

# Wired for Success: An Update on New Mexico's Statewide Education Network and Broadband

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The New Mexico Legislature has invested significant state resources and leveraged federal programs such as the Education Rate program (E-rate), the American Rescue Plan Act (ARPA), the Broadband Equity, Access, and Deployment (BEAD) program, and Digital Equity Competitive Grant program, to develop the infrastructure needed for widespread, reliable, and affordable internet access across the state. Central to this effort was the creation of the Statewide Education Network (SEN), which integrates regional hubs and supports the installation and maintenance of critical education technology infrastructure. The SEN went live in July 2024. Although the network is now operational, LESC staff have found additional work is needed for it to reach its full potential. However, there are also challenges that need to be addressed to make this happen, such as the need for additional administrative support, staffing challenges, and governance structure.

In addition to the SEN, New Mexico has launched multiple initiatives to expand broadband access and promote digital equity for schools, students, and New Mexico residents. Managed by various state agencies, these efforts sometimes overlap and involve complex technical operations. These technical operations involve deploying fiber infrastructure, integrating wireless networks, coordinating data-sharing across agencies, and ensuring advanced network security and maintenance to provide high-speed, reliable internet access for New Mexico schools, students, and residents. This work also includes full-time support to effectively navigate and leverage federal and state funds.

This brief outlines litigation, key broadband focused legislation, anticipated legislative proposals, program updates, agency roles, the role of digital devices, and an analysis of what is needed to achieve New Mexico's broadband goals and sustain these initiatives long-term.

## Martinez-Yazzie Lawsuit

The *Martinez-Yazzie* lawsuit, which was filed in 2014, is a combination of *Martinez v. State of New Mexico* and *Yazzie v. State of New Mexico*. The lawsuit challenged the adequacy and equity of New Mexico's public education system. It was filed on behalf of "at-risk" students from low-income families, English language learners, Native American communities, and students with disabilities. The suit argued that the state was failing to meet its constitutional obligation to provide a sufficient education for all. In 2018, the court ruled in favor of the plaintiffs, concluding that New Mexico's education funding was inadequate and inequitable. The court mandated that the state undertake reforms to ensure access to quality education for all students, with particular focus on addressing the unique needs of these underserved groups.

In 2020, plaintiffs in the lawsuit sought further relief from the state regarding the perceived failure to provide essential technology to at-risk students. Lawyers representing the plaintiffs claimed that the state's attempt to provide internet access and educational devices during the global pandemic was "woefully insufficient."

In 2021, 1st Judicial District Court Judge Matthew Wilson approved an expedited motion for further relief. Judge Wilson stated, "students who are lacking access to high-speed internet and technology for remote learning are

### Key Takeaways

- New Mexico has invested in broadband and education technology to provide citizens with reliable internet access and to address concerns raised by the *Martinez-Yazzie* lawsuit (Pages 1-2).
- The Legislature has passed multiple laws to expand broadband access and to improve digital equity (Pages 2-3).
- The SEN went live in July 2024 but requires additional work and support to reach its full potential (Pages 7-8).
- Long-term success for New Mexico's broadband requires planning, resource allocation, Collaboration and workforce development (Page 9).

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not getting much of an education, if at all, let alone one that is sufficient to make them college and career ready.” On September 4, 2024, the plaintiffs' attorneys filed a motion asserting the state had yet to fully address the needs of at-risk students. The motion calls for LESC to develop a “comprehensive remedial plan.” Among the proposed components of this plan, the plaintiffs emphasized the need for a technology system that ensures “all at-risk students and their teachers have access to broadband services and dedicated digital devices both at school and at home.”

Although a judgment on this motion has yet to be rendered, it is likely that this lawsuit will continue to influence the state’s approach to connectivity and the digital divide for students in New Mexico into the foreseeable future.

## The Role of Digital Devices

Digital devices play a crucial role in providing broadband access by acting as endpoints through which users connect to the internet. Without these devices, even the most robust broadband infrastructure remains inaccessible to intended users.

Additionally, these devices enable the utilization of various applications and services that rely on broadband, including online education, telehealth, e-commerce, and social networking. The performance and capabilities of digital devices can significantly affect users' experiences and their ability to leverage broadband effectively.

Furthermore, access to digital devices is vital for promoting digital inclusion, particularly in underserved communities. Providing devices helps bridge the digital divide, ensuring more people can benefit from broadband access. The quality and specifications of digital devices also influence their ability to connect to broadband networks; devices with better processing power, memory, and wireless capabilities can offer a faster and more reliable internet experience. In the context of remote work and online learning, digital devices facilitate connectivity from various locations, enhancing flexibility and accessibility to essential services regardless of geographical barriers.

Ensuring users not only have access to a viable broadband network but also possess current and functioning devices is an important consideration for the state. Many New Mexicans, particularly students, may be using devices that lack the necessary specifications to effectively access the broadband network being developed. Additionally, some of these devices may not have adequate security features, posing potential threats to the networks they connect to.

During the pandemic, the state provided many students with devices; however, many of these are now approaching the end of their useful life or are no longer supported by the service contracts that were in place at the time of distribution. As a result, a significant number of devices are due for replacement, creating an urgent situation that will need to be addressed in the near future.

The PED is one of the state agencies responsible for monitoring and managing this issue. PED staff have indicated a pressing need for funding to tackle this challenge, although staff has yet to determine a specific figure. Nevertheless, there is a clear awareness of the impending need to address the situation and ensure that all students have access to reliable and secure devices.

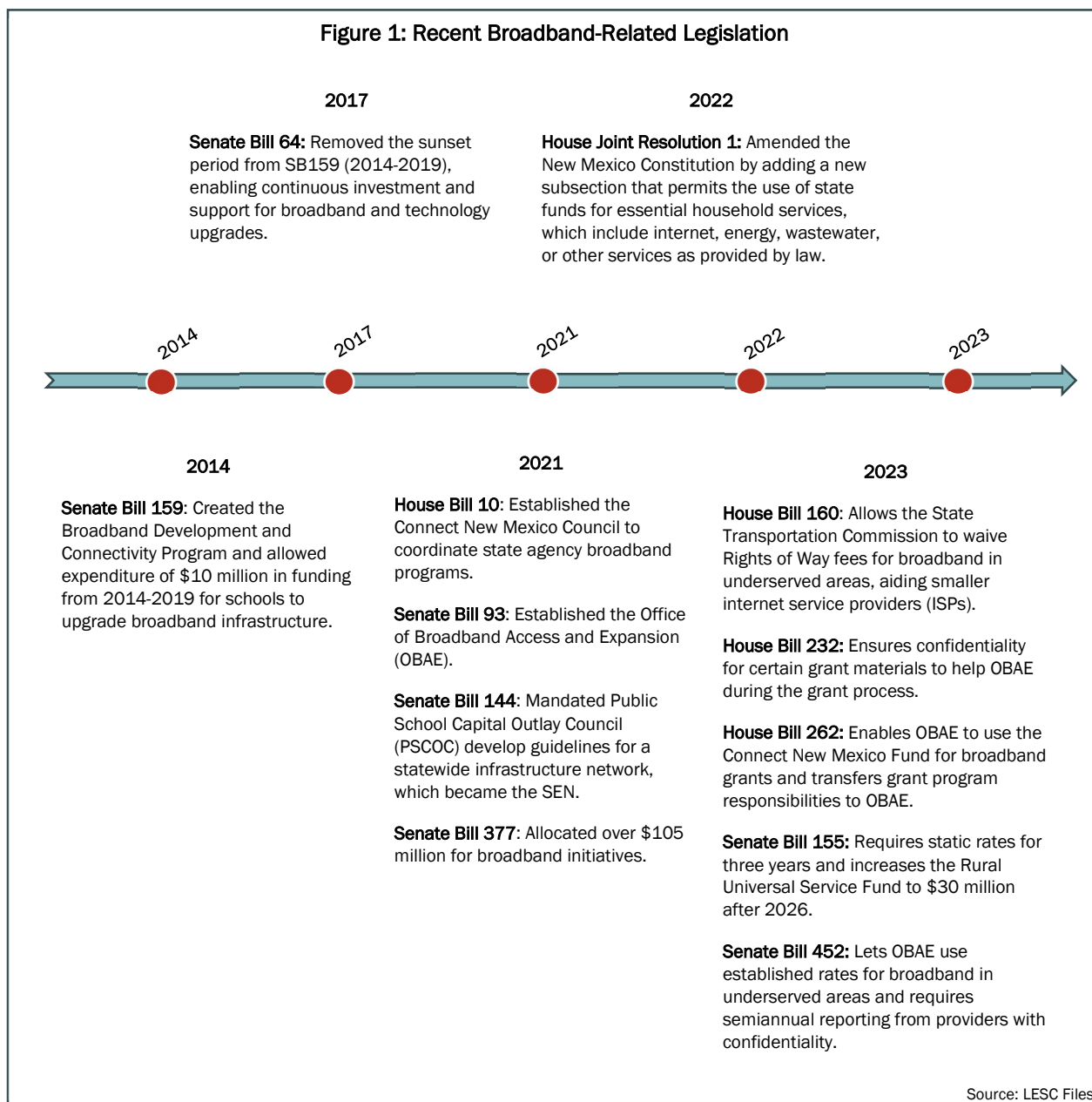
## Legislation

New Mexico has enacted multiple laws to advance broadband infrastructure for educational institutions and residents across New Mexico. This includes a 2022 constitutional amendment to the anti-donation clause (Article 9, Section 14). The amendment created a new subsection that permits the use of state funds or resources to provide essential household services. These essential services include “infrastructure that enables internet, energy, water, wastewater, or other services as provided by law.” **Figure 1: Recent Broadband-Related Legislation** provides a timeline summarizing key broadband-related legislation enacted by the legislature.

## Roles and Responsibilities

This section provides an overview of the agencies involved in the state’s broadband and educational technology initiatives, detailing each agency’s structure, the programs they oversee, and their collaborative efforts to enhance statewide impact.

**Figure 1: Recent Broadband-Related Legislation**



## Office of Broadband Access and Expansion

The New Mexico Office of Broadband Access and Expansion (OBAE) team consists of 24 individuals, including the director. As established by Senate Bill 93, OBAE is under the Department of Information and Technology (DoIT). Their primary focus areas include implementing the Broadband Equity Access and Development (BEAD) program, the Digital Equity and Competitive Grant program, Connect New Mexico funds, and the Grant Writing Engineering and Planning (GWEP) grant initiatives.

**The U.S. Broadband Equity, Access, and Deployment (BEAD).** This program offers \$42.45 billion in federal funding to enhance high-speed internet access across all states and territories. New Mexico is developing its own BEAD Plan to support statewide internet for all initiatives. This plan will include a five-year action plan based on extensive data collection and stakeholder engagement.

OBAE staff has submitted an "initial proposal" to the National Telecommunications and Information Administration (NTIA) outlining how OBAE will effectively manage a \$675 million federal BEAD infrastructure

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funding allocation to New Mexico that is intended to extend broadband to underserved areas. To access full funding, New Mexico will also submit a final proposal detailing its grant-making plans to NTIA. Final award determinations are expected to be received from NTIA in July 2025.

**Digital Equity.** New Mexico has received \$8.67 million from NTIA's State Digital Equity Capacity Grant Program, funded by the federal Bipartisan Infrastructure Law. These funds will support the state's Digital Equity Plan, led by OBAE, which aims to improve broadband access, affordability, and digital literacy. Approved by NTIA in April 2024, the plan will distribute grants to support digital inclusion activities, such as device access, tech support, skills training, and cybersecurity.

Through its Digital Equity Plan, New Mexico is working to bridge the digital divide and promote digital inclusion, providing all residents with fair access to essential technologies. By enhancing digital skills and resources, the state aims to create equal opportunities for education, employment, healthcare, and civic engagement across all communities.

**The Connect New Mexico fund.** The fund was created by the 2021 Connect New Mexico Act, supports affordable, high-speed internet expansion in underserved areas across the state. Through this program, OBAE awarded over \$40 million in grants to companies and tribal entities, including Comcast; Resound Networks; Valley Telephone Co-Op; Peñasco Valley Telephone Co-Op; Picuris Pueblo San Ildefonso Services; LLC, and Isleta Pueblo, to improve digital access for residents, businesses, and institutions. These grants will fund broadband projects in 16 counties, adding nearly 400 miles of fiber. With preliminary work underway, construction is set to begin soon, and OBAE plans to award more funds in the coming months.

**The Grant Writing, Engineering, and Planning program.** This program provides financial assistance to tribal governments and local entities for grant writing, engineering, and planning services. This support helps communities assess broadband needs and apply for additional broadband project funding. The first round of awards was announced on June 28, 2024, and applications remain open until funds are fully allocated. Eligible applicants include tribal and local governments, electric cooperatives, and telephone cooperatives. Grants can reach up to \$100 thousand, with no matching funds required. The Grant Writing, Engineering, and Planning (GWEP) program expires on June 30, 2025.

## Broadband Development and Connectivity Program

The Broadband Development and Connectivity Program (BDCP) is comprised of three permanent staff members, which include the broadband program manager, one project manager, and one project coordinator. These three staff members are focused on the SEN, E-Rate assistance, and student connectivity and wi-fi on school buses through the E-Rate program. The BDCP team receives additional help from a contractor in its work. However, the focus of this contractor is split between BDCP and OBAE initiatives. The key distinction between OBAE and BDCP lies in their focus areas: OBAE is dedicated to expanding broadband and digital access across various demographic groups statewide, while BDCP specifically targets connectivity solutions to support educational needs, specifically for public school districts and charter schools. Libraries, private schools, and schools funded by the federal Bureau of Indian Education are not part of this focus, nor are they eligible for BDCP funding. As

### E-Rate

The E-Rate program, administered by the Federal Communications Commission, offers discounts on telecommunications, internet access, and internal connections for eligible schools and libraries. This program can provide educational institutions with discounts of up to 90 percent on these services. To participate, an eligible school or library identifies the goods or services it needs and submits a request for competitive bids to the Universal Service Administrative Company (USAC). E-Rate officials determine which products and services qualify for discounts and establishes the discount level based on the percentage of students in the district who qualify for free and reduced-price school lunches.

In New Mexico, PED collects data on free and reduced-price school lunches and shares this information with entities such as OBAE, BDCP, and applicants for their various needs. Much of the work undertaken by the SEN qualifies for discounts ranging from 80% to 90%, providing the state with substantial capital to leverage for establishing connectivity. However, access to these funds for SEN initiatives is not realized until end users, such as schools, are actively connected to the network.

established by Senate Bill 159, the BDCP team is under the authority of the Public School Capital Outlay Capital Outlay Council (PSCOC). The Public School Facility Authority (PSFA), staff to the PSCOC, has administratively overseen the BDCP, including the \$10 million annual budget that funds the work done by the program.

Since its inception in 2016, the BDCP has funded network infrastructure upgrades, including Category 1 (Cat 1) fiber optic connections to schools and Category 2 (Cat 2) network equipment and wiring within buildings. Program expenditures have remained below the \$10 million cap, largely due to high E-rate participation, which is approximately 85 percent of project costs. As a result, nearly all public schools are connected to scalable fiber-optic broadband infrastructure, capable of delivering high-speed internet as needed. The program funded upgrades to approximately 1,500 miles of infrastructure, valued at \$62 million. The final two schools without fiber, Lybrook Elementary School and Tse’ Yi’ Gai High School are expected to be connected by June 30, 2025. While Cat1 upgrades are largely complete, Cat2 network upgrades continue annually, with around 50 projects valued at \$10–12 million each year.

**Figure 2: E-Rate Project Costs (2020-2024)**

Broadband for Schools (BDCP)	2020	2021	2022	2023	2024	Totals
Number of Projects	71	70	39	52	29	261
E-rate	\$10,842,184	\$11,157,699	\$7,976,389	\$7,823,039	\$3,657,207	\$41,456,518
School Portion	\$785,178	\$1,253,978	\$1,245,681	\$1,449,716	\$403,715	\$5,138,268
State Portion	\$1,319,223	\$1,206,061	\$552,308	\$894,858	\$392,558	\$4,365,008
<b>TOTAL</b>	<b>\$12,946,585</b>	<b>\$13,617,738</b>	<b>\$9,774,378</b>	<b>\$10,167,613</b>	<b>\$4,453,480</b>	<b>\$50,959,794</b>

Source: BDCP

As of April 2014, BDCP has been working within OBAE through an active memorandum of understanding (MOU) between PSFA and OBAE. The MOU exists because the work of OBAE and BDCP complements and overlaps in many areas. For instance, while BDCP establishes the network necessary for school connectivity, it does not extend to students' or teachers' homes. OBAE's initiatives address this gap, fostering a mutually beneficial relationship between the two programs. Additionally, BDCP's efforts to create a reliable network can be leveraged to provide affordable broadband access to all New Mexico residents.

By consolidating these entities, which share operational similarities, it is possible to enhance efficiency and provide the technical and administrative support that BDCP requires. The overarching goal of this collaboration is to align BDCP efforts with all other OBAE-led broadband expansion initiatives, identifying opportunities for efficiency, expediting deployment, and minimizing duplication of efforts.

Senate Bill 45, ([SB45](#)) a bill introduced but not enacted during the 2024 regular session, would have effectively removed any connection between BDCP and “education technology infrastructure” from PSCOC, PSFA, or PSCOF, and ultimately the Public School Capital Outlay Act. It is probable that another form of SB45 will be introduced during the 2025 legislative session.

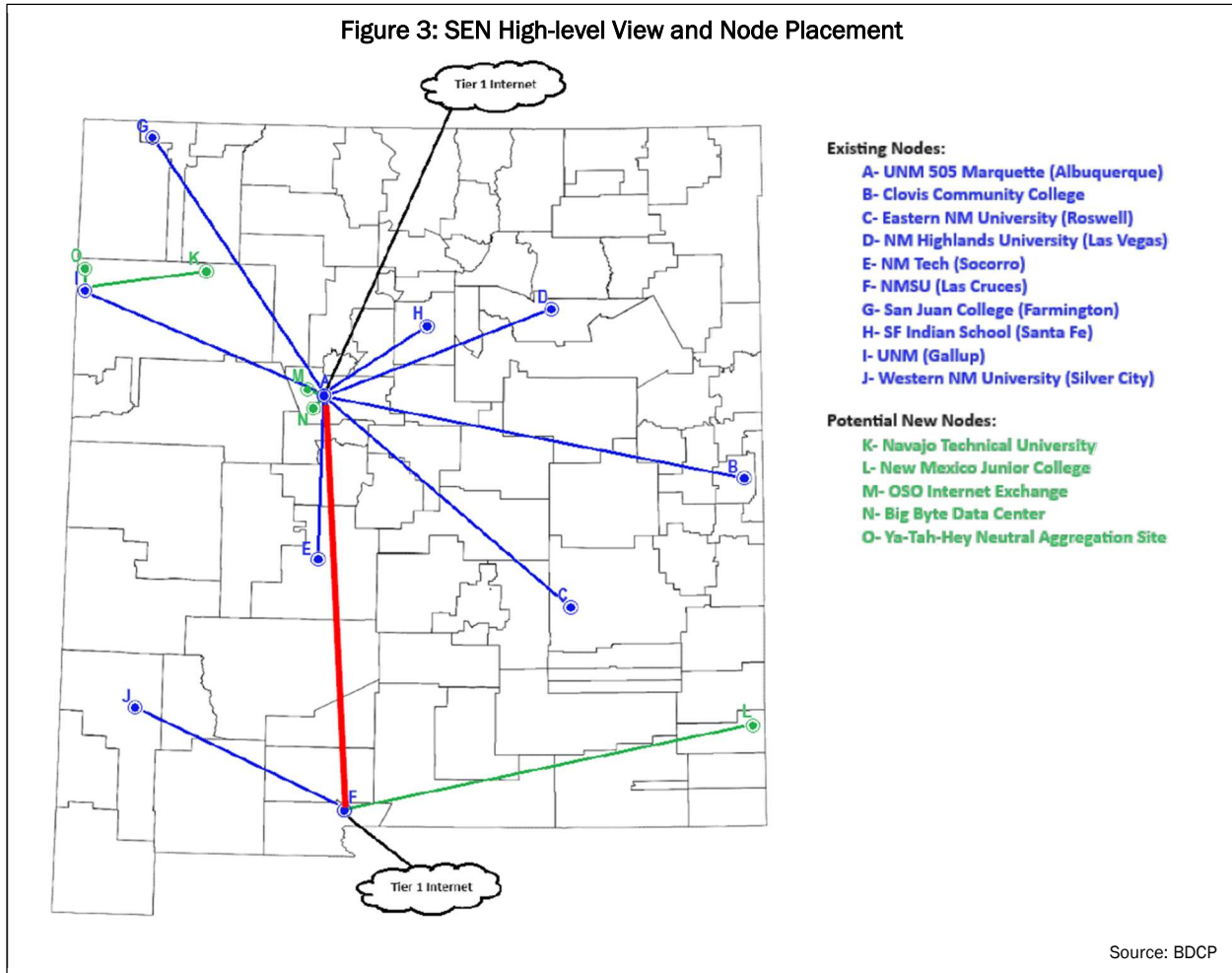
This bill could ensure that BDCP and the SEN receive the appropriate focused support, correct the funding source to align with the transfer of related programs, and establish proper alignment of statewide broadband initiatives.

## Statewide Education Network

The SEN is a state-coordinated initiative that leverages existing broadband infrastructure of Internet Service Providers (ISPs) to offer secure high-capacity internet access and interconnectivity between all participants, allowing them to share resources. Its primary goal is to connect kindergarten through 12th grade public schools to reliable and safe broadband for educational purposes. BDCP is tasked with the implementation and support



Figure 3: SEN High-level View and Node Placement



of the SEN. The SEN encompasses hardware, operational and security tools and activities, as well as user support components. The hardware includes essential equipment within network connection points known as nodes, which are placed primarily in higher education institutions throughout the state. The SEN equipment combines broadband local circuits and connects all the SEN nodes and participants to more secure internet through a high capacity connection (100 GBPS), which is scalable as needed. Schools are connected to the network by physical fiber optic communication lines operated by local providers, which link them to strategically placed local network nodes as illustrated by **Figure 3: SEN High-level View and Node Placement**.

In addition to the physical infrastructure provided by the SEN, the network, supported by the BDCP team, offers schools essential services such as technical support, cybersecurity monitoring, and controlled access, including protections such as Distributed Denial of Service (DDoS) mitigation. Once a school connects to the SEN, it relies on the network and BDCP staff to ensure reliable internet access and receive assistance with any technical issues. The BDCP team reports it recognizes the importance of this relationship and remains committed to continuously developing a secure, dependable, and efficient network.

According to BDCP staff, the SEN is a highly effective tool that can provide connected schools, students, and teachers with access to educational content, vetted learning platforms, tutoring programs, health and wellness resources, culturally relevant materials, individualized learning plans, professional development for educators, and more. This network enables the delivery of these resources more efficiently, with improved quality, reliability, and security compared to using commercial internet services.

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## Participation in the SEN

Participation in the SEN is voluntary, and schools incur no cost for their first year of service. BDCP staff and stakeholders are advocating to extend this no-cost access indefinitely. Currently, network operation costs are covered by approved funding, at the point schools were charged, a reimbursement process would result in the state ultimately covering their participation costs.

Since the state would ultimately cover the cost of participation, BDCP staff note creating a billing system for schools would not be economically or administratively practical for either the schools or the state. In addition to schools, the SEN is open to other entities such as libraries, higher education institutions, museums, state parks, and, potentially, rural health clinics, who have access to a federal funding program similar to E-rate (Healthcare Connect). OBAE and BDCP can develop guardrails to ensure strict adherence to funding and usage guidelines. This expansion has the potential to broaden the network's impact and foster greater collaboration across sectors.

## Implementation Status

Currently, all but two schools in New Mexico have broadband access, and efforts are underway to connect the remaining ones. However, broadband access alone does not equal secure, reliable, or efficient connectivity. Many schools face significant gaps in cybersecurity, lacking both the infrastructure and dedicated personnel needed to monitor and protect their networks effectively. Many schools do not currently have, and may never have, the technical staff or expertise required to design and maintain robust network systems or establish basic protections to safeguard their organizations. This underscores the need for further support beyond mere connectivity, making connection to the SEN a vital step in securing high-quality, managed network services for schools across the state.

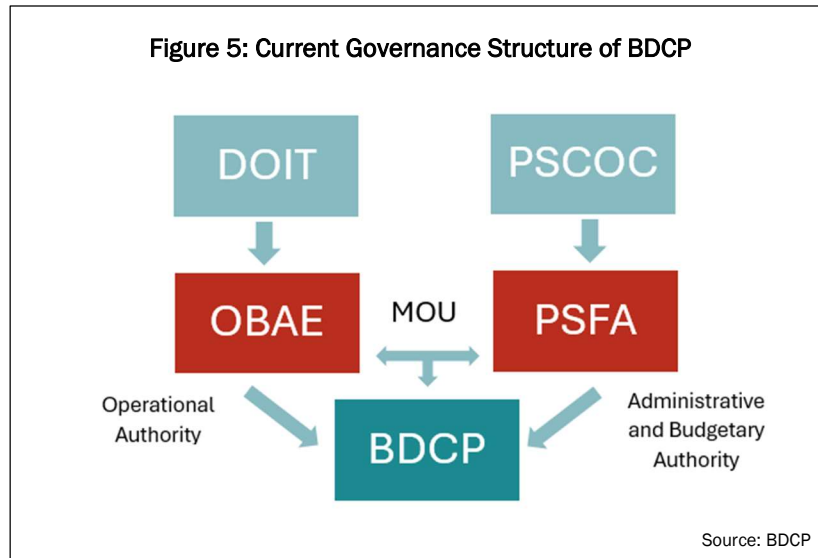
As mentioned above, the SEN went live in July 2024. However, only a fraction of schools that have expressed interest in joining have been brought online. Although the SEN is in the early stages of the onboarding process, BDCP staff have communicated several challenges that have slowed the process down. These challenges can be broken into three distinct categories: administrative support, staffing, and governance.

**Administrative Support.** PSFA staff supports BDCP with administrative tasks, such as negotiating contracts. The technical complexities of network infrastructure, however, often extend beyond PSFA's focus and expertise. Although the BDCP team has deep expertise in developing and maintaining complex communication networks, it would benefit from additional administrative support to streamline contracting and procurement processes. BDCP staff have also indicated the RFP process for Phase 3 may take up to a year to complete, based on feedback from PSFA staff.

Due to the nature of technology and complex communication networks, equipment and network components will require upgrades and replacements, while service contracts will need continuous negotiation and renewal throughout the life of the SEN. Given the numerous components and service agreements comprising the SEN, maintaining the network is a substantial undertaking that requires dedicated roles, according to BDCP staff. Furthermore, BDCP staff communicated the management and operation of a 24 hour, 365 day a year mission-critical network that provides connectivity and access to educational resources for approximately 500 thousand users daily is a complex undertaking, even when many specialized tasks are outsourced to enhance efficiency.

**Additional Technical Staff.** BDCP staff note it faces increased strain due to insufficient staffing levels. Staff members have had to take on highly involved roles in onboarding schools to the SEN. Many institutions are unfamiliar with the necessary equipment and services needed to connect to the network. Many schools are unable to properly plan out and procure the necessary services and equipment and heavily depend on BDCP to help them. This requires close collaboration with schools, particularly smaller ones, to guide them through each step of the process. Meeting with school leaders and assessing statewide needs with only three staff members, however, can be challenging. In addition to these individual site assessments, BDCP also provides support in the completion of federal funding applications for programs like E-Rate for schools that do not have the ability to handle this process on their own. These same three individuals are also tasked with the administrative duties mentioned above, outreach efforts, SEN implementation, and other additional responsibilities. Initially, the BDCP's budget supported four full-time employees (FTEs), but this has decreased to three, despite increased responsibilities. According to BDCP staff, the lack of personnel has created capacity issues that could hinder the success of the SEN and other BDCP initiatives.

**Governance and Support.** Since the program's creation, BDCP has faced obstacles due to its unique focus, which diverges from PSFA's broader mandate to support the construction and maintenance of school facilities. This divergence has made securing the specialized technical and administrative support challenging. With the recent implementation of the MOU between PSFA and OBAE, BDCP finds itself navigating between the two agencies without full integration. Transferring BDCP to OBAE appears logical, but effective alignment of each agency's initiatives is essential to enhance efficiency. Adequate support and staffing for these initiatives are also vital for meaningful progress. It is important for OBAE to evaluate its capacity to provide the comprehensive support that BDCP requires.



## Establishing Long-Term Success

The state and Legislature have demonstrated a strong commitment to establishing reliable, affordable, and efficient broadband access, and addressing issues raised in the Martinez-Yazzie lawsuit. To ensure long-term success for New Mexico's broadband infrastructure, several strategic actions should be considered.

### Policy Considerations

**Develop a Comprehensive Statewide Broadband Plan.** The Legislature and state could consider establishing a centralized plan consolidating digital equity and broadband initiatives with clear goals, regular assessments, and a focus on long-term sustainability. Oversight of this plan should be assigned to a dedicated body comprised of state agency leaders and experts with in-depth knowledge of broadband technology and infrastructure.

**Prioritize Resource Allocation and Administrative Support.** The Legislature should ensure ongoing initiatives have sufficient funding, technical expertise, and administrative support to achieve their objectives effectively.

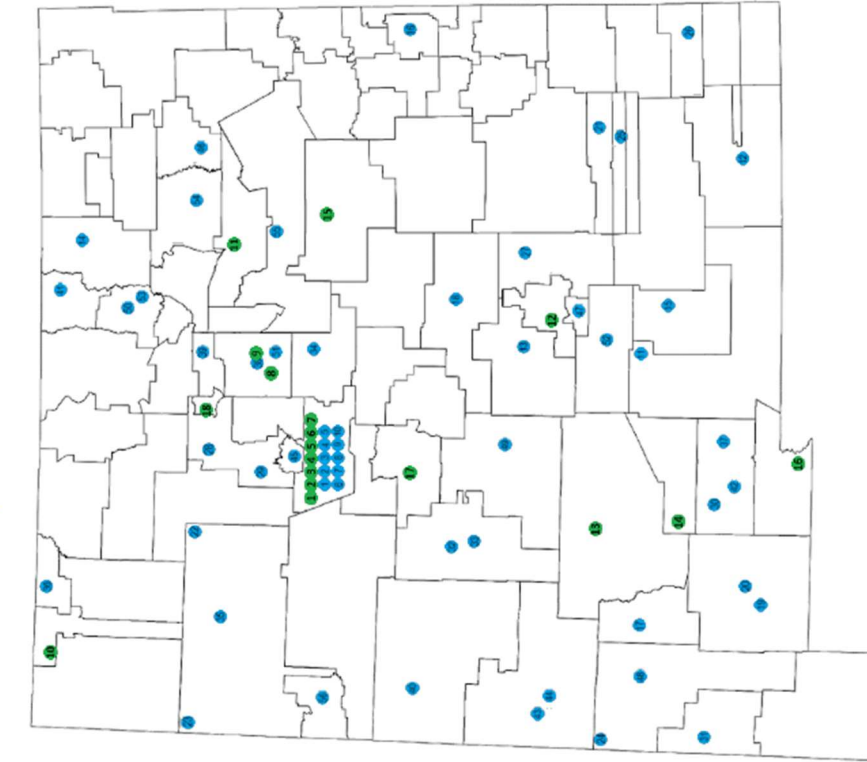
**Invest in a Skilled Workforce.** The legislature could address the shortage of technically trained workers by enhancing STEM education and creating workforce development programs focused on telecommunications and broadband installation.

**Enhance Digital Literacy and Community Collaboration.** The Legislature and the state should collaborate with schools, community organizations, and higher education institutions to promote STEM education and digital literacy, enabling full use of broadband infrastructure and preparing future workers.



## APPENDIX A: Participants of Phase 1 and Phase 2 of SEN Onboarding Process

### Last mile Participants



### Phase 1

- 1 ~~Albuquerque Charter School~~
- 2 Mark Armijo Academy
- 3 APS Data Center
- 4 ~~Albany Charter School~~
- 5 Albuquerque School of Excellence
- 6 21st Century Public Academy

### Phase 2

- 1 Albuquerque Sign Language Academy
- 2 Amy Biehl High School
- 3 Cien Aguas International School
- 4 Cottonwood Classical Prep School
- 5 Gordon Bernell Charter School
- 6 Health Leadership High School
- 7 La Academia De Esperanza
- 8 Los Puentes Charter School
- 9 New Mexico International School
- 10 Technology Leadership High School
- 11 Alamogordo Public School District
- 12 Carlsbad Municipal Schools
- 13 Carrizozo Municipal Schools
- 14 Cimarron Mun School District
- 15 Cloudcroft Mun School District
- 16 Clovis Municipal Schools
- 17 Cobre Consolidated School District
- 18 Corona Public Schools
- 19 Deming Cesar Chavez High School
- 20 Deming Data Center
- 21 Dexter School District
- 22 Diné College Tribal Library
- 23 DEAP
- 24 Glenwood Library
- 25 Hagerman Municipal School District
- 26 Hobbs Municipal School District
- 27 Hondo Valley School District
- 28 Jemez Mountain (NCC)
- 29 Jemez Valley (NCC)
- 30 Las Cruces Public Schools
- 31 Lordsburg Municipal Schools
- 32 Magdalena Elementary School
- 33 Magdalena Library
- 34 MESD Network Operations
- 35 Middle College High School
- 36 Mosaic Academy
- 37 New America School - Las Cruces
- 38 New Mexico School For The Deaf
- 39 Pojoaque Central Office
- 40 Quemado Independent School District
- 41 Questa High School
- 42 Raices del Saber Xinachtli School
- 43 Reserve Independent Schools
- 44 Reserve Library
- 45 Rio Rancho Public Schools
- 46 Roy Municipal Schools
- 47 Ruidoso High School
- 48 Silver Consolidated Schools
- 49 Socorro Data Center
- 50 Taos Academy Charter School
- 51 Tierra Encantada Charter School
- 52 Tularosa Municipal School District
- 53 Vista Grande High School
- 54 Wagon Mound Public Schools
- 55 West Las Vegas School District
- 56 Zuni Public School District
- 57 Truth or Consequences Data Center
- 58 Hatch Valley Schools
- 59 Santa Rosa Schools
- 60 Gadsden Administrative Center
- 61 Belen Schools
- 62 Los Alamos Schools