

Fiscal Year 2022 President's Budget

Space Development Agency



May 2021

**Space Development Agency
Operation and Maintenance, Defense-Wide
Fiscal Year (FY) 2022 President's Budget**

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

	<u>FY 2020 Actuals</u>	<u>Price Change</u>	<u>Program Change</u>	<u>FY 2021 Enacted</u>	<u>Price Change</u>	<u>Program Change</u>	<u>FY 2022 Request</u>
SDA	30,254	574	17,022	47,850	971	5,030	53,851

*FY 2020 includes Division A, Title IX and X of the Consolidated Appropriations Act, 2020 (P.L. 116-93), Division F, Title IV and V from the Further Consolidated Appropriations Act, 2020 (P.L. 116-94) and the Coronavirus Aid, Relief, and Economic Security Act (P.L. 116-136).

*FY 2021 includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260).

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, SDA will help inform the Department of Defense's (DoD's) decision to develop and implement a proliferated architecture enabled by lower-cost, mass-produced spacecraft and routine space access, shift the DoD to a development organization focused on experimentation, prototyping, and accelerated fielding, and change the DoD to a concentrated, decoupled structure to generate speed. 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:

- 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.

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I. Description of Operations Financed: (Cont.)

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. 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, and missile warning ground integration.

In its August 2018 Final Report on Organizational and Management Structure for the National Security Space Components of the DoD, the DoD 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 LEO is essential to developing a new, responsive space architecture, and will be SDA's primary initial focus. SDA will heavily leverage the Defense Advanced Research Projects Agency's (DARPA's) Blackjack program and its plan to demonstrate a 20-satellite constellation, to build this transport layer. SDA will develop an initial wedge of sub-constellations on this transport layer to provide additional capabilities such as advanced missile warning.

SDA ensures the achievement of efficiency and avoidance of redundancy across the DoD's space acquisition enterprise and is responsible for identifying and addressing capability gaps. SDA's FY 2022 top priorities are aligned to the National Defense Strategy priorities through (1) resumption of great power competition and modernization of priorities; (2) lethality through delivery 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).

In accordance with the National Defense Authorization Act (NDAA) for FY 2021, effective on October 1, 2022, the Space Development Agency (SDA) will be an element of the U.S. Space Force (USSF), and report to Assistant Secretary of the Air Force (ASAF) for Space Acquisition and Integration (ASAF/SA&I) with respect to acquisition decisions and directly to the Chief of Space Operations with respect to requirements decisions, personnel decisions, and any other matter not covered by ASAF/SA&I.

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I. Description of Operations Financed: (Cont.)

The FY 2022 Direct War and Enduring Costs accounted for in the base budget are as follows:

- Direct War costs accounted for in the Base Budget: \$0.0 thousand: Direct War costs are those combat or direct combat support costs that will not continue to be expended once combat operations end at major contingency locations.

- Enduring costs accounted for in the Base Budget: \$0 thousand: Enduring Requirements are enduring in theater and in CONUS costs that will likely remain after combat operations cease.

II. Force Structure Summary:

N/A

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III. Financial Summary (\$ in Thousands):

	FY 2020	Budget	FY 2021			Current	FY 2022			
			Actuals	Request	Congressional Action			Enacted	Request	
					Amount					Percent
<u>A. BA Subactivities</u>										
1. Compensation and Benefits	\$1,470	\$10,479	\$0	0.00%	\$10,479	\$10,479	\$13,869			
Labor		\$10,479	\$0	0.00%	\$10,479	\$10,479	\$13,869			
2. Operations	\$28,784	\$37,687	\$-316	-0.84%	\$37,371	\$37,371	\$39,982			
Mission		<u>\$37,687</u>	<u>\$-316</u>	<u>-0.84%</u>	<u>\$37,371</u>	<u>\$37,371</u>	<u>\$39,982</u>			
Total	\$30,254	\$48,166	\$-316	-0.66%	\$47,850	\$47,850	\$53,851			

*FY 2020 includes Division A, Title IX and X of the Consolidated Appropriations Act, 2020 (P.L. 116-93), Division F, Title IV and V from the Further Consolidated Appropriations Act, 2020 (P.L. 116-94) and the Coronavirus Aid, Relief, and Economic Security Act (P.L. 116-136).

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

<u>B. Reconciliation Summary</u>	<u>Change FY 2021/FY 2021</u>	<u>Change FY 2021/FY 2022</u>
BASELINE FUNDING	\$48,166	\$47,850
Congressional Adjustments (Distributed)	0	
Congressional Adjustments (Undistributed)	-316	
Adjustments to Meet Congressional Intent	0	
Congressional Adjustments (General Provisions)	0	
SUBTOTAL APPROPRIATED AMOUNT	47,850	
Fact-of-Life Changes (2021 to 2021 Only)	0	
SUBTOTAL BASELINE FUNDING	47,850	
Supplemental	0	
Reprogrammings	0	
Price Changes		971
Functional Transfers		0
Program Changes		5,030
CURRENT ESTIMATE	47,850	53,851
Less: Wartime Supplemental	0	
NORMALIZED CURRENT ESTIMATE	\$47,850	\$53,851

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

FY 2021 President's Budget Request (Amended, if applicable)	\$48,166
1. Congressional Adjustments	\$-316
a) Distributed Adjustments.....	\$0
b) Undistributed Adjustments	\$-316
1) Excess to Need - Non NIP	\$-316
c) Adjustments to Meet Congressional Intent.....	\$0
d) General Provisions	\$0
FY 2021 Appropriated Amount	\$47,850
2. War-Related and Disaster Supplemental Appropriations	\$0
a) OCO Supplemental Funding	\$0
3. Fact-of-Life Changes.....	\$0
a) Functional Transfers.....	\$0
b) Technical Adjustments	\$0
c) Emergent Requirements.....	\$0
FY 2021 Baseline Funding	\$47,850
4. Reprogrammings (Requiring 1415 Actions).....	\$0

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

a) Increases	\$0
b) Decreases	\$0
Revised FY 2021 Estimate.....	\$47,850
5. Less: Item 2, War-Related and Disaster Supplemental Appropriation and Item 4, Reprogrammings	\$0
a) Less: OCO Supplemental Funding.....	\$0
FY 2021 Normalized Current Estimate	\$47,850
6. Price Change	\$971
7. Functional Transfers	\$0
a) Transfers In	\$0
b) Transfers Out.....	\$0
8. Program Increases.....	\$5,030
a) Annualization of New FY 2021 Program	\$0
b) One-Time FY 2022 Increases	\$0
c) Program Growth in FY 2022.....	\$5,030
1) Compensation and Benefits - Federal Employee Retirement System (FERS) Agency Contribution Rate Assumption	\$120
<p>Increase reflects an adjustment to the regular employee rate from 17.3 percent in FY 2021 to 18.4 percent. The basis for the adjustment is due to provisional rate calculation changes as directed by the Office of Management and Budget (OMB).</p>	

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

(FY 2021 Baseline: \$10,479 thousand; 45 FTEs)

2) Compensation and Benefits - Performance Awards Increase \$94

Increase reflects an adjustment for performance awards spending, which was revised from 1.5 percent to 2.5 percent. This increase is in accordance with guidance issued in the OMB Circular No. A-11, Section 32.1 on Personnel, Compensation, Benefits and Related Costs.

(FY 2021 Baseline: \$10,479 thousand; 45 FTEs)

3) Compensation and Benefits - SDA..... \$2,938

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 2021 Baseline: \$10,479 thousand; 45 FTEs; +15 FTEs)

4) Space Development Agency - Space Architecture \$1,878

The increase supports projected growth in activities to demonstrate and deliver a transport and tracking layer starting in FY 2022 and initiate development of the next tranche of warfighting capabilities provided through the National Defense Space Architecture.

(FY 2021 Baseline: \$37,371 thousand; 0 FTEs; +0 FTEs)

9. Program Decreases \$0

a) Annualization of FY 2021 Program Decreases \$0

b) One-Time FY 2021 Increases \$0

c) Program Decreases in FY 2022 \$0

FY 2022 Budget Request \$53,851

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IV. Performance Criteria and Evaluation Summary:

SDA directly addresses the National Defense Strategy goal of creating “a more lethal, resilient, and rapidly innovating Joint Force” through the delivery of the National Defense Space Architecture (NDSA). To address current near-peer threats, the NDSA will provide a low-latency tactical communication mesh network enabling Combined Joint All-Domain Command & Control (CJADC2), missile tracking, and fire control for time-sensitive targets to deter or defeat adversary actions. The requested funding level for FY 2022 supports SDA's first capability demonstration of Tranche Zero (0) of the NDSA, and the start of development of an initial warfighting capability with regional persistent coverage (Tranche 1 of the NDSA).

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V. Personnel Summary:

	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Change FY 2020/ FY 2021</u>	<u>Change FY 2021/ FY 2022</u>
Active Military End Strength (E/S) (Total)	13	30	40	17	10
Officer	13	30	40	17	10
Civilian End Strength (Total)	7	45	60	38	15
U.S. Direct Hire	7	45	60	38	15
Total Direct Hire	7	45	60	38	15
Active Military Average Strength (A/S) (Total)	20	30	40	10	10
Officer	20	30	40	10	10
Civilian FTEs (Total)	7	45	60	38	15
U.S. Direct Hire	7	45	60	38	15
Total Direct Hire	7	45	60	38	15
Average Annual Civilian Salary (\$ in thousands)	210.0	232.9	231.2	22.9	-1.7
Contractor FTEs (Total)	0	50	60	50	10

Personnel Summary Explanations:

The increase of 38 Full Time Equivalent (FTE) from FY 2020 to FY 2021 and 15 FTEs from FY 2021 to FY 2022 is the result of the support staff needed to standup SDA. This includes 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):

	FY 2020 Program	Change from FY 2020 to FY 2021		FY 2021 Program	Change from FY 2021 to FY 2022		FY 2022 Program
		Price Growth	Program Growth		Price Growth	Program Growth	
101 EXEC, GEN'L & SPEC SCHEDS	1,470	23	8,986	10,479	238	3,152	13,869
0199 TOTAL CIVILIAN PERSONNEL COMPENSATION	1,470	23	8,986	10,479	238	3,152	13,869
308 TRAVEL OF PERSONS	22	0	772	794	15	-284	525
0399 TOTAL TRAVEL	22	0	772	794	15	-284	525
671 DISA DISN SUBSCRIPTION SERVICES (DSS)	3	0	394	397	30	-414	13
0699 TOTAL OTHER FUND PURCHASES	3	0	394	397	30	-414	13
912 RENTAL PAYMENTS TO GSA (SLUC)	0	0	1,184	1,184	22	-1,206	0
914 PURCHASED COMMUNICATIONS (NON-FUND)	354	7	-361	0	0	4,013	4,013
915 RENTS (NON-GSA)	0	0	0	0	0	130	130
920 SUPPLIES & MATERIALS (NON-FUND)	3	0	7	10	0	1,206	1,216
922 EQUIPMENT MAINTENANCE BY CONTRACT	0	0	244	244	5	-249	0
923 FACILITIES SUST, REST, & MOD BY CONTRACT	0	0	0	0	0	150	150
925 EQUIPMENT PURCHASES (NON-FUND)	0	0	0	0	0	2	2
932 MGT PROF SUPPORT SVCS	8,552	171	-59	8,664	165	11,116	19,945
933 STUDIES, ANALYSIS & EVAL	8,644	173	9,783	18,600	353	-9,325	9,628
934 ENGINEERING & TECH SVCS	130	3	5,228	5,361	102	-5,463	0
937 LOCALLY PURCHASED FUEL (NON-FUND)	0	0	0	0	0	37	37
951 OTHER COSTS (SPECIAL PERSONAL SVC PAY)	833	0	-833	0	0	1,830	1,830
957 OTHER COSTS (LAND AND STRUCTURES)	0	0	2,084	2,084	40	-2,124	0
985 RESEARCH & DEVELOPMENT, CONTRACTS	417	0	-417	0	0	0	0
987 OTHER INTRA-GOVT PURCH	948	19	-967	0	0	1,706	1,706
989 OTHER SERVICES	8,878	178	-9,023	33	1	753	787
0999 TOTAL OTHER PURCHASES	28,759	551	6,870	36,180	688	2,576	39,444
9999 GRAND TOTAL	30,254	574	17,022	47,850	971	5,030	53,851

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