<u>Broadband Expansion and Access Progress</u>

Completed pursuant to
Chapter 74 (Senate Bill 66), Digital Connectivity Act of 2021, Section 6.5-104 (E)

Submitted by the
Department of Housing and Community Development
Office of Statewide Broadband

December 20, 2023

Introduction

Chapter 74 (Senate Bill 66), the Digital Connectivity Act of 2021, Section 6.5-104(E)(1) requires a report be submitted to the Governor and the General Assembly on or before December 1 each year. The report is to include progress the Office of Statewide Broadband (OSB) is making towards developing a state broadband plan, increasing access to broadband infrastructure, improving digital literacy, the allocation of funds from the Digital Inclusion and Digital Connectivity Funds, as well as other metrics.

Background

Broadband internet access has become an essential part of everyday communications and everyday life. Chapter 74 reorganized the Office of Rural Broadband (ORB) into the Office of Statewide Broadband (OSB). The OSB was given the responsibility for broadband efforts statewide whether rural, urban or suburban. The OSB's responsibilities include access to infrastructure, digital literacy, digital inclusion and digital equity efforts.

Report

Section 6.5-104(E)(1)

Subsection (I)(1) Develop and implement the plan required under subsection (C) of this section (Statewide Broadband Plan):

The statewide broadband plan utilizes the Bipartisan Infrastructure Law (BIL) Broadband Equity Access and Deployment (BEAD) 5 Year Action Plan as its basis. This plan was submitted to the National Telecommunications and Information Administration (NTIA) in August 2023 for review and approval. We have not yet received comments or approval, but feel confident that it will be approved and are submitting it to the Governor and General Assembly as our Statewide Broadband Plan under separate cover.

Subsection (I)(2) Increase access and connection to broadband internet services throughout the state with specific reporting on improvements to infrastructure, adoption, and speeds:

The ORB began its efforts to improve access to broadband infrastructure in FY 2018 and has expanded its efforts every year since that time. Since FY 2018, the ORB/OSB has provided over $250 million in funding across 22 Counties to expand broadband access to over 46,000 households. Figure 1 provides a cumulative summary of funding and locations provided service.

Initially, all grant-funded projects met speeds of 25 megabits per second (Mbps) downstream and 3 Mbps upstream. In FY 2021 we increased the grant delivery speeds to 100 Mbps downstream by 20 Mbps upstream in order to ensure that households had the service levels they needed to run the multiple devices in the typical home. In FY 2022 we increased the speed to which an area is considered unserved from 25 Mbps downstream by 3 Mbps upstream to those lacking 100 Mbps

downstream by 20 Mbps upstream in accordance with the funding source (ARPA CPF) requirements. ARPA CPF additionally requires grant delivery speeds to be 100 Mbps symmetrical unless such speeds are not achievable due to geography, topography or high cost. Our latest grant program adhered to these requirements. As appropriate, OSB will reexamine our speed requirements and adjust them as recommended.

To encourage adoption of broadband in low- and moderate-income households, we have developed the Maryland Emergency Broadband Benefit program that provides a $15 monthly subsidy to help pay for internet service. This program has sufficient funding to operate through at least April 2024.

Concurrently, we have developed a device subsidy program that assists these households with obtaining a computer for use at their home. A contract for the OSB to purchase up to 150,000 laptops was approved by the BPW. OSB developed a grant program where local jurisdictions will apply for a portion of the devices and distribute them to eligible households. We offered grants via 2 rounds and have awarded grants for 133,240 devices to be distributed by local jurisdictions and their partners. The distribution work has been underway since June 2023 with round 2 device distributions to be completed by April 2024.

County	DHCD Funding	Non-DHCD Funding	County Total	Locations Served
Allegany	3,847,347	8,356,284	12,203,631	3,510
Anne Arundel				
Baltimore City				
Baltimore	17,415,005	6,706,883	24,121,888	2,333
Calvert	3,266,365	1,726,284	4,992,649	379
Caroline	22,312,359	11,342,436	33,654,795	3,841
Carroll	27,751,392	10,380,607	38,131,999	3,190
Cecil	16,722,172	6,153,882	22,876,054	1,558
Charles	17,050,942	7,553,238	24,604,180	3,408
Dorchester	9,895,790	5,264,806	15,160,596	1,817
Frederick	19,610,838	7,271,267	26,882,105	2,195
Garrett	7,910,402	11,450,426	19,360,828	4,290

County	DHCD Funding	Non-DHCD Funding	County Total	Locations Served
Harford	14,986,006	5,480,239	20,466,245	2,198
Howard	799,374	1,006,281	1,805,655	329
Kent	8,624,247	4,130,983	12,755,230	1,462
Montgomery	1,149,943	127,772	1,277,715	37
Prince George's	1,396,055	155,117	1,551,172	55
Queen Anne's	4,489,411	3,027,350	7,516,761	1,541
St. Mary's	4,614,665	2,910,361	7,525,026	733
Somerset	18,216,512	5,448,389	23,664,901	2,414
Talbot	9,502,406	20,524,223	30,026,629	5,992
Washington	5,796,162	2,316,670	8,112,832	1,204
Wicomico	13,655,322	7,165,585	20,820,907	1,973
Worcester	12,410,093	9,501,872	21,911,965	1,920
FY19 FY23 Total Funding	241,422,808	138,000,955	379,423,763	46,379

Figure 1

Cumulative Deployment Funding by Jurisdiction

Subsection (I)(3) Improve digital literacy among residents of the state:

The University of Maryland Extension has developed a program to distribute and provide training for a digital literacy program. The OSB advised the UM Extension in their planning for the program and provides assistance with the training and distribution of the program as well. Through a partnership between OSB and the UM Extension, UM Extension is serving as the technical support and help desk for those who receive a laptop through the device distribution program.

OSB also developed a Digital Inclusion Grant program (MD-DIG), awarding $1.9 million to 30 local jurisdictions and non-profits. The program funded programs that supported broadband usage including digital literacy training.

Subsection (I)(4) Increase speeds to meet or exceed the Federal Communications Commission standard for upload and download speeds:

The FCC standard for broadband service is 25 Megabits per second (Mbps) downstream and 3 Mbps upstream. This is also the speed that is used to determine if a household is considered served or unserved by many federal agencies in their funding opportunities. One exception is the Coronavirus Capital Projects Fund (CPF) that encouraged 100 Mbps downstream by 20 Mbps upstream be used as the unserved metric. The upcoming Broadband Equity Access and Deployment (BEAD) program requires the 25 Mbps by 3 Mbps downstream and upstream speeds be used to determine unserved areas.

The FY 2021 and FY 2022 funding provided to the OSB for broadband expansion via the Coronavirus State and Local Fiscal Recovery Fund and the Capital Projects Fund require that infrastructure expansion projects provide service at speeds of at least 100Mbps downstream and 100 Mbps upstream. We are also abiding by the CPF requested 100 Mbps by 20 Mbps unserved metric in our CPF funded programs.

The BEAD program requires that 25Mbps downstream and 3Mbps upstream be used as the unserved metric and 100Mbps downstream and 20Mbps upstream be used as the metric for underserved.

As the OSB develops and implements the statewide broadband plan, speeds necessary for progressive use of broadband will be required for all state funded projects.

Subsection (II) The existing gaps in connectivity and the state's progress toward closing those gaps:

The OSB has made significant progress towards expanding broadband infrastructure to allow households and businesses to access broadband services. To date we have provided over $245

million for broadband infrastructure projects that will provide broadband access to over 46,000 households. Areas provided grants are shown in Figure 2.

We recognize that access to broadband infrastructure at the street may not be enough for all households to obtain service. Households with long driveways struggle with the costs associated with extending service from the public road to the home. In urbanized areas, many multi-family dwellings do not have the infrastructure inside the building for the household to receive service. Treasury approved the use of CPF monies for two programs to address these issues. Two grant programs, Broadband for Public Housing and Broadband for Difficult to Serve Properties, were developed to utilize the remaining $69 million CPF funds for these programs with applications due to OSB in December 2023 and awards planned in February 2024.

The statewide broadband plan and associated map will identify internet service providers (ISP), show where service is available and by which provider, examine demographic information and utilize all data in determining where to focus the Office's efforts. Upon completion of the plan and related mapping, we will have a full understanding of the gaps and the underlying needs of the households impacted.
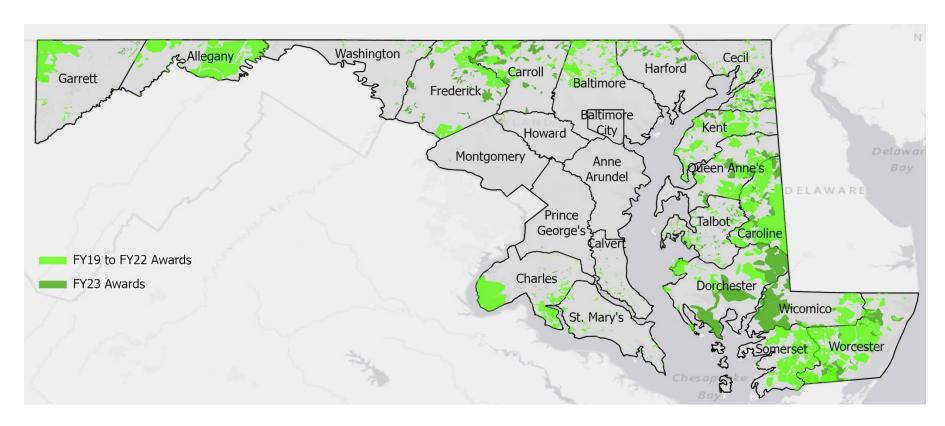.

Figure 2
Broadband Infrastructure Deployment Funded Areas

Subsection (III) The impact that gaps in internet service have on the workforce and state and local economies:

Broadband internet access has become an essential part of everyday communications and everyday life. This became very apparent when the pandemic caused companies to have workers leave their offices and work from home. Without reliable internet access, these workers were forced to jeopardize their health and continue to work from their office or were let go by their employers. Remote work was a growing trend prior to the pandemic; the pandemic simply provided the success many employers needed to see to fully accept remote working. Some employers have decided to not return to the typical office routine.

These employer decisions are going to affect where their workforce will live and how they will work. Companies allowing remote work have a much larger workforce available to them – someone can live in the mountains of Garrett County and work for a brokerage firm in New York City, bringing a well-paying job to the area. If a worker is looking for a new home, they will require broadband service in order to continue their remote working.

Home pricing is also impacted by broadband availability. Home prices have been shown to increase by 3% if reliable broadband is available. Broadband availability has a similar impact on the rental housing market.

Subsection (IV) Information from local education agencies on the impact of internet service quality on student achievement and access to 21st century opportunities:

We are having difficulties in gathering relevant data for this required item. We have reached out to the Maryland Department of Education and are performing our own research, but have found no data that compares broadband service and educational outcomes.

Subsection (V) Demographic data on locations with gaps in services:

Demographic information was gathered using ZIP Code data. ZIP Code areas having 15% or more unserved locations were analyzed. Of the 431 active ZIP Codes in Maryland, only 19 had 15% or more unserved locations.
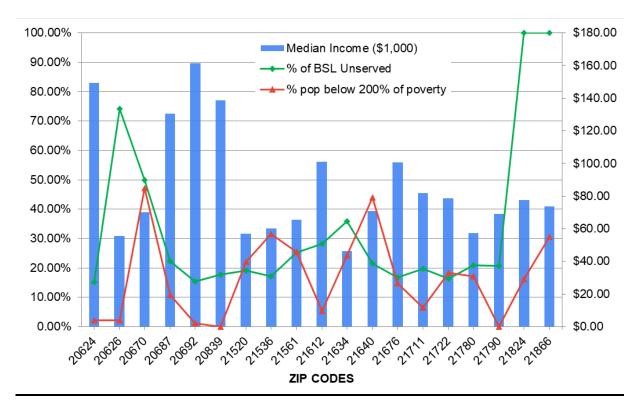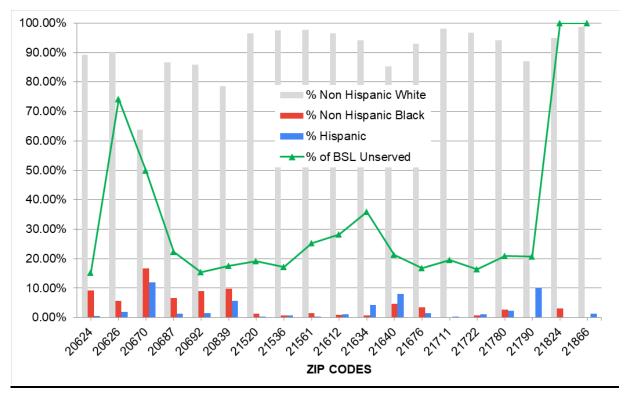
Figure 3
Unserved Locations by Income

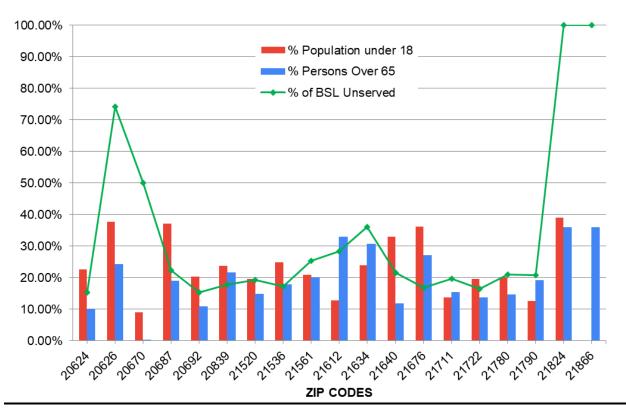**Figure 4**
Unserved Locations by Race

Figure 5

Unserved Locations by Age

The review of this data indicates no correlation between income, race or age in the delivery of broadband deployment. Reviewing the geographic location of these ZIP Code areas found that they were all in rural, low-density parts of the state, the only commonality found.

Subsection (VI) The allocation of money from, and programs supported by, the Digital Inclusion Fund, the Digital Connectivity Fund, and the Rural Broadband Assistance Fund in the preceding fiscal year:

To date, these funds have not been utilized. FY21 Supplemental Budget #5 placed funds with immediate usage needs in existing budget locations including the DHCD Office of the Secretary and the Local Government Infrastructure Fund (LGIF). In FY23, the General Assembly required that DHCD create a divisional budget for OSB. This was done and funds that resided in dedicated purpose accounts were placed in the newly created budget areas or other appropriate locations. Funds currently being utilized by the OSB are as follows:

Service Fee Subsidy	$45,000,000	Office of Secretary
Device Subsidy	$30,000,000	Office of Secretary
LGIF FY22	$15,180,000	LGIF

LGIF FY21	$30,000,000	LGIF
Municipal Broadband	$45,000,000	Division of Broadband
Digital Inclusion Fund	$2,000,000	Office of Secretary
Gap Networks	$5,000,000	Office of Secretary
Network Infrastructure	$97,600,000	LGIF
Broadband Connectiveness	$23,720,000	Division of Broadband
Tech Extension	$4,000,000	University of MD Extension
Digital Navigators	$2,000,000	University of MD Extension

The Service Fee Subsidy program, named the Maryland Emergency Broadband Benefit (MEBB) program, provides a $15 per month subsidy for broadband service to eligible low- and moderate-income households. The MEBB program utilizes the federal Affordable Connectivity Act (ACP) eligibility rules and enrollment process. The ACP provides up to a $30 subsidy for internet service. The MEBB subsidy, like the federal ACP program, provides the funds as a reimbursement to the ISP after they have provided a credit to the subscriber. With the federal ACP and MEBB subsidy, a household can obtain a service supplement of up to $45 per month. This ensures eligible households can afford sufficient reliable internet service. There are currently 43 ISP's participating in the program and we have encumbered $27.9 million for subsidies to over 165,000 unique households. We anticipate that funding will be available to continue this program through December 2025.

The device grant program is distributing over 130,000 HP Chromebook laptops to household in 25 counties and municipalities across the state. OSB, through the state's RFP process, contracted with HP to procure and deliver the devices to the awarded jurisdictions. The jurisdictions are responsible for distributing the devices to eligible households. The program runs through April 2024.

Utilizing the $45 million municipal broadband funding, we are currently accepting applications for broadband upgrades to publically owned housing. This program will allow housing that is owned by our local jurisdictions to installing broadband wiring and other infrastructure to enable residents to use and receive the benefits of broadband connectivity.

Utilizing the $23.7 million broadband connectiveness funding, we are currently accepting applications from counties to assist their residents that have difficulty accessing broadband infrastructure due to location, topography of installation cost.

In FY 2023 we encumbered over $91 million for broadband deployment grants that will extend broadband access to over 14,000 additional households. This program provided grants to nine ISP's to fund 35 projects in 20 counties.

Additional staffing has been added to the OSB. Two additional permanent and five contractual positions have been approved for the Office. OSB has filled all of these positions.

Conclusion

Plans are underway to meet all the requirements of Chapter 74/Senate Bill 66. We will continue to provide updates and reports as requested.

Appendix A
Raw ZIP Code Demographic Data >15% unserved

Zipcode	BSL_within_ Awards	Unserved_B SL	Total_BSL	% of BSL Unserved	Median Income	Median Income ($1,000)	% pop below 200% of poverty	Total_pop	Non Hispanic white persons	Non Hispanic Black persons	Hispanic American Indian Person	Non Hispanic Asian Person	Hispanic Native Hawaiian Persons	Non Hispanic Other Race persons	Non Hispanic totalpersons	Hispanic Persons
20624	51	83	544	15.26%	$149,333.00	$149.33	2.21%	1282	1145	118	3	1	0	0	9	6
20626	0	190	256	74.22%	$55,694.00	$55.69	2.23%	373	337	21	0	0	3	1	4	7
20670	2	2	4	50.00%	$70,000.00	$70.00	47.14%	1014	647	169	2	20	5	0	49	122
20687	21	65	291	22.34%	$130,463.00	$130.46	10.79%	313	271	21	0	5	0	1	11	4
20692	0	75	489	15.34%	$161,316.00	$161.32	1.14%	1051	903	96	1	5	1	0	29	16
20839	0	15	85	17.65%	$138,833.00	$138.83	0.00%	214	168	21	1	3	0	0	9	12
21520	12	215	1120	19.20%	$57,128.00	$57.13	22.02%	2074	2003	30	4	4	0	0	25	8
21536	26	340	1975	17.22%	$60,268.00	$60.27	31.49%	4121	4016	35	6	7	0	0	24	33
21561	43	719	2848	25.25%	$65,647.00	$65.65	25.45%	2627	2567	40	0	5	0	1	6	8
21612	12	104	368	28.26%	$101,042.00	$101.04	5.31%	492	475	5	1	0	0	0	5	6
21634	78	124	345	35.94%	$46,154.00	$46.15	24.19%	305	287	2	0	0	0	0	3	13
21640	263	142	663	21.42%	$70,875.00	$70.88	44.01%	1632	1390	77	2	8	0	1	24	130
21676	8	45	269	16.73%	$100,500.00	$100.50	14.70%	398	370	14	0	3	0	0	5	6
21711	13	91	464	19.61%	$81,776.00	$81.78	6.44%	1029	1010	1	0	4	0	0	10	4
21722	48	369	2249	16.41%	$78,592.00	$78.59	18.31%	5545	5369	44	5	23	1	0	43	60
21780	203	163	779	20.92%	$57,168.00	$57.17	17.19%	1625	1531	44	1	3	0	1	8	37
21790	25	12	58	20.69%	$69,021.00	$69.02	0.00%	100	87	0	0	1	0	0	2	10
21824	0	205	205	100.00%	$77,738.00	$77.74	16.08%	198	188	6	0	2	0	0	2	0
21866	0	69	69	100.00%	$73,684.00	$73.68	30.53%	78	77	0	0	0	0	0	0	1

Zipcode	% Non Hispanic White	% Non Hispanic Black	% Non Hispanic American Indian	% Non Hispanic Asian	% Non Hispanic Native Hawaiian	% Non Hispanic Other	% Non Hisapnic Total	% Hispanic	Persons Over 65	% Persons Over 65	% Population under 18	Median Age	Total Housing units	vacant units	% Vacant	% Homeowner Rate	% Homeowner w/o mortgage	% Rent
20624	89.30%	9.20%	0.2	0.1	0	0	0.7	0.50%	128	10.00%	22.60%	39.1	487	15	3.10%	56.40%	30.90%	18.40%
20626	90.30%	5.60%	0	0	0.8	0.3	1.1	1.90%	90	24.10%	37.70%	46.1	230	16	7.00%	46.60%	42.30%	19.30%
20670	63.80%	16.70%	0.2	2	0.5	0	4.8	12.00%	2	0.20%	9.00%	22	225	12	5.30%	0.50%	0.00%	99.50%
20687	86.60%	6.70%	0	1.6	0	0.3	3.5	1.30%	59	18.80%	37.00%	49	244	20	8.20%	45.40%	36.10%	28.90%
20692	85.90%	9.10%	0.1	0.5	0.1	0	2.8	1.50%	112	10.70%	20.30%	41.9	434	30	6.90%	60.30%	25.80%	18.80%
20839	78.50%	9.80%	0.5	1.4	0	0	4.2	5.60%	46	21.50%	23.60%	45	81	3	3.70%	57.90%	27.90%	19.70%
21520	96.60%	1.40%	0.2	0.2	0	0	1.2	0.40%	305	14.70%	19.50%	40.5	1054	87	8.30%	43.70%	42.60%	23.90%
21536	97.50%	0.80%	0.1	0.2	0	0	0.6	0.80%	733	17.80%	24.80%	41.2	1890	119	6.30%	40.20%	45.50%	26.20%
21561	97.70%	1.50%	0	0.2	0	0	0.2	0.30%	524	19.90%	20.80%	46.4	2699	167	6.20%	45.90%	48.00%	11.80%
21612	96.50%	1.00%	0.2	0	0	0	1	1.20%	162	32.90%	12.70%	57.6	377	26	6.90%	50.20%	44.90%	8.90%
21634	94.10%	0.70%	0	0	0	0	1	4.30%	93	30.50%	23.80%	51.9	307	53	17.30%	53.60%	40.50%	10.00%
21640	85.20%	4.70%	0.1	0.5	0	0.1	1.5	8.00%	190	11.60%	32.90%	38.7	651	44	6.80%	54.70%	31.50%	20.10%
21676	93.00%	3.50%	0	0.8	0	0	1.3	1.50%	108	27.10%	36.20%	53.5	260	27	10.40%	50.30%	38.90%	17.70%
21711	98.20%	0.10%	0	0.4	0	0	1	0.40%	156	15.20%	13.70%	42.9	418	24	5.70%	53.10%	35.80%	17.30%
21722	96.80%	0.80%	0.1	0.4	0	0	0.8	1.10%	750	13.50%	19.60%	42.5	2186	123	5.60%	55.60%	32.50%	17.60%
21780	94.20%	2.70%	0.1	0.2	0	0.1	0.5	2.30%	235	14.50%	20.00%	41.1	661	60	9.10%	52.20%	36.20%	18.10%
21790	87.00%	0.00%	0	1	0	0	2	10.00%	19	19.00%	12.50%	45.7	44	0	0.00%	41.90%	40.00%	30.20%
21824	94.90%	3.00%	0	1	0	0	1	0.00%	71	35.90%	38.90%	58	181	35	19.30%	38.90%	59.30%	4.20%
21866	98.70%	0.00%	0	0	0	0	0	1.30%	28	35.90%	0.00%	59	74	6	8.10%	52.40%	38.90%	14.30%