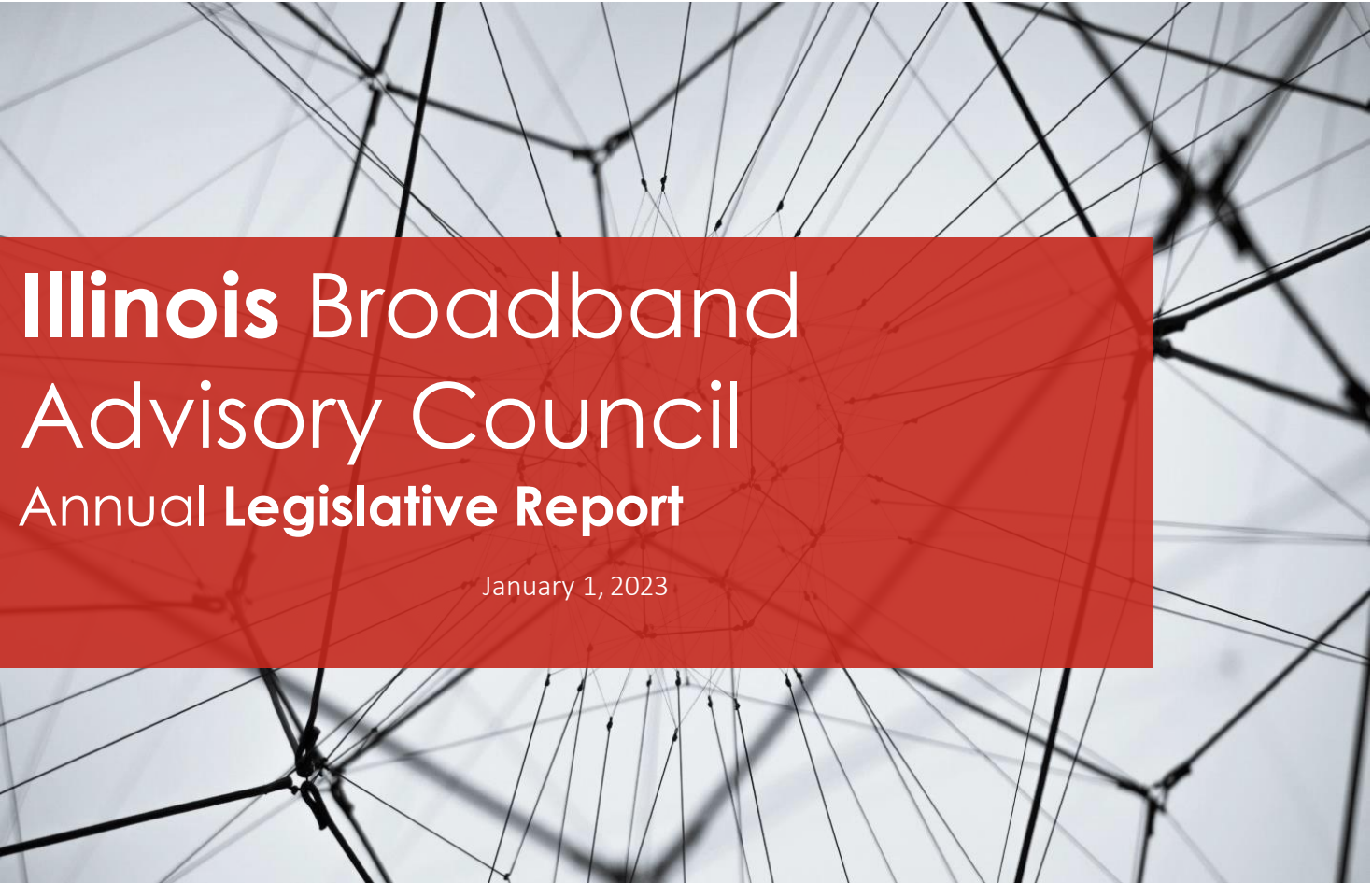


A background image showing a complex network of black lines and nodes on a light gray background, resembling a fiber optic or data network. A large, semi-transparent red rectangle is overlaid on the left side of the image, containing the title text.

Illinois Broadband Advisory Council

Annual **Legislative Report**

January 1, 2023





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Executive Summary

The Office of Broadband opened in 2019, launched its *Connect Illinois Broadband Grant Program* in 2020, and followed through in standing up complementary programming in digital equity and inclusion throughout 2021 and 2022. As historic federal funding for broadband infrastructure expansion and digital equity materializes in 2023, the Illinois Broadband Advisory Council will continue to serve as the primary platform for public discussion of Office of Broadband programming, performance, and progress – and well as a formal body, both directly and through use of its working groups, for broadband programming and policy consideration. Previous issue focus on economic development, education, and healthcare may be augmented with examination of emerging opportunities in digital equity, rural innovation, and smart cities, among others.

In 2022, the Illinois Office of Broadband (Office, IOB) administered *Connect Illinois Broadband Grant Program* awards extending access to roughly 5,000 homes, businesses, farms, and community anchor institutions. Building on this momentum, in January the Office published a \$350 million notice of funding opportunity (NOFO) leveraging state and federal funding sources and is establishing the Connect Illinois program in administrative rule. During this time, the Office secured its full share of \$254 million in federal *Capital Projects Fund* support and another \$6.5M in planning funds for its *Broadband Equity, Access, and Deployment (BEAD)* program Five-Year Action Plan and *Digital Equity* program State Digital Equity Plan – both of which are required to unlock an estimated \$1B in BEAD capital funding and an estimated \$50 million in Digital Equity capacity and competitive grant funding.

The Office launched its *Accelerate Illinois* local planning and capacity building program, engaging 12 self-defined communities (mostly counties) in a structured 14-week curriculum to support public investment in and public-private partnership toward broadband network expansion; a second “Notice of Collaboration Opportunity (NOCO)” in late 2022 identified the next five counties for participation in an agriculture-themed *Accelerate* cohort, bringing the Office’s three-year running total to over 50 local governments supported through non-capital programming.

The Office collaborated with the University of Illinois System to establish the *Illinois Broadband Lab*, a five-year commitment to broadband and digital equity capacity and programming. With three full-time staff, and at least three additional hires planned for early 2023, the *Lab* runs the *Broadband READY* program focused on broadband adoption and digital equity engagement in each of the state’s 10 economic development regions. In addition, the *Lab* procured the services of a broadband management consulting team to provide necessary capacity and expertise toward completion of various *BEAD* and *Digital Equity* program requirements, including the two plans referenced above.

Through its *Computer Equity Network* collaboration, the Office contributed to the collection, refurbishment, and redistribution of over 18,000 used computers in 100 counties. Through its collaboration with the Benton Institute for Broadband & Society, the Office published its 60th edition of the bi-weekly *Illinois Broadband Connections* newsletter, with over 1,200 subscribers throughout Illinois and beyond.



The Connect Illinois Vision

The *Connect Illinois* program launched in 2019, pairing the then-largest state matching grant program for broadband expansion – the \$400 million *Connect Illinois Broadband Grant Program* – with an appropriately ambitious commitment to digital equity and inclusion. The investment also included \$20 million to enable the existing 2,100-mile *Illinois Century Network* to provide all school districts in the state with access to free gigabit broadband. Combined, the strategic capital investment sought to ensure that all Illinois households, businesses, and community anchor institutions had access to affordable, reliable, and high-performing broadband.

At its core, the comprehensive *Connect Illinois* vision of broadband ubiquity is one of broadband equity – targeting resources to close gaps and expand opportunity for unserved and underserved communities throughout Illinois. The Illinois Broadband Advisory Council plays a key role in supporting this work – the work of the Illinois Office of Broadband, the state bureau housed within the Illinois Department of Commerce and Economic Opportunity charged with administering the *Connect Illinois Broadband Grant Program* and related work in community planning and capacity building, regional engagement, and digital equity and inclusion.

To create an ecosystem of digital equity and inclusion, the State of Illinois introduced complementary programming to pair with its historic \$420 million capital investment that, combined, seeks to address the three key pillars of digital equity: affordable in-home broadband service; access to personal computers; and digital literacy training and ongoing technical support. Over time, this approach has grown to include programs emphasizing local capacity building and planning, regional engagement, digital literacy, used computer refurbishment and distribution, and introduction of on-the-ground support for communities and broadband adoption assistance for households.

To make all of this possible, the Illinois Office of Broadband is working alongside public, private, nonprofit, and philanthropic partners to raise resources for and awareness of the digital equity challenges facing communities throughout the state. Initial collaboration has been critical to the early success of the *Connect Illinois* program, and it includes strategic cooperation with organizations and institutions such as: the Illinois-based Benton Institute for Broadband & Society; Heartland Forward; Illinois Innovation Network; PCs for People; National Digital Inclusion Alliance; University of Illinois Extension Service; and the University of Illinois System.

The comprehensive *Connect Illinois* programming and collaboration represent a holistic approach designed to empower Illinoisans to participate fully in an increasingly digital economy and society, to help communities identify and address existing broadband equity gaps, and to ensure the state leverages new and existing resources for targeted digital inclusion strategies and sustainable broadband equity outcomes.



The Illinois Broadband Advisory Council

Created through Public Act 100-833, the Broadband Advisory Council (BAC) is charged with removing barriers and fostering collaboration to expand broadband access, adoption, and utilization. In particular, the BAC serves to guide the creation, implementation, and effectiveness of the increasingly comprehensive *Connect Illinois* program – which balances the need for improved broadband access through infrastructure investment with complementary programming promoting broadband adoption and utilization, all through the lens of digital equity and inclusion.

In announcing the BAC, Governor J.B. Pritzker identified three main outcomes that would center the council's work: telehealth; education; and economic development. These priorities have gained significance in light of the COVID- 19 pandemic and constitute three primary utilization categories that depend upon high-quality broadband access:

- **Telehealth.** Expand access to telehealth across the state of Illinois, which will provide additional healthcare options to communities in rural and urban Illinois alike, ranging from primary care to expanded treatment opportunities in areas such as mental health and opioid addiction.
- **Education.** Increase broadband access – both for in-classroom learning and remote learning at home -- throughout Illinois to ensure students have the tools they need to succeed.
- **Economic Development.** Expand economic development and opportunity in urban and rural communities throughout Illinois. This investment will support the growth of Illinois' agriculture economy and information technology sector and will help to modernize transportation and support the development of entrepreneurs and small business owners.

Among its powers and duties, the BAC – in collaboration with the Illinois Office of Broadband and its strategic collaborators – strives to contribute as follows:

- Explore all ways to expand broadband availability to end-user customers, including in areas of income, business, education, health and aging in place;
- Explore ways to encourage state and municipal expansion of new broadband services;
- Explore, cooperate and assist with increased educational, career, workforce preparation including expansion of electronic and distance educational services;
- Identify service barriers to residents and small businesses;
- Research ways to eliminate adoption barriers;
- Monitor other states broadband progress; and
- Receive input from all Illinois broadband stakeholders and advise the Pritzker Administration on remedying service to underserved areas

To inform and advise the *Connect Illinois* program, the BAC convened in August 2019. The council has held regular meetings on a quarterly basis, with an occasional special meeting to cover additional agenda items. The council composition includes representation from an array of internet service providers, state agency officials and legislators, and various community and broadband-related stakeholders. Four community representation seats were added to the original 25-member council. See Appendix A to view the council's current appointed membership.





Meetings of the Broadband Advisory Council

By statute, the Broadband Advisory Council is required to meet on a quarterly basis. The Broadband Advisory Council convened four times in 2022:

- Regular Meeting: Wednesday, February 16, 2022
- Regular Meeting: Wednesday, May 11, 2022
- Regular Meeting: Wednesday, October 12, 2022
- Regular Meeting: Wednesday, December 14, 2022

February 16th Meeting: The agenda focused on updates from the Illinois Office of Broadband, particularly regarding the Connect Illinois Broadband Grant Program and growing complement of digital equity programming and collaborations. The council heard from national trends in digital equity planning and preparation ahead of Digital Equity Act implementation, as well as plans for kicking off council working groups.

Updates from the Illinois of Broadband included:

- An overview of the Round 3 *Connect Illinois Broadband Grant Program* NOFO and complementary application packet. The Round 3 NOFO included \$350 million in state and federal ARPA funding, with up to \$10 million available per individual project. Applications would be accepted on a rolling basis, with funding three distinct funding categories for applicants: Broadband Access; Broadband Innovation; and Urban Broadband. Definitions of unserved (below 25 Mbps down/3 Mbps up, wireline) and underserved (below 100 Mbps down/20 Mbps up, wireline) remained unchanged. Consistent with ARPA's Capital Projects Fund, all funded projects must be scalable to symmetrical broadband internet 100 Mbps down/100 Mbps up. The merit review scoring rubric would allocate points for the extent of non-state match offered above 30% of total projects costs.
- A summary of Connect Illinois Round 1 and Round 2 activity, with three projects nearing completion, five projects having broke ground in the fall, and three more will breaking ground in the spring (of 2022).

Updates on Illinois Office of Broadband collaborations included:

- University of Illinois Extension; Nancy Esarey Ouedraogo, State Extension Specialist for Community and Economic Development, noted that Extension supports community-driven broadband webinars and curates content on its website. Specialists collaborate with the Benton Institute for Broadband & Society and Illinois Office of Broadband to support *Illinois Connected Communities* and *Accelerate Illinois programs* through communications, organizational support, and content curation activities.
- Extension Illinois Innovation Network; Dr. Kyle Harfst, Executive Director of Illinois Innovation Network (IIN) – which supports the economic and community development of broadband in the ten regions across the state of Illinois – reported on the *Broadband Regional Engagement for Adoption + Digital Equity (READY)* program. *READY* began its second cohort in 2022, with six regions (Central, North Central, West Central, Northeast, Northwest, and Southwest); the first cohort wrapped up in 2021, with four regions represented (East Central, Southeast, Southern, and Northern Stateline). Each region receives support and collaboration toward expanding digital equity and adoption initiatives and contributing toward creation of regional and statewide digital indicator dashboards and digital divide elimination plans, among other deliverables.





- Illinois State Board of Education; Erich Grauke, Principal Consultant for Illinois State Board of Education (ISBE). ISBE's focus has been on Connected Learning, with the team he supports engaged in the District Technology Survey which requires annual reporting of tech capacity and policies. According to the 87% districts and regional offices reporting, 60% of districts are 1:1 devices and students. ISBE is also supporting Digital Equity Grant work. In 2021, Illinois was allotted \$79.7 million, and in 2022 \$52.5 million. The statewide tech survey results will help determine the amount allotted to the state in 2023. They are helping facilitate the E-Rate State Matching Grant. Federal funds from FCC's Emergency Connectivity Fund have obligated \$195 million to Illinois so far.

And an update on federal programming and funding opportunities included:

- Federal Digital Inclusion Funding; Robbie McBeath, Outreach Manager for Benton Institute for Broadband & Society. Reporting live from Portland State University at the National Digital Inclusion Alliance (NDIA) annual conference, where the focus is on digital equity and inclusivity work. Illinois seems to be a model for programming and infrastructure deployment. NDIA announced they have been awarded a grant from Google.org to work with Ameren to expand a digital navigator's program to rural areas.
- Infrastructure Investment and Jobs Act Federal Funding; Chair Schmit, reviewed the breakdown of IIA funding, which included \$65 billion for Broadband, \$48 billion of which NTIA will administer: \$42.45 billion in BEAD funding, \$2.75 billion for Digital Equity funding, \$2 billion for Tribal groups, \$1 billion for Middle Mile funding.

To support deeper discussion of broadband-related topics in smart city applications, rural innovation, and digital equity and inclusion, the council plans to schedule regular working group sessions following appointment of new its full membership – due to the creation of four additional seats, member transitions, and related turnover anticipated throughout the year.

May 11th Meeting: The agenda focused on updates from the Illinois Office of Broadband, particularly regarding its programming and collaborations. The meeting featured presentations on developments in state and federal broadband policymaking, the *Broadband READY* Illinois Digital Inclusion Profile, and the University of Chicago Internet Equity Initiative.

The Illinois Office of Broadband update included:

- Announcement that Round 3 of the *Connect Illinois Broadband Grant Program* has been paused to establish administrative rules as required by the Illinois General Assembly. In approximately two months prior to the program pause, Round 3 had produced 101 applications seeking to pair \$556 million in grant funding with nearly \$300 in non-state matching funds. The Department of Commerce and Economic Opportunity already initiated communications with the Joint Committee on Administrative Rules (JCAR) to accommodate establishment of administrative rules and resume Round 3 of the *Connect Illinois Broadband Grant Program*.
- Overview of local planning and capacity building programming through completion of two rounds of the *Illinois Connected Communities* program and the first of two planned cohorts of the *Accelerate*





Illinois community-driven broadband expansion program. The *Illinois Connected Communities* program has engaged 20 communities that received up to \$15,000 in project funding each. After two rounds, the *Accelerate Illinois* program will have engaged 12 local government entities in infrastructure planning, through a Notice of Collaboration Opportunity (NOCO) with no state funding.

Presentations included:

- Summary of the *Broadband READY* program, specifically the Illinois Digital Inclusion Profiles – a set of data for each of the state’s counties, organized by region to align with the *Broadband READY* structure. Dr. Roberto Gallardo, Purdue University, offered data visualization tools such as regional maps, demographic data in charts, and bar graphs that illustrative gaps in broadband access for student and senior populations, among other analyses. In its second year, *Broadband READY* has supported 10 regional teams – one for each of the state’s economic development regions.
- Preview of the University of Chicago Internet Equity Initiative, which explores aspects of broadband access and affordability – including various causes the digital divide within the city of Chicago. Dr. Nick Feamster and Dr. Nicole Marwell, University of Chicago, provided the preview and noted that the initiative combines a computer science and social scientific approach to the question of broadband and digital equity. Visit <https://datascience.uchicago.edu/broadband> to learn more about the initiative.
- Discussion of state and federal policymaking, including new federal funding opportunities and legislation considered by the Illinois General Assembly during the 2022 legislative session. Drew Garner, Common Sense Media, walked through a chart on federal broadband funding opportunities that featured the names of grant programs, agencies sponsoring the grant, description of the grant type, and the amount possibly awarded: <https://www.common sense media.org/sites/default/files/featured-content/files/federal broadband funding guide.pdf>. Common Sense Media and similar public interest organizations follow broadband-related legislation under consideration in various legislatures across the country and Garner shared several concerns regarding how Illinois SB 3683 could jeopardize the State’s ability to leverage federal Broadband Equity, Access, and Deployment (BEAD) Program funding.

October 12th Meeting: The agenda focused on Office of Broadband programming and collaboration; federal funding updates; and an overview of current digital equity initiatives in Chicago and Cook County.

Illinois Office of Broadband updates included:

- Recognition that the \$350 million Round 3 the *Connect Illinois Broadband Grant Program* remained on pause awaiting completion of the administrative rulemaking process. After consulting with and awaiting direction from the Joint Committee on Administrative Rules (JCAR) over the preceding months, the Department of Commerce and Economic Opportunity published proposed rules in the Illinois Register on October 9, with the department taking stakeholder comments through November 21. Prior to the pause, the Round 3 NOFO produced 101 applications seeking to pair \$556 million in grant support with nearly \$300 million in non-state match. Round 3 was anticipated to resume at some point in February 2023.





Federal funding updates included:

- Confirmation that the state had met various federal deadlines, both date-specific and rolling, since the May council meeting – including those for Broadband Equity, Access, and Deployment (BEAD) and Digital Equity program planning grant funds, as well as the state’s proposed grant and program plans for Capital Projects Fund support.
- Introduction of NTIA’s Federal Program Officer for Illinois, Greg Claus, who would serve as the primary point of contact and liaison for the Illinois Office of Broadband and stakeholders throughout the state. Claus summarized the BEAD and Digital Equity programs, including the timelines for next steps – such as completion of the state’s Five-Year Action Plan for BEAD funding and State Digital Equity Plan for use of anticipated capacity and competitive grant funding. The respective plans – likely due to NTIA by the end of 2023, will guide use of BEAD and Digital Equity funding and they will require extensive local coordination, outreach, and analysis.

Local digital equity initiative updates featured:

- Kyla Williams-Tate, Cook County Office of Digital Equity, serves as the county’s first Director of Digital Equity. The county is addressing digital equity from a multi-lens standpoint – infrastructure, accessibility, proficiency, security, and safety in an effort toward driving forward regional collective impact in Cook County. The county wants to learn about overarching needs, identify gaps in programming, and establish a regional plan that tracks progress.
- Devon Braunstein, City of Chicago Office of the Mayor, supports the city’s Digital Equity Council and its work with Chicago Connected. There are three phases of the city’s digital equity work, including for the council to develop a strategic plan. The work has included considerable stakeholder outreach and engagement, with planning targeting different approaches for different parts of the city. For more information, visit www.Chicago.gov/digitalequity.

December 14th Meeting: The agenda focused on updates from the Illinois Office of Broadband and Illinois Broadband Lab, as well as perspectives from national experts in technology and broadband adoption.

Illinois Office of Broadband updates included:

- A reminder that the \$350 million Round 3 the *Connect Illinois Broadband Grant Program* remained on pause awaiting completion of the administrative rulemaking process. The Department of Commerce and Economic Opportunity published proposed rules in the Illinois Register in October, received stakeholder feedback in November, and submitted final proposed rules to the Joint Committee on Administrative Rules in December. Prior to the pause, the Round 3 NOFO produced 101 applications seeking to pair \$556 million in grant support with nearly \$300 million in non-state match.
- Discussion of the *Broadband READY* and *Accelerate Illinois* programs, with *READY* supporting work in broadband adoption and digital equity in each of the state’s 10 economic development regions – and preparing for continued engagement in each region throughout 2023 to support the federal Digital Equity program. The *Accelerate Illinois* program completed two cohorts of structured





engagement toward community-driven broadband expansion; at least two additional cohorts are planned for early 2023, with one applying particular focus on agriculture-specific uses and analysis.

- News from the Illinois Broadband Lab collaboration with the University of Illinois System, which in November procured the services of a broadband management consulting firm to add necessary capacity to meet federal BEAD and Digital Equity program requirements. To further support the Illinois Broadband Lab collaboration, the University also posted open director positions – for Broadband Deployment and Digital Equity, respectfully.
- Challenging federal broadband mapping and an invitation for stakeholder and public participation in the state’s response to the Federal Communications Commission fixed availability broadband mapping challenge process, which is soliciting online feedback to its new mapping tool – from consumers, state and local governments, and community organizations, among others. The Office of Broadband challenged over 87,000 “broadband serviceable locations” ahead of a similar mapping deadline in November, successfully adding nearly 8,000 “BSLs” in unserved areas of the state to the FCC’s new map – which, in turn, will increase the state’s BEAD formula allocation.

Federal updates included confirmation from NTIA’s Federal Program Officer for Illinois, Greg Claus, that the federal agency had approved BEAD and Digital Equity planning grant funds of over \$6.5 million for the state.

At the request of council member and state Senator David Koehler, the meeting featured a presentation on various technologies capable of delivering broadband service sufficient to meet federal requirements per the Capital Projects Fund and/or BEAD program. Andrew Afflerbach, Ph.D., P.E., and Chief Technology Officer at CTC Technology and Energy, discussed findings from a June 2022 report he authored regarding the technology capabilities, strengths, and weaknesses of fixed wireless and fiber networks, respectively. The report analysis and findings indicate that fiber network expansion provides more long-term value for most unserved areas than does alternative technologies such as fixed wireless. Factors contributing to this finding, per Afflerbach’s presentation, include:

- *In the long term, fiber and fixed wireless costs are comparable, taking into account that fixed wireless requires frequent replacement of the system*
- *Not a foregone conclusion that very high-cost unserved areas are cheaper with wireless than fiber, especially when considering lifetime costs*
- *Fully and consistently serving unserved households in a rural area is less complex using fiber, which does not face challenges of line of sight*
- *Fiber is sustainable, scalable, and renewable; offers many times greater capacity (which will remain several steps ahead of fixed wireless); and offers predictable performance, lower maintenance costs, and a longer technological lifetime than fixed wireless technologies*

The presentation slides are available among Broadband Advisory Council meeting materials at:

<https://dceo.illinois.gov/connectillinois/meetingsmaterials.html>

The report, *Fixed Wireless Technologies and their Suitability for Broadband Delivery*, is available at:

<https://www.benton.org/sites/default/files/FixedWireless.pdf>





The Office of Broadband

Created in September 2019, the Office of Broadband is housed within the Illinois Department of Commerce and Economic Opportunity, the state's largest grant-making authority. As a primary charge, the office is responsible for administering the *Connect Illinois Broadband Grant Program*. In addition, the Office develops and administers related programming – such as in the areas of community planning and capacity building, regional engagement, and digital equity and inclusion.

With an annual operating budget of \$1 million, the Office administers the *Connect Illinois Broadband Grant Program*, leverages a modest Eliminate the Digital Divide Fund balance to support complementary programming, and maintains several procured contracts – including for recurring broadband mapping, intergovernmental collaboration with the University of Illinois System, and consultant support.

The Office has relied upon the Department of Innovation and Technology to leverage necessary subject matter expert support to conduct merit review and related activity. The Office also has forged growing external collaborations, such that its weekly “all hands” meeting often includes 15 or more individuals contributing daily to the *Connect Illinois* mission.

The Office has expanded its technical capabilities by growing its team and developing strategic collaborations that have broadened the Office's reach and activities. Matt Schmit has served as Deputy Director of Broadband since September 2019. The Office includes a grants manager, two Illini Science Policy fellows, and regular contributions from technical consultant(s). To add value to its programming, leverage external resources, and enhance its capacity, the Office forged strategic collaborations with the Illinois-based Benton Institute for Broadband & Society, Heartland Forward, the Illinois Innovation Network, University of Illinois Extension Services, and the nonprofit, PCs for People.

These collaborations have made possible the following Office activity and non-capital programming:

- *Illinois Broadband Connections*, a biweekly newsletter that has published 64 editions to date;
- *Developing Broadband Leadership Webinar Series*, regular webinar content that is well-publicized and curated;
- *Accelerate Illinois* and *Illinois Connected Communities*, local planning and capacity building that has engaged over 50 communities through expert-led, structured curriculum;
- *Broadband READY*, a regional framework that leverages expertise from higher education, planning, and economic development;
- *Computer Equity Network*, a statewide computer refurbishing and redistribution network, with regional hubs in Cook County and Metro East;
- *Illinois Connection Corps*, an AmeriCorps-style two-year program with six fellows; and
- *Illinois Broadband Lab*, an intergovernmental agreement (IGA) with the University of Illinois System to support Office programming, grow capacity, and facilitate data collection, mapping, and research.

In 2022, the Illinois Office of Broadband formalized its working relationship with the University of Illinois System through an intergovernmental agreement, creating the *Illinois Broadband Lab* collaboration.



Connect Illinois Broadband Grant Program

As part of his historic \$45 billion Rebuild Illinois investment strategy, in 2019 Governor J.B. Pritzker included \$420 million to expand access to high-speed broadband internet across the state. A critical commitment to closing gaps and expanding opportunity, the *Connect Illinois* program is central to the Governor's Five-Year Economic Plan to revitalize and grow the Illinois economy with an emphasis on equitable growth.

With \$400 million available to date for broadband deployment grants targeting areas of greatest need – and with significantly more expected via the Infrastructure Investment and Jobs Act, *Connect Illinois* is an equity-driven infrastructure program, first and foremost. Challenges tied to population sparsity, geography, or low take rate continue to stand as barriers to broadband ubiquity. In particular, *Connect Illinois* seeks to address disparities in broadband access and adoption in rural regions and black and brown communities across the state. Understandably, private investment has doubled down on relatively profitable service territories – growing the broadband access gap as a result. *Connect Illinois* funding will address this market failure and recalibrate the business case for new deployments, connecting communities and individual consumers with scalable service throughout the state.

The *Connect Illinois Broadband Grant Program* expands broadband connectivity by promoting values such as:

- Competitive matching grants will leverage all available private, local, and federal funds to pair with the necessary state funding to make a deployment viable.
- Applicant inclusive approach will inspire a wide array of proposals, including but not limited to those from providers, cooperatives, municipalities and local governments, nonprofits and other organizations created for the purpose of extending broadband access.
- Community-driven approach will promote direct engagement among providers, local communities, and individual stakeholders to collaborate and build toward a shared community technology vision.
- Affordability focus will ensure that the *Connect Illinois* program takes a comprehensive approach to promoting broadband access through broadband equity, addressing one critical barrier to adoption: a consumer's cost to connect.

Leveraging broadband for innovation in economic development or quality of life requires more than a fast connection. This is particularly true when it comes to empowering communities to participate in a broadband deployment or encouraging consumers to utilize broadband once it is available. Accordingly, Illinois compliments its historic investment in broadband infrastructure with value-added work to prime the broadband pump – through a complimentary and increasingly comprehensive approach to digital equity and inclusion programming.

Combining the work of the Broadband Advisory Council with established best practices from across the country, the [Connect Illinois Broadband Strategic Plan](#) articulates goals for universal statewide broadband access to spur advances in economic development, as well as innovation in healthcare delivery, education, and agriculture. From its beginning, the plan has emphasized the role of digital equity and inclusion as foundational to any and all state broadband capital investment.

The *Connect Illinois Broadband Grant Program* focuses on expanding broadband connectivity through matching grants for broadband infrastructure projects in unserved and underserved areas. This program can transform the state's investment into a potential total public-private investment of \$1 billion or more in state and non-state public/private sources.



Digital Equity + Inclusion Programming

The Approach: Comprehensive, Complimentary + Collaborative

As a lean operation, the Illinois Office of Broadband knew that collaboration would be key: Work with the Illinois-based Benton Institute for Broadband & Society gave rise to the biweekly *Illinois Broadband Connections* newsletter, timely local planning and capacity building through the *Illinois Connected Communities* and *Accelerate Illinois* programs, and a mutual interest in broadband data, research, and publication. The University of Illinois System – and, in particular, its Extension Services and Illinois Innovation Network – extends the Office of Broadband reach through a robust catalog of curated online content, interactive webinars, and programmatic support. Bring this all together, in 2022 the Office and its collaborators launched the *Illinois Broadband Lab*.

The [Connect Illinois Broadband Strategic Plan](#) speaks to the importance of a holistic approach to broadband investment and programming. This includes focus on broadband access, adoption, and utilization – which provide the programmatic framework for two existing initiatives, the *Illinois Connected Communities* program designed to build local broadband capacity and the *Broadband READY* program to promote regional engagement for broadband adoption and digital equity.

Another initiative, the *Digital Navigator* program, is designed to build digital literacy skills both at the local level and through statewide peer-group support. The recently announced *Connect Illinois Computer Equity Network* seeks to source, refurbish, and redistribute used computers for qualified households throughout the state. Each of these initiatives – including the namesake \$400 million *Connect Illinois Broadband Grant Program* – either aligns with or could integrate concerted state-led effort toward improved broadband affordability.

Programming + Partnership

Accelerate Illinois. The *Accelerate Illinois Broadband Infrastructure Planning Program* is a planning and capacity-building program designed to help Illinois communities leverage historic broadband infrastructure funding for community-driven broadband expansion and public-private partnership. The Accelerate Illinois program—a collaborative effort among the Illinois Office of Broadband, the Benton Institute for Broadband & Society, and University of Illinois Extension—offers Illinois local governments an intensive 14-week community engagement program with expert support provided by the Benton Institute. The opportunity is made possible through the financial support of Heartland Forward and its Connecting the Heartland Initiative.

The historic funding that is available through Connect Illinois and federal broadband programs – most notably through ARPA and IIJA – will benefit communities that prepare in advance. The Accelerate Illinois program is designed to help communities do this preparation. It provides a platform for communities to build inclusive broadband teams; determine acceptable community roles; set visions; gather critical information about their local marketplace, technology options, and broadband provider partners; develop public-private partnerships, obtain financing, and implement projects.

The Accelerate Illinois program recognizes that not all communities are prepared to take advantage of broadband grant programs. While communities do not receive state funding, program participants each benefit from 30-plus hours of free expert consultation and access to best-practice engagement in community-driven broadband planning. Initial six-community cohorts ran February through May 2022 and June through August 2022. A second “Notice of Collaboration Opportunity” was issued in October 2022 for two additional cohorts and a complementary agriculture-themed track offered in collaboration with Illinois State University and the Illinois Soybean Association.



Illinois Connected Communities. The *Illinois Connected Communities (ICC) Grant Program* began in 2020 to help drive community planning and capacity building for advances in broadband access, adoption, and utilization. The program is part of increasingly robust and comprehensive *Connect Illinois* digital equity and inclusion programming, a holistic approach designed to help communities identify and address existing broadband equity gaps – with an eye to sustained broadband equity and inclusion.

The ICC program recognizes that communities need to be prepared to take advantage of historic state and federal funding and that others could benefit from a focus on complementary aspects of the digital divide, such as broadband adoption or utilization. Whatever a community's focus – and however prepared a community may be to set a broadband vision and take steps toward realizing that vision – the ICC program is designed to support inclusive community planning and capacity building around one or more aspects of an integrated broadband strategy.

By the end of the program, each community will have completed a community-driven, broadband strategic action plan. Communities ranging from Chicago neighborhoods to entire counties comprise an *Illinois Connected Communities* cohort, with each member community forming an inclusive community steering team and participating in a combination of focused community-specific and cohort-wide activities throughout a period of nine-months.

The *Illinois Connected Communities* program is a collaborative effort between the Illinois Office of Broadband, the Benton Institute for Broadband & Society, and local philanthropic organizations.

Broadband READY. The *Broadband Regional Engagement for Adoption + Digital Equity (READY) Grant Program* debuted in early 2021. *READY* seeks to provide a roadmap to eliminating the digital divide through regional collaboration for equitable advances in the areas of broadband access, adoption, and utilization. The program is part of increasingly robust and comprehensive *Connect Illinois* digital equity and inclusion programming, a holistic approach designed to help regions identify and address existing broadband equity gaps, as well as to leverage new resources for urgent broadband access – with an eye to sustained broadband equity and inclusion.

The *Broadband READY Grant Program* supports a qualified regional entity – such as a community and economic development organization, regional planning council, or institution of higher education – in each of the state's 10 economic development regions. Grantees convene inclusive and regionally representative *Broadband READY* Teams to balance investment in urgent broadband access expansion with the strategic imperative to identify gaps, integrate resources, and track progress over time. *READY* Teams work with the Illinois Office of Broadband to leverage grant funds for expanding public broadband access, to integrate complementary programming and resources, and to produce annual *Broadband READY* reports.

Every regional *Broadband READY* report consists of three key sections: a region-specific digital indicator dashboard; a current conditions summary, identifying digital equity gaps within the defined ecosystem(s) and highlighting best practices for scaling or replication; and a digital divide elimination plan. Combined, these regional deliverables contribute to a fully integrated state *Broadband READY* report, the forerunner and annual complement to the Illinois Broadband Equity + Inclusion Strategic Plan.

The *Broadband READY* program is a collaborative effort with the Illinois Innovation Network and aligns local and regional efforts by forging and strengthening partnerships, identifying scalable or replicable best practice initiatives, and establishing baseline metrics for tracking progress.



Digital Navigators. The forthcoming *Digital Navigator Program* will promote digital equity and inclusion by supporting new or improved “digital navigator” capacity at the community level.

Digital Navigators serve as critical community “experts” to provide assistance for local residents needing improved digital literacy skills and know-how. Digital Navigators work with community organizations and residents directly to address the full digital inclusion process – ranging from at-home broadband connectivity to computer use to digital skills. Working with the Illinois Office of Broadband and program partners through a train-the-trainer model, Digital Navigators assess community digital literacy gaps and provide competent guidance towards resources and program development that is suitable for the community and its residents.

Digital Navigators can be volunteers or cross-trained staff who already work in social service agencies, libraries, health, and more and who offer remote and socially distant in-person guidance. Digital Navigators have support from the Illinois Office of Broadband and program partners through targeted training; local, regional, and statewide digital inclusion resources; and introduction to the full Illinois Digital Navigator peer community network. Digital Navigator communities have an opportunity for continued training, ongoing consultation with the peer network, and additional support and resources.

The Digital Navigator program is a collaborative effort between the Office of Broadband and respected local, state, and national organizations committed to community-based digital equity and inclusion programming and investment. Although unfunded, the Digital Navigator Program is planned to launch upon arrival of federal Digital Equity Capacity Grant funding in 2023. Meantime, the Office has support modest digital navigator activity through its Broadband READY program and contributed to a \$2 million application for federal Connecting Minority Community Program funds by one of its Broadband READY collaborators, which would apply the digital navigator approach to targeted communities near minority serving institutions in the Chicago area.

Computer Equity Network. The *Connect Illinois Computer Equity Network* launched in 2020 to address a key contributing factor to the digital divide: the lack of at-home connected computing devices. Over 1.1 million Illinois households lack at-home desktop or laptop computers. The goal is simple: to put upgraded devices into the homes of as many qualifying Illinois families as possible through regular community distribution events across the state.

Through a first-of-its-kind statewide collaboration, the *Computer Equity Network* is committed to hosting collection and redistribution events in all 102 Illinois counties. National non-profit, PCs for People, is coordinating the *Computer Equity Network*, and serving Illinois with a standardized process for refurbishment, distribution, and impact tracking through two hubs in the Metro East and Cook County Chicago Southland regions. The network provides refurbished computers, internet service and tech support to thousands of people in Illinois – with a goal of reaching at least 10,000 households annually.

The *Computer Equity Network* relied upon funds from key nonprofit and philanthropic organizations to startup the statewide network and continues to collaborate with a variety of organizations to source used computers and distribute them to families in need. In 2022, the *Computer Equity Network* distributed over 18,000 refurbished computers to eligible households located in 100 of the state’s 102 counties.



Illinois Broadband Mapping

Following a competitive procurement and subsequent contract through the Illinois Department of Commerce and Economic Opportunity, the Illinois Office of Broadband (IOB) began work with Connected Nation (CN), its broadband data collection and mapping partner. Throughout 2022, CN conducted research and broadband provider (ISP) outreach, collected and obtained information related to broadband service areas, processed and analyzed broadband data, developed and updated broadband maps, and conducted field validation activities.

The first set of Illinois broadband mapping deliverables were completed in February 2021, with subsequent data and map updates in June 2021, November 2021, June 2022, and November 2022.

Public interactive broadband maps are available at the following links:

- Comprehensive public interactive map: <https://connectednation.org/illinois/interactivemap>
- Scaled-down embedded public interactive map:
<https://www2.illinois.gov/dceo/ConnectIllinois/Pages/InteractiveMap.aspx>

Data Collection and Provider Participation

The Digital Divide cannot be closed without understanding where the gaps in broadband service are, and broadband mapping is an essential part of that. Having the location intelligence on where broadband services are available by various technologies and speeds allows for the analysis of where broadband isn't available and where attention and potential funding should be directed.

Through the broadband provider outreach process, CN works with providers to develop current and complete geographic representations of residential broadband service areas where their various technology offerings are available across the state. Broadband data are developed and maintained by providers in a wide variety of formats, so CN works with providers on the unique data they have and standardizes the information for understanding and analyzing the broadband landscape.

CN reviews, processes, and analyzes received provider data in addition to conducting independent research on network offerings, licenses, state and federal broadband databases, and other sources to compare, produce, and refine broadband service areas as needed.

Additionally, if a provider is unable or unwilling to participate in the broadband mapping project, CN works to estimate the provider's service area based on known information, public data, state and federal filings, and field data collection – where CN sends Engineering and Technical Services teams to locate telecom assets and infrastructure for targeted providers to develop more accurate service areas.

The broadband data, maps, and analyses are mainly focused on fixed broadband services, with technologies of cable, DSL, fiber, and fixed wireless. Based on the most recent data collection cycle where provider outreach and research occurred for broadband mapping deliverables submitted to IOB in November 2022, below are statistics on how the data collection breaks down.



Broadband Provider Data Collection November 2022	
Outreach and Research Summary	
Total Viable Providers	113
Data Received/Estimated/Processed	41
No Update Since May 2022 Data	70
Providers Not Yet Mapped	2
Provider Data Vintage	
New Coverage/Speeds Since May 2022	35
No Update Since May 2022 Data	70
Combination of New/Previous Data	6
Data Granularity	
Detailed Service Area	97
Less Than Granular Data	8
Combination of Detailed/Less Granular Data	6

Of the 113 viable broadband providers in the state, service area data is included for 111 of them. The remaining two are in progress, but enough information was not received and/or able to be located, obtained, and/or estimated prior to the development of the November 2022 maps; these provider service areas will be a focus for the next set of deliverables to include their service areas or confirm they are not actually a viable provider.

Compared to the May 2022 broadband maps, the broadband service areas and/or speed information has been updated for 41 providers, while 70 providers either indicated there had been no change in their networks or information was not received or located that an update had occurred. For the provider data vintage, of the 41 providers with updated data on the November 2022 map, 35 of them had updates for all their technologies, while six providers had an update to some of their technologies, but not all.

In terms of data granularity (i.e., level of detail), of the 111 providers represented on the broadband maps, 97 of them are represented by detailed broadband service areas, where there is higher confidence that all households with the service area are able to receive broadband service from that provider. There are 8 providers whose service areas are not as detailed, considered less than granular data, which may be represented as census block coverage, which tends to overstate service areas and there is less confidence that all households within the service area can actually receive service. The remaining six providers are represented by a combination of detailed and less than granular data. Any providers with less than granular data will continue to be a focus for subsequent broadband maps, working to obtain more detailed service area information through provider outreach, independent research, crowdsourcing, and field validation.



Field Validation Activities

As part of the Illinois broadband mapping project, field validation activities, to confirm the presence of certain broadband services and speeds or refine provider data in discrepancy areas, were scheduled prior to the May 2022 map update. While Connected Nation (CN) worked closely with broadband providers to collect, process, research, analyze, and clarify residential broadband service areas for inclusion on the state's broadband maps, there are and were areas requiring further investigation. These targeted locations consist of areas that have been challenged as having the broadband service available as advertised or areas where CN believed potential overstatement existed, especially related to FCC Form 477 reported data. Field validation activities provide an opportunity to confirm exact service boundaries, track telecommunications assets and infrastructure, locate new or previously unknown broadband providers, and educate stakeholders on available services.

CN reviewed coverage areas from the broadband map where FCC Form 477 data had to be utilized, either from a provider not supplying more granular information about their service area, the provider being non-responsive to requests, and/or the provider supplying FCC Form 477 data to CN that may have been more recent than the current public data. Additionally, areas targeted for field validation included providers who had received Connect Illinois grant funds and completed build out in their application areas; field validation provided a way to confirm the services were built out as expected.

After the review, a selection of providers and technologies were targeted as the specific areas for field validation activities to be conducted by CN's Engineering and Technical Services staff.

Field validation activities across the state occurred March 2022 by multiple ETS staff. The results of each provider and technology validated, in terms of data refinements, updates, and revisions were processed and incorporated into the May 2022 Illinois broadband mapping deliverables.

Broadband Availability Statistics

An important part of broadband mapping and analysis is being able to identify the gaps in service – the Digital Divide – and understand how many people are unserved or underserved in a given area. Upon compiling and aggregating broadband service area data, CN calculates broadband availability statistics that estimate the number of served and unserved households at various speeds.

Below are broadband availability statistics on how the percent of served households across the state has changed since the initial broadband map in February 2021, through the June 2021 update, and the most recent November 2021 data. The first table represents all fixed broadband services, including cable, DSL, fiber, and fixed wireless, while the second table represents only wireline broadband services of cable, DSL, and fiber. There have been increases in the percent of served households at the four measured speed levels with each set of broadband mapping updates, reflecting continued expansion of broadband availability, even as some broadband service areas have become more detailed and granular, sometimes decreasing the total area served as more accurate and precise data is developed. Additionally, there is a significant drop in the availability of 1 Gbps download and 1 Gbps upload broadband service compared to lower speeds, as fewer high-speed services are currently available throughout the state.

Change in Illinois Statewide Broadband Availability Estimates by Speed Tier Among Fixed Technologies: Cable, DSL, Fiber, Fixed Wireless					
Speeds	Feb 2021	Jun 2021	Nov 2021	May 2022	Nov 2022
25 Mbps Download x 3 Mbps Upload	96.25%	97.19%	97.83%	98.11%	98.26%
100 Mbps Download x 20 Mbps Upload	90.33%	90.61%	93.42%	93.23%	78.50%
100 Mbps Download x 100 Mbps Upload	n/a	n/a	n/a	31.33%	30.68%
1 Gbps Download x 1 Gbps Upload	19.25%	20.08%	23.93%	24.10%	24.16%

Change in Illinois Statewide Broadband Availability Estimates by Speed Tier Among Wireline Technologies: Cable, DSL, Fiber					
Speeds	Feb 2021	Jun 2021	Nov 2021	May 2022	Nov 2022
25 Mbps Download x 3 Mbps Upload	92.46%	93.55%	94.01%	94.28%	94.29%
100 Mbps Download x 20 Mbps Upload	89.57%	89.98%	92.44%	92.93%	70.74%
100 Mbps Download x 100 Mbps Upload	n/a	n/a	n/a	28.53%	28.59%
1 Gbps Download x 1 Gbps Upload	19.12%	19.97%	23.36%	23.20%	23.27%

Additionally, CN analyzes the availability of broadband in rural areas to determine statistics among rural households. Below are the same style tables as above, although displaying statistics on rural broadband availability estimates. Rural availability also continues to increase over time, but continues to lag behind urban and suburban availability. It should be noted the rural areas definition changed with the new 2020 Census, which affected the availability statistics between November 2021 and May 2022.

Change in Illinois Statewide RURAL Broadband Availability Estimates by Speed Tier Among Fixed Technologies: Cable, DSL, Fiber, Fixed Wireless					
Speeds	Feb 2021	Jun 2021	Nov 2021	May 2022	Nov 2022
25 Mbps Download x 3 Mbps Upload	90.56%	93.20%	94.70%	86.67%	88.07%
100 Mbps Download x 20 Mbps Upload	73.89%	74.55%	82.27%	54.49%	49.59%
100 Mbps Download x 100 Mbps Upload	n/a	n/a	n/a	21.37%	19.72%
1 Gbps Download x 1 Gbps Upload	10.46%	10.85%	14.25%	11.62%	12.59%

Change in Illinois Statewide RURAL Broadband Availability Estimates by Speed Tier Among Wireline Technologies: Cable, DSL, Fiber					
Speeds	Feb 2021	Jun 2021	Nov 2021	May 2022	Nov 2022
25 Mbps Download x 3 Mbps Upload	80.18%	83.23%	84.25%	56.67%	56.91%
100 Mbps Download x 20 Mbps Upload	72.10%	73.13%	79.90%	47.46%	40.89%
100 Mbps Download x 100 Mbps Upload	n/a	n/a	n/a	15.13%	16.27%
1 Gbps Download x 1 Gbps Upload	10.46%	10.85%	14.25%	11.62%	12.59%

Reviewing the percent of served households across the state is one way of viewing the data, but it is also very meaningful to see the number of households impacted by a lack of broadband service at various speed levels. Below are tables on the number of households unserved by broadband among fixed technologies and wireline technologies. At the current federal broadband definition of 25 Mbps download and 3 Mbps upload, it is estimated there are nearly 87,000 Illinois households without access to fixed broadband. This number exponentially increases as higher speeds are analyzed.

Illinois Households Unserved by Broadband Among Fixed Technologies: Cable, DSL, Fiber, Fixed Wireless	
Speed	Number of Unserved Households
25 Mbps Download x 3 Mbps Upload	87,001
100 Mbps Download x 20 Mbps Upload	1,074,613
100 Mbps Download x 100 Mbps Upload	3,464,714
1 Gbps Download x 1 Gbps Upload	3,790,832

Illinois Households Unserved by Broadband Among Wireline Technologies: Cable, DSL, Fiber	
Speed	Number of Unserved Households
25 Mbps Download x 3 Mbps Upload	285,540
100 Mbps Download x 20 Mbps Upload	1,462,595
100 Mbps Download x 100 Mbps Upload	3,569,570
1 Gbps Download x 1 Gbps Upload	3,835,167

Similar to the overall statewide statistics, the broadband data were analyzed in rural areas to estimate the number of unserved rural households at the various speed levels.

Illinois RURAL Households Unserved by Broadband Among Fixed Technologies: Cable, DSL, Fiber, Fixed Wireless	
Speed	Number of Unserved Households
25 Mbps Download x 3 Mbps Upload	66,380
100 Mbps Download x 20 Mbps Upload	280,394
100 Mbps Download x 100 Mbps Upload	446,554
1 Gbps Download x 1 Gbps Upload	486,242

Illinois RURAL Households Unserved by Broadband Among Wireline Technologies: Cable, DSL, Fiber	
Speed	Number of Unserved Households
10 Mbps Download x 1 Mbps Upload	239,714
25 Mbps Download x 3 Mbps Upload	328,821
100 Mbps Download x 20 Mbps Upload	465,773
1 Gbps Download x 1 Gbps Upload	486,242

Shifting from statewide to county level statistics, the tables below show how broadband availability varies across counties. The first table shows the top ten most served counties by fixed broadband at three speed levels; in this case, most served is based on the percent of served households in the county.

Top Ten Most Served Counties By Percent Served Households						
	25 x 3 Mbps Fixed Broadband		100 x 20 Mbps Fixed Broadband		1 x 1 Gbps Fixed Broadband	
	County	% Served	County	% Served	County	% Served
1	HARDIN	100%	HARDIN	100%	CLAY	90.24%
2	KANE	99.96%	MOULTRIE	99.93%	ADAMS	89.47%
3	MOULTRIE	99.95%	CHRISTIAN	98.85%	KENDALL	75.78%
4	DUPAGE	99.84%	RICHLAND	98.24%	EFFINGHAM	71.14%
5	DEKALB	99.82%	EDWARDS	96.95%	DEKALB	70.17%
6	WILL	99.66%	LAWRENCE	96.86%	BROWN	69.68%
7	WILLIAMSON	99.6%	STARK	96.76%	MCDONOUGH	65.52%
8	LAKE	99.59%	WILL	76.57%	MCLEAN	65.34%
9	KENDALL	99.57%	HENRY	96.54%	CHRISTIAN	63.76%
10	MADISON	99.53%	MADISON	96.02%	MORGAN	63.23%



Bottom Ten Most Unserved Counties By Number of Unserved Households (HH)						
	25 x 3 Mbps Fixed Broadband		100 x 20 Mbps Fixed Broadband		1 x 1 Gbps Fixed Broadband	
	County	Unserved HH	County	Unserved HH	County	Unserved HH
1	COOK	11,339	COOK	251,879	COOK	1,552,589
2	KANKAKEE	2,534	LAKE	98,634	DUPAGE	302,167
3	MACOUPIN	2,336	WINNEBAGO	96,172	LAKE	232,336
4	ADAMS	2,098	DUPAGE	53,175	WILL	196,100
5	SANGAMON	1,997	MCHENRY	52,294	WINNEBAGO	115,448
6	COLES	1,989	SANGAMON	33,923	MCHENRY	108,133
7	PEORIA	1,937	PEORIA	33,610	KANE	90,394
8	OGLE	1,925	LASALLE	23,745	MADISON	89,171
9	MASSAC	1,884	KANE	20,669	ST. CLAIR	85,192
10	RANDOLPH	1,692	OGLE	19,505	SANGAMON	49,884

Perhaps more important than knowing the top served counties across the state is an analysis of the bottom ten counties. The following table shows the bottom ten most unserved counties, where most unserved is based on the percent of households in the county served by fixed broadband. It should be noted there are 32 Illinois counties without any access to 1 Gbps download and 1 Gbps upload broadband service (i.e., 0% served), while two counties do not have any access to 100 Mbps download and 20 Mbps upload broadband.

Bottom Ten Most Unserved Counties By Percent Served Households						
	25 x 3 Mbps Fixed Broadband		100 x 20 Mbps Fixed Broadband		1 x 1 Gbps Fixed Broadband	
	County	% Served	County	% Served	County	% Served
1	CALHOUN	23.5%	LEE	0%	32 counties do not have access to 1 x 1 Gbps Fixed Broadband	
2	CUMBERLAND	67.36%	MASSAC	0.01%		
3	MASSAC	67.92%	OGLE	6.54%		
4	ALEXANDER	69.73%	CALHOUN	9.52%		
5	HAMILTON	71.47%	STEPHENSON	15.57%		
6	CRAWFORD	78.58%	WINNEBAGO	16.7%		
7	CLARK	79.14%	PULASKI	21.29%		
8	EDGAR	80.66%	GRUNDY	22.01%		
9	SCHUYLER	81.03%	BOONE	22.09%		
10	HANCOCK	82.01%	WHITESIDE	30.52%		

In addition to analyzing the bottom ten counties by the percent of served households, it's also important to note the number of unserved households, as the number and percent can vary depending on the total population of a county. Below is a table of the bottom ten most unserved Illinois counties, by the number of households unserved by fixed broadband.



Next Steps

Connected Nation will continue to follow a four-pronged approach to broadband mapping and analysis:

1. Independent Research
2. Provider Relationships/Outreach
3. Field Validation
4. Crowdsourced Data/Resident Feedback

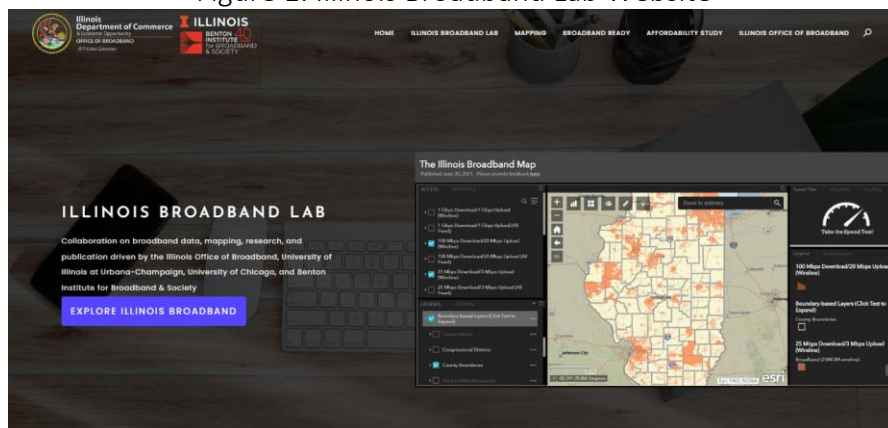
This holistic approach to broadband mapping does not rely on any one source of information and works as a set of checks and balances to continue to update, refine, and revise broadband service area and speed data to better understand the broadband landscape across Illinois. While provider participation in the program is high, outreach and research will continue, in order to ensure broadband service representations are as accurate as possible and as updated as possible, as the state reviews availability and makes decisions on where to direct broadband funding for expansion to unserved and underserved areas.

The next set of Illinois broadband mapping deliverables are scheduled to be published at the end of May 2023.

The Illinois Broadband Lab

To build on the *Illinois Broadband Map* and related mapping resources, to contribute additional data, research, and publication capacity, and to supplement Connect Illinois programming, the *Broadband Lab* collaboration began informally in late 2020, contributing to the success of the *Broadband READY* program in 2021 and 2022. In May 2022, an intergovernmental agreement (IGA) between DCEO and the University of Illinois System provided the *Broadband Lab* with resources and a formal scope of work. Currently, the Lab leverages University leadership and administrative resources with Office of Broadband operational funding to support three full-time staff, focused on mapping and data, digital equity and inclusion, and programing and communications, respectively.

Figure 1: Illinois Broadband Lab Website



To meet the relatively structured and demanding requirements of IJA's Digital Equity and Broadband Equity, Access, and Deployment (BEAD) programs, the IGA was amended in September 2022 to include support for these programs. To provide necessary expertise to meet federal requirements, the *Broadband Lab* procured the services a broadband management consulting firm in November 2022. Combined, the full *Broadband Lab* team will be

working hard to meet aggressive deadlines in 2023 for completion of a State Digital Equity Plan and BEAD Five-Year Action Plan, each required to leverage hundreds of millions in IIJA funding.

The interactive state broadband mapping tool, county-level PDF maps, and other resources available through the Illinois Broadband Lab can be accessed here: <http://ibl.illinois.edu/>. In addition, the mapping resources and *Illinois Broadband Lab* collaboration will support existing programming focused on community planning, capacity building, and regional engagement.

New Federal Broadband Funding

The state commitment to broadband investment has been enhanced through significant funding through ARPA’s Capital Projects Fund and IIJA’s Broadband Equity, Access, and Deployment (BEAD) programs. The Capital Projects Fund (CPF) allocation for Illinois is \$254 million; with an additional \$46 million in State Fiscal Recovery Fund dollars, ARPA accounts for \$300 million of the \$350 million Round 3 of the *Connect Illinois Broadband Grant Program*. The BEAD program is similarly formula-driven, with the state’s number of unserved locations determinative to the formula allocation – estimated to approach \$1 billion or more for Illinois.

Although the CPF and BEAD programs are similar in resembling block-grant support to states for further distribution to subrecipient grantees determined by the state, there are some important differences – for instance, in terms of eligibility thresholds and performance standards:

Program	Source	Funding Agency	2023 Activity	Eligibility Threshold	Performance Standard	Funding Timeline
Connect Illinois	Rebuild Illinois Capital Plan	Illinois Department of Commerce & Economic Opportunity	\$350M ‘Round 3’ of Connect Illinois Broadband Grant Program	Below 100/20 Mbps wireline	<u>Scalable</u> to 100/100 Mbps	‘Round 3’ of Connect Illinois expected to make grants in 2023 and 2024
Capital Projects Fund	American Rescue Plan Act (ARPA)	US Dept of Treasury	\$350M ‘Round 3’ of Connect Illinois Broadband Grant Program	Below 100/20 Mbps wireline	100/100 Mbps <u>upon deployment</u>	‘Round 3’ of Connect Illinois expected to make grants in 2023 and 2024
Broadband Equity, Access, and Deployment (BEAD)	Infrastructure Investment and Jobs Act (IIJA)	National Telecommunications and Information Administration (NTIA)	Completion of Five-Year Action Plan detailing how Illinois will extend access to <u>all unserved</u> locations and <u>as many underserved</u> locations and community anchor institutions as possible	Ranked priorities: 1) <u>unserved</u> at or below 25/3 <u>Mbps</u> ; 2) <u>underserved</u> between 25/3 and 100/20 <u>Mbps</u> ; 3) community anchor institutions	100/20 Mbps; Five-Year Action Plan to determine appropriate technology mix (<u>e.g.</u> wireline vs licensed fixed wireless)	‘Round 4+’ of Connect Illinois expected to make grants in 2025 - 2028

Capital Projects Fund

The \$10 billion Capital Projects Fund is the primary broadband provision included in the American Rescue Plan Act (ARPA). The fund is administered by the U.S. Department of the Treasury and awards the equivalent of state block grant funding for broadband infrastructure expansion, among other narrowly defined eligible uses. Funding is awarded on a formula basis driven by the state’s population, rurality, and poverty metrics relative to those of the country at large. The State of Illinois chose to use its full Capital Projects Fund allocation of \$253.7 million to support Round 3 of its *Connect Illinois Broadband Grant Program*.

The following is excerpted directly from Treasury’s website, with *Appendix C* providing Treasury’s Fact Sheet for the Illinois award – which was announced by Treasury on December 22, 2022:



Funding Objectives. *The COVID-19 public health emergency revealed and continues to reinforce our understanding that communities without access to high-quality modern infrastructure, including broadband, face impediments to fully participating in aspects of daily life, such as remote work, telehealth, and distance learning. Treasury is launching the Capital Projects Fund to allow recipients to invest in capital assets that meet communities' critical needs in the short- and long-term, with a key emphasis on making funding available for broadband infrastructure. The Capital Projects Fund aims to:*

- *Directly support recovery from the COVID-19 public health emergency by strengthening and improving the infrastructure necessary for participation in work, education, and health monitoring that will last beyond the pandemic.*
- *Enable investments in capital assets designed to address inequities in access to critical services.*
- *Contribute to the Administration's goal of providing every American with the modern infrastructure necessary to access critical services, including a high-quality and affordable broadband internet connection.*

A key priority of this program is to make funding available for reliable, affordable broadband infrastructure and other digital connectivity technology projects. Recipients may also use funds for certain other capital projects, such as multi-purpose community facilities, that enable work, education, and healthcare monitoring, including remote options. The program encourages recipients to focus on economically distressed areas, support community empowerment, and adopt strong labor practices.

Eligible Projects. *For a capital project to be an eligible use of Capital Projects Fund grant funds, it must meet all of the following criteria:*

1. *The capital project invests in capital assets designed to directly enable work, education, and health monitoring.*
2. *The capital project is designed to address a critical need that resulted from or was made apparent or exacerbated by the COVID-19 public health emergency.*
3. *The capital project is designed to address a critical need of the community to be served by it.*

The following capital projects are identified in the Capital Projects Fund Guidance as being eligible uses of Capital Projects Fund grant funding:

- **Broadband Infrastructure Projects:** *the construction and deployment of broadband infrastructure designed to deliver service that reliably meets or exceeds symmetrical speeds of 100Mbps so that communities have future-proof infrastructure to serve their long-term needs.*
- **Digital Connectivity Technology Projects:** *the purchase or installation of devices and equipment, such as laptops, tablets, desktop personal computers, and public Wi-Fi equipment, to facilitate broadband internet access for communities where affordability is a barrier to broadband adoption and use.*
- **Multi-Purpose Community Facility Projects:** *the construction or improvement of buildings designed to jointly and directly enable work, education, and health monitoring located in communities with critical need for the project.*

Broadband Equity, Access, and Deployment (BEAD) Program

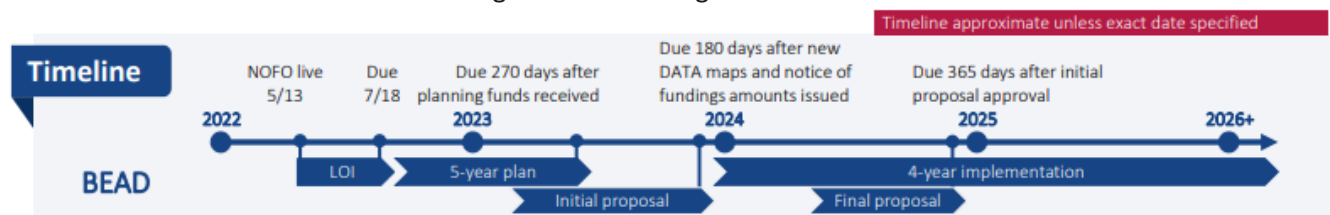
The \$42.5 billion Broadband Equity Access, and Deployment (BEAD) Program is the primary broadband provision included in Infrastructure Investment and Jobs Act (IIJA). The program is administered by the National Telecommunications and Information Administration (NTIA) within the U.S. Department of Commerce. The program awards the equivalent of state block grant funding for broadband infrastructure expansion, with funding awarded on a formula basis driven by the state's estimated number of unserved locations. Given the close alignment between the BEAD program and the Connect Illinois Broadband Grant Program, the Illinois Office of Broadband plans use all Illinois BEAD funding, estimated at \$1 billion or more, to support subsequent rounds of its Connect Illinois Broadband Grant Program.

According to NTIA's website, eligible uses of BEAD Program funding include but is not limited to:

- Planning for the deployment of high-speed Internet, including conducting research, collecting data, outreach, and training
- Deploying or upgrading Internet in unserved or underserved areas or improving service to community anchor organizations
- Installing Internet and Wi-Fi in multi-unit residential buildings
- Adoption and digital equity programs
- Workforce development programs and vocational training

As Figure 1 illustrates, the BEAD Program is a decade-long investment, with full funding dependent upon local coordination, detailed planning, and NTIA approval regarding use of funds.

Figure 2: BEAD Program Timeline



In December 2022, NTIA announced that Illinois will receive the full \$5 million available to fund various planning activities ahead of its full BEAD allocation, including:

- Creation of five-year "Connect Illinois" action plan;
- Identification of unserved and underserved locations;
- Increasing capacity and staffing of Illinois' state broadband office;
- Surveys of underserved, unserved and underrepresented communities to better understand barriers to high-speed Internet adoption;
- Identification and elimination of digital equity gaps in alignment with the Digital Equity program.

Digital Equity Program

The \$2.75 billion Digital Equity Act and related Digital Equity Program were included in the Infrastructure Investment and Jobs Act (IIJA). The program is administered by the National Telecommunications and Information Administration (NTIA) within the U.S. Department of Commerce. The program awards the equivalent of state block grant funding for various digital equity initiatives, with funding awarded on a formula and competitive basis. This funding is allocated as an initial formula-driven planning grant, a formula-driven capacity grant to invest in various initiatives, and a competitive grant opportunity – available to states, local governments, and community organizations, among others.

According to NTIA’s website, eligible uses of Digital Equity Program funding include but is not limited to:

- Develop, implement, and oversee digital equity plans
- Make awards to other entities to help in developing digital equity plans
- Improve the online accessibility and inclusivity of public resources
- Implement digital equity plans and digital inclusion activities
- Provide digital literacy and skills education to covered populations
- Facilitate the adoption of high-speed Internet by covered populations

Figure 3: Digital Equity Program Timeline



In December 2022, NTIA announced that Illinois will receive the full \$1.52 million available to fund various planning activities ahead of its full Digital Equity Capacity Grant allocation, including:

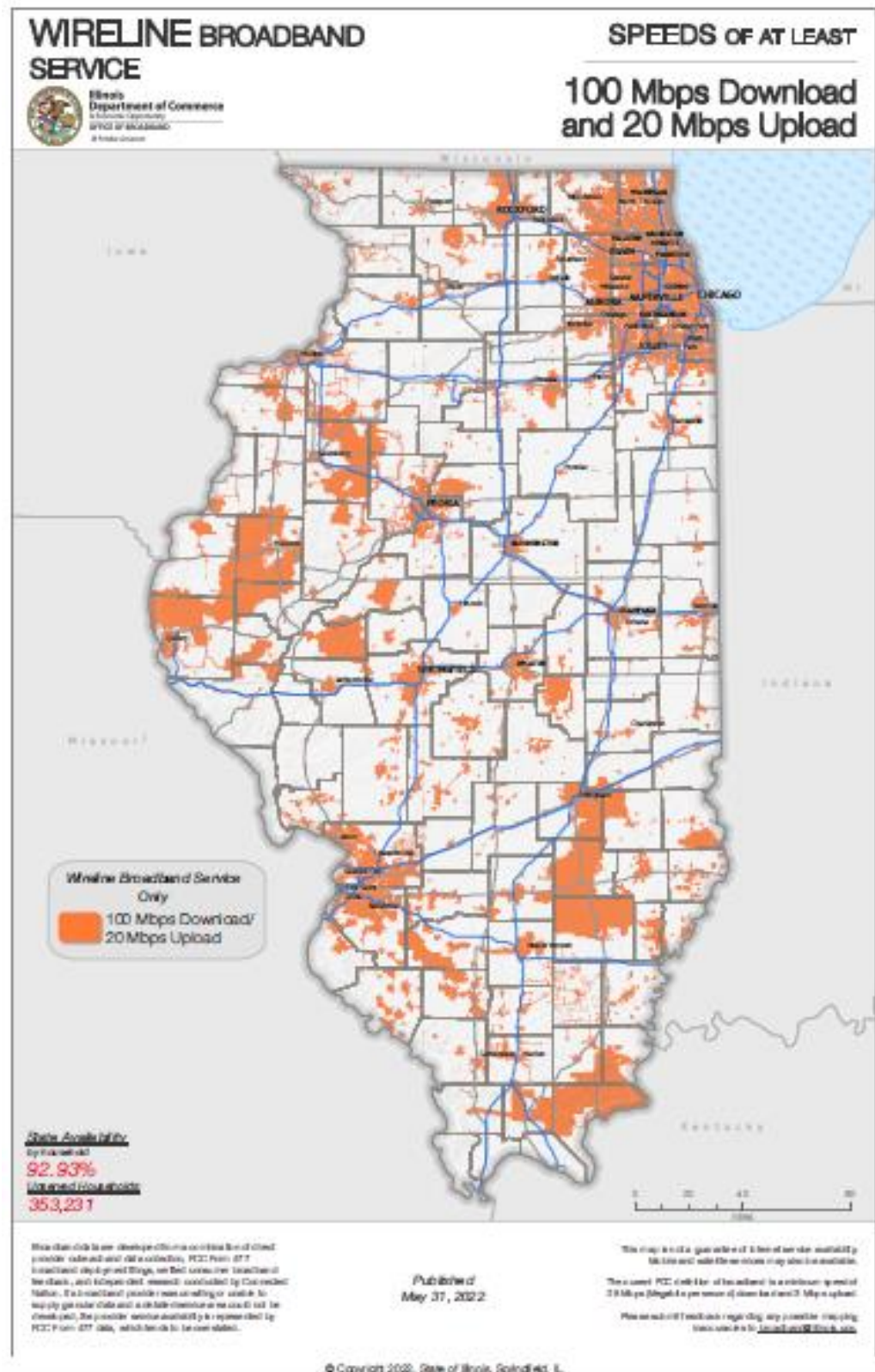
- Creation of an Illinois state Digital Equity plan;
- Cohort-wide meetings and kick-off events;
- Data snapshots for each region and state on critical digital equity indicators;
- Digital navigator capacity and training systems;
- Data collection and sharing through the Illinois Broadband Lab collaboration – such as annual broadband access mapping.



APPENDIX A - Broadband Advisory Council Members

<u>BAC Member</u>	<u>Organization</u>
Matt Schmit, Chair	Illinois Department of Commerce and Economic Opportunity
Deno Perdiou	AT&T
Melia Carter	Verizon
Chris Nelson	Comcast
Rick Holzmacher	Illinois Rural Broadband Association
Zak Horn	Metro Communications
Steven Hill	Satellite Broadcasting and Communications Association
Josh Shallenberger	CEO of Shelby Electric Coop
Deborah Frank Feinen	Illinois Municipal League/Mayor of Champaign
Anne Slaughter	Illinois Library Association
Deb Alfredson	Illinois Association of Housing Authorities
Jeff Newell	Illinois Community College Board
David Antonacci	Illinois Board of Higher Education
Bill Bodine	Illinois Farm Bureau
Ryan Gruenenfelder	AARP
Lori Sorenson, Vice Chair	Department of Innovation and Technology
Paula Basta	Department of Aging
Susan Satter	Illinois Attorney General
Jim Zolnierak	Illinois Commerce Commission
Kim McCullough	Illinois Department of Healthcare and Family Services
Caroline Sanchez Crozier	Community Appointee
Tejas Shah	Community Appointee
Sen. David Koehler	Illinois Senate
Sen. Jil Tracy-R	Illinois Senate
Rep. Aaron Ortiz-D	Illinois House of Representatives
Rep. Keith Wheeler-R	Illinois House of Representatives

APPENDIX B – Illinois Broadband Map





U.S. DEPARTMENT OF THE TREASURY

Capital Projects Fund Award Fact Sheet *Illinois*

Treasury approves Illinois' plan to invest \$253.7 million of CPF funding in broadband infrastructure projects that will provide high-quality internet to locations that lack access to adequate service.

Illinois Capital Projects Fund Program Overview

- **Program Summary:** \$253.7 million for Broadband Infrastructure (100% of CPF allocation)
- **Locations to Be Served:** 87,163 (estimated)
- **Program Description:** The Connect Illinois Broadband Grant (CIBG) program is a competitive grant program designed to deploy highspeed internet service to areas lacking access to at least 100/20 Mbps wireline service. The CIBG Program will prioritize projects that demonstrate community support, deploy fiber-optic infrastructure, provide affordable service and adoption assistance. This will be the third round of funding offered through the CIBG Program, first launched in February 2020.
 - The program is designed to provide internet service with speeds of 100/100 Mbps symmetrical to households and businesses upon project completion.
 - Each of the internet service providers funded by the program will participate in the FCC's [Affordable Connectivity Program \(ACP\)](#) – a \$30 per month subsidy for low-income families.
- **Key State Contact:** Illinois Office of Broadband (IOB)

As reported by Illinois, estimates show that investments made using the Capital Projects Fund will serve ~25% of locations still lacking high-speed internet access in the state.



For More Information: Please visit www.treasury.gov/CPF

For Media Inquiries: Please contact the U.S. Treasury Press Office at (202) 622-2960

For General Inquiries: Please email CapitalProjectsFund@treasury.gov for additional information



APPENDIX D – Resources and Publications

Broadband Advisory Council Act (Public Act 100-833)

<https://www.ilga.gov/legislation/publicacts/fulltext.asp?Name=100-0833>

Broadband Advisory Council Meetings and Materials

<https://dceo.illinois.gov/connectillinois/meetingsmaterials.html>

Broadband Advisory Council Affordability Study

<https://dceo.illinois.gov/connectillinois/affordabilitystudy.html>

Capital Projects Fund Overview

<https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/capital-projects-fund>

Chicago Digital Equity Council

<https://www.chicago.gov/city/en/sites/digital-equity-council/home.html>

Cook County Digital Equity

<https://www.cookcountyil.gov/service/digital-equity>

Common Sense Media Federal Broadband Funding Opportunities

https://www.common sense media.org/sites/default/files/featured-content/files/federal_broadband_funding_guide.pdf

Connect Illinois Broadband Strategic Plan

<https://dceo.illinois.gov/content/dam/soi/en/web/dceo/connectillinois/documents/broadband-strategic-plan-2-5-20.pdf>

Connect Illinois Digital Equity + Inclusion Framework

<https://dceo.illinois.gov/content/dam/soi/en/web/dceo/connectillinois/documents/il-broadband-equity-inclusion.pdf>

Fixed Wireless Technologies and their Suitability for Broadband Delivery

<https://www.benton.org/sites/default/files/FixedWireless.pdf>

Illinois Broadband Map

<https://gis.connectednation.org/portal/apps/webappviewer/index.html?id=caedfe7ce8924660a4ce62de6a75a7fd>

Illinois Office of Broadband Website

<https://dceo.illinois.gov/connectillinois.html>

Illinois Broadband Lab

<https://ibl.illinois.edu/index.html>

University of Chicago Internet Equity Initiative

<https://datascience.uchicago.edu/broadband>