# COMMERCIAL SPECTRUM ENHANCEMENT ACT

Annual Progress Report for 2021



# **U.S. DEPARTMENT OF COMMERCE**

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October 2022

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# **Executive Summary**

The National Telecommunications and Information Administration (NTIA) submits this report pursuant to Section 207 of the Commercial Spectrum Enhancement Act (CSEA), Title II of Pub. L. 108-494 (47 U.S.C. 928 note), which provides as follows:

The NTIA shall submit an annual report to the Committees on Appropriations and Energy and Commerce of the House of Representatives, the Committees on Appropriations and Commerce, Science, and Transportation of the Senate, and the Comptroller General on –

- the progress made in adhering to the timelines applicable to relocation from eligible frequencies required under [former] section 118(d)(2)(A) of the National Telecommunications and Information Administration Organization Act [now 47 U.S.C. 928(d)(2)(B)], separately stated on a communication system-by-system basis and on an auction-by-auction basis; and
- (2) with respect to each relocated communication system and auction, a statement of the estimate of relocation costs required under section 113(g)(4) of such Act [47 U.S.C. 923(g)(4)], the actual relocation costs incurred, and the amount of such costs paid from the Spectrum Relocation Fund.

This report covers the period from January 2021 through December 2021 with the funds reported reflecting expenditures for Fiscal Year (FY) 2021. As authorized by the CSEA, the Spectrum Relocation Fund (SRF) provides a centralized and streamlined funding mechanism through which federal agencies can recover the costs associated with relocating their radio communications systems or sharing the reallocated spectrum. This report, based on data the federal agencies submitted to NTIA and the Office of Management and Budget (OMB), describes the progress the federal agencies have made in adhering to spectrum transition timelines. It also details, on a system-by-system basis, the costs estimated, funds transferred, and costs paid from the SRF.

This report is partitioned and provides status on five federal spectrum bands auctioned by the Federal Communications Commission (FCC) for non-federal or shared federal and non-federal use, as summarized below.

Part I: Fifteenth Annual Progress Report on the Relocation of Federal Radio Systems from the 1710-1755 MHz Band. In September 2006, the FCC concluded the first auction of licenses for Advanced Wireless Services (AWS)-1. Twelve federal agencies that received SRF funds have completed their transition of the spectrum; however, the Department of Energy continues to expend funds toward achieving comparable capability. For FY2021, outlays totaled \$5.7 million dollars, bringing the total cumulative outlays to \$1.36 billion.

Part II: Seventh Annual Progress Report on the Transition of Spectrum in the 1695-1710 MHz Band. The AWS-3 auction concluded January 31, 2015. Five federal agencies have completed transition to indefinite sharing with non-federal licenses. For FY2021, outlays for the eligible federal agencies for the 1695-1710 MHz band totaled \$33.7 million, bringing the total cumulative outlays to \$254.3 million.

Part III: Seventh Annual Progress Report on the Transition of Spectrum in the 1755-<u>1780 MHz Band</u>. This band was also auctioned as part of AWS-3. Eight federal agencies have completed their transition efforts and achieved comparable capability. Two agencies are still in the progress of transitioning their spectrum use and a total of nine agencies continue spending funds towards achieving comparable capability. For FY2021, outlays totaled \$440 million, bringing the total cumulative outlays to \$2,270 million. Additionally, during this period, the Department of Justice was approved for an additional \$293.28 million to complete their transition. Full transition from the spectrum for the remaining agencies is projected for 2025.

Part IV: First Annual Progress Report on the Transition of Spectrum in the 3550-3650 <u>MHz Band.</u> Priority Access Licenses were auctioned (3.5 GHz auction) authorizing shared used of federal spectrum as part of the Citizens Broadband Radio Service in 2020. Spending began this reporting period, and outlays for five Department of Defense (DOD) agencies totaled \$18.75 million for FY2021.

Part V: First Annual Progress Report on the Transition of Spectrum in the 3450-3550 <u>MHz Band.</u> While the 3.1-3.45 GHz auction did not commence until October 2021, OMB transferred pre-auction planning funds in the amount of \$67.02 million to five DOD agencies in July 2021. Transition of the spectrum did not begin during this reporting period; however, outlays totaled \$15.34 million during the pre-auction period.

# Introduction

With enactment of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96 (Tax Relief Act or Act), <sup>1</sup> federal agencies are authorized payments for costs stemming from their actions to enable spectrum to be shared or relocated, as well as to recover certain preauction costs. The Act outlines a requirement for certain information to be included in a transition plan which must be approved by a Technical Panel prior to Office of Management and Budget payment, following a required Congressional notification and waiting period. Accordingly, Parts II - V reflect transition costs, which include both relocation and sharing costs, as well as separate timelines associated with transitioning federal spectrum use and expending Spectrum Relocation Fund (SRF) funds. Note that tables with details are not included in annual reports starting the year after a federal agency reports completion of the transition of the spectrum, or completion of the expenditure of funds and achievement of comparable capability. For past activity and details regarding expenditures or spectrum transitions, refer to the prior Annual Progress Reports under the following auctions:

- 1710-1755 MHz Band (Advanced Wireless Services (<u>AWS)-1</u>)
- 1695-1710 MHz and 1755-1780 MHz Bands (<u>AWS-3</u>)

The following is provided to assist with interpretation of the tables provided for the 1695-1710 MHz, 1755-1780 MHz, 3550-3650 MHz, and 3450-3550 MHz bands.

# "Summary of Sharing and Relocation Activities" Tables:

- <u>Estimated Completion of Transition</u>: The month/year when a federal entity estimates it will have completed *the transition of all of its spectrum use in the band* as documented by the "transition timeline" in its transition plan approved by the Technical Panel. This could be achieved by either vacating the auctioned spectrum or implementing an indefinite sharing arrangement enabling non-federal use of the spectrum.
- <u>Transition Status</u>: The overall status of an agency's transition of the spectrum (by relocation or sharing) considering all operations of the agency, e.g., the status is ongoing unless the federal entity has reported completion of the transition of all of its spectrum use. (Transition status is N/A for agencies that do not have assignments in the band.)
- <u>Spending Status</u>: This represents the status of expending SRF funds for an agency based on *spending on all of its systems or programs*. The status is

<sup>&</sup>lt;sup>1</sup> Additional differences may also be due to the implementation of an automated information system, the Spectrum Transition Tool (ST2), for tracking the transition and cost data presented in the tables. The data reported reflects inputs verified as accurate and submitted by agencies into ST2.

ongoing unless the agency has reported completion of spending SRF funds for the band. It is N/A for an agency or system that transitions at zero cost (e.g., compressing operations). Note, agencies can still spend SRF funds after a transition is complete to achieve comparable capability.

# "Status of Spectrum Relocation Funds" Tables

- <u>End Timeline for Spending Funds</u>: The month/year when a federal entity estimates it will have completed its expenditure of SRF funds on a specific system or program as documented in its transition plan approved by the Technical Panel.
- <u>Spending Status</u>: Identifies the status of SRF spending <u>by system or program</u> as either ongoing, completed, or N/A for a system or program that transitions at zero cost.

# "Status of Spectrum Transition" Tables:

- <u>Assignment Transition Completion Date</u>: The month/year when a federal entity estimates it will have completed <u>the transition of its frequency assignments in the band for similar types of systems, represented as the maximum transition timeline for that operation based on the estimates by "system use" as documented in its transition plan approved by the Technical Panel and any timeline changes approved by NTIA in consultation with OMB and FCC changes. System use represents a categorization of frequency assignments, by type of system or operational use, and the status column reflects an aggregation of status of assignments or operations in the band. This could be achieved by either vacating the auctioned spectrum or implementing an indefinite sharing arrangement enabling non-federal use of the spectrum. If the spectrum transition is complete, the completion date is entered.</u>
- <u>Status</u>: Identifies the aggregated status of the transition of the federal entity's frequency assignments for the indicated system use or operation. Status may be ongoing, completed, delayed, or N/A for an agency that does not have assignments in the band. A delay in the transition of any assignment will reflect a delayed status for that type of system use or operation.

# Part I: 1710-1755 MHz Band (AWS-1)

In September 2006, the Federal Communications Commission (FCC) concluded the first auction of licenses for Advanced Wireless Services (AWS-1) in the 1710-1755 MHz band paired with the 2110-2155 MHz band. In August 2008, the FCC held a second auction of licenses that received no winning bids in the first auction. The combined AWS-1 auctions for the 1710-1755 MHz and 2110-2155 MHz bands raised over \$13.7 billion in net winning bids. Auction proceeds attributable to federal frequencies were deposited in the Spectrum Relocation Fund (SRF) in accordance with the CSEA.

In February 2007, the Office of Management and Budget (OMB), in consultation with the National Telecommunications and Information Administration (NTIA), submitted a report to Congress detailing a transfer of \$1.008 billion from the SRF to 12 federal agencies to relocate their radio communications systems from the 1710-1755 MHz band. OMB transferred this amount to the agencies in March 2007. Between 2007 and 2012, OMB, consistent with the provisions of the CSEA, in consultation with NTIA, and after Congressional notification, made several additional transfers from the SRF to agencies to cover additional unanticipated relocation expenses.

All 12 federal agencies that received SRF funds have reported that they have ceased operations of their systems in the 1710-1755 MHz band, where required to do so.<sup>2</sup> To date eleven agencies have completed their relocation efforts and achieved comparable capability by relocating to new frequency assignments or by utilizing alternative technology,<sup>3</sup> while the remaining agency, the Department of Energy (DOE), is delayed beyond its previously planned date for achieving comparable capability. As required by the CSEA, NTIA has notified the FCC of these results. The reasons for the delay include contract close-out issues and impacts due to COVID-19 resulting in staffing shortages for the DOE. The DOE stated it continues to spend SRF funds and now expects to complete the relocation effort and achieve comparable capability in 2023. NTIA will notify the FCC when the DOE has completed the relocation effort and achieved comparable capability.

The total amount transferred from the SRF to the agencies was \$1.55 billion. For the 12-month period ending December 2021, outlays of the eligible federal agencies totaled approximately \$5.7 million, bringing the total cumulative outlays to \$1.36 billion. To date, agencies have

<sup>&</sup>lt;sup>2</sup> The exceptions are specified areas around federal facilities located at Yuma, Arizona and Cherry Point, North Carolina, which are protected indefinitely and for which AWS-1 licensees shall be required to coordinate any operations that could permit mobile, fixed, and portable stations to operate. *See* 47 C.F.R. §27.1134.

<sup>&</sup>lt;sup>3</sup> In addition, bureaus within the DOE (National Nuclear Security Administration (NNSA), Bonneville Power Administration (BPA), and DOE Headquarters) stated that they have completed relocation efforts and achieved comparable capability of their systems. The notification to the FCC will be submitted for each agency once all bureaus within that agency have informed NTIA that they have completed relocation efforts and reached comparable capability.

returned excess relocation funds totaling approximately \$148.6 million, while the remaining agency will continue to expend SRF funds until it has established comparable capability.<sup>4</sup>

The following tables detail the total actual costs incurred (cumulative outlays) on a system-bysystem basis for each department, agency, or bureau within the DOE and Department of Homeland Security (DHS) since they were the only agencies with activity to report during this reporting period.

<sup>&</sup>lt;sup>4</sup> Agencies/bureaus that have returned or plan to return funds to the SRF are: the United States Department of Agriculture, the Department of Defense, the DHS (Customs and Border Protection), the DOE (Bonneville Power Administration) and (National Nuclear Security Administration), the Department of Interior (Bureau of Reclamation and the National Park Service), the Department of Justice (Bureau of Alcohol, Tobacco, Firearms, and Explosives), the Department of Transportation/Federal Aviation Administration, and the Department of the Treasury.

# 1710 – 1755 MHz Band Agency Status of Funds

# **Department of Energy (DOE)** National Nuclear Security Administration (NNSA)

System Number	System Name	Estimated Relocation Timeframe (Months)	Status <sup>1</sup>	Estimated Relocation Cost <sup>2</sup>	Total Transferred From the Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments <sup>3</sup>	Adjusted Total	Cumulative Outlays
1	OST - Remote Keying System, Replacement	24	Completed	\$180,000	\$180,000	$-\$180,000^4$	\$0	\$0
2	SNL - Portable Microwave, System and Laser Tracking Microwave	24	Completed	\$691,000	\$691,000	\$0	\$691,000	\$691,000
3	Pantex Admin System	24	Completed	\$870,000	\$870,000	\$1,500,000	\$2,370,000	\$2,370,000
4a	SNL - Laser Tracking Microwave	24	Completed	\$344,500	\$344,500	\$0	\$344,500	\$344,500
4b	SNL - Telecommand Link	24	Completed	\$384,500	\$384,500	\$0	\$384,500	\$384,500
5	OST - Microwave Link	24	Completed	\$385,000	\$385,000	\$360,000	\$745,000	\$745,000
6	SNL - Remote Control Development Link - Robotics Vehicle	24	Completed	\$240,000	\$240,000	\$0	\$240,000	\$240,000
7	LANL – Robotic Vehicle (Video/Audio)	24	Completed	\$360,000	\$360,000	-\$277,402	\$82,598	\$82,598
8	NSO - YMP Microwave System	24	Completed	\$840,000	\$840,000	-\$763,360	\$76,640	\$76,640
9	NSO - NV Teleoperated System	24	Completed	\$435,000	\$435,000	-\$236,591	\$198,409	\$198,409
10	YMP Seismic Link (Shoshone Mtn and Echo Peak, NV)	24	Completed	\$900,000	\$900,000	\$214,213	\$1,114,213	\$1,114,213
11	NSO - Helicopter Event Video	24	Completed	\$970,000	\$970,000	\$100,000	\$1,070,000	\$1,070,000
12	NSO - Backbone Microwave Link (Nevada Test Site and Angel Peak)	24	Completed	\$770,000	\$770,000	\$98,429	\$868,429	\$868,429
13	NSO - YMP Seismic Link (Yucca Mtn and Sober Peak, NV)	24	Completed	\$830,000	\$830,000	\$650,000	\$1,480,000	\$1,480,000
14	LLNL - Research Microwave between Tracy Airport and LLNL	24	Completed	\$360,000	\$360,000	\$0	\$360,000	\$360,000
15	LLNL - Water System Microwave Link (Livermore to Mocho)	24	Completed	\$890,000	\$890,000	-\$15,289	\$874,711	\$874,711
16	NNSA Inflation Indexed Reserve	24	Completed	\$1,450,000	\$1,450,000	-\$1,450,000	\$0	\$0
			Total	\$10,900,000	\$10,900,000	\$0	\$10,900,000	\$10,622,598 <sup>5</sup>

<sup>1</sup> DOE/NNSA reported it has completed the relocation effort and reached comparable capability.

<sup>2</sup> Pre-relocation estimates as indicated in the February 2007 OMB Report to Congress.

<sup>3</sup> Column denotes agencies have transferred funds between systems due to either higher or lower than estimated costs to relocate and this action does not affect the total amount received from the Spectrum Relocation Fund.

<sup>4</sup>DOE/NNSA indicated the system has been deleted and is no longer operating in the 1710-1755 MHz band. The funds shown have been transferred to System 5.

<sup>5</sup> DOE/NNSA previously reported in error that NNSA had a zero balance. They are now reporting that NNSA has an excess of \$277,402 which will be returned to the SRF. This error is specific to system #7. The Cumulative Outlay for System 7 has not been corrected in this report, so as a result, the correct total Cumulative Outlay is \$10,622,598 rather than \$10,900,000 as reflected.

#### **Bonneville Power Administration (BPA)**

System Number	System Name	Estimated Relocation Timeframe (Months)	Status <sup>1</sup>	Estimated Relocation Cost <sup>2</sup>	Total Transferred From Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments <sup>3</sup>	Adjusted Total	Cumulative Outlays
1	2N	36	Completed	\$4,896,239	\$4,896,239	\$0	\$4,896,239	\$4,252,435
2	4A	48	Completed	\$1,147,111	\$1,147,111	\$0	\$1,147,111	\$820,467
3	4D	60	Completed	\$1,727,645	\$1,727,645	\$500,000	\$2,227,645	\$2,051,667
4	D	48	Completed	\$2,815,160	\$2,815,160	\$0	\$2,815,160	\$2,215,222
5	Н	48	Completed	\$767,501	\$767,501	\$0	\$767,501	\$552,638
6	Ι	72	Completed	\$8,913,238	\$8,913,238	-\$500,000	\$8,413,238	\$7,151,635
7	N	24	Completed	\$8,589,111	\$8,589,111	\$83,506	\$8,672,617	\$8,415,391
8	PND AC00	48	Completed	\$4,712,537	\$4,712,537	\$250,720	\$4,963,257	\$3,004,466
9	PND D00	48	Completed	\$1,975,385	\$1,975,385	-\$250,720	\$1,724,665	\$1,509,882
10	PND XC00	36	Completed	\$5,063,823	\$5,063,823	\$1,440,000	\$6,503,823	\$4,168,537
11	PND YC00	24	Completed	\$6,441,748	\$6,441,748	-\$1,440,000	\$5,001,748	\$4,995,674
12	Т	12	Completed	\$288,198	\$288,198	-\$83,506	\$204,692	\$204,692
13	U	60	Completed	\$915,458	\$915,458	-\$10,000	\$905,458	\$606,087
14	USA <sup>4</sup>	72	Completed	\$374,245	\$374,245	\$10,000	\$384,245	\$388,721
			Total	\$48,627,399	\$48,627,399	\$0	\$48,627,399	\$40,337,514

<sup>1</sup> DOE/BPA reported it has completed the relocation effort and reached comparable capability.

<sup>2</sup> Pre-relocation estimates as indicated in the February 2007 Office of Management and Budget Report to Congress.

<sup>3</sup> Column denotes agencies have transferred funds between systems due to either higher or lower than estimated costs to relocate and this action does not affect the total amount received from the Spectrum Relocation Fund.

<sup>4</sup> This system consists of radios that will be used across the remaining 13 systems during catastrophic emergency conditions where timely restoration of mission critical telecommunication traffic is of the utmost importance. The estimated relocation timeframe is not expected to affect commercial access to the band, since this system operates in a backup capacity only.

#### Southwestern Power Administration (SWPA)

	System Number	System Name	Estimated Relocation Timeframe (Months)	Status <sup>1</sup>	Estimated Relocation Cost <sup>2</sup>	Total Transferred From Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments	Adjusted Total	Cumulative Outlays
	1	Southwestern <sup>3</sup>	24	On Time	\$8,091,360	\$42,821,360 <sup>4,5</sup>	\$0	\$42,821,360	\$35,533,307
_				Total	\$8,091,360	\$42,821,3604,5	\$0	\$42,821,360	\$35,533,307

<sup>1</sup> DOE/SWPA indicated this system has been relocated from the 1710-1755 MHz band, although funds may continue to be used to implement the transition.

<sup>2</sup> Pre-relocation estimates as indicated in the February 2007 Office of Management and Budget Report to Congress.

<sup>3</sup> The March 2008 First Annual Progress Report showed an additional system AD (Corporate Overhead and Reserve). This is now combined with System 1 (Southwestern) and the total amount paid from the Spectrum Relocation Fund (SRF) remains the same.

<sup>4</sup> As indicated in the May 12, 2009 Congressional Notification from OMB, a subsequent transfer of \$17,730,000 from the SRF was made to DOE/SWPA in accordance with the provisions of the Commercial Spectrum Enhancement Act (CSEA).

<sup>5</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$17,000,000 from the SRF to DOE/SWPA in accordance with the provisions of the CSEA.

#### Western Area Power Administration (WAPA)

System Number	System Name	Estimated Relocation Timeframe (Months)	Status <sup>1</sup>	Estimated Relocation Cost <sup>2</sup>	Total Transferred From Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments <sup>3</sup>	Adjusted Total	Cumulative Outlays
1	Sierra-Nevada Region (SNR)	30	On Time	\$9,846,000	\$9,846,000	\$13,148,453	\$22,994,453	\$22, 985,197
2	Rocky Mountain Region (RMR)	28	On Time	\$5,971,200	\$5,971,200	\$1,511,875	\$7,483,075,	\$7,411,775
3	Desert Southwest Region (DSW)	30	On Time	\$7,320,000	\$7,320,000	\$4,767,510	\$12,087,510	\$11,913,849
4	Upper Great Plains - Montana (UGP-PT)	364	On Time	\$22,275,000	\$22,275,000	\$1,751	\$22,276,751	\$22,275,451
5	Upper Great Plains - North Dakota (UGP-ND)	364	On Time	\$21,467,000	\$21,467,000	-\$5,949,443	\$15,517,557	\$15,517,557
6	Upper Great Plains - South Dakota (UGP-SD)	364	On Time	\$26,688,000	\$26,688,000	-\$16,072,522	\$10,615,478	\$10,616,778
$AD^4$	Corporate Overhead and Reserve	N/A	On Time	\$14,635,000	\$14,635,000	\$2,592,376	\$17,227,376	\$0
			Total	\$108,202,200	\$108,202,200	\$0	\$108,202,200	\$90,720,607

<sup>1</sup> DOE/WAPA indicated these systems have been relocated from the 1710-1755 MHz band, although funds may continue to be used to implement the transition.

<sup>2</sup> Pre-relocation estimates as indicated in the February 2007 Office of Management and Budget Report to Congress.

<sup>3</sup> Agencies indicate they are transferring funds between systems due to either higher or lower than estimated costs to relocate and this action does not affect the total amount received from the Spectrum Relocation Fund.

<sup>4</sup> DOE/WAPA indicated the System AD is not a radio system but rather an administrative designator to capture the overhead expenditures associated with all systems and funds kept in reserve for inflation, collocation coordination, and planning. Actual costs and associated funding for overhead are distributed out to the system at the end of each fiscal year.

### **DOE Headquarters**

System Number	System Name	Estimated Relocation Timeframe (Months)	Status (On Time)	Estimated Relocation Cost <sup>1</sup>	Total Transferred From Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments	Adjusted Total	Cumulative Outlays
N/A	DOE Headquarters	72	Completed <sup>2</sup>	\$1,000,000	\$1,650,000 <sup>3</sup>	\$0	\$1,650,000	\$1,650,000
			Total	\$1,000,000	\$1,650,000 <sup>2</sup>	\$0	\$1,650,000	\$1,650,000

<sup>1</sup> Pre-relocation estimates as indicated in the February 2007 Office of Management and Budget Report (OMB) Report to Congress.

<sup>2</sup> DOE reported DOE Headquarters has completed the relocation effort and reached comparable capability.

<sup>3</sup> As indicated in the May 12, 2009 OMB Congressional Notification, OMB made a subsequent transfer of \$650,000 from the Spectrum Relocation Fund to DOE Headquarters in accordance with the provisions of the Commercial Spectrum Enhancement Act.

# **Department of Homeland Security (DHS)**

#### **Customs and Border Protection (CBP)**

System Number	System Name <sup>1</sup>	Estimated Relocation Timeframe (Months)	Status <sup>2</sup>	Estimated Relocation Cost <sup>3</sup>	Total Transferred From Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments <sup>4</sup>	Adjusted Total	Cumulative Outlays
1	El Centro	12	On Time	\$9,913,332	\$11,714,400 <sup>5</sup>	-\$91,754	\$11,622,646	\$ 6,324,054
2	El Paso	12	On Time	\$21,065,830	\$24,893,100 <sup>6</sup>	-\$7,929,930	\$16,963,170	\$ 8,205,548
3	Yuma	12	On Time	\$9,913,332	\$11,714,400 <sup>7</sup>	-\$2,299,119	\$9,415,281	\$ 5,927,938
4	Rio Grande Valley	12	On Time	\$9,913,332	\$11,714,400 <sup>8</sup>	\$1,088,743	\$12,803,143	\$ 4,755,008
5	Laredo	12	On Time	\$9,913,332	\$11,714,400 <sup>9</sup>	\$2,084,743	\$13,799,143	\$ 7,765,996
6	Marfa	12	On Time	\$8,674,166	\$10,250,100 <sup>10</sup>	\$1,502,376	\$11,752,476	\$ 5,744,260
7	Tucson	12	On Time	\$4,956,666	\$5,857,20011	\$5,644,942	\$11,502,142	\$12,044,789
8	Livermore	12	On Time	\$0	\$0	\$0	\$0	\$0
9	San Diego	12	On Time	\$0	\$0	\$0	\$0	\$0
10	Del Rio	12	On Time	\$0	\$0	\$0	\$0	\$0
			Total	\$74,349,990	\$87,858,000	\$0	\$87,858,000	\$50,767,592

<sup>1</sup> The February 2007 Office of Management and Budget (OMB) Report to Congress lists DHS/CBP as having 60 systems. The correct number should be a total of 10 systems comprised of 60 point-topoint links. Fixed microwave systems are unique to the operational areas defined by the Office of Border Patrol sector areas of responsibility. The number of relocating frequency assignments remains constant. This has no impact on the total resources required to vacate the band.

<sup>2</sup> DHS/CBP indicated these systems have been relocated from the 1710-1755 MHz band by implementing an interim solution; remaining funds will be used to implement a final long-term solution. DHS/CBP reported CBP has completed the relocation effort and reached comparable capability.

<sup>3</sup> Pre-relocation estimates as indicated in the February 2007 OMB Report to Congress.

<sup>4</sup> Column denotes agencies have transferred funds between systems due to either higher or lower than estimated costs to relocate and this action does not affect the total amount received from the Spectrum Relocation Fund (SRF).

<sup>5</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$1,801,068 from the SRF to DHS/CBP in accordance with the provisions of the Commercial Spectrum Enhancement Act (CSEA).

<sup>6</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$3,827,269 from the SRF to DHS/CBP in accordance with the provisions of the CSEA.

<sup>7</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$1,801,068 from the SRF to DHS/CBP in accordance with the provisions of the CSEA.

<sup>8</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$1,801,068 from the SRF to DHS/CBP in accordance with the provisions of the CSEA.

9 As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$1,801,068 from the SRF to DHS/CBP in accordance with the provisions of the CSEA.

<sup>10</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$1,575,934 from the SRF to DHS/CBP in accordance with the provisions of the CSEA.

<sup>11</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$900,534 from the SRF to DHS/CBP in accordance with the provisions of the CSEA.

#### **Immigration and Customs Enforcement (ICE)**

System Number	System Name <sup>1</sup>	Estimated Relocation Timeframe (Months)	Status <sup>2</sup>	Estimated Relocation Cost <sup>3</sup>	Total Transferred From Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments	Adjusted Total	Cumulative Outlays
1	Components for Portable Systems	12	On Time	\$3,559,281	\$160,116,206 <sup>4,5</sup>	\$0	\$160,116,206	\$160,116,206
			Total	\$3,559,281	\$160,116,206 <sup>4,5</sup>	\$0	\$160,116,206	\$160,116,206

<sup>1</sup> The February 2007 Office of Management and Budget (OMB) Report to Congress lists ICE as having four systems. The correct number should be one. DHS/ICE did not explain the difference in reporting systems. However, in other cases, agencies attributed the difference to a correction based on their understanding of the definition of a "system."

<sup>2</sup> DHS/ICE indicated this system has been relocated from the 1710-1755 MHz band, although funds may continue to be used to implement a final long-term solution. DHS/ICE reported ICE has completed the relocation effort and reached comparable capability.

<sup>3</sup> Pre-relocation estimates as indicated in the February 2007 OMB Report to Congress.

<sup>4</sup> As indicated in the November 16, 2007 OMB Congressional Notification, OMB made a subsequent transfer of \$35,570,000 from the Spectrum Relocation Funds (SRF) to DHS/ICE in accordance with the provisions of the Commercial Spectrum Enhancement Act (CSEA).

<sup>5</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$120,986,925 from the SRF to DHS/ICE in accordance with the provisions of the CSEA.

### **United States Secret Service (USSS)**

System Number	System Name	Estimated Relocation Timeframe (Months)	Status <sup>1</sup>	Estimated Relocation Cost <sup>2</sup>	Total Transferred From Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments	Adjusted Total	Cumulative Outlays
1	Fixed (Transportable)	12 <sup>3</sup>	Completed	\$105,800	\$15,179,062 <sup>4</sup>	\$0	\$15,179,062	\$15,179,062
			Total	\$105,800	\$15,179,062 <sup>4</sup>	\$0	\$15,179,062	\$15,179,062

<sup>1</sup> DHS reported USSS has completed the relocation effort and reached comparable capability.

<sup>2</sup> Pre-relocation estimates as indicated in the February 2007 Office of Management and Budget (OMB) Report to Congress.

<sup>3</sup> DHS/USSS indicated this system has been relocated from the 1710-1755 MHz band by implementing an interim solution; remaining funds will be used to implement a final long-term solution. <sup>4</sup> As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$15,073,262 from the Spectrum Relocation Fund to DHS/USSS in accordance with the provisions of the Commercial Spectrum Enhancement Act.

### **DHS-wide Support (Office of the Chief Information Officer (CIO))**

System Number	System Name	Estimated Relocation Timeframe (Months)	Status <sup>1</sup>	Estimated Relocation Cost <sup>2</sup>	Total Transferred From Spectrum Relocation Fund (SRF)	Intra-Agency Adjustments	Adjusted Total	Cumulative Outlays
NA	DHS Wide Support	12	On Time	\$11,979,761	\$19,086,572 <sup>3</sup>	\$0	\$19,086,572	\$19,086,572
			Total	\$11,979,761	\$19,086,572 <sup>3</sup>	\$0	\$19,086,572	\$19,086,572

<sup>1</sup> DHS-wide Support indicated this system has been relocated from the 1710-1755 MHz band, although funds may continue to be used to implement a final long-term solution.

<sup>2</sup> Pre-relocation estimates as indicated in the February 2007 Office of Management and Budget (OMB) Report to Congress. DHS/CIO reported CIO has completed the relocation effort and reached comparable capability.

<sup>3</sup>As indicated in the April 2, 2012 OMB Congressional Notification, OMB made a subsequent transfer of \$7,106,811 from the Spectrum Relocation Fund to DHS/CIO in accordance with the provisions of the Commercial Spectrum Enhancement Act.

# Part II: 1695-1710 MHz Band (AWS-3)

On March 20, 2013, the FCC announced its plan to commence an auction of the 1695-1710 MHz and 1755-1780 MHz frequency bands, which were allocated for federal use, and the 2155-2180 MHz band, which was allocated for non-federal use. These frequencies would be designated as the AWS-3 bands.

On May 13, 2014, NTIA sent a letter to the FCC on behalf of eligible federal agencies, providing notification of the initial estimated relocation and sharing costs and the estimated transition and spending timelines. The total estimated relocation and sharing costs were \$527.1 million.

On September 8, 2014, OMB, in consultation with NTIA, submitted a report to Congress detailing its intent to transfer pre-auction planning funds in the amount of \$479,000 to two federal agencies. The AWS-3 auction commenced on November 13, 2014 and concluded on January 30, 2015, with \$41.3 billion in net winning bids and a total of 31 bidders winning 1,611 licensees. On June 23, 2015, OMB submitted a second report to Congress detailing its intent to transfer \$526.56 million to five federal agencies.

All five agencies (the Department of Commerce (DOC)/National Oceanic and Atmospheric Administration (NOAA), the Department of Defense (DOD)/United States Air Force (Air Force)/Department of the Army (Army)/Department of the Navy (DON), and the Department of Interior (DOI)) reported they have transitioned the use of the spectrum but will continue to use funds from the SRF until achieving comparable capability. NTIA will notify the FCC when each of the agencies has completed its transition effort and achieved comparable capability. For the period ending September 2021, outlays for the eligible federal agencies totaled \$33.7 million. This brings the total cumulative outlays to \$254.3 million.

The following are the overall summary and agency status of funds tables for the 1695-1710 MHz band. As all agencies have completed their spectrum transitions there are no status of spectrum transition tables.

Department/Agency	Bureau	Estimated Completion of Transition Timeline (Month/Year)	Transition Status	Total Original Estimated Transition Cost	Total Adjusted Estimated Transition Cost	Total Transferred from SRF	Cumulative Outlays	Spending Status
DOC	NOAA	4/2018	Complete	\$263,303,000	\$263,303,000	\$263,303,000	\$173,093,700	Ongoing
DOD	Air Force	4/2018	Complete	\$88,976,400	\$35,184,300	\$20,741,600	\$5,262,100	Ongoing
DOD	Army	4/2018	Complete	\$64,121,000	\$64,121,000	\$37,765,800	\$37,156,200	Ongoing
DOD	DON	4/2018	Complete	\$76,344,500	\$53,148,000	\$31,638,600	\$7,281,500	Ongoing
DOD	Subtotal			\$229,441,900	\$152,453,300	\$90,146,000	\$49,699,800	
DOI	DOI	4/2018	Complete	\$34,325,000	\$34,325,000	\$34,325,000	\$31,547,500	Ongoing
Total				\$527,069,900	\$450,081,300	\$387,774,000	\$254,341,000	

# 1695-1710 MHz Band Agency Status of Funds

# **Department of Commerce**

# National Oceanic and Atmospheric Administration (NOAA)

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
Barrigada GU RCVR Site	\$15,047,000	\$15,047,000	\$0	\$15,047,000	\$2,896,000	\$0	\$0	\$2,896,000	3/30/2024	On Time
BARROW POES RCVR	\$7,194,000	\$7,194,000	\$0	\$7,194,000	\$2,923,000	\$0	\$0	\$2,923,000	3/30/2024	On Time
Boulder CO RCVR Site	\$6,566,000	\$6,566,000	\$0	\$6,566,000	\$5,403,000	\$0	\$0	\$5,403,000	3/30/2024	On Time
Coordination Portal	\$6,600,000	\$6,600,000	\$0	\$6,600,000	\$1,166,500	\$729,900	\$7,163,400	\$436,600	3/30/2023	On Time
Elmendorf AFB-Anchorage POES RCVRS	\$11,464,000	\$11,464,000	\$0	\$11,464,000	\$2,913,000	\$0	\$0	\$2,913,000	3/30/2024	On Time
FAIRBANKS POES RCVR	\$12,918,000	\$12,918,000	\$0	\$12,918,000	\$4,029,000	\$0	\$0	\$4,029,000	3/30/2024	On Time
Fairmont WV RCVR Site	\$6,296,000	\$6,296,000	\$0	\$6,296,000	\$2,822,000	\$0	\$0	\$2,822,000	3/30/2024	On Time
FORD ISLAND POES RCVR	\$7,683,000	\$7,683,000	\$0	\$7,683,000	\$2,866,000	\$0	\$0	\$2,866,000	3/30/2024	On Time
GILMORE CREEK POES RCVR	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
GOES-R Redesign	\$3,690,000	\$3,690,000	\$0	\$3,690,000	\$0	\$0	\$3,690,000	\$0	7/30/2015	Complete
GREENBELT GOES RCVRS	\$3,423,000	\$3,423,000	\$0	\$3,423,000	\$2,845,000	\$0	\$0	\$2,845,000	3/30/2024	On Time
Guaynabo PR RCVR Site	\$5,202,000	\$5,202,000	\$0	\$5,202,000	\$2,851,000	\$0	\$0	\$2,851,000	3/30/2024	On Time
Hub (NSOF)	\$34,128,000	\$34,128,000	\$0	\$34,128,000	\$11,709,000	\$6,090,000	\$6,090,000	\$5,619,000	3/30/2024	On Time
KANSAS CITY POES RCVR	\$3,501,000	\$3,501,000	\$0	\$3,501,000	\$2,822,000	\$0	\$0	\$2,822,000	3/30/2024	On Time
MIAMI AOML POES RCVR	\$3,253,000	\$3,253,000	\$0	\$3,253,000	\$3,131,000	\$0	\$0	\$3,131,000	3/30/2024	On Time
MIAMI NHC POES RCVR	\$3,386,000	\$3,386,000	\$0	\$3,386,000	\$3,126,000	\$0	\$0	\$3,126,000	3/30/2024	On Time
MONTEREY POES RCVR	\$3,520,000	\$3,520,000	\$0	\$3,520,000	\$2,827,000	\$0	\$0	\$2,827,000	3/30/2024	On Time
Norman OK RCVR Site	\$3,482,000	\$3,482,000	\$0	\$3,482,000	\$2,821,000	\$0	\$0	\$2,821,000	3/30/2024	On Time
Pre-Acquisition/GCs & Fees	\$5,537,000	\$5,537,000	\$0	\$5,537,000	\$2,945,100	\$0	\$99,635,900	\$2,945,100	3/30/2024	On Time
Radiosonde Relocation	\$80,139,000	\$80,139,000	\$0	\$80,139,000	\$41,266,400	\$12,551,800	\$50,424,400	\$28,714,600	3/30/2024	On Time
STENNIS SPACE CENTER POES RCVR	\$4,867,000	\$4,867,000	\$0	\$4,867,000	\$2,000	\$0	\$0	\$2,000	3/30/2024	On Time
SUITLAND POES RCVRS	\$15,056,000	\$15,056,000	\$0	\$15,056,000	\$7,914,000	\$0	\$0	\$7,914,000	3/30/2024	On Time
WALLOPS ISLAND RCVRS (POES/GOES)	\$20,351,000	\$20,351,000	\$0	\$20,351,000	\$6,393,000	\$6,090,000	\$6,090,000	\$303,000	3/30/2024	On Time
Total	\$263,303,000	\$263,303,000	\$0	\$263,303,000	\$115,671,000	\$25,461,700	\$173,093,700	\$90,209,300		

# **Department of Defense (DOD)**

# Air Force

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
1695-1710 MHz Portal (ITS)	\$2,220,000	\$2,220,000	\$265,200	\$1,159,300	\$636,000	\$120,000	\$578,100	\$516,000	8/14/2025	On Time
AF Implementation and Oversight	\$1,500,000	\$1,500,000	\$0	\$833,700	\$740,800	\$0	\$0	\$740,800	8/14/2025	On Time
AF METSAT 1	\$5,434,000	\$5,434,000	\$610,800	\$2,990,600	\$2,062,600	\$206,000	\$1,128,600	\$1,856,600	8/14/2025	On Time
AF METSAT 2	\$13,691,400	\$6,700,000	\$541,700	\$4,533,500	\$3,176,600	\$120,000	\$914,400	\$3,056,600	8/14/2025	On Time
AF METSAT 3	\$18,423,000	\$6,700,000	\$541,700	\$4,533,500	\$3,504,000	\$120,000	\$914,400	\$3,384,000	8/14/2025	On Time
AF METSAT 4	\$27,900,700	\$6,917,800	\$553,600	\$4,703,300	\$3,175,600	\$120,000	\$946,700	\$3,055,600	8/14/2025	On Time
AF METSAT Pre-Auction	\$100,000	\$100,000	\$0	\$71,000	\$0	\$0	\$0	\$0	9/14/2015	Complete
Monitoring Hub	\$19,707,300	\$5,612,500	\$511,300	\$3,840,600	\$2,989,900	\$120,000	\$779,900	\$2,869,900	8/14/2025	On Time
Sequestration	\$0	\$0	(\$782,100)	(\$1,923,900)	\$0	\$0	\$0	\$0		N/A
Total	\$88,976,400	\$35,184,300	\$2,242,200	\$20,741,600	\$16,285,500	\$806,000	\$5,262,100	\$15,479,500		

# Army

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
1695-1710 MHz Army deployment related costs	\$8,560,000	\$0	\$0	\$2,143,100	\$0	\$0	\$2,041,700	\$0		N/A
1695-1710 MHz Portal (ITS)	\$2,220,000	\$2,220,000	\$52,200	\$664,900	\$59,400	\$52,200	\$326,000	\$7,200	8/14/2025	On Time
AR-12 (Direct Readout Ground Station Hardening)		\$18,496,000	\$1,050,000	\$8,193,600	\$1,051,100	\$1,050,000	\$8,192,500	\$1,100	8/14/2025	On Time
AR-13 (Fixed/Transportable Monitoring Systems)		\$43,155,000	\$5,144,000	\$15,232,000	\$5,144,400	\$5,144,000	\$14,770,800	\$400	8/14/2025	On Time
Cincinnati, OH - GOES RCVR	\$5,434,000	\$0	\$0	\$1,206,800	\$0	\$0	\$1,105,300	\$0		N/A
Columbus Lake, MS - GOES RCVR	\$5,434,000	\$0	\$0	\$1,206,800	\$0	\$0	\$1,105,300	\$0		N/A
Management, Oversite, Engineering Support (Army Spectrum Mgt Office)	\$250,000	\$250,000	\$0	\$900,000	\$425,000	\$0	\$300,000	\$425,000	8/14/2025	On Time
Monitoring System - Hub	\$13,138,200	\$0	\$0	\$3,500,500	\$0	\$0	\$3,398,700	\$0		N/A
Omaha, NE - GOES RCVR	\$5,360,400	\$0	\$0	\$1,191,300	\$0	\$0	\$1,089,800	\$0		N/A
Rock Island, IL - GOES RCVR	\$7,201,400	\$0	\$0	\$1,566,500	\$0	\$0	\$1,465,000	\$0		N/A
Sacramento, CA - GOES RCVR	\$5,655,000	\$0	\$0	\$1,252,000	\$0	\$0	\$1,150,500	\$0		N/A
Sequestration	\$0	\$0	\$0	(\$1,705,300)	\$0	\$0	\$0	\$0		N/A
St Louis, MO - GOES RCVR	\$5,434,000	\$0	\$0	\$1,206,800	\$0	\$0	\$1,105,300	\$0		N/A
Vicksburg, MS - GOES RCVR	\$5,434,000	\$0	\$0	\$1,206,800	\$0	\$0	\$1,105,300	\$0		N/A
Total	\$64,121,000	\$64,121,000	\$6,246,200	\$37,765,800	\$6,679,900	\$6,246,200	\$37,156,200	\$433,700		

# Department of the Navy (DON) <u>STATUS OF SPECTRUM RELOCATION FUNDS</u>

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
1695-1710 MHz Portal (ITS)	\$2,220,000	\$2,220,000	\$85,000	\$638,200	\$91,100	\$0	\$331,700	\$91,100	8/14/2025	On Time
1695-1710 MHz Portal (Navy)	\$3,167,000	\$16,456,000	\$2,410,000	\$10,029,900	\$6,798,100	\$571,600	\$4,293,400	\$6,226,500	8/14/2025	On Time
DoN HQ Transition Process Management	\$3,136,000	\$3,136,000	\$128,000	\$2,801,800	\$153,800	\$101,000	\$2,184,400	\$52,800	8/14/2025	On Time
METMF MetSat RCVR (USMC METOC-3)		\$25,347,000	\$2,764,700	\$13,743,900	\$13,322,800	\$0	\$419,000	\$13,322,800	8/14/2025	On Time
Monitoring - Hub	\$19,707,300	\$0	\$0	\$841,000	\$500	\$0	\$0	\$500		N/A
Monterey MetSat RCVR (Navy METOC-3)	\$9,269,900	\$0	\$0	\$674,900	\$100	\$0	\$0	\$100		N/A
Norfolk MetSat RCVR (Navy METOC-4)		\$2,980,000	\$1,050,300	\$2,345,800	\$2,345,800	\$0	\$0	\$2,345,800	8/14/2025	On Time
Pearl Harbor MetSat RCVR (Navy METOC-1)	\$18,706,400	\$3,009,000	\$1,065,900	\$2,561,700	\$2,316,800	\$0	\$53,000	\$2,316,800	8/14/2025	On Time
Sequestration		\$0	(\$4,100)	(\$4,703,300)	\$0	\$0	\$0	\$0		N/A
Stennis Space Center MetSat RCVR (Navy METOC-2)	\$9,269,900	\$0	\$0	\$1,674,900	\$500	\$0	\$0	\$500		N/A
Test & Measurement System	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Twenty-Nine Palms MetSat RCVR (USMC METOC-2)	\$5,434,000	\$0	\$0	\$514,900	\$100	\$0	\$0	\$100		N/A
Yuma MetSat RCVR (USMC METOC-1)	\$5,434,000	\$0	\$0	\$514,900	\$100	\$0	\$0	\$100		N/A
Total	\$76,344,500	\$53,148,000	\$7,499,800	\$31,638,600	\$25,029,700	\$672,600	\$7,281,500	\$24,357,100		

# **Department of Interior (DOI)** STATUS OF SPECTRUM RELOCATION FUNDS

STATUS OF SPECIRUM			(17) M	1		~ .			1	
System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
Boise, ID - GOES (RRC BORPNRHA)	\$5,380,000	\$5,380,000	\$0	\$5,380,000	\$846,500	\$120,900	\$8,475,000	\$725,600	3/23/2023	On Time
Boise, ID - GOES (RRC NFIC)	\$5,380,000	\$5,380,000	\$0	\$5,380,000	\$801,200	\$120,900	\$7,229,300	\$680,300	3/23/2023	On Time
Guaynabo, PR - GOES (RRC CWSC)	\$8,189,000	\$8,189,000	\$0	\$8,189,000	\$0	\$0	\$27,500	\$0	12/23/2021	On Time
Knoxville, TN - GOES (RRC TVARFC)	\$5,332,000	\$5,332,000	\$0	\$5,332,000	\$766,800	\$120,900	\$7,423,800	\$645,900	3/23/2023	On Time
Sioux Falls, SD - GOES (RRC EDDN-1)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Sioux Falls, SD - GOES (RRC EDDN-2)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Sioux Falls, SD - POES (RRC EROSLRPS)	\$10,044,000	\$10,044,000	\$0	\$10,044,000	\$846,600	\$120,900	\$8,391,900	\$725,700	3/23/2023	On Time
Total	\$34,325,000	\$34,325,000	\$0	\$34,325,000	\$3,261,100	\$483,600	\$31,547,500	\$2,777,500		

# Part III: 1755 – 1780 MHz Band (AWS-3)

On May 13, 2014, NTIA sent a letter to the FCC on behalf of eligible federal agencies, providing notification of the initial estimated relocation and sharing costs and the estimated transition timelines for the 1695-1710 MHz and the 1755-1780 MHz bands. The total estimated relocation and sharing costs for the 1755-1780 MHz band were \$4.576 billion.

On September 8, 2014, OMB, in consultation with NTIA, submitted a report to Congress detailing its intent to transfer pre-auction planning funds in the amount of \$69.386 million to four federal agencies. The AWS-3 auction commenced on November 13, 2014 and concluded on January 30, 2015, with \$41.3 billion in net winning bids and a total of 31 bidders winning 1,611 licensees. On June 23, 2015, OMB submitted a second report to Congress detailing its intent to transfer \$4.503 billion to 12 federal agencies.

Agencies are expected to adhere to their approved transition plans. Required updates in costs or timelines are subject to OMB and/or NTIA approval. During this reporting period, OMB approved additional SRF expenditures to cover relocation or sharing expenses beyond the original approved costs for systems in the 1755-1780 MHz band. Specifically, the DOJ was approved for an additional \$293.28 million.

Eight agencies (the United States Capitol Police (USCP), the DOC/NOAA, the Department of Housing and Urban Development (HUD), the Department of Transportation/Federal Aviation Administration (FAA), the National Aeronautics and Space Administration (NASA), the Department of the Treasury (Treasury), the United States Agency for International Development (USAID), and the Department of Veterans Affairs (VA)) completed their relocation efforts and achieved comparable capability. As required by the CSEA, NTIA has notified the FCC of these results. The DOE/ Bonneville Power Administration (BPA), the DHS, the Department of Justice (DOJ), the DOI/National Park Service (NPS), and the DOI/US Geological Survey (USGS) reported that they have transitioned the use of the spectrum but will continue to use funds from the SRF until achieving comparable capability. NTIA will notify the FCC when each of the agencies has completed its transition effort and achieved comparable capability. Full transition from the spectrum for the remaining agencies is projected for 2025. For the period ending September 2021, outlays for the eligible federal agencies totaled \$440 million. This brings the total cumulative outlays to \$2,270 million.

The following are the overall summary, agency status of funds, and agency status of spectrum transition tables for the 1755-1780 MHz band.

# 1755-1780 MHz Band Summary of Sharing and Relocation Activities

Department/Agency	Bureau	Estimated Completion of Transition Timeline (Month/Year)	Transition Status	Total Original Estimated Transition Cost	Total Adjusted Estimated Transition Cost	Total Transferred from SRF	Cumulative Outlays	Spending Status
DHS	DHS	1/2018	Complete	\$490,145,000	\$490,145,000	\$489,287,000	\$105,255,500	Ongoing
DOC	NOAA	5/2016	Complete	\$350,000	\$350,000	\$0	\$0	Complete
DOD	Air Force	1/2025	Ongoing	\$565,776,400	\$568,381,400	\$354,052,700	\$210,355,400	Ongoing
DOD	Army	4/2020	Complete	\$709,821,000	\$709,821,000	\$624,910,600	\$438,261,300	Ongoing
DOD	Defense Spectrum Organization (DSO)		N/A	\$247,000,000	\$247,000,000	\$178,488,500	\$159,258,900	Ongoing
DOD	DON	10/2023	Ongoing	\$1,396,961,000	\$1,660,424,900	\$1,132,489,400	\$717,991,100	Ongoing
DOD	Subtotal			\$2,919,558,400	\$3,185,627,300	\$2,289,941,200	\$1,525,866,700	
DOE	BPA	7/2017	Complete	\$6,800,000	\$6,800,000	\$6,800,000	\$4,716,300	Ongoing
DOI	NPS	1/2017	Complete	\$8,946,000	\$8,946,000	\$8,946,000	\$7,961,400	Ongoing
DOI	USGS	1/2018	Complete	\$35,680,000	\$35,680,000	\$35,680,000	\$14,087,500	Ongoing
DOI	Subtotal			\$44,626,000	\$44,626,000	\$44,626,000	\$22,048,900	
DOJ	DOJ	7/2018	Complete	\$1,104,480,000	\$1,397,605,900	\$1,104,330,000	\$602,364,900	Ongoing
DOT	FAA	1/2016	Complete	\$433,000	\$433,000	\$270,900	\$270,900	Complete
HUD	HUD	2/2015	Complete	\$24,000	\$24,000	\$24,000	\$24,000	Complete
NASA	NASA	10/2016	Complete	\$1,537,000	\$1,537,000	\$1,537,000	\$1,537,000	Complete
TREAS	Treasury	1/2016	Complete	\$7,802,000	\$7,802,000	\$7,801,000	\$7,800,800	Complete
USAID	USAID	1/2015	Complete	\$150,000	\$150,000	\$104,100	\$104,100	Complete
USCP	USCP	1/2016	Complete	\$0	\$0	\$0	\$0	Complete
VA	VA	4/2016	Complete	\$275,000	\$275,000	\$275,000	\$275,000	Complete
Total				\$4,576,180,400	\$5,135,375,200	\$3,944,996,200	\$2,269,983,700	

# 1755-1780 MHz Band Agency Status of Funds and Spectrum Transition

# DHS

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
Brownsville Station	\$5,410,000	\$5,410,000	\$0	\$5,410,000	\$1,127,200	\$1,127,200	\$5,410,000	\$0	12/24/2027	On Time
CBP Microwave	\$4,269,000	\$4,269,000	\$0	\$4,269,000	\$1,349,400	\$1,258,100	\$4,177,700	\$91,300	12/24/2027	On Time
HQ Project Management	\$26,275,000	\$26,275,000	\$0	\$25,417,000	\$4,504,800	\$0	\$20,912,200	\$4,504,800	12/24/2027	On Time
Video 1	\$266,243,000	\$266,243,000	\$0	\$266,243,000	\$234,318,500	\$8,090,000	\$40,014,500	\$226,228,500	12/24/2027	On Time
Video 2	\$178,152,000	\$178,152,000	\$0	\$178,152,000	\$155,343,500	\$8,449,800	\$31,258,300	\$146,893,700	12/24/2027	On Time
Video 3	\$3,576,000	\$3,576,000	\$0	\$3,576,000	\$1,836,700	\$71,600	\$1,810,900	\$1,765,100	12/24/2027	On Time
Video 4 OIG	\$6,220,000	\$6,220,000	\$0	\$6,220,000	\$4,815,400	\$267,300	\$1,671,900	\$4,548,100	12/24/2027	On Time
Total	\$490,145,000	\$490,145,000	\$0	\$489,287,000	\$403,295,500	\$19,264,000	\$105,255,500	\$384,031,500		

# DOD

# Air Force

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
AF ACTS	\$68,153,300	\$68,153,300	\$3,500,000	\$50,162,800	\$37,502,600	\$96,600	\$10,660,400	\$37,406,000	8/30/2025	On Time
AF AMT 1	\$236,276,000	\$236,276,000	\$31,900,000	\$118,516,800	\$56,284,400	\$25,047,600	\$87,619,700	\$31,236,800	11/30/2025	On Time
AF AMT 2	\$56,983,000	\$55,298,000	\$0	\$44,367,700	\$18,449,200	\$0	\$26,285,500	\$18,449,200	11/30/2025	On Time
AF AMT 3	\$56,983,000	\$55,299,000	\$3,794,300	\$54,692,500	\$28,944,800	\$3,794,300	\$29,909,000	\$25,150,500	11/30/2025	On Time
AF AMT 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Classified System	\$20,000,000	\$20,000,000	\$0	\$4,091,900	\$280,100	\$0	\$229,900	\$280,100	8/30/2025	On Time
AF Cost and Accounting (AFCAA)	\$424,000	\$424,000	\$0	\$562,000	\$0	\$0	\$0	\$0	11/30/2016	Complete
AF Other 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Other 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Other 3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Overhead and Implementation (AFSMO)	\$32,986,000	\$32,986,000	\$150,000	\$2,513,700	\$889,300	\$116,700	\$1,421,000	\$772,600	11/30/2025	On Time
AF Robotics 1	\$2,804,000	\$2,804,000	\$0	\$2,494,000	\$0	\$0	\$2,473,800	\$0	8/30/2019	Complete
AF Robotics 2	\$614,000	\$614,000	\$0	\$614,000	\$204,500	\$0	\$409,500	\$204,500	5/30/2025	On Time
AF Robotics 3	\$614,000	\$614,000	\$0	\$614,000	\$204,500	\$0	\$409,500	\$204,500	5/30/2025	On Time
AF Robotics 4	\$614,000	\$614,000	\$0	\$614,100	\$234,600	\$0	\$379,500	\$234,600	5/30/2025	On Time
AF Robotics 5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Robotics 6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Transition Support	\$19,827,100	\$19,827,100	\$1,500,000	\$12,283,300	\$4,916,900	\$999,900	\$7,615,700	\$3,917,000	2/28/2026	On Time
AF TT&C	\$24,007,200	\$24,007,200	\$2,210,000	\$21,995,700	\$5,787,200	\$0	\$13,172,700	\$5,787,200	8/30/2023	On Time
AF TT&C Transition Support	\$958,800	\$958,800	\$62,500	\$1,218,400	\$365,800	\$62,500	\$607,400	\$303,300	5/30/2023	On Time
AF UAS 1	\$27,404,000	\$33,378,000	\$0	\$41,527,800	\$16,249,200	\$0	\$22,402,900	\$16,249,200	1/30/2024	On Time
AF UAS 2	\$3,667,000	\$3,667,000	\$0	\$3,666,800	\$2,113,200	\$0	\$1,509,400	\$2,113,200	1/30/2024	On Time
AF UAS 3	\$2,330,000	\$2,330,000	\$0	\$1,369,000	\$311,300	\$0	\$76,700	\$311,300	1/30/2024	On Time
AF UAS 4	\$3,428,000	\$3,428,000	\$0	\$3,428,000	\$200,000	\$200,000	\$3,628,000	\$0	7/30/2020	Complete
AF UAS 5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF UAS 6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Video 1	\$874,000	\$874,000	\$60,000	\$874,000	\$369,000	\$60,000	\$565,000	\$309,000	5/30/2025	On Time
AF Video 2	\$874,000	\$874,000	\$60,000	\$874,000	\$369,100	\$0	\$504,900	\$369,100	5/30/2025	On Time
AF Video 3	\$874,000	\$874,000	\$60,000	\$874,100	\$399,200	\$0	\$474,900	\$399,200	5/30/2025	On Time
AF Video 4	\$5,081,000	\$5,081,000	\$0	\$1,922,600	\$0	\$0	\$0	\$0	8/30/2021	Complete
AF Video 5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Video 6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Sequestration	\$0	\$0	(\$2,474,400)	(\$15,224,500)	\$0	\$0	\$0	\$0		N/A
Total	\$565,776,400	\$568,381,400	\$40,822,400	\$354,052,700	\$174,074,900	\$30,377,600	\$210,355,400	\$143,697,300		

# Air Force

### STATUS OF SPECTRUM TRANSITION

System Use	Assignment Transition Completion Date	Status	Comments
Video Operations	7/2020	Complete	
Unmanned Aerial Systems Operations	7/2020	Complete	
Air Combat Training Operations	7/2020	Complete	
Satellite Operations	1/2016	Complete	
Telemetry Operations	1/2025	On Time	
Robotics Operations	7/2020	Complete	
Other Operations	1/2016	Complete	

### Army <u>STATUS OF SPECTRUM RELOCATION FUNDS</u>

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
Army Microwave	\$43,200,000	\$43,200,000	\$12,000,000	\$42,786,000	\$31,596,700	\$0	\$7,271,900	\$31,596,700	8/14/2025	On Time
Army Other 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Other 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Other 3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Other 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Other 5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Other 6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Other 7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Other 8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Telemetry	\$27,700,000	\$27,700,000	\$0	\$30,250,000	\$390,600	\$0	\$29,857,900	\$390,600	8/14/2022	On Time
Army Transition Support	\$17,792,000	\$17,792,000	\$1,000,000	\$9,476,000	\$4,140,700	\$1,000,000	\$4,264,000	\$3,140,700	8/14/2025	On Time
Army TRR	\$17,700,000	\$17,700,000	\$0	\$9,500,000	\$0	\$0	\$0	\$0	11/14/2020	Complete
Army UAS	\$532,879,000	\$532,879,000	\$70,157,600	\$504,438,800	\$253,377,700	\$123,957,400	\$369,371,700	\$129,420,300	7/14/2025	On Time
Army Video	\$30,650,000	\$30,650,000	\$0	\$36,431,000	\$18,756,200	\$2,243,000	\$18,852,400	\$16,513,200	8/14/2022	On Time
Implementation and Oversight (Army Spectrum Mgt Office)	\$39,900,000	\$39,900,000	\$2,500,000	\$17,689,900	\$7,518,000	\$1,930,500	\$8,643,400	\$5,587,500	8/14/2025	On Time
Return-To-OMB			(\$4,768,100)	(\$4,768,100)	\$0	\$0	\$0	\$0		N/A
Sequestration	\$0	\$0	(\$7,086,100)	(\$20,893,000)	\$0	\$0	\$0	\$0		N/A
Total	\$709,821,000	\$709,821,000	\$73,803,400	\$624,910,600	\$315,779,900	\$129,130,900	\$438,261,300	\$186,649,000		

# **Defense Spectrum Organization (DSO)** <u>STATUS OF SPECTRUM RELOCATION FUNDS</u>

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
DISA-1: 1755-1780 MHs Band Portal (Early Entry Portal)	\$20,700,000	\$20,700,000	\$1,300,000	\$26,217,300	\$2,570,700	\$2,570,700	\$26,429,600	\$0	7/29/2022	On Time
DISA-2: 1755-1780 MHz Band Portal (FSMS Portal)	\$22,900,000	\$22,900,000	\$1,100,000	\$3,344,000	\$1,600,000	\$0	\$1,165,800	\$1,600,000	7/29/2022	On Time
DISA-3: 1780-1850 MHz Band Compression and Optimization Tool	\$26,700,000	\$26,700,000	\$3,260,000	\$13,300,000	\$6,969,200	\$1,084,100	\$6,427,100	\$5,885,100	7/29/2025	On Time
DISA-4: 2025-2110 MHz Band Spectrum Management System	\$42,800,000	\$42,800,000	\$4,035,300	\$19,151,300	\$9,671,900	\$3,882,100	\$10,771,600	\$5,789,800	7/29/2025	On Time
DISA-5: 1755-1780 MHz Band Spectrum Sharing Test & Demonstration (SST&D) Program	\$105,900,000	\$105,900,000	\$9,900,000	\$103,240,800	\$11,612,700	\$7,670,500	\$104,736,100	\$3,942,200	7/29/2023	On Time
DISA-6/DISA-7: DoD Spectrum Relocation Management Team (DSRMT)/Pre-auction studies	\$28,000,000	\$28,000,000	\$2,222,100	\$15,471,100	\$3,814,100	\$1,801,600	\$9,728,700	\$2,012,500	7/29/2025	On Time
Sequestration	¢2.47.000.000	\$0	(\$513,600)	(\$2,236,000)	\$0	\$0	\$0	\$0		N/A
Total	\$247,000,000	\$247,000,000	\$21,303,800	\$178,488,500	\$36,238,600	\$17,009,000	\$159,258,900	\$19,229,600		

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
DoN ACTS	\$12,359,000	\$12,359,000	\$1,544,900	\$12,114,200	\$4,340,400	\$2,433,500	\$10,452,300	\$1,906,900	12/14/2023	On Time
DoN HQ Transition Process Management	\$81,263,000	\$81,263,000	\$8,569,200	\$56,469,800	\$25,416,100	\$8,468,400	\$39,514,300	\$16,947,700	8/14/2025	On Time
DoN Other 1	\$174,036,000	\$210,018,700	\$0	\$195,813,100	\$30,165,900	\$2,181,000	\$176,805,700	\$27,984,900	11/14/2022	On Time
DoN Other 2	\$53,003,200	\$55,507,300	\$0	\$56,904,900	\$5,385,900	\$0	\$50,121,000	\$5,385,900	11/14/2022	On Time
DoN Other 3	\$161,366,600	\$161,908,000	\$36,324,500	\$125,038,600	\$69,976,400	\$26,315,100	\$86,108,900	\$43,661,300	8/14/2025	On Time
DoN Other 4	\$151,585,400	\$151,585,400	\$18,100,000	\$112,333,000	\$78,395,900	\$19,152,900	\$47,575,800	\$59,243,000	8/14/2025	On Time
DoN Other 5	\$79,940,800	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DoN Other 6		\$133,618,300	\$3,000,000	\$43,147,000	\$41,000,000	\$9,437,300	\$11,584,300	\$31,562,700	9/14/2026	On Time
DoN Other Systems Transition Support	\$16,685,000	\$16,685,000	\$3,663,500	\$10,820,300	\$5,562,700	\$0	\$4,591,900	\$5,562,700	8/14/2025	On Time
DoN PGM	\$24,492,000	\$24,492,000	\$0	\$21,799,600	\$79,100	\$0	\$1,451,500	\$79,100	8/14/2025	On Time
DoN PGM Transition Support	\$16,685,000	\$16,685,000	\$0	\$4,075,000	\$594,000	\$554,200	\$2,390,900	\$39,800	8/14/2025	On Time
DoN Robotics	\$111,058,200	\$111,058,200	\$0	\$49,070,000	\$9,932,900	\$1,922,000	\$44,389,100	\$8,010,900	4/14/2023	On Time
DoN Robotics Transition Support	\$16,685,000	\$16,685,000	\$2,300,000	\$13,750,000	\$3,941,500	\$3,403,300	\$12,721,800	\$538,200	8/14/2025	On Time
DoN Telemetry 1	\$30,857,400	\$50,685,200	\$0	\$50,672,000	\$7,568,700	\$6,455,600	\$49,558,900	\$1,113,100	8/14/2025	On Time
DoN Telemetry 1-5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DoN Telemetry 2	\$27,297,900	\$32,428,200	\$3,897,000	\$32,171,000	\$14,249,500	\$6,039,400	\$24,204,900	\$8,210,100	8/14/2025	On Time
DON Telemetry 3	\$4,886,500	\$11,362,000	\$0	\$11,360,000	\$5,799,000	\$3,908,500	\$9,469,500	\$1,890,500	8/14/2025	On Time
DoN Telemetry 4	\$41,300,600	\$44,672,900	\$4,870,000	\$36,606,400	\$12,179,000	\$8,443,300	\$33,426,700	\$3,735,700	8/14/2025	On Time
DoN Telemetry 5	\$1,284,700	\$12,037,000	\$0	\$12,037,000	\$2,745,100	\$2,745,100	\$12,023,900	\$0	12/14/2020	Complete
DoN TRR 1	\$126,800,000	\$149,290,000	\$33,912,800	\$79,697,700	\$64,068,300	\$0	\$13,059,000	\$64,068,300	8/14/2025	On Time
DoN TRR 2	\$5,300,000	\$52,210,000	\$14,956,500	\$31,029,700	\$28,685,700	\$17,750,000	\$19,730,400	\$10,935,700	8/14/2025	On Time
DoN TRR 3	\$25,468,500	\$25,468,500	\$0	\$4,067,000	\$100	\$0	\$607,000	\$100	8/14/2025	On Time
DoN TT&C SatOps	\$982,100	\$982,100	\$80,600	\$746,000	\$141,400	\$0	\$360,400	\$141,400	8/14/2025	On Time
DON UAS 1	\$6,400,800	\$6,400,800	\$5,000	\$6,736,000	\$5,193,200	\$4,771,700	\$5,500,500	\$421,500	8/14/2025	On Time
DON UAS 1-4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON UAS 2	\$33,319,000	\$33,319,000	\$12,767,000	\$32,463,400	\$29,365,500	\$300	\$1,102,300	\$29,365,200	9/14/2022	On Time
DON UAS 3	\$31,402,400	\$31,402,400	\$3,955,500	\$16,800,200	\$15,927,200	\$2,194,100	\$5,820,700	\$13,733,100	8/14/2025	On Time
DON UAS 4	\$33,388,900	\$33,388,900	\$0	\$8,788,800	\$7,142,600	\$5,623,900	\$7,930,100	\$1,518,700	10/14/2021	On Time
DON UAS 5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON UAS Transition Support	\$16,685,000	\$16,690,000	\$3,771,800	\$16,131,400	\$12,924,800	\$791,700	\$3,765,300	\$12,133,100	8/14/2025	On Time
DoN UAS-Video 5	\$94,200,000	\$108,580,000	\$29,100,000	\$65,656,200	\$52,104,900	\$16,231,900	\$35,862,800	\$35,873,000	8/14/2025	On Time
DoN Video 1	\$1,543,000	\$1,543,000	\$0	\$1,438,400	\$272,500	\$272,500	\$1,543,400	\$0	12/14/2020	Complete
DoN Video Scout Afloat		\$58,100,000	\$10,405,000	\$38,155,000	\$30,337,100	\$0	\$5,029,000	\$30,337,100	8/14/2025	On Time
DoN Video Transition Support	\$16,685,000	\$0	\$0	\$2,292,000	\$98,300	\$0	\$1,275,700	\$98,300		N/A
FQM-151A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
L-3VNTXL-1A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Sequestration	\$0	\$0	(\$6,366,800)	(\$15,694,300)	\$0	\$0	\$0	\$0		N/A
Total	\$1,396,961,000	\$1,660,424,900	\$184,856,500	\$1,132,489,400	\$563,593,700	\$149,095,700	\$717,991,100	\$414,498,000		

# DON

#### STATUS OF SPECTRUM TRANSTION

System Use	Assignment Transition Completion Date	Status	Comments
Video Operations	1/2016	Complete	
Unmanned Aerial Systems Operations	1/2019	Complete	
Tactical Radio Relay Operations	1/2020	Complete	
Air Combat Training Operations	4/2020	Complete	
Missile Operations	1/2019	Complete	
Satellite Operations	1/2016	Complete	
Telemetry Operations	10/2023	On Time	
Robotics Operations	1/2019	Complete	
Other Operations	4/2022	On Time	

# DOE BPA

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
13A	\$2,400,000	\$2,400,000	\$0	\$2,400,000	\$1,065,500	\$0	\$1,334,500	\$1,065,500	9/29/2023	On Time
3A	\$100,000	\$100,000	\$0	\$100,000	\$100,000	\$0	\$0	\$100,000	9/29/2023	On Time
3D	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		Complete
3К	\$2,400,000	\$2,400,000	\$0	\$2,400,000	\$1,451,300	\$1,451,300	\$2,400,000	\$0	9/29/2023	Complete
4K-1	\$100,000	\$100,000	\$0	\$100,000	\$82,700	\$82,700	\$100,000	\$0	9/29/2023	Complete
4K-2	\$100,000	\$100,000	\$0	\$100,000	\$60,900	\$0	\$39,100	\$60,900	9/29/2023	On Time
Headquarters Overhead	\$1,600,000	\$1,600,000	\$0	\$1,600,000	\$757,300	\$0	\$842,700	\$757,300	9/29/2023	On Time
Т	\$100,000	\$100,000	\$0	\$100,000	\$100,000	\$0	\$0	\$100,000	9/29/2023	On Time
Total	\$6,800,000	\$6,800,000	\$0	\$6,800,000	\$3,617,700	\$1,534,000	\$4,716,300	\$2,083,700		

# DOI **National Park Service**

#### STATUS OF SPECTRUM RELOCATION FUNDS

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
USPP/NPS	\$8,946,000	\$8,946,000	\$0	\$8,946,000	\$984,600	\$0	\$7,961,400	\$984,600	9/23/2025	On Time
Total	\$8,946,000	\$8,946,000	\$0	\$8,946,000	\$984,600	\$0	\$7,961,400	\$984,600		

# United States Geological Survey STATUS OF SPECTRUM RELOCATION FUNDS

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
EHZ SEIS	\$28,668,000	\$28,668,000	\$0	\$28,668,000	\$20,945,600	\$4,880,600	\$12,603,000	\$16,065,000	9/23/2025	On Time
USGS Spectrum Relocation Program Office	\$7,012,000	\$7,012,000	\$0	\$7,012,000	\$5,529,500	\$2,000	\$1,484,500	\$5,527,500	9/23/2025	On Time
Total	\$35,680,000	\$35,680,000	\$0	\$35,680,000	\$26,475,100	\$4,882,600	\$14,087,500	\$21,592,500		

# **Department of Justice** STATUS OF SPECTRUM RELOCATION FUNDS

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
Baltimore1	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Baltimore2	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Birmingham	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Buffalo	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Dallas	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Detroit	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
DOJ HQ		\$7,009,600	\$0	\$0	\$2,806,000	\$960,200	\$5,163,800	\$1,845,800	4/21/2027	On Time
DOJ R&D		\$87,037,500	\$0	\$0	\$19,198,300	\$8,121,100	\$44,090,600	\$11,077,200	4/21/2027	On Time
Houston	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Jacksonville	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Knoxville	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Miami	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Minneapolis	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Mobile	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
New Orleans	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Oklahoma City1	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Oklahoma City2	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Operational1	\$3,960,000	\$0	\$0	\$3,960,000	\$0	\$0	\$3,113,000	\$0		Complete
Operational2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Operational3	\$8,086,000	\$36,085,800	\$0	\$8,086,000	\$1,752,300	\$339,700	\$6,673,400	\$1,412,600	8/25/2025	On Time
Operational4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Operational5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Operational6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Operational7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Phoenix	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Portland1	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Portland2	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
San Diego	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Surveillance1	\$570,897,000	\$703,210,300	\$0	\$570,897,000	\$269,258,100	\$42,769,400	\$322,815,200	\$226,488,700	8/25/2025	On Time
Surveillance2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Surveillance3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Surveillance4	\$232,337,000	\$157,268,600	\$0	\$232,337,000	\$140,380,400	\$8,873,200	\$25,761,400	\$131,507,200	9/22/2025	On Time
Surveillance5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Surveillance6	\$286,050,000	\$350,494,100	\$0	\$286,050,000	\$160,368,100	\$35,222,600	\$169,309,700	\$125,145,500	8/25/2025	On Time
Surveillance7		\$56,500,000	\$0	\$0	\$7,743,800	\$3,255,900	\$24,807,800	\$4,487,900	4/21/2027	On Time
Washington DC	\$150,000	\$0	\$0	\$150,000	\$0	\$0	\$31,500	\$0		Complete
Total	\$1,104,330,000	\$1,397,605,900	\$0	\$1,104,330,000	\$601,507,000	\$99,542,100	\$602,364,900	\$501,964,900		

# **Department of Treasury** STATUS OF SPECTRUM RELOCATION FUNDS

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
CI Techops	\$7,561,000	\$7,561,000	\$0	\$7,561,000	\$2,575,700	\$2,575,700	\$7,560,900	\$0	9/29/2021	Complete
TIGTA Techops	\$241,000	\$241,000	\$0	\$240,000	\$50,900	\$50,900	\$239,900	\$0	12/29/2021	Complete
Total	\$7,802,000	\$7,802,000	\$0	\$7,801,000	\$2,626,600	\$2,626,600	\$7,800,800	\$0		

# United States Agency for International Development STATUS OF SPECTRUM RELOCATION FUNDS

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
Return-To-OMB			(\$45,900)	(\$45,900)	\$0	\$0	\$0	\$0		N/A
WESTX-1860	\$150,000	\$150,000	\$0	\$150,000	\$0	\$0	\$104,100	\$0	6/29/2021	Complete
Total	\$150,000	\$150,000	(\$45,900)	\$104,100	\$0	\$0	\$104,100	\$0		

# Part IV: 3550 – 3650 MHz Band (3.5 GHz/CBRS)

The FCC established the Citizens Broadband Radio Service (CBRS) and created a three-tiered access and authorization framework to accommodate shared federal and non-federal use of the 3550-3700 MHz band in 2015. On September 27, 2019, the FCC announced its plan to commence an auction of Priority Access Licenses (PALs) in the 3550-3650 MHz portion of this band, which was allocated for shared federal and non-federal use. The auction of these frequencies is referred to as the CBRS auction in this report.

On December 20, 2019, NTIA sent a letter to the FCC on behalf of DOD's eligible federal agencies, providing notification of the initial estimated relocation and sharing costs and the estimated transition timelines for the 3550-3650 MHz band. The total estimated relocation and sharing costs for the band are \$98.17 million.

The CBRS auction commenced on July 23, 2020, and concluded on August 25, 2020, with \$4.5 billion in net winning bids and a total of 228 bidders winning 20,631 PALs. On October 23, 2020, OMB, in consultation with NTIA, submitted a report to Congress detailing its intent to transfer \$98.17 million to five DOD agencies for the 3550-3650 MHz band.

This is the first year of reporting on the CBRS spectrum. Because federal agencies were already sharing the spectrum at the time of the auction, implementation to indefinite sharing was effective upon award of licenses. For the period ending September 2021, outlays for DOD for the 3550-3650 MHz band totaled \$18.75 million.

The following are the overall summary and agency status of funds tables for the 3550-3650 MHz band. As all agencies have completed spectrum transition, there are no status of spectrum transition tables.

Department/Agency	Bureau	Estimated Completion of Transition Timeline (Month/Year)	Transition Status	Total Original Estimated Transition Cost	Total Adjusted Estimated Transition Cost	Total Transferred from SRF	Cumulative Outlays	Spending Status
DOD	Air Force	8/2020	Complete	\$5,088,000	\$5,088,000	\$2,456,000	\$650,000	Ongoing
DOD	Army	8/2020	Complete	\$11,950,000	\$11,950,000	\$2,650,000	\$0	Ongoing
DOD	DSO		N/A	\$48,357,000	\$48,357,000	\$18,975,000	\$17,367,000	Ongoing
DOD	DON	8/2020	Complete	\$30,431,000	\$30,431,000	\$7,007,000	\$726,300	Ongoing
DOD	OCIO		N/A	\$2,348,400	\$2,348,400	\$425,000	\$4,400	Ongoing
DOD	Subtotal			\$98,174,400	\$98,174,400	\$31,513,000	\$18,747,700	
Total				\$98,174,400	\$98,174,400	\$31,513,000	\$18,747,700	

# 3550 – 3650 MHz Band Summary of Sharing and Relocation Activities

# DOD

# Air Force

### STATUS OF SPECTRUM RELOCATION FUNDS

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
AF EME Sensing and Monitoring (AF- 3550-2)	\$4,338,000	\$4,338,000	\$2,306,000	\$2,306,000	\$2,306,000	\$500,000	\$500,000	\$1,806,000	1/29/2026	On Time
AF Engineering and Sharing Support (AF- 3550-1)	\$750,000	\$750,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$0	1/29/2026	On Time
AF Other 1 (AF-3550-4)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		Complete
AF Other 2 (AF-3550-5)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		Complete
AF Other 3 (AF-3550-6)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		Complete
AF Other 4 (AF-3550-7)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		Complete
AF Other 5 (AF-3550-8)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		Complete
AF Other 6 (AF-3550-9)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		Complete
AF Radiolocation 1 (AF-3550-3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		Complete
Total	\$5,088,000	\$5,088,000	\$2,456,000	\$2,456,000	\$2,456,000	\$650,000	\$650,000	\$1,806,000		

# Army

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
Army EME Sensing and Monitoring (AR- 3550-2)	\$9,950,000	\$9,950,000	\$2,250,000	\$2,250,000	\$2,250,000	\$0	\$0	\$2,250,000	1/29/2026	On Time
Army Engineering and Sharing Support (AR-3550-1)	\$2,000,000	\$2,000,000	\$400,000	\$400,000	\$400,000	\$0	\$0	\$400,000	1/29/2026	On Time
Army Land Based Other 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Army Radiolocation 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
Total	\$11,950,000	\$11,950,000	\$2,650,000	\$2,650,000	\$2,650,000	\$0	\$0	\$2,650,000		

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
CBRS Sharing Ecosystem Assessment (DISA-3550-2)	\$16,590,500	\$16,590,500	\$13,458,000	\$13,458,000	\$13,458,000	\$13,086,600	\$13,086,600	\$371,400	1/29/2026	On Time
DoD Interference Management Capability (DISA-3550-3)	\$24,640,500	\$24,640,500	\$4,076,000	\$4,076,000	\$4,076,000	\$3,670,500	\$3,670,500	\$405,500	1/29/2026	On Time
DoD Spectrum Sharing Team (DISA- 3550-1)	\$7,126,000	\$7,126,000	\$1,441,000	\$1,441,000	\$1,441,000	\$609,900	\$609,900	\$831,100	1/29/2026	On Time
Total	\$48,357,000	\$48,357,000	\$18,975,000	\$18,975,000	\$18,975,000	\$17,367,000	\$17,367,000	\$1,608,000		

# **DON**

### STATUS OF SPECTRUM RELOCATION FUNDS

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
DON Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON Oversight and Implementation (DON-3550-9)	\$2,242,000	\$2,242,000	\$373,000	\$373,000	\$373,000	\$0	\$0	\$373,000	1/29/2026	On Time
DON Radiolocation 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON Radiolocation 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON Radiolocation 3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON RDTE 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON RDTE 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON SESEF	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON Simulator	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
USMC CBRS Sharing Ecosystem Assessment (DON-3550-8)	\$612,000	\$612,000	\$91,000	\$91,000	\$91,000	\$0	\$0	\$91,000	1/29/2026	On Time
USMC EME Sensing and Monitoring (DON-3550-7)	\$6,871,000	\$6,871,000	\$2,098,000	\$2,098,000	\$2,098,000	\$0	\$0	\$2,098,000	1/29/2026	On Time
USMC Engineering and Sharing Support (DON-3550-6)	\$2,374,000	\$2,374,000	\$545,000	\$545,000	\$545,000	\$0	\$0	\$545,000	1/29/2026	On Time
USN CBRS Sharing Ecosystem Assessment (DON-3550-3)	\$1,213,000	\$1,213,000	\$450,000	\$450,000	\$450,000	\$100,000	\$100,000	\$350,000	1/29/2026	On Time
USN DPA Awareness (DON-3550-4)	\$4,375,000	\$4,375,000	\$650,000	\$650,000	\$650,000	\$109,000	\$109,000	\$541,000	1/29/2026	On Time
USN EME Sensing and Monitoring (DON-3550-2)	\$4,147,000	\$4,147,000	\$1,475,000	\$1,475,000	\$1,475,000	\$86,400	\$86,400	\$1,388,600	1/29/2026	On Time
USN EMI Recognition (DON-3550-5)	\$5,973,000	\$5,973,000	\$850,000	\$850,000	\$850,000	\$248,900	\$248,900	\$601,100	1/29/2026	On Time
USN Engineering and Sharing Support (DON-3550-1)	\$2,624,000	\$2,624,000	\$475,000	\$475,000	\$475,000	\$182,000	\$182,000	\$293,000	1/29/2026	On Time
Total	\$30,431,000	\$30,431,000	\$7,007,000	\$7,007,000	\$7,007,000	\$726,300	\$726,300	\$6,280,700		

# OCIO

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
DoD CIO Engineering and Sharing Support (DOD- 3550-1)	\$2,348,400	\$2,348,400	\$425,000	\$425,000	\$425,000	\$4,400	\$4,400	\$420,600	1/29/2026	On Time
Total	\$2,348,400	\$2,348,400	\$425,000	\$425,000	\$425,000	\$4,400	\$4,400	\$420,600		

# Part V: 3450 – 3550 MHz Band (3.45 GHz Service)

On June 12, 2020, the FCC announced its plan to commence an auction of the 3450-3550 MHz band, which had been allocated for federal use. These frequencies would be designated as the 3.45 GHz Service by the FCC.

On January 14, 2021, NTIA sent a letter to the FCC on behalf of DOD eligible federal agencies, providing notification of the initial estimated relocation and sharing costs and the estimated transition timelines for the 3450-3550 MHz band. The total estimated relocation and sharing costs for the band are \$13.43 billion.

On April 30, 2021, OMB, in consultation with NTIA, submitted a report to Congress detailing its intent to transfer pre-auction planning funds in the amount of \$67.02 million to the five DOD agencies. The 3450-3550 MHz auction commenced on October 5, 2021, and would conclude on January 4, 2022, with 23 winning bidders and gross proceeds exceeding \$22.5 billion.

This is the first year of reporting on the 3450-3550 MHz Band. This report only includes progress for pre-auction planning funds as the auction did not conclude before the end of this reporting period. For the period ending September 2021, total outlays for DOD for the 3450-3550 MHz band totaled \$15.340 million.

The following are the overall summary, agency status of funds, and agency status of spectrum transition tables for the 3450-3550 MHz band.

Department/Agency	Bureau	Estimated Completion of Transition Timeline (Month/Year)	Transition Status	Total Original Estimated Transition Cost	Total Adjusted Estimated Transition Cost	Total Transferred from SRF	Cumulative Outlays	Spending Status
DOD	Air Force	7/2033	Ongoing	\$772,273,900	\$772,273,900	\$13,580,000	\$6,454,100	Ongoing
DOD	Army	10/2022	Ongoing	\$244,815,000	\$244,815,000	\$13,605,000	\$8,633,600	Ongoing
DOD	DSO		N/A	\$84,095,000	\$84,095,000	\$3,225,000	\$0	Ongoing
DOD	DON	10/2022	Ongoing	\$12,028,776,400	\$12,028,776,400	\$19,300,000	\$232,000	Ongoing
DOD	OCIO		N/A	\$302,180,000	\$302,180,000	\$17,310,000	\$19,600	Ongoing
DOD	Subtotal			\$13,432,140,300	\$13,432,140,300	\$67,020,000	\$15,339,300	
Total				\$13,432,140,300	\$13,432,140,300	\$67,020,000	\$15,339,300	

# 3450-3550 MHz Summary of Sharing and Relocation Activities

# DOD

# Air Force

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
AF 96 TW - RSE Relocation to Eglin Santa Rosa Island (AF-3450-6)	\$18,920,000	\$18,920,000	\$0	\$0	\$0	\$0	\$0	\$0	10/1/2029	On Time
AF Airborne Radar 1 (AF- 3450-8)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Airborne Radar Operational Impact Flight Test (AF-3450-2)	\$3,040,000	\$3,040,000	\$3,040,000	\$3,040,000	\$3,040,000	\$1,656,600	\$1,656,600	\$1,383,400	10/1/2023	On Time
AF Airborne Radar Replacement Project (USAF-3450-4)	\$686,084,300	\$686,084,300	\$1,350,000	\$1,350,000	\$1,350,000	\$1,237,400	\$1,237,400	\$112,600	10/1/2033	On Time
AF Commercial Industry Deployment Coordination (AF-3450-1)	\$19,891,700	\$19,891,700	\$7,760,000	\$7,760,000	\$7,760,000	\$2,130,100	\$2,130,100	\$5,629,900	10/1/2033	On Time
AF NRTF Spectrum Sharing Optimization (AF- 3450-5)	\$20,860,900	\$20,860,900	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000	\$0	10/1/2027	On Time
AF NTTR - Threat Systems (AF-3450-7)	\$11,338,000	\$11,338,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$0	4/1/2028	On Time
AF Other 1 (AF-3450-12)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Other 2 (AF-3450-13)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Other 3 (AF-3450-14)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Other 4 (AF-3450-15)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Other 5 (AF-3450-16)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Other 6 (AF-3450-17)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Other 7 (AF-3450-18)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF RCS 1 (AF-3450-9)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF RSE 1 (AF-3450-10)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Threat System 1 (AF- 3450-11)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
AF Training Mission Support (USAF-3450-3)	\$12,139,000	\$12,139,000	\$0	\$0	\$0	\$0	\$0	\$0	10/1/2033	On Time
Total	\$772,273,900	\$772,273,900	\$13,580,000	\$13,580,000	\$13,580,000	\$6,454,100	\$6,454,100	\$7,125,900		

# Air Force

#### STATUS OF SPECTRUM TRANSITION

System Use	Assignment Transition Completion Date	Status	Comments
Airborne Radar	7/2033	On Time	
Fixed Radar	10/2022	On Time	
Mobile Radar	10/2022	On Time	
Other	10/2022	On Time	

# Army status of spectrum relocation funds

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
AN/TPQ-53	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
ARMY 3450-3: RPS-42 Interim Study	\$940,000	\$940,000	\$940,000	\$940,000	\$940,000	\$808,600	\$808,600	\$131,400	10/1/2024	On Time
ARMY-3450-1: Army & Commercial Industry Deployment Coordination	\$18,590,000	\$18,590,000	\$3,820,000	\$3,820,000	\$3,820,000	\$0	\$0	\$3,820,000	10/1/2028	On Time
ARMY-3450-2: AN/TPQ- 53 Counter Fire Radar Study & Modification	\$224,265,000	\$224,265,000	\$7,825,000	\$7,825,000	\$7,825,000	\$7,825,000	\$7,825,000	\$0	10/1/2028	On Time
ARMY-3450-4: Electromagnetic Warfare (EW) PEO STRI	\$1,020,000	\$1,020,000	\$1,020,000	\$1,020,000	\$1,020,000	\$0	\$0	\$1,020,000	10/1/2024	On Time
Total	\$244,815,000	\$244,815,000	\$13,605,000	\$13,605,000	\$13,605,000	\$8,633,600	\$8,633,600	\$4,971,400		

#### STATUS OF SPECTRUM TRANSITION

System Use	Assignment Transition Completion Date	Status	Comments
Fixed Radar	10/2022	On Time	

# DSO

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
Automated Spectrum Coordination System (DISA-3450-3)	\$71,145,000	\$71,145,000	\$1,595,000	\$1,595,000	\$1,595,000	\$0	\$0	\$1,595,000	10/1/2028	On Time
Engineering Coordination Services (DISA-3450-2)	\$7,110,000	\$7,110,000	\$730,000	\$730,000	\$730,000	\$0	\$0	\$730,000	10/1/2028	On Time
Spectrum Access Optimization Team (DISA- 3450-1)	\$5,840,000	\$5,840,000	\$900,000	\$900,000	\$900,000	\$0	\$0	\$900,000	10/1/2028	On Time
Total	\$84,095,000	\$84,095,000	\$3,225,000	\$3,225,000	\$3,225,000	\$0	\$0	\$3,225,000		

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STATUS OF SPECTROM REF		ſ	SRF			Cost				
System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
DON 3450-10-USMC										
Engineering Analysis &	\$3,923,000	\$3,923,000	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2032	On Time
Operational Compliance										
DON 3450-11-USN Test										
Range EMSO &	\$54,010,000	\$54,010,000	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2032	On Time
Verification/Compliance										
DON 3450-12-USN (SESEF)	\$1,950,000	\$1,950,000	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2032	On Time
Test Ranges						1 -	1 -			
DON 3450-13-USN Advanced	¢22.000.000	¢22.000.000	¢0	¢0	\$0	\$0	\$0	¢0	4/1/2022	O. T
Dynamic Aircraft Measurement	\$23,000,000	\$23,000,000	\$0	\$0	20	20	20	\$0	4/1/2032	On Time
Systems DON 3450-15-USN Training										
Ranges – Spectrum Sensing	\$2,250,000	\$2,250,000	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2032	On Time
DON 3450-2-USN										
Ashore/Shipboard CONOPS	\$40,666,900	\$40,666,900	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2032	On Time
Verification and Compliance	\$40,000,900	\$40,000,700	φθ	φθ	φθ	φθ	φΰ	ψυ	4/1/2032	On Third
DON 3450-3-USN Analysis,										
Engineering, and Coordination	\$42,617,500	\$42,617,500	\$6,650,000	\$6,650,000	\$6,650,000	\$232,000	\$232,000	\$6,418,000	4/1/2032	On Time
DON 3450-4-USN Future X-										
Band Radar (FXR)	\$11,163,037,500	\$11,163,037,500	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2041	On Time
DON 3450-5-USN Engineering										
Change-Antenna Pattern	\$158,774,800	\$158,774,800	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2032	On Time
Notching								-		
DON 3450-7-Headquarters										
USMC (HQMC) Transition	\$4,930,300	\$4,930,300	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2032	On Time
Management Support										
DON 3450-8-USMC										
Commercial Industry	\$9,510,600	\$9,510,600	\$6,900,000	\$6,900,000	\$6,900,000	\$0	\$0	\$6,900,000	4/1/2032	On Time
Deployment Coordination										
DON 3450-9 USMC Future		\$509,000,000	\$0	\$0	\$0	\$0	\$0	\$0	4/1/2032	On Time
Radar System Modification										
DON RADIOLOCATION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON RDTE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON SIMULATOR	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		N/A
DON-3450-01DON CIO	\$11,205,800	\$11,205,800	\$5,600,000	\$5,600,000	\$5,600,000	\$0	\$0	\$5,600,000	4/1/2033	On Time
Oversight and Implementation										
DON-3450-14USN Training	\$2,000,000	¢2,000,000	¢150.000	¢150.000	¢150.000	¢0	¢0	¢150.000	4/1/2022	On Time
Ranges – Codify CONOPS/TTPs	\$3,900,000	\$3,900,000	\$150,000	\$150,000	\$150,000	\$0	\$0	\$150,000	4/1/2032	On Time
Total	\$11,519,776,400	\$12,028,776,400	\$19,300,000	\$19,300,000	\$19,300,000	\$232,000	\$232,000	\$19,068,000		
Totai	\$11,519,776,400	\$12,028,770,400	\$19,300,000	\$19,300,000	\$19,300,000	\$232,000	\$232,000	\$19,008,000		

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#### STATUS OF SPECTRUM TRANSITION

System Use	Assignment Transition Completion Date	Status	Comments
Fixed Radar	10/2022	On Time	
Shipborne Radar	10/2022	On Time	
Other	10/2022	On Time	

# OCIO

System/Program Name	Original Estimated Transition Costs	Adjusted Estimated Transition Costs	SRF Transfers This Reporting Year	Total SRF Transfers	Adjusted System Total	Cost Incurred this Reporting Year (Outlays)	Cumulative Outlays	SRF Balance	System Spending Closeout Date	Spending Status
DoD Commercial Industry Deployment Coordination (DOD-3450-1)	\$17,710,000	\$17,710,000	\$4,130,000	\$4,130,000	\$4,130,000	\$19,600	\$19,600	\$4,110,400	10/1/2032	On Time
EW Spectrum Sharing Range and Engineering Study (DOD-3450-7)	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$0	\$0	\$3,000,000	4/1/2028	On Time
Multiband EW Simulator (DOD-3450-6)	\$113,250,000	\$113,250,000	\$1,500,000	\$1,500,000	\$1,500,000	\$0	\$0	\$1,500,000	4/1/2028	On Time
Propagation Model Study (DOD-3450-2)	\$20,820,000	\$20,820,000	\$1,730,000	\$1,730,000	\$1,730,000	\$0	\$0	\$1,730,000	10/1/2027	On Time
Secure Laboratory (DOD- 3450-4)	\$46,300,000	\$46,300,000	\$2,950,000	\$2,950,000	\$2,950,000	\$0	\$0	\$2,950,000	10/1/2028	On Time
Spectrum Management Modernization (DOD- 3450-5)	\$61,500,000	\$61,500,000	\$500,000	\$500,000	\$500,000	\$0	\$0	\$500,000	10/1/2027	On Time
Threat Representations Operations and Development (DOD-3450- 3)	\$39,600,000	\$39,600,000	\$3,500,000	\$3,500,000	\$3,500,000	\$0	\$0	\$3,500,000	10/1/2028	On Time
Total	\$302,180,000	\$302,180,000	\$17,310,000	\$17,310,000	\$17,310,000	\$19,600	\$19,600	\$17,290,400		