Closing the Digital Divide: Expanding Broadband and Technology Accessibility in Montgomery County

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About the Fellow

Madison Hollon is currently a Master of Public Policy candidate at the University of Maryland. Originally from Montgomery, Alabama, Madison is a new DMV resident. Her background is in activism around reproductive justice. She is passionate about poverty alleviation and achieving autonomy through policy. She previously worked for the Feminist Majority Foundation, and the Doug Jones for Senate campaign and remains an activist and organizer.

Acknowledgments

Disclaimer

The analysis, options, and recommendation do not represent the opinions of the Office of Broadband Programs.

Executive Summary

In today's digital world, access to affordable, robust broadband and connected devices is imperative to participate in our economy, education, and democratic system. During a global pandemic, the world seemed to transition to work and school from home almost overnight. Those without access to a connected device or broadband connection were unable to participate in this new normal. **Digital equity is an imperative policy initiative to ensure low-income and disenfranchised individuals have access to the connected world.**

Digital Equity is the state in which all families, regardless of income or identity, have access to broadband and devices, and the skills to use them, for daily living, to participate in civic life, and to fully participate in the digital economy. In Montgomery County, the Office Broadband Programs focuses on achieving digital equity through **Three Pillars of Digital Equity:**

1. *Broadband Connections- Initial connection to the internet*
2. *Connected Devices- Laptops/Tablets to use the connection*
3. *Digital Literacy- The skills to use the laptop/tablet*

Montgomery County addresses these disparities through several existing programs in the Office of Broadband Programs:

- Emergency Broadband Benefit (EBB)
- Emergency Connectivity Fund (ECF)
- MoCoNet
- FiberNet
- Senior Planet Montgomery

Those most effected by digital disparities are low-income families. In Montgomery County, MD there are 80,000 households that are low-income, making less than $50,000 annually. This makes up 21% of the households in Montgomery County, MD.

Of those low-income households:

- **36% of low-income families do not have a computer (28,325 households)**
- **27% of low-income families do not have connected devices (21,041 households)**

These programs do not accurately address digital disparities in the county. They need to be further expanded to create digital equity in low-income areas. Investments such as additional staffing, funding, and creating a digital equity plan will decrease digital disparities in Montgomery County.

The Office of Broadband programs aims to connect 10,000 households to broadband connection through the Emergency Broadband Benefit program, but numbers have plateaued due to minimal marketing, making residents unaware of this program and stagnating the county's registration numbers. Recommendations will be provided in this analysis to support the current programs and target digital disparities in Montgomery County.

The digital divide issue is cyclic. First a computer is needed, then internet access, then digital literacy. All pillars of digital equity must be addressed to close the digital divide and indirectly achieve upward mobility for low-income Montgomery County residents. The Maryland State Legislature aims to achieve digital equity by creating the Office of Statewide Broadband (OSB). The OSB will aim to create a digital equity plan to achieve statewide digital equity in 2026. Montgomery County can expand current programs and be a model for the state in achieving digital equity.

Summary of Recommendations:
- Increase staff for administration of current federal programs
- Create a Digital Equity plan to comply with State Law
- Increase funds to expand FiberNet as a Last Mile System

The Council has an opportunity to utilize federal funding of the ECF and EBB programs and provide a foundation for continued Digital Equity initiatives in Montgomery County. An expansion in the Office of Broadband Programs to include additional staffing and funding efforts, could reach the 28,000 households in Montgomery County who are digitally disenfranchised. **Therefore, the primary recommendation is to increase staff to administer and support current federal grant programs**. While the federal government covers initial program costs, Montgomery County would lower long-term operational costs by supplying more staff to these programs. Making the operational investment now will utilize these federal programs while making Montgomery County a leader in digital equity.

> All pillars of digital equity must be addressed to close the digital divide and indirectly achieve upward mobility for low-income Montgomery County residents.

Introduction

The COVID-19 Pandemic has exacerbated the need for digital equity across the country. When the nation moved to an online work and education platform, those without access to internet connection and connected devices were left unable to participate in their pre-pandemic lives. This greatly impacted the nation's workforce. While most employers moved to an online era, some front-line workers were unable to due to their employer circumstances. If these essential workers had access to the internet and were able to find a higher paying and safer job online, would this increase their quality of life?

The same lack of digital equity is found in our education system. Some public schools such as Montgomery County Public Schools were able to provide their students modems or Google Chromebooks during a year of online learning while other homeschooled children did not have access to this.

How we interact with our communities, work, education, and democracy has shifted to an online platform. Those who have access to digital connection, connected devices and digital literacy are well-equipped to continue their lives online. The COVID-19 pandemic alienates those without these digital resources to no longer participate in their education, work, or social lives. Montgomery County Government has a responsibility to provide digital resources to residents without these resources so they may continue to participate in the new normal of the connected world.

As the pandemic continues, the need for digital equity becomes a policy priority. When governments fail to address digital equity, this further disenfranchises the population with digital disparities. This excludes this population from playing an active role in their own lives and potentially achieving upward mobility.

The pandemic proposes new challenges and questions to our normal routine of in-person work and education. When governments are deciding how to proceed in the future, the question must be poised: *How are we reaching the most digitally disenfranchised communities?*

Digital Disparity in Montgomery County

The problem:

- 28,325 low-income families in Montgomery County do not have broadband at home
  - This encompasses 36% of low-income households in Montgomery County
- 21,041 low-income families in Montgomery County do not have a computer
  - This encompasses 27% of low-income households in Montgomery County
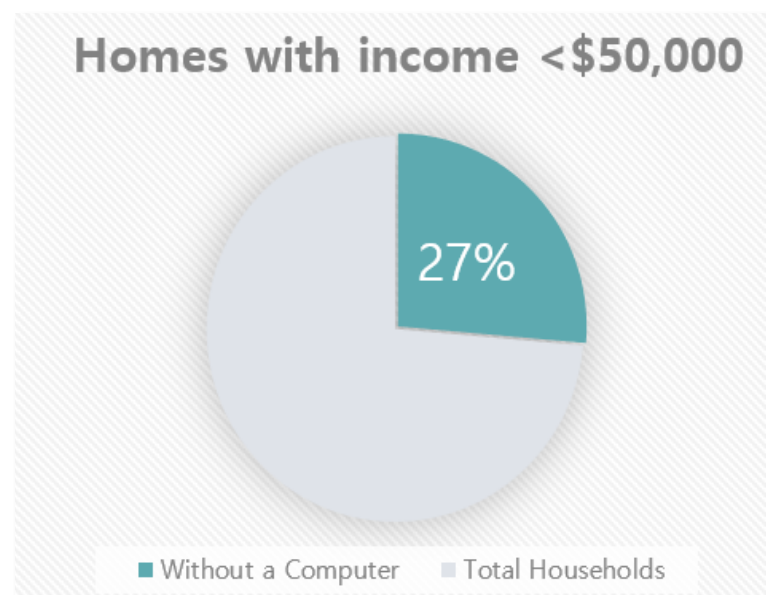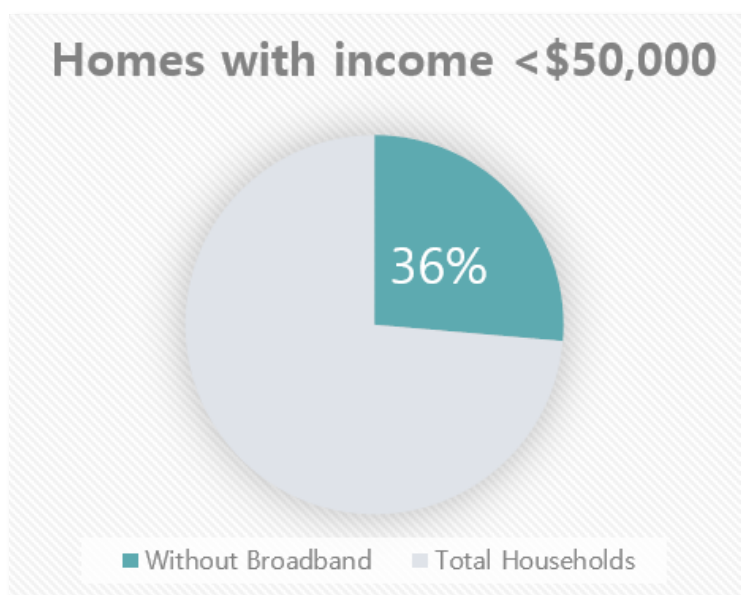
Data provided by the 2019 US Census. Compiled in chart by Madison Hollon, July 2021.

Montgomery County has a total of 368,898 households. Of those households, 79,056 households earn less than $50,000 annually, accumulating to 21% of the households in Montgomery County. For those who fall under this measurement of low-income, 36% of the population do not have access to broadband and 27% do not have access to a computer. For the purposes of this research, the data for the intersection of the disparities of not having a computer and broadband connection are unavailable in the 2019 census data. Although specific numbers are unavailable, the visual of this intersectionality can be found in the Digital Equity Map. The Digital Equity Map below shows geographically where the compounded disparities of not having broadband or a computer are present in Montgomery County.

Digital Disparity in Montgomery County

The [Digital Equity Map](#) is a tool used to locate and visualize digital disparities throughout the county. Digital disparities throughout Montgomery County will be addressed by households per sq mile. The map uses 2019 Census data and evaluates broadband connectivity and computer access per square mile. The blue areas show low-income households without broadband and the orange show households (income unknown due to lack of census data) without a computer. The overlapping in dark red illustrate the intersection of both lack of connection and a computer. Although the income of those households without a computer is unknown, the dark red areas show an overlap in low-income houses without broadband as well. Therefore, it can be concluded the areas with lack of access to broadband and computers are primarily in low-income households. The compounding need for computers and broadband shows the digital disparity is much more prevalent in districts 3 and 5. This data needs to be updated to 2021 data to fully show the impact of COVID-19. This data also shows us per household not individual digital disparities. Although this data is substantial in showing where the digital disparities are, addressing digital disparities individually would lead to a more robust picture of digital disparity in the county.

Map Key

- ▮ Low-income Homes without Broadband
- ▮ Unknown income Homes without a Computer
- ▮ Low-income Homes without Broadband and a Computer

Top Digital Disparity Hotspots:
- Gaithersburg
- Rockville
- Silver Spring
- Aspen Hill
- White Oak
- North Bethesda
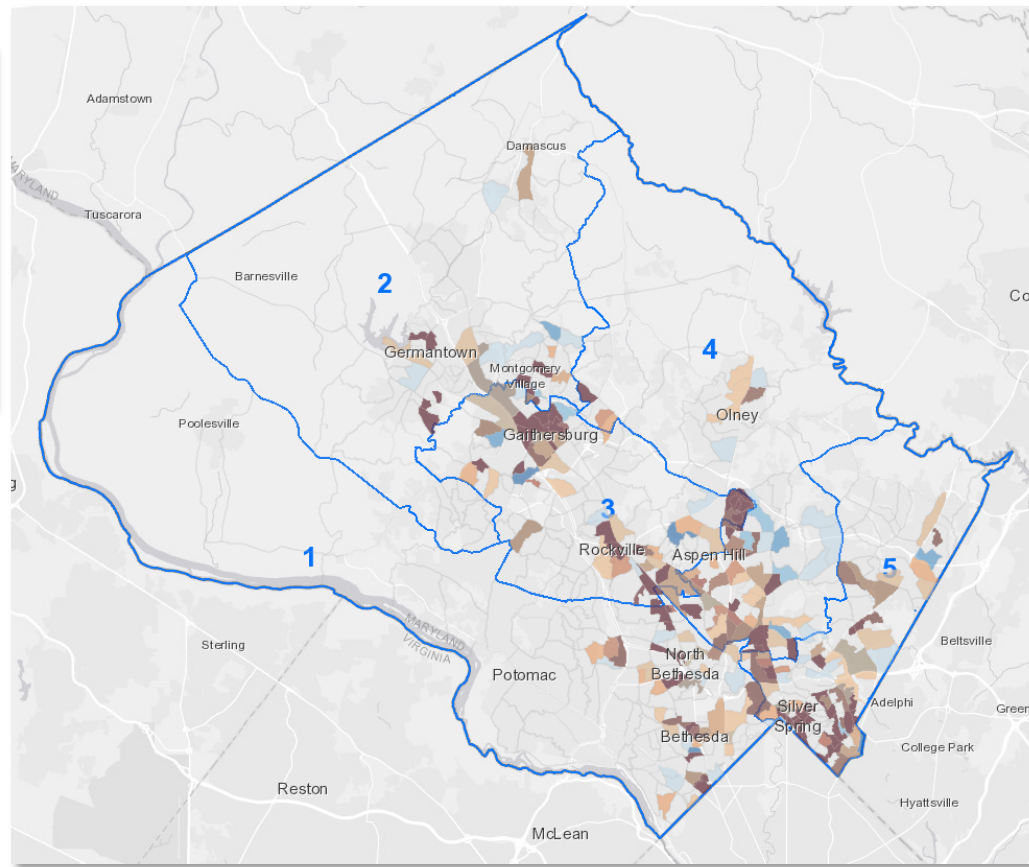
GIS map using 2019 Census Data. Provided by the Montgomery County Office of Broadband Programs. Map Key created by Madison Hollon, August 2021.

Digital Connectivity Act

The Maryland State General Assembly approved the Digital Connectivity Act in the 2021 Session. This legislation created the Office of Statewide Broadband (OSB) to catalyze digital equity efforts throughout Maryland. The bill's primary initiative is to create a statewide digital equity plan by July 2022. This plan hopes to achieve complete digital equity in the state of Maryland by December 31, 2026.

Montgomery County currently has no intentional plan to achieve digital equity throughout the county. The Office of Broadband Programs relies on its digital equity programs such as EBB, ECF, MoCoNet, FiberNet, and Senior Planet Montgomery to achieve digital equity in the county but has not formally made a developed plan for digital equity efforts. This legislation would require the state to have a plan, which could have an impact on OBP operations. Montgomery County has programs through OBP that could reach its current goals and fully achieve Digital Equity in the county if further supported with staffing and funding. This achievement would lead state efforts and make compliance with the Digital Connectivity Act and new Office of Statewide Broadband easier for Montgomery County.

Maryland State Capitol, Annapolis, MD.

Status Quo

Montgomery County works to address disparities through Digital Equity programs in the Office of Broadband Programs but can make significant operational improvements to close the digital divide. In response to the need for closing the digital divide, the federal government has started programs such as the EBB and ECF to give low-income households direct assistance to purchase broadband service or provide a connected device to increase digital equity. OBP executes these federal funds to achieve the first two pillars of digital equity: broadband connection and connected devices. MoCoNet and FiberNet projects in OBP also address broadband connection. Digital Literacy is addressed through OBP's Senior Planet Montgomery program. The goal of this analysis is to analyze what programs OBP is executing, how they address the three pillars of digital equity and where these programs can be further supported to close the digital divide.

Analysis of Current Programs

Federal Funding - EBB

OBP coordinates the Emergency Broadband Benefit (EBB) program to offer internet discounts for low-income families. EBB offers a temporary discount up to $50 per month for low-income families, which should cover the entire monthly cost of home broadband. The State of Maryland is planning to provide an additional $15 a month discount for another year, offering a potential $65 discount for low-income families. The initiatives of these programs will be reoccurring as the nation and county recover from the COVID-19 pandemic. Families are eligible if they are enrolled in SNAP, Medicaid, Pell Grant, or free school lunch programs or receive federal housing subsidies. **OBP aims to achieve 10,000 families registered but has stagnated at 4,688 registrants.** Residents who have a connected device have been reached via news, social media, press releases or the OBP website and have registered for the program. **OBP lacks critical personnel such as a marketing expert, bilingual community organizers, a communication expert** and more. Bilingual staff are needed to meet the needs of residents who learned English as a second language. In Montgomery County, 41% of households speak another language other than English ([2019 Census Data](#)). In OBP efforts, coordinating Spanish fluent volunteers are a priority to execute EBB registration events, which illustrates the need for bilingual staff. There are only two people who handle this program, a Manager in OBP along with me as a summer fellow. My time in this position is up and therefore the help they received to execute this program is no longer available. If OBP had more staff with experienced skillsets to help reach beyond the low-hanging fruit of residents who already have access to a connected device.

Federal Funding - EBB

The county current has 4,688 registrants in the EBB program and aiming to reach 10,000 registrants. Although this is making incremental progress in the amount of registration, the graph below shows the registrations have plateaued in the summer of 2021.
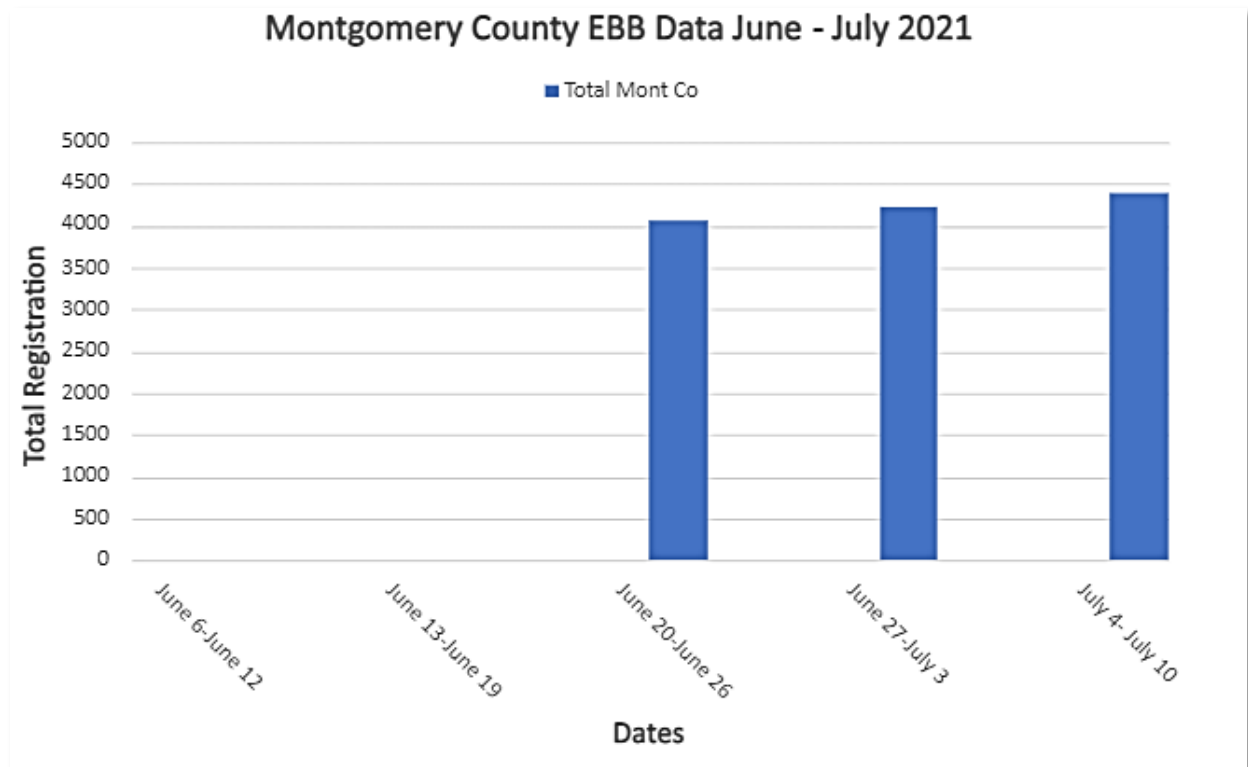
The FCC released EBB enrollment data for Montgomery County beginning June 29, 2021. Data collected from FCC, compiled in graph by Madison Hollon, July 2021.

This program has the potential to be extended until 2026 under the Bipartisan Infrastructure bill, which recently passed the United States Senate. The likelihood of this program's expansion is high, putting Montgomery County in an optimal position to utilize federal funds and lower initial costs. This program will continue to stagnate throughout its extension without staffing resources, perpetrating the digital divide in Montgomery County.

Federal Funding - ECF

The Emergency Connectivity Fund (ECF) is a federal grant to distribute Connected Devices (Laptops/tablets) to low-income library patrons for educational purposes. In Montgomery County, this program is named *Computers For You.* OBP is currently coordinating an effort to distribute connected devices to low-income families. ECF allocates funds for reimbursement of up to $400 per device. TEBS has chosen Google Chromebooks to distribute to participants and has set a goal of 10,000 Chromebooks. TEBS is capable of ordering more if this program is successful.

This program has the potential to be fully utilized but is lacking essential staff to execute the program. Those who have already enrolled in EBB are in a database to be contacted and offered to participate in the ECF program as well. **These registrants, almost 5,000, are the low-hanging fruit of residents in Montgomery County who need a connected device. The county does not have sufficient human capital to execute this program to its most effective potential in closing the digital divide.**

Organization efforts to inform residents about this program are needed to fully execute the ECF and maximize its effectiveness. The program will not be funded federal after 2022, but the program's efforts can continue using Maryland state funds. The Maryland General Assembly allocated $30 Million in FY 2022 for connected devices. This would continue the work of the ECF program despite switching from federal to state funds. OBP's work with ECF can expand along with the EBB program to reach its maximum effectiveness, if administrative resources such as staffing, and funding are implemented. **OBP is in an optimal position to continue this program with foreseeable funding in the future**.

MoCoNet

The MoCoNet projects are affordable housing units for special needs and low-income residents built with free, robust internet connectivity. The first and most successful housing unit is Main Street Apartments in Rockville, MD. Main Street offers 70 units of affordable housing with no cost internet and minimum fees for additional data and video service. The connection provides a robust 50Mbps (upload and download) and digital literacy training for residents.

OBP works with the Affordable Housing Partnership to find pre-constructed housing units to turn into more MoCoNet service apartments. The cost of this project depends on the building, wiring, and size but is estimated around $1,500-$2,000 per unit. OBP has an additional 250 affordable housing units to renovate but lack the financial and staff capacity to oversee the growth of this project.


Main Street Apartments in Rockville, MD. Photo provided by the Montgomery County Office of Broadband Programs.

FiberNet

The same internet connectivity is used for Montgomery County Government Facilities and other agencies throughout the county. FiberNet is a robust internet system connecting 256 MCG facilities, 223 traffic cameras, 865 traffic signal devices, 135 Elementary Schools, 40 Middle Schools, 25 High Schools and all 19 of Montgomery County Public School Centers, facilities, offices, and data centers. This system saves the county $3.5 Million and MCPS $3.0 Million annually. FiberNet is projected to expand from Ashburn, VA to increase robustness and upgrade objectives to include 100+ Gbps (90Gbps more than FiberNet 2006). This system operates as a middle mile system, a segment of connection that extends and links to the central connection site to the next local network plant.

The map below shows the connection of FiberNet to MCG facilities throughout the county. The black Flags represent an MCG facility site that uses FiberNet connectivity. The system provides the first pillar of digital equity: broadband connection to MCG facilities and OBP projects such as MoCoNet. Expansion of this project could include extension to residential areas as a last mile system, which would secure the first pillar of digital equity to those without initial broadband connection.
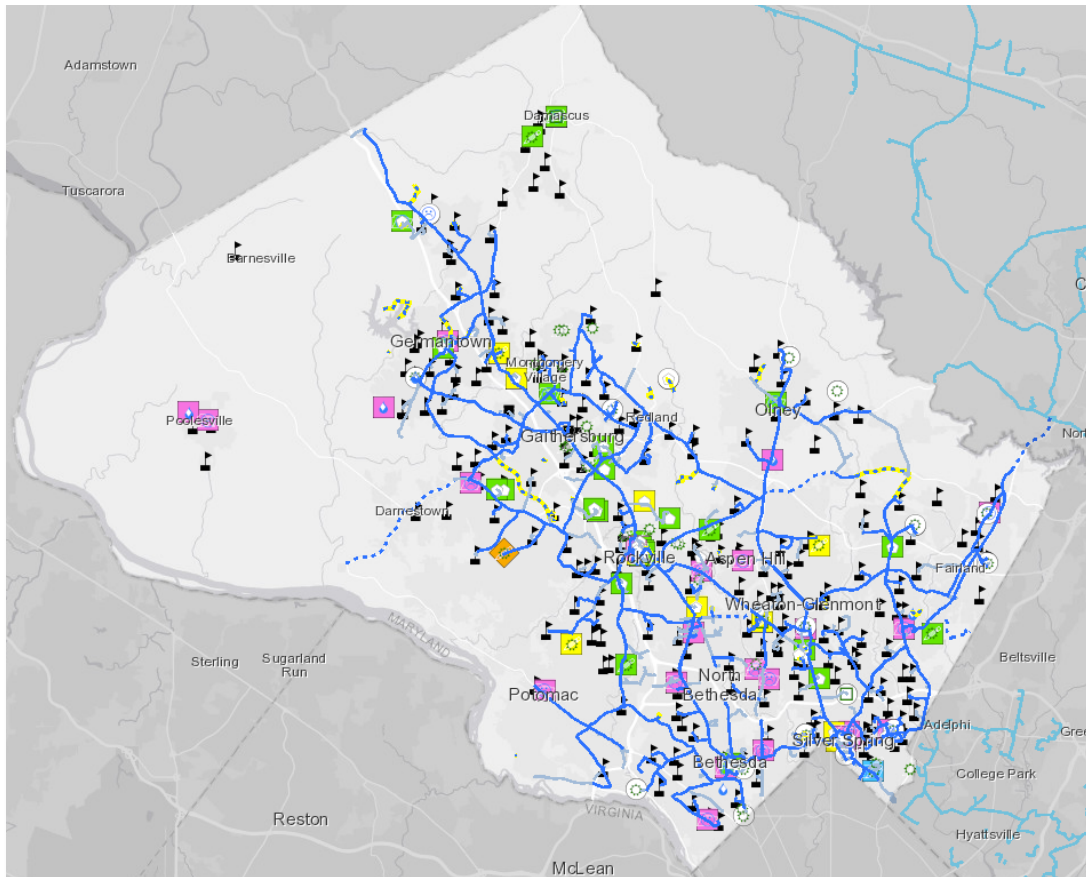
FiberNet site map. Provided by the Montgomery County Office of Broadband Programs.

Analysis of Current Programs

Senior Planet Montgomery

OBP executes the third pillar of digital equity, digital literacy, through the Senior Planet Montgomery program. This program offers digital literacy courses for older adults to better engage in the digital age. The program is of no cost, in English and Spanish, and made in collaboration with AARP and Older Adults Technology Services (OATS). The classes are in-person and available online as well. Although this program ensures the third and final pillar of digital equity, the first two must be achieved beforehand. Older adults may not have access or information to connection and services to fully utilize this program.

Analysis of Current Programs

Outcomes Matrix

The Montgomery County Council uses the 4 E criteria to evaluate policy, which will be adopted in this analysis and used to determine the best solution to close the digital divide.

The 4 E Criteria:

- **Education:** Does the policy promote educational opportunities for residents?
- **Economic Development:** Does the policy create economic development, either by creating revenue or decreasing costs, for residents or Montgomery County?
- **Environment:** Does the policy aid environmental efforts or reduce residents' or Montgomery County's carbon footprint?
- **Equity:** Does the policy address specific inequities in the county?

The current programs will be further analyzed using these criteria, shown in the outcomes matrix below:

Program	Education	Economic Development	Environment	Equity
EBB	X	X	X	X
ECF	X	X	X	X
MoCoNet	X	X	X	
FiberNet	X	X	?	
Senior Planet Montgomery	X	X	X	X

EBB/ECF

EBB and ECF are some of the current programs that meet all these criteria. These programs are of minimal operational cost to Montgomery County and give residents the opportunity to apply for diverse employment opportunities by providing connection to the internet and a device to use that connection. This outcome increases a resident's chance of finding a higher paying opportunity with low execution cost to Montgomery County through federal funds, meeting the economic development criteria. The ECF is designed for continuing education on a digital platform. The EBB allows for initial connection for online education, which meets the education criteria of this matrix. They are also environmentally friendly by giving residents a work from home option to reduce their carbon footprint. These programs promote education as well. Specifically, ECF for federally mandating devices be used for educational and library purposes. The EBB provides a connection for low-income families and children still learning remotely. These programs are both equitable by their no cost requirement and target of providing to low-income families. This program requires residents be met where they are, creating a more convenient and equitable service for recipients.

Analysis of Current Programs

Outcomes Matrix

MoCoNet

The MoCoNet project promotes education and economic development by providing no cost Wi-Fi in the housing units. Affordable housing units used in this program are already constructed and then renovated with FiberNet, meeting the environment criteria. The project is targeted for special needs and elderly residents, which provides equity for those residents but still leaves low-income populations from these services. It does not pass the equity aspect because the FiberNet system is installed in a specific unit rather meeting low-income residents where they are in their currently occupied households. Although this completes 3 out of the 4 E criteria, the MoCoNet project is not the most suitable or efficient to meet the current problem of lack of digital connection and connected devices.

FiberNet

The FiberNet system offers a robust internet connection that has the potential to complete the first pillar of digital equity and establish connection for Montgomery County residents. It promotes economic development by saving money for the county and public school system but is not equitable because it only services MCG facilities and utilized in MoCoNet. The extension into Ashburn, VA has been completed by the time of this report's publication. Due to this, environmental impact cannot be assessed on potential harm. This extension will be able to better serve Montgomery County Public Schools with faster and stronger Wi-Fi, completing the education criteria. The current network operates as a middle mile system for MCG facilities, excluding residents from its use. If FiberNet were extended further as a last mile system in low-income residencies, then it would be a more equitable solution.

Senior Planet Montgomery

The Senior Planet Montgomery system specifically targets the third pillar of digital equity: digital literacy. It therefore completes the education requirement of the criteria by providing substantial digital education for elder residents. It meets the economic development requirement by being a Public Private Partnership with AARP and OATS, lowering Montgomery County's operational costs. Senior Plant Montgomery also meets the environment criteria due to its establishment as an online program. Although this is equitable for older residents in the community, the number of elderly residents who have internet connection, and a connected device to use this program need to be further studied. The utilization of this program needs to be further analyzed by comparing the county's elderly population to those who are utilizing this program, and those who do not have broadband connection or a connected device. This program completes all 4 criteria but is still not a prime recommendation due to the lack of information on digital disparities in elderly populations and need for further analysis.

NACo Broadband in Municipal Counties Taskforce Report

The National Association of Counties Taskforce released their report on Broadband in Municipal Counties which assessed potential for county governments' ability to close the digital divide. The report concluded that broadband is a necessity beginning with an individual connected device with adequate, timely, and reliable service. It also found multiple ways to increase internet service and accessibility under county jurisdiction but there were 4 initiatives that pertain to Montgomery County. The report will be used to assess the best policy options to close the digital divide in Montgomery County.

#1 Closing the Homework Gap

The homework gap is defined by the National Education Association as the "barriers students face when working on homework assignments without a reliable Internet source at home." This gap leads to less access to education and therefore less social mobility in impoverished families. Assessing the digital divide and expanding digital equity efforts are essential to closing the homework gap for Montgomery County students.

In the beginning of the pandemic, Montgomery County Public Schools offered students modems and Google Chromebooks to help address the digital divide. Now that schools are going back to in-person instruction, these devices may need to be returned to MCPS. While this policy is not confirmed, students need reliable connected devices to be cognitive learners and participate in schools. This also disenfranchised homeschooled children with no access to MCPS resources.

NACo found the best policy is creating a permanent funding program such as "extending the ongoing Emergency Broadband Benefit Program" ([NACo Broadband Task Force](#)). This funding will be extended into 2022 and potentially further with the Bipartisan Infrastructure Plan. Montgomery County could ensure the longevity of this program by providing additional staffing, administrative aid, and finical resources to execute the program. This would provide the resources necessary to maximize efficiency.

#2 Shift to Individual Data

Another finding that the NACo report suggested is that broadband data should be based on an individual basis rather than by household. Collecting data on an individual basis gives more accuracy of digital disparities across the state although it could be more challenging. Household data does not give any marginal space for households with multiple children in school, multiple adults working online, or multiple people receiving telehealth services in one household. When collecting data post-pandemic, the county needs to implement individual analysis of digital disparities rather than per households to create a clearer image of digital disparity. Creating a more accurate picture of digital disparities would provide robust data to adequately target areas that are more disenfranchised.

#3 Federal Programming Extended

The NACo report concluded multiple times: federal programming must be extended to combat the digital divide in the middle of a pandemic. The state of the current federal programs relies heavily on the Federal Communications Commission. The FCC plans to execute the ECF program until 2022 (e-ratecentral.gov). The initiative of this program will continue through state funds. The Maryland General Assembly allocated $30 Million for devices in FY 2022, which will continue the efforts of the ECF. The ECF is a reimbursement process, where the state funding would grant physical connected devices to municipal governments to then distribute to residents.

During the time of this analysis, the US Senate passed the Bipartisan Infrastructure and Jobs Act, which includes $65 billion for continuing funds given in the American Rescue Plan Act. This legislation will continue the Emergency Broadband Benefit Program and further expand broadband connection efforts. If supported now with additional resources, such as adequate staffing, these federal programs would operate much more effectively. This creates a foundational effort to prioritize digital equity in the county.

#4 Middle Mile System

The NACo report also encourages broadband to be regulated as a utility. This expands middle mile systems to last mile systems to provide connection directly to residents. NACo reports multiple middle mile systems are inefficient, meaning an open network model would be more efficient for county and resident use. Montgomery County can expand its current middle mile system to a last mile system (which extends to residential areas) to combat the digital divide.

Policy Options

These are the available policy options that will be assessed by the 4 E's: Economic Development, Environment, Equity, and Education. From these options I will make my recommendation.

Expand MoCoNet

The MoCoNet service, operated by OBP, provides robust internet for the Main Street Apartments. These apartments are equipped with robust internet connected and available for low-income households and people with disabilities. The Office of Broadband Programs hopes to expand its efforts in 2021 along with their new launch site downtown Rockville at the Ansel Apartments. These apartments will serve 135 low-income senior citizens and provide connectivity. In March of 2022, the program will be extended to Snowden's Ridge low-income townhome development to 86 low-income families. The Office of Broadband Programs are in partnership with other affordable housing partners but would need additional funding to combat the affordability and digital connectivity issues more aggressively.

The Council Executive sets the budget for the fiscal year, while the County Council determines how to execute this budget. The MoCoNet project could be allocated more funds than previously to expedite this process and provide connection and affordable housing throughout Montgomery County. With additional funding efforts, the MoCoNet program would still complete 3 of the 4 E's criteria: Education, Economic Development, and Environment. This is still not an equitable aspect by placing residents in new housing rather than their current households and is therefore not a primary recommendation.

Policy Options

Expand FiberNet as a Last Mile System

The FiberNet system in Montgomery County currently operates as a middle mile system, providing broadband to multiple MCG facilities. The map of current Montgomery County Government Facilities overlaps the digital equity map where there are the most significant digital disparities. These disparities can be met with expansion of FiberNet as a last mile system, which provide broadband services to residential areas in the county.
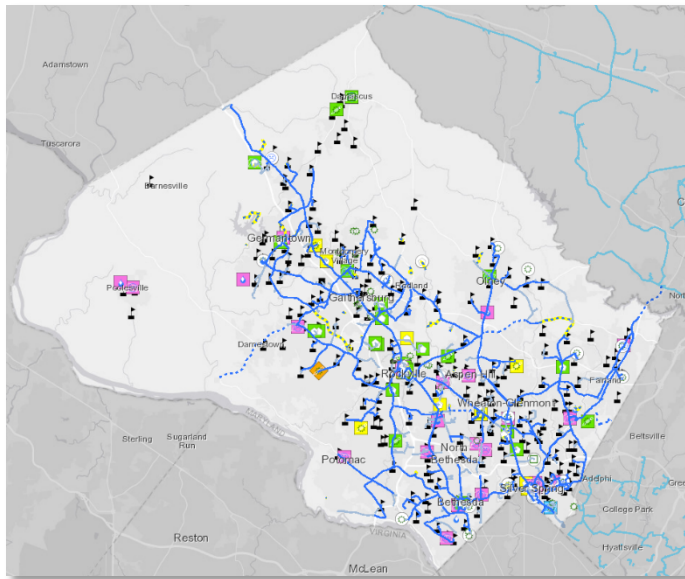
FiberNet site map. Provided by the Montgomery County Office of Broadband Programs.
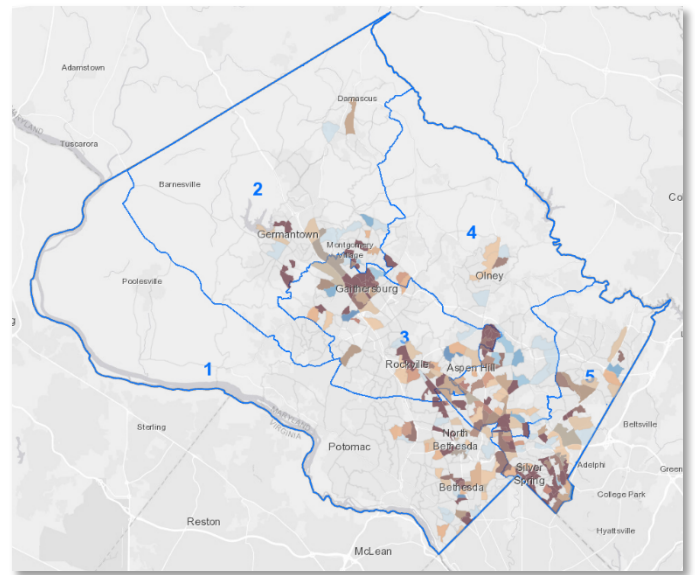
GIS map using 2019 Census Data. Provided by the Montgomery County Office of Broadband Programs.

The county could become an internet service provider for those low-income residents and offer a discounted rate of service. The system is currently being expanded as FiberNet3 and currently being connected to Ashburn, VA. OBP would need additional funding to expand FiberNet more towards central (as shown by the digital equity map) Montgomery County to reach these disenfranchised areas. This expansion would ensure residents throughout the county have quality internet service.

Although this service would provide more initial broadband connection to low-income residents the environmental impact and feasibility of expansion into these areas. More research would need to be conducted to assess if this is a feasible solution for the county.

Increase Resources to current Digital Equity Programs

The most resourceful option is to invest currently in the Digital Equity Programs executed in the OBP now to create a foundation of digital equity in the future. The federal government is providing extensive funding for these programs to be utilized by municipal governments at lower operational costs. Montgomery County could invest in additional staff to execute these funds to reach OBP's goals and beyond. The staff added could include but not limited to:

- Event Organizers
- Nonprofit Relations Coordinator
- Communications Strategists
- Marketing Expert
- Finance Coordinator

Detailed job descriptions are provided in section II of the appendix. All these positions should be listed as preferred for bilingual candidates to better execute the EBB and ECF funds and meet non-English speaking residents' needs. Adding additional staff to the digital equity office would make these programs more effective and utilize the federal funding that is already provided and likely to be extended to the future.

Create a Digital Equity Plan

The Maryland State Government passed the Digital Connectivity Act, which required the state to create a plan to achieve digital equity by 2026. Montgomery County would have to work with the new Office of Statewide Broadband to ensure digital equity is being achieved. As shown from the Digital Disparities in Montgomery County section, low-income households are most at risk for digital disparities, making them a primary demographic to target in a digital equity plan. By creating a fully developed plan that reaches these digital disenfranchised efforts, Montgomery County could be a leader in state initiatives and fully close the digital divide throughout the county.

Maintain Status Quo

The county could maintain the status quo with all programs operating at current staffing and funding resources. This would not damage current digital equity efforts in the county but would prohibit the programs from growing and being able to impact those with digital disparities at a much slower rate. The county would not be able to be a leader in digital equity initiatives and would stagnate the digital divide rather than fully close digital disparities.

Recommendation

> Short term: Increase Resources to execute Federal Funding
> Long term: Create a Digital Equity Plan

The recommendation to the council will be evaluated on the 4 E's criteria as introduced in the analysis portion of this document. The table below shows the outcomes if the policy recommendation of providing additional staffing and funding is addressed.

Program	Education	Economic Development	Environment	Equity
EBB	X	X	X	X
ECF	X	X	X	X
FiberNet	X	X	?	X

In the long-run, Montgomery County needs to develop a plan for digital equity. Intentionally addressing current programs and a timeline to achieve digital equity in the county is needed to combat the current digital disparities. This would make the county a leader in state-wide digital equity efforts.

In this plan, the long-term project of FiberNet expansion can be included as a last mile system to county residents rather than just MCG and MCPS networks. Offering an additional service would increase competition in the market and bring down prices, making connection more affordable for all residents. This solution therefore passes the economic development criteria by providing additional funds to the county at a low-cost to residents. It passes the education criteria by providing adequate service for online school and addressing the homework gap. It is also equitable by meeting low-income and disenfranchised residents where they are in the county. Although it meets all these criteria, the extension of FiberNet could be an immense construction period which would increase the county's environmental impact. More insight into the feasibility of connecting the system as a last mile system and its environmental impact is needed to fully operationalize this recommendation.

Recommendation

In the short- run, Montgomery County is in an optimal position to invest in federal programs now to reap benefits in the future. These programs, if additionally supported with staff, will continue to execute digital equity initiatives by providing two of the three pillars of digital equity: broadband connection and connected devices. These programs address all aspects of the criteria: increases education and economic development for residents; reduces our carbon footprint due to online work and school; and meets people where they are, which provides an equitable solution to close the digital divide. **Due to its low initial cost to Montgomery County and potential to close more digital disparities in the future, this is my primary recommendation for the council.** Addressing the digital divide while in a global pandemic has offered the county a cost-effective way of expanding digital equity efforts and potentially leading the state in digital equity in the future.

Conclusion

The digital divide is a policy issue that will be prevalent until digital equity is reached. Digital equity is the state in which all residents, regardless of income have 1) access to initial internet connection, 2) a connected device to use the internet, and 3) the skills and knowledge to use that device and participate in the online world. As the COVID-19 pandemic has shown us, the challenges ahead will only be exacerbated further if not addressed with urgency and met with substantial resources.
To combat the digital divide, Montgomery Count must increase staffing resources to adequately execute the current federal programming. Utilizing these programs will be the most cost-effective measure and will allow for more residents to receive the two pillars of digital equity: connection and a device. This will aid OBP in exceeding the goal of reaching over 10,000 EBB registrants and making Montgomery County a leader in digital equity for the state of Maryland.

> As the pandemic continues, the need for digital equity becomes a policy priority. When governments fail to address digital equity, this further disenfranchises the population with digital disparities. This excludes this population from playing an active role in their own lives.

References

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Appendix

I. Definitions

Connected Device: Personal devices such as laptops/tablets. The connected devices discussed throughout this proposal are individual laptops and tablets. The connected devices provided under the ECF are Google Chromebooks.

Broadband: High-capacity transmission technique using a wide range of frequencies, which enables many messages to be communicated simultaneously.

Digital Equity: As defined by the National Digital Inclusion Alliance, a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy. Digital Equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services. Contains three main aspects: broadband connection, connected devices, and digital literacy.

MoCoNet: MoCoNet is primarily refers to OBP's Main Street Apartment projects. Uses FiberNet system.

FiberNet: Robust internet connection that serves 256 Montgomery County Government facilities.

EBB: Emergency Broadband Benefit Program. A federal grant established during the COVID-19 pandemic to provide a discount for internet services to low-income families.

ECF: Emergency Connectivity Fund. A federal grant program established during the COVID-19 pandemic to provide a connected device for educational and library purposes to low-income individuals.

Digital Divide: The blank space between residents with access to internet and connected devices and residents who do not have any of the three pillars of digital equity.

Digital Disenfranchisement/Disparity: The absence of one or more pillars of digital equity.

Digital Literacy: The skills to use connected devices to fully participate in the online world.

Digital Resources: Lack of access to broadband connection or a connected device.

OBP: Montgomery County's Office of Broadband Programs under the Technology and Enterprise Business Solutions Office. Executes digital equity programs.

TEBS: Technology and Enterprise Business Solutions. Office in Montgomery County Government that houses OBP.

II. EBB and ECF Staff Descriptions

- Event organizers: Bilingual program workers who will organize EBB and ECF registration events for low-income communities. Frontline workers who can directly communicate to residents and meet people where they are. This could include weekend or evening workdays to accommodate residents who are unable to participate in the 8 am – 5pm workday.
- Nonprofit Relations Coordinator: Additional managers who can communication with nonprofit partners and aid in organizing outreach events, collaboration efforts, address clients' needs.
- Communications Strategists/ Marketing Expert: Bilingual communication experts who can create press releases, draft social media posts, create literature such as flyers and promotional images to inform residents of the EBB and ECF services.
- Finance Coordinator: A governmental finance expert who can address transition from federal to state funds, process reimbursements from FCC, and apply for additional funds if needed.