meet mission readiness, equipment availability, quality of life standards and safety requirements.

$8,952 increase provides funding for FGA Missile Field 4 preventative and corrective maintenance for 20 additional silos and silo interface vaults; 24 hours a day, 7 days a week assured maintenance response to immediately assess and repair weapon system component failures; Warfighter integration to ensure the needs and requirements of U.S. Northern Command (USNORTHCOM) are met; and to purchase required spare parts for the weapon system. Additionally, the increase provides funding for transition of Operations and Sustainment for the GMD Weapon System from the GMD Development and Sustainment Contract (DSC) to the future GMD System Integration, Test and Readiness (SITR) contract and GMD Weapon System (GWS) contract transitioning from Q4 FY 2023 through Q1 FY 2024. The transition requires a gradual and temporary ramp up of incoming personnel to allow for weapon system training and familiarization prior to contract change over to ensure continued operations.
(FY 2022 Baseline: $156,623 thousand)

9. Program Decreases ..... $-11,584

a) Annualization of FY 2022 Program Decreases $0

b) One-Time FY 2022 Increases ..... $-281

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

1) Aegis BMD Program..... $-281
-$281 the one-time cost associated with providing additional anticipated lab hours at the operational test station.
(FY 2022 Baseline: $68,293 thousand)

c) Program Decreases in FY 2023 ..... $-11,303

1) Aegis BMD Program..... $-4,659
-$2,651 decrease reflects the updated SM-3 Block IB Round recertification cycle from 4 years to 6 years to ensure Fleet missile capacity and global BMD capability.

-$1,517 decrease reflects a reduction in maintenance update requirements due to increased developmental upgrades on BL9 and reduced prime contractor maintenance and sustainment of the Aegis BMD Common Source Library (CSL) fair share maintenance software change requests for Mission Planner (MP), Command and Decision (CND), Aegis Display System (ADS), Aegis Common Infrastructure (ACI), Operational Readiness Test System (ORTS), Radar, and Weapon Control System (WCS) Products.

-$491 decrease reflects a realignment of BMDS interoperability Capabilities and Limitations information as an extension of the Strike Group Interoperability from Fleet Integration to Aegis Weapons Systems.
(FY 2022 Baseline: $68,293 thousand)

2) BMDS Radars Program..... $-4,959
-$4,959 decrease reflects reduction in Repair and Return after the positive impact of FY 2021 Spares Congressional Plus Up (CPU) and FY 2022 increases to fleet spares and Repair and Return to mitigate backlog and restore stock inventory.
(FY 2022 Baseline: $190,706 thousand)

3) THAAD Program..... $-1,685
- $1,685 decrease reflects cost savings for THAAD Contractor Support.
(FY 2022 Baseline: $86,828 thousand)

FY 2023 Budget Request $541,787

IV. Performance Criteria and Evaluation Summary:

	FY 2021 Actuals	FY 2022 Enacted	FY 2023 Estimate
1. Operational Support	**572,886**	**502,418**	**541,787**
Aegis Program	77,195	68,293	69,071
Ground-Base Midcourse Program	148,741	156,623	185,564
BMDS Radars Program	257,244	190,674	200,207
THAAD Program	89,706	86,828	86,945
Total Operations and Maintenance, Defense Wide	**572,886**	**502,418**	**541,787**

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.

- Aegis BMD. The Aegis BMD element of the BMDS 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 BMDS. By the end of FY 2023 there will be 50 total BMDS 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). In FY 2023, MDA will support operationally deployed GBIs located at FGA and Vandenberg Space Force Base, California (VSFB). Each GBI 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. In FY 2023, 20 additional silos and silo interface vaults Operations and Sustainment at the FGA Missile Field 4 complex and will be included in the performance criteria.

C. Ballistic Missile Defense Systems (BMDS) 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 2023 includes AN/TPY-2 operations and maintenance execution and

IV. Performance Criteria and Evaluation Summary:

Depot Level Maintenance (DLM) for Cooling Equipment Unit (CEU) and continuation of Gallium Nitride (GaN) Transmit/Receive Integrated Multichannel Module (T/RIMM) sustainment due to vehicle life expectancy, obsolescence improvements, and high operational tempo use in corrosive environments. MDA also provides sustainment unique to the MDA Missile Defense mission for the five Upgraded Early Warning Radars (UEWRs) and COBRA DANE Radar, which MDA sustains and operates in conjunction with the U.S. Space Force.

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.

V. Personnel Summary:

	FY 2021	FY 2022	FY 2023	Change FY 2021/ FY 2022	Change FY 2022/ FY 2023
Contractor FTEs (Total)	**1,043**	**691**	**691**	**-352**	**0**

Personnel Summary Explanations:

The FY 2021 to FY 2022 decrease reflects proper alignment of Contractor Full Time Equivalents (FTEs) in accordance with the Office of Management and Budget (OMB) Circular A-11 to not include Other Government Agency personnel.

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

			Change from FY 2021 to FY 2022			Change from FY 2022 to FY 2023		
		FY 2021 Program	Price Growth	Program Growth	FY 2022 Program	Price Growth	Program Growth	FY 2023 Program
308	TRAVEL OF PERSONS	19	1	-20	0	0	0	0
0399	**TOTAL TRAVEL**	**19**	**1**	**-20**	**0**	**0**	**0**	**0**
401	DLA ENERGY (FUEL PRODUCTS)	1,716	173	-708	1,181	-88	158	1,251
0499	**TOTAL DEFENSE WORKING CAPITAL FUND SUPPLIES AND MATERIALS**	**1,716**	**173**	**-708**	**1,181**	**-88**	**158**	**1,251**
677	DISA TELECOMM SVCS - REIMBURSABLE	169	1	-40	130	0	-57	73
0699	**TOTAL OTHER FUND PURCHASES**	**169**	**1**	**-40**	**130**	**0**	**-57**	**73**
771	COMMERCIAL TRANSPORT	3,508	105	-145	3,468	73	68	3,609
0799	**TOTAL TRANSPORTATION**	**3,508**	**105**	**-145**	**3,468**	**73**	**68**	**3,609**
913	PURCHASED UTILITIES (NON-FUND)	2,338	70	326	2,734	57	-4	2,787
914	PURCHASED COMMUNICATIONS (NON-FUND)	2,506	75	-1,548	1,033	22	3,188	4,243
915	RENTS (NON-GSA)	0	0	239	239	5	-1	243
920	SUPPLIES & MATERIALS (NON-FUND)	77,838	2,335	-30,755	49,418	1,038	-14,705	35,751
922	EQUIPMENT MAINTENANCE BY CONTRACT	378,051	11,342	-84,965	304,428	6,393	5,852	316,673
923	FACILITIES SUST, REST, & MOD BY CONTRACT	31,740	952	-6,446	26,246	551	30,121	56,918
925	EQUIPMENT PURCHASES (NON-FUND)	4,131	124	-3,476	779	16	-332	463
930	OTHER DEPOT MAINTENANCE (NON-FUND)	46,057	1,382	44,747	92,186	1,936	4,781	98,903
932	MGT PROF SUPPORT SVCS	550	17	-567	0	0	0	0
933	STUDIES, ANALYSIS & EVAL	0	0	0	0	0	622	622
934	ENGINEERING & TECH SVCS	382	11	-393	0	0	657	657
936	TRAINING AND LEADERSHIP DEVELOPMENT (OTHER CONTRACTS)	8,974	269	-9,243	0	0	0	0
984	EQUIPMENT CONTRACTS	0	0	100	100	2	-1	101
987	OTHER INTRA-GOVT PURCH	8,367	251	1,078	9,696	204	-339	9,561
989	OTHER SERVICES	228	7	10,545	10,780	226	-1,074	9,932
990	IT CONTRACT SUPPORT SERVICES	6,312	189	-6,501	0	0	0	0

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

			Change from FY 2021 to FY 2022			Change from FY 2022 to FY 2023		
		FY 2021 Program	Price Growth	Program Growth	FY 2022 Program	Price Growth	Program Growth	FY 2023 Program
0999	TOTAL OTHER PURCHASES	567,474	17,024	-86,859	497,639	10,450	28,765	536,854
9999	GRAND TOTAL	572,886	17,304	-87,772	502,418	10,435	28,934	541,787