U.S. DEPARTMENT OF COMMERCE
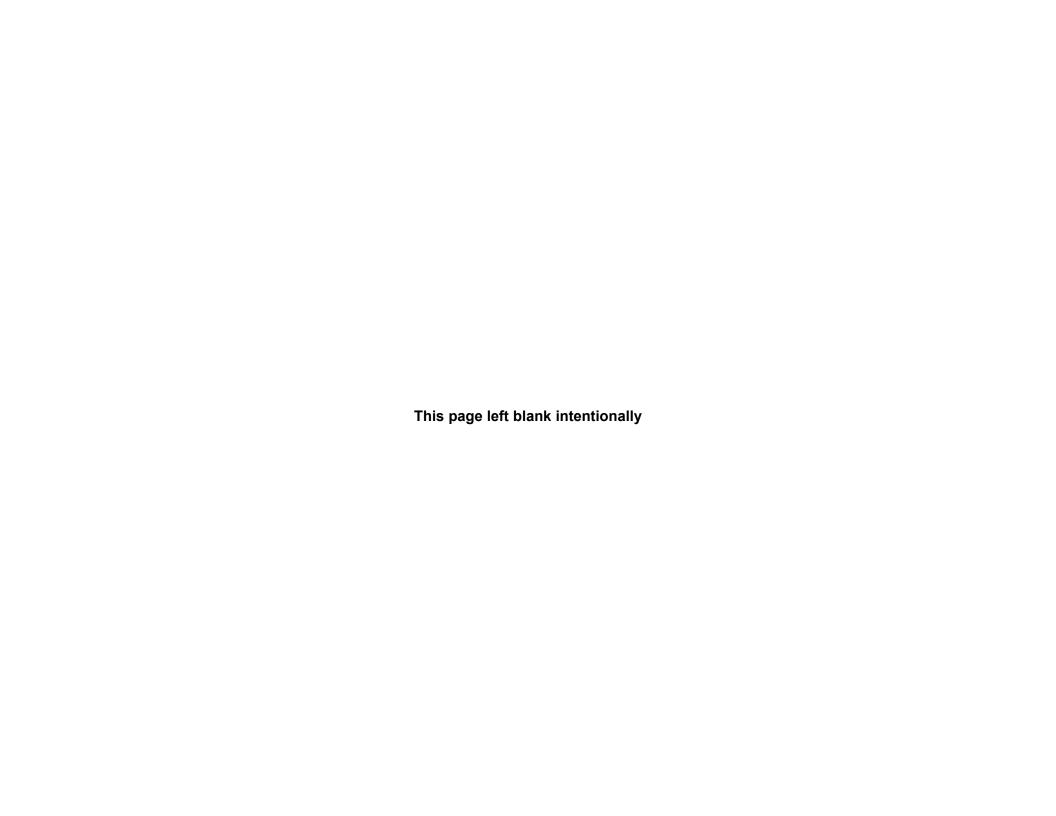
National Telecommunications and Information Administration

FY 2023 Budget as Presented to Congress

March 2022

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Exhibit 1

DEPARTMENT OF COMMERCE
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION
Budget Estimates, Fiscal Year 2023
Congressional Submission
Table of Contents

Exhibit 1

Exhibit 1

Exhibit 1

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Exhibit 2

Department of Commerce
National Telecommunications and Information Administration
Organization Chart

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                    ┌─────────────────────┐
                    │    Administrator     │         ┌──────────────┐
                    │  ----------------    │ · · · · ·│   FirstNet   │
                    │      Deputy          │         └──────────────┘
                    │   Administrator      │
                    └─────────────────────┘
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Office of International Affairs	Office of Policy Analysis & Development	Office of Public Safety Communications	Institute for Telecommunication Sciences	Office of Spectrum Management	Office of Internet Connectivity and Growth

Office of Policy Coordination and Management

Office of the Chief Counsel

Office of Congressional Affairs

Office of Minority Broadband Activities

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Exhibit 3

Department of Commerce
National Telecommunications and Information Administration
Budget Estimate, Fiscal Year 2023
Executive Summary

The National Telecommunications and Information Administration's (NTIA) FY 2023 Budget Request totals $67.6 million and 189 positions. The budget request supports NTIA's critical role of advising the President on communications and information policy issues. NTIA's programs and policymaking focus on expanding the availability of spectrum for all users, managing core spectrum programs effectively and efficiently, and identifying innovative approaches to increase spectrum access and spectrum sharing opportunities. This Budget provides the resources to ensure that the Internet remains an engine for continued economic growth, promotes a 21st century Internet economy in rural communities, and expands broadband Internet access and adoption in America.

Domestic and International Policies. NTIA's domestic and international policies program funding in FY 2023 totals $14.2 million and 48 positions. NTIA's domestic and international policies work to preserve the Internet's openness and its cultural and economic potentials while advancing key U.S. interests. As the President's advisor on information and communications policy, NTIA is a critical interface between the private sector and government decision makers. In this role, NTIA helps ensure U.S. policies maximize national security objectives and resources and helps develop and drive adoption of market-based, risk-based cybersecurity guidelines to improve the private sector's cybersecurity resilience while advancing the policy goals of the U.S.

NTIA, through its domestic and international policies program, coordinates Executive Branch communications policy and represents the Administration's policy to independent agencies such as the Federal Communications Commission (FCC) and the Federal Trade Commission. NTIA must be positioned to meet the growing complexity of the Internet environment, as the world becomes more interconnected via rapid growth of the Internet, the globalization of information technology services and equipment, and as governance of the Internet becomes an increasingly complex geopolitical issue. Utilizing the multistakeholder process to reach general consensus on internet policy issues, NTIA is central to the Executive Branch's involvement in the Internet Governance Forum (IGF), and its support of mutual legal assistance treaty modernization efforts with key U.S. industries.

Spectrum Management. NTIA's spectrum management program direct funding for FY 2023 totals $8.9 million and 40 positions. NTIA will continue to evolve its analysis capabilities to increase spectrum access available to commercial and federal users. The budget will support the commercial sector's development of next generation wireless services by recommending reallocation of spectrum for commercial use and by promoting spectrum sharing between commercial and government users. The agency promotes the most efficient use of the limited spectrum resources across the Federal Government. Working with the FCC, NTIA coordinates international and domestic spectrum access requirements, identifies and reallocates spectrum bands for commercial use, updates spectrum policies, and develops long-range spectrum management plans. NTIA collaborates with the State Department to advance U.S. interests and positions related to international spectrum issues, conferences, and negotiations.

Exhibit 3

Advanced Communications Research. NTIA's advanced communications research program direct funding for FY 2023 totals $12.7 million and 51 positions. Communications research will keep identifying innovative approaches to increase spectrum access and sharing opportunities. This FY 2023 request will both sustain and increase resources for NTIA's Institute for Telecommunication Sciences (ITS), which provides scientific research, development, and testing on spectrum capability, spectrumsharing approaches, and spectrum-enabled technology for both Federal agencies and private industry partners.[1] NTIA is also expanding collaborative research and development in advanced communications technologies to support commercial and government applications to enhance wireless efficiencies.

BroadbandUSA. NTIA's broadband program funding in FY 2023 totals $27.4 million and 42 positions. Broadband has become integral in fueling a dynamic economy, driving commerce, enriching education, enhancing healthcare, and improving public safety. The 2020 COVID-19 crisis highlighted the digital divide across the country—leaving behind rural communities and economically disadvantaged neighborhoods. Communities without high-speed, affordable broadband fell farther behind as they were cut off from education and job opportunities and unable to participate in the digital economy. In FY 2023, NTIA will continue to support communities in their efforts to close the digital divide and to improve broadband services in unserved and underserved communities across the country.

Public Safety Communications. NTIA's public safety communications program funding in FY 2023 totals $4.4 million and 8 positions. As communication technologies continue to evolve, our nation's 911 call centers are unable to keep pace with the technological advancements, threatening the integrity of our nation's emergency communications systems. NTIA's public safety communications program provides the technical expertise and coordination support necessary to enable our nation's 911 systems to upgrade from analog to Internet Protocol (IP)-based systems, commonly referred to as Next Generation 911.

Performance:
For current Government Performance and Results (GPRA) targets please see the FY2023/2021 Annual Performance Plan and Report (APPR) and the APPR Backup.

Adjustments:
The NTIA FY 2023 Base includes a total of $3.303 million to account for the full funding requirement for inflationary adjustments to current programs for its activities. This includes the estimated FY 2023 civilian pay raise of 4.6% as well as inflationary increases and adjustments to base (ATBs) for estimated labor and no-labor activities, including benefits, service contracts, utilities, and rent charges from the General Services Administration (GSA).

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[1] Federal and Industry Partners - https://www.its.bldrdoc.gov/publications/3181.aspx

Department of Commerce
National Telecommunications and Information Administration
FY 2023 PROGRAM INCREASES / DECREASES / TERMINATIONS
(Dollar amounts in thousands)
(By Appropriation, Largest to Smallest)

Increases

Page No.	Appropriation	Budget Program	Title of Increase	Positions	Budget Authority
NTIA - 48	Salaries and Expenses	Broadband Programs	Expand Access to Broadband and Provide Grant Support	11	10,000
NTIA - 59	Salaries and Expenses	Public Safety Communications	Transition from Mandatory Accounts	7	4,000
NTIA - 16	Salaries and Expenses	Domestic and International Policies	Build Capacity for Cybersecurity and International Standards	7	2,036
NTIA - 39	Salaries and Expenses	Advanced Communications Research	IT Security Maintenance and Resilience	2	880
NTIA - 30	Salaries and Expenses	Spectrum Management	IT Security Maintenance and Resilience	1	682
NTIA - 20	Salaries and Expenses	Domestic and International Policies	IT Security Maintenance and Resilience	2	665
NTIA - 52	Salaries and Expenses	Broadband Programs	IT Security Maintenance and Resilience	2	521
NTIA - 63	Salaries and Expenses	Public Safety Communications	IT Security Maintenance and Resilience	0	18
Subtotal, Increases				**32**	**18,802**

Decreases

Page No.	Appropriation	Budget Program	Title of Decrease	Pos.	Budget Authority
		No Program Decreases			
Subtotal, Decreases					

Terminations

Page No.	Appropriation	Budget Program	Title of Termination	Pos.	Budget Authority
		No Program Terminations			
Subtotal, Terminations					

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Exhibit 5

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

Page No.			Positions	FTE	Budget Authority	Direct Obligations
Appropriation Available, 2022			157	154	45,500	56,331
Plus: Unobligated balance, end of year, 2022						0
2023 Adjustments to Base						
Plus: Inflationary adjustments to base			0	0	3,303	3,303
2023 Base			157	154	48,803	48,803
Plus: 2023 Program changes			32	28	18,802	18,802
2023 Estimate			189	182	67,605	67,605

			FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base		FY 2023 Estimate		Increase/Decrease from FY 2023 Base	
Comparison by activity/subactivity with totals by activity			Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
NTIA - 11	Domestic and International Policies	Pos./BA	28	10,574	39	10,574	39	11,522	48	14,223	9	2,701
		FTE/Obl.	28	10,125	39	13,190	39	11,522	46	14,223	7	2,701
NITA - 24	Spectrum Management	Pos./BA	22	7,255	38	7,255	38	8,206	40	8,888	2	682
		FTE/Obl.	23	7,255	38	7,255	38	8,206	39	8,888	1	682
NTIA - 34	Advanced Communications Research	Pos./BA	42	11,180	50	11,180	50	11,815	51	12,695	1	880
		FTE/Obl.	41	11,228	50	11,969	50	11,815	51	12,695	1	880
NTIA - 43	Broadband Programs	Pos./BA	29	16,183	29	16,183	29	16,926	42	27,447	13	10,521
		FTE/Obl.	26	18,110	29	23,301	29	16,926	41	27,447	12	10,521
NTIA - 56	Public Safety Communications	Pos./BA	1	308	1	308	1	334	8	4,352	7	4,018
		FTE/Obl.	0	0	1	616	1	334	8	4,352	7	4,018
	Total	Pos./BA	122	45,500	157	45,500	157	48,803	189	67,605	32	18,802
		FTE/Obl.	118	46,718	157	56,331	157	48,803	185	67,605	28	18,802

	FY 2021 Actual	FY 2022 CR Annualized	FY 2023 Base	FY 2023 Estimate	Increase/Decrease
Adjustments for:					
Recoveries	(377)				
Unobligated balance, start of year	(11,349)	(10,831)			
Unobligated balance transferred					
Unobligated balance, end of year	10,831				
Unobligated balance expiring	224				
Financing from transfers:					
Transfer from other accounts (-)					
Transfer to other accounts (+)					
Appropriation	45,500	45,500	48,803	67,605	18,802

Exhibit 6

Department of Commerce
National Telecommunications and Information
Administration Salaries and Expenses
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable Projects											
Advanced Communications Research	Pos./BA	42	12,000	50	0	50	0	50	0	0	0
	FTE/Obl.	41	13,069	50	45,336	50	10,000	50	10,000	0	0
Other	Pos./BA	0	375	2	0	2	0	2	0	0	0
	FTE/Obl.	0	178	2	1,192	2	375	2	375	0	0
Total, Reimbursable Projects	Pos./BA	42	12,375	52	0	52	0	52	0	0	0
	FTE/Obl.	41	13,247	52	46,528	52	10,375	52	10,375	0	0
Spectrum Fees											
Spectrum Management	Pos./BA	87	40,679	107	0	107	0	107	0	0	0
	FTE/Obl.	91	36,622	107	60,586	107	45,225	107	45,225	0	0
Total, Spectrum Fees	Pos./BA	87	40,679	107	0	107	0	107	0	0	0
	FTE/Obl.	91	36,622	107	60,586	107	45,225	107	45,225	0	0
Total, Reimbursable Obligations	Pos./BA	129	53,054	159	0	159	0	159	0	0	0
	FTE/Obl.	132	49,869	159	107,114	159	55,600	159	55,600	0	0

Exhibit 7

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SUMMARY OF FINANCING
(Dollar amounts in thousands)

	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
Total Obligations	96,587	163,445	104,403	123,205	18,802
Offsetting collections from:					
Federal funds	(49,369)	(106,614)	(55,100)	(55,100)	0
Non-Federal sources	(500)	(500)	(500)	(500)	
Recoveries	(377)				
Unobligated balance, start of year	(11,349)	(10,831)			
Unobligated balance transferred					
Unobligated balance, end of year	10,831				
Unobligated balance expiring	224				
Budget Authority	45,500	45,500	48,803	67,605	18,802
Financing:					
Transfer from other accounts (-)					
Transfer to other accounts (+)					
Appropriation	45,500	45,500	48,803	67,605	18,802

Exhibit 8

Department of Commerce
National Telecommunications and Information
AdministrationSalaries and Expenses
ADJUSTMENTS TO BASE
(Dollar amounts in thousands)

	Positions	Amount
Transfers	0	0
Adjustment		0
Financing		0
		0
Other Changes:		
2022 Pay raise		176
2023 Pay raise		809
Awards		0
Full-year cost in 20BY of positions financed for part-year in 20CY	0	0
Change in compensable days		(88)
Civil Service Retirement System (CSRS)		(4)
Federal Employees Retirement System (FERS)		9
Thrift Savings Plan		(101)
Federal Insurance Contribution Act (FICA) - OASDI		21
Health insurance		28
Employees Compensation Fund		(23)
Travel:		11
Mileage		1
Per diem		17
Rental payments to GSA		796
GSA Furniture and IT Program (FIT)		534
Postage		2
Working Capital Fund, Departmental Management		245
National Archives and Records Administration (NARA)		0
General Pricing Level Adjustment		286
Continuous Diagnostics and Mitigation Charges		41
Enterprise Infrastructure Services		336
Enterprise Services Direct Billing		217
Commerce Business System		0
Federal Protective Service		(10)
Other changes unique to certain bureaus (e.g., grants, ship and aircraft costs)		0
Subtotal, other changes	0	3,303
Total, adjustments to base	0	3,303

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
Domestic and International Policies
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Domestic and
  International Policies

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base		FY 2023 Estimate		Increase/Decrease from Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Domestic	Pos./BA	28	10,574	39	10,574	39	11,522	48	14,223	9	2,701
and International Policies	FTE/Obl	28	10,125	39	13,190	39	11,522	46	14,223	7	2,701
Total	Pos./BA	28	10,574	39	10,574	39	11,522	48	14,223	9	2,701
	FTE/Obl	28	10,125	39	13,190	39	11,522	46	14,223	7	2,701

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Domestic and International Policies

<u>Goal Statement</u>

The goal of the Domestic and International Policies program is to strengthen U.S. commerce by advancing policies that protect andpromote the Internet and digital commerce, foster innovation, create economic value, and enhance security both domestically and internationally.

<u>Base Program</u>

NTIA's strategic focus is to protect and promote an open, interoperable Internet; advocate for the free flow of information, goods, andservices; promote policies that maximize national security objectives and lessen collateral consequences; reduce regulatory barriers; and strengthen the global marketplace for American digital products and services. The Internet is the greatest engine of communications and commerce the world has ever known and is vital to U.S. economic leadership, innovation, and prosperity. Through its programs, NTIA improves the domestic and international policy landscape for the Internet and digital economy, which accounts for $1.2 trillion, or 6.5%, of the U.S. gross domestic product, and nearly six million jobs.[2] On behalf of the Administration, NTIA carries out its diverse programs and services, using and promoting multistakeholder approaches to lead U.S. policymakers, domestic industry, foreign governments, and international organizations in addressing Internet and digital economy policymaking, standards development, and governance issues. By advocating for market-driven policies and multistakeholder informed initiatives,NTIA supports online commerce, greater employment opportunities, and better quality of life for all Americans.

<u>Statement of Operating Objectives</u>

As the President's principal advisor on telecommunications and information policy issues, NTIA's FY 2023 operating objectives are guided by the Administration's Interim National Security Strategic Guidance and the three vital, national interests of: 1) protecting the American people; 2) expanding economic prosperity and opportunity; 3) realizing and defending the democratic values at the heart of the American way of life. To accomplish this in FY 2023, NTIA will support Presidential initiatives, the White House's National Security Strategy, and the Department of Commerce's Internet and digital commerce programs as they relate to the concerns of the U.S. business community, the promotion of market-based solutions, and the preservation of U.S. technology. NTIA's objective is to

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[2] Bureau of Economic Analysis – https://www.bea.gov/digital-economy

Exhibit 12

establish domestic and international policy leadership on, such issues as consumer data privacy, cybersecurity, online platforms, 5Gand next generation communications, the Internet of Things (IoT), and artificial intelligence (AI).

Domestically and internationally, U.S. industry and consumers rely significantly on the open Internet. Thus, in FY 2023, NTIA will leadthe Department of Commerce's bureaus on Internet and digital commerce strategies by conducting research and providing analytical support. NTIA work to advance the conversation on domestic privacy reform through stakeholder outreach and interagency consensus building. Further, NTIA is the Executive Branch expert on issues relating to the Domain Name System (DNS) and will support a multi-stakeholder approach to the coordination of the DNS to ensure the long-term viability of the Internet as a force for innovation and economic growth, including by providing a framework for the administration of the .edu and .us domains. In this capacity, NTIA has also worked to ensure that foreign data protection legislation does not unduly curtail access to information or freedom of speech, vital American priorities.

Because American businesses and governmental entities continue to be the target of cyber-attacks, in FY 2023, NTIA will convene industry to seek market-based, innovative solutions to cybersecurity challenges that require cross-sector collaboration. The goal of these activities is to improve industry-led adoption and awareness of cyber policy best practices and to examine where market incentives are imbalanced or insufficient. NTIA will accomplish the following cyber policy outcomes: (1) Finalize working group reports and continue to promote and support advancements on Software Component Transparency and Software Bill of Materials (SBOM) as outlined in NTIA's Executive-Order directed Report on Minimum Elements for an SBOM; (2) lead the recommendations on the Vulnerabilities Equities Process (VEP) on whether to disclose cybersecurity vulnerability information to the vendor so they willpatch the vulnerability or temporarily restrict knowledge of the vulnerability so that it can be used for national security or law enforcement purposes; and (3) advise the Administration on security threats to the telecommunications infrastructure from foreign license applicants.

In FY 2023, NTIA will represent the Administration's policies to independent agencies, including the Federal Communications Commission (FCC) and the Federal Trade Commission (FTC) with the goal of advocating for market-based, consensus-driven policies versus overly burdensome regulation. For the education and promotion of the importance of a free and open Internet, NTIAwill provide training in coordination with foreign assistance efforts, such as the Telecommunications Leadership Program and the
U.S. Telecommunications Training Institute.

Explanation and Justification

NTIA is the U.S. government leader in the strategic development, promotion, and execution of policies to support the domestic and global Internet and broader digital commerce. NTIA's Internet policy framework contributes to the efficient and equitable operation ofthe digital economy on a global scale and provides infrastructure for innovation and entrepreneurship to enhance American competitiveness. NTIA's domestic and international policy activities require it to maintain expertise and leadership on telecommunications and information policy issues and to identify the most important for Executive Branch attention. NTIA plays a critical role in representing the United States in multiple treaty-based and technical standards setting fora in order to provide leadership and advance U.S. national economic and technology policies.

Exhibit 12

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Domestic and International Policies	Pos./BA	28	10,574	39	10,574	39	11,522
	FTE/Obl.	28	10,125	39	13,190	39	11,522

With the FY 2023 base resources, NTIA's domestic and international policies program will focus their efforts on the following keyareas, as outlined below.

Executive Branch Support. In its role as advisor to the President on telecommunications and Internet issues, NTIA coordinates Executive Branch communications and Internet policy, represents the Administration's policy to independent agencies, including theFCC and the FTC, and provides technical and policy expertise on Internet infrastructure to the Executive Branch and other stakeholders. NTIA coordinates United States government (USG) domestic and international policies and positions that impact the Internet and other communications. NTIA plays an integral role in supporting the interagency legislative coordination and clearance process by reviewing Internet and digital commerce policies.

Law Enforcement and National Security. NTIA provides advice focusing on innovation and economic growth in policy discussions related to the protection of Americans from cyber threats. As such, in FY 2023, NTIA will take action to continue to participate in interagency discussions on topics ranging from countering online violence and radical extremism to proposals to authorize companies to "hack back" against the perpetrators of cyber-attacks. NTIA is the lead for the Department in representing its equities ininteragency deliberations related to cyber operations and policy, and thus continued program support will enable it to continue to convene stakeholders from across the ecosystem to address cybersecurity challenges in a proactive collaborative manner, including in response to new and emerging risks posed by emerging technologies.

Digital Commerce Leadership. NTIA will support the Department's leadership team by providing analytical and technical expertise on cross-cutting issues and convening senior leaders for decision making and direction on Internet policy economic competitiveness anddigital commerce issues. NTIA will continue to serve in leading and supporting roles in communications and information policy, economic analysis, intellectual property, trade, and technical standards to address the most pressing issues in the digital commerce and Internet economy, including the areas of online speech and content moderation, privacy, and 5G and next generation communications.

Multistakeholder Engagements. To promote American prosperity, NTIA develops Internet policies designed to protect and expand Internet use and encourage further innovation and economic growth. Through its multistakeholder engagements, NTIA expands andstrengthens Internet policy development to include economic and business/industry concerns and impacts.

Exhibit 12

International Representation. NTIA plays a critical role in developing strategy and representing the USG in international negotiations, standard setting, and diplomacy efforts. It is in these gatherings that governments and other stakeholders advance policy approaches that will determine how open the global digital economy will be to American products, services, and ideas. NTIA advocates for bilateral, multistakeholder, multilateral and regional adoption of policies that encourage an open Internet; promote market liberalization; and stimulate economic development and promotion of communications technology interests. NTIA participates in a wide variety of international fora to ensure that they maintain a central focus on innovation and economic growth and preserve the multistakeholder approach to Internet policymaking. NTIA requested a small funding increase, which is critical for NTIA to ensure thatharmful standards and policies are not adopted by the International Telecommunications Union that would negatively impact industry and the interests of the U.S.

Trade Negotiations. NTIA provides policy and technical support to the Department, United States Trade Representative (USTR), and other federal agencies to ensure that any U.S. free trade agreement[s], existing or under development, supports the Administration's position regarding communications, digital commerce services, and the free flow of information across borders. NTIA's continued participation in these efforts will contribute to preserving and/or creating jobs for Americans and rejuvenating the domestic economy. NTIA will increase its participation in Department of Commerce-run bilateral commercial dialogues to improve understanding with counterpart trade and economics (not just communications) ministries.

Inter-Agency Work and Capacity Building. NTIA will continue to work with other agencies to develop implementation strategies for improved and continuous telecommunications and information development in key countries and regions (e.g., Africa, Central and Latin America, and the Middle East), through such foreign assistance efforts as the Telecommunications Leadership Program, andthe U.S. Telecommunications Training Institute. We will work with the Office of the United States Trade Representative (USTR), other Commerce agencies, the State Department, and other federal agencies on policy approaches to telecommunications and information standards developments worldwide.

Exhibit 13

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGES FOR 2023
(Dollar amounts in thousands)

		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Domestic and International Policies	Pos./BA	39	11,522	46	13,558	7	2,036
	FTE/Obl.	39	11,522	44	13,558	5	2,036

Build Capacity for Cybersecurity and International Standards (+$2,036, 5 FTE/7 Positions) - NTIA is requesting $2,036 million and 7 positions to build additional program capacity and bolster expertise within our domestic and international policies program. The EO 14028 makes cybersecurity a clear priority for this Administration and is directly relevant to and intertwined with NTIA's role as the principal Advisor to the President on telecommunications and information policies. NTIA plays a critical role within the federal government in developing and driving adoption of market-based, risk-based cybersecurity guidelines to improve the private sector's cyber-security resilience. Additional staff would enable NTIA to bolster the cybersecurity expertise, increasing demand for voluntary, stakeholder-led best practices, codes of conduct, and measurement strategies and more actively assist in the range of interagency processes in support of the Administration's cybersecurity priorities. NTIA also has a critical role in the Internet governance and International Telecommunications Union (ITU) to preserve our economic security and facilitate U.S. technology leadership globally. With additional staff, NTIA will also promote and protect U.S. commercial interests internationally among the various ITU study groups that research, create, and promote communication standards—especially emerging technology standards.

	2023	2024	2025	2026	2027
Performance Measures:					
Number of assessments conducted	5	7	9	11	13
Number of industry and interagency meetings to exchange sensitive information	4	6	8	10	12

Exhibit 14

Department of Commerce
National Telecommunications and Information
Salaries and Expenses
PROGRAM CHANGE PERSONNEL DETAIL

Activity: Domestic and International Policies

Program Change: Build Capacity for Cybersecurity and International Standards

Title		Grade	Number	Annual Salary	Total Salaries
Telecom Policy Specialist		14	5	143,064	715,320
Communications Program Specialist		13	2	121,065	242,130
			0		0
					0
Subtotal			7	264,129	957,450
Less lapse	25%		(2)		(239,363)
Total full-time permanent (FTE)			5		718,088
FY 2023 Pay Raise	4.6%				33,032
Total					751,120

Personnel Data

Full-time Equivalent Employment	
Full-time permanent	5
Other than full-time permanent	0
Total	5
Authorized Positions:	
Full-time permanent	7
Other than full-time permanent	0
Total	7

Exhibit 15

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Direct Obligations amounts in thousands)

Activity: Domestic and International Policies

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	3,881	5,322	5,489	6,240	751
11.3	Other than full-time permanent					
11.5	Other personnel compensation	122	95	100	118	18
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**4,003**	**5,417**	**5,589**	**6,358**	**769**
12.1	Civilian personnel benefits	1,363	1,647	1,682	1,897	215
13	Benefits for former personnel					
21	Travel and transportation of persons	9	566	573	1,021	448
22	Transportation of things	0	6	6	6	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	516	854	1,319	1,403	84
23.3	Commun., util., and misc. charges	138	86	86	91	5
24	Printing and reproduction	9	12	13	16	3
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	988	2,901	329	437	108
25.3	Other goods and services from Federal sources	2,492	1,481	1,687	1,940	253
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					

Exhibit 15

25.7	Operation and maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons					
26	Supplies and materials	26	40	41	45	4
31	Equipment	581	45	62	209	147
32	Lands and structures					0
33	Investments and loans					
41	Grants, subsidies and contributions	0	135	135	135	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**10,125**	**13,190**	**11,522**	**13,558**	**2,036**

Exhibit 13

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGES FOR 2023
(Dollar amounts in thousands)

		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Domestic and International Policies	Pos./BA	39	11,522	41	12,187	2	665
	FTE/Obl.	39	11,522	40	12,187	1	665

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IT Security Maintenance and Resilience (+$665, 1 FTE/2 Positions) - NTIA is requesting funding to strengthen IT security resiliency across all NTIA programs and accelerate the implementation of specific cybersecurity standards set forth by OMB M-22-09 memorandum - Federal zero trust architecture (ZTA) strategy. The Zero Trust approach is the leading contemporary IT industry paradigm for minimizing exposure to cyber threats while enabling a mobile workforce and is mandated as the path toward implementing Executive Order 14028, Improving the Nation's Cybersecurity. This proposal expands NTIA's capability in meeting specific zero trust security goals by the target date in FY 2024.

As we expand our mission support in spectrum, advanced telecommunications, and national recovery through a broadband grants program, it is no longer viable to operate without dedicated Information System Security Officers (ISSOs) to define accurate control configuration information that enables Information Security Continuous Monitoring (ISCM) as NIST describes. NITA has 14 diverse FISMA systems under security remit, this has inevitably diluted oversight and tool expertise from a security perspective. With sustained funding, NTIA will have the capability to onboard and assign ISSOs responsible for related systems, whether mission or infrastructure, with a maximum of 2-3 systems each. In addition, the ISSOs will be charged with implementing and enabling the ISCM security governance framework at the system level.

In addition, this increase will support the Zero Trust mandate and enable NTIA to meet targets for implementation. NTIA will dedicate resources toward implementation phases identified in the "Zero Trust Implementation Plan Guide and Template" using consulting and contracting resources for Phase 1: Planning; Phase 2: Technical implementation; Phase 3: Administrative (including general documentary), Phase 4: Analysis and Reporting.

	2023	2024	2025	2026	2027
Performance Measures:					
Percentage of Security and Access Management Events Reported to Help Desk with increase	Baseline	100%	100%	100%	100%
Percentage of Security and Access Management Events Reported to Help Desk without increase	Baseline	90%	75%	75%	75%

Exhibit 14

Department of Commerce
National Telecommunications and Information
Salaries and Expenses
PROGRAM CHANGE PERSONNEL DETAIL

Activity: Domestic and International Policies

Program Change: IT Security Maintenance and Resilience

Title	Grade	Number	Annual Salary	Total Salaries
Enterprise Security Architect	14	1	143,064	143,064
ISSO (Enterprise Systems)	13	1	121,065	121,065
Subtotal		2	264,129	264,129
Less lapse	25%	(1)		(66,032)
Total full-time permanent (FTE)		1		198,097
FY 2023 Pay Raise	4.6%			9,112
Total				207,209

Personnel Data

Full-time Equivalent Employment	
Full-time permanent	1
Other than full-time permanent	0
Total	1

Authorized Positions:	
Full-time permanent	2
Other than full-time permanent	0
Total	2

Exhibit 15

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Direct Obligations amounts in thousands)

Activity: Domestic and International Policies

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	3,881	5,322	5,489	5,696	207
11.3	Other than full-time permanent					
11.5	Other personnel compensation	122	95	100	100	
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**4,003**	**5,417**	**5,589**	**5,796**	**207**
12.1	Civilian personnel benefits	1,363	1,647	1,682	1,740	58
13	Benefits for former personnel					
21	Travel and transportation of persons	9	566	573	584	11
22	Transportation of things	0	6	6	6	
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	516	854	1,319	1,344	25
23.3	Commun., util., and misc. charges	138	86	86	87	1
24	Printing and reproduction	9	12	13	14	1
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	988	2,901	329	551	222
25.3	Other goods and services from Federal sources	2,492	1,481	1,687	1,754	67
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					

Exhibit 15

25.7	Operation and maintenance of equipment	0	0	0	0	
25.8	Subsistence and support of persons					
26	Supplies and materials	26	40	41	42	1
31	Equipment	581	45	62	134	72
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	135	135	135	
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**10,125**	**13,190**	**11,522**	**12,187**	**665**

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
Spectrum Management
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Spectrum Management

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base		FY 2023 Estimate		Increase/Decrease from Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Spectrum Management	Pos./BA	22	7,255	38	7,255	38	8,206	40	8,888	2	682
	FTE/Obl	23	7,255	38	7,255	38	8,206	39	8,888	1	682
Total	Pos./BA	22	7,255	38	7,255	38	8,206	40	8,888	2	682
	FTE/Obl	23	7,255	38	7,255	38	8,206	39	8,888	1	682

Exhibit 11

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM AND PERFORMANCE: REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Activity: Spectrum Management

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base		FY 2023 Estimate		Increase/Decrease from Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Spectrum Management	Pos./BA	87	40,679	107	0	107	0	107	0	0	87
	FTE/Obl	91	36,622	107	60,586	107	45,225	107	45,225	0	91
Total	Pos./BA	87	40,679	107	0	107	0	107	0	0	87
	FTE/Obl	91	36,622	107	60,586	107	45,225	107	45,225	0	91

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Spectrum Management

Goal Statement

The Spectrum Management program ensures that electromagnetic spectrum is used efficiently and effectively to enable the federal agencies to perform their missions, while supporting the commercial sector's development of next generation wirelessservices.

Base Program

NTIA carries out the President's authority to assign spectrum resources to radio stations belonging to and operated by the United States.[3] The federal agencies rely on the radio spectrum to execute their congressionally mandated missions, ranging from national defense, homeland security, and law enforcement to ensuring aeronautical and marine safety, conducting spacetravel and scientific research, and accurately forecasting the weather. The agencies could not provide these vital government services without radio frequency assignments, which NTIA is responsible for managing. NTIA is also charged from time to time with making more spectrum available for licensed commercial use, creating billions of dollars in spectrum auction proceeds for the U.S. Treasury and ensuring U.S. leadership and economic growth driven by next-generation technologies. Tosupport these spectrum auctions, NTIA works closely with the Federal Communications Commission (FCC) to coordinate spectrum use, identify and reallocate spectrum bands to accommodate commercial wireless services, update spectrum policies, and develop long-range spectrum management plans. To execute these responsibilities and minimize costs, NTIA depends on significant collaboration with interested federal agencies and key private-sector stakeholders.[4]

Statement of Operating Objectives

In FY 2023, NTIA will continue to help ensure sufficient spectrum is available for federal entities and will prioritize the following three activities: 1) conduct mission-essential functions to manage federal spectrum resources; 2) support growing demand for

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[3] NTIA Organization Act, as amended (47 USC 901 et. seq.)
[4] See links to Interdepartment Radio Advisory Committee (IRAC) at https://www.ntia.doc.gov/page/interdepartment-radio-advisory-committee-irac and Commerce Spectrum Management Advisory Committee (CSMAC) at https://www.ntia.doc.gov/category/csmac

Exhibit 12

spectrum in the commercial wireless industry, including through facilitating the efficient and effective use of federal spectrum; and 3) coordinate critical national and international spectrum issues that impact U.S. businesses, consumers, and governmentagencies.

To accomplish its essential functions, NTIA will ensure that federal agencies have sufficient access to spectrum resources needed to conduct their current and future mission-critical activities. NTIA will achieve these three key outcomes: 1) certify approximately 300 spectrum-dependent systems required to support national security, emergency communications, and important federal scientific endeavors; 2) process over 100,000 radio frequency assignments to authorize federal wireless systems to operate when and where they are needed; and 3) respond during disasters to ensure continuity of critical state, territorial, local, and federal spectrum operations. In support of growing demand for commercial wireless spectrum, NTIA will lead the efforts to find additional spectrum to support the deployment of innovative technologies that contribute billions of dollars towards America's economic prosperity and global technology leadership. For example, through tremendous analysis and effort, NTIA in early FY 2021 identified 100 megahertz of mid-band spectrum (3450-3550 MHz) that the FCC auctioned during FY 2022.

Internationally, NTIA will lead the federal agencies in preparations to advance U.S. policy positions slated for the next International Telecommunication Union's World Radiocommunication Conference (WRC) agenda, scheduled to be held in 2023. Concurrently, NTIA will lead the implementation of changes to the U.S. regulations resulting from the WRC, the treaty- status forum that establishes radiocommunication regulations for global and regional operations in space and on earth. In other international efforts, NTIA will coordinate critical spectrum issues along the Canadian and Mexican borders, with the goalof preventing harmful interference under applicable treaties, agreements, and arrangements. NTIA will also coordinate hundreds of satellite actions with foreign governments and domestic operators to bring these systems into use and to improve the global competitiveness of the U.S. space sector.

<div align="center">Explanation and Justification</div>

The federal agencies could not provide their vital government services without radio frequency assignments and without NTIA's management of these scarce spectrum resources. At the same time, there is tremendous growth in demand for wireless spectrum by consumers, businesses, and government agencies. According to the recent Cisco Annual Internet Report, there will be 29.3 billion networked devices by 2023, up from 18.4 billion in 2018. Most of these will be wireless devices relying upon access to spectrum. Our nation's economic prosperity depends on innovative technologies and commercial wireless services gaining access to morespectrum.

Exhibit 12

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Spectrum Management	Pos./BA	22	7,255	38	7,255	38	8,206
	FTE/Obl.	23	7,255	38	7,255	38	8,206

As part of its FY 2023 base resources, NTIA will accomplish the following activities, as outlined below.

NTIA conducts day-to-day spectrum management operations to authorize agency requests for radio frequency assignments and to certify agency spectrum-dependent equipment including those supporting national security and emergency communications. These assignment and certification actions require expert electromagnetic compatibility evaluations to ensure the equipment, when deployed, does not cause interference during operations. NTIA also conducts spectrum engineering studies and technical analyses to make decisions regarding frequency assignments, system certifications, spectrum sharing, interference resolution, and federal technical standards.

NTIA conducts domestic spectrum activities that include developing, advocating, and implementing spectrum policies that expand spectrum access and improve efficiency across the Federal Government. This involves responding to proposed spectrum legislation, Congressional inquiries, and dozens of new and ongoing FCC proceedings. NTIA also provides outreach to public and private stakeholders, including spectrum training courses and seminars for U.S. and foreign spectrum managers. To inform policymaking, NTIA will conduct its annual symposium at which a wide range of subject matter experts will discuss innovations, ideas, and issues in federal spectrum policy and management. NTIA will continue to administer and conduct the Technical Panel activities, which include the review and approval of agency transition plans and spectrum pipeline plans needed to reallocate and auction spectrum to accommodate commercial access. NTIA will also continue to execute its responsibilities to ensure commercial licensees have timely access to federal spectrum bands auctioned by the FCC and that agencies spend Spectrum Relocation Fund transfers in accordance with their approved transition plans.

NTIA conducts international spectrum policy activities to develop positions and promote U.S. interests in international bodies dealing with radio regulations and other spectrum issues. This includes representing federal interests at international forums such as the WRC, regional meetings, and other specialized agencies of the United Nations (*e.g.*, the International Civil Aviation Organization). NTIA is also responsible for leading all coordination and registration for federal satellite systems to provide protection of global satellite services from harmful interference and safeguard orbital slots for U.S. satellite systems. In addition, NTIA coordinates federal

Exhibit 12

spectrum requirements along our national borders. NTIA's efforts on these international matters play a critical role in building confidence worldwide in U.S. spectrum management capabilities to win support for U.S. positions that augment the mission capabilities of federal entities worldwide and in space, enable groundbreaking wireless and satellite technologies, and improve theglobal competitiveness of U.S. industries.

NTIA will continue to implement a twelve-year plan to modernize and automate NTIA's Spectrum IT Systems. In FY 2023, NTIA will implement the first of four phases to modernize Spectrum IT Systems. It will enhance the security of federal Spectrum IT Systems to meet Federal Information Security Management Act (FISMA) security requirements. In later years, NTIA will seek to implement phases 2-4, where Phase 2 will enable spectrum (i.e., radio frequency) efficiencies to promote economic growth. This effort targets a 5% or greater increase in spectrum efficiency of U.S. federal spectrum use and a 50% improvement inprocessing timeliness. Phase 3 will ensure NTIA has the data and situational awareness needed to perform NTIA responsibilities in a spectrum sharing environment. Phase 4 will operate and maintain federal Spectrum IT Systems with improved data quality and transparency to better inform spectrum efficiency.

Exhibit 13

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGES FOR 2023
(Dollar amounts in thousands)

		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Spectrum Management	Pos./BA	38	8,206	40	8,888	2	682
	FTE/Obl.	38	8,206	39	8,888	1	682

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IT Security Maintenance and Resilience (+$682, 1 FTE/2 Positions) - This request will strengthen NTIA's IT security resiliency across all NTIA programs and accelerate the implementation of specific cybersecurity standards set forth by OMB M-22-09 memorandum - Federal zero trust architecture (ZTA) strategy. The Zero Trust approach is the leading contemporary IT industry paradigm for minimizing exposure to cyber threats while enabling a mobile workforce and is mandated as the path toward implementing Executive Order 14028, Improving the Nation's Cybersecurity. This proposal expands NTIA's capability in meeting specific zero trust security goals by the target date in FY 2024.

As we expand our mission support in spectrum, advanced telecommunications, and national recovery through a broadband grants program, it is no longer viable to operate without dedicated Information System Security Officers (ISSOs) to define accurate control configuration information that enables Information Security Continuous Monitoring (ISCM) as NIST describes. NITA has 14 diverse FISMA systems under security remit, this has inevitably diluted oversight and tool expertise from a security perspective. With sustained funding, NTIA will have the capability to onboard and assign ISSOs responsible for related systems, whether mission or infrastructure, with a maximum of 2-3 systems each. In addition, the ISSOs will be charged with implementing and enabling the ISCM security governance framework at the system level.

In addition, this increase will support the Zero Trust mandate and enable NTIA to meet targets for implementation. NTIA will dedicate resources toward implementation phases identified in the "Zero Trust Implementation Plan Guide and Template" using consulting and contracting resources for Phase 1: Planning; Phase 2: Technical implementation; Phase 3: Administrative (including general documentary), Phase 4: Analysis and Reporting.

	2023	2024	2025	2026	2027
Performance Measures:					
Percentage of Security and Access Management Events Reported to Help Desk with increase	Baseline	100%	100%	100%	100%
Percentage of Security and Access Management Events Reported to Help Desk without increase	Baseline	90%	75%	75%	75%

Exhibit 14

Department of Commerce
National Telecommunications and Information Administration
Operations and Administration
PROGRAM CHANGE PERSONNEL DETAIL

Activity: Spectrum Management

Program Change: IT Security Maintenance and Resilience

Title		Grade	Number	Annual Salary	Total Salaries
ISSO (OSM Systems)		14	1	143,064	143,064
ISSO (OSM Systems)		13	1	121,065	121,065
			0		0
					0
Subtotal			2	264,129	264,129
Less lapse	25%		(1)		(66,032)
Total full-time permanent (FTE)			1		198,097
FY 2023 Pay Raise	4.6%				9,112
Total					207,209

Personnel Data

Full-time Equivalent Employment
Full-time permanent	1
Other than full-time permanent	0
Total	1

Authorized Positions:
Full-time permanent	2
Other than full-time permanent	0
Total	2

Exhibit 15

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Spectrum Management

Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1 Full-time permanent compensation	2,711	3,201	3,372	3,579	207
11.3 Other than full-time permanent	0	0	0	0	0
11.5 Other personnel compensation	75	58	63	63	0
11.8 Special personnel services payments					
11.9 **Total personnel compensation**	**2,786**	**3,259**	**3,435**	**3,642**	**207**
12.1 Civilian personnel benefits	965	990	1,001	1,059	58
13 Benefits for former personnel					
21 Travel and transportation of persons	1	86	93	104	11
22 Transportation of things	0	2	2	2	0
23 Rent, communications and utilities					
23.1 Rental payments to GSA	0	0	0	0	0
23.2 Rental payments to others	366	386	863	888	25
23.3 Commun., util., and misc. charges	87	17	17	18	1
24 Printing and reproduction	1	6	6	7	1
25 Other contractual services					
25.1 Advisory and assistance services	0	0	0	0	0
25.2 Other services from non-Federal sources	1,726	599	642	879	237
25.3 Other goods and services from Federal sources	923	1,881	2,101	2,169	68
25.4 Operations and maintenance of facilities					
25.5 Research and development contracts					
25.6 Medical care					

Exhibit 15

25.7	Operation and maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons					
26	Supplies and materials	18	23	23	24	1
31	Equipment	382	6	23	96	73
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	0	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**7,255**	**7,255**	**8,206**	**8,888**	**682**

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
Advanced Communications Research
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Advanced Communications Research

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base		FY 2023 Estimate		Increase/Decrease from Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Advanced Communications	Pos./BA	42	11,180	50	11,180	50	11,815	51	12,695	1	880
Research	FTE/Obl	41	11,228	50	11,969	50	11,815	51	12,695	1	880
Total	Pos./BA	42	11,180	50	11,180	50	11,815	51	12,695	1	880
	FTE/Obl	41	11,228	50	11,969	50	11,815	51	12,695	1	880

Exhibit 11

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM AND PERFORMANCE: REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Activity: Advanced Communications Research

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2022 Base		FY 2022 Estimate		Increase/Decrease from Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Advanced Communications	Pos./BA	42	12,000	50	0	50	0	50	0	0	0
Research	FTE/Obl	41	13,069	50	45,336	50	10,000	50	10,000	0	0
Total	Pos./BA	42	12,000	50	0	50	0	50	0	0	0
	FTE/Obl	41	13,069	50	45,336	50	10,000	50	10,000	0	0

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Advanced Communications Research

<u>Goal Statement</u>

Through cutting-edge research and engineering, the Advanced Communications Research program advances the nation's goals to discover and deploy technologically advanced communication solutions to use and share spectrum more efficiently and effectively without harmful interference.

<u>Base Programs</u>

The Institute for Telecommunication Sciences (ITS), NTIA's research facility in Boulder, Colorado, is one of the world's leading telecommunications research laboratories. ITS research informs spectrum policy; proposes solutions to emerging telecommunications issues; and provides critical technical input regarding how spectrum-dependent systems, such as radars and cellphones, interact. ITS partners with other federal agencies, industry, and academia to collaborate on solving critical telecommunications problems. Through its independent, unbiased technical analyses, ITS serves as a trusted agent, working to balance the goals of protecting mission critical federal telecommunication systems from harmful interference while promoting commercial industries' ability to innovate and deploy advanced communication technologies. Towards these objectives, ITS researches new and innovative approaches to spectrum sharing, interference protection, and the interaction of communication equipment, systems, and services. ITS also provides key technical leadership for the U.S. Government on technology and spectrumissues in domestic and international telecommunications standards bodies.

<u>Statement of Operating Objectives</u>

ITS has identified three core technical research and engineering priority areas in FY 2023 that (1) promote efficient spectrum accessand spectrum sharing; (2) inform policy development to stimulate US industry success in 5G and beyond communications by informing NTIA's policy making role through standards development and test and evaluation; and (3) modernize and maintain research facilities and equipment.[5]

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[5] More detailed information on ITS's research can be found on the website at https://www.its.bldrdoc.gov/

Exhibit 12

Promote efficient spectrum access and spectrum sharing. In an accelerating wireless world, spectrum is a critically important, scarce resource. Different communication systems are now required to share spectrum, meaning that they must operate using the same radio frequencies. These sharing arrangements must take place without the systems interfering with each other's operations. ITS conducts the critically important research into reliable spectrum access and dynamic, interference-free spectrum sharing. The ITS research portfolio is designed to enable and improve spectrum access and sharing by continuously improving our understanding of radio frequency signals: how radio waves behave in different environments; how bandwidth and coverage vary with frequency; how much usage is really occurring at different frequencies; and how different spectrum-dependent systems can co-exist near each other.To this end, in FY 2023, ITS will perform extensive measurement validation and verification of the troposcatter, terrain diffraction, and clutter propagation models. These measurement campaigns will produce high quality real-world data sets with modern measurementequipment and techniques, providing objective ground truth against which to evaluate propagation models. Validated models will then be provided to the propagation and spectrum community through releases to the open-source ITS Propagation Library, while the evaluation datasets will later be made public to support additional collaboration between ITS and other research organizations and government agencies, in addition to supporting US government Open Data initiatives.

Inform policy development to stimulate U.S. industry success in 5G. In FY 2023, ITS will conduct research that supports the deployment of new and innovative telecommunications technologies to inform NTIA's policy making role as it relates to next generation information and communications technologies such as 5G. ITS will continue to provide unbiased research in support of improved spectrum efficiency and increased spectrum sharing among continuously evolving technologies, promoting balanced consideration of commercial and federal needs. Additionally, ITS will continue to represent emerging U.S.interests through targeted technical expertise and contributions to influence development and negotiation of national and international standards that support an open and globally competitive telecommunications marketplace.

Modernize and maintain research facilities and equipment. In FY 2023, ITS will maintain the ITS research facility in Boulder, Colorado and upgrade research equipment to solve complex spectrum sharing problems as they evolve in response to new technologies. ITS owns and maintains the Table Mountain Field Site and Radio Quiet Zone, which is an 1,800-acre, open-air test location, that is the only Radio Quiet Zone available for research and development of new spectrum-dependent technologies. Table Mountain is protected by Federal and state law to prevent the transmissions of powerful signals over the site. The site is used by multiple federal agencies and industry partners to perform fundamental research into the nature, interaction, and performance of spectrum-dependent devices, systems, and services. Other federal agencies leverage ITS's research facilities and expert staff for advanced research to resolve their telecommunications issues.

Exhibit 12

Explanation and Justification

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Advanced Communications Research	Pos./BA	42	11,180	50	11,180	50	11,815
	FTE/Obl.	41	11,228	50	11,969	50	11,815

NTIA will conduct research in areas of efficient spectrum access and spectrum sharing and other critical spectrum activities. The critical radio frequency measurement data NTIA gathers will provide ITS, private partners, and the public sectors with data modeling tools that will be used to deploy new telecommunication networks and services and increase commercial access to new shared radio bands. The Radio Spectrum Measurement Sciences' spectrum monitoring capabilities will be expanded to monitor additional swaths of spectrum usage and will continue to provide the FCC, DoD, and other federal agencies increased insight into the occupancy of the spectrum to inform planning, efficient management, and enforcement. To keep pace with 5G research and development, which is one of the fastest growing and most impactful communications technologies now and into the future, NTIA will continue to adapt and expand the next-generation communications laboratory and direct subject matter expertise on future information and communications technologies to give the US a powerful voice in the global development and standardization of the further evolution of information and communications technologies. These efforts will help ensure NTIA has sufficient engineering expertise to inform its policy making role in working to ensure US industry success in the global 5G and beyond information and communications technologies market.

NTIA will conduct upgrades on the modernization and maintenance of research facilities and equipment. For the Table Mountain Field Site and Radio Quiet Zone, NTIA will continue to manage, operate, and maintain this critical, telecommunication research site. ITS will continue the renovation of the laboratory buildings at the site and in FY2023 three buildings will be modernized, including two large dish antennas. Telecommunications is one of the most rapidly evolving sectors of the economy with new generations of equipment being released annually or more frequently. To keep pace with each new generation of technology, NTIA must continually invest in new measurement equipment to meet the needs of greater sensitivity, increased resolution, higher frequencies and wider bandwidths.

Exhibit 13

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGES FOR 2023
(Dollar amounts in thousands)

		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Advanced Communications Research	Pos./BA	50	11,815	51	12,695	1	880
	FTE/Obl.	50	11,815	51	12,695	1	880

IT Security Maintenance and Resilience (+$880, 1 FTE/1 Positions) - NTIA is requesting funding to strengthen IT security resiliency across all NTIA programs and accelerate the implementation of specific cybersecurity standards set forth by OMB M-22-09 memorandum - Federal zero trust architecture (ZTA) strategy. The Zero Trust approach is the leading contemporary IT industry paradigm for minimizing exposure to cyber threats while enabling a mobile workforce and is mandated as the path toward implementing Executive Order 14028, Improving the Nation's Cybersecurity. This proposal expands NTIA's capability in meeting specific zero trust security goals by the target date in FY 2024.

As we expand our mission support in spectrum, advanced telecommunications, and national recovery through a broadband grants program, it is no longer viable to operate without dedicated Information System Security Officers (ISSOs) to define accurate control configuration information that enables Information Security Continuous Monitoring (ISCM) as NIST describes. NITA has 14 diverse FISMA systems under security remit, this has inevitably diluted oversight and tool expertise from a security perspective. With sustained funding, NTIA will have the capability to onboard and assign ISSOs responsible for related systems, whether mission or infrastructure, with a maximum of 2-3 systems each. In addition, the ISSOs will be charged with implementing and enabling the ISCM security governance framework at the system level.

In addition, this increase will support the Zero Trust mandate and enable NTIA to meet targets for implementation. NTIA will dedicate resources toward implementation phases identified in the "Zero Trust Implementation Plan Guide and Template" using consulting and contracting resources for Phase 1: Planning; Phase 2: Technical implementation; Phase 3: Administrative (including general documentary), Phase 4: Analysis and Reporting.

	2023	2024	2025	2026	2027
Performance Measures:					
Percentage of Security and Access Management Events Reported to Help Desk with increase	Baseline	100%	100%	100%	100%
Percentage of Security and Access Management Events Reported to Help Desk without increase	Baseline	90%	75%	75%	75%

Exhibit 14

Department of Commerce
National Telecommunications and Information Administration
Operations and Administration
PROGRAM CHANGE PERSONNEL DETAIL

Activity: Advanced Communications Research

Program Change: IT Security Maintenance and Resilience

Title		Grade	Number	Annual Salary	Total Salaries
ISSO (ITS Systems)		13	1	121,065	121,065
Subtotal			1	121,065	121,065
Less lapse	25%		(0)		(30,266)
Total full-time permanent (FTE)			1		90,799
FY 2023 Pay Raise	4.6%				4,177
Total					94,975

Personnel Data	
Full-time Equivalent Employment	
Full-time permanent	1
Other than full-time permanent	0
Total	1
Authorized Positions:	
Full-time permanent	1
Other than full-time permanent	0
Total	1

Exhibit 15

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Advanced Communications Research

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	3,629	4,630	4,851	4,946	95
11.3	Other than full-time permanent					
11.5	Other personnel compensation	194	199	205	205	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**3,823**	**4,829**	**5,056**	**5,151**	**95**
12.1	Civilian personnel benefits	1,207	1,433	1,478	1,505	27
13	Benefits for former personnel					
21	Travel and transportation of persons	5	179	188	193	5
22	Transportation of things	0	4	4	4	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	73	734	734	746	12
23.3	Commun., util., and misc. charges	81	6	8	9	1
24	Printing and reproduction	0	11	12	12	0
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	1,394	929	196	810	614
25.3	Other goods and services from Federal sources	896	954	1,226	1,268	42
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					

Exhibit 15

25.7	Operation and maintenance of equipment	92	0	0	0	0
25.8	Subsistence and support of persons					
26	Supplies and materials	99	28	29	29	0
31	Equipment	3,558	2,862	2,884	2,968	84
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions					
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**11,228**	**11,969**	**11,815**	**12,695**	**880**

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
Broadband Programs
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Broadband Programs

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base		FY 2023 Estimate		Increase/Decrease from Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Programs	Pos./BA	29	16,183	29	16,183	29	16,926	42	27,447	13	10,521
	FTE/Obl	26	18,110	29	23,301	29	16,926	41	27,447	12	10,521
Total	Pos./BA	29	16,183	29	16,183	29	16,926	42	27,447	13	10,521
	FTE/Obl	26	18,110	29	23,301	29	16,926	41	27,447	12	10,521

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Broadband Programs

Goal Statement

The Broadband Program promotes the expansion of broadband access and use across America by facilitating and overseeing investments in critical infrastructure deployment and digital inclusion that will help attract new jobs, promoteeconomic growth, and encourage increased innovation.

Base Program

The Consolidated Appropriations Act, 2021 and the ACCESS BROADBAND Act, established the Office of Internet Connectivity and Growth (OICG) at NTIA. All of NTIA's broadband programs are housed in OICG including the Office of Minority Broadband Initiatives (OMBI), the National Broadband Availability Map (NBAM), all of its State and interagency coordination functions, including the Broadband Interagency Coordination Agreement (BICA), as well as its BroadbandUSA technical assistance programs that provide community outreach and support for state, tribal, and local leaders on the breadth of issues related to the digital divide in our country.

ACCESS Broadband Act also charged OICG with tracking in a centralized database, federal and state broadband programs for the construction of broadband infrastructure and programs supporting the adoption and use of broadband services. OICG publishes an annual report including the number of residents of the United States that received broadband as result of federal broadband support programs, a description of Americans who received support for broadband services and related equipment and training, as well as the economic impact of such broadband deployment efforts on local economies, including any effect on small businesses or jobs.

OICG will continue the BroadbandUSA outreach activities with states, localities, and tribal organizations to improve digital inclusion efforts, hold regional and virtual workshops to share best practices and effective strategies for promoting broadband access and adoption, develop education and training tools to support local strategies to expand broadband access and adoption.

Through the Office of Minority Broadband Initiatives, NTIA will continue to collaborate with federal agencies; state, local and tribal governments; Historically Black Colleges and Universities, Tribal Colleges and Universities and Minority-Serving Institutions; and any interested stakeholders to promote initiatives related to expanding connectivity and digital opportunities for anchor communities.

Exhibit 12

NTIA will continue to provide oversight of and technical assistance to recipients that will be awarded Broadband Connectivity Grants. These activities are necessary to protect the federal investment of $1.27 billion in federal funds andensure the successful completion of projects.

Statement of Operating Objectives

In FY23, NTIA will accomplish the following objectives related to ACCESS BROADBAND and its Broadband Interagency Coordination efforts to promote greater coordination and consistency across federal programs to better target broadband investments to unserved areas and to streamline the application process for broadband programs, prepare a report to Congress including the number of residents of the United States that received broadband as result of federal broadband support programs, a description of Americans who received support for broadband services and related equipment and training, as well as the economic impact of such broadband deployment efforts on local economies, including any effect onsmall businesses or jobs.

NTIA will improve the nation's understanding of broadband availability through its broadband availability data mapping initiative. In FY23, NTIA will accomplish the following items: 1) update geographic information systems (GIS) and geo- analytical systems, necessary to support the base program; 2) integrate, visualize, and analyze broadband availability data from participating states; 3) integrate, visualize, and analyze broadband availability data from broadband providers; 4) integrate the most recent FCC Form 477 data, or, if available, the new Broadband DATA Act granular data on broadband availability and quality; and 5) integrate updated broadband planning data from other federal agencies. These important improvements will enhance BroadbandUSA's data collection and analytic capabilities to better support policymaking and investment decisions. Without these improvements, the U.S. will lack the ability to compare updated federal and non-federaldata sets to identify regions with insufficient service, better validate broadband availability data, and produce reports and analyses that could be used for investment and decision-making.

NTIA will carry out the responsibilities if the Office of Minority Broadband Initiatives to collaborate with federal agencies; state, localand tribal governments; Historically Black Colleges and Universities, Tribal Colleges and Universities and Minority-Serving Institutions; and any interested stakeholders to help navigate federal funding opportunities and promote broadband Internet accessand adoption, digital literacy, professional development opportunities, and deployment of advanced technologies in anchor communities that serve minority populations.

Explanation and Justification

Through its BroadbandUSA program, NTIA will continue to provide technical assistance to tribal, state, and local communities seeking to expand connectivity and meet their economic development goals. BroadbandUSA's work will prepare stakeholders with technical, solution-neutral guidance and tools that help them engage in more effective and persuasive discussions with broadband partners and providers. BroadbandUSA staff will continue to lead workshops and events for communities to facilitate new public-private partnerships, explore a variety of infrastructure and digital inclusion funding opportunities, provide fresh perspectives for digital inclusion, and foster innovation for connectivity and use. NTIA will engage with stakeholders within industry, state, regional, and local entities to further common goals of increasing broadband access, particularly in rural areas. BroadbandUSA will work closely with the organizations at all levels of government to assist in removing barriers to deployment, facilitating and developing information, and increasing knowledge on broadband.

Exhibit 12

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Programs	Pos./BA	29	16,183	29	16,183	29	16,926
	FTE/Obl.	26	18,110	29	23,301	29	16,926

Through its Office of Minority Broadband Initiatives, NTIA will continue to expand NTIA's minority stakeholder engagement, principally by leveraging NTIA's good work with Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs). In particular and in line with the Administration's imperative to promote rural broadband deployment, 5G deployment, economic competitiveness, and digital inclusion, NTIA seeks to increase HBCU/TCU leadership participation in relevant broadband organizations, increase their outreach and participation in federal agency broadband programs, and ensure their inclusion in the broadband deployment stakeholder ecosystems and grant opportunities.

NTIA will continue to integrate new datasets, improve technical capabilities, and apply user feedback to improve the visualization, analytical, and other features of the map. As of fourth quarter of FY21, NTIA has: established a platform for broadband mapping, visualization, and analysis; added business intelligence capabilities to create dashboards and reports; integrated 380 data layers/data services including, Federal Communications Commission (FCC) Form 477 deployment data, FCC RDOF grant data, Universal Service Administrative Company (USAC) CAF II and HUBB portal data, USDA ReConnect grant data, Census American Community Survey (ACS) data, NTIA BTOP data, Economic Development Administration (EDA) project data, Appalachian Regional Commission (ARC) broadband deployment program data, Bureau of Indian Affairs (BIA) tribal grant data, Department of Education (ED) school location data, Department of Homeland Security (DHS) public infrastructure data, Department of Interior (DOI) real property and tribal lands, Department of Transportation (DOT) transit stations, Department of Housing and Urban Development (HUD) public housing data, Treasury Opportunity Zones; Measurement LAB and Ookla speed test data, Microsoft usage data, BroadbandNow pricing data, White Star parcel data; and data from many of the state governments; entered into agreements with 37 state partners, five Federal partners, and will support NTIA's new grant programs.

During FY21, BroadbandUSA collected feedback to inform enhancements and improvements to the map in later fiscal years. BroadbandUSA must keep its mapping system up to date in order to ensure that it meets users' performance expectations, complies with federal information security requirements, maintains the accuracy and integrity of the data, and scales to handle

Exhibit 12

additional data sets and user requirements. In order for the map to provide input to planning and funding decisions, BroadbandUSA must ensure that the system incorporates the latest FCC Form 477 datasets (released twice per year) or, if available, the new Broadband DATA Act granular data on broadband availability and quality, most recent broadband availability data made available by the states and participating service providers, and the most up-to-date demographic and economic data from other federal agencies that is incorporated into the tool. NTIA also published the "Indicators of Broadband Need" (IBN) interactive map, our first public tool derived from the NBAM, which brings multiple third-party data sources together to help the public better understand the digital divide and the connection between poverty and lack of broadband access or use. Layers include: Internet use survey data and poverty data from Census; service provider reported deployment data from the FCC; crowdsourced speed test data from M-Lab and Ookla; usage data downloaded from Microsoft system updates; tribal lands; and minority serving institutions. In addition, we also published the Connecting Minority Communities Eligibility Dashboard for grant applicants and are working with NTIAs Infrastructure and Tribal grant programs to develop use case driven tools that can help with the grant evaluation process. We also continue to consider tools like maps, reports, and dashboards that we can publish on the BroadbandUSA website to further support the public.

NTIA will continue to expand the map to include additional data on broadband availability from additional and participating states and service providers. New data sets will ensure that the map offers a granular and comprehensive understanding of broadband availability, in the areas where data is available. NTIA will also work to integrate its existing broadband technical assistance program with the map, by implementing tools that support reporting, broadband planning, and broadband analysis. Collectively, these activities will provide the information necessary to inform and better coordinate federal programs that fund broadband infrastructure and expand rural broadband deployments. In addition, BroadbandUSA will leverage this funding to incorporate additional analyses and data visualizations into the map, based on feedback from users. BroadbandUSA also plans to license third-party data sets that inform broadband planning and the analysis of broadband availability and incorporate that data into the platform.

NTIA will incorporate broadband availability data from additional states. The outcomes of such data will improve the understanding of broadband gaps at the state level. This new data will serve as a resource to leverage that improved understanding to inform state policy and investments as an opportunity to improve collaboration between states and NTIA, as part of NTIA's effort to augment the national broadband availability map.

In FY 22, NTIA will complete the award of approximately $980 million in Tribal Broadband Connectivity grants and $288 million in Broadband Infrastructure grants, and NTIA will begin post-award oversight responsibilities. The Tribal Broadband Connectivity Program has a statutory limitation of administrative expenses of not more than 2 percent or $20 million NTIA must continue to provide oversight to protect the federal investment in and ensure accountability for these broadband connectivity grants. NTIA also must provide technical assistance to help recipients navigate through technical challenges, federal grants administration requirements, and environmental and historic preservation regulations.

Exhibit 13

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGES FOR 2023
(Dollar amounts in thousands)

		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Programs	Pos./BA	29	16,926	40	26,926	11	10,000
	FTE/Obl.	29	16,926	40	26,926	11	10,000

Expand Access to Broadband and Provide Grant Support (+$10,000, 11 FTE/11 Positions) - NTIA is seeking an increase of $10 million and 11 positions for Broadband programs, as a key priority at NTIA. This increase will allow NTIA to build capacity to support the President's goal of expanding broadband access, including the establishment of the Office of Internet Connectivity and Growth. This additional funding will support the added responsibilities of the new office, including connecting with states, communities, and minority organizations that need broadband and digital inclusion support and developing targeted training. This funding will allow NTIA to consult with and lead the efforts with other Federal agencies on a streamlined and standardized application process for financial assistance and grants in the area of broadband programs. This funding will help continue the monitoring and support of NTIA broadband grants.

	2023	2024	2025	2026	2027
Performance Measures:					
New Technical Assistance engagements offered to rural and tribal broadband stakeholders with increase	350	500	521	550	600

Exhibit 14

Department of Commerce
National Telecommunications and Information Administration
Operations and Administration
PROGRAM CHANGE PERSONNEL DETAIL

Activity: Broadband Programs

Program Change: Expand Access to Broadband and Provide Grant Support

Title		Grade	Number	Annual Salary	Total Salaries
Communications Program Specialist		15	4	148,484	593,936
Communications Program Specialist		14	3	126,233	378,699
Communications Program Specialist		13	4	106,823	427,292
					0
Subtotal			11	381,540	1,399,927
Less lapse	25%		0		0
Total full-time permanent (FTE)			11		1,399,927
FY 2023 Pay Raise	4.6%				64,397
Total					1,464,324

Personnel Data

Full-time Equivalent Employment

Full-time permanent	11
Other than full-time permanent	0
Total	11

Authorized Positions:

Full-time permanent	11
Other than full-time permanent	0
Total	11

Exhibit 15

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Broadband Programs

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	4,030	4,471	4,600	6,064	1,464
11.3	Other than full-time permanent					
11.5	Other personnel compensation	128	92	94	94	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**4,158**	**4,563**	**4,694**	**6,158**	**1,464**
12.1	Civilian personnel benefits	1,439	1,384	1,409	1,819	410
13	Benefits for former personnel					
21	Travel and transportation of persons	3	212	218	418	200
22	Transportation of things	0	6	6	6	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	456	472	837	943	106
23.3	Commun., util., and misc. charges	115	21	23	33	10
24	Printing and reproduction	1	59	59	103	44
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	7,979	14,824	7,737	14,726	6,989
25.3	Other goods and services from Federal sources	1,345	1,196	1,366	2,055	689
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					
25.7	Operation and maintenance of equipment	0	0	0	0	0

Exhibit 15

25.8	Subsistence and support of persons					
26	Supplies and materials	24	13	13	26	13
31	Equipment	2,590	551	564	639	75
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions					
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**18,110**	**23,301**	**16,926**	**26,926**	**10,000**

Exhibit 13

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGES FOR 2023
(Dollar amounts in thousands)

		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Program	Pos./BA	29	16,926	31	17,447	2	521
	FTE/Obl.	29	16,926	30	17,447	1	521

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IT Security Maintenance and Resilience (+$521, 1 FTE/2 Positions) - NTIA is requesting funding to strengthen IT security resiliency across all NTIA programs and accelerate the implementation of specific cybersecurity standards set forth by OMB M-22-09 memorandum - Federal zero trust architecture (ZTA) strategy. The Zero Trust approach is the leading contemporary IT industry paradigm for minimizing exposure to cyber threats while enabling a mobile workforce and is mandated as the path toward implementing Executive Order 14028, Improving the Nation's Cybersecurity. This proposal expands NTIA's capability in meeting specific zero trust security goals by the target date in FY 2024.

As we expand our mission support in spectrum, advanced telecommunications, and national recovery through a broadband grants program, it is no longer viable to operate without dedicated Information System Security Officers (ISSOs) to define accurate control configuration information that enables Information Security Continuous Monitoring (ISCM) as NIST describes. NITA has 14 diverse FISMA systems under security remit, this has inevitably diluted oversight and tool expertise from a security perspective. With sustained funding, NTIA will have the capability to onboard and assign ISSOs responsible for related systems, whether mission or infrastructure, with a maximum of 2-3 systems each. In addition, the ISSOs will be charged with implementing and enabling the ISCM security governance framework at the system level.

In addition, this increase will support the Zero Trust mandate and enable NTIA to meet targets for implementation. NTIA will dedicate resources toward implementation phases identified in the "Zero Trust Implementation Plan Guide and Template" using consulting and contracting resources for Phase 1: Planning; Phase 2: Technical implementation; Phase 3: Administrative (including general documentary), Phase 4: Analysis and Reporting.

	2023	2024	2025	2026	2027
Performance Measures:					
Percentage of Security and Access Management Events Reported to Help Desk with increase	Baseline	100%	100%	100%	100%
Percentage of Security and Access Management Events Reported to Help Desk without increase	Baseline	90%	75%	75%	75%

Exhibit 14

Department of Commerce
National Telecommunications and Information Administration
Operations and Administration
PROGRAM CHANGE PERSONNEL DETAIL

Activity: Broadband Program

Program Change: IT Security Maintenance and Resilience

Title		Grade	Number	Annual Salary	Total Salaries
ISSO (OICG Systems)		14	1	143,064	143,064
ISSO (Enterprise Systems)		14	1	143,064	143,064
Subtotal			2	286,128	286,128
Less lapse	25%		(1)		(71,532)
Total full-time permanent (FTE)			1		214,596
FY 2023 Pay Raise	4.6%				9,871
Total					224,467

Personnel Data

Full-time Equivalent Employment	
Full-time permanent	1
Other than full-time permanent	0
Total	1
Authorized Positions:	
Full-time permanent	2
Other than full-time permanent	0
Total	2

Exhibit 15

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Broadband Programs

	Object Class	2021 Actual	2022 Annualized CR	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	4,030	4,471	4,600	4,824	224
11.3	Other than full-time permanent					
11.5	Other personnel compensation	128	92	94	94	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**4,158**	**4,563**	**4,694**	**4,918**	**224**
12.1	Civilian personnel benefits	1,439	1,384	1,409	1,472	63
13	Benefits for former personnel					
21	Travel and transportation of persons	3	212	218	229	11
22	Transportation of things	0	6	6	6	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	456	472	837	862	25
23.3	Commun., util., and misc. charges	115	21	23	24	1
24	Printing and reproduction	1	59	59	60	1
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	7,979	14,824	7,737	7,808	71
25.3	Other goods and services from Federal sources	1,345	1,196	1,366	1,431	65
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					

Exhibit 15

25.7	Operation and maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons					
26	Supplies and materials	24	13	13	14	1
31	Equipment	2,590	551	564	623	59
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions					
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**18,110**	**23,301**	**16,926**	**17,447**	**521**

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
Public Safety Communications
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Public Safety Communications

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base		FY 2023 Estimate		Increase/Decrease from Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Communications	Pos./BA	1	308	1	308	1	334	8	4,352	7	4,018
	FTE/Obl	0	0	1	616	1	334	8	4,352	7	4,018
Total	Pos./BA	1	308	1	308	1	334	8	4,352	7	4,018
	FTE/Obl	0	0	1	616	1	334	8	4,352	7	4,018

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Public Safety Communications

<u>Goal Statement</u>

NTIA's public safety communications program provides the critical leadership and support for the coordination, interoperability,transition, and technical resources for our nation's public safety agencies in their adoption and implementation of advanced communications technologies.

<u>Base Program</u>

NTIA's public safety communications program will continue to serve the nation's emergency communications needs as NTIA is uniquely situated to support public safety agencies in their efforts to adopt and implement advanced communication technologies given NTIA's technical spectrum and public safety expertise through continued support for Next Generation 911 (NG911) activities.

<u>Statement of Operating Objectives</u>

NTIA supports the communication needs of public safety personnel at all levels of government with their NG911 activities. NTIA serves as a key federal-level coordinator for public safety communications and works closely with other federal agencies, states, territories, tribes, and local governments, public safety personnel at all levels of government, and equipment manufacturers to planfor and advance NG911 implementation. With this continued funding, NTIA will engage other federal agencies to advance regulatory, financial, and policy priorities to advance nationwide NG911 deployment. NTIA's activities will support the efforts of federal, state, local, and tribal public safety agencies to utilize cutting-edge NG911 technologies that can improve public safety responses and help save lives. In FY 2023, NTIA will continue to focus on three key policy areas in NG911 activities:

- NG911 Strategic Assessment and policy leadership: NTIA is a key federal agency in the implementation of specific programgoals and performance measures for NG911 implementation and will work to eliminate identified adoption barriers through technical assistance, policy development and grant program prioritization.
- Providing technical assistance, sharing best practices, and other facilitation and coordination activities with 911 stakeholders.
- Responding to 911 community requests and inquiries.

Exhibit 12

Explanation and Justification

Line Item		FY 2021 Actual		FY 2022 CR Annualized		FY 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Communications	Pos./BA	1	308	1	308	1	334
	FTE/Obl.	0	0	1	616	1	334

NTIA will continue to allocate one (1) position within its existing FY 2023 Budget Request to support these NG911 activities and to serve as a subject matter expert on best practices in NG911 implementation. NTIA will update a strategic assessment of progress innationwide NG911 deployment, implement a strategic NG911 plan for continued progress with program metrics for future years, respond to inquiries and requests for assistance from the 911 community, and help develop policy recommendations for the Executive branch and Congress on NG911 matters.

For more than 50 years, 911 systems have served the needs of the public in emergencies. As communication technologies have evolved to include wireless phones, text and picture messaging, video chat, social media, and Voice over Internet Protocol (VoIP) devices, the 911 systems have not kept pace and are unable to accept information from these new communication methods. The future success of 911 in serving the public's needs will only be possible when our 911 call centers have transitioned from analog toan Internet Protocol (IP)-based 911 systems, commonly referred to as Next Generation 911 or NG911. The GAO's January 2018 report to Congress, GAO-18-252, recommended that the federal government could strength efforts to assist states.[6]

The proposed tasks for FY 2023 will continue some of activities identified under the Title VI, Subtitle E, of the Middle Class Tax Reliefand Job Creation Act of 2012, also referred to as the Next Generation 911 Advancement Act of 2012 (Act), which will expire on September 30, 2022.

For public safety agencies, the transition to NG911 will be complex and challenging. In order to successfully make the transition to NG911, agencies at all levels will require information, training, planning, technical certainty, and advocacy to leverage NG911 for first responders and those they serve. These activities also directly address the GAO recommendations in GAO-18-252 on how federal agencies, including NTIA, should be supporting the state and local NG911 efforts.[7]

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[6] The GAO stated that *"[w]hile deploying and operating 911 is the responsibility of entities at the state and local level, federal agencies – including NHTSA (National Highway Transportation and Safety Administration), NTIA, FCC (the Federal Communications Commission), and DHS (U.S. Department of Homeland Security) – have responsibilities to support NG911 implementation, including through facilitating coordination activities among 911 stakeholders and administering federal grants."*
[7] 47 U.S.C. § 902(b)(2), 47 U.S.C. § 942, 47 U.S.C. § 1413

Exhibit 13

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGES FOR 2023
(Dollar amounts in thousands)

		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Communications	Pos./BA	1	383	8	4,383	7	4,000
	FTE/Obl.	1	383	8	4,383	7	4,000

Transition from Mandatory Accounts (+$4,000 7 FTE/7 Positions) - NTIA is requesting an increase of $4.0 million and 7 positions to transition statutory, delegated, and other key public safety communications activities from the 47 USC 1457: Public Safety Trust Fund mandatory accounts (which expire on September 30, 2022) to annual appropriations within NTIA's Salaries and Expenses. NTIA is faced with sun setting resources, but the statutory requirements to perform their core functions remain. These activities include conducting the annual FirstNet Authority fee review to ensure that FirstNet Authority is financially self-sustaining; leading the recruitment and vetting of 12 non-permanent FirstNet Authority Board members on behalf of the Secretary; and shepherding the Department in monitoring FirstNet Authority activities. The current activities conducted by NTIA benefit the Department and public safety by ensuring that a high-visibility, high-risk program such as the FirstNet Authority has sufficient monitoring and oversight and that risks are elevated to Departmental Leadership and mitigated as needed. In addition, NTIA has developed strong program insight and credibility, both within the FirstNet Authority and the Department, to act as an advisor and to provide early awareness of potential challenges to the Department.

	2021	2022	2023	2024	2025

Performance Measures:
    No change in performance measures

Exhibit 14

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE PERSONNEL DETAIL

Activity: Public Safety Communications

Program Transition from Mandatory Accounts

Title		Grade	Number	Annual Salary	Total Salaries
Deputy Associate Administrator		15	1	181,933	181,933
Sr. Communications Program Specialists		15	3	181,933	545,799
Management and Program Analysts		13	2	142,137	284,274
Administrative Specialist		11	1	99,722	99,722
Subtotal			7	605,725	1,111,728
Less lapse	25%		0		0
Total full-time permanent (FTE)			7		1,111,728
FY 2023 Pay Raise	4.6%				51,139
Total					1,162,867

Personnel Data

Full-time Equivalent Employment
Full-time permanent	7
Other than full-time permanent	0
Total	7

Authorized Positions:
Full-time permanent	7
Other than full-time permanent	0
Total	7

Exhibit 15

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Public Safety Communications

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	0	117	122	1,272	1,150
11.3	Other than full-time permanent					
11.5	Other personnel compensation	0	1	1	29	28
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**0**	**118**	**123**	**1,301**	**1,178**
12.1	Civilian personnel benefits	0	35	35	415	380
13	Benefits for former personnel					
21	Travel and transportation of persons	0	5	5	78	73
22	Transportation of things	0	1	1	2	1
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	0	7	20	132	112
23.3	Commun., util., and misc. charges	0	2	2	8	6
24	Printing and reproduction	0	1	1	5	4
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	0	354	47	1,940	1,893
25.3	Other goods and services from Federal sources	0	85	92	392	300
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					

Exhibit 15

25.7	Operation and maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons					
26	Supplies and materials	0	1	1	6	5
31	Equipment	0	7	7	55	48
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	0	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**0**	**616**	**334**	**4,334**	**4,000**

Exhibit 13

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGES FOR 2023
(Dollar amounts in thousands)

		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Communications	Pos./BA	1	334	1	352	0	18
	FTE/Obl.	1	334	1	352	0	18

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IT Security Maintenance and Resilience (+$18, 0 FTE/0 Positions) – NTIA is requesting funding to strengthen IT security resiliency across all NTIA programs and accelerate the implementation of specific cybersecurity standards set forth by OMB M-22-09 memorandum - Federal zero trust architecture (ZTA) strategy. The Zero Trust approach is the leading contemporary IT industry paradigm for minimizing exposure to cyber threats while enabling a mobile workforce and is mandated as the path toward implementing Executive Order 14028, Improving the Nation's Cybersecurity. This proposal expands NTIA's capability in meeting specific zero trust security goals by the target date in FY 2024.

As we expand our mission support in spectrum, advanced telecommunications, and national recovery through a broadband grants program, it is no longer viable to operate without dedicated Information System Security Officers (ISSOs) to define accurate control configuration information that enables Information Security Continuous Monitoring (ISCM) as NIST describes. NITA has 14 diverse FISMA systems under security remit, this has inevitably diluted oversight and tool expertise from a security perspective. With sustained funding, NTIA will have the capability to onboard and assign ISSOs responsible for related systems, whether mission or infrastructure, with a maximum of 2-3 systems each. In addition, the ISSOs will be charged with implementing and enabling the ISCM security governance framework at the system level.

In addition, this increase will support the Zero Trust mandate and enable NTIA to meet targets for implementation. NTIA will dedicate resources toward implementation phases identified in the "Zero Trust Implementation Plan Guide and Template" using consulting and contracting resources for Phase 1: Planning; Phase 2: Technical implementation; Phase 3: Administrative (including general documentary), Phase 4: Analysis and Reporting.

	2023	2024	2025	2026	2027
Performance Measures:					
Percentage of Security and Access Management Events Reported to Help Desk with increase	Baseline	100%	100%	100%	100%
Percentage of Security and Access Management Events Reported to Help Desk without increase	Baseline	90%	75%	75%	75%

Exhibit 15

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PROGRAM CHANGE DETAIL BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Public Safety Communications

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	0	117	122	1,272	0
11.3	Other than full-time permanent					
11.5	Other personnel compensation	0	1	1	29	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**0**	**118**	**123**	**1,301**	0
12.1	Civilian personnel benefits	0	35	35	415	0
13	Benefits for former personnel					
21	Travel and transportation of persons	0	5	5	78	0
22	Transportation of things	0	1	1	2	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	0	7	20	132	0
23.3	Commun., util., and misc. charges	0	2	2	8	0
24	Printing and reproduction	0	1	1	5	0
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	0	354	47	1,940	16
25.3	Other goods and services from Federal sources	0	85	92	392	0
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					

Exhibit 15

25.7	Operation and maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons					
26	Supplies and materials	0	1	1	6	0
31	Equipment	0	7	7	55	2
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	0	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**0**	**616**	**334**	**4,334**	**18**

Exhibit 16

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	14,251	17,741	18,434	22,532	4,098
11.3	Other than full-time permanent					
11.5	Other personnel compensation	519	445	463	509	46
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**14,770**	**18,186**	**18,897**	**23,041**	**4,144**
12.1	Civilian personnel benefits	4,974	5,489	5,605	6,816	1,211
13	Benefits for former personnel					
21	Travel and transportation of persons	18	1,048	1,077	1,836	759
22	Transportation of things	0	19	19	20	1
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	1,411	2,453	3,773	4,162	389
23.3	Commun., util., and misc. charges	421	132	136	161	25
24	Printing and reproduction	11	89	91	145	54
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	12,087	19,607	8,951	19,101	10,150
25.3	Other goods and services from Federal sources	5,656	5,597	6,472	7,956	1,484
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					

Exhibit 16

25.7	Operation and maintenance of equipment	92	0	0	0	0
25.8	Subsistence and support of persons					
26	Supplies and materials	167	105	107	132	25
31	Equipment	7,111	3,471	3,540	4,100	560
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	135	135	135	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**46,718**	**56,331**	**48,803**	**67,605**	**18,802**
	Less prior year recoveries	(377)	0	0	0	0
	Less prior year unobligated balance	(841)	(10,831)	0	0	0
	Total Budget Authority	45,500	45,500	48,803	67,605	18,802
	Personnel Data					
	Full-Time equivalent Employment:					
	Full-time permanent	118	157	157	185	28
	Other than full-time permanent					
	Total	118	157	157	185	28
	Authorized Positions:					
	Full-time permanent	121	157	157	189	32
	Other than full-time permanent					
	Total	121	157	157	189	32

Department of Commerce
National Telecommunications and Information Administration

Salaries and Expenses
SELECT ACTIVITIES BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Spectrum Management

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	2,711	3,201	3,372	3,372	207
11.3	Other than full-time permanent					
11.5	Other personnel compensation	75	58	63	63	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**2,786**	**3,259**	**3,435**	**3,435**	**207**
12.1	Civilian personnel benefits	965	990	1,001	1,001	58
13	Benefits for former personnel					
21	Travel and transportation of persons	1	86	93	93	11
22	Transportation of things	0	2	2	2	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	366	386	863	863	25
23.3	Commun., util., and misc. charges	87	17	17	17	1
24	Printing and reproduction	1	6	6	6	1
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	1,726	599	642	642	237
25.3	Other goods and services from Federal sources	923	1,881	2,101	2,101	68
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					
25.7	Operation and maintenance of equipment	0	0	0	0	0

25.8	Subsistence and support of persons					
26	Supplies and materials	18	23	23	23	1
31	Equipment	382	6	23	23	73
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	0	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**7,255**	**7,255**	**8,206**	**8,206**	**682**
	Less prior year recoveries					
	Less prior year unobligated balance	0	0	0	0	0
	Total Budget Authority	7,255	7,255	8,206	8,206	682
	Personnel Data					
	Full-Time equivalent Employment:					
	Full-time permanent	23	38	38	39	1
	Other than full-time permanent					
	Total	23	38	38	39	1
	Authorized Positions:					
	Full-time permanent	22	38	38	40	2
	Other than full-time permanent					
	Total	22	38	38	40	2

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SELECT ACTIVITIES BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Advanced Communications Research

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	3,629	4,630	4,851	4,946	95
11.3	Other than full-time permanent					
11.5	Other personnel compensation	194	199	205	205	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**3,823**	**4,829**	**5,056**	**5,151**	**95**
12.1	Civilian personnel benefits	1,207	1,433	1,478	1,505	27
13	Benefits for former personnel					
21	Travel and transportation of persons	5	179	188	193	5
22	Transportation of things	0	4	4	4	0
23	Rent, communications, and utilities					
23.1	Rental payments to GSA					
23.2	Rental payments to others	73	734	734	746	12
23.3	Commun., util., and misc. charges	81	6	8	9	1
24	Printing and reproduction	0	11	12	12	0
25	Other contractual services					
25.1	Advisory and assistance services					
25.2	Other services from non-Federal sources	1,394	929	196	810	614
25.3	Other goods and services from Federal sources	896	954	1,226	1,268	42
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					
25.7	Operation and maintenance of equipment	92	0	0	0	0

25.8	Subsistence and support of persons					
26	Supplies and materials	99	28	29	29	0
31	Equipment	3,558	2,862	2,884	2,968	84
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions					
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**11,228**	**11,969**	**11,815**	**12,695**	**880**
	Less prior year recoveries					
	Less prior year unobligated balance	(48)	(789)	0	0	0
	Total Budget Authority	11,180	11,180	11,815	12,695	880
	Personnel Data					
	Full-Time equivalent Employment:					
	Full-time permanent	41	50	50	51	1
	Other than full-time permanent					
	Total	41	50	50	51	1
	Authorized Positions:					
	Full-time permanent	42	50	50	51	1
	Other than full-time permanent					
	Total	42	50	50	51	1

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
SELECT ACTIVITIES BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Broadband Programs

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent compensation	4,030	4,471	4,600	6,288	1,688
11.3	Other than full-time permanent	0	0	0	0	0
11.5	Other personnel compensation	128	92	94	94	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**4,158**	**4,563**	**4,694**	**6,382**	**1,688**
12.1	Civilian personnel benefits	1,439	1,384	1,409	1,882	473
13	Benefits for former personnel					
21	Travel and transportation of persons	3	212	218	429	211
22	Transportation of things	0	6	6	6	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA	0	0	0	0	0
23.2	Rental payments to others	456	472	837	968	131
23.3	Commun., util., and misc. charges	115	21	23	34	11
24	Printing and reproduction	1	59	59	104	45
25	Other contractual services					
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services from non-Federal sources	7,979	14,824	7,737	14,797	7,060
25.3	Other goods and services from Federal sources	1,345	1,196	1,366	2,120	754
25.4	Operations and maintenance of facilities					
25.5	Research and development contracts					
25.6	Medical care					
25.7	Operation and maintenance of equipment	0	0	0	0	0

25.8	Subsistence and support of persons					
26	Supplies and materials	24	13	13	27	14
31	Equipment	2,590	551	564	698	134
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	0	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
99.9	**Total Obligations**	**18,110**	**23,301**	**16,926**	**27,447**	**10,521**
	Less prior year recoveries					
	Less prior year unobligated balance	(1,927)	(7,118)	0	0	0
	Total Budget Authority	16,183	16,183	16,926	27,447	10,521
	Personnel Data					
	Full-Time equivalent Employment:					
	Full-time permanent	26	29	29	41	12
	Other than full-time permanent					
	Total	26	29	29	41	12
	Authorized Positions:					
	Full-time permanent	29	29	29	42	13
	Other than full-time permanent					
	Total	29	29	29	42	13

Exhibit 32

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
JUSTIFICATION OF PROPOSED LANGUAGE CHANGES

PROPOSED LANGUAGE CHANGES

As the U.S. Department of Commerce moves to a new accounting system, NTIA has encountered unexpected challenges caused by the appropriations language authorizing NTIA to recover its costs for spectrum management operations from the Federal agencies. Although NTIA has successfully managed this process for over 20 years, NTIA needs to amend the appropriations language to permit NTIA to continue to recover its costs without significant disruption to its operations given the new accounting system. This modification would support a more efficient process.

Existing Language: Provided, that notwithstanding 31 U.S.C. 1535(d), the Secretary of Commerce shall charge Federal agencies for costs incurred in spectrum management, analysis and operations, and related services and such fees shall be retained and used as offsetting collections for costs of such spectrum services, to remain available until expended.

Proposed Language: Provided, that, notwithstanding 31 U.S.C. 1535(d), the Secretary of Commerce shall recover from Federal agencies the costs incurred in spectrum management, analysis, and operations, and such sums shall be collected from the agencies through nonexpenditure transfers, to be retained and used for such purposes, to remain available until expended.

Exhibit 33

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
APPROPRIATION LANGUAGE AND CODE CITATION

<u>FY 2023</u>

For necessary expenses, as provided for by law, of the National Telecommunications and Information Administration (NTIA), $67,605,000 will remain available until September 30, 2024: Provided, that, notwithstanding 31 U.S.C. 1535(d), the Secretary of Commerce shall recover from Federal agencies the costs incurred in spectrum management, analysis, and operations, and such sums shall be collected from the agencies through nonexpenditure transfers, to be retained and used for such purposes, to remain available until expended: Provided further, that the Secretary of Commerce is authorized to retain and use as offsetting collections all funds transferred, or previously transferred, from other Government agencies for all costs incurred in telecommunications research, engineering, and related activities by the Institute for Telecommunication Sciences of NTIA, in furtherance of its assigned functions under this paragraph, and such funds received from other Government agencies shall remain available until expended.

15 U.S.C. § 1512
15 U.S.C. § 1532
47 U.S.C. § 305
47 U.S.C. § 606
47 U.S.C. § 901, et seq.
47 U.S.C. § 1304
47 U.S.C. § 1305
47 U.S.C. § 1413

15 U.S.C. § 1512 authorizes the Secretary of Commerce to foster, promote and develop foreign and domestic commerce.

15 U.S.C. § 1532 authorizes the Secretary of Commerce to conduct research and analysis in all telecommunications sciences; to investigate the transmission of radio waves and electromagnetic radiation; and to compile, evaluate, publish, and distribute related information.

Exhibit 33

47 U.S.C. § 305 authorizes the President to assign frequencies to radio stations or classes of radio stations belonging to and operated by the United States. Originally delegated to the Department of Commerce by Executive Order 12046, as later codified in the National Telecommunications and Information Administration Organization Act, 47 U.S.C. § 901, et seq.

47 U.S.C. § 606 and associated Executive Orders authorize the President to perform certain telecommunications emergency functions essential to security and the national defense.

47 U.S.C. § 901, et seq. authorizes NTIA to perform the Secretary's communications and information functions, among other things.

47 U.S.C. § 1304 authorizes the Secretary of Commerce to establish and administer a grant program for the development and implementation of statewide initiatives to identify and track the availability and adoption of broadband services within each State.

 47 U.S.C. § 1305 authorizes the Assistant Secretary of Commerce for Communications and Information to establish and administer anational broadband service development and expansion grant program and to develop and maintain a comprehensive nationwide inventory map of existing broadband service capability and availability in the United States.

Exhibit 34

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
ADVISORY AND ASSISTANCE SERVICES

	2021 Actual	2022 CR Annualized	2023 Estimate
Consulting services	0	0	0
Management and professional services	0	0	0
Special studies and analyses	0	0	0
Management and support services for research and development	0	0	0
Total	0	0	0

Exhibit 35

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
PERIODICALS, PAMPHLETS AND AUDIOVISUAL PRODUCTS

	2021 Actual	2022 CR Annualized	2023 Estimate
Periodicals	0	0	0
Pamphlets	0	0	0
Audiovisuals	0	0	0
Total	0	0	0

Exhibit 36

Department of Commerce
National Telecommunications and Information Administration
Salaries and Expenses
AVERAGE GRADE AND SALARIES

	2021 Actual	2022 CR Annualized	2023 Estimate
Average ES Salary	185,879	191,455	200,262
Average GS/GM Grade	13	13	13
Average GS/GM Salary	135,853	139,929	146,365

Exhibit 41

Department of Commerce
National Telecommunication and Information Administration
Operating Unit of Commerce
Salaries and Expenses
IMPLEMENTATION STATUS OF GAO AND OIG RECOMMENDATIONS

31 U.S.C. 720, as amended January 3, 2019, requires the head of a federal agency to submit a written statement of the actions planned or taken on Government Accountability Office (GAO) recommendations to the House and Senate on Appropriations with the agency's first request for appropriations made more than 180 calendar days after the date of the report.

The Good Accounting Obligation in Government Act (GAO-IG Act), passed on January 3, 2019, (P.L. 115-414) requires each agency to include, in its annual budget justification, a report that identifies each recommendation issued by GAO and the agency's office of the inspector general (OIG) which has remained unimplemented for one year or more from the annual budget justification submission date. In addition, the Act requires a reconciliation between the agency records and the IGs' Semiannual Report to Congress (SAR).

Section 1. Recommendations for which action plans were finalized since the last appropriation request.

Nothing to Report

Section 2. Implementation of GAO public recommendation issued on less than one year ago that designated by GAO as 'Open' or 'Closed-Unimplemented.'

Open Recommendations(s) the Department has decided not to implement.

Nothing to Report

Open Recommendations(s) the Department has plans to implement.
Include information on all open recommendations made one year or more ago that the Department / bureau plans to implement. GAO recommendations are open until officially closed by GAO.

Nothing to Report

Recommendations designed by GAO as "Closed –Unimplemented for the past 5 years (2015-2019)." Future reports will cover a one-year period.

Nothing to Report

Exhibit 41

Section 3. Implementation of OIG public recommendations issued no less than one year for which Final Action has not been Taken or Action Note Recommended has been Taken

Nothing to Report

Section 4. Discrepancies between this report and the semiannual reported submitted by Commerce Office of Inspector General or reports submitted by the GAO

Report Number	GAO-21-474
Report Title	*Spectrum Management: Agencies Should Strengthen Collaborative Mechanisms and Processes to Address Potential Interference*
Issue Date	June 3, 2021
Recommendation Number	# 6
Recommendation	The NTIA Administrator should establish clearly-defined and agreed-upon processes for making decisions on spectrum-management activities that involve other agencies, particularly when consensus cannot be reached, in consultation with FCC and – as appropriate – State.
Action(s) Planned	NTIA is developing clearly defined processes that would supplement existing laws and regulations governing spectrum management activities that involve other agencies.
Action Status (Planned, In-Progress, or Complete)	In-Process
Target Completion Date	TBD
Recommendation Status (Planned, In-Progress, or Complete)	Planned

Report Number	GAO-21-474
Report Title	*Spectrum Management: Agencies Should Strengthen Collaborative Mechanisms and Processes to Address Potential Interference*

Exhibit 41

Issue Date	June 3, 2021
Recommendation Number	# 7
Recommendation	The NTIA Administrator should clarify and further identify shared goals or outcomes for spectrum-management activities that involve collaboration and ways to monitor and track progress, in consultation with FCC and – as appropriate – State.
Action(s) Planned	NTIA is developing shared goal/outcomes for spectrum management activities that involve collaboration with other agencies, and for ways to monitor and track progress
Action Status (Planned, In-Progress, or Complete)	Planned
Target Completion Date	TBD
Recommendation Status (Planned, In-Progress, or Complete)	Planned

Report Number	GAO-21-474
Report Title	*Spectrum Management: Agencies Should Strengthen Collaborative Mechanisms and Processes to Address Potential Interference*
Issue Date	June 3, 2021
Recommendation Number	# 8

Exhibit 41

Recommendation	The NTIA Administrator should update the FCC-NTIA MOU to address identified gaps (such as lack of clearly-defined goals and agreed-upon processes for making decisions) and develop a means to continually monitor and update this agreement, in consultation with FCC.
Action(s) Planned	NTIA will work with the FCC to update the MOU and set up a process for its periodic review.
Action Status (Planned, In-Progress, or Complete)	Planned
Target Completion Date	TBD
Recommendation Status (Planned, In-Progress, or Complete)	Planned

Report Number	GAO-21-474
Report Title	*Spectrum Management: Agencies Should Strengthen Collaborative Mechanisms and Processes to Address Potential Interference*
Issue Date	June 3, 2021
Recommendation Number	# 9
Recommendation	The NTIA Administrator should request that State initiate a review of the General Guidance Document – in consultation with NTIA, FCC, and other relevant participants – and update and develop a means to continually monitor and update this document.
Action(s) Planned	NTIA has requested that the State Department initiate a review of the General Guidance Document and has provided State input to address key issues such as transparency and collaboration. State has initiated a revision and is in the process of consulting with FCC and NTIA on changes before publishing an update.

Exhibit 41

Action Status (Planned, In-Progress, or Complete)	In- Progress
Target Completion Date	TBD
Recommendation Status (Planned, In-Progress, or Complete)	Planned

Report Number	GAO-21-474
Report Title	*Spectrum Management: Agencies Should Strengthen Collaborative Mechanisms and Processes to Address Potential Interference*
Issue Date	June 3, 2021
Recommendation Number	# 10
Recommendation	The NTIA Administrator should establish procedures to help guide the design (including selection of acceptable assumptions and methodologies) of spectrum sharing and potential-interference studies intended as U.S. contributions to WRC technical meetings, in consultation with FCC, State, and other Federal participants of the U.S. technical preparatory process.
Action(s) Planned	NTIA is developing procedures to help guide the design of spectrum-sharing and potential interference studies intended as U.S. contributions to WRC technical meeting.
Action Status (Planned, In-Progress, or Complete)	Planned
Target Completion Date	TBD
Recommendation Status (Planned, In-Progress, or Complete)	Planned

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Exhibit 5

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning, and Construction
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
President's Budget, 2022	0	0	0	1,202
2023 Adjustments to base:	0	0	0	0
2023 Base	0	0	0	0
plus: 2023 Program changes	0	0	0	0
2023 Estimate	0	0	0	0

Comparison by activity/subactivity: with totals by activity		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Telecommunications Facilities, Planning, and Construction, Grants	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	0	0	0	0	0	0	0	0	0
Public Telecommunications Facilities, Planning, and Construction, Program Management	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	17	0	1,202	0	0	0	0	0	0
Total	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	17	0	1,202	0	0	0	0	0	0

Adjustments for:
Recoveries	(4)				
Unobligated balance, start of year	(1,215)	(1,202)			
Unobligated balance transferred					
Unobligated balance, end of year	1,202				
Unobligated balance expiring					

Financing from transfers:
Transfer from other accounts (-)					
Transfer to other accounts (+)					
Appropriation	0	0	0	0	0

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning, and Construction
JUSTIFICATION OF PROGRAM AND PERFORMANCE
(Dollar amounts in thousands)

Activity: Public Telecommunications Facilities, Planning, and Construction

The Public Telecommunications Facilities, Planning, and Construction program was discontinued in FY 2011.

Exhibit 33

Department of Commerce
National Telecommunications and Information Administration
Public Telecommunications Facilities, Planning, and Construction
APPROPRIATION LANGUAGE AND CODE CITATION

For the administration of prior-year grants, recoveries and unobligated balances of funds previously appropriated are available for the administration of all open grants until their expiration. (Public Law 116-216)

47 U.S.C. § 391 authorizes the Secretary of Commerce to provide grant funds for the planning and construction of public telecommunications facilities by eligible entities.

47 U.S.C. § 392 sets forth the application requirements to be submitted to the Secretary of Commerce by eligible entities to requestfunds for the construction of public telecommunications facilities.

47 U.S.C. § 902(b)(3) assigned to NTIA the administration of the Public Telecommunications Facilities Program.

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Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Public Safety Trust Fund
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
President's Budget, 2022	6	6	0	8,765
2023 Adjustments to base:	0	0	0	0
2023 Base	6	0	0	0
plus: 2023 Program changes	0	0	0	0
2023 Estimate	6	0	0	0

Comparison by activity/subactivity: with totals by activity		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increases/Decreases from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Trust Fund	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Ob	0	2,000	0	2,000	0	0	0	0	0	0
First Responder Network Authority	Pos./BA	0	0	0	0	0	0	0	0	0	0
Administrative	FTE/Ob	0	2	0	498	0	0	0	0	0	0
National Telecommunications & Information Administration	Pos./BA	0	0	0	0	0	0	0	0	0	0
Program Administration & Implementation	FTE/Ob	5	2,829	5	5,584	0	0	0	0	0	0
National Telecommunications & Information Administration	Pos./BA	0	0	0	0	0	0	0	0	0	0
Next Generation 911	FTE/Ob	1	518	1	683	0	0	0	0	0	0
Total	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Ob	6	5,349	6	8,765	0	0	0	0	0	0
Adjustments for:											
Recoveries											
Unobligated balance, start of year			(14,669)		(9,320)						
Unobligated balance transferred											
Unobligated balance, end of year			9,320		555						
Unobligated balance expiring											
Financing from transfers:											
Transfer from other accounts (-)											
Transfer to other accounts (+)											
Appropriation			0		0		0		0		0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Public Safety Trust Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Public Safety Trust Fund

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Public Safety Trust Fund	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	2,000	0	2,000	0	0	0	0	0	0
Total	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	2,000	0	2,000	0	0	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Public Safety Trust Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: FirstNet - Administration

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
First Responder Network Authority	Pos./BA	0	0	0	0	0	0	0	0	0	0
Administration	FTE/Obl	0	2	0	498	0	0	0	0	0	0
Total	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	2	0	498	0	0	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Public Safety Trust Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: NTIA - Program Administration & Implementation

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Program Administration and Implementation (NTIA)	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	5	2,829	5	5,584	0	0	0	0	0	0
Total	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	5	2,829	5	5,584	0	0	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Public Safety Trust Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: NTIA - Next Generation 911

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Next Generation E-911, NTIA	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	1	518	1	683	0	0	0	0	0	0
Total	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	1	518	1	683	0	0	0	0	0	0

Exhibit 16

Department of Commerce
National Telecommunications and Information Administration
Public Safety Trust Fund
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Public Safety Trust Fund

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent (Compensation)	963	1,281	0	0	0
11.3	Other than full-time permanent				0	0
11.5	Other personnel compensation	32			0	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	995	1,281	0	0	0
12.1	Civilian personnel benefits	365	384	0	0	0
13	Benefits for former personnel					
21	Travel and transportation of persons	0	45	0	0	0
22	Transportation of things	0	0	0	0	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA	0	0	0	0	0
23.2	Rental payments to others	161	202	0	0	0
23.3	Commun., util., and misc. charges	44	53	0	0	0
24	Printing and reproduction	2	3	0	0	0
25	Consulting and other services					
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services from non-Federal sources	944	1,636	0	0	0
25.3	Purchase of goods and services from Gov't accounts	593	3,149	0	0	0
25.4	Operation of GOCOs	0	0	0	0	0
25.5	Research and development contracts	0	0	0	0	0
25.6	Medical care	0	0	0	0	0
25.7	Operation & maintenance of equipment	0	0	0	0	0

Exhibit 16

25.8	Subsistence and support of persons	0	0	0	0	
26	Supplies and materials	13	12	0	0	0
31	Equipment	232			0	0
32	Lands and structures					0
33	Investments and loans					
41	Grants, subsidies and contributions	0	0	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
94	Expenditure Transfer	2,000	2,000	0	0	0
99.9	**Total Obligations**	5,349	8,765	0	0	0
	Less prior year recoveries					
	Less prior year unobligated balance	(14,669)	(9,320)	0	0	0
	Total Budget Authority					
	Personnel Data	0	0	0	0	0
	Full-Time equivalent Employment:					
	Full-time permanent	6	6	6	6	0
	Other than full-time permanent	0	0	0	0	0
	Total	6	6	6	6	0
	Authorized Positions:					
	Full-time permanent	6	6	6	6	0
	Other than full-time permanent	0	0	0	0	0
	Total	6	6	6	6	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
State and Local Implementation Fund
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity: **State and Local Implementation Fund**		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable Projects											
State and Local Implementation Grant	Pos./BA	0	0	0	0	0	0	0	0	0	0
Fund Administration	FTE/Obl.	4	2,071	2	1,828	0	0	0	0	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	4	2,071	2	1,828	0	0	0	0	0	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
Network Construction Fund
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity:		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
Network Construction Fund		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable Projects											
First Responder Network Authority	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	98	0	3,902	0	0	0	0	0	0
NTIA Opt-Out	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	0	0	0	0	0	0	0	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	98	0	3,902	0	0	0	0	0	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
First Responder Network Authority
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity:		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
First Responder Network Authority		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable Projects											
First Responder Network Authority	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	212	71,242	258	572,469	258	195,000	258	195,000	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	212	71,242	258	572,469	258	195,000	258	195,000	0	0

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Exhibit 5

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
President's Budget, 2022	0	20	2,000,000	1,278,189
2023 Adjustments to base:	0	0	0	0
2023 Base	0	20	0	1,010,511
plus: 2023 Program changes	0	0	0	0
2023 Estimate	0	20	2,000,000	1,010,511

Comparison by activity/subactivity: with totals by activity		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increases/Decreases from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Tribal Grants	Pos./BA	0	980,000	0	2,000,000	0	0	0	0	0	0
	FTE/Obl.	0	0	0	1,980,000	0	1,000,000	0	1,000,000	0	0
Tribal Admin	Pos./BA	13	20,000	13	0	13	0	13	0	0	0
	FTE/Obl.	4	9,597	13	6,322	13	4,081	13	4,081	0	0
Infrastructure Broadband Connectivity Grants	Pos./BA	0	288,000	0	0	0	0	0	0	0	0
	FTE/Obl.	0	0	0	288,000	0	0	0	0	0	0
Infrastructure Broadband Connectivity Admin	Pos./BA	7	12,000	7	0	7	0	7	0	0	0
	FTE/Obl.	3	1,703	7	3,867	7	6,430	7	6,430	0	0
Total	Pos./BA	20	1,300,000	20	2,000,000	20	0	20	0	0	0
	FTE/Obl.	7	11,300	20	2,278,189	20	1,010,511	20	1,010,511	0	0

Adjustments for:						
Recoveries						
Unobligated balance, start of year		0	(1,288,700)		(1,010,511)	
Unobligated balance transferred						
Unobligated balance, end of year		1,288,700	1,010,511			
Unobligated balance expiring						
Financing from transfers:						
Transfer from other accounts (-)						
Transfer to other accounts (+)						
Appropriation		1,300,000	2,000,000	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Tribal Grants

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Tribal Grants	Pos./BA	0	980,000	0	2,000,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	1,980,000	0	1,000,0000	0	1,000,000	0	0
Total	Pos./BA	0	980,000	0	2,000,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	1,980,000	0	0	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Tribal Admin

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
	Pos./BA	7	12,000	7	0	7	0	7	0	0	0
Tribal Admin	FTE/Obl	3	1,703	7	3,867	7	6,430	7	6,430	0	0
Total	Pos./BA	7	12,000	7	0	7	0	7	0	0	0
	FTE/Obl	3	1,703	7	3,867	7	6,430	7	6,430	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Infrastructure Broadband Connectivity Grants

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Infrastructure Broadband Connectivity Grants	Pos./BA	0	288,000	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	288,000	0	0	0	0	0	0
Total	Pos./BA	0	288,000	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	288,000	0	0	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Infrastructure Broadband Connectivity Admin

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Infrastructure Broadband Connectivity Admin	Pos./BA	7	12,000	7	0	7	0	7	0	0	0
	FTE/Obl	3	1,703	7	3,867	7	6,430	7	6,430	0	0
Total	Pos./BA	7	12,000	7	0	7	0	7	0	0	0
	FTE/Obl	3	1,703	7	3,867	7	6,430	7	6,430	0	0

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund - Mandatory Account
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Broadband Connectivity Fund

Goal Statement

The Broadband Connectivity Grants will expand broadband infrastructure to areas of the United States that lack access, especially rural areas and tribal lands. The grants that expand broadband deployment on tribal lands willsupport telehealth, distance learning, broadband affordability, and digital inclusion to tribal communities.

Base Program

The National Telecommunications and Information Administration will award up to $3.27 billion in Broadband Connectivity Grants to expand access to and adoption of broadband service to underserved areas of the UnitedStates.

The Tribal Broadband Connectivity Program will award up to $2.980 billion in grants to eligible entities, which include a Tribal Government, a Tribal College or University, the Department of Hawaiian Home Lands on behalf ofthe Native Hawaiian Community, including Native Hawaiian Education Programs, a Tribal organization, or a Native Corporation. These funds will be used for the deployment and adoption of broadband service on Tribal land and for programs that promote the use of broadband for telehealth, distance learning, broadband affordability, and digital inclusion to tribal communities.

The Broadband Infrastructure Program will award up to $288 million in grants to covered partnerships for coveredbroadband projects. The term ''covered partnership'' means a partnership between a State or political subdivisionof a state and a provider of fixed broadband service. The term ''covered broadband project'' means a competitively and technologically neutral project for the deployment of fixed broadband service that provides qualifying broadband service in an eligible service area. The term ''qualifying broadband service'' means broadband service with— (A) a download speed of not less than 25 megabits per second; (B) an upload speed of not less than 3 megabits per second; and (C) a latency sufficient to support real time, interactive applications.

Service area is defined as a census block in which broadband service is not available at 1 or more households orbusinesses in the census block, as determined by NTIA on the basis of— (A) the maps created under section 802(c)(1) of the Communications Act of 1934 (47 U.S.C. 642(c)(1)); or (B) if the maps described in subparagraph are not available, the most recent information available to NTIA, including information provided by the FederalCommunications Commission.

Exhibit 12

Statement of Operating Objectives

The Consolidated Appropriations Act, 2021, established NTIA's Broadband Connectivity Programs and provided $1billion to implement Tribal Broadband Connectivity grants and $300 million to implement Broadband Infrastructure grants. The Infrastructure Investment and Jobs Act, 2022 directs NTIA to award $2 billion in Tribal Broadband Connectivity grants to tribal governments for broadband deployment on tribal lands, as well as for telehealth, distance learning, broadband affordability, and digital inclusion.

In FY23, NTIA will provide oversight of and technical assistance to grant recipients of the programs to ensure the success of awarded projects.

Explanation and Justification

Line Item		2021 Actual		2022 CR Annualized		2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Tribal Grants	Pos./BA	0	980,000	0	2,000,000	0	0
	FTE/Obl.	0	0	0	1,980,000	0	1,000,000
Tribal Admin	Pos./BA	13	20,000	13	0	13	0
	FTE/Obl.	4	9,597	13	6,322	13	4,081
Infrastructure Broadband Connectivity Grants	Pos./BA	0	288,000	0	0	0	0
	FTE/Obl.	0	0	0	288,000	0	0
Infrastructure Broadband Connectivity Admin	Pos./BA	7	12,000	7	0	7	0
	FTE/Obl.	3	1,703	7	3,867	7	6,430

Efforts to implement these programs in FY21 include the release of the Notice of Funding Opportunity and application guidance, stakeholder engagement and pre-award technical assistance for prospective applicants, the filing deadline for applicants, and the initial review of applications. NTIA also has secured the necessary staff and contractor resources to carry out these responsibilities.

In FY 22, NTIA will complete the award of approximately $1.980 billion in Tribal Broadband Connectivity grants and $288 million in Broadband Infrastructure grants, and NTIA will begin post-award oversight responsibilities. The remainder of the funds authorized by Congress is being used to implement and administer the programs. The Tribal Broadband Connectivity Program has a statutory limitation of administrative expenses of not more than 2 percent or $20 million.

In FY23, NTIA's oversight activities will help protect the federal investment in and ensure accountability for these broadband connectivity grants. NTIA also will provide technical assistance to help recipients navigate through technical challenges, federal grants administration requirements, and environmental and historic preservation regulations.

Exhibit 16

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Broadband Connectivity Fund

	Object Class	2021 Enacted	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent (Compensation)	780	2,649	2,649	2,649	0
11.3	Other than full-time permanent				0	0
11.5	Other personnel compensation	0	66	66	66	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**780**	**2,715**	**2,715**	**2,715**	**0**
12.1	Civilian personnel benefits	242	822	822	822	0
13	Benefits for former personnel					
21	Travel and transportation of persons	2	152	152	152	0
22	Transportation of things	0	10	10	10	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA	0	0	0	0	0
23.2	Rental payments to others	0	230	230	230	0
23.3	Commun., util., and misc. charges	0	0	0	0	0
24	Printing and reproduction	0	30	30	30	0
25	Consulting and other services					
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services from non-Federal sources	8,083	1,641	1,963	1,963	0
25.3	Purchase of goods and services from Gov't accounts	2,193	4,192	4,192	4,192	0
25.4	Operation of GOCOs	0	0	0	0	
25.5	Research and development contracts	0	0	0	0	
25.6	Medical care	0	0	0	0	
25.7	Operation & maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons	0	0	0	0	
26	Supplies and materials	0	15	15	15	0

Exhibit 16

31	Equipment	0	382	382	382	0
32	Lands and structures					0
33	Investments and loans					
41	Grants, subsidies and contributions	0	2,268,000	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
94	Expenditure Transfer	0	0	0	0	0
99.9	**Total Obligations**	**11,300**	**1,278,189**	**10,511**	**10,511**	**0**
	Less prior year recoveries					
	Less prior year unobligated balance	0	(1,288,700)	(1,010,511)	(1,010,511)	0
	Total Budget Authority	1,300,000	2,000,000	0	0	0
	Personnel Data					
	Full-Time equivalent Employment:					
	Full-time permanent	7	20	20	20	0
	Other than full-time permanent	0	0	0	0	0
	Total	7	20	20	20	0
	Authorized Positions:					
	Full-time permanent	20	20	20	20	0
	Other than full-time permanent	0	0	0	0	0
	Total	20	20	20	20	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity:		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
Broadband Connectivity Fund		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable Projects											
Tribal	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	100	0	100	0	100	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	100	0	100	0	100	0	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
Broadband Connectivity Fund
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity: **Broadband Connectivity Fund**		2021 Enacted		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
<u>Reimbursable Projects</u>											
Infrastructure Broadband Connectivity	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	0	0	100	0	100	0	100	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl.	0	0	0	100	0	100	0	100	0	0

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Exhibit 5

Department of Commerce
National Telecommunications and Information Administration
Connecting Minority Communities
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
President's Budget, 2022	7	7	0	271,662
2023 Adjustments to base:	0	0	0	0
2023 Base	7	7	0	2,229
plus: 2023 Program changes	0	0	0	0
2023 Estimate	7	0	0	2,229

		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increases/Decreases from 2023 Base	
Comparison by activity/subactivity: with totals by activity		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Connecting Minority Communities Grants	Pos./BA	0	267,900	0	0	0	0	0	0	0	0
	FTE/Obl.	0	0	0	267,900	0	0	0	0	0	0
Connecting Minority Communities Program Admin	Pos./BA	7	17,100	7	0	7	0	7	0	0	0
	FTE/Obl.	7	5,869	7	9,002	7	2,229	7	2,229	0	0
Total	Pos./BA	7	285,000	7	0	7	0	7	0	0	0
	FTE/Obl.	7	5,869	7	276,902	7	2,229	7	2,229	0	0

Adjustments for:						
Recoveries						
Unobligated balance, start of year		0	(279,131)		(2,229)	
Unobligated balance transferred						
Unobligated balance, end of year		279,131	2,229			
Unobligated balance expiring						
Financing from transfers:						
Transfer from other accounts (-)						
Transfer to other accounts (+)						
Appropriation		285,000	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Connecting Minority Communities
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Connecting Minority Communities Grants

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Connecting Minority Communities Grants	Pos./BA	0	267,900	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	267,900	0	0	0	0	0	0
Total	Pos./BA	0	267,900	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	267,900	0	0	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Connecting Minority Communities
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Connecting Minority Communities Program Admin

Line Item		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Connecting Minority	Pos./BA	7	17,100	7	0	7	0	7	0	0	0
Communities Program Admin	FTE/Obl	7	5,869	7	9,002	7	2,229	7	2,229	0	0
Total	Pos./BA	7	17,100	7	0	7	0	7	0	0	0
	FTE/Obl	7	5,869	7	9,002	7	2,229	7	2,229	0	0

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Connecting Minority Communities Fund - Mandatory Account
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Connecting Minority Communities Fund

Goal Statement

The Connecting Minority Communities Pilot Grants will expand broadband access and connectivity to Historically Black Colleges and Universities (HBCUs), Tribal Colleges and Universities (TCUs), and minority serving institutions (MSIs), or aconsortium that is led by one of these institutions.

Base Program

The National Telecommunications and Information Administration will award up to $268 million in in grants underthe Connecting Minority Communities Pilot Program. These funds will be awarded to Historically Black Collegesand Universities (HBCUs), Tribal Colleges and Universities (TCUs), and minority serving institutions and related eligible entities for the purchase of broadband internet access service, equipment, training, and information technology to facilitate education and remote learning, as well as for the operations of these institutions and minority enterprises within their anchor communities.

Statement of Operating Objectives

The Consolidated Appropriations Act, 2021, established NTIA's Connecting Minority Communities Pilot Programand provided $285 million to implement the program. In FY23, NTIA will provide oversight of and technical assistance to grant recipients of the program to ensure the success of awarded projects.

Exhibit 12

Explanation and Justification

Line Item		2021 Actual		2022 CR Annualized		2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Connecting Minority Communities Grants	Pos./BA	0	267,900	0	0	0	0
	FTE/Obl.	0	0	0	267,900	0	0
Connecting Minority Communities Program Admin	Pos./BA	7	17,100	7	0	7	0
	FTE/Obl.	7	5,869	7	9,002	7	2,229

Efforts to implement the program in FY21 include the promulgating of program rules, the release of the Notice of Funding Opportunity and application guidance, stakeholder engagement and pre-award technical assistance for prospective applicants. NTIA also has secured the necessary staff and contractor resources to carry out these responsibilities. In FY 22, NTIA will review the applications and complete the award of approximately $268 million in Connecting Minority Communities Pilot grants, and NTIA will begin post-award oversight responsibilities. The remainder of the funds authorized by Congress is being used to implement and administer the program.

In FY23, NTIA's oversight activities will help protect the federal investment in and ensure accountability of thesepilot grants. NTIA also will provide technical assistance to help recipients navigate through technical challengesand federal grants administration requirements.

Exhibit 16

Department of Commerce
National Telecommunications and Information Administration
Connecting Minority Communities
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Connecting Minority Communities

	Object Class	2021 Actual	2022 CR Annualized	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent (Compensation)	343	1,475	1,475	1,475	0
11.3	Other than full-time permanent				0	0
11.5	Other personnel compensation	0	25	25	25	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**343**	**1,500**	**1,500**	**1,500**	**0**
12.1	Civilian personnel benefits	106	458	458	458	0
13	Benefits for former personnel					
21	Travel and transportation of persons	0	57	57	57	0
22	Transportation of things	0	4	4	4	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA	0	0	0	0	0
23.2	Rental payments to others	0	93	93	93	0
23.3	Commun., util., and misc. charges	0	0	0	0	0
24	Printing and reproduction	3	20	20	20	0
25	Consulting and other services					
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services from non-Federal sources	4,736	5,590	0	0	0
25.3	Purchase of goods and services from Gov't accounts	681	1,132	92	92	0
25.4	Operation of GOCOs	0	0	0	0	0
25.5	Research and development contracts	0	0	0	0	0
25.6	Medical care	0	0	0	0	0
25.7	Operation & maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons	0	0	0	0	

Exhibit 16

26	Supplies and materials	0	5	5	5	0
31	Equipment	0	143	0	0	0
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	267,900	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
94	Expenditure Transfer	0	0	0	0	0
99.9	**Total Obligations**	**5,869**	**276,902**	**2,229**	**2,229**	**0**
	Less prior year recoveries					
	Less prior year unobligated balance	0	(279,131)	(2,229)	(2,229)	0
	Total Budget Authority	285,000	0	0	0	0
	Personnel Data					
	Full-Time equivalent Employment:					
	Full-time permanent	7	7	7	7	0
	Other than full-time permanent	0	0	0	0	0
	Total	7	7	7	7	0
	Authorized Positions:					
	Full-time permanent	7	7	7	7	0
	Other than full-time permanent	0	0	0	0	0
	Total	7	7	7	7	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
Connecting Minority Communities
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity:		2021 Actual		2022 CR Annualized		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
Connecting Minority Communities		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable Projects											
Connecting Minority Communities	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	100	0	100	0	100	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	100	0	100	0	100	0	0

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Exhibit 5

Department of Commerce
National Telecommunications and Information Administration
Broadband Equity, Access, and Deployment
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
President's Budget, 2022	91	68	42,450,000	0
2023 Adjustments to base:	0	0	0	0
2023 Base	91	91	42,450,000	0
plus: 2023 Program changes	0	0	0	0
2023 Estimate	91	68	42,450,000	0

Comparison by activity/subactivity: with totals by activity		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increases/Decreases from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Equity, Access, and Deployment Grants	Pos./BA	0	0	0	41,601,000	0	0	0	0	0	0
	FTE/Obl.	0	0	0	5,300,000	0	0	0	0	0	0
Broadband Equity, Access, and Deployment Admin	Pos./BA	0	0	91	837,000	91	0	91	0	0	0
	FTE/Obl.	0	0	68	76,061	91	93,797	91	93,797	0	0
Broadband Equity, Access, and Deployment OIG Transfer	Pos./BA	0	0	0	12,000	0	0	0	0	0	0
	FTE/Obl.	0	0	0	12,000	0	0	0	0	0	0
Total	Pos./BA	0	0	91	42,450,000	91	0	91	0	0	0
	FTE/Obl.	0	0	68	5,388,061	91	93,797	91	93,797	0	0

Adjustments for:

Recoveries							
Unobligated balance, start of year		0		0		(37,061,939)	
Unobligated balance transferred							
Unobligated balance, end of year		0		37,061,939		36,968,142	
Unobligated balance expiring							

Financing from transfers:

Transfer from other accounts (-)							
Transfer to other accounts (+)							
Appropriation		0		42,450,000		0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Broadband Equity, Access, and Deployment
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Broadband Equity, Access, and Deployment Grants

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Equity, Access, and Deployment Grants	Pos./BA	0	0	0	41,601,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	5,300,000	0	0	0	0	0	0
Total	Pos./BA	0	0	0	41,601,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	5,300,000	0	0	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Broadband Equity, Access, and Deployment
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Broadband Equity, Access, and Deployment Admin

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Equity, Access, and Deployment Admin	Pos./BA	0	0	91	837,000	91	0	91	0	0	0
	FTE/Obl	0	0	68	76,061	91	93,797	91	93,797	0	0
Total	Pos./BA	0	0	91	837,000	91	0	91	0	0	0
	FTE/Obl	0	0	68	76,061	91	93,797	91	93,797	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Broadband Equity, Access, and Deployment
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Broadband Equity, Access, and Deployment Admin

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Equity, Access, and Deployment OIG Transfer	Pos./BA	0	0	0	12,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	12,000	0	0	0	0	0	0
Total	Pos./BA	0	0	0	12,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	12,000	0	0	0	0	0	0

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Broadband Equity, Access, and Deployment
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Broadband Equity, Access, and Deployment

<u>Goal Statement</u>

The Broadband Equity, Access, and Deployment Grants will expand broadband access and connectivity to State for broadband equity, access, and deployment projects to bridge the digital divide.

<u>Base Program</u>

The National Telecommunications and Information Administration (NTIA) will award up to $41.6 billion in formula grants under the Broadband Equity, Access, and Deployment program. This program builds upon the broadband assistance programs that NTIA is administering from the fiscal year (FY) 2021 Consolidated Appropriations Act. These funds will be awarded to State for broadband equity, access, and deployment projects to bridge the digital divide.

<u>Statement of Operating Objectives</u>

The Infrastructure Investment and Jobs Act, 2022, established NTIA's Broadband Equity, Access, and Deployment program and provided $42.5 billion to implement the program. In FY23, NTIA will provide oversight of and technical assistance to grant recipients of the program to ensure the success of awarded projects.

Exhibit 12

Explanation and Justification

Line Item		2021 Actual		2022 Enacted		2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Broadband Equity, Access, and Deployment Grants	Pos./BA	0	0	0	41,601,000	0	0
	FTE/Obl.	0	0	0	5,300,000	0	0
Broadband Equity, Access, and Deployment Admin	Pos./BA	0	0	91	837,000	91	0
	FTE/Obl.	0	0	68	76,061	91	93,797
Broadband Equity, Access, and Deployment OIG Transfer	Pos./BA	0	0	0	12,000	0	0
	FTE/Obl.	0	0	0	12,000	0	0

Efforts to implement the program in FY22 include the promulgating of program rules, the release of the Notice of Funding Opportunity and application guidance, stakeholder engagement and pre-award technical assistance for prospective applicants. NTIA will secured the necessary staff and contractor resources to implement the program. In FY22, NTIA will conduct stakeholder outreach and technical assistance to assist States and other stakeholders plan for investments to address broadband equity, access, and deployment. NTIA will review the applications and complete the award of approximately $5.3 billion to States and Territories to fund broadband planning activities, including a 5-Year Action Plan, and Initial Plans for each State and Territory. The remainder of the funds authorized by Congress is being used to implement, administer, and oversee the program.

In FY23, NTIA's oversight activities will help protect the federal investment in and ensure accountability of these grants. NTIA also will provide technical assistance to help recipients navigate through technical challengesand federal grants administration requirements.

Exhibit 16

Department of Commerce
National Telecommunications and Information Administration
Broadband Equity, Access, and Deployment
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Broadband Equity, Access, and Deployment

	Object Class	2021 Actual	2022 Enacted	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent (Compensation)	0	7,562	10,083	10,083	0
11.3	Other than full-time permanent				0	0
11.5	Other personnel compensation	0	154	206	206	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**0**	**7,716**	**10,289**	**10,289**	**0**
12.1	Civilian personnel benefits	0	3,801	5,067	5,067	0
13	Benefits for former personnel					
21	Travel and transportation of persons	0	819	1,092	1,092	0
22	Transportation of things	0	0	0	0	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA	0	0	0	0	0
23.2	Rental payments to others	0	0	0	0	0
23.3	Commun., util., and misc. charges	0	0	0	0	0
24	Printing and reproduction	0	1,843	2,303	2,303	0
25	Consulting and other services					
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services from non-Federal sources	0	56,700	68,135	68,135	0
25.3	Purchase of goods and services from Gov't accounts	0	5,182	6,911	6,911	0
25.4	Operation of GOCOs	0	0	0	0	0
25.5	Research and development contracts	0	0	0	0	0
25.6	Medical care	0	0	0	0	0
25.7	Operation & maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons	0	0	0	0	

Exhibit 16

26	Supplies and materials	0	0	0	0	0
31	Equipment	0	0	0	0	0
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	5,300,000	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
94	Expenditure Transfer	0	12,000	0	0	0
99.9	**Total Obligations**	**0**	**5,388,061**	**93,797**	**93,797**	**0**
	Less prior year recoveries					
	Less prior year unobligated balance	0	0	(37,061,939)	(37,061,939)	0
	Total Budget Authority	0	42,450,000	0	0	0
	Personnel Data					
	Full-Time equivalent Employment:		68	91	91	
	Full-time permanent	0				0
	Other than full-time permanent	0	0	0	0	0
	Total	0	68	91	91	0
	Authorized Positions:					
	Full-time permanent	0	91	91	91	0
	Other than full-time permanent	0	0	0	0	0
	Total	0	91	91	91	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
Broadband Equity, Access, and Deployment
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity:		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
Broadband Equity, Access, and Deployment		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
<u>Reimbursable Projects</u>											
Broadband Equity, Access, and Deployment	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	250	0	250	0	250	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	250	0	250	0	250	0	0

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Exhibit 5

Department of Commerce
National Telecommunications and Information Administration
Digital Equity
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
President's Budget, 2022	8	6	2,750,000	271,662
2023 Adjustments to base:	0	0	0	0
2023 Base	8	8	2,750,000	6,826
plus: 2023 Program changes	0	0	0	0
2023 Estimate	8	8	2,750,000	6,826

Comparison by activity/subactivity:
with totals by activity

		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increases/Decreases from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Digital Equity Grants	Pos./BA	0	0	0	2,695,000	0	0	0	0	0	0
	FTE/Obl.	0	0	0	58,800	0	0	0	0	0	0
Digital Equity Admin	Pos./BA	0	0	8	50,000	8	0	8	0	0	0
	FTE/Obl.	0	0	6	3,862	8	5,826	8	5,826	0	0
Digital Equity OIG Transfer	Pos./BA	0	0	0	5,000	0	0	0	0	0	0
	FTE/Obl.	0	0	0	1,000	0	1,000	0	1,000	0	0
Total	Pos./BA	0	0	8	2,750,000	8	0	8	0	0	0
	FTE/Obl.	0	0	6	63,662	8	6,826	8	6,826	0	0

Adjustments for:
　Recoveries
　Unobligated balance, start of year　　　　0　　　　　　0　　　　　　　　　　　　(2,686,338)
　Unobligated balance transferred
　Unobligated balance, end of year　　　　0　　　2,686,338　　　　　　　　　　2,679,512
　Unobligated balance expiring

Financing from transfers:
　Transfer from other accounts　(-)
　Transfer to other accounts　(+)
Appropriation　　　　　　　　　　　　　　0　　　2,750,000　　　　0　　　　　　0　　　　　　0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Digital Equity
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Digital Equity Grants

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
	Pos./BA	0	0	0	2,695,000	0	0	0	0	0	0
Digital Equity Grants	FTE/Obl	0	0	0	58,800	0	0	0	0	0	0
Total	Pos./BA	0	0	0	2,695,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	58,800	0	0	0	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Digital Equity
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Digital Equity Admin

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
	Pos./BA	0	0	8	50,000	8	0	8	0	0	0
Digital Equity Admin	FTE/Obl	0	0	6	3,862	8	5,826	8	5,826	0	0
Total	Pos./BA	0	0	8	50,000	8	0	8	0	0	0
	FTE/Obl	0	0	6	3,862	8	5,826	8	5,826	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Digital Equity
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Digital Equity Admin

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
	Pos./BA	0	0	0	5,000	0	0	0	0	0	0
Digital Equity OIG Transfer	FTE/Obl	0	0	0	1,000	0	1,000	0	1,000	0	0
Total	Pos./BA	0	0	0	5,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	1,000	0	1,000	0	1,000	0	0

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Digital Equity
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Digital Equity

<u>Goal Statement</u>

The Digital Equity Grant program will promote the achievement of digital equity, support digital inclusion activities, and build capacity for efforts by States relating to the adoption of broadband by residents of those States. Additionally, this grants program will support efforts to achieve digital equity, promote digital inclusion activities, and spur greater adoption of broadband among covered populations.

<u>Base Program</u>

The National Telecommunications and Information Administration (NTIA) will award up to $2.7 billion in State Digital Equity Capacity grants and Digital Equity Competitive grants under the Digital Equity program. This program builds upon the broadband assistance programs that NTIA is administering from the fiscal year (FY) 2021 Consolidated Appropriations Act.

<u>Statement of Operating Objectives</u>

The Infrastructure Investment and Jobs Act, 2022, established NTIA's Digital Equity program and provided $2.8 million to implement the program. In FY23, NTIA will provide oversight of and technical assistance to grant recipients of the program to ensure the success of awarded projects.

Exhibit 12

Explanation and Justification

Line Item		2021 Actual		2022 Enacted		2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Digital Equity Grants	Pos./BA	0	0	0	2,695,000	0	0
	FTE/Obl.	0	0	0	58,800	0	0
Digital Equity Admin	Pos./BA	0	0	8	50,000	8	0
	FTE/Obl.	0	0	6	3,862	8	5,826
Digital Equity OIG Transfer	Pos./BA	0	0	0	5,000	0	0
	FTE/Obl.	0	0	0	1,000	0	1,000

Efforts to implement the program in FY22 include the promulgating of program rules, the release of the Notice of Funding Opportunity and application guidance, stakeholder engagement and pre-award technical assistance for prospective applicants. NTIA will secured the necessary staff and contractor resources to implement the program. In FY22, NTIA will conduct stakeholder outreach and technical assistance to assist States and other stakeholders plan for investments to address broadband equity, access, and deployment. NTIA will review the applications and complete the award of approximately $58.8 million in grants for State Digital Equity Plans. The remainder of the funds authorized by Congress is being used to implement, administer, and oversee the program.

In FY23, NTIA's oversight activities will help protect the federal investment in and ensure accountability of these grants. NTIA also will provide technical assistance to help recipients navigate through technical challenges and federal grants administration requirements.

Exhibit 16

Department of Commerce
National Telecommunications and Information Administration
Digital Equity
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Digital Equity

	Object Class	2021 Actual	2022 Enacted	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent (Compensation)	0	665	886	886	0
11.3	Other than full-time permanent				0	0
11.5	Other personnel compensation	0	14	18	18	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**0**	**679**	**904**	**904**	**0**
12.1	Civilian personnel benefits	0	334	446	446	0
13	Benefits for former personnel					
21	Travel and transportation of persons	0	72	96	96	0
22	Transportation of things	0	0	0	0	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA	0	0	0	0	0
23.2	Rental payments to others	0	0	0	0	0
23.3	Commun., util., and misc. charges	0	0	0	0	0
24	Printing and reproduction	0	152	203	203	0
25	Consulting and other services					
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services from non-Federal sources	0	2,170	3,570	3,570	0
25.3	Purchase of goods and services from Gov't accounts	0	455	607	607	0
25.4	Operation of GOCOs	0	0	0	0	0
25.5	Research and development contracts	0	0	0	0	0
25.6	Medical care	0	0	0	0	0
25.7	Operation & maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons	0	0	0	0	

Exhibit 16

26	Supplies and materials	0	0	0	0	0
31	Equipment	0	0	0	0	0
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	58,800	0	0	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
94	Expenditure Transfer	0	1,000	1,000	1,000	0
99.9	**Total Obligations**	**0**	**63,662**	**6,826**	**6,826**	**0**
	Less prior year recoveries					
	Less prior year unobligated balance	0	0	(2,686,338)	(2,686,338)	0
	Total Budget Authority	0	2,750,000	0	0	0
	Personnel Data					
	Full-Time equivalent Employment:					0
	Full-time permanent	0	6	8	8	
	Other than full-time permanent	0	0	0	0	0
	Total	0	6	8	8	0
	Authorized Positions:					0
	Full-time permanent	0	8	8	8	
	Other than full-time permanent	0	0	0	0	0
	Total	0	8	8	8	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
Digital Equity
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity:		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
Digital Equity		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable Projects											
Digital Equity	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	250	0	250	0	250	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	250	0	250	0	250	0	0

Exhibit 6

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Exhibit 5

Department of Commerce
National Telecommunications and Information Administration
Middle Mile Deployment
SUMMARY OF RESOURCE REQUIREMENTS
(Dollar amounts in thousands)

	Positions	FTE	Budget Authority	Direct Obligations
President's Budget, 2022	19	14	1,000,000	1,000,000
2023 Adjustments to base:	0	0	0	0
2023 Base	19	19	1,000,000	1,000,000
plus: 2023 Program changes	0	0	0	0
2023 Estimate	19	19	1,000,000	1,000,000

Comparison by activity/subactivity: with totals by activity		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increases/Decreases from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Middle Mile Deployment Grants	Pos./BA	0	0	0	980,000	0	0	0	0	0	0
	FTE/Obl.	0	0	0	0	0	980,000	0	980,000	0	0
Middle Mile Deployment Admin	Pos./BA	0	0	19	19,000	19	0	19	0	0	0
	FTE/Obl.	0	0	14	7,826	19	11,165	19	11,165	0	0
Middle Mile Deployment OIG Transfer	Pos./BA	0	0	0	1,000	0	0	0	0	0	0
	FTE/Obl.	0	0	0	1,000	0	0	0	0	0	0
Total	Pos./BA	0	0	19	1,000,000	19	0	19	0	0	0
	FTE/Obl.	0	0	14	8,826	19	991,165	19	991,165	0	0

Adjustments for:				
Recoveries				
Unobligated balance, start of year	0	0	(991,174)	
Unobligated balance transferred				
Unobligated balance, end of year	0	991,174	9	
Unobligated balance expiring				

Financing from transfers:
Transfer from other accounts (-)
Transfer to other accounts (+)

Appropriation	0	1,000,000	0	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Middle Mile Deployment
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Middle Mile Deployment Grants

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Middle Mile Deployment Grants	Pos./BA	0	0	0	980,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	0	0	980,000	0	980,000	0	0
Total	Pos./BA	0	0	0	980,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	0	0	980,000	0	980,000	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Middle Mile Deployment
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Middle Mile Deployment Admin

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
	Pos./BA	0	0	19	19,000	19	0	19	0	0	0
Middle Mile Deployment Admin	FTE/Obl	0	0	14	7,826	19	11,165	19	11,165	0	0
Total	Pos./BA	0	0	19	19,000	19	0	19	0	0	0
	FTE/Obl	0	0	14	7,826	19	11,165	19	11,165	0	0

Exhibit 10

Department of Commerce
National Telecommunications and Information Administration
Middle Mile Deployment
PROGRAM AND PERFORMANCE: DIRECT OBLIGATIONS
(Dollar amounts in thousands)

Activity: Middle Mile Deployment OIG Transfer

Line Item		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Middle Mile Deployment OIG Transfer	Pos./BA	0	0	0	1,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	1,000	0	0	0	0	0	0
Total	Pos./BA	0	0	0	1,000	0	0	0	0	0	0
	FTE/Obl	0	0	0	1,000	0	0	0	0	0	0

Exhibit 12

Department of Commerce
National Telecommunications and Information Administration
Middle Mile Deployment
JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Middle Mile Deployment

<u>Goal Statement</u>

The Middle Mile Grant program will expand and extend middle mile infrastructure to reduce costs and establish connection resiliency for broadband networks to unserved and underserved areas.

<u>Base Program</u>

The National Telecommunications and Information Administration (NTIA) will award up to $980 million in competitive grants under the Middle Mile program to expand and extend connection resiliency for broadband networks to unserved and underserved areas. This program builds upon the broadband assistance programs that NTIA is administering from the fiscal year (FY) 2021 Consolidated Appropriations Act.

<u>Statement of Operating Objectives</u>

The Infrastructure Investment and Jobs Act, 2022, established NTIA's Middle Mile program and provided $1 billion to implement the program. In FY23, NTIA will provide oversight of and technical assistance to grant recipients of the program to ensure the success of awarded projects.

Exhibit 12

Explanation and Justification

Line Item		2021 Actual		2022 Enacted		2023 Base	
		Personnel	Amount	Personnel	Amount	Personnel	Amount
Middle Mile Deployment Grants	Pos./BA	0	0	0	980,000	0	0
	FTE/Obl.	0	0	0	0	0	980,000
Middle Mile Deployment Admin	Pos./BA	0	0	19	19,000	19	0
	FTE/Obl.	0	0	14	7,826	19	11,165
Middle Mile Deployment OIG Transfer	Pos./BA	0	0	0	1,000	0	0
	FTE/Obl.	0	0	0	1,000	0	0

Efforts to implement the program in FY22 include the promulgating of program rules, the release of the Notice of Funding Opportunity and application guidance, stakeholder engagement and pre-award technical assistance for prospective applicants. NTIA will secured the necessary staff and contractor resources to implement the program. In FY22, NTIA will conduct stakeholder outreach and technical assistance to assist States and other stakeholders plan for investments to address broadband equity, access, and deployment.

In FY23, NTIA will review applications and complete awards in the first half of fiscal year after completing the program's pre-award phase that includes issuing a notice of funding opportunity within and conducting a competitive review process to select and vet applicants.

Exhibit 16

Department of Commerce
National Telecommunications and Information Administration
Middle Mile Deployment
SUMMARY OF REQUIREMENTS BY OBJECT CLASS
(Dollar amounts in thousands)

Activity: Middle Mile Deployment

	Object Class	2021 Actual	2022 Enacted	2023 Base	2023 Estimate	Increase/Decrease from 2023 Base
11.1	Full-time permanent (Compensation)	0	1,579	2,105	2,105	0
11.3	Other than full-time permanent				0	0
11.5	Other personnel compensation	0	32	43	43	0
11.8	Special personnel services payments					
11.9	**Total personnel compensation**	**0**	**1,611**	**2,148**	**2,148**	**0**
12.1	Civilian personnel benefits	0	794	1,058	1,058	0
13	Benefits for former personnel					
21	Travel and transportation of persons	0	0	0	0	0
22	Transportation of things	0	171	228	228	0
23	Rent, communications and utilities					
23.1	Rental payments to GSA	0	0	0	0	0
23.2	Rental payments to others	0	0	0	0	0
23.3	Commun., util., and misc. charges	0	0	0	0	0
24	Printing and reproduction	0	361	481	481	0
25	Consulting and other services					
25.1	Advisory and assistance services	0	0	0	0	0
25.2	Other services from non-Federal sources	0	3,807	5,807	5,807	0
25.3	Purchase of goods and services from Gov't accounts	0	1,082	1,443	1,443	0
25.4	Operation of GOCOs	0	0	0	0	0
25.5	Research and development contracts	0	0	0	0	0
25.6	Medical care	0	0	0	0	0
25.7	Operation & maintenance of equipment	0	0	0	0	0
25.8	Subsistence and support of persons	0	0	0	0	

Exhibit 16

26	Supplies and materials	0	0	0	0	0
31	Equipment	0	0	0	0	0
32	Lands and structures					
33	Investments and loans					
41	Grants, subsidies and contributions	0	0	980,000	980,000	0
42	Insurance claims and indemnities					
43	Interest and dividends					
44	Refunds					
94	Expenditure Transfer	0	1,000	0	0	0
99.9	**Total Obligations**	**0**	**8,826**	**991,165**	**991,165**	**0**
	Less prior year recoveries					
	Less prior year unobligated balance	0	0	(991,174)	(991,174)	0
	Total Budget Authority	0	1,000,000	0	0	0
	Personnel Data					
	Full-Time equivalent Employment:					
	Full-time permanent	0	14	19	19	0
	Other than full-time permanent	0	0	0	0	0
	Total	0	14	19	19	0
	Authorized Positions:					
	Full-time permanent	0	19	19	19	0
	Other than full-time permanent	0	0	0	0	0
	Total	0	19	19	19	0

Exhibit 6

Department of Commerce
National Telecommunications and Information Administration
Middle Mile Deployment
SUMMARY OF REIMBURSABLE OBLIGATIONS
(Dollar amounts in thousands)

Comparison by activity:		2021 Actual		2022 Enacted		2023 Base		2023 Estimate		Increase/Decrease from 2023 Base	
Digital Equity		Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount	Personnel	Amount
Reimbursable Projects											
Middle Mile Deployment	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	250	0	250	0	250	0	0
Total, Reimbursable Projects	Pos./BA	0	0	0	0	0	0	0	0	0	0
	FTE/Obl	0	0	0	250	0	250	0	250	0	0

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION
FY 2023/2021
Annual Performance Plan and Report Backup

Overview of Bureau Accomplishments

Domestic and International Policies

- NTIA continued to support advancements on Software Component Transparency and Software Bill of Materials (SBOM) -- acritical step in securing the global software supply chain in a 5G and Internet of Things environment -- by delivering an Executive Order-directed report on minimum elements of an SBOM. The agency completed its work with cross-sector stakeholders from around the world and published key documents to close out phase two of the multistakeholder process.
- NTIA solicited public comment for, and helped to draft, the National Strategy to Secure 5G Implementation Plan; held twopublic industry listening sessions and published a summary report on advancing and securing 5G development; began building the Congressionally mandated Communications Supply Chain Risk Information Partnership (C-SCRIP) to share supply chain security risk information with trusted communications providers and suppliers; and implemented E.O. 14034,Protecting Americans' Sensitive Data From Foreign Adversaries, including developing a 120-report proposing policies to protect persons' sensitive data.
- NTIA successfully filed more than 35 recommendations for the Committee for the Assessment of Foreign Participation in theUnited States Telecommunications Services Sector in accordance with EO 13913, supporting the FCC's public interest review of license applications for national security and law enforcement issues resulting from foreign investment.
- NTIA convened cross-sector stakeholders from around the world and published documents on the development of a SoftwareBill of Materials, which is a critical step in securing the global software supply chain in a 5G and Internet of Things environment.
- NTIA successfully built an international coalition to defeat a proposal to override the current standard Internet protocols(TCP/IP) through a "newIP" standard at the International Telecommunications Union and successfully protected the multistakeholder model for Internet governance.
- NTIA built support for U.S. 5G vendor diversity priorities among numerous foreign governments and international bodies, securing the first consensus language within a multilateral forum on this topic (G7 Digital and Technology Ministerial Declaration), engaging in the most comprehensive public-private, global event on vendor diversity to date ("Quad Open RANForum"), leading policy discussions with the 28-member European Union, and coordinating interagency bilateral engagementwith a range of likeminded governments.
- NTIA completed a Request for Comments on the World Telecommunications and Development Conference
- NTIA led the development and adoption of the Prague Proposals on Telecommunications Supplier Diversity, the most comprehensive statement to date on the role of governments in enhancing 5G supplier diversity.
- NTIA developed of policy opinions within the World Telecommunication Policy Forum, which will serve the basis of future ITU work
- U.S. leadership on DNS to remove problematic regulations from foreign policies that would impose rules on U.S. infrastructure.

Spectrum Management

- Made available 100 megahertz of mid-band spectrum to be auctioned to commercial wireless operators.
- Automated spectrum management processes to increase security, transparency, and access to accurate and authoritative data.

- Implemented new methods and technology to support an enduring process and pipeline for spectrum access.
- Established MOA with NSF and the FCC to align investments in spectrum research, infrastructure, and workforce development with U.S. spectrum policy objectives, principles, and strategies.
- Pursued spectrum management workforce development initiatives, such as the reviewed the human resources processes for classification of job recruitments, evaluated the process used to select potential candidates, considered how the organization could better train staff, developed options to show better staff recognition, and created initiatives for staff retention.

Advanced Communications Research
- Fundamental research at NTIA's Boulder lab led to improvements in models to predict the behavior of radio frequencies used for 5G communications, e.g., to account for propagation impacts of buildings and foliage ("clutter"). The lab also tooled up to take precision mobile propagation measurements at 37 GHz ("millimeter wave") in an urban setting, adding to an existing "gold standard" data set acquired by ITS at mid-band frequencies. NTIA work to model and validate clutter propagation is central to NTIA and FCC policy decisions and helps agencies reduce uncertainty in spectrum sharing compatibility positions.
- NTIA's Boulder Lab upgraded the Table Mountain Radio Quiet Zone Advanced Communications Test Site to expand support for collaborative spectrum sharing research. Those facilities upgrades, coupled with application of an automated transmitter emissions measurement system developed under this program, were instrumental in timely support to DoD to investigate the impact of 5G on radio altimeters.
- NTIA's Boulder Lab commissioned a 5G Communications Research and Innovation Network (CRAIN) testbed to support research and development of open radio access network (Open RAN) 5G capabilities, performance, and integration. The technical CRAIN expertise spearheaded the 5G Challenge effort, a collaborative prize competition with the Department of Defense (DoD), to accelerate the adoption of open interfaces, interoperable secure components, and diverse supplier solutions towards the development of an open 5G ecosystem.

BroadbandUSA
- Received and reviewed more than 700 applications requesting more than $9.1 billion from three grant programs with $1.5 billion in combined funds available. In November 2021, NTIA announced its first three awards for the TBCP program to deliver nearly $1.4 million to tribes for broadband planning and use and adoption projects.
  - BIP - Received 230+ applications for $2.5 billion in funding
  - TBCP – Received 280+ applications for $5.79 billion in funding
  - CMC – Received 200+ applications for $833 million in funding
- Developed and released publicly the Indicators of Broadband Need Map (IBN), designed to aggregate multiple third-party data sources and provide tools to the public to understand the digital divide and the varied obstacles to broadband availability and use. The map enables users to layer various data sets to evaluate broadband access by "indicators of need," and search by specific locations such as tribal lands and minority-serving institutions.
- Enhanced the National Broadband Availability Map by adding pricing information, updating speed-test data, and including federal investments from the FCC's Rural Digital Opportunity Fund (RDOF) and the U.S. Department of Agriculture's (USDA) ReConnect Program as new layers in the NBAM. Expanded NBAM to include 40 participating states and territories and 5 participating Federal agencies.
- Signed the Broadband Interagency Coordination Agreement (BICA) with FCC and USDA on June 25, 2021, to share information about and coordinate the distribution of federal broadband deployment funds. As part of the signed agreement, each federal agency

partner will share information about existing or planned projects that receive funding from NTIA, FCC, or USDA. Each partner will also, upon request, identify entities providing broadband service in a specified geographic area; the levels of broadband service in that area, including broadband speeds and technologies deployed; the geographic scope of broadband service in that area; and each entity in that area that has or will receive funds from these programs.

- Prepared/published the first annual ACCESS Broadband Report highlighting the newly established Office of Internet Connectivity and Growth's (OICG) accomplishments over the past year and investments in federal broadband support programs and Universal Service Fund (USF) programs. The report was developed in coordination with 13 federal agencies comprising 55 total programs and summarizes the federal broadband investment landscape, outlines the current state of measuring investments and connection across federal broadband support and USF programs, and provides recommendations to improve efforts to track broadband spending and outcomes.
- Provided support to the U.S. Department of the Treasury with respect to the $350 billion State and Local Fiscal Recovery Funds and the $10 billion Capital Projects Program created by the American Rescue Plan Act of 2021 (ARPA). NTIA employees with expertise in federal and state broadband programs facilitated close coordination between the NTIA and Treasury programs and helped ensure state and local governments are well served by the Treasury programs. NTIA provided its experience with tribal consultations, outreach, and technical assistance to tribal communities through a Memorandum of Understanding as Treasury engaged tribes interested in broadband funding. NTIA has long coordinated with federal programs to share best practices, provide direct support, and participate in events of shared interest, such as the 2021 Department of Interior Tribal Broadband Summit, where OICG developed and facilitated 11 broadband sessions for attendees.
- Provided technical assistance to state, local, and Tribal entities, including to:
  - 145 members of State Broadband Leaders Network (SBLN) from 56 States and Territories
  - 100 members of Digital Equity Leaders Network (DELN) who convened for 5 meetings
  - 700 participants in 3 formal Tribal consultations
  - 13,287 registrants for 33 webinars hosted
  - 150 communities participating in TA workshops
  - 150 students and professors engaged from 4 HBCUs

Public Safety – Mandatory
- FirstNet made significant progress in FY 2021 the nationwide public safety broadband coverage and capacity with contractual milestones met ahead of schedule. FirstNet connected more than 5,000 public safety agency and organization subscribers and approximately 1.1 million device connections, for a total of approximately 17,000 public safety agencies and more than 2.5 million FirstNet devices connected since the launch in March 2017.
- The FirstNet Authority delivered on two network investments: upgrades to the network core for initial 5G capabilities and expansion of FirstNet's fleet of deployables with 15 new assets. FirstNet users now have access to AT&T's 5G spectrum in agrowing number of markets enabling 5G network capabilities on FirstNet, which is expected to drive major increases in the quantity and types of connected devices for FirstNet users, including vehicles, unmanned aerial vehicles and sensors. The new deployable assets are helping to meet public safety's increasing demand with nearly 1,000 requests for FirstNet deployables from January 2020 to date (August, 2021).
- The FirstNet Authority updated and publicly released the FirstNet Authority Roadmap to reflect new research and publicsafety priorities within the Roadmap's six domains. The six domains are: Core, Coverage, Situational Awareness, VoiceCommunications, Secure Information Exchange and User Experience.
- The NTIA Office of Public Safety (OPSC) jointly administered $109 million in grant funding to 36 states, tribal entities, and the District

of Columbia under the 911 Grant Program. These grant funded projects were completed in FY 2022, and helped fund the migration of Emergency Communications Centers (ECCs) to IP-enabled emergency networks; adoption of NG911 services and applications, interconnection with emergency response organizations; and training of public safety personnel in 911 services.

Analysis of Performance Indicators

Explanation of Trends

Highlighting two longstanding performance measures:

- NTIA's domestic and international policy group plays a critical role in representing the United States in multiple treaty-based meetings to provide leadership and advance U.S. national economic and technology policies. The metric *"% of NTIA positionssubstantially adopted or successful at international meetings"* tracks those treaty-level positions that NTIA brings to the meeting and shows our success rate at getting them fully or substantially adopted. This trend has been exceeding targets for many years.

- NTIA's Institute for Telecommunication Sciences (ITS) is a world leader in research and engineering, specializing in telecommunications, next generation communication, and improved quality of service. Federal agencies, state and local government, and industry use ITS services through reimbursable agreements to conduct research. Other parties and researchers use ITS' published technical articles to learn about the newest communications technology. Two metrics, whichare exceeding target, serve as a proxy for the value of ACR's work, *"Number of times research publications are downloadedannually"* and *"Successfully completed deliverables under reimbursable agreements (on time, on budget, and accepted)"*.

Explanation of Targets for FY22 and FY23

In FY22 and FY23, NTIA will transition our performance measures to better align with the new work being performed by the programs. If funding is approved, NTIA has set aggressive targets and will work to achieve those outcomes. If funding is not approved, NTIA might need to adjust target-levels but would not change outcomes that measure programs' success. The annual operating funding levels for the FirstNet Authority continue to remain steady from year-to-year and itsannual operating budget is made available through non-appropriated means.

Progression of the Performance Indicators

As our mission programs advance, NTIA has transitioned our performance measures to better align with these new requirements and to increase the utility of the measures for periodic review with senior leadership. In FY22, NTIA will request to discontinue six (6) performance measures that were aligned to programs that have ended or priorities of the prior Administration. NTIA is developing new performance measures that better measure the evolving mission of NTIA's programs, including new Congressional and Presidential mandates.

Performance Data Validation and Verification

NTIA and FirstNet track closely the performance of the program outcomes. NTIA holds regular briefings with senior leadership to ensure that deadlines are being attained and the public is being served by its work. FirstNet has quarterly briefings with the DeputySecretary of Commerce to support the review and monitoring of the program goals and to ensure that the multi-billion initiative is achieving is on track to meets its vital public safety mission.

Performance Indicators

Performance Indicator	FY 2021 Actual	FY 2021 Target	Status	FY 2022 Target	FY 2023 Target
Number of times research publications are downloaded annually	15,800	9,000	Exceeded	9,500	9,500
Successfully completed deliverables under reimbursable agreements (on time, on budget,and accepted)	98%	95%	Exceeded	95%	95%
In coordination with DOC operating units, conduct outreach activities with government, industry, and multi-stakeholder groups to identify and address privacy and global free flow of information issues	11	6	Exceeded	6	6
Percentage of NTIA positions substantially adopted or successful at international meetings	75%	75%	Met	75%	75%
Number of pilot states and territories providing data to NTIA to populate Congressionally mandated broadband map	37	36	Met	43	46
Communities to which NTIA provides technical assistance	158	193	Not Met	DISC	DISC
Impact of NTIA providing broadband support (K-12 Students)	2,783,420	3,400,000	Not Met	DISC	DISC
Impact of NTIA providing broadband support (Community Anchor Institutions)	6,304	7,700	Not Met	DISC	DISC
Impact of NTIA providing broadband support (Hospital)	1,105	1,350	Not Met	DISC	DISC
Percentage of planned coverage achieved	80%	80%	Met	95%	100%
Percentage of timely implementation of Presidential Memorandum within 3 years	60%	60%	Met	DISC	DISC
Percentage of Federal frequency assignments in AWS-3 bands that have vacated orshared spectrum, according to approved transitions plans	100%	80%	Exceeded	90%	90%
Percentage of public safety adoption targets achieved	87%	60%	Exceeded	100%	100%
Percentage of States and Territories that will continue critical coordination activities regarding wireless broadband and FirstNet beyond NTIA's availability of grant funds	71%	50%	Met	DISC	DISC
Improve public safety by extending enhanced wireless broadband service to rural populations	61%	60%	Exceeded	DISC	DISC
Number of State and Territory Technical Assistance Engagements	N/A	N/A	N/A	50	51

Number of Broadband Equity Access and Deployment (BEAD) Program State & Territory 5-Year Action Broadband Plans	N/A	N/A	N/A	10	46
The amount of Broadband Grant Funds Obligated (Awarded) for broadband - related programs	N/A	N/A	N/A	$2.7B	$5.0B
Number of NG911 technical assistance engagements performed	N/A	N/A	N/A	N/A	3