

# **Fiscal Year (FY) 2021 Budget Estimates**

## **Operation and Maintenance, Defense-Wide Space Development Agency**



**February 2020**

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**Operation and Maintenance, Defense-Wide Summary (\$ in thousands)  
Budget Activity (BA) 2: Mobilization Warstoppers**

	FY 2019 <u>Actuals</u>	Price <u>Change</u>	Program <u>Change</u>	FY 2020 <u>Enacted</u>	Price <u>Change</u>	Program <u>Change</u>	FY 2021 <u>Estimate</u>
SDA	0	0	30,343	30,343	584	17,239	48,166

**I. Description of Operations Financed:** The Space Development Agency (SDA) is established to develop the next generation space architecture to enable U.S. military operations to be responsive to emerging multi-domain threats against our national security. To achieve that goal, the SDA will help inform the Department's decision to develop and implement a proliferated architecture enabled by lower-cost, The Space Development Agency (SDA) is established to develop the next generation space architecture to enable U.S. military operations to be responsive to emerging multi-domain threats against our national security. To achieve that goal, the SDA will help inform the Department's decision to develop and implement a proliferated architecture enabled by lower-cost, mass-produced spacecraft and routine space access, shift the Department to a development organization focused on experimentation, prototyping, and accelerated fielding, and change the Department to a concentrated, decoupled structure to generate speed. The SDA will manage, direct, and execute the development of the space capabilities in accordance with DoD's Space Vision and field space capabilities at speed and scale, with the following goals:

- bold breakthroughs designed to out-pace our competitors,
- technology maturation and systems engineering,
- lean engineering, manufacturing, and support,
- industrial base expansion; streamlined development and acquisition process, and
- increased acquisition cooperation with the National Reconnaissance Office (NRO).

The SDA will rapidly deploy critical elements of the next-generation space capabilities, initially focusing on these essential capabilities:

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**I. Description of Operations Financed (cont.)**

- Persistent global surveillance for advanced missile targeting,
- Indications, warnings, targeting, and tracking for defense against advanced missile threats,
- Alternate position, navigation, and timing (PNT) for a GPS-denied environment,
- Global and near-real time space situational awareness,
- Development of a deterrent capability
- Responsive, resilient, common ground-based space support infrastructure (e.g., ground stations and launch capability),
- Cross-domain, networked, node-independent battle management command, control, and communications (BMC3), and
- Highly-scaled, low-latency, persistent, artificial intelligence-enable global surveillance.

The establishment of a data transport layer in Low Earth Orbit (LEO) is essential to developing a new, responsive space architecture, and will be SDA's primary initial focus. The SDA will develop an initial wedge of sub-constellations on this transport layer to provide additional capabilities, such as advanced missile warning.

SDA's baseline funding will allow the agency to identify capability roadmaps from the DoD and Military Service programs of record and concepts in development; determine potential National Defense Space Architectures (NDSA) from these roadmaps and collaborate with all DoD acquisition organizations towards an integrated architecture, and begin initial concept studies and prototype development in a few critical areas. These areas include proliferated Low Earth Orbit (pLEO) sensor technologies, space situational awareness and launch, transport architecture and standards, missile warning ground integration, space-based interceptor studies, and space-based discrimination studies.

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**I. Description of Operations Financed (cont.)**

In its August 2018 Final Report on Organizational and Management Structure for the National Security Space Components of the DoD, The Department described eight critical, currently unmet priorities (the "DoD Space Vision") that need timely attention in order to prevent potential adversaries from gaining combat advantage over the U.S. SDA will solve these eight unmet needs by orchestrating the creation of a layered architecture to provide assured, persistent, and timely capabilities. SDA will accomplish this mission by establishing and fostering a new, threat-driven organization dedicated to rapid deployment of new systems.

A key element of SDA's approach involves capitalizing on momentum in the commercial space sector to enable a proliferated, integrated architecture making the future NDSA more robust against future threats.

The establishment of a resilient and unified military data transport layer in Low Earth Orbit (LEO) is essential to developing a new, responsive space architecture, and will be SDA's primary initial focus. The SDA will heavily leverage the Defense Advanced Research Projects Agency's Blackjack program and its plan to demonstrate a 20-satellite constellation, to build this transport layer. The SDA will develop an initial wedge of sub-constellations on this transport layer to provide additional capabilities such as advanced missile warning.

SDA is responsible for ensuring efficiency is achieved and that redundancy is avoided across the Department's space acquisition enterprise and to identify and address capability gaps. The SDA FY 2021 investment budget will support the warfighter by initiating work on a proliferated layered architecture covering the eight capabilities outlined in the "DoD Space Vision". There are six space layers, and one support layer envisioned to provide the eight capabilities.

The SDA FY 2021 top priorities are aligned to the National Defense Strategy priorities through (1) resumption of great power competition, modernization of priorities; (2) lethality through delivery

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**I. Description of Operations Financed (cont.)**

of warfighting capabilities; (3) partnerships within and outside DoD; and (4) reform through rapid requirements development and fielding. SDA's proliferated, distributed approach enables resiliency (to direct threats) and responsiveness (to emerging terrestrial threats).

**II. Force Structure Summary:**

N/A

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III. Financial Summary (\$ in thousands)

	FY 2020							FY 2021 <u>Estimate</u>
	<u>FY 2019 Actuals</u>	<u>Budget Request</u>	<u>Congressional Action</u>		<u>Appropriated</u>	<u>Current Enacted</u>		
			<u>Amount</u>	<u>Percent</u>				
<b>A. BA Subactivities</b>								
<b>1. Compensation and Benefits</b>	0	6,700	0	0.0	6,700	6,700	10,479	
Labor	0	6,700	0	0.0	6,700	6,700	10,479	
<b>2. Operations</b>	0	38,050	-14,407	-37.9	23,643	23,643	37,687	
Mission	0	38,050	-14,407	-37.9	23,643	23,643	37,687	
<b>Total</b>	0	44,750	-14,407	-32.2	30,343	30,343	48,166	

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III. Financial Summary (\$ in thousands)

<u>B. Reconciliation Summary</u>	<u>Change</u> <u>FY 2020/FY 2020</u>	<u>Change</u> <u>FY 2020/FY 2021</u>
<b>Baseline Funding</b>	<b>44,750</b>	<b>30,343</b>
Congressional Adjustments (Distributed)	-14,190	
Congressional Adjustments (Undistributed)	-217	
Adjustments to Meet Congressional Intent		
Congressional Adjustments (General Provisions)		
<b>Subtotal Appropriated Amount</b>	<b>30,343</b>	
Fact-of-Life Changes (2020 to 2020 Only)		
<b>Subtotal Baseline Funding</b>	<b>30,343</b>	
Supplemental		
Reprogrammings		
Price Changes		584
Functional Transfers		
Program Changes		17,239
<b>Current Estimate</b>	<b>30,343</b>	<b>48,166</b>
Less: Wartime Supplemental		
<b>Normalized Current Estimate</b>	<b>30,343</b>	



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**III. Financial Summary (\$ in thousands)**

	<u>Amount</u>	<u>Totals</u>
<b>C. <u>Reconciliation of Increases and Decreases</u></b>		
<b>FY 2020 President's Budget Request (Amended, if applicable)</b>		<b>44,750</b>
1. Congressional Adjustments		-14,407
a. Distributed Adjustments		
1) Insufficient Justification	-14,190	
b. Undistributed Adjustments		
1) Unjustified Growth (Across-the-Board reduction to the Operation and Maintenance, Defense-Wide Account)	-165	
2) Budget Justification Inconsistencies (Across-the- Board reduction to the Operation and Maintenance, Defense-Wide Account)	-52	
c. Adjustments to Meet Congressional Intent		
d. General Provisions		
<b>FY 2020 Appropriated Amount</b>		<b>30,343</b>
2. War-Related and Disaster Supplemental Appropriations		
3. Fact-of-Life Changes		
<b>FY 2020 Baseline Funding</b>		<b>30,343</b>
4. Reprogrammings (Requiring 1415 Actions)		
<b>Revised FY 2020 Estimate</b>		<b>30,343</b>
5. Less: Item 2, War-Related and Disaster Supplemental Appropriations and Item 4, Reprogrammings		
<b>FY 2020 Normalized Current Estimate</b>		<b>30,343</b>
6. Price Change		584
7. Functional Transfers		
8. Program Increases		18,411
a. Annualization of New FY 2020 Program		
b. One-Time FY 2021 Increases		
c. Program Growth in FY 2021		
1) Space Development Agency - Space Architecture	14,695	
The increase supports Space-related technical studies		

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**III. Financial Summary (\$ in thousands)**

<b>C. <u>Reconciliation of Increases and Decreases</u></b>	<b><u>Amount</u></b>	<b><u>Totals</u></b>
and contractual support to perform technical demonstrations and experiments. Enhanced support for technical analysis on the data provided by the demonstrations and prototypes is required for rapid development and fielding of next generation space architecture. (FY 2020 Baseline: \$12,232 thousand; +0 FTEs)		
2) Compensation and Benefits - SDA The increase of 15 Full Time Equivalents (FTE) and associated funding will support the continued standup of the SDA, to include agency leadership and administrative and support functions. (FY 2020 Baseline: \$6,700 thousand; Baseline FTEs: 30; +15 FTEs)	3,716	
9. Program Decreases		-1,172
a. Annualization of FY 2020 Program Decreases		
b. One-Time FY 2020 Increases		
c. Program Decreases in FY 2021		
1) Space Development Agency Operations Decrease reflects normalization of SDA operations. Projected reduction in office space, equipment, and maintenance costs as operations mature beyond initial stand-up. (FY 2020 Baseline: \$38,050 thousand)	-1,132	
2) Compensation and Benefits - One Less Compensable Day The reduction of funding is the result of one less compensable day for FY 2021. The number of compensable days changes from 262 in FY 2020 to 261 in FY 2021.	-40	

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III. Financial Summary (\$ in thousands)

<u>C. Reconciliation of Increases and Decreases</u>	<u>Amount</u>	<u>Totals</u>
(FY 2020 Baseline: \$6,700 thousand; Baseline FTEs: 30; +0 FTEs)		
<b>FY 2021 Budget Request</b>		<b>48,166</b>

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

As the SDA establishes itself as an organization, the SDA team will work on providing substantive performance metrics.

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<b>V. <u>Personnel Summary</u></b>	<b><u>FY 2019</u></b>	<b><u>FY 2020</u></b>	<b><u>FY 2021</u></b>	<b><u>Change FY 2019/ FY 2020</u></b>	<b><u>Change FY 2020/ FY 2021</u></b>
<u>Active Military End Strength (E/S) (Total)</u>	<u>0</u>	<u>20</u>	<u>30</u>	<u>20</u>	<u>10</u>
Officer	0	20	30	20	10
<u>Civilian End Strength (Total)</u>	<u>0</u>	<u>30</u>	<u>45</u>	<u>30</u>	<u>15</u>
U.S. Direct Hire	0	30	45	30	15
Total Direct Hire	0	30	45	30	15
<u>Active Military Average Strength (A/S) (Total)</u>	<u>0</u>	<u>20</u>	<u>30</u>	<u>20</u>	<u>10</u>
Officer	0	20	30	20	10
<u>Civilian FTEs (Total)</u>	<u>0</u>	<u>30</u>	<u>45</u>	<u>30</u>	<u>15</u>
U.S. Direct Hire	0	30	45	30	15
Total Direct Hire	0	30	45	30	15
Average Annual Civilian Salary (\$ in thousands)	0	223.3	232.9	223.3	9.6
<u>Contractor FTEs (Total)</u>	<u>0</u>	<u>40</u>	<u>60</u>	<u>40</u>	<u>20</u>

The increase of 15 Full Time Equivalent (FTE) and associated resources will support the standup of the SDA, to include agency leadership and administrative and support functions. Also included will be one lead for each of the eight essential capabilities listed in Part One, as well as a program security officer, general counsel, a contracting officer, and budget and finance support.

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

<b>OP 32 Line</b>	<b>FY 2019</b>	<b>Change</b>		<b>FY 2020</b>	<b>Change</b>		<b>FY 2021</b>
	<b>Actuals</b>	<b>FY 2019/FY 2020</b>	<b>Program</b>	<b>Enacted</b>	<b>FY 2020/FY 2021</b>	<b>Program</b>	<b>Estimate</b>
101 Exec, Gen'l & Spec Scheds	0	0	6,685	6,685	103	3,691	10,479
107 Voluntary Sep Incentives	0	0	15	15	0	-15	0
<b>199 Total Civ Compensation</b>	<b>0</b>	<b>0</b>	<b>6,700</b>	<b>6,700</b>	<b>103</b>	<b>3,676</b>	<b>10,479</b>
308 Travel of Persons	0	0	750	750	15	29	794
<b>399 Total Travel</b>	<b>0</b>	<b>0</b>	<b>750</b>	<b>750</b>	<b>15</b>	<b>29</b>	<b>794</b>
671 DISA DISN Subscription Services (DSS)	0	0	288	288	14	95	397
<b>699 Total DWCF Purchases</b>	<b>0</b>	<b>0</b>	<b>288</b>	<b>288</b>	<b>14</b>	<b>95</b>	<b>397</b>
912 Rental Payments to GSA (SLUC)	0	0	859	859	17	308	1,184
920 Supplies & Materials (Non-Fund)	0	0	10	10	0	0	10
922 Equipment Maintenance By Contract	0	0	630	630	13	-399	244
932 Mgt Prof Support Svcs	0	0	3,421	3,421	68	5,175	8,664
933 Studies, Analysis & Eval	0	0	8,811	8,811	176	9,929	18,916
934 Engineering & Tech Svcs	0	0	3,600	3,600	72	1,689	5,361
957 Other Costs (Land and Structures)	0	0	5,188	5,188	104	-3,208	2,084
989 Other Services	0	0	86	86	2	-55	33
<b>999 Total Other Purchases</b>	<b>0</b>	<b>0</b>	<b>22,605</b>	<b>22,605</b>	<b>452</b>	<b>13,439</b>	<b>36,496</b>
<b>Total</b>	<b>0</b>	<b>0</b>	<b>30,343</b>	<b>30,343</b>	<b>584</b>	<b>17,239</b>	<b>48,166</b>