Funding, Oversight, and Coordination of Broadband Programs

Summary

During the Covid-19 pandemic, the Department of Information Technology (DoIT) and other entities faced a changing broadband landscape and increased need during closures of schools, government, businesses, and critical health and social service entities. Spurred by the pandemic, DoIT funded emergency connectivity and planning using a $10 million capital outlay appropriation for rural broadband. These projects, as well as the Public Education Department's and the Public School Facilities Authority's student connectivity efforts, successfully connected unserved and underserved users to new broadband services.

Further, the 2021 Legislature took action to create new broadband governance through the Broadband Access and Expansion and the Connect New Mexico acts, which created the Office of Broadband Access and Expansion (OBAE), the Connect New Mexico Council, and the connect New Mexico fund. In total, the state has seen an investment of nearly $300 million in state and federal funds for broadband expansion and planning efforts at state agencies, including $100 million appropriated into the connect New Mexico fund, though very little has been spent. Further, four out of five newly added positions for OBAE remain vacant, though hiring is reportedly in progress.

Although only partially staffed as of September 2022, OBAE has met deadlines to apply for some new federal broadband grant programs. Still lacking from OBAE is an overarching strategy and plan to spend existing broadband appropriations and coordinate the various public and private broadband expansion efforts undertaken across the state.

The Evaluation: *The LFC 2019* Funding, Oversight, and Coordination of Broadband Programs *evaluation analyzed state spending on broadband infrastructure and services and management, oversight, and planning functions. The study found a lack of coordination and oversight and piecemeal implementation had led to inconsistent outcomes and persistent obstacles to expanding broadband in the state. DoIT was identified as the likely lead agency to track funds, coordinate with stakeholders, and ensure accountability.*

Of the implementation action items highlighted here, DoIT and OBAE have completed two and are making progress on four more.

Progress Reports foster accountability by assessing the implementation status of previous program evaluation reports, recommendations and need for further changes.

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If an area or entity has **access** to broadband, it generally means some form of internet service is available to them, whether fixed or wireless. However, this does not indicate whether those areas or entities can actually **afford** the service or **adopt** (sign up for) the service. **Connectivity** usually refers to the extent of this access across a population.

Broadband **coverage** is the percent of a geographical area that has access to broadband of any form.

Other federal definitions further define access by data speeds. For instance, an area or entity is **unserved** if it cannot receive fixed, terrestrial internet access at speeds of at least 25 megabits per second download and 3 megabits per second upload (25/3 Mbps) speeds. Neither satellite nor mobile services can be considered broadband under this definition.

Further, an area or address is generally **underserved** if lacking access to broadband at or above 100 megabits per second downstream and 20 megabits per second upload (100/20 Mbps) speeds.

Table 1. Average County Broadband Coverage

Coverage (2022)	Change from 2021
75.4%	+2.0%

Source: Broadband Now

NM Student Connect: PED contracted with two IT firms to help map and connect disconnected students via the most effective means possible in each area, be it federally subsidized broadband, Starlink, or some other solution. The partnership revolved around helping districts identify disconnected students and find local solutions.

Background

Recent investments in response to Covid-19 pandemic closures have significantly improved connectivity in some regions of the state, but New Mexico continues to lag behind the United States.

Reports published by Broadband Now, an independent broadband research company using Federal Communications Commission (FCC) data,[1] show New Mexico ranked 39th in the nation for broadband access in 2022 compared with 49th in 2020. Broadband coverage varies by county, but on average New Mexico counties saw a 2 percentage point increase in geographical broadband coverage from 2021 to 2022. However, New Mexico still lags behind the United States in connectivity, with 96 percent of the nation reportedly served with broadband speeds of at least 25 megabits download and 3 megabits upload (25/3 Mbps), compared with just 89 percent of New Mexicans. Legislative appropriations and substantial federal funding to the Department of Information Technology (DoIT), Public Education Department (PED), Public School Facilities Authority (PSFA), local school districts, and telecommunications and internet providers increased connectivity to schools, homes, and businesses and contributed to overall state progress.

The Covid-19 pandemic highlighted the need for high-speed, reliable internet access to support employment, telehealth services, and education during pandemic-related closures. State agencies needed a quick response to the challenges posed by school and business closures during the Covid-19 pandemic response, including the need to better understand connectivity gaps across the state. As cited in LFC hearing briefs, a June 2020 strategic plan published by DoIT estimated between 126 thousand and 196 thousand New Mexico locations lacked access to broadband, or roughly 13 to 20 percent of all homes and businesses statewide. As another example, pandemic-related school closures exacerbated the need for student devices and broadband access from home as classrooms moved online. Estimates show roughly 131 thousand students in target districts lacked a device at the start of the pandemic, while over 21 thousand lacked a connection and 42.5 thousand lacked both.

In May 2021, the defendants of the *Martinez-Yazzie* lawsuit filed an emergency technology motion ordering the state to immediately provide at-risk students and teachers of at-risk students in 23 court-identified "focus districts" with (1) access to digital devices, (2) access to high-speed internet, and (3) sufficient IT staffing. The judge ruled focus-district students without these components do not have "access to their constitutionally guaranteed sufficient and adequate education." In response, PED, PSFA, and other education-related entities expedited connectivity projects to fulfill requirements of the lawsuit, providing devices for 131 thousand students in need and helping over 119 thousand households register for federal broadband subsidy programs primarily using elementary and secondary school emergency relief funds (ESSER). Further, The Remote Technology Infrastructure Act of 2021 requires the public school capital outlay council to

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[1] There are limitations to FCC coverage information, which may be overestimated if a company or other private entity offers service, even if coverage is not adequate or affordable, and data is self-reported by carriers and often not independently verified.

establish guidelines to develop a statewide education network (SEN) (see "Appendix A" for details on the enabling legislation).

Stories of Student Connectivity Issues: On May 12, 2022, LFC and Public School Facilities Authority (PSFA) staff heard from students and teachers at Amy Biehl Charter High School in Albuquerque about internet connectivity issues. Many students reported challenges finishing homework and attending remote classes—some received disciplinary action because of poor connectivity—and many reported difficulties completing required internships and college courses outside of school hours. They spoke of challenges in multi-family homes where limited bandwidth is shared among family members, noting the usefulness of personal hotspots and dedicated school devices. None of the students in attendance owned their own personal devices and reported relying heavily on the Chromebooks provided by the school.

The 2019 LFC broadband evaluation pointed out the need for coordination, oversight, and strategies to aggregate demand to meet statewide access goals. Of the recommendations highlighted in Table 2, DoIT and OBAE have completed actions addressing two recommendations and are making progress on four more (see Table 7, status of select evaluation recommendations, on page 15).

Table 2. Summary of Key Findings from 2019 LFC Broadband Program Evaluation

Findings	Recommendations
New Mexico lacks coordination and oversight of broadband development.	Legislature should consider • Designating in statute a single entity to be the state's broadband lead and central point of contact, with a director appointed by the governor • Requiring the Public Regulation Commission to track and report all funding set aside for broadband under the state rural universal service fund.
	DoIT should develop a detailed plan for elevating the Office of Broadband to full program status by FY22.
The state's broadband efforts have yielded successes, but piecemeal implementation has led to inconsistent outcomes and persistent obstacles.	DoIT should immediately begin planning and development of criteria for use of the $10 million appropriation in FY20.
	DoIT should ensure the maps and assessment produced for the Rural Broadband Program inventory include information about unserved and underserved locations ineligible for federal funds but which may be suitable for state-funded projects.
	DoIT should work with the Department of Finance and Administration and LFC to develop Accountability in Government Act performance measures around statewide broadband goals, including minimum data speeds and connectivity of rural residents, businesses, and community anchor institutions.
	DoIT should work with the Workforce Solutions Department to identify shortages of qualified network and systems administrators in rural areas with educational and other broadband needs and develop a strategy to train and recruit individuals for those position.
	DoIT should work with school districts, higher education institutions, and other community anchor institutions to identify opportunities for demand aggregation using existing infrastructure.

Actions by the Legislature and DoIT Show Promise to Accelerate Broadband Expansion

Both the 2019 LFC broadband program evaluation and DoIT's 2020 strategic plan recommended elevating the then-existing broadband bureau at DoIT. The bureau continued to operate with a director and two project managers until the Office of Broadband Access and Expansion (OBAE) was created by the 2021 Legislature. The broadband bureau, funded via indirect costs at DoIT, had oversight of the 2019 $10 million rural broadband appropriation and continued to support broadband with these funds, pending establishment of the OBAE. During the transition, the director position was vacant for almost half a year until the executive entered into a contract with an executive broadband advisor.

New governance structures and a recurring funding source should address the lack of oversight and accountability identified by previous LFC reports. Legislation passed during the 2021 legislative session established the OBAE, the connect New Mexico fund, and the Connect New Mexico Council, which began meeting in January 2022. The connect New Mexico fund, created through the Connect New Mexico Act, received appropriations totaling $100 million. The Broadband Access and Expansion Act creates the OBAE, administratively attached to DoIT. See "Appendix A" for more details on the enabling broadband legislation. The council also established four working groups focused on regional planning and community engagement, mapping data and evaluation, digital equity and inclusion, and grants. In August 2022, the council established a fifth working group to discuss permitting, rights of way, and pole attachments.

Of five authorized positions for the Office of Broadband Access and Expansion, the director position was only filled in July 2022 and additional hires were made in September 2022. DoIT's 2020 *Statewide Broadband Strategic Plan* highlighted some recommended functions of the office but did not provide specifics on staffing levels, position descriptions, or how to build capacity for providing the needed coordination and technical services. At first, the office had a very small staff consisting of the contracted advisor ($52 thousand) and two staff members reassigned from other programs, supported by DoIT administrative staff. Since then, the State Personnel Office has advertised four positions for the office, including an assistant director, an assistant grant manager, a finance administrator, and a compliance manager—and the governor-appointed director position was not filled until July 2022. These delays in hiring over time have ultimately contributed to delays in administering connect New Mexico and other grant funds. These hiring challenges are also reflected in a 2022 LFC evaluation of the state personnel system, which indicated high vacancy rates and long hiring processes across the board in state government. However, more recently, OBAE reports hiring an administrative assistant and an operations manager in September 2022 and is making progress on hiring a deputy director, a compliance manager, and a grants manager. Additionally, the department's geospatial information officer retired at the end of June 2022, but an offer of employment was reportedly accepted in September 2022.

Plans developed by Deloitte, a private professional services company under contract with DoIT, also listed the different levels of broadband oversight and associated roles and responsibilities, from the Connect New Mexico Council down to the broadband key stakeholders. The proposed organizational

Connect New Mexico Council membership includes representatives from the Department of Transportation, Public and Higher Education departments, Economic Development Department, Cultural Affairs Department, DoIT, Mortgage Finance Authority, Public Schools Facilities Authority, and the public. However, the Public Regulation Commission, an important stakeholder in broadband for its role in administering state rural universal service funds, is not officially represented.

Further, the Connect New Mexico Council is required to have three tribal representatives (one representative of the Navajo Nation, one representative of Apache tribal governments, and one representative of Indian pueblo tribal governments); however, the committee has not had a Navajo representative since previously appointed member went to work for the federal National Telecommunications and Information Administration in March 2022.
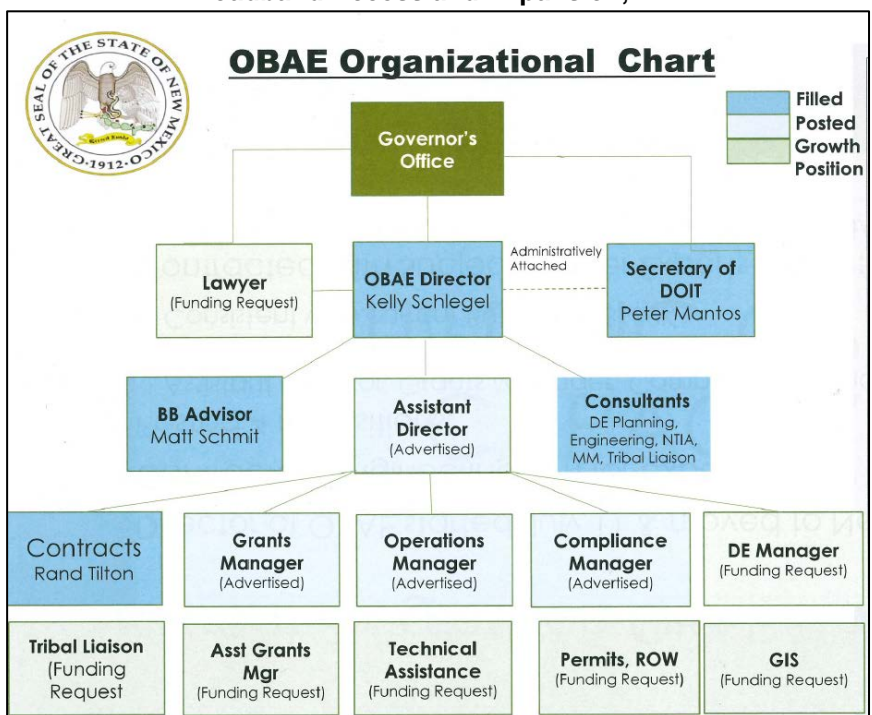
structure for OBAE reflects these recommendations. The office must prioritize filling key roles to expand and formalize these proposed governance structures.

Figure 1. Proposed Organizational Structure for the Office of Broadband Access and Expansion, FY24

Source: OBAE

Projects to be funded by the council and efforts supported by the office should ultimately contribute to the state's comprehensive broadband planning effort and align with other stakeholder efforts long term. However, challenges in hiring and other state workforce issues raise concerns about grant portfolio management.

New Mexico's labor shortages in critical areas, such as IT network administration and broadband installation and permitting, are being addressed on an ad hoc basis. The 2019 evaluation highlighted the need for IT personnel in rural areas and school districts. Now, the issue facing New Mexico is a lack of broadband personnel, including installers, surveyors, and permitting staff. The 2022 LFC evaluation report on the state personnel system documents the extreme labor market challenges in New Mexico, which include current full employment and long-term low labor force participation. There is also a reported lack of trained personnel for infrastructure expansion statewide, with a critical need for experienced project managers. Local projects launched during the pandemic addressed some broadband workforce shortages by expanding training programs for installers and fiber optic technicians. Further, DoIT is proposing for State Personnel Office to establish broadband job classification positions at a competitive market rate, and DoIT and OBAE are seeking funding to expand the installer job training program. To further address these issues long-term, OBAE noted in its FY24 operating budget request its intent to use federal broadband equity, access and deployment (BEAD) grant funding to support workforce development initiatives related to broadband, but no details were provided on that plan.

Local Projects Launched During the Pandemic Addressed Broadband Workforce Shortages

Protec fiber optic technician certification training boot camps offered by Santa Fe Community College trained three Santa Fe County cohorts comprising 52 students and a fourth cohort of 10 Luna County students.

Cochiti's Cultivating Our Own to Lead (COOL) cohort trained local workers and bought community wireless to two tribes, which hired a dozen people to do installations.

Source: Community Learning Network

Broadband Funding is Ample but Agencies are Slow to Spend

Table 3. Existing Broadband Funding
(thousands)

Source	State Amount	Federal Amount
DoIT Funds	$22,680.6	$124,556.0
Connect New Mexico Funds	$100,000.0	$0
Other Agency Funds	$39,943.1	$10,000.0
Sub Totals	$162,623.7	$134,556.0
Grand Total	**$297,190.5**	

Source: LFC Files

Since 2019, DoIT has supported broadband expansion through operational initiatives as well as through a $10 million certified rural broadband project. Capital outlay funding was appropriated for FY20 to support rural broadband expansion statewide to maximize availability of broadband connectivity across the state's rural areas. DoIT reports obligating all funds for the project as of the end of FY22.

Funds were used to support broadband connectivity projects for rural areas in Chaves, Sierra, and Lea counties, Cochiti Pueblo, Edgewood, southeast New Mexico, and the Permian Basin from Carlsbad to Jal. For example, DoIT contracted with LeaCo Telephone Company to support broadband connectivity projects for approximately 170 people, 29 farms, and five businesses in Chaves and Lea counties. The funding has also been used to support development of strategic plans, mapping, printing services, and a help desk to assist New Mexicans with connectivity issues and boost enrollment in federal broadband subsidy programs.

In total, the state has seen nearly $300 million appropriated for broadband among state agencies, including $100 million in the connect New Mexico fund, and more federal funds are expected.

DoIT and OBAE are focused on obtaining available federal funding from new grant opportunities but are slow to spend existing funding that has upcoming deadlines for expenditure. The agencies are setting up legally-mandated rules, processes, and programs for fair and effective expenditure, but most federal funds have expiration dates—with new allocations estimated through 2026—and existing state funding typically expires if unspent after a certain number of years. For instance, $134.5 million in available funding to DoIT is set to expire by the end of FY25, including $123 million in capital projects funding and $11.3 million for rural broadband and libraries, which is set to expire at the end of FY23. (See "Appendix B" for a list of broadband appropriations and their anticipated reversion dates). While DoIT and OBAE are establishing a pilot program to begin expending available funds, the agencies and the Connect New Mexico Council should prioritize using existing funds to support local broadband expansion efforts, such as providing local entities with state matching funds or providing broadband infrastructure grants where funding allows. The agencies should not delay buildout of infrastructure that can be funded currently because construction and development of new infrastructure will take time.

Currently, the connect New Mexico fund has $100 million available to support broadband in New Mexico, a majority of which is still unspent. In the 2021 General Appropriation Act, total funding includes $70 million for broadband infrastructure, $5 million for grants for planning and grant writing support, and $25 million in public education reform fund revenues to support broadband for schools. Reported commitments and obligations so far total just under $951 thousand, including several contracts with outside agencies to support broadband expansion efforts statewide, $500 thousand to support OBAE employees, $42 thousand to recruit a broadband advisor, and other costs for broadband administration and board member fees.

In addition to the connect New Mexico fund totals, DoIT also has $147.2 million available for various broadband initiatives, including $123 million from capital projects funds (allocated from American Rescue Plan Act (ARPA) funds) and $1 million for digital equity planning out of a $20 million broadband and cybersecurity appropriation. Totals for DoIT also include a $10 million capital appropriation from FY20 for rural broadband, though that funding has been fully encumbered. This total, however, does not include the $822.6 thousand in operating funds for the first year of the Office of Broadband Access and Expansion received during the 2022 legislative session.

DoIT reports committing or obligating $13.2 million of the available funding, including its full $10 million rural broadband appropriation. Other spending so far includes $260 thousand spent to support digital equity contracts and $3 million obligated to the Navajo Nation. Additionally, DoIT's $123 million federal appropriation will be used for the New Mexico broadband pilot grant program, announced in August 2022. The program will fund up to 75 percent of projects costs for projects totaling up to $10 million. Initial awards are

expected by October 2022. Other state agencies also received funding for broadband, totaling just under $50 million. Appropriation amounts by agency, including DoIT and connect New Mexico funds, are listed in "Appendix B."

In addition to the existing allocations, federal funding continues to play a significant role in broadband planning and expansion across the state. Several new grant programs have been announced by the National Telecommunications and Information Administration (NTIA) intended to bring states millions in funding for broadband infrastructure projects through 2026. Estimated allocations from the NTIA's broadband equity, access and deployment (BEAD), enabling middle mile, and three state digital equity grant programs are listed in Table 4. OBAE already submitted letters of interest for the BEAD and digital equity planning grant programs, with allocations expected through FY26. Other federal allocations, such as E-Rate and additional U.S. Department of Agriculture funding, depend on applications by entities seeking funds, so estimated allocations are not known for these sources.

Table 4. Projected NM Federal Funding Allocations, FY22-FY26
(thousands)

Program	Amount	Source
Middle Mile Funds - Competitive Grant	$50,000.0	*OBAE Estimate*
Digital Equity - Competitive Grant	$30,000.0	*OBAE Estimate*
Digital Equity - Planning Grant (Formula)	$741.0	*Applied for; not yet received*
Digital Equity - Capacity Grant (Formula)	$17,773.0	*Federal Funds Info. For States Estimate*
Broadband Equity, Access and Deployment (BEAD)	$545,821.4	*NY Law School Estimate; $100M minimum*
Total	**$644,335.4**	

For FY24, OBAE requested additional personnel to support the operations of the office, including an additional six staff for an increase of $500 thousand. For OBAE, the total operating budget request for FY24 totals $1.3 million in general fund revenues, an increase of $500 thousand, or 60.7 percent, from FY23. The entirety of the increase is being requested in the personnel category for a total of 11 FTE. The request for contractual services ($125 thousand) and other costs ($79.3 thousand) remains flat. In addition to the existing 5 FTE already approved in FY23, OBAE requested an additional 6 FTE for FY24—including positions for tribal liaison, digital equity coordinator, program coordinator, attorney, geographic information systems analyst, technical assistance coordinator, and additional grant and compliance coordinators—for a total personnel increase of 80 percent. These staff should assist the office with infrastructure planning and deployment. The proposed expanded operating budget is intended to position the office to take advantage of new federal grant opportunities, manage and administer existing funds, and foster collaboration with other stakeholders.

Since 2018, the amount of monies requested from the state rural universal service broadband program quadrupled. The 2019 LFC broadband evaluation recommended the Legislature require the Public Regulatory Commission (PRC) to submit an annual report on applications and awards from the broadband fund. PRC staff note the commission submits an annual report on the state rural universal service fund (SRUSF) to the interim legislative Science, Technology and Telecommunications Committee. The broadband program was created in 2018 by the commission with a minimum allocation of $5

DoIT and OBAE will use its $123 million federal funding allocation to begin the New Mexico broadband pilot program. During the 2021 second special legislative session, $123 million was appropriated from American Rescue Plan Act (ARPA) funds to be used for broadband infrastructure statewide, including alternative technologies. The funding is available through June 30, 2025.

A notice of funding opportunity for the proposed pilot grant program was released in August 2022 and awards for the first round of grants are expected by late September 2022. The program is intended to fund last-mile network connections in underserved or unserved locations. Eligible entities include local and tribal governments or agencies, nonprofit and for-profit organizations, co-ops, and limited liability corporations. The pilot will fund up to 75 percent of project costs for projects costing up to $10 million.

The pilot will set the framework for administering additional funding from the connect New Mexico fund. However, the Connect New Mexico Council is currently undergoing rulemaking with assistance from DoIT general counsel to establish criteria for administering the awards in accordance with state legislation.

Table 5. Applications for SRUSF Monies Increased from 2018-2021
(millions)

Year	Award Recipients	Amount Requested	Amount Awarded
2018	4	$8.2	$6.1
2019	4	$6.4	$4.8
2020	10	$21.6	$13.9
2021	7	$37.0	$11.5

Source: PRC

million to eligible telecommunications carriers, which was increased in 2021 to a minimum of $8 million by the Connect New Mexico Act. The SRUSF is financed by a surcharge on customer bills that is passed on to PRC ($1.24 per connection per month in 2019; 95 cents per connection per month in 2022).

Applications to the fund increased significantly during the pandemic because rural telephone companies and electric utilities started to submit applications. In 2021, the amount of requested funding exceeded the available amount by approximately $25.5 million (available funds covered less than one-third of total requests). Applicants are required to provide a 25 percent per project match and can reapply for projects that are not funded in subsequent years. There is currently a $30 million cap on broadband program funding, but the commission has recommended that the Legislature temporarily increase that amount in future years. Applications for 2022 funding will go before the commission on October 1, 2022. In 2021, several legislators joined in requesting that OBAE fund the difference for PRC "shovel ready" projects with the then-proposed $26 million from the appropriation contingency fund in the General Appropriation Act of the 2021. That did not happen. However, these projects could be eligible to apply for the upcoming $123 million broadband pilot program and they can reapply the following year for funding from the state rural universal service fund.

Funding restrictions on use and eligibility requirements present barriers to local matches and other gap funding.

In conversations with providers, those developing networks, and other stakeholders, LFC staff repeatedly heard local matches and other gap funding is difficult to obtain, limiting broadband expansion opportunities in the private, educational, and nonprofit sectors. Funding available from DoIT's $123 million pilot grant program is from federal capital projects fund dollars, so it is ineligible to be used as a state match for federal funds. DoIT is currently undergoing rulemaking for administering these and other connect New Mexico grant funds. Because DoIT and OBAE are statutorily required to undergo rulemaking before administering connect New Mexico funds, those state dollars—which could be used as matching funds—are not available for use yet despite being appropriated in 2021. Further, SRUSF awards can't be used as a state match because they are not allowed to be used with funding from other sources.

Available funding can be used for grant programs for projects that meet certain criteria. However, the existing programs are being targeted at last-mile connections, so middle-mile networks, which are virtually nonexistent in New Mexico, are more difficult to finance. For example, because of these appropriation restrictions, REDI Net and the statewide education network (SEN) cannot access connect New Mexico funds to support an application for the federal Enabling Middle Mile grant program, as there is no readily available funding source to provide the required match. The middle mile grant program was established during November 2021 by the Infrastructure Investment and Jobs Act after connect New Mexico funds and other ARPA funds had been appropriated. The state expects to receive $50 million in federal middle-mile grants, which will require $15 million in local matching funds (30 percent). DoIT and OBAE staff have been proactive in helping entities find additional in-kind donations and other potential matching funds to secure new federal funding. In addition, DoIT and OBAE are considering whether to pursue amendments to existing appropriations or pursue new

appropriations to provide state matching fund opportunities. Because federal funds cannot be used as a match for new federal money, the Legislature may want to re-consider language within the available appropriations in future sessions to expand eligibility of the use of funds to include other eligible entities and other funding uses, such as middle mile.

Federal funding allocated to private entities is difficult to track and progress on those projects is not reported to the OBAE or the Legislature.

Some New Mexico providers have obtained federal broadband funding, such as the U.S. Department of Agriculture's ReConnect Program or rural digital opportunity fund grant funding. That flow of federal dollars has improved broadband infrastructure in many parts of the state but possibly duplicates other efforts or might not support larger state-facilitated planning and broadband expansion.

For instance, in October 2020, the Agriculture Department announced $23 million of federal ReConnect funding for broadband expansion in Eddy, Chaves, Lea, Lincoln, Otero, Cibola, and Sierra counties, intended to connect around 1,400 homes and businesses. Further, in December 2020, the Federal Communications Commission (FCC) approved $165 million to 18 companies to expand broadband infrastructure in underserved areas of New Mexico, expected to support broadband services to 64 thousand houses, businesses, and other locations over 10 years. As another example, Sacred Winds Communications and its affiliate, SW DinehNet, plan to expand broadband services to the residents of Yatahey in McKinley County using a $2 million award for fiber infrastructure expansions, won through the federal rural digital opportunity fund (RDOF) auction, and a Grants-based company, Continental Divide Electric Cooperative, is planning to use $4.4 million in grant and ARPA funding to expand broadband services to the Pueblo of Zuni.

OBAE and the Connect New Mexico Council are in the process of establishing information exchanges to ensure visibility of all on-going broadband projects. This will immediately include tracking progress on connect New Mexico fund projects and is expected to soon include tracking of other external grant funds like the rural digital opportunity fund, the ReConnect program, or other federal funds allocated to outside entities. While LFC staff are independently tracking federal pandemic funding to state and local government to determine progress on spending, this again does not include these external private investments in broadband.

On August 10, 2022, the Federal Communications Commission rejected long-form applications from LTD Broadband and Starlink to receive support though the rural digital opportunity fund (RDOF) program. The program awards would have provided $1.2 billion to LTD Broadband and $886 million to Starlink. The FCC review found LTD Broadband and Starlink are not capable of deploying a network of the scope or size required and could not meet required data speeds. According to the FCC, Starlink had made 258 separate bids in New Mexico over a 10-year period, but all of these bids are now defaulted.

Digital equity surfaced as a focus for addressing disconnectedness in communities that might be overlooked. According to the U.S. Census Bureau, roughly 91 percent of the New Mexico population falls into at least one of eight covered population categories as defined by the 2021 Digital Equity Act, the highest in the region and fourth highest in the nation.

The Connect New Mexico Act defines digital equity as "information technology needed for civic and cultural participation, employment, education, business and economic development, lifelong learning and access to essential services generally available to residents regardless of their racial grouping, socioeconomic status or cultural identity." The bill further requires the Office of Broadband Access and Expansion to complete and submit a digital equity and inclusion plan to the Legislature by August 1, 2023, detailing the challenges posed by lack of affordable services, knowledge, and use of devices, and existing programs that could help address those challenges. The digital equity plan must be incorporated into the larger statewide broadband plan by January 1, 2024.

Covered Population Groups in New Mexico

Covered Population Category	% of Population
Racial/Ethnic Minority	63%
Rural	38%
<150% Federal Poverty Level	29%
Language Barriers	26%
Aged 60+	25%
Disabled	16%
Veterans	6%
Incarcerated	1%

Source: US Census Bureau

Despite Improved Mapping, the State Lacks an Overarching Strategy to Expand Broadband

Lack of a comprehensive statewide broadband plan could result in noncompliance with state legislation, and a misalignment with federal planning requirements may further delay implementation.

Pending additional updates to the existing broadband maps, the state still does not have a three-year broadband plan as required in state legislation nor a five-year broadband implementation plan required for federal broadband grant programs. As such, DoIT and OBAE are undergoing additional broadband mapping efforts to better understand the extent of need for broadband connectivity across the state, which should subsequently inform the state's planning efforts. Prior recommendations by LFC also point out preferred strategies for supporting broadband expansion, but DoIT and OBAE have yet to implement those strategies within a larger statewide strategic planning effort to improve broadband connectivity.

New Mexico has paid for two broadband plans since 2019 and will need to develop two more to meet existing state and new federal requirements for broadband and digital equity funding.

Several plans are required in state legislation and for meeting requirements for federal grant programs. The Connect New Mexico Act requires OBAE to submit a digital equity analysis plan by August 1, 2023. Additionally, the office is required to submit a data collection annual report that includes information on digital equity and broadband access by October 1 each year, and OBAE is currently preparing this report to meet these statutory deadlines. The Broadband Access and Expansion Act also requires a three-year statewide broadband plan by January 1 each year, initially expected in 2022, but a comprehensive plan was not received. Federal guidance for new broadband grant programs specify the need for a five-year statewide broadband plan. Deadlines for federal plan submissions depend on the program; for instance, the plan for the broadband equity, access and deployment program (BEAD) is due 270 days after receipt of initial planning funds. OBAE will likely consolidate its efforts to develop only one broadband implementation plan that satisfies both the state and federal requirements.

The state allocated $6 million to study broadband in 2010, with funding from the American Recovery and Reinvestment Act. Since then, several broadband deployment studies have been produced, including an implementation framework in 2012, deployment recommendations in 2013, a strategic plan in 2014, an education broadband study in 2015, a financial modeling study in 2016, and an ongoing business broadband study in 2017.

In June 2020, CTC Technology and Energy completed the 2020 *Statewide Broadband Strategic Plan* for DoIT for $400 thousand, paid for with DoIT's $10 million rural broadband appropriation. CTC developed connectivity maps to identify unserved and underserved locations to support the plan. The plan recommended a hybrid solution to cover the majority of the state's unserved areas, combining use of fiber and mobile and fixed wireless technologies, with cost estimates for implementing those solutions. It also noted the need for

alternative technology solutions or an aggregation of demand to implement broadband in those least dense areas of the state at a reasonable cost.

In September 2021, Deloitte completed a report proposing a framework for accessing anticipated federal grant opportunities for $500 thousand (also from rural broadband project funds). OBAE staff reported it lacked actionable detail for implementation and was out of date by the time it was completed. The Deloitte report, provided to LFC staff in June 2022, includes a high-level governance structure directed by 2021 state broadband legislation, identifies key staff needs and stakeholders, and provides preliminary expansion plans.

In addition to previous planning efforts, DoIT has initiated several contracts to support broadband expansion efforts statewide and secure additional planning funding. For instance, DoIT executed two $65 thousand contracts for broadband consulting services. To support its ongoing planning efforts, the state also applied for $5 million in initial planning funds for the BEAD program on August 15, 2022. Additionally, the state applied for $741 thousand in planning funds to develop a digital equity plan to meet requirements for federal digital equity grant programs. However, the total remaining cost of developing the needed plans is unknown.

New Mexico's baseline connectivity data, primarily from the June 2020 strategic plan, is being updated by DoIT and OBAE to develop improved maps on statewide broadband access.

State legislation requires OBAE to submit a data collection annual report to the legislature, including information about the access to and quality of broadband service statewide on a county-by-county basis. The first report is due October 1, 2022, and each year thereafter. Existing maps developed by DoIT and the University of New Mexico Earth Data Analysis Center (EDAC) are publicly available online. Mapping done by EDAC and CTC Technology and Energy during development of the June 2020 Strategic Plan helped establish a baseline of served and unserved locations. DoIT is negotiating a contract to update the maps with county-level data. However, it is unclear whether DoIT is measuring progress along this baseline.

New Mexico's broadband mapping has been ongoing for over 10 years and includes fieldwork to verify connectivity data provided by the FCC, which is not commonly done. DoIT has undergone mapping efforts with the University of New Mexico Earth Data Analysis Center (EDAC) for nearly a decade and, since 2019, has paid over $526 thousand for mapping support for the interactive New Mexico broadband map. The New Mexico broadband map includes geographic information system (GIS) layers and selectable filters to show the available Wi-Fi locations (including schools, libraries, mobile hotspots, and other services), public facilities, telecom resources, and general broadband coverage areas for different technologies. Additionally, the Public Regulation Commission reports carrier applications to the rural universal services fund include mapping information updates forwarded to DoIT.

Part of New Mexico's mapping success is due to DoIT's use of a database of address points, including premises on Navajo Nation, pueblos, and tribal lands from local wireless Enhanced 911

DoIT funded a pilot household survey in Doña Ana County regarding broadband access and speeds. The survey was implemented by the Doña Ana Broadband Public-Private Regional Partnership and was available online in both English and Spanish. The survey provided more information about the county's need for expanded or improved connectivity. The survey shows 1,451 unserved locations with no internet, 554 unserved locations with low internet speeds (less than 25 Mbps), 712 underserved location with medium internet speeds (25-100 Mbps), and only 88 fully served locations at above 100 Mbps speeds. This survey is a model for how to obtain finer granularity through community engagement and will likely be replicated by the state with federal funds expected from the state digital equity planning grant.

Figure 2. New Mexico Geographic Fiber Coverage
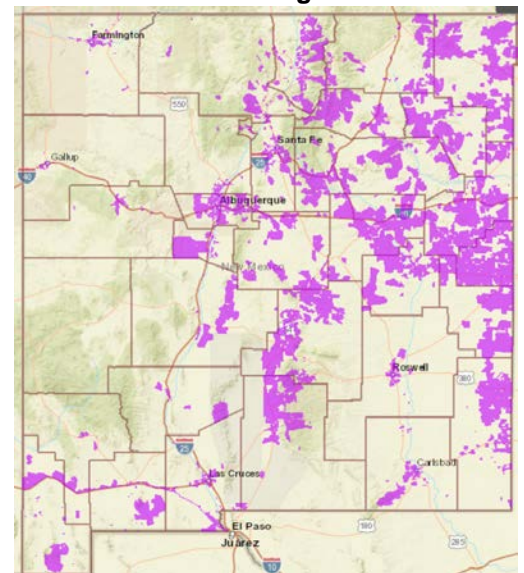
Source: New Mexico Broadband Map (EDAC)
www.nmbbmapping.org/mapping
(As of 9/8/2022)

location reporting. In addition to existing program maps, DoIT is launching a digital equity map that will be publicly available to show different statistics on internet access across the state using EDAC and Federal Communications Commission data. DoIT signed two contracts totaling approximately $130 thousand with New Mexico community-based organizations to support OBAE and the Connect New Mexico Council on the digital equity analysis and plan required by the Connect New Mexico Act and National Telecommunications and Information Administration grant programs.

DoIT must continue to update the maps with the most recent information about served and unserved locations and ensure the maps can meet federal requirements for new funding programs. Ideally, DoIT and other entities should use these and other maps when determining awards for future grant funds, planning expansion projects, and updating reports on the overall broadband needs of the state.

Proposed OBAE performance measures do not follow statutory mandates or LFC recommendations.

For FY24, DoIT and OBAE have established preliminary performance measures for OBAE but will need to develop additional metrics for network performance and digital equity over time to meet state and federal requirements. OBAE is proposing to add four performance measures for the office: (1) amount of connect New Mexico grant program dollars awarded; (2) number of connect New Mexico grant program grantees; (3) number of fiber miles (last mile and middle mile) built with grant funding; and (4) number of new or improved grant-funded connections to homes, businesses, or community institutions. However, the agency did not propose performance measures for minimum broadband data speeds or quality of service as mandated by new state broadband legislation. DoIT also did not propose digital equity metrics that will be required for federal funding after the proposed state digital equity planning grant project is completed. Map data needs to be accurate and complete to have relevant data for performance measurement over time, so OBAE plans to propose appropriate metrics in future years to align with federal benchmarks as defined.

The 2020 strategic plan also recommended the state clearly establish robust metrics for performance and customer support for all networks, regardless of technology, and verify that awardees have met those grant performance metrics. Although rural communities are not explicitly noted in the proposed measures as recommended in the 2019 LFC evaluation report, DoIT did propose a measure for tracking the number of connections to homes, businesses, and community institutions. This metric should help establish a baseline for measuring the key activities associated with the broadband program. In future years, DoIT and LFC staff will refine these measures to better reflect the recommended performance targets for broadband.

Demand aggregation and public-private partnerships remain promising strategies for high-cost areas, leveraging existing infrastructure, and building new middle-mile networks.

Prior LFC reports identified three broadband deployment models, including (1) status quo, (2) procurement optimization, and (3) demand aggregation. A 2017 LFC memo on broadband identified the costs and benefits of the three options. Demand aggregation, defined as institutions within a geographic

region working together on obtaining high-speed internet and sharing the access point over a wide area network, is recommended by LFC staff as the preferred method. Table 6 identified the costs and benefits to each model.

Until now, DoIT and other agencies have focused on pricing and purchasing as broadband deployment strategies. In August 2021, DoIT awarded nine vendors statewide price agreements related to broadband services to streamline the procurement process. Six vendors were awarded agreements in support of planning services, two in support of grant writing services, and three for broadband infrastructure services. These state price agreements are open to all public agencies and tribal entities. Table 6 shows a focus on pricing and purchasing may have higher recurring costs and lower benefits than other deployment models, but this should still help expand broadband services and streamline procurement for public and tribal entities, eliminating the delays inherent to other competitive proposal processes.

Table 6. NM Broadband Deployment Models

		Status Quo	Procurement Optimization	Demand Aggregation
Cost	Human Capital	None	Low	Low
	Capital Cost	None	None	Low
	Recurring Cost	High	Medium	Low
Benefit	Speed	Low	Medium	High
	Availability	Low	Low	High

Source: LFC Files

Demand aggregation is recommended for its high benefit in areas of speed and availability and its low human capital and recurring costs. One way of implementing demand aggregation to leverage existing infrastructure and contain costs is to aggregate traffic at regional nodes. "Neutral node" hubs, also called carrier hotels in the telecommunications sector, are places where any provider can house equipment and connect to other carriers or to wide area networks at a fraction of the cost associated with individual connections at multiple premises. A robust broadband ecosystem requires three kinds of networks: backbone, middle mile, and last mile, as shown in Figure 3. Much of the state's focus has been on last-mile connections to homes and businesses, but now OBAE and others are highlighting the importance of middle-mile networks, which interconnect last-mile networks with the public internet backbone.

Figure 3: Broadband Network Hierarchy
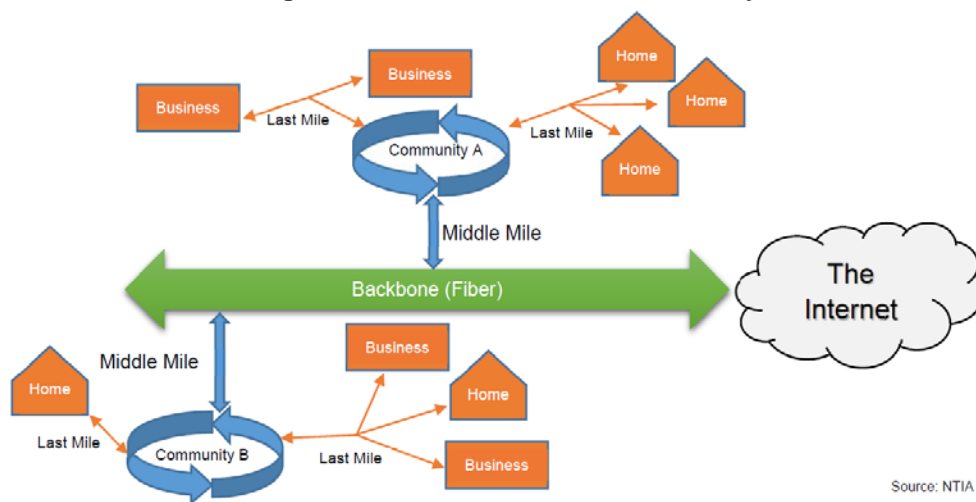
Source: NTIA

Regional aggregation and collocation hubs are key elements of a robust broadband ecosystem and are critical for middle-mile networks, but few exist in New Mexico. These hubs are regional traffic aggregation sites where network equipment is installed and maintained. LFC staff knows of only two

such nodes or network locations in the state: at 123 Central (operated by Big Byte, Corp.) in Albuquerque and the Plateau Telecommunications control center in Clovis. These nodes require expensive electronics and heating and cooling systems. As noted in the LFC's 2019 program evaluation, aggregating traffic at these nodes reduces overhead and lowers connectivity costs due to lower pricing associated with sharing associated services. The regional hubs potentially allow small internet service providers (ISPs) to build out their own last-mile networks in nearby underserved areas.

The statewide education network (SEN) being developed by the Public School Facilities Authority (PSFA) and other entities will operate as an open-access middle-mile network to meet state broadband priorities. As part of the SEN effort, the University of New Mexico-Gallup, in partnership with PSFA, PED, Higher Education Department, and Early Childhood Education and Care Department, is using federal pandemic governor's emergency education relief funds to construct the first regional hub for the SEN. The initial upgrades to the site are to be completed by the end of 2022 for an estimated cost of $600 thousand. Other hubs will be strategically located around the state at higher education institutions and other community anchor institutions with existing staff capacity and infrastructure.

The entities will replace hundreds of individual circuits to schools with single circuits; additional benefits to providers and schools will include reducing the number of provider agreements and E-Rate applications. While Gallup is the only funded location, OBAE reports working with PSFA and other staff to identify and fund new node locations. Facilities authority staff and the partner agencies estimate an additional $5 million need to upgrade the other sites, and it will take about 12 months to buy the equipment and set up the sites once funding becomes available. Although the SEN cannot combine schools and residences because of federal constraints, the model can be extended to health clinics, libraries, and state agencies.

OBAE has suggested these hubs will be essential to its middle-mile strategy, which will include open access policies, e.g., offering wholesale services and interconnection on terms that are reasonable and nondiscriminatory. OBAE released two different requests for proposals focused on the middle mile to understand the extent of middle mile services available in New Mexico. There were 22 respondents to OBAE's initial 2022 request for information regarding middle-mile networks (see "Appendix C"); most respondents were supportive of open access for public agencies and nonaffiliated service providers seeking additional capacity today or in the future.

Table 7. Status of Select Evaluation Recommendations

Recommendation	Status			Comments
	No Action	Progressing	Complete	
DoIT should develop a detailed plan for elevating the Office of Broadband to full program status by FY22, including plans for hiring staff to provide statewide, regional, and sector-specific coordination and technical assistance services.	●──────────	────────────	──────────●	The director of OBAE was hired in July 2022. Four FTE positions have been posted and interviews started August 2022, with hiring and onboarding expected to be completed by the end of the year. Six additional positions were requested through general funding for FY24.
DoIT should immediately begin planning and development of criteria for use of the $10 million appropriation in FY20, including requirements to ensure the program does not duplicate the existing state rural universal service fund, targets middle-mile or last-mile networks in unserved or underserved locations that may be ineligible for federal funds, requires a minimum non-state match, requires minimum speeds of at least 25/3 Mbps, and ensures compliance with New Mexico's constitutional anti-donation clause.	●──────────	────────────	──────────●	The $10 million rural broadband appropriation has been fully spent or obligated as of the end of FY22. Funds were used to support broadband expansion projects in rural areas, to support development of strategic plans, mapping, printing services, and a help desk to assist New Mexicans with connectivity issues and boost enrollment in federal broadband subsidy programs.
DoIT should ensure the maps and assessment produced for the Rural Broadband Program inventory unserved and underserved locations ineligible for federal funds but which may be suitable for state-funded projects.	●─────────●			DoIT is currently negotiating a contract with a vendor to provide enhanced and updated mapping to support planning and grant funding requests. The maps will be available to all state, tribal and educational entities.
DoIT should work with DFA and LFC staff to develop Accountability in Government Act performance measures around statewide broadband goals, including minimum data speeds and connectivity of rural residents, businesses, and community anchor institution.	●─────────●			For FY24, DoIT requested four new performance measures for the Office of Broadband Access and Expansion. DoIT and LFC staff will refine these measures which will be effective in FY24.
DoIT should work with the Department of Workforce Solutions to identify shortages of qualified network and systems administrators in rural areas with education and other broadband needs and develop a strategy to train and recruit individuals for those positions.	●─────────●			DoIT reports working with state and private entities to establish and fund necessary job training programs. DoIT is proposing for the State Personnel Office to establish broadband job classification positions at a competitive market rate, and DoIT and OBAE are seeking funding to expand the installer job training program.
DoIT should work with school districts, higher education institutions, and other community anchor institutions to identify opportunities for demand aggregation using existing infrastructure.	●─────────●			DoIT is coordinating with several entities on middle mile and last mile planning. DoIT reports endorsing a demand aggregation strategy.

REMOTE EDUCATION TECHNOLOGY INFRASTRUCTURE ACT *Senate Bill 144 (2021)*	**Requiring the public school capital outlay council to establish guidelines to fund education technology infrastructure to ensure that those expenditures are in accord with the development of a <u>statewide education technology infrastructure</u> network** Section 2, B: The council shall develop guidelines for a statewide education technology infrastructure network that integrates regional hub locations for network services and the installation and maintenance of equipment. The council may fund education technology infrastructure projects or items that the council determines are in accord with the guidelines and necessary to education for: (1) students; (2) school buses; (3) internet connectivity within a school district; (4) a multi-district regional education; and (5) a statewide education network.

STATEWIDE BROADBAND NETWORK ACT *House Bill 113 (2017)*	**Amending sections of the department of information technology act to provide for the department to coordinate the development of a <u>statewide broadband</u> network.** Section 2, F(4): The secretary shall provide for the development of a statewide broadband network plan in conjunction with the public education department, the higher education department, state universities, other educational institutions, the public school capital outlay council, political subdivisions of the state, Indian nations, tribes and pueblos, the public regulation commission and telecommunication network service providers

BROADBAND ACCESS & EXPANSION ACT *Senate Bill 93 (2021)*	**Enacting <u>the broadband access and expansion act.</u>** Establishing the office of broadband access and expansion; The broadband office shall: • Establish by rule standards for quality service • Create and maintain official maps • Create and maintain repository for broadband data including access gaps, unserved, underserved, infrastructure locations • Provide a three-year broadband plan by January 1, 2022 • Implement the broadband plan • Provide technical and planning assistance • Identify federal and nongovernmental funding assistance opportunities & be the applicant • Coordinate with agencies and educational institutions to purchase broadband infrastructure • Coordinate with and enter into MOU with other agencies to create permits and rules for infrastructure

BROADBAND DEVELOPMENT DIVISION (Connect New Mexico Act)
House Bill 10 (2021)
	Enacting <u>the Connect New Mexico act</u>
	
	• Creating the Connect New Mexico Council; The Council shall:
	    • Coordinate programs and projects
	    • Evaluate grant proposals
	    • Adopt rules for competitive grant programs
	    • Develop digital equity analysis and plan by August 1, 2023
	    • Incorporate digital equity analysis and plan into statewide plan by January 1, 2024
	
	• Establishing the Connect New Mexico fund; Subject to appropriation by legislature to the council, Non-reverting
	• Providing for grants;
	• Requiring reports; data collection annual report by October 1
	• Raising the levels of disbursement for broadband from the state rural universal service fund (from $5 million to $8 million per year)

APPENDIX B. BROADBAND FUNDING BY AGENCY

DoIT Funds

Location	Source	Reversion/ Expiry Date	Amount (thousands)	Purpose
2021 HB285	Severance Tax Bonds	FY25	$7,048.0	For broadband infrastructure, of which $500 thousand is available until DoIT submits expenditure plan to LFC.
2019 SB280	General Fund	FY23	$259.7	For the north central New Mexico economic development district in Rio Arriba and Santa Fe counties.
2020 HB349	Severance Tax Bonds	FY25	$3,000.0	For broadband access for the Navajo Nation.
2020 HB349	Severance Tax Bonds	FY25	$372.9	For broadband infrastructure in Northern New Mexico.
2019 SB280	General Fund	FY23	$1,000.0	To the library broadband infrastructure fund, for library broadband expansion and improvement statewide, including assessments and contracts, contingent upon the execution of a memorandum of understanding for use of the funds with the cultural affairs department
2022 HB2	Capital Projects Funds	FY25	$123,066.8	To plan, design, construct, renovate and equip broadband, including alternative and satellite broadband, statewide
CARES Act (Federal)	Economic Development Act Grant	FY23*	$1,500.0	Technical Assistance/Planning. * Funds expire September 30, 2022.
2022 HB2	General Fund	FY25	$1,000.0	To plan, design and construct broadband projects and improve cybersecurity statewide. The appropriation contains sufficient funding for development of a digital equity plan (DoIT reports they will use $1M of the $20M appropriation for digital equity planning).
FY20 SB280	General Fund (Capital Outlay)	FY23	$10,000.0	For broadband expansion, including assessments and contracts, in rural areas statewide for use through FY23. *EXPENDED*
General Broadband Total			**$147,247.40**	

Connect New Mexico Funds

Location	Source	Reversion/ Expiry Date	Amount (thousands)	Purpose
2021 SB377	General Fund	FY26	$70,000.0	To the Connect New Mexico Fund for broadband infrastructure, of which $7 million can be expended until DoIT submits expenditure plan to the LFC.
2021 SB377	General Fund	FY26	$5,000.0	To the Connect New Mexico Fund for planning and grant writing assistance, of which $500 thousand can be expended until DoIT submits expenditure plan to the LFC. The department of information technology shall coordinate with the department of finance and administration in developing criteria for distributing the funds.
2021 SB377	Public Education Reform Fund	FY26	$25,000.0	To the Connect New Mexico Fund for schools, of which $2.5 million can be expended until DoIT submits expenditure plan to the LFC.
Connect New Mexico Total			**$100,000.0**	

Other Agency Broadband Funds

Location	Source	Reversion/ Expiry Date	Amount (thousands)	Purpose
2021 HB285	Severance Tax Bonds	FY25	$167.1	**Department of Finance and Administration (LGD);** For specific projects to plan, design and construct broadband in Rio Arriba and Santa Fe Counties
2021 HB285	Severance Tax Bonds	FY25	$828.0	**Department of Transportation;** For a citywide fiber and wireless network in Hobbs and Lea County
FY22 HB10	SRUSF	Annual	$8,000.0	**Public Regulation Commission;** State Rural Universal Service Fund minimum annual broadband allocation
2021 SB377	General Fund	FY26	$10,000.0	**Economic Development Department;** For projects that support emerging broadband technology
FY19 SB094	GO Bonds	FY23	$4,750.0	**Department of Cultural Affairs;** For IT projects, equipment, furniture, resource acquisitions for libraries
FY22 HB285/ FY20 SB280	Severance Tax Bonds/General Fund	FY23, FY25	$6,063.0	**Indian Affairs Department;** For projects in Jicarilla Apache Nation, Acoma in Cibola County, Navajo Nation in McKinley County, Nambe Pojoaque, and San Ildefonso in Santa Fe County, and Santa Fe Indian School
FY22 SB144	PSCOC Fund	Annual	$10,000.0	**Public School Capital Outlay Council;** E-Rate match
FY22 HB285	Severance Tax Bonds	FY26	$135.0	**Eastern New Mexico University;** For fiber upgrades at the Roswell campus
2021 HB2 (2nd Special)	Capital Projects Funds	FY23	$10,000.0	**Public Education Department;** For broadband in libraries for Native American Communities statewide
Other Agency Total			**$49,943.1**	

STATE OF NEW MEXICO
OFFICE OF BROADBAND AND EXPANSION

MICHELLE LUJAN GRISHAM
Governor

KELLY SCHLEGEL
Broadband Director

MEMORANDUM

TO: Legislative Finance Committee

FROM: Kelly Schlegel, Office of Broadband & Expansion, Director

DATE: August 18, 2022

SUBJECT: OBAE Response to LFC Inquiry

Short summary of Middle Mile RFI responses:

OBAE issued a Request for Information (RFI) to obtain feedback regarding the development of a statewide, open-access middle-mile network. Over 20 entities responded to the RFI; they represented Internet service providers, state agencies, non-profits, and higher education.

A. <u>Number and Type</u>; 22 responses, representing diverse perspectives:

Middle Mile Providers (4)
- Arcadia/Infracom
- SunHub
- Redinet
- Zayo

- Kit Carson Electric
- CDEC/Red Bolt Broadband
- Farmington Electric Utility System
- Socorro Electric Cooperative

Last Mile Providers (8)
- Taos Net
- NM Fiber Network
- Sacred Wind
- NM Broadband Initiative Consortium
- WNM Communications
- Plateau
- Lumen
- SBI

Data Centers (2)
- Brown Rice
- Big Byte

Public/Governmental Authorities (4)
- Public School Facilities Authority
- NM DOT
- North Central New Mexico Economic Development District
- NMSU NMT SFIS UNM

Electric Cooperatives (4)

B. <u>Intended Use of Information</u>

Middle-mile fiber is incredibly important to the performance of local networks, and it can contribute significantly to lowering the costs of deployment for providers and communities and the costs of service for residents. Access to middle mile fiber also gives state agencies certain

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Governor

KELLY SCHLEGEL
Broadband Director

benefits, including enhanced network performance, improved security, cost savings and/or longer-term cost certainty.

With considerable unserved and underserved areas, New Mexico stands to benefit from coordinated expansion of middle-mile infrastructure – and OBAE has used the RFI process to help align applications, ensure quality, and position the state to make the most of this opportunity. Investing in middle mile infrastructure now will facilitate future investment in last mile network expansion leveraging historic state and federal resources.

C. <u>Planned Engagement with Respondents</u> vis-a-vis Infrastructure Investment and Jobs Act Middle Mile Grant Notice of Funding Opportunity (NOFO)

OBAE followed up with many RFI respondents and subsequently published a second RFI to solicit additional information regarding potential non-State applications to NTIA's Middle Mile grant program that may benefit from State 'collaboration and consultation,' including but not limited to a letter of support from the State.

The federal Middle Mile grant program makes clear that:

> NTIA *strongly encourages prospective non-state applicants to coordinate and consult with the State Broadband Office or other coordinating body located in the jurisdiction in which the eligible entity proposes to deploy middle mile infrastructure to ensure that the proposal is consistent with the state's broadband plan and priorities. Please confirm collaboration and consultation.*

The intent and goal of OBAE's second RFI is to ensure appropriate State Collaboration with applicants to NTIA's Enabling Middle Mile Broadband Infrastructure Program, to help OBAE further plan and coordinate given potential non-State applications, and to make clear the process by which non-State applications can collaborate with the State and/or receive a letter of support from the State.

D. <u>Findings of First RFI</u>

The 22 entities confirmed that unserved and underserved communities lack middle-mile networks, thereby being another barrier to the deployment of last-mile networks, which require backhaul to interconnect with the public Internet backbone. Respondents identified specific transport corridors where the middle mile was either lacking, or capacity constrained.

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KELLY SCHLEGEL
Broadband Director

The responses also included detailed recommendations around the technical design (e.g., fiber count, degree of interconnection points) to ensure a future-proof network. Most respondents were supportive of the state playing a critical role in forming a public-private partnership (PPP). OBAE amplified that the public interest can be advanced by ensuring open-access policies (e.g., offering of wholesale services and interconnection on terms that are reasonable and non-discriminatory). Some respondents with existing infrastructure asked that overbuild be avoided.

These responses then led to conversations with entities planning to apply for NTIA's Middle-Mile Broadband Infrastructure Grant Program. Some asked about support letters from the state; others about forming a PPP structure that would involve the contribution of capital dollars from both public and private entities. This input led to the issue of a second RFI, in which OBAE welcomed the opportunity to: a) review applications; b) provide a letter of support; c) identify other project partners (private, public, non-profit, etc.) that may be interested in collaborating (e.g., capacity purchase, cost sharing, filing support letters, etc.); d) identify potential areas of overlap with other applications and convene meetings between applicants if mutually agreed upon; e) identify a PPP model that allowed public agencies to have access to the capacity, as well as other non-affiliated service providers seeking additional backhaul capacity today or in the long-term.

In conclusion, RFI responses confirmed the need for investment in robust middle mile network expansion, particularly along key interstate corridors, between higher education anchor institution locations, and among priority agency assets. Other initiatives, such as a "statewide education network," "pueblo education network," or support for electric vehicle charging stations, intelligent transportations systems, or connected/autonomous vehicle expansion require similar long-term access to high-performance, secure, and price-stable middle mile fiber. Through direct ownership and/or long-term lease arrangements, the State can support a variety of priorities, not least of which: its obligation under the federal Broadband Equity, Access, and Deployment (BEAD) Program to ensure broadband access to every unserved household – currently estimated at 196,000 locations statewide.

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INFORMATION TECHNOLOGY REPORT CARD
Department of Information Technology
Fourth Quarter, Fiscal Year 2022

New Mexico Rural Broadband Project

OVERVIEW

Project Phase	Implementation
Start Date	6/1/19
Est. End Date	6/30/23
Est. Total Cost	$10,000.0

Project Description:

The New Mexico Rural Broadband Project will maximize availability of broadband connectivity across the state's rural areas.

Overall Status

DoIT is supporting efforts for broadband expansion through operational initiatives as well as through this $10 million certified project. DoIT reports obligating all funds for the project this quarter. Funds were used to support broadband connectivity projects for rural areas in Chavez, Sierra, and Lea counties, Cochiti Pueblo, Edgewood, Southeast New Mexico, and the Permian Basin from Carlsbad to Jal. The funding has also been used to support development of strategic plans, mapping, printing services, and a help desk.

Measure	FY20 Rating	FY21 Rating	FY22 Q1	FY22 Q2	FY22 Q3	FY22 Rating
Budget	Y	G	G	G	G	G
Schedule	Y	Y	Y	Y	Y	G
Risk	Y	Y	Y	Y	Y	Y
Overall Rating	Y	Y	Y	Y	Y	Y

Budget

Additional funding appropriated in the 2021 and 2022 legislative sessions will not be part of the $10 million total budget but will be monitored seperately. DoIT reports spending 60 percent of available funds and reported an additional obligation of $1.9 million to expand help desk services to additional populations, including veterans. This service will help expand enrollment in federal broadband subsidy programs.

Budget Status Overview
(in thousands)

State	Federal	Total Available Funding	Spent to Date	Balance	% of Appropriations Spent
$10,000.0	$0.0	$10,000.0	$6,021.1	$3,978.9	60.2%

Schedule

The project is estimated to complete in 2023, but the department's role in supporting broadband will continue beyond the scope of this project as the administrative support for the Office of Broadband Access and Expansion. As the project has reported obligating all funds, DoIT anticipates closeout of the project on or before June 2023, which reduces the schedule risk rating as the project moves towards an on-time closeout.

Risk

DoIT reports spending or obligating all remaining funds, but strategic plans and other reports commissioned using project funds have not resulted in a uniform, comprehensive strategy for expanding broadband statewide or a five-year statewide broadband plan as is required for future federal funding opportunities. However, those efforts should inform larger strategic planning efforts of the broadband office and the project has been successful in serving rural areas.

INFORMATION TECHNOLOGY REPORT CARD
Department of Information Technology
Fourth Quarter, Fiscal Year 2022

Statewide Broadband Program

OVERVIEW	
Project Phase	Planning
Start Date	7/1/21
Est. End Date	Ongoing
Est. Total Cost	TBD

Project Description:

The Statewide Broadband Program will support the implementation and expansion of broadband statewide, including uses of funds from the Connect New Mexico Fund.

Overall Status

The Office of Broadband Access and Expansion's (OBAE) statewide broadband program is reported seperately from the $10 million certified rural broadband project. The director of the office has been hired and four positions have been posted for an assistant director, a compliance manager, a grant manager, and an operations manager. Once staffed, the office should continue to prioritize development of both a spending plan and a 3- to 5-year broadband plan.

Measure	FY20 Rating	FY21 Rating	FY22 Q1	FY22 Q2	FY22 Q3	FY22 Rating
Budget	NEW	R	R	R	R	R
Schedule	NEW	Y	Y	Y	Y	Y
Risk	NEW	Y	Y	Y	Y	Y
Overall Rating	NEW	R	R	R	R	R

Budget

The office has yet to develop a comprehensive spend plan for administering its available funding. However, the Connect New Mexico Council is undergoing rulemaking for distribution of connect New Mexico funds and is launching the broadband pilot grant program using $123 million in ARPA funds appropriated to the Department of Information Technology. The office has encumbered $130 thousand to support digital equity planning.

Budget Status Overview
(in thousands)

State	Federal	Total Available Funding[1]	Spent to Date	Balance	% of Appropriations Spent
$112,680.6	$124,566.8	$237,247.4	$0.0		0.0%

[1] Program funding includes $100 million to the connect New Mexico fund to be provisioned by the OBAE and $137.2 million to DoIT, including $123 million in federal funds allocated to DoIT from federal ARPA funds and $1.5 million in CARES Act funding.

Schedule

The OBAE has established a timeline for administering the $123 million pilot grant program, with the first round of awards expected in late September. The office has also met deadlines so far for federal grant opportunities, having submitted the required letters of interest to participate in the federal Broadband Equity, Access and Deployment (BEAD) grant program and submitted a request for $740 thousand for digital equity planning and $5 million for BEAD planning.

Risk

Delays to standing up the council and staffing the office resulted in delays and posed risk to securing additional federal funding, but progress is being made to meet deadlines for federal programs and the office is engaging with stakeholders to promote coordinated planning to ensure funds are spent most effectively across the state.