

Fiscal Year 2015 Budget Estimates
Missile Defense Agency (MDA)



March 2014

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**Missile Defense Agency
Operation and Maintenance, Defense-Wide
Fiscal Year (FY) 2015 Budget Estimates**

**Operation and Maintenance, Defense-Wide Summary (\$ in thousands)
Budget Activity (BA) 1: Operating Forces
Subactivity Group 11A**

	FY 2013 <u>Actual</u>	Price <u>Change</u>	Program <u>Change</u>	FY 2014 <u>Estimate</u>	Price <u>Change</u>	Program <u>Change</u>	FY 2015 <u>Estimate</u>
MDA	221,609	4,211	143,551	369,371	6,655	40,618	416,644

I. Description of Operations Financed:

A. Aegis Ballistic Missile Defense (BMD).

Aegis BMD funding will support a wide range of activities in support of the SM-3 Blk IA including Vertical Launch System (VLS) canister spares, fleet introduction and support, first destination AUR transportation; re-certification of the SM-3 Blk IA at 4 year mid-life, demilitarization of the Blk IA at 8 year mid-life, and round surveillance.

B. Ballistic Missile Defense (BMD) Midcourse Defense Segment.

The Ground-based Midcourse Defense (GMD) program is the element of the Ballistic Missile Defense System (BMDS) that provides combatant commanders with a continuously available (24 hours a day, 7 days a week, 365 days a year) capability to defend the Homeland against limited intermediate and long-range ballistic missile threats in the midcourse battle space. Missile Defense Agency (MDA) funding supports the operations and sustainment of the GMD weapon system that consists of Ground Based Interceptors (GBI), GMD Fire Control (GFC) systems, GMD Communications Network (GCN), In-Flight Interceptor Communications System Data Terminals (IDT) and all of the ground Launch Support Systems (LSS), silos, silo interface vaults (SIVs), environmental control systems, Command Launch Equipment (CLE), firing circuits and safety systems. This funding specifically provides for a wide range of activities in support of the fielded capabilities to include the GBIs

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I. Description of Operations Financed (cont.)

at Fort Greely, Alaska (FGA) and Vandenberg Air Force Base (VAFB), California as well as IDTs at Eareckson Air Station (EAS), Alaska, FGA, VAFB and Fort Drum, New York. It also provides for the maintenance, repair, training, sustainment and supply support, sustaining engineering, network operations, integrated logistics support, execution and management of day-to-day planning, configuration control, scheduling, execution control, system transitioning and performance reporting functions at FGA, VAFB, EAS, Fort Drum and the Missile Defense Integration Operations Center (MDIOC), at Colorado Springs, Colorado. Additionally, the funding provides Base Operations Support (BOS) for facility sustainment and maintenance at the various GMD sites. BOS includes funding for utilities, facility maintenance, communications infrastructure support, grounds maintenance, snow removal and other services required to support the fielded weapon system.

C. Ballistic Missile Defense Systems (BMDS) AN/TPY-2 Radars.

This funding provides for the Upgraded Early Warning Radar (UEWR)/Cobra Dane Radar Software Sustainment unique to the Missile Defense mission. FY 2015 funding also provides training, sustainment and daily operations of 11 Army Navy/Transportable Radar Surveillance and Control-2 radars: five forward-based radars, and six Terminal High Altitude Area Defense battery radars. This funding will also establish depot capability at Letterkenny Army Depot (LEAD) to support AN/TPY-2 Electronics Equipment Unit (EEU) retrofit in FY 2015.

D. Terminal High Altitude Area Defense (THAAD).

As described in the BMDS Transition and Transfer (T2) Annex, the MDA is responsible for the sustainment of the missile defense unique or developmental items and the U.S. Army is responsible for the sustainment of the common items. MDA funding accomplishes the

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I. Description of Operations Financed (cont.)

following efforts: Provides field and sustainment level maintenance for all THAAD deployed equipment for missile defense unique equipment only. Provides spares, repair parts, and maintenance capability at the location of the deployed THAAD batteries. Spares and repair parts include the contractor transportation, packaging and handling of Line Replaceable Units (LRUs) and inventory control and storage of repair parts, LRUs, and spares. Provides engineering support for the THAAD missile defense unique equipment. Provides missile transportation and handling from the missile storage location to the site of the THAAD launchers. Updates logistical data information of the Interactive Electronic Technical Manual (IETM) with the most current data and provide software user's guide up-dates and certify each revision of the software. Provides maintenance and upkeep for all THAAD training devices. Provides maintenance support to the missile defense unique equipment in the THAAD Fire Battery, for all New Equipment Training and any Delta training for fielded units required due to design changes for replacement soldiers. Provides Special Tools and Test Equipment for the organic depot. Begins RESET program. Ensures THAAD assets are properly maintained and the crews are trained to meet Combatant Commanders needs.

II. Force Structure Summary:

A. Aegis Ballistic Missile Defense (BMD). The Aegis Ballistic Missile Defense (Aegis BMD) mission is to deliver an enduring, operationally effective and supportable Ballistic Missile Defense capability to defend the nation, deployed forces, friends and allies. The Aegis BMD element of the BMDS capitalizes upon and evolves from the existing United States 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 Ballistic Missiles (SRBM), Medium-Range Ballistic Missiles (MRBM), and Intermediate-Range Ballistic Missiles (IRBM) in the midcourse phase of flight and shorter range missile in terminal phase. Aegis BMD

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II. Force Structure Summary (cont.)

also provides a Long Range Surveillance and Track (LRS&T) capability to the BMDS. Aegis BMDS program decrease in FY 2015 is due to a reduction in required recertifications of SM-3 Block IA for deployment aboard US Navy BMD configured ships.

B. Ballistic Missile Defense (BMD) Midcourse Defense Segment.

The GMD fielded weapon system is under the command of U.S. Northern Command (NORTHCOM) and consists of soldiers from the 100th Missile Defense Brigade (5 crews) headquartered at Colorado Springs, Colorado, and its 49th Missile Defense Battalion (5 crews) at Fort Greely, Alaska. The 30 operationally deployed GBIs located at FGA (26 GBIs) and VAFB (4 GBIs) each deliver a single Exoatmospheric 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 (2 each) and the MDIOC (2 each). IDTs are currently located at FGA, VAFB, EAS and the MDA plans to field an additional IDT at Fort Drum, New York with an Initial Operational Capability (IOC) in 3rd QTR FY 2015. The increase in FY 2015 adheres to congressional direction to transfer all GMD Operations and Sustainment activities previously captured in the Ballistic Missile Defense Midcourse Segment RDT&E program element (0603882C) to the Operations and Maintenance, Defense -Wide appropriation starting in FY 2014.

C. Ballistic Missile Defense Systems (BMDS) AN/TPY-2 Radars. This funding provides for the Upgraded Early Warning Radar (UEWR)/Cobra Dane Radar Software Sustainment in support of the Missile Defense mission. The Air Force is responsible for the day to day operations and Maintenance of the UEWRs and Cobra Dane Radar. The FY 2015 funding also provides for the training, sustainment and daily operation of eleven Army Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) radars: five forward-based radars, and six Terminal High Altitude Area Defense battery radars. These services are

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II. Force Structure Summary (cont.)

furnished through Centralized Contractor Logistics Support (CCLS) contracts. This funding will also establish depot capability at Letterkenny Army Depot (LEAD) to support an AN/TPY-2 Electronics Equipment Unit (EEU) retrofit in FY15. The force structure and operational tempo are documented in the AN/TPY-2 Cost Analysis Requirements Description dated January 2012. The increase in the FY 2015 O&M estimate is due to the establishment of depot capability at LEAD and the sustainment efforts associated with the planned deployment of the PACOM Radar.

D. Terminal High Altitude Area Defense (THAAD). Army force structure for THAAD is currently set at six batteries with six launchers operated by ninety-five soldiers and documented on Modified Table of Organization and Equipment (MTOE) number 44693G000. The battery is organized to conduct 120-day deployments (forty-five days of entry operations and seventy-five days of 17-hour/day combat operations). This operational tempo can be increased with appropriate attachments and support. The battery requires support from the Army for communications, security, common supplies, and services. THAAD missile defense unique supplies are routed to a non-theater contractor supply and specialized maintenance chain. To this end, the battery brings with it a twelve-person contractor support team with its own complement of equipment. The contractor team will be documented on an Army Table of Distribution and Allowances (TDA) to facilitate movement into a war zone with the battery. Interceptors are not considered part of battery force structure and are allocated by commanders in accordance with the mission and threat. Batteries will be doctrinally assigned to the theater Army Air and Missile Defense Command. Engagements will be coordinated through the theater Air Operations Center. With the provision of specialized communications and radar software, the battery will be able to communicate directly with the Ballistic Missile Defense System Command and Control Battle Management and Communications (C2BMC) system making it capable of performing surveillance and tracking missions in addition to its normal active defense engagement mission. The

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II. Force Structure Summary (cont.)

increase in FY 2015 is due to increased field support required for the fielding of the fifth THAAD battery.

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III. Financial Summary (\$ in thousands)

	FY 2014						
	FY 2013	Budget	Congressional Action			Current	FY 2015
			Actual	Request	Amount		
A. <u>BA Subactivities</u>							
1. <u>Operational Support</u>	221,609	256,201	113,170	44.2	369,371	369,371	416,644
Aegis Ballistic Missile Defense (BMD)	11,050	18,444	-706	-3.8	17,738	17,738	11,666
Ballistic Missile Defense (BMD) Midcourse Defense Segment	0	0	137,776	n/a	137,776	137,776	146,218
Ballistic Missile Defense Systems (BMDS) AN/TPY-2 Radars	173,543	145,798	-5,573	-3.8	140,225	140,225	183,047
Terminal High Altitude Area Defense (THAAD)	37,016	91,959	-18,327	-19.9	73,632	73,632	75,713
Total	221,609	256,201	113,170	44.2	369,371	369,371	416,644

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III. Financial Summary (\$ in thousands)

B. <u>Reconciliation Summary</u>	Change	Change
	<u>FY 2014/FY 2014</u>	<u>FY 2014/FY 2015</u>
Baseline Funding	256,201	369,371
Congressional Adjustments (Distributed)	127,456	
Congressional Adjustments (Undistributed)	-10,000	
Adjustments to Meet Congressional Intent		
Congressional Adjustments (General Provisions)	-4,286	
Subtotal Appropriated Amount	369,371	
Fact-of-Life Changes (2014 to 2014 Only)		
Subtotal Baseline Funding	369,371	
Supplemental		
Reprogrammings		
Price Changes		6,655
Functional Transfers		
Program Changes		40,618
Current Estimate	369,371	416,644
Less: Wartime Supplemental		
Normalized Current Estimate	369,371	

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III. Financial Summary (\$ in thousands)

<u>C. Reconciliation of Increases and Decreases</u>	<u>Amount</u>	<u>Totals</u>
FY 2014 President's Budget Request (Amended, if applicable)		256,201
1. Congressional Adjustments		113,170
a. Distributed Adjustments		
1) Distributed Adjustments	127,456	
b. Undistributed Adjustments		
1) Program Reduction	-10,000	
c. Adjustments to Meet Congressional Intent		
d. General Provisions		
1) Section 8140 - DWCF Excess Cash	-4,140	
2) Section 8034 - Indian Lands Environmental Mitigation	-143	
3) Section 8023 - FFRDC	-3	
FY 2014 Appropriated Amount		369,371
2. War-Related and Disaster Supplemental Appropriations		
3. Fact-of-Life Changes		
FY 2014 Baseline Funding		369,371
4. Reprogrammings (Requiring 1415 Actions)		
Revised FY 2014 Estimate		369,371
5. Less: Item 2, War-Related and Disaster Supplemental Appropriations and Item 4, Reprogrammings		
FY 2014 Normalized Current Estimate		369,371
6. Price Change		6,655
7. Functional Transfers		
8. Program Increases		49,272
a. Annualization of New FY 2014 Program		
b. One-Time FY 2015 Increases		
c. Program Growth in FY 2015		
1) BMDS Radar program increase is due to the establishment of depot capability at Letterkenny Army Depot and the sustainment efforts with the PACOM Radar deployment. (FY 2014 baseline \$141,896K +0 FTE)	41,151	

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III. Financial Summary (\$ in thousands)

C. <u>Reconciliation of Increases and Decreases</u>	<u>Amount</u>	<u>Totals</u>
2) BMD Midcourse Defense Segment program increase is due to a congressional transfer of all GMD Operations and Sustainment activities from RDT&E to O&M appropriation. (FY 2014 baseline \$139,300K \$+0 FTE)	6,918	
3) THAAD program increase is due to increased field support required for the fielding of the fifth THAAD battery. (FY 2014 baseline \$74,510K, +0 FTE)	1,203	
9. Program Decreases		-8,654
a. Annualization of FY 2014 Program Decreases		
b. One-Time FY 2014 Increases		
c. Program Decreases in FY 2015		
1) Aegis BMD program decrease is due to a reduction in required recertification of SM-3 Block IA for deployment aboard US Navy BMD configured ships. (FY 2014 baseline \$17,950K, +0 FTE)	-8,654	
FY 2015 Budget Request		416,644

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IV. Performance Criteria and Evaluation Summary:

A. Aegis Ballistic Missile Defense BMD Standard Missile 3 Block IA (SM-3 BLK IA). Performance Objectives are defined in the SM-3 contracts as follows: The performance incentive of the SM-3 Cost Plus/ Incentive Fee/Award Fee (CP/IF/AF) contracts is determined by a formula designed to focus on reduction of overall maintenance cost and efficiency of recertification and the timely return of SM-3s to the fleet.

B. Ballistic Missile Defense Midcourse Defense Segment. The Ground-Based Midcourse System utilizes a performance clause on the Development and Sustainment Contract (DSC) with Boeing using GMD System Availability SA and GBI Availability GA criteria as the primary operational readiness metric to gauge the DSC Prime Contractor's sustainment performance.

The intent of using SA and GA criteria are to: 1) Maximize availability of the GMD weapon system to the warfighter for the Homeland Defense mission; and 2) Maximize the availability of operational interceptors to the Warfighter. Specifically, at any given time during performance of the contract, the DSC Contractor is responsible for making a minimum number of healthy GBIs available, and ensuring that COCOM minimum asset availability is maintained per established COCOM readiness criteria.

Specific SA and GA Calculation: All calculations are based on times measured to the nearest minute.

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IV. Performance Criteria and Evaluation Summary:

$$SA = \frac{(TT - TCM - TPM - \text{Government Directed Down Time})}{(TT - \text{Government Directed Down Time})}$$

$$GA = \frac{(TT - \text{Government Directed Down Time} - \text{Time that fewer than } x^* \text{ GBIs Healthy})}{(TT - \text{Government Directed Down Time})}$$

SA and GA Calculation Notes:

TT	Total Time (24 hrs/X days in Month)
TCM	Total downtime due to corrective maintenance actions including logistics
TPM	Total downtime due to preventative maintenance actions including logistics delay
Government Directed Down Time (GDDT)	When the Government expressly directs the Contractor to take the system or selected prime mission equipment asset(s) out of an operational state for a specified period of time for activities that are neither CM nor PM. Further, GDDT includes periods when the system or assets are turned off based on unforeseen or scheduled events (beyond the control, fault or negligence of the contractor or any of its subcontractors) which created conditions that render the system unavailable to the Warfighter GDDT does not include scheduled Corrective Maintenance (CM) and Preventive Maintenance (PM) activities covered in the Warfighter Asset Management

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IV. Performance Criteria and Evaluation Summary:

	Process. Under Performance Based Logistics (PBL), the DSC Contractor should schedule maintenance using the Asset Management Process in a way that minimizes down time.
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C. Ballistic Missile Defense Systems (BMDS) AN/TPY-2 Radars.

Upgraded Early Warning Radars (UEWR) and Cobra Dane operations and sustainment are managed by Air Force Space to maintain radar mission capability and meet specified operational availability requirements to maintain and enhance the Missile Defense mission for these radars.

For Army Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) radars, the contractor's performance in operations and sustainment will be measured by the radars' demonstrated operational availability (Ao), defined as:

$$A_o = \frac{\text{Total Time} - \text{Non Mission Capable Time}}{\text{Total Time}}$$

For AN/TPY-2 radars: "Total time" is defined as 24 hours per day times the number of days in the period of performance of the task order. Performance measurement does not include contractually-defined conditions that are outside the control of the Contractor and are exceptions to A downtime. For AN/TPY-2 radars, performance incentives are calculated as follows:

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IV. Performance Criteria and Evaluation Summary:

Target $A_o = 95\%$	
$A_o > 95\%$	100% of Performance Incentive Pool
$A_o \geq 70\%, < 95\%$	Actual $A_o\%$ achieved times pool amount
$A_o < 70\%$	Performance Fee = 0%

D. Terminal High Altitude Area Defense (THAAD). THAAD utilizes a Performance Clause in the Interim Contractor Support (ICS) contract with LM to incentivize LM for THAAD weapon system readiness. The assessment of the performance clause is based on evaluation of Battery Operational Readiness and Minimum Capability:

Operational Readiness (OR) is calculated by dividing the number of hours the required components (2 TSG's and 3 Launchers) are available to accomplish the mission during a rating period by the number of hours possible during the rating period. For OR levels greater than 70% and less than or equal to 100%, the contractor is awarded an incentive fee on a sliding scale for that portion. Minimum Capability (MC) is also calculated by dividing the number of hours the required components (1 TSG and 2 Launchers) are available to accomplish the mission during a rating period by the number of hours possible during the rating period. For MC readiness levels less than 100% the contractor is awarded zero fee for that portion.

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V. <u>Personnel Summary</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Change FY 2013/ FY 2014</u>	<u>Change FY 2014/ FY 2015</u>
<u>Contractor FTEs (Total)</u>	<u>510</u>	<u>894</u>	<u>894</u>	<u>384</u>	<u>0</u>

The FY 2013 to FY 2014 contractor FTE increase is due to a congressional direction to transfer all GMD Operations and Sustainment activities previously captured in the Ballistic Missile Defense Midcourse Segment RDT&E program element (0603882C) to the Operations and Maintenance, Defense-Wide appropriation. There is no contractor FTE increase for FY 2014 to FY 2015.

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

<u>OP 32 Line</u>	<u>FY 2013</u> <u>Actual</u>	<u>Change</u> <u>FY 2013/FY 2014</u>		<u>FY 2014</u> <u>Estimate</u>	<u>Change</u> <u>FY 2014/FY 2015</u>		<u>FY 2015</u> <u>Estimate</u>
		<u>Price</u>	<u>Program</u>		<u>Price</u>	<u>Program</u>	
401 DLA Energy (Fuel Products)	0	0	1,532	1,532	34	120	1,686
499 Total Supplies & Materials	0	0	1,532	1,532	34	120	1,686
677 DISA Telecomm Svcs - Reimbursable	0	0	5	5	0	-5	0
699 Total DWCF Purchases	0	0	5	5	0	-5	0
771 Commercial Transport	0	0	1,031	1,031	19	-1	1,049
799 Total Transportation	0	0	1,031	1,031	19	-1	1,049
913 Purchased Utilities (Non-Fund)	0	0	4,142	4,142	75	662	4,879
920 Supplies & Materials (Non- Fund)	0	0	78	78	1	16	95
922 Equipment Maintenance By Contract	209,201	3,975	93,145	306,321	5,514	44,675	356,510
923 Facilities Sust, Rest, & Mod by Contract	0	0	12,767	12,767	230	213	13,210
932 Mgt Prof Support Svcs	0	0	7,471	7,471	134	-9	7,596
937 Locally Purchased Fuel (Non- Fund)	0	0	52	52	1	0	53
987 Other Intra-Govt Purch	0	0	13,888	13,888	250	-2,790	11,348
989 Other Services	12,408	236	9,207	21,851	393	-2,548	19,696
990 IT Contract Support Services	0	0	233	233	4	285	522
999 Total Other Purchases	221,609	4,211	140,983	366,803	6,602	40,504	413,909
Total	221,609	4,211	143,551	369,371	6,655	40,618	416,644