STATE OF NEW MEXICO

OFFICE OF BROADBAND ACCESS AND EXPANSION

Office of Broadband Access and Expansion
Department of Information Technology
State of New Mexico

Michelle Lujan Grisham, Governor
Howie Morales, Lieutenant Governor

New Mexico Broadband Plan Update
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Message from the Acting Director, Office of Broadband Access and Expansion, Drew Lovelace

Dear fellow New Mexicans,

The role of government in industry and society constitutes a commonly debated topic across kitchen tables, classrooms, board rooms, hallways, and community centers around the country, and certainly in New Mexico. The impetus behind these debates are several but often involve two common themes. First, despite tremendous progress achieved in recent years toward fostering economic growth and social opportunity, many citizens feel left behind. Second, the narrative often involves whether the government or the private sector can best be trusted to solve our problems.

The Office of Broadband Access and Expansion (OBAE) recognizes the divergent views around this debate, especially as we tirelessly work to achieve our goals of fostering universal broadband availability and digital inclusion for ALL New Mexicans – residents, businesses, and community institutions. Achieving these goals requires collaboration across government, industry, non-profits, community leaders and organizations, and academia, and mutual respect for the unique strengths across the ecosystem. A multi-stakeholder approach shifts the debate from "what is the role of government" to "how government can efficiently and effectively work with stakeholders to drive impactful, sustainable change." Collaboration and respect represent two of our fundamental values.

New Mexico is the fifth largest state in size but thirty-sixth in population. This means the cost to build the broadband network and the recurring operating expenses are spread over a smaller base of potential customers. This recipe of large size and low population does not allow for sound private-sector business cases without government support. These challenging economics partially explain why approximately 16% of the State's residential and business locations remain unserved or underserved.

Moreover, the COVID-19 pandemic demonstrated our society's increasing dependence on high-speed Internet. Every part of our modern lives necessitates broadband – distance learning, telehealth, telework, information gathering, social communication, government services, and entertainment. While physical connection to broadband is essential, true access does not exist without digital equity. Meaningful Internet usage requires access to affordable services, affordable devices, community networks, and digital literacy, which altogether constitute digital equity.

Since OBAE was created in 2022, our multifaceted role includes spearheading grant funding programs; providing technical assistance across the broadband ecosystem; convening stakeholders; coordinating with other federal, state, and local agencies to solve challenges; engaging in analytics and research to identify gaps and opportunities; and running the Statewide Education Network. In all these efforts, we take great pride in working with many local and state partners to ensure every New Mexican can participate in our digital economy and society.

Our 2024 Broadband Plan builds upon the tremendous progress achieved over the past year. During the 2024-2025 time period, OBAE will launch, award, and invest $770 million into broadband infrastructure. This involves $70 million from the Connect New Mexico Fund for general infrastructure, $25 million from the Connect New Mexico Fund for school broadband infrastructure, and $675 million from the Broadband Equity, Access, and Deployment program. Coupled with private matching funds, the total budgets for broadband infrastructure projects could approach $1.3 to $1.5 billion. We will also closely monitor the $117 million in grants already issued to 19 projects from the Connect New Mexico Pilot Program. We also recently launched the $5 million GWEP (Grant Writing, Engineering, and Planning) Fund to assist electric and telephone co-ops, local governments, and tribes with preparing technical and financial plans and grant applications for projects to connect the unserved.

On the digital equity front, OBAE will submit its plan to the federal government in February of 2024 and continue to advocate for Congress to extend the Affordable Connectivity Program, helping 180,000 New Mexican households to

receive a subsidy on their Internet bill and helping to put devices into the hands of more New Mexicans. Should the program not be continued, OBAE will advocate for the State to fund and run a similar program.

I am honored to lead this organization. I express my deepest gratitude to former Director Kelly Schlegel, who retired in September 2023. She exemplifies the best of government leadership – a strong work ethic, values grounded in humility and transparency, and commitment to collaboration and daily community outreach. Director Schlegel built a dynamic organization with a staff of 20 personnel and contractors and an institutional structure committed to public-private partnerships. We are building upon these strengths.

I am grateful for the resounding support of Governor Michelle Lujan Grisham. The Governor's directive to OBAE is clear – connect all New Mexican residents and entities with affordable, reliable, high-speed Internet and remove every barrier limiting them from taking advantage of the rich resources online. Second, we are grateful to the Legislature, who, working with the Governor, have given us resources to build our team and provide grant funds necessary to bridge the digital divide.

OBAE is committed to connecting the rich cultural history of its diverse people to its future through universal broadband. Thank you for placing your trust in me and my Office. We look forward to working together to achieve the Governor's vision of making New Mexico the most connected state.

Sincerely,

Drew Lovelace
Acting Director, Office of Broadband Access and Expansion

List of Abbreviations and Acronyms

ACP	Affordable Connectivity Program		MBA	Master of Business Administration
ACS	American Community Survey		Mbps	Megabits per second
ALGE	Acequia and Land Grant Education		MNO	Mobile Network Operator
ARPA	American Rescue Plan Act		MOU	Memorandum of Understanding
BAT	Broadband Action Team		NAP	Network Access Points
BEAD	Broadband Equity, Access, and Deployment		NDIA	National Digital Inclusion Alliance
BLM	Bureau of Land Management		NEPA	National Environmental Policy Act
Bps	Bits per second		NMAC	New Mexico Administrative Code
BSL	Broadband Serviceable Location		NMDFA	New Mexico Department of Finance & Admin.
BTOP	Broadband Technology Opportunities Program		NMDoIT	New Mexico Department of Information Technology
CAI	Community Anchor Institutions		NMDOT	New Mexico Department of Transportation
CARES Act	Coronavirus Aid, Relief and Economic Security Act		NMHU	New Mexico Highlands University
CCA	Competitive Carriers Association		NMLA	New Mexico Library Association
CFR	Code of Federal Regulations		NMM	Northern New Mexico
CMC	Connecting Minority Communities		NMRSUSF	New Mexico Rural State Universal Service Fund
CNMC	Connect New Mexico Council		NMSA	New Mexico Statutes Annotated
CNMEC	Central New Mexico Electric Cooperative		NOFO	Notice of Funding Opportunity
CPE	Consumer Premise Equipment		NOPR	Notice of Proposed Rulemaking
CSF	Critical Success Factors		NTIA	National Telecommunications & Info. Admin.
DDOS	Distributed Denial of Service		OBAE	Office of Broadband Access and Expansion
DE	Digital Equity		PAU	Project Area Unit
DEA	Digital Equity Act		P3	Public-Private Partnership
DEP	Digital Equity Plan		PEN	Pueblo Education Network
DOH	Department of Health		POP	Points of Presence
DoIT	Department of Information Technology		PPP	Public Private Partnership
DOT	Department of Transportation		PRC	Public Regulation Commission
DSL	Digital Subscriber Line		PROP	Permits, Right of Ways, and Pole Attachments
ED	Economic Development		PSAP	Public Safety Access Pont
EDAC	Earth Data Analysis Center		PSCOC	Public School Capital Outlay Council
FCC	Federal Communications Commission		PSFA	Public Schools Facilities Authority
FTE	Full Time Equivalent		RDOF	Rural Digital Opportunities Fund
FTTP	Fiber to the Premise		READY	Regional Engagement for Adoption & Digital Equity
FY	Fiscal Year		RFI	Request for Information
G2G	Government to Government		ROW	Right of Way
Gbps	Billions of bits per second		RUS	Rural Utilities Service
GEER	Governor's Emergency Education Relief (Fund)		SB	Senate Bill
GHz	Gigahertz		SCP	Senior Certified Professional
GIS	Geographic Information System		SEC	Socorro Electric Cooperative
GMS	Grants Management System		SEN	Statewide Education Network
HED	Higher Education Department		SFIS	Santa Fe Indian School
HH	Household		SHLB	Schools, Health and Libraries Broadband (Coalition)
ICI	Information and Communication Technology		SHRM	Society for Human Resource Management
IDS	Intrusion Detection Service		SME	Subject Matter Expert
IIJA	Infrastructure Investment and Jobs Act		SQL	Structured Query Language
IP	Internet Protocol		STIP	Statewide Transportation Improvement Plan
IPRA	Inspection of Public Records Act		TAP	Technical Assistance Program
IPS	Intrusion Protection Service		TDS	Telecommunications and Data Systems
IRU	Indefeasible Right of Usage		TIA	Telecommunications Industry Association
ISP	Internet Service Providers		UNM	University of New Mexico
JANPA	Jicarilla Apache Nation Power Authority		USCS	United States Code Service
KPI	Key Performance Indicator		WNM	Western New Mexico

1.0   Executive Summary

The Office of Broadband Access and Expansion (OBAE) is required to provide an annual update to the Governor and Legislature on the statewide Three-Year Broadband Plan ("Broadband Plan"). The Statute directs OBAE to develop an assessment of broadband services across New Mexico.

OBAE delivered a highly comprehensive, detailed Broadband Plan on January 1, 2023. That version, the "2023 Broadband Plan", defined the key strategic goals, or guideposts, to measure progress over the next three years and beyond. Second, it provided an update regarding the state of broadband availability and adoption. Third, it summarized the annual progress made toward advancing OBAE's strategic goals. Fourth, the Plan discussed the major strategic priorities to achieve these goals. Fifth, it defined the specific initiatives and action items for 2023 for each priority, recognizing that many of them would require several years to implement. Finally, it highlighted the critical success factors that must be in place to implement these initiatives and effectively reach the goals. This version, the "2024 Broadband Plan," follows this same framework and updates all key sections.

Goals

The 2024 Broadband Plan aims to achieve the following four major goals.

Goal 1) Universal Availability of Terrestrial-Based High-Speed, Scalable Broadband Networks

New Mexican residents and businesses should have access to terrestrial-based high-speed broadband networks that reliably deliver at least 100/20 Mbps (download/upload) by 2029 – the time period when planned grant-funded broadband networks should be deployed. This speed constitutes the current federal definition of "served", and the definition adopted in OBAE-administered grant programs.

Moreover, all terrestrial networks funded by the State's grant programs should offer at least 100/100 Mbps unless the applicant can demonstrate extraordinary circumstances limiting this speed. In such cases, the networks must offer 100/20 Mbps and be scalable to at least 100/100 Mbps. To meet the 100/100 Mbps standard, New Mexico aims to prioritize fiber-based networks – given their distinct advantages of being sustainable, "future ready" and "future proof", and their relatively lower operating and upgrade expenditures. Fixed wireless technologies may be considered when fiber is impracticable to deploy due to geography, topography, or excessive cost barriers. For those highly remote communities where terrestrial networks cannot be deployed due to extraordinarily high costs or technical barriers, the State may consider initiatives to foster the adoption of existing non-terrestrial solutions, such as satellite-based broadband.

Goal 2) Widespread Adoption and Meaningful Usage of the Internet

All New Mexicans should have an opportunity to adopt the Internet by 2026. This can occur at home, an office, a community institution, or through a mobile device. All New Mexicans should be offered the support to overcome adoption challenges – which may include programs to enable affordability, obtain devices, receive digital literacy training, or have high-quality access at a nearby community institution.

Secondly, all New Mexican broadband adopters should meaningfully use the Internet's myriad of valuable digital applications to advance their social and economic standing – i.e., health, education, workforce, civic and social services, etc. The quality and innovation of online resources increase every year, thereby yielding

valuable tools for both residents (e.g., e-learning, telehealth, workforce skills development, etc.) and businesses (e.g., online marketplaces, cloud-hosted applications performing real-time functionality, etc.).

Goal 3) Advancement of Next-Generation Statewide Networks

Last-mile broadband networks are critical, but not alone in importance. New Mexico's ambition of being the most connected state necessitates several other pieces, including: a) a Statewide Education Network (SEN) that connects all interested public schools and public libraries together through scalable, reliable, affordable and secure Internet, and a sister initiative, the Pueblo Education Network (PEN) which is focused on Tribal controlled schools and libraries; b) all New Mexican communities should reside in close proximity to open-access middle-mile networks that offer reasonably priced, high-speed lit services and dark fiber to facilitate backhaul and support private links for government, large enterprises, data centers, educational institutions, and others requiring at least 1 Gbps connectivity; c) universal mobile 5G coverage that spans across all rural communities and highly-trafficked roadways; and d) networks architectures that offer resiliency, redundancy, and security. The end result will involve an interconnected network system that provides widespread connectivity, safety and security, resiliency, and customer choice through public-private collaboration.

Goal 4) Program Stewardship

The end results of universal broadband availability, widespread adoption, and meaningful usage, along with complementary statewide next-generation networks, will constitute a generational achievement that will involve heavy public investment and time. The public expects accountability from both the government agencies issuing the funds and the awardees (grantees) receiving the funds. Thus, the Broadband Plan recognizes the immense value of program stewardship. OBAE leadership and staff are committed to the utmost transparency and accountability of its programs. Moreover, OBAE will actively monitor its awardees and hold them accountable for all programmatic and compliance requirements.

State of Broadband in New Mexico

❖ State of Broadband Availability

New Mexico has 874,000 broadband serviceable locations (BSLs). Eight percent (or approximately 70,600) BSLs) are unserved, meaning they lack access to wireline or licensed fixed wireless networks offering 25/3 Mbps service. Moreover, another eight percent (approximately 72,400 BSLs) are underserved, meaning they have at least 25/3 Mbps but they lack access to wireline or licensed fixed wireless networks offering at least 100/20 Mbps, the threshold for the use of federal funding to build new broadband infrastructure. Thus, 84% of New Mexican residents and businesses (approximately 730,800) can be considered served. Please note that the "served" category also includes any locations definitively targeted for broadband deployment by existing enforceable commitments through federal or state funding support.

This is a vast improvement over a single year. The 2023 Plan noted that 25% of the locations are either unserved or underserved with equal distribution between both statuses. This improvement can be attributed to several federal and state public funding efforts (e.g., Connect New Mexico Pilot Program, Public Regulation Commission, ReConnect Program, Alternative Connect America Cost Model, and Rural Digital Opportunity Fund).

Also note that the methodology for identifying broadband availability has changed significantly since last year's report. Today, availability is measured against point locations known as Broadband Serviceable

Locations (BSL's) instead of estimations based on census blocks. For the latter, an entire census block was considered served if one location within the block was served. In contrast, this report compares the 2022 point locations (FCC Fabric v1) to those points as they were reported in 2023 (FCC Fabric v3.2).

These data points will be closely reviewed, and likely revised, within the context of the location fabric data provided by the Federal Communications Commission (FCC). OBAE continues to collect and review data regarding the state of broadband available across all communities and Tribal areas. The federal government has recently completed its first phase of identifying serviceable locations, as well as broadband availability based on input from service providers.

OBAE continues to collect and review data regarding the state of broadband available across all communities and Tribal areas. As new data releases are provided by the FCC and the Broadband Data Collection system, OBAE will continue to monitor the evolution of service availability in the state (with the assistance of several consulting firms). OBAE will provide an update to these metrics once the challenge process is completed for the BEAD program.

❖ **State of Broadband Adoption and Usage**

The digital divide encompasses not just access to Internet services (and the infrastructure and technologies that provide them) but also the adoption and meaningful use of those services. An estimated 19.5 percent of New Mexico residents report that they do not use the Internet. The State's non-adoption level is in line with national averages[1] and compares favorably to New Mexico's neighbors, Arizona and Texas, which report 20.1 percent and 23.0 percent, respectively. Nevertheless, this rate is unacceptable and the 2024 Broadband Plan includes several initiatives to foster digital equity and inclusion.

There is wide variability in Internet adoption rates within the State. There is a clear lack of adoption specifically along the western edge of the State. The rates of wireline non-adoption are particularly notable in McKinley and Catron counties. Outside of the western edge, there also is a high degree of non-adoption in Mora County (75 percent). In contrast, Los Alamos County stands out with its low (16 percent) level of residents who do not subscribe to wireline Internet service.

Key adoption challenges include:

1. **Lack of device ownership:** New Mexico lags behind the national average in desktop and laptop computer ownership. At 40.9 percent, New Mexico has the largest portion of residents not using a laptop or desktop computer in the nation.[2] Given that smartphones and tablets are still not as capable as a desktop or laptop (particularly because of their small screens and lack of functionality), and cellular service contracts are often more expensive than home Internet service, this represents a significant barrier for the State in terms of achieving adoption and meaningful use of the Internet.

2. **Affordability issues:** The federal Affordable Connectivity Program (ACP) provides a $30 monthly subsidy per household, $75 per Tribal household, for broadband connectivity, to low-income households and recipients of many types of federal aid. An estimated 450,000 New Mexico

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[1] Digital Equity Act Population Viewer, https://arcg.is/8vGLv (accessed December 21, 2022).
[2] NTIA. Digital Equity Act Population Viewer. https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=a0013a9dcbb9419e855f563d78e892ef.

households (54 percent) may be eligible for the ACP.[3] By comparison, as of December 29, 2023, the FCC reports that 178,327 New Mexico households are receiving the subsidy for Internet services – equating to a 39% enrollment rate.[4] New Mexico's ACP enrollment rate in consistent with the national average. Affordability remains a key adoption barrier, and OBAE will continue to drive efforts to maintain funding programs and participation rates.

3. **Lack of digital skills and literacy:** The existing data reflect that New Mexico is largely on pace with neighboring states and the nation when it comes to residents' digital skills and literacy. Across a wide variety of online activities, New Mexico residents report a level of engagement similar to residents of other states. Notably, less than a third of New Mexico residents report using the Internet to take classes and participate in job training, telecommute to (or remotely) work, or search for a job — suggesting a considerable opportunity for new economic activity if meaningful usage can be expanded. New Mexico is not an outlier in this regard; those levels are roughly the same for Americans nationwide.

Digital Literacy Needs

For individuals to meaningfully use the Internet, they must practice and be confident in their ability to perform digital skills. Although some individuals may have Internet service and a working computer, they can frequently be functionally limited by their inability to navigate the Internet effectively. In New Mexico, 66 percent of residents use cite a lack of need or interest in the Internet as a reason why they do not use the Internet in the home, according to 2021 Census data. These findings suggest that the need for digital skills and literacy training may be the single largest barrier to increasing meaningful Internet use in the State.

Utilizing data from the Current Population Survey and the NTIA Internet Use Survey, OBAE evaluated the extent to which various covered populations engage in key online activities. These key findings are as follows:

- New Mexico performs similarly to the nation in frequency of online digital skill use; but members of covered populations consistently underperform compared to non-covered populations.
- Individuals living in low-income households, at or above 60 years of age, living with disabilities, or living in rural areas express the most urgent need for digital skills programming.
- New Mexico underperforms compared to the nation across measured telemedicine-related online activities. Similarly, members of covered populations tend to underperform compared to non-covered populations.
- Individuals living in low-income households, racial or ethnic minorities, and individuals living in rural areas express the most urgent need for digital skills related to telemedicine.

Across 17 measured online activities, the biggest discrepancy between the State and nation is in accessing government services online (such as registering to vote), where New Mexico leads the nation by a gap of 4.7 percentage points. Nevertheless, while the national figures help contextualize the State's positionality

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[3] Estimates are based on 2021 American Community Survey reported data on household income and participation in assistance programs such as the Supplemental Nutrition Assistance Program, Medicaid, Supplemental Security Income, and public assistance income. This estimation does not take into account qualification via Tribal assistance programs, and therefore may underestimate the size of eligible populations throughout the State.

[4] "ACP Enrollment and Claims Tracker," USAC. https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/.

relative to the country, the nation does not represent the ceiling for achievement. Furthermore, although New Mexico does not deviate strongly from national rates of digital skills use, there is still great opportunity for improvement in the State.

❖ **Next-Generation Networks**

Stakeholder input and market observances continue to demonstrate critical gaps with regard to middle-mile, 5G mobile broadband coverage, network resiliency and security. Input to prior RFIs and recent consultations confirm that many unserved and underserved communities lack access to affordable and high-capacity links for lit and/or dark fiber services. Moreover, several communities across the State are dependent upon a single backhaul link; in other cases, the middle-mile network does not provide open access. Several rural communities and highly trafficked roadways have poor or no signal from 5G networks. In addition, recent network outages impacting schools, and entire communities, substantiate the need for greater investment in network resiliency. Finally, cybersecurity continues to remain a priority given the increasing sophistication of bad actors to infiltrate broadband networks.

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Key Achievements (Calendar Year 2023)

The year 2023 marked a pivotal year for OBAE, with several achievements realized across the organization, advancement of the aforementioned goals, and multistakeholder collaboration that touched all New Mexican communities, tribal governments, and a myriad of partners.

OBAE Achievements	
Office Foundation	
Leadership	• Acting Director Drew Lovelace started to lead OBAE in August to build upon the foundational efforts of Kelly Schlegel who retired after leading the team as its inaugural director. Acting Director Lovelace is continuing the momentum in prioritizing key initiatives, increasing personnel, and engaging with stakeholders and communities to advance the goal of universal connectivity for all New Mexicans.
Organizational Growth	• The office almost quadrupled its workforce to 22 employees. Plans are underway to further grow the team in 2024, enhancing capacity to deliver on OBAE's mission to achieve meaningful and affordable broadband for all New Mexicans including the unserved and underserved.
Expert Engagement	• OBAE continues to leverage the guidance of expert consultants to help design and launch grant programs, develop digital inclusion programs, engage in tribal outreach, identify opportunities for operational productivity and efficiency, and ensure programmatic compliance with federal grant programs.
Broadband Infrastructure Expansion	
Connect New Mexico Pilot Program	• Completed the selection of 19 awards constituting $115.7 million in grants matched by $71.9 million in cash and in-kind contributions for a total investment of $187.7 million. • Projects will connect 22,400 unserved and underserved locations and involve the deployment of 1,340 fiber miles; to illustrate this size, this involves 3.6 times the State's distance from north to south (a distance of 370 miles). Projects span across 14 of the State's 33 counties. • Awarded projects cover six pueblos (Jemez, Laguna, Nambe Santo Domingo, Santa Ana, Ohkay Owingeh) and one reservation (Ramah Navajo).

	• The program funded three electric cooperatives which will enable them to initiate their entry into the broadband services market.
Connect New Mexico Fund	• Launched the $70 million fund by issuance of the NOFO and program materials in December 2023.

NTIA BEAD Program	• Following the announcement of a $675.4 million Broadband, Equity, Access, and Deployment (BEAD) grant allocation from the Biden Administration to expand broadband across the state, OBAE engaged directly with tribes, local ISPs, telephone cooperatives, electric cooperatives, and local communities to hear directly from stakeholders in order to ensure grant application alignment that reflected the unique needs of their communities.
	  - OBAE met with all 23 tribes and pueblos in New Mexico in addition to six regional community engagements and one statewide broadband summit.
	  - Had 1:1 sessions with over 20 broadband service providers
	• Submitted Five-Year Action Plan on August 28, 2023.
	• Submitted Volumes One and Two of the Initial Proposal by the designated deadlines; expected proposal clearance sets the path for New Mexico to receive the appropriated amount later in 2024.

Grant Program for Grant Writing, Engineering, and Planning (GWEP)	• Established the $5M Grant Program for Grant Writing, Engineering, and Planning for connecting the unserved with awards to go out in early 2024.
Digital Inclusion	
State Digital Equity Program Planning Grant (NTIA)	• Submitted the Digital Equity Plan – enabling the future allocation of tens of millions for the State Digital Equity Capacity Grant Program.
Affordable Connectivity Program (ACP)	• Contributed to the current total enrollment of 178,000 households (38 percent of state's households) for a program that started exactly two years ago.
Community Engagement	• Supported 150+ community engagement events including working group meetings, community listening sessions, workshops, forums, and local and Tribal stakeholders sessions. These took place to build awareness, inspire action, and mobilize local, regional, and statewide support for broadband improvement and BEAD and Digital Equity planning.
Connect New Mexico Council	• OBAE facilitated monthly meetings of the 14 member Connect New Mexico Council, which provides guidance to leadership for broadband policy including digital equity and inclusion, mapping, and engagement
Education Networks	
Statewide Education Network	• Advanced the procurement process for Phase1 of the SEN that could connect at least 150,000 students and teachers. • Gained oversight to manage the State Education Network and associated staff given the synergies between the fiber networks that serve community institutions, like schools, and those serving residents and businesses. The network is responsible for technology infrastructure and upgrades to ensure reliable connectivity for students and teachers, K – 12 and beyond. Connecting New Mexico's students for better educational outcomes is a primary obligation of OBAE and impetus for receiving
Tribal Engagement and Funding Opportunities	
Tribal Outreach	• The OBAE team met with all 23 Tribes and Pueblos in 2023 to discuss and assess the status and broadband needs in each community.

Government to Government Summits	• OBAE regularly participated in Government-to-Government summits to maintain productive partnerships and ensure awareness about opportunities for Tribes and Pueblos.
Outreach and Stakeholder Engagement	
Statewide Convenings	• OBAE has hosted six regional engagements and one statewide summit, which was the largest gathering of any state summit according to NTIA.
Connect New Mexico Council	• Continue to lead and/or facilitate six working groups; promoted and supported over 60 stakeholder and working group meetings.
Public Affairs	• Made ConnectNewMexico.org the official OBAE website for all communication, resources, and funding program landing pages.
Community Visits	• Visited over 100 communities for meetings, site visits, technical assistance, partnership development, etc. • OBAE has hosted six regional engagements, 13 listening sessions, one Digital Equity Summit, and one statewide summit which was the largest gathering of any state summit according to NTIA. • OBAE also supported a Network Operator's Conference in Albuquerque, multiple focus groups, meetings, press events, award ceremonies, and presentations, including a tele-town hall with AARP with over 800 participants.
Analytics	
Broadband Map Analytics	• Submit over 50,000 broadband serviceable location challenges and almost 200,000 service availability challenges after a statewide assessment of data. Assess challenge methodologies relative to final FCC adjudication of the challenges. These findings/lessons are currently being reviewed with FCC and shared with stakeholders. • Advocated behalf of stakeholders when FCC data appear to be systematically in error. • Yielded approximately 20,000 successful location challenges statewide, including 12,000 driven by OBAE (includes missing BSL's as well as data corrections, such as unit counts and converting building types from enterprise back to community anchor institutions)
Data Collection Report	• Submitted the Data Collection Report to the Legislature. Report documents the current state of broadband access and digital equity on a county-by-county basis across the State. Guided by the legislation, OBAE collected data and consulted with local governments, Tribal Nations, public educational institutions, State agencies, and community stakeholders to address the key requirements identified in the Connect New Mexico Act.
Public Policy	
Legislative & Policy Successes	• With the support and leadership of the governor and bill sponsors, OBAE successfully pursued a package of broadband bills to break down barriers to facilitate better, faster internet for all New Mexicans. OBAE passed six of seven bills during the 2023 session.
Compliance	• Met all deadlines for federal allocations and reporting requirements.
Rulemaking	• Completed the rulemaking which establishes guidelines that OBAE must follow in the design, launch, and administration of the Connect New Mexico Fund.

➢ Other Statewide Achievements to Bridge the Digital Divide

Program	Results
Broadband Infrastructure Expansion	
NM Public Regulation Commission Annual Broadband Program	• The Public Regulation Commission provided $11.8 million in grants to five broadband service providers.
NTIA Tribal Broadband Connectivity Program	• Four Tribal entities received awards totaling $1.913 million; these largely involve planning grants for future application submitted for infrastructure funding.
RUS ReConnect Program	• Eight broadband providers received grant awards of approximately $142 million.

Strategic Priorities and Key Initiatives

The Broadband Plan includes 13 key strategic priorities that advance the goals above. These priorities involve 22 major initiatives, along with an action plan and key performance indicators to measure progress. These priorities and key initiatives were developed based on internal deliberation, federal and state government mandates, and stakeholder input. Each of these initiatives involves a comprehensive set of strategies and action items.

Strategic Priorities	Major Initiatives for 2024
Goal: Universal Broadband Availability	
❖ Grant Funding to Enable Broadband Deployment	• Connect New Mexico Fund (Awardee Selection) • NTIA BEAD Program (Program Launch)
❖ Current and Accurate Broadband Maps	• Robust Data for Spatial Data Management and Analytics • Evolutions of the State Broadband Map • Launch of Analytic and Decision Support Tools to Empower All Stakeholders
❖ Removing Deployment Barriers Related to Permits, Rights Of Way and Pole Attachments (PROP)	• Permit and Rights of Way Streamlining • Modernization of Pole Attachment Policies and Practices • NMDOT Rights of Way Fee Waiver Program for In-Kind Fiber and/or Conduit Contribution
❖ Workforce Development	• "All Hands on Deck": Statewide Broadband Workforce Development Strategy
❖ Technical Assistance Programs	• Technical Assistance Programs to Empower Local Communities
Goal: Broadband Adoption and Meaningful Usage	
❖ Participation in NTIA Programs for Digital Equity	• Successful Implementation of the Digital Equity Plan
❖ Broadband Affordability	• Robust Participation in the FCC Affordable Connectivity Program and Low-Cost Service Options
❖ Digital Equity and Inclusion for Tribal Communities	• Tribal Community Digital Inclusion Program

Goal: Next-Generation Statewide Networks	
❖ Statewide Middle-Mile Networks	• Launch of Statewide Education Network • Public-Private Investment Program for Priority Middle-Mile Routes
❖ Coverage Expansion of 5G Mobile Broadband	• Rural 5G Coverage Acceleration
❖ Network Resiliency and Security	• Statewide Network Resiliency and Security Program
Goal: Program Stewardship	
❖ OBAE Transparency and Accountability	• Rulemaking for Broadband Grant Programs • OBAE Annual Progress Report • Program Evaluation and Socioeconomic Impact Assessment
❖ Grantee Accountability for All Programmatic and Compliance Requirements	• Comprehensive System to Foster Grantee Accountability • Connect New Mexico Pilot Program (program monitoring)

Critical Success Factors

The ambitious set of strategic priorities and initiatives for 2024 are dependent upon several critical success factors (CSFs) – which involve the set of financial resources, policies, and external developments that enable the implantation. For each section, the most CSFs are listed. They are generally categorized into the following groups.

Categories		Critical Success Factors
Multistakeholder Collaboration for Broadband Mapping Accuracy		• ISP Cooperation in Sharing Accurate Mapping Data • FCC acceptance of challenges from NM constituents, including the OBAE mapping team • Access to accurate and detailed data by providers and constituents, given limitations imposed by Costquest licensing

Legislative Appropriations and Authority	Budget	• Provide additional state funds to subsidize private investment for rural-based network deployments where the business plans are not otherwise financially viable and sustainable.
		  - Note: Preliminary estimate is that the State requires up to $5.5 billion for broadband infrastructure – depending upon assumptions regarding: technology, ability to leverage of existing assets, accuracy of broadband mapping data, etc.
		  - The potential funding from the BEAD program, along with the known amounts from the Connect New Mexico Pilot Program and Connect New Mexico Fund, provide approximately 25 percent of this required amount.
		  - The 25 percent minimum matching contribution will partially lower the level of required grant funding for network deployment across unserved and underserved communities.
		  - The State may need up to $2.07 billion in grant funding to achieve universal availability.
		  - The Legislature should immediately increase the Connect New Mexico Fund by $250 million for both last- and middle-mile expansion.
		• Continue to support mapping and data collections efforts to provide data to federal government for funding formulas

	Policy	• Move the Public School Facilities Authority (PSFA) State Education Network (SEN) program from PSFA to OBAE. • Allow for small cell towers to be placed on State land. • Give rulemaking authority to OBAE over utility pole owners not currently regulated. • Authorize utility easements for broadband. • Update procurement code to allow professional services contracts to extend for more than four years. • Make OBAE an independent office.
	Staff	• Move twenty (20) positions from sponsored term (federally funded) to permanent positions.

		• Expectation for increased growth to approximately 45 employees in FY24 and beyond. • Staffing model will be adjusted accordingly based on ongoing needs, and to eventually grow the office to 60 employees in future years.
Workforce		• Hire a Workforce Development Project Manager • Build on prior year successes driving workforce development and continue fostering strategic partnership with state agencies and other labor-affiliated stakeholders.

Complementary Strategic Planning Activities

OBAE has initiated a parallel effort to develop two detailed strategic plans for broadband deployment and digital equity to enable the federal allocation of grant funds. Specifically, the Infrastructure Investment and Jobs Act (IIJA) established the Broadband Equity Access and Deployment (BEAD) and Digital Equity programs, which are administered by NTIA. Both initiatives require extensive data collection, public engagement, and rigorous analytics to make universal access to reliable, affordable, high-performance broadband a reality for all New Mexicans. The coordinated effort has resulted in the development of the BEAD Five-Year Action and State Digital Equity Plans, which were submitted on-time to NTIA in August and December 2023, respectively.

Office of Broadband Access and Expansion: Poised to Bridge the Digital Divide

The year 2023 constituted OBAE's second year with an operational staff of 22 staff members and six key consultants. This team contributed to several of the aforementioned achievements. The year 2024 will be a momentous year given the significance of the strategic priorities discussed. OBAE's DNA comprises of the following:

- Mission: Passionate leadership to drive bold, equitable, and inclusive broadband solutions
- Vision: Achieve bold, affordable broadband solutions for New Mexicans that honor the state's rich heritage and elevate quality of life for all
- Values: Seven values defining OBAE's people, processes, planning, and programs: 1) courageous; 2) honest; 3) curious; 4) innovative; 5) respectful; 6) collaborative; 7) analytically rigorous

Key Milestones and Dates (Calendar Year 2024)

The following table lists specific dates (or time periods) regarding the major milestones for the initiatives identified in the Three Year Plan.

Priorities and Initiatives		Targeted Dates (2024)
Broadband Infrastructure Funding		
Connect New Mexico Pilot Program	• Completion of Award Agreements and Issuance of Purchase Orders	January 31st
Connect New Mexico Fund	• Application Due Date	March 11th
	• Awardee Selection	June 15th
NTIA BEAD Program ** Contingent upon NTIA approval*	• NTIA Acceptance of Initial Proposal Volume 1	January 31st **
	• Challenge Process Start	February 15th **
	• Challenge Process Completion	April 30th **
	• NTIA Acceptance of Initial Proposal Volume 2	February 28th **
	• Finalization of Project Area Units	May 15th
	• Application Due Date	3rd Quarter (July-Sept)
	• Awardee Selection	First Half (2025)
	• Submission of Initial Proposal Volume 2	Summer 2025
Broadband Maps		
Robust Data for Spatial Data Management and Analytics	• Serviceable Location Fabric Challenges	Dec. 2023 – Mar. 2024 June – Sept. 2024 Ongoing Bi-Annually
	• Service Availability Challenges	Nov. 2023 – Jan. 2024 May – Jul. 2024 Ongoing Bi-Annually
	• Fourth Filing of Service Availability to FCC and OBAE by Providers of Fixed or Mobile Broadband Service (as of January 2, 2024)	March 1, 2024
	• Service Availability Dashboard with Service Status query & comparison tools	Q1 2024
	• State Challenge Portal for BEAD	March 2024
	• Statewide Structures database (Building Footprints from LiDAR)	Q4 2024
	• BEAD Project Area Unit (PAU) Planning Tool	Q1 2024
	• Fifth Filing of Service Availability to FCC and OBAE by Providers of Fixed or Mobile Broadband Service (as of June 30, 2024)	September 1, 2024
Digital Equity and Inclusion		
State Digital Equity Plan	• Completion and Submission to NTIA	February 13th
	• Launch Support Initiatives (including Digital Equity TAP workshops and Digital Equity Pilot)	2nd Quarter
Digital Equity Competitive Grant Program	• Secure, develop, and coordinate NTIA Digital Equity Competitive Grant program for the state	Summer
Next Generation Networks		
Statewide Education Network	• Network Begins Operations	July 1st
5G Coverage Expansion	• RFI for 5G Network Expansion	June 30th

OBAE Transparency and Accountability		
Rulemaking for Grant Program Rules	• Updated Rulemaking to Allow for Entity Expansion	January 31st
OBAE Reports (filing dates)	• Three-Year Broadband Plan Update for 2025-2027	January 1st (2025)
Governance		
Connect New Mexico Council	• Council Meetings	Monthly Recurring
Working Groups	• Six Working Groups	Monthly/Bi-Monthly
Stakeholder Engagement Events		
Legislative Events	• Broadband Day at the Roundhouse	January 24th
Community Engagement	• Ongoing Meetings, Workshops, Trainings, Activities, and Events	Recurring
Tribal Engagement	• Ongoing Tribal Convenings, Workshops, Trainings • Bi-Weekly Tribal Working Group	Recurring

2.0   Document Overview

2.1 Legislative Directive

The 2024 Broadband Plan ("Plan") addresses the Statutory obligation, and also provides a comprehensive overview of the State's broadband strategy. This Plan also provides an update on the progress of broadband development in the State and complies with the Office of Broadband Access and Expansion's (OBAE) statutory obligation under the "Broadband Access and Expansion Act" (Senate Bill 93). [5] The specific requirements follow in the table below, along with how this document fulfils the requirements.

Overview of Senate Bill 98 Regarding Strategic Plan		
General Directive	• *On or before January 1, 2022, the broadband office shall develop and provide to the governor and the legislature a three-year statewide broadband plan.* • *On or before January 1, 2023, and on or before January 1 of each year thereafter, the broadband office shall update and revise the statewide broadband plan developed pursuant to this section for the ensuing three years and report the updated and revised statewide broadband plan to the governor and the legislature.*	
	Specific Requirements	**OBAE Approach to Meeting Requirement**
Specific Output	• *In its initial plan pursuant to Subsection D of this section and in its annual revised and updated plan pursuant to this subsection, the broadband office shall provide an assessment of broadband service across the State compared to the standards established by the various federal*	• Plan discusses the state of broadband availability – based on an estimate of unserved and underserved premises determined by broadband mapping data. • The definition of unserved and underserved reflects federal rules delineated by federal agencies that

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[5] See Section 3, paragraphs D – F. SB 93, SB0093 (nmlegis.gov).

	broadband regulatory and assistance programs.	develop broadband policy and/or administer broadband grant programs – including the Federal Communications Commission, National Telecommunications and Information Administration, and U.S. Department of Treasury.
Process Requirements	• *In the development of the statewide broadband plan, the broadband office shall request advice and provide opportunities for meaningful input from each local and Tribal government within New Mexico, and all state agencies and public educational institutions shall cooperate with and provide relevant broadband-related information collected or developed by the agencies as requested by the broadband office.*	• The Office of Broadband Access supported over 150 stakeholder meetings in 2023.
Implementation	• *The broadband office shall implement the statewide broadband plan.*	• Sections 9.0 – 12.0 list key program initiatives, strategies and action items for the underlying strategic goals.

2.2 Topics and Relevant Sections

The flow of the document follows. First, the Plan defines the key strategic goals that provide guideposts to measure progress over the next three years. Second, it provides an update regarding the state of broadband availability and adoption. Third, it summarizes recent progress made toward advancing the strategic goals. Fourth, the Plan discusses the major strategic priorities to achieve these goals. Fifth, it defines the specific initiatives and action items for 2024 – many of which extend into 2025-2026. Finally, it highlights the critical success factors that must be in place to effectively implement these initiatives and reach the goals. Key subjects and the related sections follow below.

Topic	Key Sections

• Complementary Strategic Planning Efforts
   - Digital Equity Plan: Overview, process, timetable, and deliverables
   - Five Year Action Plan: Overview, process, timetable, and deliverables
	3.0

• Strategic Goals
   - Universal Broadband Availability
   - Broadband Adoption and Meaningful Usage
   - Statewide Next Generation Networks
   - Program Stewardship
	4.0

• State of Broadband
   - State of Broadband Availability
   - State of Adoption and Usage
	5.0

• State of Adoption and Meaningful Usage - Internet service adoption rates - Affordable Connective Program enrollment rates - Key barriers to adoption	6.0
• Overview of the Office of Broadband Access and Expansion - Vision, Mission, Values - Organization Structure	7.0
• Key Achievements over 2023 - Accomplishments by Strategic Priority During 2023	8.0
• Recent Developments to Advance Broadband: Government & Market Intervention - Federal, state, and other awards received to foster broadband deployment and adoption	9.0
• Broadband Availability: Strategic Priorities and Initiatives - Recognizes five priorities and 11 initiatives, and a strategic plan for each.	10.0
• Broadband Adoption and Meaningful Usage: Strategic Priorities and Initiatives - Recognizes three priorities and three initiatives, and an action plan for each.	11.0
• Next Generation Networks: Strategic Priorities and Initiatives - Recognizes three priorities and four initiatives, and an action plan for each.	12.0
• Program Stewardship: Strategic Priorities and Initiatives - Recognizes two priorities and four initiatives, and an action plan for each.	13.0
• Critical Success Factors - Required staff resources, funding, legislation, and other support	14.0
• Summary of Key Priorities, Initiatives and Strategies	15.0
• Appendix - Overview: Tribal Broadband Task Force	16.0

3.0   Complementary Strategic Planning Efforts in New Mexico

OBAE has initiated two parallel efforts to develop a detailed strategic plan for broadband deployment and digital equity to receive federal grants.

3.1 NTIA BEAD Program: Five-Year Action Plan

The BEAD program establishes a $42.45 billion fund to expand broadband access through planning, infrastructure deployment, and adoption programs. New Mexico had been allocated $675.4 million.[6] The receipt of these BEAD funds is contingent upon the development of a Five-Year Action Plan.

NTIA had allocated $5 million in Initial Planning Funds to New Mexico to develop the Five-Year Action Plan. OBAE submitted the Five-Year Action Plan on August 28, 2023. The Five-Year Action Plan incorporated a comprehensive needs assessment (including the needs of covered populations and underrepresented communities). This assessment had been informed by collaboration with local, regional, and Tribal (as applicable) entities, as well as unions and worker organizations. [7]

Web link: Five Year Action Plan
https://connect.nm.gov/uploads/1/4/1/9/141989814/new_mexico_bead_five-year_action_plan_-_final_20230828.pdf

The Five-Year Action Plan had been followed by two "Initial Proposals". The following graphic (Figure 3A) illustrates the high-level timeline for BEAD planning.

Figure 3A: Estimated timeline for BEAD planning

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[6] See https://www.governor.state.nm.us/2023/07/06/gov-michelle-lujan-grisham-announces-plans-for-675-million-investment-to-expand-access-to-broadband/
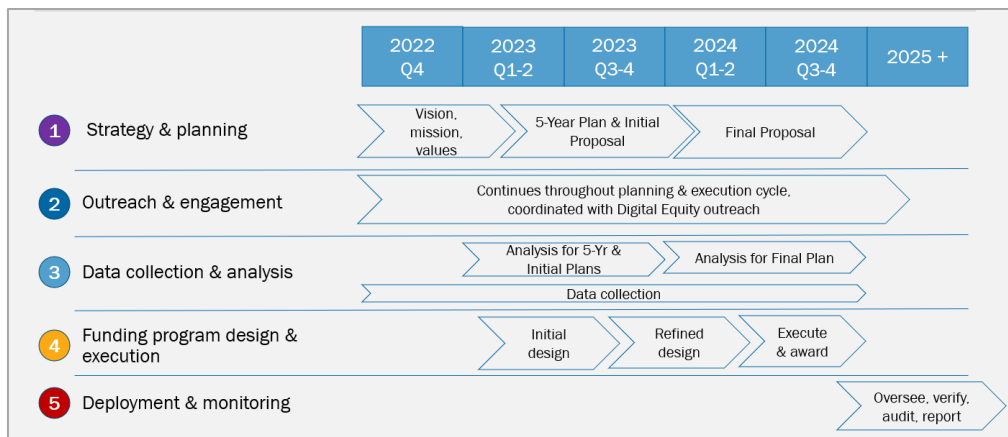
[7] A consulting firm, CTC Technology & Energy, led the development of the Five-Year Action Plan with input from OBAE staff. CTC also led the development of the Initial Proposals Volume One and Two.

➢ **Initial Proposal Volume One**

Volume One addressed the following topics:

- Identified existing efforts to deploy broadband and close the digital divide in New Mexico.
- Identified each unserved location and underserved location within New Mexico, using the most recently published National Broadband Map as of the date of submission of the Initial Proposal, and identifies the date of publication of the National Broadband Map used for such identification.
- Described how OBAE has applied the statutory definition of the term "community anchor institution" (CAI), identified all eligible CAIs in New Mexico, and assessed the needs of eligible CAIs, including what types of CAIs it intends to serve; which institutions, if any, it considered but declined to classify as CAIs; and, if OBAE proposes service to one or more CAIs in a category not explicitly cited as a type of CAI in Section 60102(a)(2)(E) of the Infrastructure Act, the basis on which OBAE determined that such category of CAI facilitates greater use of broadband service by vulnerable populations.
- Proposed a detailed plan as to how OBAE will conduct a challenge process.

Web Link: Initial Proposal Volume One
https://connect.nm.gov/uploads/1/4/1/9/141989814/bead_nm_initial_proposal_v1_final_20230927_rev5.pdf

➢ **Initial Proposal Volume Two**

Volume Two addressed the following topics:

- Overview of the stakeholder engagement activities to obtain feedback to assist with BEAD planning local and tribal communities, regional planning authorities, broadband service providers, non-profits, etc. (See Figure 3B)
- Input received from stakeholders regarding broadband gaps, existing and planned initiatives, data to help with cost modeling, key deployment barriers, etc.
- Residential phone survey that gathered received 2,400 responses from a diverse group of adult New Mexican residents (results were published in the Digital Equity Plan)
- Selection process for grantees, including: principles and approach for the grant program design
- Description of the three different phases
  - Prequalification Phase: to establish the qualifications of prospective applicants
  - Scoring Phase: during which OBAE will receive, review, and score grant applications
  - Negotiation Phase: during which OBAE will engage with applicants to reach final project boundaries and costs
- Scoring methodology, including criteria, assigned points, and approach to determining the points
- Labor standards and protection: guidelines, compliance requirements, etc.
- Workforce readiness strategy
- Process, strategy, and data tracking methods to ensure that minority businesses (MBE), women-owned business enterprises (WBEs), and labor surplus area firms (LSAF) are recruited, used, and retained when possible
- Low-cost option and middle-class affordability plans
- Key cost challenges and deployment barriers
- Climate assessment

- Certification of BEAD compliance requirements for awardees (e.g., reporting, cybersecurity and supply chain risk management)

Figure 3B: Stakeholder Categories and Dates

Stakeholder Outreach for BEAD Planning
• Local and Regional Governments: May 8, May 10
• Community Anchor Institutions: May 19
• Health Centers, Health Alliance: May 19
• Digital Equity/Covered Populations: May 22, May 26
• Workforce Development: May 30, May 31
• Internet Service Providers (ISP): June 5, June 8
• Tribal Government and Agencies: June 9
• Business and Economic Development: June 12, June 14
• Human Services Department: June 22

Web Link: Initial Proposal Volume Two
https://connect.nm.gov/uploads/1/4/1/9/141989814/bead_nm_initial_proposal_v2_final_20231112_rev1.pdf

Once NTIA has approved the State's Initial Proposals, OBAE will receive its federal funding and be in a position to conduct the planned grant program as proposed during 2024. OBAE hopes to start making awards in 2024 on a contingent basis—and will prepare and submit to NTIA a Final Proposal reflecting the outcome of the grant process toward the end of 2024. Once the Final Proposal is accepted, OBAE's contingent awards will be made final, and federal funds will start to flow to grantees through OBAE.

3.2 Digital Equity Plan

The Digital Equity Act (DEA) --- part of the IIJA of 2021 – created a $2.75 billion fund to establish three grant programs to promote digital equity and inclusion. The Digital Equity Act (DEA) of 2021 was created to advance digital equity in every state and set up legislative requirements to guide the states in charting Digital Equity Plans.

The first of these involves the State Digital Equity Act Planning Program to develop digital equity plans. New Mexico had received its full allocated amount in 2022, which supports the development of New Mexico's Digital Equity Plan (DEP). The DEP is required in order for New Mexico to participate in the State Digital Equity Capacity Grant Program and implement the initiatives delineated in the DEP. This program aims to promote the achievement of digital equity, support digital inclusion activities, and build capacity for efforts by states relating to the adoption of broadband by residents of those states.

The State DE Plan was posted for public comment on December 21, 2023, and will be adopted and submitted to NTIA by February 13, 2024. The State DE Plan is accessible online at https://connect.nm.gov/digital-equity-plan.

➢ **Background**

The Notice of Funding Opportunity (NOFO), released by NTIA in May 2022, added specifications to frame the processes and goals for Digital Equity Plans and articulated a focus on indicators that include both access and digital inclusion. NTIA specifications entail:

- Focus on the unserved, under-served, and "covered populations" including: low-income households, aging populations, incarcerated individuals, veterans, people with disabilities, people with language barriers, racial and ethnic minorities, and rural inhabitants;
- Identification of barriers to digital equity faced by each of the covered populations, including availability and affordability, online accessibility and inclusivity, digital literacy, online privacy and cybersecurity, and device availability and affordability;
- Setting measurable objectives and goals for decreasing these key barriers to digital equity; and
- Setting measurable objectives for assessing the impact of digital equity on key sectors, including education, economics, workforce, health, civic and social engagement, and essential services.

Additional requirements for the plan are listed in Table 3C.

Table 3C: Requirements of the NTIA Digital Equity Grant NOFO

Digital Equity Vision Statement
Digital Equity Goals
Asset Inventory
Collaboration with stakeholders
Incorporation of existing local digital equity plans and initiatives
List of organizations that contributed to the planning process
Coordination strategy and plan
Stakeholder engagement plan
Conduct a community organization asset and capacity assessment
Identify digital equity barriers and assets by target population
Provide an explanation of impact of digital inclusion on key sectors
Identify and describe a holistic implementation strategy and plan
Explain how the implementation strategy will address gaps and meet goals
Implementation timeline
Sustainability and continuity

4.0   Strategic Goals

4.1 Universal Availability of High-Speed, Scalable Broadband Networks

The strategic goals of universal availability follow below, along with the rationale for the specific target. These goals involve: a) speed threshold; b) timing; c) preferences for grant-funded projects.

- **Universal Access of 100/20 Mbps:** All New Mexico residents and businesses should have access to terrestrial-based high-speed broadband networks that reliably deliver at least 100/20 Mbps (download/upload) by 2029. This goal is adopted for two main reasons. First, a guaranteed speed of at least 100/20 Mbps enables our constituents to have a high-quality experience when using bandwidth-consuming applications, such as video conferencing, watching high-definition videos, or transferring large files. Real-time video conferencing applications are critical for distance learning, telemedicine, and teleworking. Second, this threshold reflects the federal definition of a "served" location.
    - Infrastructure Investment and Jobs Act (IIJA): This Act instructs the NTIA, for the Broadband Equity, Access, and Deployment program, to award funding in a way that gives priority to projects that will provide service to unserved locations (defined as those without access to 25/3 Mbps service), then to underserved locations (defined as those without access to 100/20 Mbps service), and next to community anchor institutions (defined as those without gigabit connections).[8] The BEAD program constitutes the single-largest national funding program, ever, to support last-mile broadband.
    - FCC Proceeding: FCC Chairwoman Jessica Rosenworcel has proposed to raise the minimum speed for broadband to 100/20 Mbps. This constitutes the standard adopted in the Rural Digital Opportunities Fund (RDOF) – the most recent FCC universal service auction. The Chairwoman also proposed to set a national futuristic, non-binding, goal of 1 gigabit per second downstream and 500 Mbps upstream speeds. The FCC had last raised the broadband standard in 2015, when it set the minimum speed for advanced services at 25/3 Mbps.[9]
- **Target Date of 2029:** This goal should be achieved by 2029, when award recipients from current and planned grants programs should have their networks fully deployed, tested, and ready for commercial service.

➢ **Grant Funded Infrastructure Projects**

OBAE recognizes that all technologies are required to bridge the digital divide fully. Nevertheless, OBAE has an obligation to ensure grant-funded projects deliver high-speed, reliable Internet today and for the long term. From a technology perspective, these projects should be "future ready", or "future proof" to accommodate increases in bandwidth consumption at both the individual user level and the community. Moreover, the networks should meet the needs of the comprehensive community – including businesses and community institutions. Grant-funded projects should also support the backhaul needs of other local and

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[8] https://www.congress.gov/bill/117th-congress/house-bill/3684/text

[9] https://www.fcc.gov/document/chairwoman-rosenworcel-proposes-increase-minimum-broadband-speeds

regional networks, such as 5G mobile, public safety, or community Wi-Fi. From a business case perspective, recurring expenditures should not jeopardize the financial viability of the awardee, or pose uncertain risks. For these reasons, other targets include:

- **Scalability:** All grant-funded broadband deployment projects by the State will be scalable to service of at least 100/100 Mbps – meeting present day and future needs.

- **Fiber Prioritization:** New Mexico aims to prioritize fiber-based networks – given their distinct advantages of being long-term sustainable, "future ready" and their lower recurring expenses relative to fixed wireless.

- **Role of Non-Terrestrial Networks**: For those highly remote communities where terrestrial networks cannot be deployed due to extraordinarily high costs or technical barriers, the State will work on initiatives to foster non-terrestrial solutions.

4.2 Widespread Internet Adoption and Meaningful Usage

The digital divide encompasses not just access to Internet services (and the infrastructure and technologies that provide them) but also the adoption and meaningful use of those services. Several preconditions are necessary for individuals to make meaningful use of the Internet, including:

- ❖ Access to affordable service
- ❖ Ownership of a sufficient and appropriate device (such as a laptop or large-screen tablet)
- ❖ Working knowledge of how to use the Internet (also known as "digital literacy")
- ❖ Basic understanding of online privacy and security issues

Within each of the preconditions for meaningful use, there exists a diverse array of challenges to overcome. This is particularly true for communities that have few reliable service offerings or in which a large portion of residents are not able to afford service (i.e., barriers chiefly related to infrastructure and affordability). But residents who have access and can afford service might face other challenges that have the same effect of preventing their adoption of broadband. In that light, the State establishes the following goals for Internet adoption and meaningful use:

- **Adoption:** All New Mexicans should have the opportunity to adopt the Internet by 2026. This can occur at home, an office, community institution, or through a mobile device. All New Mexicans should be offered the support to overcome adoption challenges – which may include programs to enable affordability, obtain devices, receive digital literacy training, or have high-quality access at a nearby community institution.

- **Meaningful Usage:** Secondly, all New Mexican broadband adopters should meaningfully use the Internet's myriad of valuable digital applications to advance their social and economic standing – i.e., health, education, workforce, civic and social services, etc. The quality and innovation – across content, applications, communication tools – continue to progress for both residents (e.g., e-learning, telehealth, workforce skills development, etc.) and businesses (e.g., online marketplaces, cloud hosted applications performing real-time functionality, etc.)

4.3 Statewide Deployment of Next-Generation Statewide Networks

Last-mile broadband networks are critical, but not alone in importance. New Mexico's ambition of being the most connected State necessitates several other pieces. These include: 1) a statewide education network

(SEN) and a Pueblo education network (PEN) that offer scalable, reliable, affordable and secure Internet to all schools; 2) statewide middle-mile networks offering high-capacity backhaul to last-mile networks; 3) high-speed mobile broadband networks (e.g., 5G) that have quality coverage across all rural communities and well-trafficked roadways; 4) network architecture that is "fail proof" due to being both resilient and redundant. Unfortunately, the communities facing the greatest gaps toward these goals are primarily rural-based. Reversing course would yield an interconnected network system that fosters the earlier goal of universal access and adoption while fostering public safety, network security, resiliency, and competition.

- **Statewide Education Networks**: The Statewide Education Network (SEN) aims to connect all interested public schools and public libraries together through scalable, reliable, affordable and secure Internet. All such institutions should join the SEN by 2027.

- **Pueblo Education Network**: The Pueblo Education Network (PEN) focuses on connecting Tribes and Pueblos, and preserving native language, culture, and local education.

- **Middle-Mile**: all New Mexican communities should reside in close proximity to open-access middle-mile networks that offer reasonably priced, high-speed lit services and dark fiber to facilitate backhaul and support private links for government, large enterprises, data centers, educational institutions, and others requiring at least 1 Gbps connectivity. Such networks offer several benefits.
  - Catalyst for last-mile network deployment and upgrades involving fiber or next-generation fixed wireless;
  - Catalyst for the coverage expansion for mobile and public safety networks (e.g., FirstNet) which require high-speed backhaul;
  - High-capacity bandwidth solution for: a) community institutions which often require 1 Gbps; b) research and education networks – across higher-ed and K-12 – face growing bandwidth needs;
  - Enabler for Intelligent Transport Systems when crossing major roadways; and
  - Requirement for hyperscale data centers requiring ultra-high-speed fiber backbone networks with redundant pathways.

- **Advanced Generation Mobile Broadband:** Mobile broadband services are used by more than 84 percent of the U.S. population. 5G networks are 100 times faster than 4G networks and offer decreased latency, improved reliability, and high capacity. This performance can enable remote learning, telehealth, telework, precision agriculture, and other services and applications. Every major New Mexican roadway and rural community should have a strong signal to support 5G mobile data and voice coverage from the mobile network operators currently serving a particular community or region.

- **Network Resiliency and Security**: Broadband networks constitute an essential utility for most New Mexicans. Network downtimes thwart the productivity of residents, businesses, and institutions, and can have serious consequences in achieving essential objectives and functions. It's imperative that all network elements – last-mile, middle-mile, SEN, mobile – remain operational and withstand external threats – e.g., environmental, human error, criminal, etc. Recent wildfires, and their potential frequency due to climate change, unfortunately, make network resiliency a critical priority. The network designs should reflect best practices around: a) redundancy through backup paths and systems that minimize downtime; b) defense against physical attacks (man-made or environmental); c) defense against cyberattacks; d) long-term sustainability.

4.4 Program Stewardship

The end-state of universal broadband availability, widespread adoption and meaningful usage, and statewide next-generation networks will constitute a generational achievement. A centerpiece to reach these goals and support the underlying initiatives involves hundreds of millions of public investment allocated by the government to private entities. OBAE, and other supporting agencies, are responsible for design and authorization of the funds. The beneficiaries of the funds are responsible for meeting all programmatic obligations and compliance requirements. Both sides must always remain accountable to the public and act as a good steward of these precious funds. Two key pillars behind this stewardship include:

- **OBAE Transparency and Accountability**: OBAE is transparent to the public regarding the purpose, scope, design, and implementation of the strategy as presented in this plan, and the specific programs and projects funded. Moreover, OBAE is able to share the results of the plan and the program.

- **Grantee Accountability for All Programmatic and Compliance Requirement**s: The beneficiaries of the funds meet all programmatic and compliance requirements, and provide the public performance and progress reports.

5.0   State of Broadband Availability in New Mexico

5.1 State of Broadband Availability

➢ **Background: Analytical Approach**

This Three-Year Statewide Broadband Plan (Plan) builds on the earlier strategic plan's extensive data collection and analysis to lay the groundwork for the State's Five-Year Action Plan as required by the National Telecommunication and Information Administration's (NTIA) Broadband Equity, Access, and Deployment (BEAD) grant program. The 2024 Plan is based on the new broadband map released by the FCC.

This report is based on point location data reported in the FCC's Broadband Data Collection System instead of the statistical data generalized to a census block as previously reported based on FCC Form 477. This is important when attempting to compare this report's numbers to previous reports.

This report highlights numbers of broadband serviceable locations, which comprises residences and businesses, with a few community anchor institutions when presumed to only use commercial, mass-market internet instead of enterprise service. The numbers are reported in the total number of unique structures or x,y coordinate locations, and does not account for multi-tenant units (MTUs).

➢ **Definition of Unserved, Underserved and Served (Broadband Serviceable Locations)**

The definitions follow for these three classifications.
- Unserved Location: A household or business location that lacks access to a broadband connection that reliably offers at least 25/3 Mbps (download/upload) through a wireline network or fixed wireless network using licensed spectrum.
- Underserved Location: A household or business location that has access to a broadband connection that reliably offers at least 25/3 Mbps (download/upload) but less than 100/20 Mbps through a wireline network or fixed wireless network using licensed spectrum. This category also includes locations that will have access to this threshold due to an enforceable commitment by a federal or state funding program.
- Served Location: The household or business location has access to a broadband connection that reliably offers at least 100 Mbps download and 20 Mbps upload (100/20 Mbps) through a wireline network or fixed wireless network using licensed spectrum. This category also includes locations that will have access to 100/20 Mbps due to an enforceable commitment by a federal or state funding program.

Explanation for Exclusion of Fixed Wireless
The exclusion of unlicensed fixed wireless technology in this analysis reflects new rules established by NTIA in its 2022 Notice of Funding Opportunity[10] for the BEAD program. By way of background, the IIJA authorized the BEAD and requires NTIA to determine the "reliable" broadband technologies that are eligible for BEAD grants. NTIA's NOFO notes that "reliable broadband service" means "broadband service that meets performance criteria for service availability, adaptability to changing end-user requirements, length of

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[10] "NOFO: BEAD Program," NTIA, https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf.

serviceable life, or other criteria, other than upload and download speeds....".[11] This definition of reliability means that unlicensed wireless technology, often used to deliver Internet service to locations in rural environments, is not considered a future-proof technology by the NTIA—and locations currently serviced by this technology are considered unserved for purposes of BEAD grant eligibility. Please note that fixed wireless technology using <u>licensed spectrum is acceptable</u>, so locations receiving that type of service are considered served.

➢ **Number of Unserved and Underserved Locations**

Analysis of the FCC's address fabric (May 2023) and existing federal and state funding data (e.g., enforceable commitments) found the following relative to the 873,797 broadband serviceable locations:[12]

- Unserved: 70,609 (8 percent)
- Underserved: 72,384 (8 percent)
- Served: 730,804 (84 percent) including addresses that that are slated to receive 100/20 Mbps connectivity under enforceable commitments such as RDOF funding or State grants

The New Mexico Broadband Map shows a concentration of service in densely populated regions, along major transportation corridors, and in areas of strong business and industry demand. Fiber optic service, the most reliable service type for long-term, high-speed, connectivity, is most aligned with these high-demand areas.

➢ **Source Data: FCC Version Two Fabric**

The basis of this analysis are ISP filings with FCC. These filings are only for locations identified by the FCC as BSL's, and include the maximum advertised download and upload speeds available at each BSL.

This analysis utilizes the FCC's V2 fabric and most recently updated service availability data (released May 30, 2023), with the addition of:

- More than 100,000 changes in service availability status, as successfully challenged (adjudication process complete and challenge conceded)
- Thousands of new Broadband Serviceable Locations which are projected to be conceded based on OBAE staff verification

Since these locations are not part of the fabric, they cannot be joined with service availability data. OBAE assigned speed data based on the average FCC service availability data of locations in the same area and classified locations accordingly as served, unserved, or underserved. OBAE excludes unlicensed fixed wireless and satellite in determining service availability.

The data were further refined by performing grant filtering of both federal and State programs, changing the service availability designation of any unserved or underserved locations that fell within those grant-served areas.

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[11] BEAD NOFO at footnote 10.

[12] Location counts do not include community anchor institutions that may lack gigabit service or any low-income housing facilities (i.e., multi-tenant unit buildings) the State may identify that are reported as served but where residents of individual units are unserved. The cost estimate and timeline for universal service presented in Section **Error! Reference source not found.** do not take into account the cost to connect such locations.

Table represents the changes from the base data to the adjusted data based on the grant filtering. In some instances, the locations funded via federal programs are understated due to overlap between federal and State programs. In the cases of overlap, the locations were attributed to State programs.

Table 5A: Calculation of unserved and underserved locations through grant filtering

Scenario	Underserved locations	Unserved locations
Base data	80,462	125,394
Locations funded via federal programs	10,874[13]	34,672
Locations funded via State grant programs	-2,796[14]	20,113
Adjusted data	**72,384**	**70,609**

The maps below illustrate the State's served, unserved, and underserved locations. The challenging cost of deploying broadband in New Mexico is highlighted by **Error! Reference source not found.**, which shows that many of the unserved locations are in rural and low-income areas.

➢ **OBAE Challenge of FCC Data**

During 2023, a couple of challenges, involving tens of thousands of locations were filed regarding the speeds provided over cell networks and were for the most part accepted. Only data that has been fully adjudicated and accepted by the FCC are reported here, but OBAE does continue to track other data believed to be accurate though not fully approved by the FCC to date.

After two rounds of challenges to the FCC BSL data, in 2023 the State added about 57,000 new units, not previously identified by the FCC.

As for those units which are considered served (with 100/20 or greater speeds), the largest increase from 2022 to 2023 is attributable to an increase of about 82,000 units served by wired cable and fiber and about 30,000 units served by wireless technology.

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[13] 11,592 locations were reclassified as served due to funding commitments. 718 locations were reclassified from unserved to underserved. This resulted in a net reduction of 10,874 locations.
[14] 6,459 locations were reclassified as served due to funding commitments. 9,255 locations were reclassified from unserved to underserved. This resulted in a net addition of 2,796 underserved locations.

Figure 5A: Unserved Locations in New Mexico

Note: The unserved locations reflect those that potentially qualify for BEAD funding, after removing those that have received funding from existing federal and state funding programs.

Figure 5B: Underserved Locations in New Mexico

Note: The underserved locations reflect those that potentially qualify for BEAD funding, after removing those that have received funding from existing federal and state funding programs.
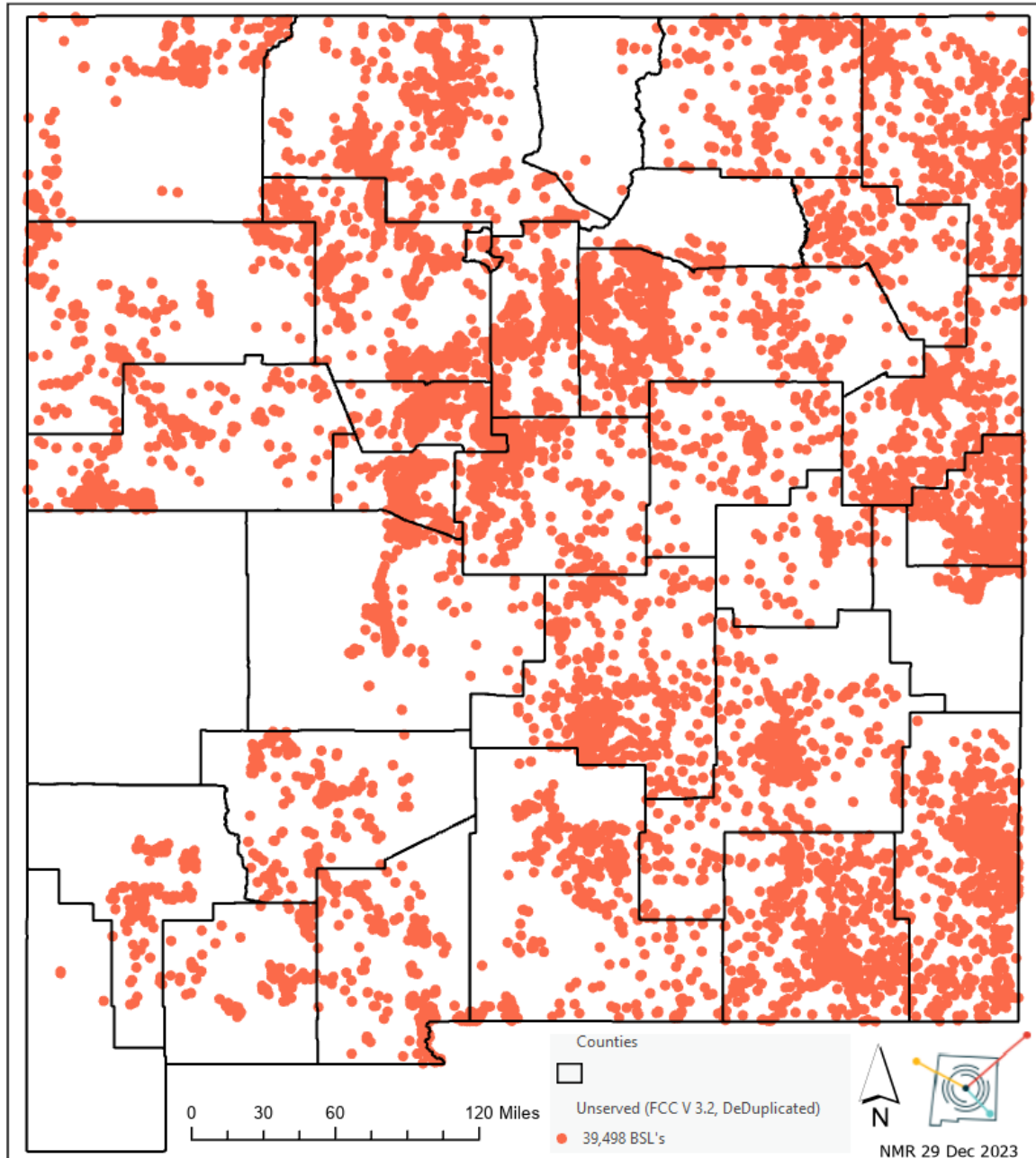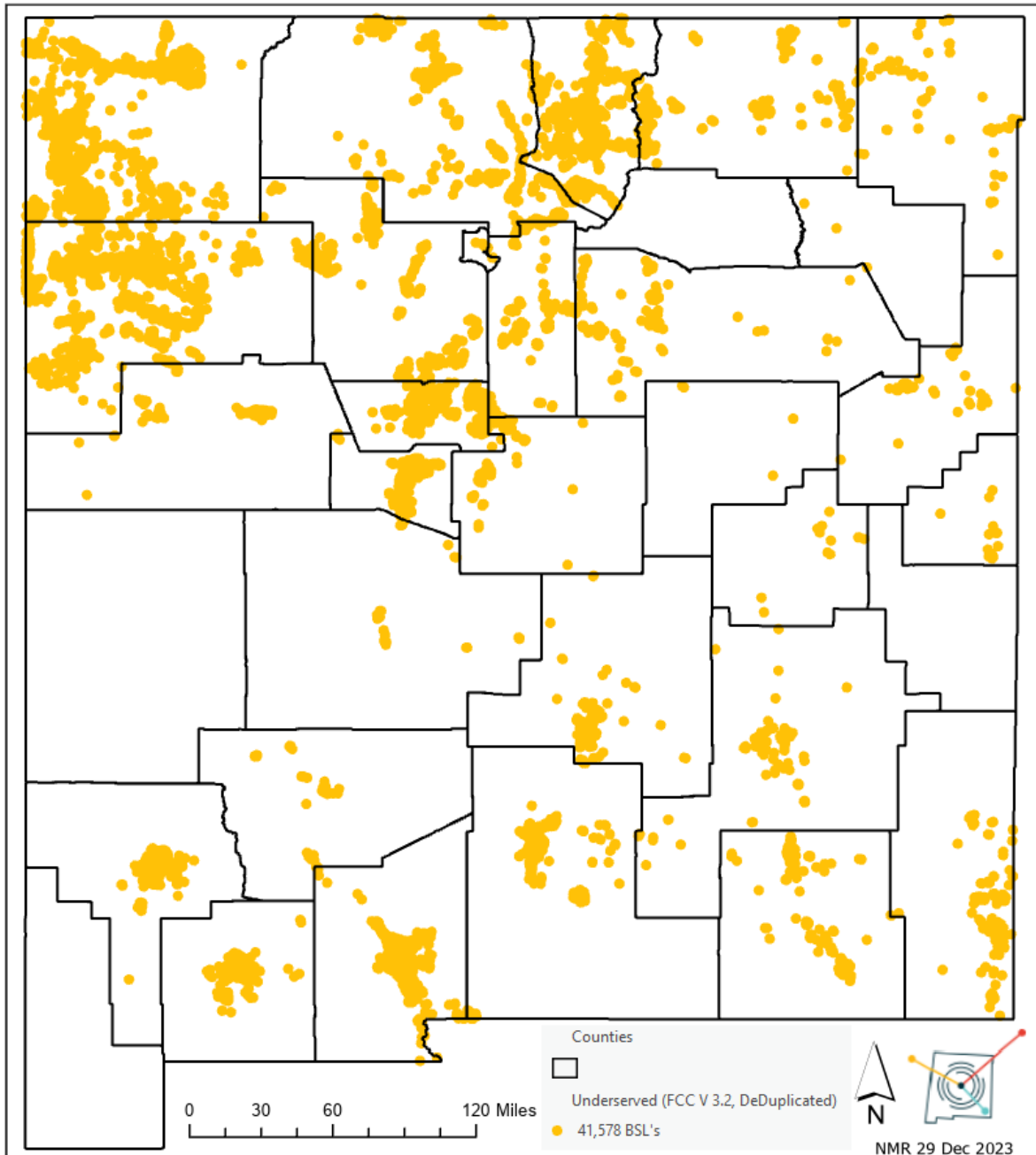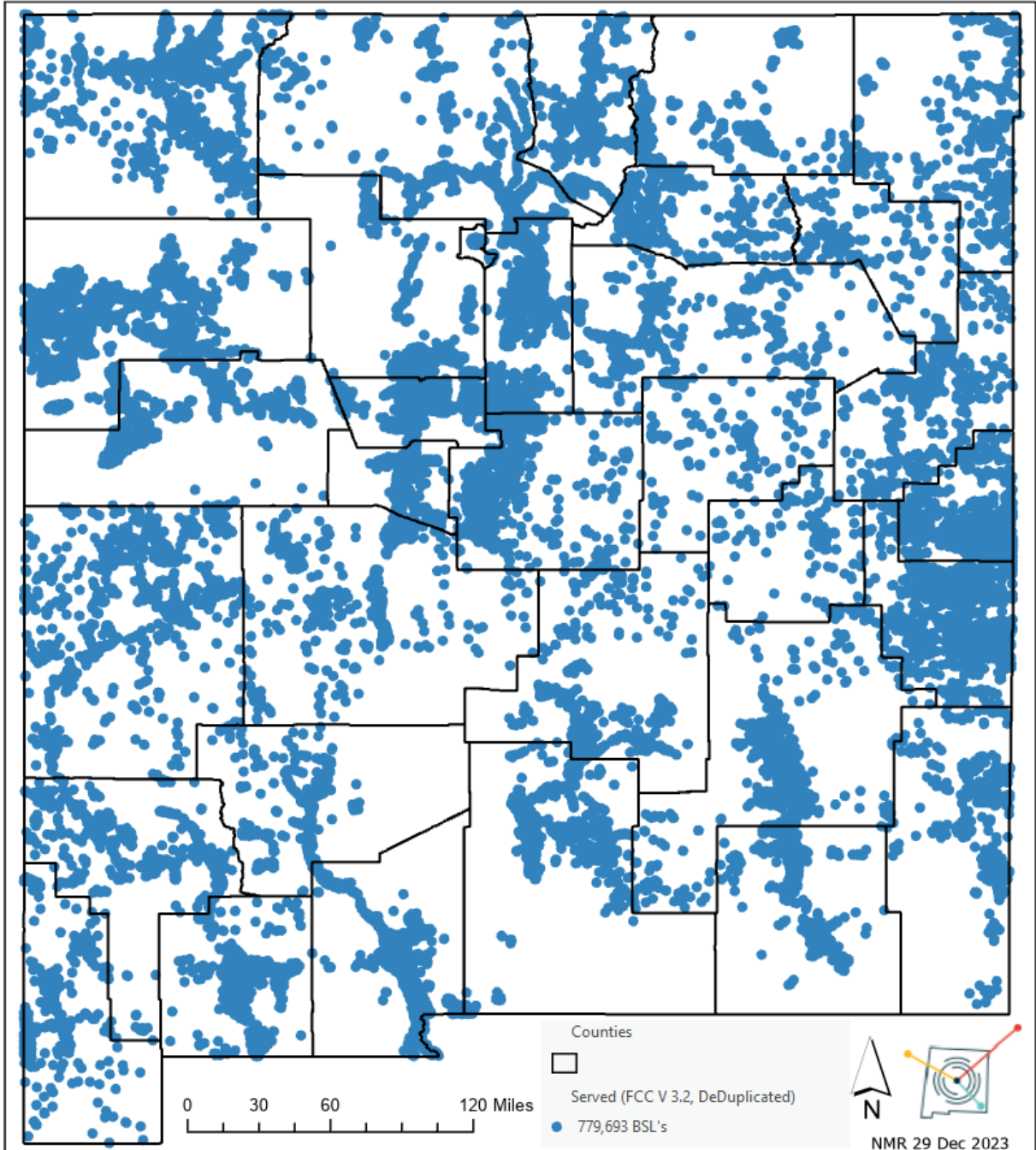
Figure 5C: Served Locations in New Mexico

Note: These served locations reflect those that DO NOT qualify for BEAD funding, accounting for those that have received funding from existing federal and state funding programs.

5.2 Estimated Capital Cost to Connect Unserved and Underserved Locations

These estimates are based on an analytical model that incorporates local labor and material unit costs; the location of existing infrastructure that can be used as a starting point; and surveys of a statistically valid sample of unserved and underserved areas. The estimates do not incorporate the State's open-access middle-mile (see Section **Error! Reference source not found.**) and universal 5G coverage strategies, because that investment is beyond the scope of the BEAD program.

➢ **Fiber Deployment Cost to Connect All Unserved Locations**

The State estimates the total deployment cost to be approximately $2.26 billion to $2.94 billion to reach the estimated 70,609 unserved addresses with an estimated 20,087 miles of fiber. This estimate assumes a timeframe of 48 to 60 months for the buildout of primary fiber-to-the-premises infrastructure passing each unserved home, with deployment activities related to customer activations, including service drop construction and installation of customer premises equipment (CPE), continuing through the period of performance.

➢ **Fiber Deployment Cost to Connect All Unserved and Underserved Locations**

A more comprehensive plan to address the State's broadband access needs, reaching all unserved and underserved addresses, would cost an estimated $2.81 billion to $4.12 billion (Table 5D). This estimate includes a total of 24,735 miles of new fiber construction using a mix of 40 percent aerial and 60 percent underground construction (i.e., 14,875 miles of underground fiber) to reach all of the estimated 70,609 unserved locations and 72,384 underserved locations.

The network design would pass underserved locations while reaching locations that are unserved, requiring comparatively less fiber deployment and resulting in a lower incremental cost to serve the underserved locations. In this scenario, the buildout of primary fiber-to-the-premises infrastructure and customer activations extends through the performance period.

Table 5D: Estimated deployment costs to reach all unserved and underserved addresses

Cost component	Estimated low-end cost	Estimated high-end cost
Physical fiber plant construction – FTTP distribution network	$2,845,100,000	$3,698,630,000
Core and distribution network electronics	$60,400,000	$78,520,000
Subscriber drop construction	$215,600,000	$280,280,000
Customer premises equipment	$46,100,000	$59,930,000
Total	**$2.81 billion**	**$4.12 billion**

➢ **Comparative Assessment**

CTC also analyzed how the estimated cost of constructing broadband to unserved New Mexicans might have changed, relative to the 2020 estimate. Based on this review of the EDAC maps, the main difference is due to the increases of unit costs for labor and materials, which increased the cost by approximately 30 percent.

These changes are due to supply chain issues caused by the Covid-19 pandemic, inflation, and increased demand with the new explosion of broadband construction. Based on an analysis of unit pricing from bids in comparable projects between the two time periods, taking into account both fiber construction and electronics, the aggregate increase in cost per address by the aforementioned amount.

5.3 Funding Gap

New Mexico was only allocated approximately $675.4 million. Even if matching funds raise the total to $1 billion, New Mexico faces a significant shortfall that will challenge the State's creativity and partners. In the 2023 legislative session, OBAE sought $500 million from the State for the Connect New Mexico Fund and sought to replenish the Fund in FY 2025 based on the analysis of capital requirements conducted for the BEAD program.

6.0   State of Broadband Adoption and Meaningful Usage

6.1 Overview

The digital divide encompasses not just access to Internet services (and the infrastructure and technologies that provide them) but also the adoption and meaningful use of those services. In that light, evaluating broadband adoption patterns among residents who have access to reliable, high-speed broadband options is critical for articulating a data-driven policy framework for the State.

Several preconditions are necessary for individuals to make meaningful use of the Internet, including:

1. Access to affordable service
2. Ownership of a sufficient and appropriate device (such as a laptop or large-screen tablet)
3. Working knowledge of how to use the Internet (also known as "digital literacy")
4. Basic understanding of online privacy and security issues

Within each of the preconditions for meaningful use, there exists a diverse array of challenges to overcome. This is particularly true for communities that have few reliable service offerings or in which a large portion of residents are not able to afford service (i.e., barriers chiefly related to infrastructure and affordability). However, residents who have access and can afford service might face other challenges that have the same effect of preventing their adoption of broadband. For example, a community where the vast majority of residents have access to Internet service but lack basic digital skills (which is frequently caused by a lack of education or prior exposure) would also likely have low broadband adoption rates.

Considering how each of these issues intersects with demographic groups further illustrates the many facets of the evaluation. For example, some older adults might have the financial means to purchase a computer but might lack the confidence in their ability to effectively use the device. Similarly, a disabled adult may be able to afford broadband service but lack digital literacy—or the Internet content they seek may not be available in an accessible format. As a result, a full and rigorous investigation of demographic groups' relationships to the necessary preconditions for meaningful adoption and use is necessary to derive actionable and equitable insights from a digital equity study.

The following sections make an initial assessment of the extent to which New Mexican residents are adopting and meaningfully using the Internet. This discussion also serves as an initial framework and baseline for tracking broadband adoption in the future. A robust and precise set of metrics will be developed in forthcoming State efforts, as the State is engaged in finalizing a Digital Equity Plan that will establish measurable objectives related to broadband adoption.

6.2 Internet Service Adoption Rates

Of all New Mexico households that do not use Internet at home an estimated 10 percent claim that a main reason for their lack of Internet use at home is an inability to afford service. Therefore, challenges relating to service affordability seem to be high priority obstacles to digital equity for many New Mexicans.

According to the American Community Survey, 90.0 percent of New Mexico residents have a home Internet subscription of any kind. This is similar to the national rate of 90.3 percent. However, New Mexico residents do not have similar adoption of reliable broadband when compared against the nation. Only 68.7 percent of New Mexico residents have a wireline home Internet subscription. This is 6.8 percentage points less than the national rate of 75.5 percent. Wireline Internet subscriptions tend to be more reliable than other forms of Internet subscription and, as such, typically serve as a more substantial measure of useful Internet adoption.

Additionally, 15.3 percent of New Mexico residents rely on a cellular data plan alone for home Internet service, which is considered to be insufficient to realize the many benefits of broadband. Mobile-only individuals typically cite affordability, their smartphone being good enough, and/or having access to broadband somewhere else as the reasons for not having home Internet connectivity.

Table 6A: Internet adoption rates in New Mexico and the U.S.[239]

Internet in the house	New Mexico		Nation		Gap	
Internet subscription of any kind	90.0%		90.3%		-0.3%	
Internet subscription via wireline technology (i.e. fiber, cable, DSL)	68.7%		75.5%		-6.8%	
Only subscription via cellular data plan	15.3%		10.9%		4.4%	

An estimated 19.5 percent of New Mexico residents report that they do not use the Internet. This level is in line with national averages.[15] compares favorably to New Mexico's neighbors, Arizona and Texas, which report 20.1 percent and 23.0 percent, respectively (Figure 6B).

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[15] Digital Act Population Viewer, https://arcg.is/8vGLv (accessed December 21, 2022).

Figure 1B: Percentage of population 3 years and older who do not use the Internet.[16]
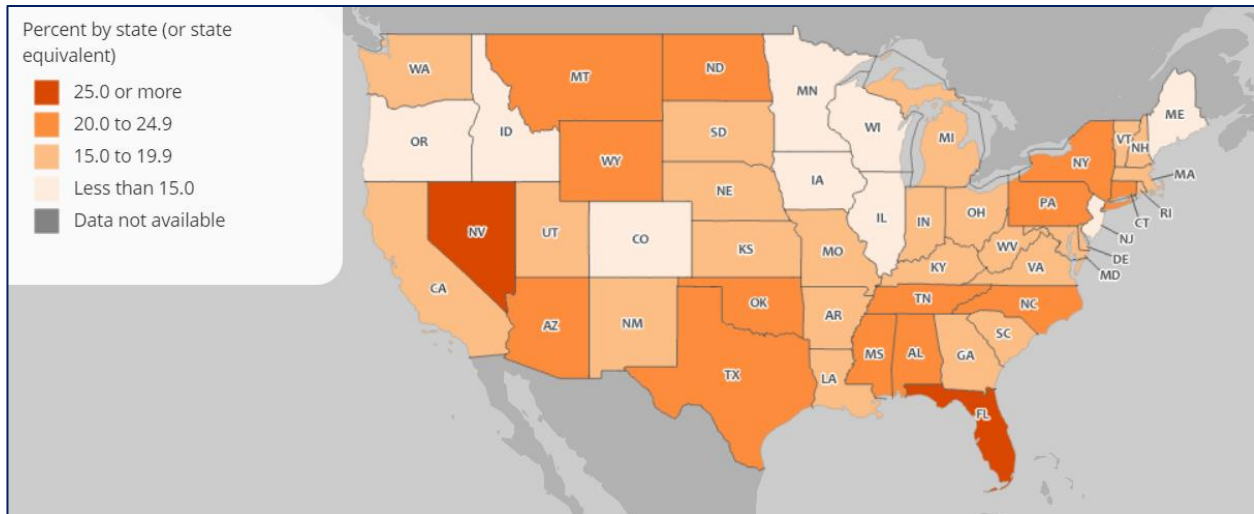
Source: Digital Equity Act Population Viewer, based on 2021 NTIA/Census Current Population Survey - (Internet Use Survey)

There is wide variability in Internet adoption rates within the State, both in terms of all Internet subscriptions (Figure 6C) and wireline Internet subscriptions (Figure 6D). There is a clear lack of adoption specifically along the western edge of the State. The rates of wireline non-adoption are particularly notable in McKinley and Catron counties. Outside of the western edge, there also is a high degree of non-adoption in Mora County (75 percent). In contrast, Los Alamos County stands out in that a very small percentage of residents (16 percent) do not subscribe to wireline Internet service (Figure 6E).

Figure 6C: Map of New Mexico households without any Internet subscription

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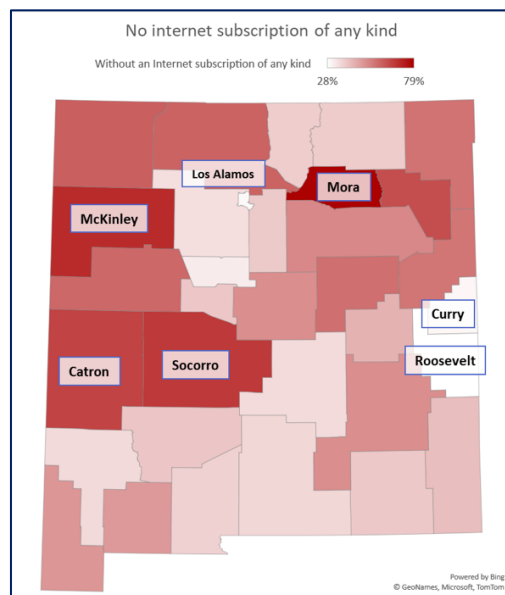
[16] Ibid.

Figure 6D: Map of New Mexico households without wireline Internet subscriptions
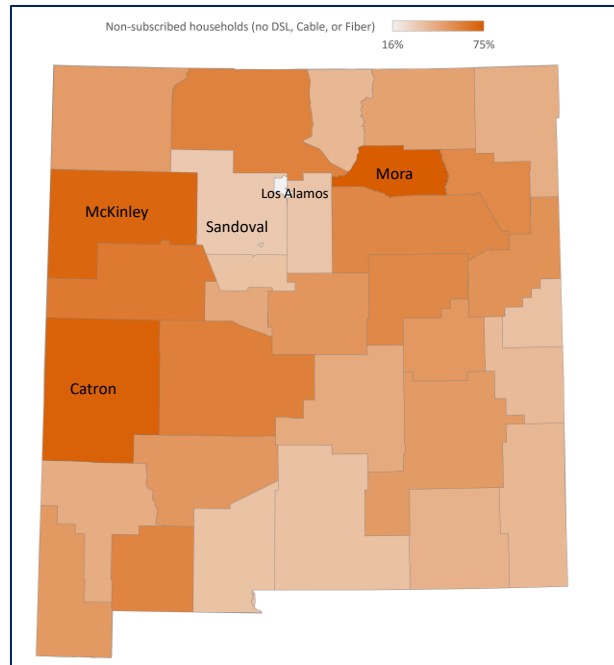
Figure 6E: New Mexico households without wireline Internet subscriptions (by County).[17]
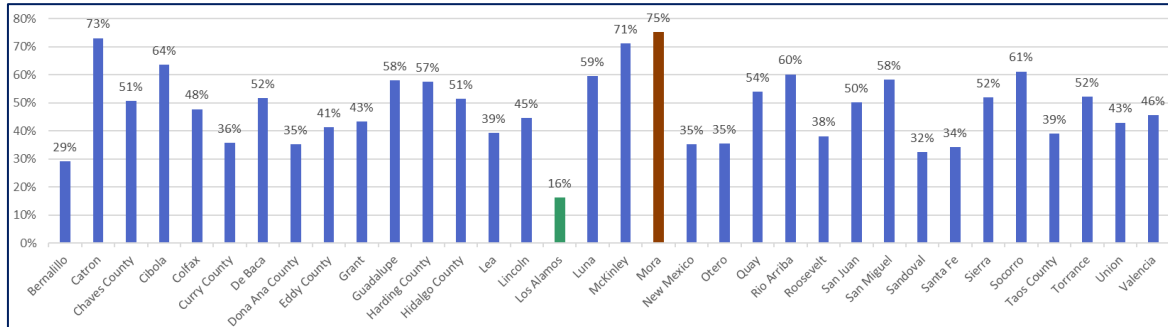
6.3 Correlation with Income

Individuals living in low-income households constitute the covered population with the largest adoption gaps. Low-income individuals are 14.5 percentage points less likely than higher-income individuals to have a home Internet subscription, and they are 20.6 percentage points less likely to have a wireline Internet subscription. Low-income individuals are also the covered population most likely to be mobile-only users, with a rate of 18.1 percent.

Though low-income individuals constitute the covered population with the largest adoption gaps, racial or ethnic minorities, aging individuals, individuals with disabilities, and English language learners also all represent

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[17] American Community Survey, 5-year estimates (2016-2021).

populations with substantial adoption gaps. Each of these populations trailed their non-covered counterparts for an Internet subscription of any kind by at least five percentage points.

Full breakdowns of each covered population's adoption rates are included in Table 6F.[241]

Table 6F: Internet adoption rates in various covered populations[242]

	Internet in the house	Low income	Higher income	Gap	
Income	Internet subscription of any kind	80.0%	94.6%	-14.5%	
	Internet subscription via wireline technology (i.e. fiber, cable, DSL)	54.6%	75.1%	-20.6%	
	Only subscription via cellular data plan	18.1%	14.1%	4.0%	
	Internet in the house	Minority	White alone	Gap	
Race	Internet subscription of any kind	87.7%	92.9%	-5.2%	
	Internet subscription via wireline technology (i.e. fiber, cable, DSL)	64.3%	74.1%	-9.8%	
	Only subscription via cellular data plan	16.5%	13.9%	2.5%	
	Internet in the house	Aging	Younger	Gap	
Age	Internet subscription of any kind	84.1%	92.0%	-7.9%	
	Internet subscription via wireline technology (i.e. fiber, cable, DSL)	62.1%	70.9%	-8.8%	
	Only subscription via cellular data plan	16.3%	15.0%	1.2%	
	Internet in the house	With disabilities	Without disabilities	Gap	
Disability	Internet subscription of any kind	78.4%	92.3%	-13.9%	
	Internet subscription via wireline technology (i.e. fiber, cable, DSL)	55.8%	71.3%	-15.4%	
	Only subscription via cellular data plan	15.4%	15.3%	0.1%	
	Internet in the house	English learner	Fluent	Gap	
English proficiency	Internet subscription of any kind	80.5%	90.9%	-10.4%	
	Internet subscription via wireline technology (i.e. fiber, cable, DSL)	54.1%	70.0%	-15.9%	
	Only subscription via cellular data plan	16.8%	15.2%	1.6%	
	Internet in the house	Veteran	Non-veteran	Gap	
Veteran status	Internet subscription of any kind	88.7%	90.1%	-1.5%	
	Internet subscription via wireline technology (i.e. fiber, cable, DSL)	67.3%	68.8%	-1.5%	
	Only subscription via cellular data plan	15.4%	15.3%	0.1%	

Across New Mexico, Internet subscriptions are heavily correlated with household incomes. Only about 40 percent of households making less than $75,000 annually have a wireline Internet subscription—compared to roughly 80 percent of households with higher incomes.[18]

These rates become even lower for very-low-income households, both for wireline Internet subscriptions (Figure 6G) and all Internet subscriptions (Figure 6H). The lowest of those rates can be found in the western bloc of counties. Additionally, the gap between Internet subscription rates among low-income and middle-income households varies across the State (Figure 6I); the difference is largest in Catron County (Figure 6J).

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[18] ACS 2021 one-year estimate.

Figure 6G: Lowest-income households without a wireline Internet subscription
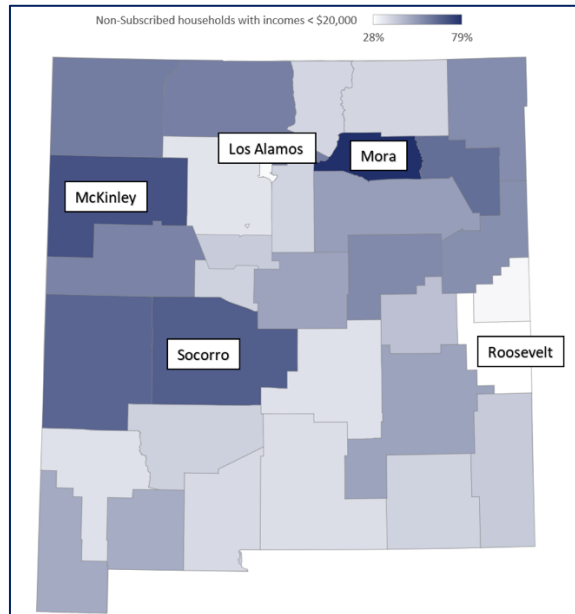
Figure 6H: Lowest-income households without Internet subscriptions of any kind
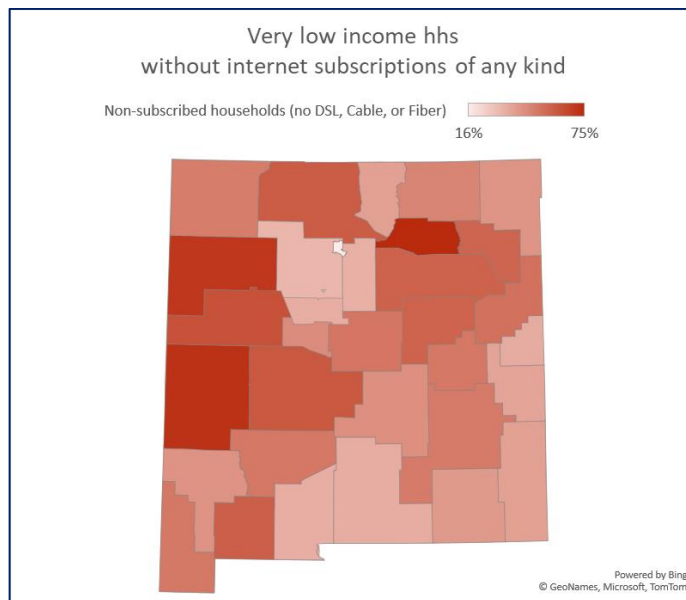
Figure 6I: Map of subscription inequality between lowest and highest-income households
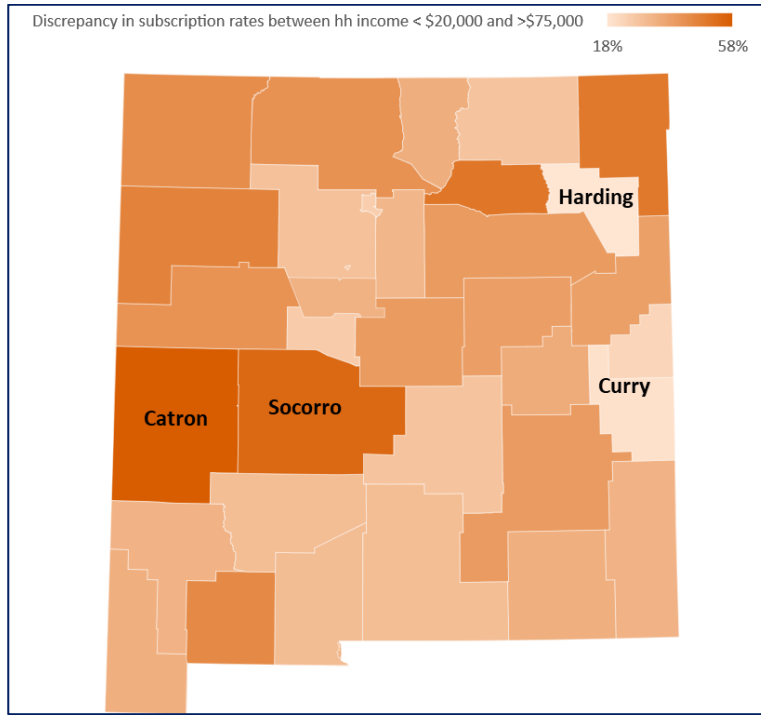

Figure 6J: Comparison of subscription rates between lowest and highest income households
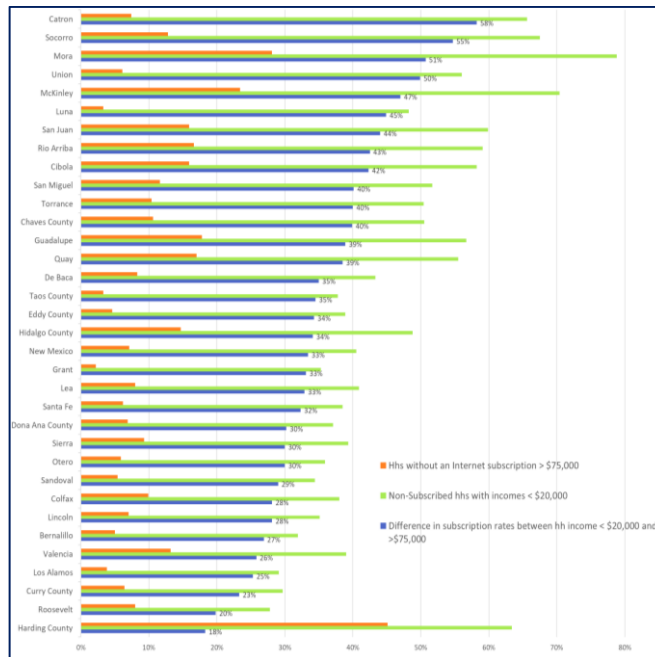
6.4 Affordable Connectivity Program (ACP): Enrollment Update

The federal Affordable Connectivity Program (ACP), which provides a monthly subsidy toward home Internet subscriptions, presents an opportunity for many low-income residents to purchase a quality broadband subscription more affordably. However, the ACP is known to be chronically undersubscribed. Understanding the existing enrollment patterns in the State can help to describe the way income interacts with subscription rates.

As of December 29, 2023, the FCC reports that 178,327 New Mexican households are receiving the ACP subsidy for Internet services.[19] While this figure is substantial, it is important to contextualize that an estimated 450,000 households (55 percent of all State households) may be eligible.[20] New Mexico's enrollment rate stands at 39.6%, which is on par with the national rate and the enrollment rates of neighboring states.[21] Substantial additional benefits that could be realized by State residents if enrollment rates were to increase.

From January to October 2023, Figure 6K displays a line graph depicting the monthly enrollment rates for the Affordable Connectivity Program (ACP) in both New Mexico and the entire nation. During this period, NM's ACP enrollment rate remains steady at 7%, while the national rate holds at 11%, covering around 56 million eligible individuals. Detailed county-specific data from USAC reveals fluctuations in monthly rates for both NM and the nation. This discrepancy highlights a widespread issue of consistent under-enrollment in the ACP, despite its potential to enhance broadband accessibility for low-income residents.

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[19] "ACP Enrollment and Claims Tracker," USAC. https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/.

[20] Estimates are based on 2021 American Community Survey reported data on household income and participation in assistance programs such as the Supplemental Nutrition Assistance Program, Medicaid, Supplemental Security Income, and public assistance income. This estimation does not take into account qualification via Tribal assistance programs, and therefore may underestimate the size of eligible populations throughout the State.

[21] "ACP Enrollment and Claims Tracker," USAC.

Figure 6K: 2023 ACP New Enrollment in New Mexico and Nationally
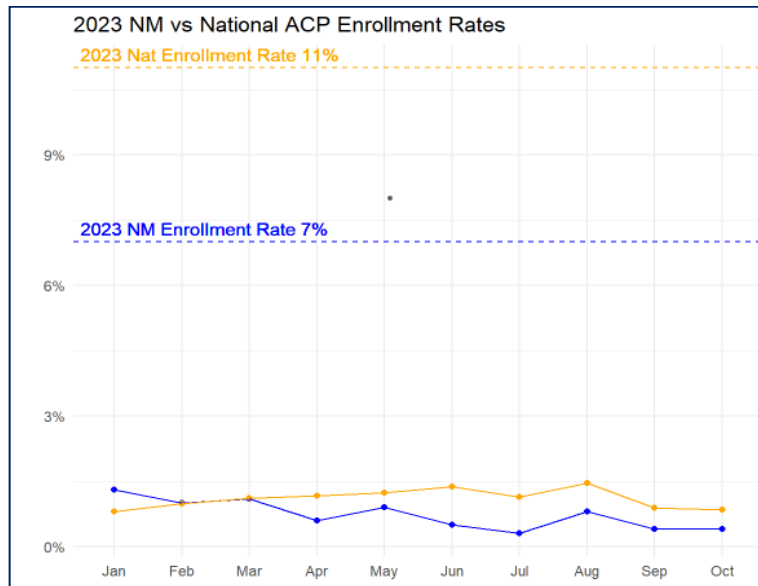
> **Enrollment Rates Across New Mexico**

Within the State, enrollment rates vary by county (Figure 6L). Perhaps most notable, only seven percent of eligible households have enrolled in Catron County, which has the largest gap in Internet service adoption rates between low- and middle-income households. The high enrollment rate in McKinley County may be due, in part, to the large number of households on Tribal land there; the ACP has additional criteria through which eligibility may be achieved by households on "Qualifying Tribal lands,"[22] which may have lowered barriers to enrollment.

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[22] "ACP: What are Qualifying Tribal Lands?" https://www.affordableconnectivity.gov/do-i-qualify/enhanced-Tribal-benefit/#qualifying-lands.

Figure 6L: Map of ACP enrollment in New Mexico
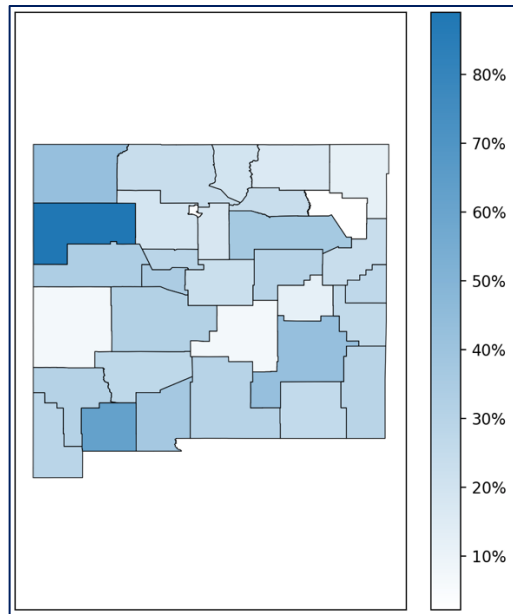
The relatively low enrollment rates across the United States are largely ascribed to a lack of knowledge of the program and a lack of accessibility in the sign-up process; many households without Internet may need to travel to an area outside of their home in order to even start the registration process. As a result, many local governments, non-profits, and other invested entities engage in active outreach to candidate populations to make them aware of the program and assist in the sign-up process.

While outreach may increase ACP enrollment in some areas, there will always be a portion of the eligible population who are uninterested or unwilling to participate. This may be the case if a household feels no need to use the Internet, receives satisfactory service from a cellular provider, receives free Internet access through a communal source, or does not trust federal subsidy programs.

6.5 Device Ownership

New Mexico lags behind the national average in desktop and laptop computer ownership (see Figure 6M). At 40.9 percent, New Mexico has the largest portion of residents who don't use a laptop or desktop computer in the nation.[23] Given that smartphones and tablets are still not as capable as a desktop or laptop (particularly because of their small screens and lack of functionality), and cellular service contracts are often more expensive than home Internet service, this represents a significant barrier for the State in terms of achieving adoption and meaningful use of the Internet.

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[23] NTIA. Digital Equity Act Population Viewer. https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=a0013a9dcbb9419e855f563d78e892ef .

Figure 6M : Portion of population not using a device.[24]
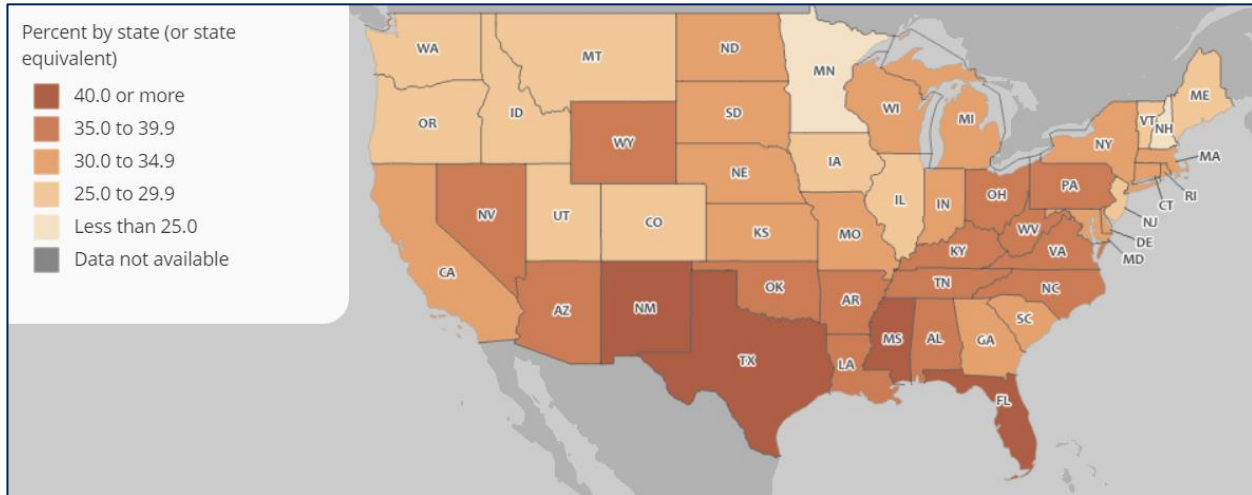
6.6 Digital skills and literacy

For individuals to meaningfully use the Internet, they must practice and be confident in their ability to perform digital skills. Although some individuals may have Internet service and a working computer, they can frequently be functionally limited by their inability to navigate the Internet effectively. In New Mexico, 66 percent of residents without home Internet use cite a lack of need or interest in the Internet as a reason why they do not use Internet in the home, according to 2021 Census data (see Table 6N).

Table 6N: Reported reasons for no home Internet use[197]

Reasons for no home internet use	New Mexico
Can't afford it	10%
Not worth the cost	3%
Can use it elsewhere	3%
Not available in area	3%
Don't need or not interested	66%
Online privacy or security concerns	0%
No or inadequate computing device	1%

These findings suggest that the need for digital skills and literacy training may be the single largest barrier to increasing meaningful Internet use in the State.

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[24] NTIA. Digital Equity Act Population Viewer. https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=a0013a9dcbb9419e855f563d78e892ef .

Utilizing data from the Current Population Survey and the NTIA Internet Use Survey, the State of New Mexico evaluated the extent to which various covered populations engage in key online activities. These key findings are as follows:

- New Mexico performs similarly to the nation in frequency of online digital skill use, but within the State, members of covered populations consistently underperform compared to non-covered populations.
- Individuals living in low-income households, at or above 60 years of age, living with disabilities, or living in rural areas express the most urgent need for digital skills programming.
- New Mexico underperforms compared to the nation across all measured telemedicine-related online activities. Similarly, members of covered populations tend to underperform compared to non-covered populations.
- Individuals living in low-income households, racial or ethnic minorities, and individuals living in rural areas express the most urgent need for digital skills related to telemedicine.
- Generally, New Mexico performs similarly to the nation in frequency of digital skills use. Across 17 measured online activities, the biggest discrepancy between the State and nation is in accessing government services online (such as registering to vote), where New Mexico trails the nation by a gap of 4.7 percentage points. Nevertheless, while the national figures help contextualize the State's positionality relative to the country, the nation does not represent the ceiling for achievement.

Furthermore, although New Mexico does not deviate strongly from national rates of digital skills use, there is still great opportunity for improvement in the State.

Table 6O: Digital activity in New Mexico and the U.S.[243]

Online activity	New Mexico	Nation	Gap
Uses text messaging or instant messaging	93.2%	93.3%	-0.1%
Uses email	89.6%	91.8%	-2.2%
Uses online social networks	74.4%	74.6%	-0.1%
Shops, makes travel reservations, or uses other consumer services online	74.4%	74.1%	0.2%
Uses online financial services like banking, investing, paying bills	75.8%	74.3%	1.6%
Watches videos online	70.6%	70.1%	0.5%
Participates in online video or voice calls or conferencing	64.5%	65.6%	-1.1%
Streams or downloads music, radio, podcasts, etc.	63.2%	60.0%	3.2%
Requests services provided by other people via the internet	40.4%	43.0%	-2.6%
Accessing government services	43.1%	38.4%	4.7%
Takes class or participates in job training online	30.0%	25.7%	4.3%
Interacts with household equipment using the internet	18.8%	22.3%	-3.5%
Telecommutes using the internet	27.8%	27.7%	0.1%
Searches for a job online	20.2%	21.3%	-1.1%
Posts or uploads blog posts, videos, or other original content	14.9%	17.0%	-2.1%
Uses the internet to sell goods	12.3%	10.5%	1.8%
Offers services for sale via the internet	7.2%	8.8%	-1.6%

Individuals belonging to covered populations uniformly practice digital skills at a lower rate than those that do not belong to covered populations. Here, the largest gaps can be found in requesting services provided by other people via the Internet (26.6 percentage point gap), streaming or downloading music, radio, podcasts, etc. (21.9 percentage point gap), telecommuting using the Internet (21.5 percentage point gap), and watching videos online (16.7 percentage point gap).

Table 6P: Digital activity in New Mexico covered populations[244]

Online activity	Covered group	Non-covered group	Gap
Uses text messaging or instant messaging	90.8%	99.1%	-8.3%
Uses email	88.1%	92.9%	-4.9%
Uses online social networks	72.3%	79.6%	-7.4%
Shops, makes travel reservations, or uses other consumer services online	72.4%	80.3%	-7.9%
Uses online financial services like banking, investing, paying bills	72.7%	86.1%	-13.5%
Watches videos online	65.8%	82.5%	-16.7%
Participates in online video or voice calls or conferencing	61.7%	71.2%	-9.5%
Streams or downloads music, radio, podcasts, etc.	57.2%	79.1%	-21.9%
Requests services provided by other people via the internet	33.1%	59.8%	-26.6%
Accessing government services	41.2%	49.0%	-7.8%
Takes class or participates in job training online	25.7%	39.8%	-14.1%
Interacts with household equipment using the internet	17.0%	23.0%	-6.0%
Telecommutes using the internet	22.0%	43.4%	-21.5%
Searches for a job online	18.1%	23.3%	-5.2%
Posts or uploads blog posts, videos, or other original content	12.8%	20.1%	-7.3%
Uses the internet to sell goods	10.5%	17.8%	-7.4%
Offers services for sale via the internet	6.0%	9.7%	-3.7%

The existing data reflect that New Mexico is largely on pace with neighboring states and the nation when it comes to residents' digital skills and literacy. Across a wide variety of online activities, New Mexico residents report a similar level of engagement as compared to residents of other states.

Notably, less than a third of New Mexico's residents report using the Internet to take classes and participate in job training, telecommute to (or remotely) work, or search for a job—suggesting a considerable opportunity for new economic activity if this type of Internet use can be expanded. (New Mexico is not an outlier in this regard; those levels are roughly the same for Americans nationwide.)

Table 6Q: Comparison of digital activities in New Mexico and other states[25]

Digital activity	NM	Gap from nation	USA	AZ	CO	UT
Uses Email	90%	-2%	92%	92%	95%	96%
Uses Online Financial Services Like Banking, Investing, Paying Bills	76%	2%	74%	79%	83%	83%
Uses Online Social Networks	74%	0%	75%	74%	73%	77%
Shops, Makes Travel Reservations, or Uses Other Consumer Services Online	74%	0%	74%	79%	85%	82%
Participates in Online Video or Voice Calls or Conferencing	65%	-1%	66%	64%	71%	74%
Takes Class or Participates in Job Training Online	30%	4%	26%	25%	33%	36%
Telecommutes Using the Internet	28%	0%	28%	28%	35%	29%
Searches for a Job Online	20%	-1%	21%	20%	22%	20%

Because the field of digital literacy is relatively young, there is a need for more data collection—specifically surrounding confidence in digital skills and frequency of use. Additionally, data should be collected to understand how digital literacy relates to demographic traits such as income, age, race, and education.

6.7 Security and privacy

[25] US Census Bureau. November 2021, Current Population Survey, Computer and Internet Use Supplement.

Theft, fraud, phishing, and misinformation are all commonplace on the Internet, and fully realizing digital equity in New Mexico requires users to be safe from such online risks. In New Mexico, while relatively few survey respondents reported online security and privacy concerns as a primary barrier to home Internet use, 17.8 percent of individuals in covered populations reported having been the victim of an online security or privacy breach. Therefore, the State of New Mexico has used data from the Current Population Survey and the NTIA Internet Use Survey to evaluate the extents to which various covered populations perceive and feel confident in their ability to disarm online security and privacy threats.

The key findings are as follows:

- New Mexico residents are similarly concerned by online security and privacy concerns when compared against the nation.
- Identity theft and credit card fraud are the two online security breaches that are concerning to most New Mexico residents.
- There are reasons to believe that members of covered populations are less aware of online security and privacy concerns when compared against non-covered populations, with this gap largest for low-income or rural households.
- Members of covered populations appear somewhat less dissuaded than non-covered populations to undertake various online activities because of security or privacy concerns.

Identity theft and credit card fraud were the two online security risks that concerned the most New Mexico residents. This is in line with the national ranking. Other concerns such as third-party tracking, government tracking, and online threats were of less concern.

Table 6R: Main online security or privacy concerns in New Mexico and the U.S.[254]

(Non-exclusive) main online security or privacy concerns	New Mexico		Nation		Gap	
Identity theft	51.6%		50.7%		0.9%	
Credit card fraud	43.5%		42.1%		1.3%	
Third party tracking	28.2%		26.4%		1.7%	
Government tracking	21.3%		19.0%		2.3%	
Online threats	24.9%		23.1%		1.7%	
Other	14.7%		13.1%		1.6%	

New Mexico lacks accessible data about the effect of online security and privacy issues on broadband adoption in the State. The little available data show that, of households that do not currently subscribe to Internet services, none indicate having made that decision due to concerns about security and privacy (Figure 6S). This does not imply that those unsubscribed households had robust knowledge of security and privacy best practice. It also does not alter any understanding of the actual rates by which New Mexico's residents are falling prey to security or privacy vulnerabilities.

Figure 6S: Privacy or security concerns as primary reason for lack of broadband adoption.[26]

Main Reason Not Online at Home: Privacy or Security Concerns
Universe: Households without any Home Internet Users
Nov 2021

7.7%
5.8%
3.8%
1.9%
0.0%
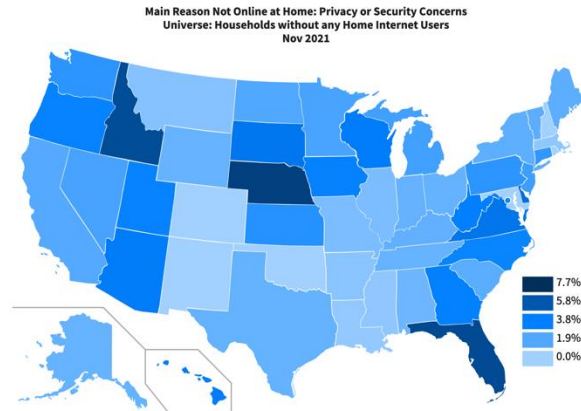
6.8 Next Steps

New Mexico received funding from the NTIA to develop both a Five-Year Action Plan for broadband infrastructure and a State Digital Equity Plan, both of which address broadband access and use issues. OBAE is developing an initial framework for measurable objectives and a Digital Equity grant program will then be designed to address adoption and meaningful-use projects.

The New Mexico state DE Plan is open for public comment until January 21, 2024, and is due to NTIA by February 13, 2024. This plan targets the digital divide within the 8 populations outlined by NTIA, addressing identified barriers and setting measurable objectives. It will evolve based on NTIA funding allocations and statewide resource development, as well as changing community needs, the digital landscape in NM, local pilots programming, ongoing data collection and analysis efforts, and best practices.

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[26] US Census Bureau. November 2021, Current Population Survey, Computer and Internet Use Supplement.

7.0   Office of Broadband Access and Expansion: Overview

7.1 Background

In 2021, the New Mexico Broadband Access and Expansion Act created the State's Office of Broadband Access and Expansion, established its charge, and set in law various powers and duties of the office. OBAE is administratively attached to the Department of Information Technology, but serves as an independent entity. In addition to submitting an annual report to the legislature articulating the office's approach – the New Mexico Statewide Broadband Plan – and progress toward universal broadband access, OBAE's mandate includes the following.

- Establish standards for quality of service for homes, businesses, and public institutions;
- Create and maintain an official, publicly accessible online New Mexico broadband access map showing broadband availability and quality of service for homes, businesses, and public institutions on a county-by-county basis;
- Create and maintain a repository for broadband data and information in New Mexico on a county-by-county basis, including:
  - o the number of homes and businesses that do not have access to broadband service;
  - o the number of homes and businesses that have broadband service that falls below the quality of service standards established by the broadband office; and
  - o the locations of broadband infrastructure currently owned or projected for construction by the State or local governments on a county-by-county basis;
- Provide broadband-related technical and planning assistance to local governments, public education institutions, and state agencies;
- Identify and communicate relevant federal broadband funding opportunities for local and Tribal governments, public education institutions, and state agencies; and
- Support regional broadband planning and engagement.

7.2 Vision, Mission, and Values

OBAE recognizes its enormous responsibility, and the heavy level of effort to achieve the aforementioned goals and strategic priorities. The Office's leadership and staff have developed the following vision, mission statement, and set of values – based on a collaborative effort and several work sessions.

First the team went through a tutorial on vision, mission, and value setting. The team learned that mission and vision statements are closely related but serve slightly different purposes. In general, a mission statement describes the Office's purpose: the "what" and "how" of OBAE, while the vision statement focuses more on the "why" or the meaning behind OBAE's actions and long-term goals to reach a future state. The biggest difference between mission and vision statements is in the timeframe. A mission statement outlines all the things the office is doing in the present to reach its goals, while a vision statement describes what OBAE is building for the future. OBAE's values are a reflection of the beliefs, philosophies, and principles that guide its operations. They impact the employee experience we deliver as well as the relationship developed with customers, partners, and stakeholders.

As part of the exercise, the team broke into two groups to define a draft of the vision, mission, and values for the Office. After a couple hours of brainstorming, the two groups produced candidate visions, missions and

values that were so similar that it was easy to refine and reach consensus. In short, the mission statement serves as a roadmap of strategic planning to work toward OBAE's vision statement and foundational principles.

Vision	• Achieve bold, affordable broadband solutions for New Mexicans that honor the State's rich heritage and elevate quality of life for all.
Mission	• Passionate leadership to drive bold, equitable, and inclusive broadband solutions
Values	• Courageous • Honest • Curious • Innovative • Respectful • Collaborative • Analytically Rigorous

7.3 Organization

➢ **Internal Staff**

In 2024, OBAE took its initial six staff members and built an organizational strategy to successfully meet the statutory and programmatic requirements that were established in the January 1, 2023 Three Year Broadband Plan.

At the start of 2023, the office was led by Director Kelly Schlegel, MBA, who transitioned from a distinguished forty-year career with the Boeing Company as an Executive Program Director. Rounding out the leadership team, Drew Lovelace was the Operations Manager, and Dianne Lindstrom was the Deputy Director. Dianne Lindstrom retired in March and Drew moved into the Deputy Director role.

OBAE grew from six employees at the start of 2023 to twenty-six approved positions, and twenty of them were filled. With the office set up and on track to achieve its mission, Director Schlegel retired in September of 2023, and Drew Lovelace stepped into the Acting Director role. In addition to Drew's twenty years in the private sector in leadership positions and serving as the Deputy Director and Operations Manager for the Office of Broadband, Drew previously served at the State Personnel Office in Labor Relations and Workforce Planning Divisions and Department of Transportation as a Project Manager. Drew holds an MBA from the University of New Mexico and a BA in both English Literature and History from the University of Colorado at Boulder, and he maintains a Society for Human Resources Management (SHRM) Senior Certified Professional (SCP) certification.

As the office continues to grow, Lee Gagnon started the year as the Compliance Manager and has taken over as the Programs and Compliance Manager in charge of the Grants Manager, and the coordinators for BEAD, ARPA, Digital Equity, and Tribal programs and their respective programs. Lee has an Engineering Degree from

New Mexico Tech and seven years of experience in City government in water and roads and three years in Mining and Compliance.

OBAE has reclassified Dianne Lindstrom's vacant position to a Project Management Bureau Chief position to run and operate the Albuquerque office and guide the Project Managers on technical assistance and project management for the approximately $1 billion dollars of infrastructure projects managed by the office. This position is currently being interviewed for at the time of this report. OBAE anticipates it to be filled in January of 2024.

Aquiles "Alex" Trujillo serves as the Broadband Technical Fellow and Technical Assistance Project Manager. Alex is a twenty-five-year veteran of the broadband industry. As a former broadband entrepreneur, he has hands-on infrastructure and executive management experience building, managing, and maintaining enterprise and commodity broadband networks across the Rocky Mountain West. Additionally, Alex has fifteen years of senior management experience in data centers, cybersecurity, routing, switching, and physical plant operations.

OBAE hired Vanessa Willock as General Counsel in June of 2023 rounding out the internal staff leadership team. Vanessa previously served as the EEO Director for the New Mexico Department of Public Safety (DPS) and the agency's ADA and ADR Coordinator in addition to serving as on the State of New Mexico's ADR advisory council and as the co-chair of the ADA Coordinator Council. Prior to her work with DPS, Vanessa served as Lead EEO Compliance Representative with the University of New Mexico's EEO and specialized in employment law in private practice. Vanessa received her JD from the University of Colorado School of Law and her BBA from the University of New Mexico.

➢ **Current Staffing Model**

In addition to the leadership, the Office has seventeen positions that are either filled or being actively recruited for at the time of this report. These positions make up the foundations of the administrative services division, grants and programs, legal, mapping and information technology, technical assistance, and project management office. In addition, OBAE has the BDCP team from PSFA working with the office to deploy the State Education Network.

➢ **Head of Statewide Education Network**

Ovidiu Viorica has 26 years of telecommunications and infrastructure construction experience and has more than 15 years of experience in all aspects of broadband deployment. He serves as the Lead Program Manager for the Statewide Education Network and liaison to the Pueblo Education Network (PEN) in the Public School Facilities Authority, responsible for broadband connectivity for New Mexico's 840 public schools. His vast broadband knowledge earned him a seat as a representative on the Connect New Mexico Council, leading the Permits, Rights of Way, and Pole Attachments working group (PROP). He also ensures that the federal program for schools and libraries is appropriately leveraged by each school to help establish the broadband infrastructure. As part of the Memorandum of Understanding between OBAE and PSFA, Ovidiu is the Broadband Manager for the Broadband Deficiency and Corrections Program and a de facto internal advisor on Broadband to OBAE, especially middle and last mile deployment, and he is the advisor to the Broadband Director on Network Architecture and leveraging the SEN and PEN as a key backbone to the State's Middle Mile.

➢ **Expert Advisors and Consultants**

The Office also has several consultants.

- Sandeep Taxali serves as Program Advisor. He brings a 24-year career in the telecom sector across multiple technologies (fiber, wireless and satellite) and organizations (e.g., service providers, federal government with the FCC and NTIA, and the United Nations). He has 14 years of experience in developing and managing federal, State, and international broadband infrastructure grant programs. He helped design the Connect New Mexico Pilot Program and Connect New Mexico Fund, formulated strategic priorities and programs, and spearheads several initiatives, including this Three-Year Broadband Plan and the State's application to NTIA for the Middle Mile Broadband Infrastructure Program.
- Kim Kruzel serves as an organizational and operational strategist and applies expertise she garnered as the result of a 30+ years career with the U.S. Navy to help OBAE effectively and efficiently execute its mission.
- Jennifer Nevarez is a nonprofit leader, credentialed educator, and regional driver for improving Tech access education, employment, and enterprise development in New Mexico. She brings more than 26 years of professional experience in community-serving program development, education, and coalition-building to the New Mexico Broadband and Digital Equity planning process and to support the extensive stakeholder engagement and coordinated community action needed to identify and address local broadband challenges with creative and collective solutions.
- Stephine "Steph" Poston, is the owner of a Native American, woman-owned, full-service communications firm, with nearly 30 years of experience executing highly effective community engagement and capacity-building initiatives for and with Tribal communities.
- John Osmon has spent 25 years in technical, leadership and consulting roles within New Mexico's Internet community. John has worked to bring attention to New Mexico network and technical conferences, founded a local Internet exchange, and sits on the board for Open Internet Exchange (OIX). John holds an engineering degree from Colorado School of Mines and an MBA from the University of New Mexico.
- CTC Technology and Energy provides engineering, technical, and economic advisory services to OBAE. CTC developed the 2020 Broadband Strategic Plan and Rural Broadband Assessment and provided the analysis for the 2023 Three Year Broadband Plan for the degree of unserved/underserved locations and capital budget analysis. CTC has also served as the primary contractor supporting the Broadband Equity, Access, and Deployment initial Proposal (IP) requirements, including IP Volume 1 and IP Volume 2.

➢ Required Staffing Model

OBAE continues to build organizational capacity as it moves into operating independently from its administrative attachment to the Department of Information Technology. OBAE has already built the foundational structure of an administrative services department including financials and human resources. OBAE has built a technical assistance and project management division, legal division, grants and programs. During the early part of 2024, OBAE will bolster the existing divisions and begin to staff up a mapping information technology division to meet its stator mapping responsibilities and prepare for IT support to operate independently.

OBAE's growth will be supported by federal funds in early 2024, while OBAE has asked for the legislature to move twenty positions from sponsored term (federally funded) to permanent positions. Additionally, OBAE has the Broadband Deficiency and Corrections Program from PSFA brought over to the office on a

memorandum of understanding. Currently three positions are filled, with another two vacant. OBAE is pursuing legislation to bring the program over in its entirety and to rename them the Broadband Deployment and Connectivity Program (BDCP) to OBAE, which includes the responsibility of supporting E-rate with the schools and deployment of the State Education Network.

OBAE has current plans to build an organization of forty-five employees and anticipates moving towards sixty in the coming years to support the statutory and programmatic requirements of the agency.

Office of Broadband Access and Expansion (OBAE) (9800000000) Organization Chart
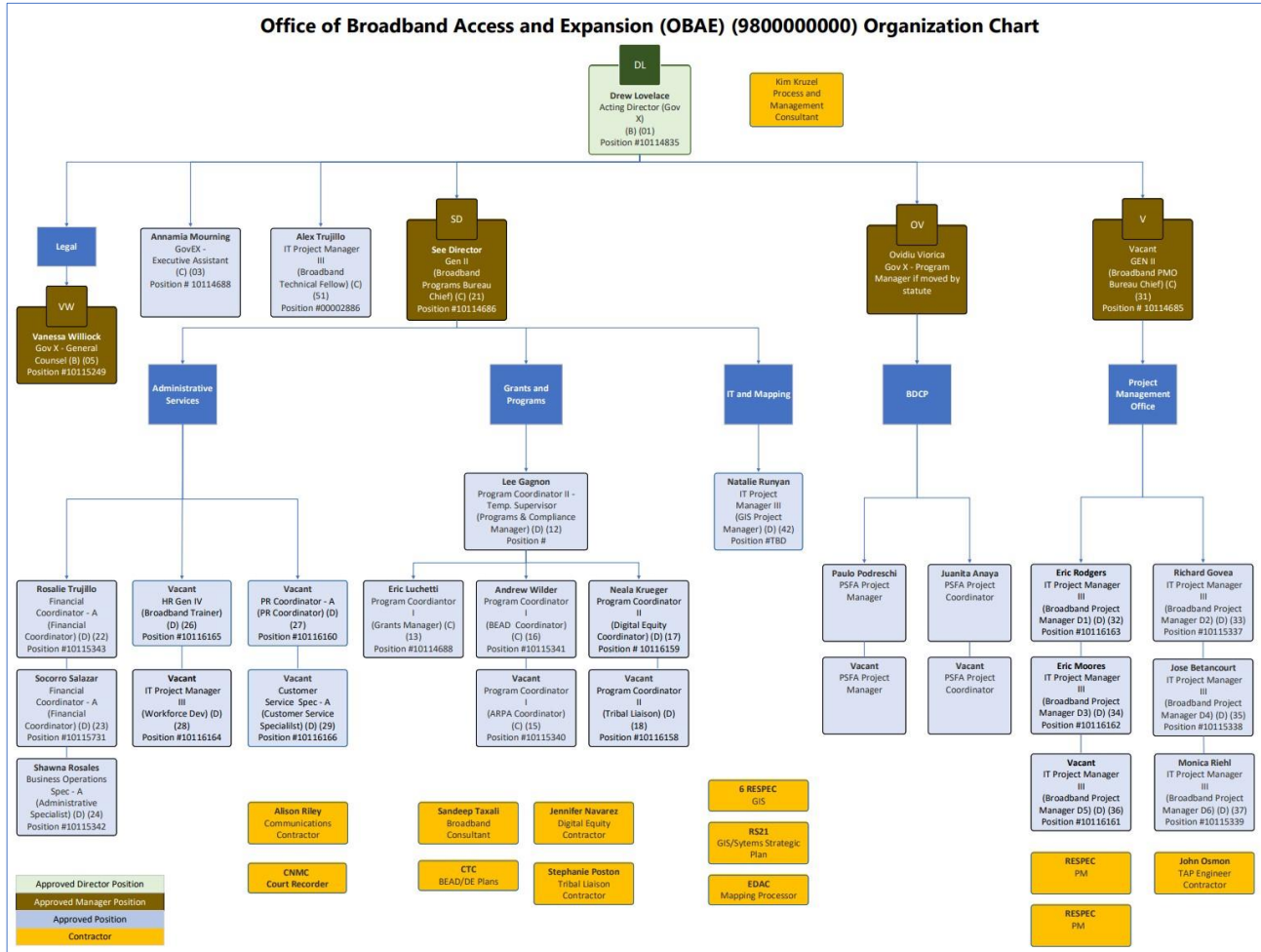
8.0   Key OBAE Achievements (2023)

This section lists several achievements led and/or enabled by OBAE. They are segmented across the designated "initiative" categories.

8.1 Funding Programs

OBAE team completed the Connect New Mexico Pilot Program, which involves a $117 million grant program.

OBAE also recently launched the Connect New Mexico Fund, which involves $70 million.

OBAE submitted the Five-Year Action Plan to NTIA on-time. The Plan incorporates a comprehensive needs assessment and establishes the State's goal to deliver broadband to all residences of New Mexico. This constituted one of several key requirements to be responsive to the requirements established by the National Telecommunications and Information Administration (NTIA) under the Infrastructure Investment and Jobs Act. [27] After meeting all the requirements, the State will qualify for the $675.4 million, the amount which has been designated by NTIA. [28]

Initiative	Connect New Mexico Pilot Program

- Completed all award assignments in September 2023 – 13 months after launching the program.
- Awarded 19 projects – on which 18 involved fiber deployments and one involved an advanced generation of fixed wireless.
- Projects constitute a total budget of $187.7 million – comprising of $115.7 million in grant funding and matched by $71.9 million in cash and in-kind contributions for a total investment of $187.7 million.
- Projects will connect 22,400 unserved and underserved locations and involve the deployment of 1,340 fiber miles; to illustrate this size, this involves 3.6 times the State's distance from north to south (a distance of 370 miles). Projects span across 14 of the State's 33 counties.
- Awarded projects cover six pueblos (Jemez, Laguna, Nambe Santo Domingo, Santa Ana, Ohkay Owingeh) and one reservation (Ramah Navajo).
- The program funded three electric cooperatives which will enable them to initiate their entry into the broadband services market.
- Signed Grant Agreement for all but two awardees.

Initiative	Connect New Mexico Fund

- Released program materials on December 12, 2023 (NOFO, application, and scoring rubric).
- Application due date is March 11, 2024.

Initiative	Five Year Action Plan

- OBAE submitted the Five-Year Action plan to NTIA on August 28, 2023.
- Found that 84% of the State's locations can receive, or will receive through federal enforceable commitments, 100/20 Mbps or greater. Also found that eight percent of locations are unserved, or receiving speeds under 25/3 Mbps. Also found that another eight percent are underserved, or receiving

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[27] Five Year Action Plan Guidance, https://broadbandusa.ntia.doc.gov/sites/default/files/2022-09/BEAD_Five-Year_Action_Plan_Guidance_1.pdf.

[28] "Biden-Harris Administration Announces State Allocations for $42.45 Billion High-Speed Internet Grant Program as Part of Investing in America Agenda," NTIA press release, June 26, 2023, https://ntia.gov/press-release/2023/biden-harris-administration-announces-state-allocations-4245-billion-high-speed.

- speeds between 25/3 and 100/20 Mbps.
- A preliminary analysis of the FCC data (May 2023) indicates that the total capital cost for extending high-speed, end-to-end fiber broadband to both unserved and underserved locations is approximately $2.81 billion to $4.12 billion over the period of performance.

8.2 Current and Accurate Broadband Maps

OBAE has completed several projects that foster an accurate assessment of the location, characteristics, and status of available broadband technologies and speeds across the State, and identifies grant-funded networks that will be deployed in the near future. OBAE also engaged in a robust effort to challenge the FCC Broadband Serviceable Location (BSL) Fabric and Broadband Availability Data, which involved a variety of outreach efforts, data analytics, and communication with the FCC. The net result involved removing locations deemed to be served or underserved, which allows for more units that qualify for BEAD funding. Furthermore, OBAE deployed a centralized public mapping interface, which aggregates several data sets and provides user-friendly tools to access and analyze the data. Finally, OBAE initiated several stakeholder outreach efforts to discern the broadband-based GIS needs of New Mexico, which has shaped a structured, needs-based roadmap of the tools and resources that OBAE will launch over the next two years.

Initiative	Robust Data for Spatial Data Management and Analytics

- ➢ **Challenge of FCC Broadband Serviceable Location (BSL) Fabric and Broadband Availability Data**
- Developed a SQL geodatabase model to manage the various states" of data about locations and Internet service, including FCC claims, data challenges, and adjudications of those claims.
- Conducted one-on-one sessions and workshops on methods and data for assessing FCC map accuracies and reporting issues. Compiled and submitted bulk challenges for multiple local and Tribal entities.
- Publish a public-facing dashboard Federal Service Availability Status for NM (arcgis.com) enabling users to query by various areas of interest to return NM's best available information about FCC BSLs and service availability at those locations.
- Submit over 50,000 location and almost 200,000 service availability challenges after a statewide assessment of data. Assess challenge methodologies relative to final FCC adjudication of the challenges. These findings/lessons are currently being reviewed with FCC and shared with stakeholders. Advocating with FCC on behalf of stakeholders when FCC data appear to be systematically in error.
- Apply data analysis results to the proposed modifications in the NTIA BEAD Initial Proposal Volume 1, and scope the state challenge tool to be used in grant-making of the NTIA BEAD allocation to NM
- On-track to publish, by the end of 2023, a public dashboard of un/under/served in NM that accounts for those already funded by existing grant programs (e.g., those with 'enforceable commitments')

Initiative	Evolutions of the State Broadband Map

- A centralized public mapping interface (maps.connect.nm.gov), designed in coordination with the OBAE website, was deployed, which provides a one-stop-shop for accessing broadband map resources for NM.
- A data inventory and set of standard operating procedures have been developed to guide the routine planning and maintenance of mapping tools and resources. A "functional data taxonomy" ties data and geographic information system (GIS) functions to OBAE's strategic initiatives and business functions.

- Data are gradually being published in the new OBAE enterprise geodatabase for public access, including detailed metadata and a simplified inventory of relevant data
- Data aggregation is underway to publish Ookla speed test results and FCC broadband map data at scales appropriate to targeted user groups and licensing levels.
- New data currently being ingested and/or created: service subscriptions for community anchor institutions, indicators of digital equity, and middle mile resources and plans.
- PDF's are in production to provide mapping data for web site users who do not have broadband.
- A critical success factor (EDAC contract) has delayed some KPI's which are expected to be back on track by the end of 2023.

Initiative	Launch of Analytic and Decision Support Tools to Empower All Stakeholders

- Twenty-two stakeholders are using or have been directly engaged with the Broadband Community Mapping Hub. This web environment provides for "secure data consortiums" of users to assemble data for awareness and discussion. Additional stakeholders are on-track to be engaged through the remainder of 2023.
- OBAE continues to participate in and lead priority technical working groups/meetings, and the advisory membership of the Mapping and Data Evaluation Working group has doubled. Logistical organization of this forum has improved and is on-track to be optimized by the end of 2023.
- The GIS needs assessment including an implementation roadmap is complete and is being applied by the team regularly to guide ongoing work and priorities. This process included 14 interviews with key stakeholders and research of the web-presence of other state broadband offices.
- A secure, enterprise-level GIS environment was built on a virtual machine platform, which includes a SQL geodatabase for hosting and processing core data. These data include statewide speed test results for the past two years, updated monthly, and the broadband serviceable location (BSL) data, including claimed and estimated broadband service availabilities. Datasets are continuously being loaded and processed to support decision-making as the programmatic questions evolve.
- A requirements assessment of map and tool resources for NM tribes is underway as part of a Governor's Task force established in 2023.
- The initiative is on-track to hire three geospatial data management and analysis positions by the end of 2023.

8.3 Removing deployment barriers related to permits, rights-of-way, and pole attachments (PROP)

OBAE has advanced three key initiatives to remove barriers for broadband deployment as related to permitting, rights of way and pole attachments. The specific activities include research and analytics, creation and/or moderation of working groups, development of high-impact legislative proposals, and improved systems and processes. The outcomes and ultimate success are contingent upon the participation of several stakeholders.

Initiative	Permit and Rights of Way Streamlining

- Created PROP Working group composed of subject matter experts (state agencies, federal agencies, municipalities, Tribal, ISPs, and Electric Utilities/Cooperatives meeting regularly to discuss policy recommendations and solutions.
- OBAE developed a draft proposed legislative language to extend existing utilities (electric/phone)

easements and ROWs for the 2024 legislative session. (Alternative best practice approaches are also being developed).
- OBAE has continued to follow up with NMDOT regarding rulemaking on reduced costs to use the right of way and easements.
- Developed a list of recommendations for policy and potential legislative action at state and federal level, including reducing cultural and environmental study requirements (as possible/appropriate) in pre-disturbed roadway and utility corridors.
- OBAE supports the recent allocation of $155M by the Federal Permitting Improvement Steering Council to federal agencies for additional resources and tools to facilitate the permitting process related to broadband infrastructure expansion.

Initiative	Modernization of Pole Attachment Policies and Practices

- Created PROP Working group composed of subject matter experts (state agencies, federal agencies, municipalities, Tribal, ISPs and Electric Utilities/Cooperatives meeting regularly to discuss solutions
- OBAE developed draft legislative language to develop a consistent and transparent approach for "Make Ready", utility poles replacement models, utility poles attachments fees, and to create a pole replacement fund to assist with unexpected costs related to utility poles replacements. Language is being reviewed with all stakeholders, including ISPs, Electric Utilities – Cooperatives and Investor Owned Utilities, municipalities and municipality-owned electric utilities.
- A subgroup of the PROP is currently drafting policy initiatives, to be finalized in 2024 Q1, that will provide more clarity, fairness, predictability, transparency and expediency to the broadband infrastructure attachments to utility poles (for "Make Ready" <or one time tasks & expenses> and "Joint Use" <or reoccurring tasks and expenses>).
- Developing a specialized support structure to provide supplemental resources to assist with permit-related technical tasks: surveys, evaluations and engineering. This work by specialized vendors will help small utilities deal with the permit and engineering work load expected to increase significantly in the near future as a result of state and federal investments in broadband infrastructure expansion.

Initiative	NMDOT Rights of Way Fee Waiver Program for In-Kind Fiber and/or Conduit Contribution

- Developed and supported passage of legislation (HB160) allowing the NM Department Of Transportation to waive ROW fees for broadband infrastructure deployment, especially in "Unserved" areas.
- Actively coordinating with the NM DOT on the implementation of a "Dig Once" policy where all suitable current and future road construction projects will include conduit and possibly fiberoptic cable.
- Working with NM Department of Transportation coordinating the development, testing and implementation of an electronic permitting system (ePermit). The new system will improve permitting process transparency and consistency across all NM DOT districts.
- Working to emulate the Utah DOT system of "asset tracking and swapping". Will visit Utah DOT to gather requirements for an In-Kind fiber/conduit contribution tracking system, based on the functional system there.

8.4 Workforce development

A large, highly skilled workforce constitutes a critical success factor to allow for the planning, design, deployment, testing, and operations of broadband networks necessary to achieve the universal availability of high-speed Internet. According to the U.S. Chamber of Commerce, New Mexico has only "68 available

workers for every 100 open jobs." Several small ISPs noted that they have difficulty finding and retaining a skilled workforce. OBAE has been proactive in addressing the potential workforce shortages. OBAE has taken an "All Hands on Deck" approach to foster the development of a workforce.

Initiative	"All Hands on Deck": Statewide Broadband Workforce Development Strategy
- Submitted a request and received funding to start broadband workforce development - Discussed state of workforce challenges and opportunity with the Tribal consultations and ISP meetings held in 2023. - Gathered Federal and industry broadband employment data and shared with state government, industry, and higher education - Identified potential assets for workforce development among higher education institutions and private entities providing training and certifications related to fiber deployment, including through partnerships with local or State government entities. - Leveraged existing and formed new relationships to promote workforce development efforts and also to use its grant program to encourage service providers to hire and train employees as part of their BEAD projects. - OBAE is working across state agencies with Department of Workforce Solutions to connect existing programs such as the Pre-Apprenticeship Program to enable workforce development efforts t. - OBAE also anticipates playing an important role in promoting available training and driving interest in employment opportunities in the broadband deployment sector.	

8.5 Technical assistance programs

OBAE continues to provide active support to a variety of stakeholders – service providers, community officials, academia, etc. The general case involves a broadband need (e.g., lack of service availability or reliability), and the development of various strategies to address that need. Alternatively, a case may involve an existing opportunity where the OBAE team applies a structured set of consideration factors to evaluate its merits. The stakeholders have spanned residential communities, business locations, and community institutions.

Initiative	Technical Assistance Programs to Empower Local Communities
- Completed outreach to all 23 Tribes. - Completed outreach to 15 of 33 Counties. - Converted EDA TAP Contract to Interactive Broadband Workbook due in next 12 months - Worked with over 10 executive Branch Agencies to Identify Anchor institutions that need broadband assistance. - Worked with over 15 providers on their broadband plans and applications. - Assisted 5 Tribes with applications to Pilot Projects. - Assisted 7 NTIA tribal network awardees.	

8.6 Participation in NTIA Programs for Digital Equity

OBAE engaged in a myriad set of projects to foster broadband adoption and meaningful usage. Key achievements included securing planning grant funding from NTIA; engaging in several fact-gathering efforts

to understand adoption barriers and identify best practices and strategies to remove these barriers; fostering stakeholder collaboration; promoting awareness on key statewide resources.

Initiative	Development of the Digital Equity Plan

- Secured federal NTIA Digital Equity Planning grant funding
- Developed initial Stakeholder Engagement Strategic Plan
- Contracted with CTC to write the State Digital Equity Plan
- Submitted NM Broadband Knowledge & Digital Equity Analysis & Plan Aug 1
- Attending NTIA Digital Equity Office Hours, NTIA State Leadership Meetings, & the NTIA State Leaders Conference, as well as NDIA/Federal Reserve Digital Equity regional trainings, and meeting regularly with NTIA State, Tribal, & Digital Equity Federal Program Officers
- Digital Equity & Inclusion working group meeting every 2 weeks
- Launched Connect New Mexico website https://connect.nm.gov with 130+ public/private pages in English/Spanish, & 14,500+ unique visitors so far
- Launch social media page at https://www.facebook.com/NMOBAE
- Launch YouTube channel
- Publishing both Connect New Mexico & Tribal Broadband newsletters
- Launched Map Challenge targeted direct mail campaign to 295,635 households in unserved areas & OBAE submitted a total of 246,692 availability/location challenges of which 174,499 were accepted.
- Hosted Broadband Day at the Legislature Feb 15 for 400 people with info tables in East and West Wings, lunch presentations, & Gov. Michelle Lujan-Grisham proclamation of March as Connect New Mexico Month to kick off Spring Sprint series of outreach events.
- Hosted Six Regional Meetings
  - April 17 - SE Region 5 meeting in Alamogordo (Otero County)
  - April 18 - Central Region 3 meeting in Los Lunas (Valencia County)
  - May 11 - NE Region 4 meeting in Springer (Colfax County)
  - May 12 - SW Region 5 meeting in Las Cruces (Doña Ana County)
  - May 15 - NW Region 1 meeting in Farmington (San Juan County)
  - May 16 - NC Region 2 meeting in Hernandez (Rio Arriba County)
- Hosted 13 Listening Sessions (Webinars)
- Co-hosted "Internet for All: New Mexico Broadband Summit" and Tribal Roundtable with NTIA Director Alan Davidson May 24 at Buffalo Thunder in Pojoaque Pueblo in Santa Fe County w/ 372 participants, which was the highest-attended local coordination event with NTIA in the nation
- Supported the second Broadband Summit December 13 hosted by the NM Chamber of Commerce and Kelly Cable at Sandia Pueblo Resort
- Co-hosted the first Digital Equity Summit on October 5, 2023, at UNM Taos with the Digital Equity Working Group
- Presented at AARP New Mexico Tele-town Hall in October 2023 with more than 800 listeners

8.7 Broadband Affordability

OBAE continues to foster participation in the FCC Affordable Connectivity Program.

Initiative	Robust Participation in the FCC Affordable Connectivity Program

- Conducted an inventory of all New Mexican fixed and mobile broadband service providers that participate in the ACP; found over 100 that do.
- Found 58 providers that offer a device discount.
- The following were awarded funding to support ACP enrollment initiatives and are currently mobilizing regional programs in New Mexico to promote and support affordability:
  National Competitive Outreach Program (NCOP)
  - City of Albuquerque – $400,000
  - New Mexico Black Leadership Council, Albuquerque – $400,000
  - El Paso Community Foundation – $300,000
  - Multi-state award to Texas includes Las Cruces)
  Tribal Competitive Outreach Program (TCOP)
  - Pueblo of Jemez – $379,234
  - Pueblo of Zuni – $325,000

8.8 Digital Equity and Inclusion for Tribal communities

OBAE had developed and aggressively implemented a comprehensive plan to foster digital equity for Tribal communities. The achievements included hosting tribal consultations with Tribal leadership; planning and launching several summits; mapping sessions to confirm unserved and underserved premises; providing technical assistance for several projects; and making grant award announcements for broadband infrastructure.

Initiative	Tribal Community Digital Inclusion Program

➢ **Grant Awards**
- Awarded grants directly to five pueblos (Jemez, Laguna, Nambe, Santa Ana, Santo Domingo) and grants to two private broadband service providers that will be serving Ohkay Owingeh and Ramah Navajo.

➢ **Outreach and Engagement**
- Co-hosted "Internet for All: New Mexico Broadband Summit" and Tribal Roundtable with NTIA Director Alan Davidson May 24 at Buffalo Thunder in Pojoaque Pueblo in Santa Fe County w/ 372 participants, which was the highest-attended local coordination event with NTIA in the nation
- Over 80 attendees at inaugural statewide tribal broadband convening
- Official tribal consultation with 100 percent of 23 New Mexico Tribes, Nations and Pueblos.
- Meeting with Ten Southern Pueblos
- Meeting with Eight Northern Pueblos
- Meeting with All Pueblo Council of Governors
- Hosted and facilitated bi-weekly meetings Connect New Mexico Tribal Working Group
- Attendance and active engagement at four (4) NM Indian Affairs Department Dashboard Taskforce Meetings
- Support for Pueblo of Tesuque hosting the Broadband Bootcamp on June 29, 2023
- OBAE participated in Pueblo Education Network (PEN) meetings
- OBAE attended weekly NM IAD Tribal Leader virtual meetings

- OBAE made presentation at NM Indian Affairs Department G2G in July 2023
- Extensive support with Tribal Dashboard Taskforce
- Participation on weekly NM Indian Affairs weekly tribal leaders call
- OBAE participated at the Monthly Broadband Initiative on Navajo Nation

➢ **Information Sharing**
- 25 tribal broadband electronic newsletters published.
- 100% of NM tribes have been reached via technical assistance, mapping, grant writing guidance, etc.
- Posted extensive tribal resources on Connect NM website

➢ **Other**
- Secured funding for OBAE Tribal Coordinator position
- OBAE team in regular contact with several tribes for technical assistance and support
- OBAE tribal content focused presentations at numerous local and national meetings
- OBAE staff cultural training

➢ **Technical Support**
- Provided technical support to Navajo Nation via regular meetings and attendance at monthly Navajo broadband meetings
- OBAE presented at the NM Indian Affairs Department State Tribal Leaders Summit, All Pueblo Council of Governors, Ten Southern Pueblos Council, Eight Northern Indian Pueblos Council and the National Tribal Telecommunications Association Conference.
- OBAE collaborated with NTIA to host a Tribal Roundtable May 24, 2023

➢ **Mapping Analytics**
- Held Grant Funding and Data Mapping Session on November 7, 2023.
- Four candidates interviewed for OBAE tribal coordinator; which is close to onboarding.

8.9 Statewide Middle-mile Networks

OBAE continues to advance the development of the Statewide Education Network (SEN). Key achievements spanned across the design, vendor negotiations, pilot program construction, and development of regional sites. OBAE also continues to identify and develop opportunities to foster open-access middle-mile networks that can catalyze last-mile networks across unserved and underserved communities.

Initiative	Launch of Statewide Education Network
• Completed negotiations and executed contracts with several vendors for the implementation of Phase1 of the NM Statewide Education Network. • Working on the design for the SEN network architecture. High Level Design (HLD) is complete, with the detailed design (Low Level Design / LLD) scheduled to be complete in Q1 / 2024 • Completed the construction of the pilot network regional aggregation node and "neutral MeetMe point", located in Gallup, NM. Nine other regional sites are in different stages of work (expected to be complete in 2024), with the Memoranda Of Understanding (MOUs) under review. • Received the equipment for the SEN, with installation, configuration and testing scheduled for the first half of 2024. SEN operations are scheduled to begin during the second half of the same year. • Issued the Request For Proposal for SEN Phase2 to add up to 56 participants and five potential nodes to the network. Awards are expected in the first half of 2024 (Pending BDCP transfer from PSFA to OBAE).	

Initiative	Public-Private Investment Program for Priority Middle-Mile Routes
• Launched the Connect New Mexico Fund later this year, which allows for projects to fund middle mile networks which can foster last-mile connectivity to unserved and underserved locations. • Developed a legislative proposal seeking funding for a dedicated middle-mile investment fund.	

8.10 Coverage Expansion of 5G Mobile Broadband

OBAE aims to launch a dedicated 5G mobility fund to foster the universal availability of mobile voice and broadband coverage across rural communities and highly trafficked roadways, and ensure first responders have access to a public safety network. This effort will gain further steam over the next six months as OBAE launches a comprehensive fact-gathering session.

The strategy calls for the following: a) identify coverage holes across rural communities and highly trafficked roadways; b) identify gaps in the public safety networks (e.g., FirstNet); c) understand the mobile network operators' specific plans to address these gaps; d) gain industry feedback on key barriers toward achieving quality coverage and capacity; e) determine approaches on how current and planned last-mile grant programs can be used to facilitate 5G coverage expansion (e.g., open-access requirement for backhaul networks; shared usage of towers for fixed and mobile broadband); f) design other programs to foster universal 5G coverage (e.g., investment, integration statewide middle-mile initiative, permit streamlining, etc.)

Initiative	5G Coverage Initiative
• Conducted myriad of tribal consultations and ISP meetings to gauge the state of 5G networks. • Submitted a legislative proposal asking for dedicated funding for this network. • Highlighted 5G networks as an eligible project category for the Connect New Mexico Fund. - The proposal enable 5G coverage in areas both lacking reliable signal strength AND having a concentration of unserved and underserved locations • Will issue a Request for Information to gain public input to inform the strategy.	

8.11   Network Resiliency and Security

OBAE continues to advance the critical mission of ensuring all broadband networks are resilient and secure. These efforts spanned across the SEN, DoIT operated networks, collaborative network planning with other state agencies, and newly funded broadband networks.

Initiative	Text
➢ **Statewide Education Network**	
• Standing Up of the SEN Nodes	
• Ordering 100Gbps Wavelengths to SEN Nodes	
• Architected and Ordered Ciena Wavelength Equipment	
• Negotiated Colo with 10 Higher Ed Locations	
➢ **Rio Grande Optical Network (RGON)**	
• Renegotiated the Rio Grande Optical Network	
• Identified 5 new RGON Add Drop Locations	
• Architected Upgrade of 5 RGON existing sites to 400Gbps Wavelengths can support up to 32 wavelengths	
• SEN/RGON have separate physical routes from Santa Fe, Albuquerque, Socorro, Las Vegas, and Las Cruces providing a resilient connection to those nodes.	
➢ **State Agency Collaboration**	
• Working with DOT to Identify High Value Lettings OBAE could place conduit under Dig Once Agreement	
• Identified Meta Fiber path and working with DOT to light the 24 strands.	
➢ **Grant Programs**	
• Encompassed the provision that every Grantee, receiving a broadband award, has cybersecurity risk management plan in place before starting commercial service. The Plan reflects the latest version of the National Institute of Standards and Technology (NIST) Framework for Improving Critical Infrastructure Cybersecurity (currently Version 1.1) and the standards and controls set forth in Executive Order 14028 and specifies the security and privacy controls being implemented.	

8.12   OBAE Transparency and Accountability

OBAE recognizes the immense trust offered to it by the Governor, Legislature, and all residents and establishments across New Mexico to implement critical programs that advance socioeconomic development, and ensure funds are most effectively and efficiently applied. OBAE completed the rulemaking process last year and updated vital provisions. OBAE will produce a more detailed annual report by year-end. OBAE has also started developing partnerships with academia to engage in program evaluation.

Initiative	Rulemaking for Broadband Grant Programs
• Completed the rulemaking process for the Connect New Mexico Council	
• Have updated the rulemaking to recent stakeholder feedback.	

Initiative	OBAE Annual Progress Report
• Included detailed list of all achievements in the Three Year Broadband Plan.	

Initiative	Program Evaluation and Socioeconomic Impact Assessment
• Conducted five engagements with New Mexico higher education institutions from June 2023 – September 2023, gathering information on interest in conducting an Impact Assessment of Grant Programs. • One institution is in the process of planning a longitudinal study regarding the digital equity efforts of New Mexico; the aim is to combine the Impact Assessment with this effort, if possible, by December 2023.	

8.13   Grantee Accountability for Programmatic and Compliance Requirements

OBAE continues to meet all program and compliance requirements.

Initiative	Comprehensive System to Foster Grantee Accountability
• Maintained 100% compliance for subgrantees and OBAE on all federal and state awards managed by OBAE. • Standing up a grants management software called Submittable to handle all future applications to grant programs, document retention, compliance reporting, and program resource communications; this should be finalized by Q4 2023. • Landing pages are under construction for all grants OBAE will manage; these webpages will house program resources for assisting and empowering the sub-recipients. The aim is to have this completed by December 2023. • Site visit program implementation is being developed by our project management team; this should be ready for implementation by December 2023 for construction commencement on projects in 2024.	

9.0   Recent Developments to Advance Broadband: Government & Market Intervention

9.1 Landscape of Federal Awards

A. NTIA Tribal Broadband Connectivity Program

➢ **Overview**

The Department of Commerce's National Telecommunications and Information Administration awarded nine New Mexico Tribal entities with grants totaling over $169 million through the Tribal Broadband Connectivity Program. [29]

2023 Awardees	Amount	Description
Pueblo of Tesuque	$413,479	• This Planning, Engineering, Feasibility, and Sustainability project will provide a turnkey program to deploy broadband fiber that will ensure Pueblo members have reliable qualifying broadband service.

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[29] https://www.ntia.doc.gov/press-release/2022/biden-administration-awards-more-146-million-expand-high-speed-Internet-access

Ohkay Owingeh	$500,000	• This Broadband Use and Adoption project will provide no-cost monthly qualifying wireless broadband service to 250 unserved Pueblo households, including the initial cost for the installation of existing Ohkay Owingeh equipment in 250 unserved households.
Pueblo of Jemez	$500,000	• This Broadband Infrastructure Deployment project will construct a new wireless tower to provide viable Internet access and critical services to Tribal members and ensure that the outlying regions of the Pueblo Jemez have access to basic critical needs, including education, health, safety, and social services. Proposed activities will meet a minimum of 25/3 speeds but may exceed these speeds after pre-engineering.
Pueblo of Nambe	$500,000	• This Broadband Infrastructure Deployment project takes initial steps toward the deployment of underground and aerial fiber networks as part of the Pueblo of Nambe's Phase I Broadband Deployment Project. Once all project phases are complete, all unserved Pueblo of Nambe households will be able to access qualifying broadband service.
Pueblo of Pojoaque	$500,000	• This Broadband Infrastructure Deployment project will provide affordable, reliable, high-speed Internet service via fiber to 75 tribal households.
2022 Awardees	**Amount**	**Description**
Taos Pueblo	$477,817	• The proposed project, through a qualified consultant, will conduct comprehensive engineering analysis with respect to the technical design, market conditions and financial requirements of providing broadband services to its community.
Pueblo of Acoma	$14,346,244	• The Broadband Infrastructure Deployment project proposes to install fiber to directly connect 1167 unserved Native American households and anchor institutions with a minimum of 25/3 Mbps service.
Santa Fe Indian School (SFIS)	$57,298,683	• The Broadband Infrastructure Deployment project proposes to install fiber connecting the 700 students in grades 7-12 from the 19 Pueblos, Navajo and Apache Tribes of New Mexico, Zuni Tribe, Pueblo of Acoma, Pueblo of Isleta, Pueblo of Jemez, Pueblo of Santo Domingo, and the Pueblo of Zia with fiber-to-the-home 1 Gbps/1 Gbps service.
Jicarilla Apache Nation Power Authority	$6.9M	• Install middle-mile Dense Wave Division Multiplexing optical transport equipment to connect the Apache Nugget Casino (existing tower location) with JANPA's headquarters using about 80 miles of existing fiber. Install 55 miles of fiber under and above ground to connect 1,051 Native American households, 116 unserved Native American businesses, and 25 Native American community anchor institutions with up to 1 Gbps of reliable and affordable Internet service.
Mescalero Apache Telecom	$43.9M	• Construct new middle mile fiber optic transport to Points of Presence (POP) at El Paso, TX, to enable connection to the Texas Lone Star Network. Provide reliable, affordable Internet access

		(up to 1 Gbps) to 835 unserved Native American households, 336 businesses, and 29 community anchor institutions. Add 14 towers to the seven existing ones to deploy 2.5 GHz spectrum service, provide cellular services, and increase FirstNet public safety network access.
Santa Fe Indian School (SFIS)	$57.3M	• The Pueblo Education Network proposes constructing 336 miles of new fiber optic infrastructure for 19 Pueblos, Navajo and Apache Tribes of New Mexico, Zuni Tribe, Pueblo of Acoma, Pueblo of Isleta, Pueblo of Jemez, Pueblo of Santo Domingo, and the Pueblo of Zia. Project enables Tribal members, businesses, Tribal government entities, and anchor institutions to connect to affordable Internet services. Network connects the 700 students in grades seven to 12.
Santo Domingo (Kewa) Pueblo	$12.8M	• The project proposes to deploy a 15-mile middle-mile fiber network connecting the Santo Domingo Pueblo lands with the regional Internet exchange located in Albuquerque. The project will also construct six 150' monopole towers to deliver qualifying wireless service to Tribal members living in outlying areas and adjacent communities and retrofit two existing communications towers with the necessary equipment to provide qualifying wireless service to Tribal households in the Pueblo Plaza area.
Pueblo of Isleta	$26.0M	• The project proposes to install fiber directly connecting 1,526 unserved Native American households, 54 community anchor institutions, and 10 businesses with fiber-to-the-home and/or fixed wireless to the home 25 Mbps/3Mbps service
Pueblo of Zia	$4.7M	• The project proposes to install fiber to directly connect 228 unserved Native American households and 13 unserved community anchor institutions with qualifying broadband service with up to 1Gbps symmetrical speeds.
Pueblo of San Ildefonso	$4.9M	• The project proposes to install fiber and fixed wireless to directly connect 255 unserved Native American households with qualifying broadband service with up to 1000 Mbps symmetrical speeds
Picuris Pueblo	$3.7M	• Installs fiber directly connecting 79 unserved Native American households, 15 Tribal offices, two Tribal businesses, and three community anchor institutions with qualifying broadband service with up to 1Gbps symmetrical speeds.
Pueblo of Santa Clara	$9.1M	• Installs fiber directly connecting 600 unserved Native American households with fiber to the home service of 1 Gbps symmetrical and 50/10 Mbps wireless service.

B. RUS ReConnect Program (2023)

Overview

RUS awarded several New Mexican ISP's funding from the ReConnect Program. [30] The ReConnect Program offers loans, grants, and loan-grant combinations to Eligible Organizations to increase broadband availability in areas of rural America that currently do not have sufficient access to broadband. The expansion of broadband services and infrastructure will fuel long-term rural economic development and opportunities in rural America. Funding can be used for projects that are financially sustainable and cash flow positive. The projects can be both terrestrial and fixed wireless.

2023 Awardee	Amount	Description
Panhandle Telephone Cooperative Inc.	$21,665,524	• This Rural Development investment will be used to deploy a fiber-to-the-premises network to provide high-speed Internet. This network will benefit 1,284 people, 36 businesses, 696 farms and three educational facilities in Beaver and Cimarron counties in Oklahoma and Union County in New Mexico. Panhandle Telephone Cooperative, Inc. will make high-speed Internet affordable by participating in the Federal Communications Commission's (FCC) Lifeline and Affordable Connectivity Programs.
WNM Communications Corporation	$24,700,224	• This Rural Development investment will be used to deploy a fiber-to-the-premises network to provide high-speed Internet. This network will benefit 4,270 people, 109 businesses, four farms and five educational facilities in Socorro County in New Mexico. WNM Communications Corporation will make high-speed Internet affordable by participating in the Federal Communications Commission's (FCC) Lifeline and Affordable Connectivity Programs. This project will serve socially vulnerable communities in Socorro County.
Western New Mexico Telephone Company, Inc.	$23,770,661	• The Western New Mexico Telephone Company Inc. is receiving a $23.8 million grant to deploy a fiber-to-the-premises network to provide high-speed Internet access to people in Catron County. The company will make high-speed Internet affordable by participating in the Federal Communications Commission's (FCC) Lifeline and Affordable Connectivity Programs (ACP). It also will provide a $34.99 monthly plan with 75 megabits per second upload and download speeds for subscribers within the project area who are enrolled in the ACP.
Central New Mexico Electric Cooperative, Inc.	$24,808,800	• This Rural Development investment will be used to deploy a fiber-to-the-premises network to provide high-speed Internet. This network will benefit 2,921 people, 70 businesses, 64 farms and 10 educational facilities in Torrance County in New Mexico. Central New Mexico Electric Cooperative Inc. will make high-speed Internet affordable by participating in the Federal Communications Commission's (FCC) Affordable Connectivity Program. This project will serve socially vulnerable communities in Torrance County.

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[30] See https://www.usda.gov/reconnect/round-four-awardees

Continental Divide Electric Cooperative, Incorporated	$21,722,200	• This Rural Development investment will be used to deploy a fiber-to-the-premises network to provide high-speed Internet. This network will benefit 2,559 people, 78 businesses, 76 farms and six educational facilities in Cibola and McKinley counties in New Mexico. Continental Divide Electric Cooperative Incorporated will make high-speed Internet affordable by participating in the Federal Communications Commission's (FCC) Affordable Connectivity Program. This project will serve socially vulnerable communities in Cibola and McKinley counties.
E.N.M.R. Telephone Cooperative	$2,603,946	• The E.N.M.R. Telephone Cooperative is receiving a $2.6 million grant to deploy a fiber-to-the-premises network to provide high-speed Internet access to people in De Baca, Guadalupe, Harding, Quay, San Miguel, Socorro and Union counties. E.N.M.R. will make high-speed Internet affordable by participating in the FCC's Lifeline and Affordable Connectivity Programs. This project will serve socially vulnerable communities in De Baca, Guadalupe, San Miguel and Socorro counties.
SWC Telesolutions, Incorporated	$9,256,350	• This Rural Development investment will be used to deploy a fiber-to-the-premises network to provide high-speed Internet. This network will benefit 4,962 people, 106 businesses, 11 farms and 17 educational facilities in Doña Ana and Sierra counties in New Mexico. SWC Telesolutions Incorporated will make high-speed Internet affordable by participating in the Federal Communications Commission's (FCC) Affordable Connectivity Program. This project will serve socially vulnerable communities in Doña Ana and Sierra counties.
Penasco Valley Telephone Cooperative, Inc.	$13,850,542	• The Peñasco Valley Telephone (PVT) Cooperative is receiving a $13.9 million grant to deploy a fiber-to-the-premises network to provide high-speed Internet access to 550 people, 48 farms and 11 businesses in Chaves, Eddy, Otero and Lincoln counties. PVT will make high-speed Internet affordable by participating in the FCC's Affordable Connectivity Program (ACP). PVT also offers a program that can provide free Internet for households participating in the ACP. This project will serve socially vulnerable communities in Chaves, Eddy and Otero counties.

9.2 Landscape of State Awards

A. Public Regulation Commission

The NMPRC provided $11.8 million in grants to nine broadband service providers. The Commission Broadband Program focuses on the selection of projects that will prioritize unserved, underserved, and served areas, in that order. The NMPRC works closely with Eligible Telecommunication Companies that register with the PRC to receive funding. Funding can be used for new broadband construction as well as to upgrade existing services underlying equipment or cable.

Awardee	Total Amount	Type of Project Descriptions
Baca Valley Telephone Co., Inc.	$2.135M	• Fiber-Optic to the Home/Premise Project 100/100 Mbps to 497 street addresses, Res/Bus.
New Mexico Surf	$3.132M	• Broadband service utilizing 3G/4G Wireless Cellular Technology. 200/100 Mbps to 3,749 addresses, Res/Bus.
Sierra Communications	$1.472M	• Fiber-Optic to the Home/Premise Project, 25/3 Mbps to 565 street addresses, Res/Bus.
Smith Bagley, Inc. (SBI)	$4.910M	• Cellular Technology/5GNR Upgrades/Tower Build, 25/3Mbps – 50/10Mbps to 5,500 street addresses, Res/Bus.
Windstream Communications Southwest	$177.7K	• Fiber-Optic to the Home/Premise Project 1/1 Gbps to 71 street addresses, Res/Bus.

B. Connect New Mexico Pilot Program (ARPA Capital Projects Fund)

OBAE launched the Connect New Mexico Pilot Program on August 10, 2022 – with the release of the Notice of Funding Opportunity, Application, and Scoring Guide. The program includes three waves of funding with the following deadlines: Wave One (September 23), Wave Two (December 9), and Wave Three (February 27, 2023). The program aims to foster the deployment of broadband access (solutions) across unserved and underserved areas in New Mexico through sustainable, scalable networks and financially viable business plans and serve the comprehensive community with high-quality, reasonably priced solutions.

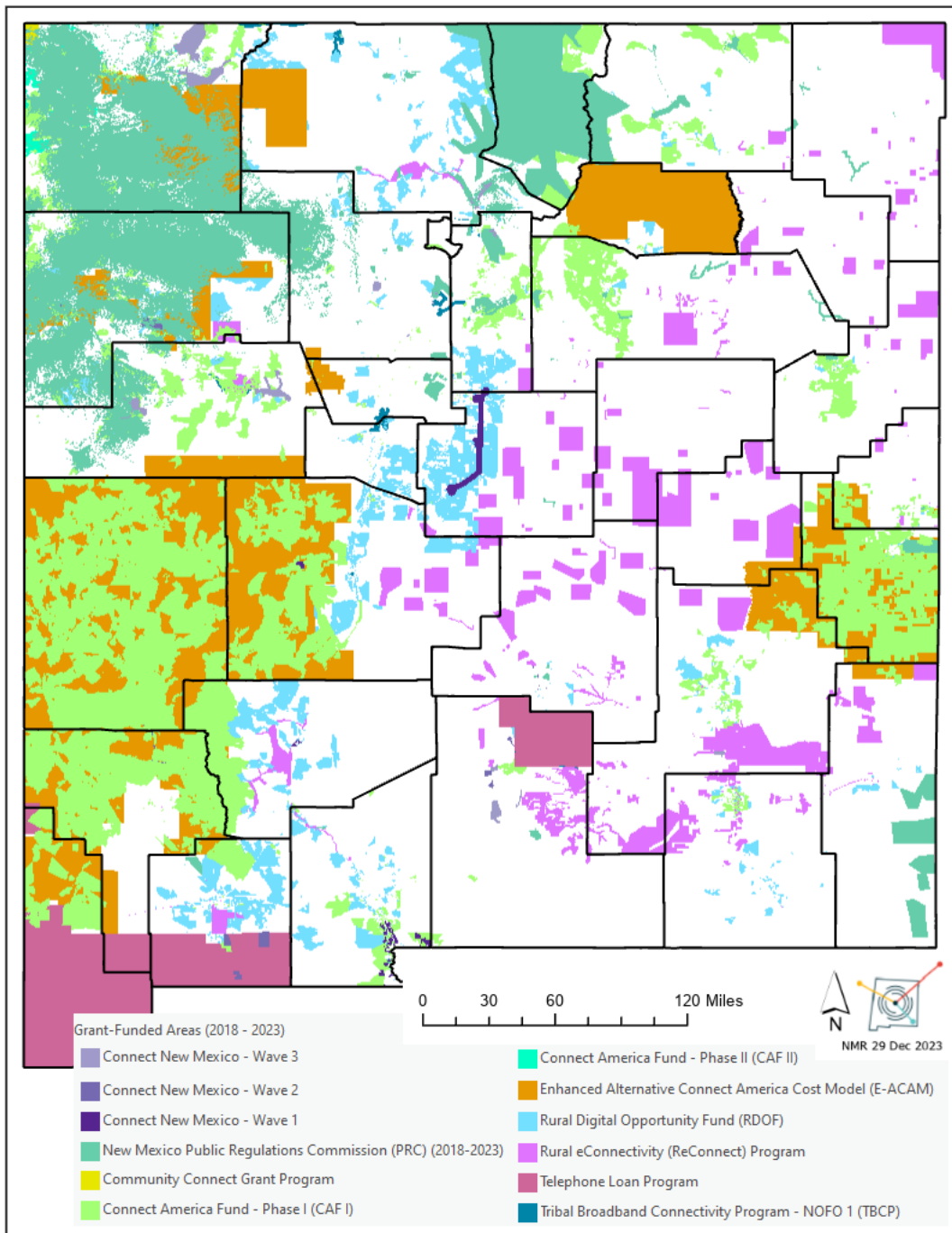| Awardee	Grant Amount	Description
Wave One		
Central New Mexico Electric Cooperative	$6.57M	• Involves an 86-mile fiber network to connect over 2,031 premises (1643 households, 388 businesses, and 28 community institutions) across Estancia and Mountainair. The project constitutes CNMEC's entry into the broadband market. The scalable fiber technology offers symmetrical 1 Gbps to largely unserved customers, all of whom are existing electric customers. Project budget involves $8.76 million – 75 percent of which is grant funded.

Comcast (two projects)	$16.595M	• Involves two projects in Dona Ana County that bring fiber to the premise and offer 1 Gbps to over 4,635 largely residential premises, with businesses and community institutions also connected. Project budget involves $32.88 million of which 50.4% is grant funded. Connected communities involve: a) Phase 1: Berino, La Mesa, Chamberino and the City of Anthony, Vado; b) Phase 2: Chaparral, La Union, Santa Teresa, Sunland Park.
Socorro Electric Cooperative, Inc. (SEC)	$5.096M	• Involves a 50-mile fiber network to connect approximately 300 premises the community of Magdalena in Socorro County – broken between a middle-mile span and last-mile segment of 31 and 19 miles, respectively. The project constitutes SEC's entry into the broadband market. The scalable fiber technology offers symmetrical 1 Gbps to unserved customers, all of whom are existing electric customers. Project budget involves $7.475 million – 68% of which is grant funded.
SWC Telesolutions (subsidiary of Sacred Wind)	$8.48M	• Involves 49-mile fiber network connecting 2,932 largely residential premises across the communities of Truth or Consequences and Williamsburg in Sierra County – evenly divided between unserved and underserved premises. Project is 100 percent last-mile, and leverages existing middle-mile. The scalable fiber technology offers symmetrical 1 Gbps. Project budget involves $14.51 million – 58 percent of which is grant funded.
Wave Two		
Comcast (two projects)	$15.559M	• Connects 2,843 unserved and underserved locations in Aztec and Bloomfield in San Juan County via 234 fiber miles. Project budget involves $20.745 million – 75 percent of which is grant funded. Awardee is the incumbent service provider. Both communities are highly economically distressed community. Leverages existing awardee assets in the region to offer symmetrical 1 Gbps. Project budget involves $XX million – XX percent of which is grant funded.
Jemez Mountains Electric Cooperative	$5.993M	• Catalyzes the electric cooperatives entry into broadband by connecting 10 communities, representing 3,171 premises, with 105 fiber miles – including communities of Alcalde, Canova, Chamita, El Duende, Española, Hernandez, La Villita, Los Luceros, Ohkay Owingeh, Velarde. Positions JMEC for future expansion to connect 18,000 additional unserved units in it electrical service footprint. Project budget involves $11.986 million –50 percent of which is grant funded.
SWC Telesolutions, Inc.	$1.042M	• Involves a fixed wireless deployment to connect 435 locations across three highly economically distressed mobile home parks in community West Gallup and Thoreau. Leverages a next generation of high-speed wireless technology that has "beam forming" signals – which means line of sight not always required.
Tularosa Communications	$7.447M	• Connects 1,048 mostly unserved locations in West Alamogordo, Bent, Sun Valley via 78 fiber miles. Offers attractive pricing of $59.99 for 100 Mbps symmetrical and $79.99 for 1 Gbps symmetrical. Project budget involves $9.993 million – 75 percent of which is grant funded.
Valley Telecom Group	$ 3.704M	• Connects 822 mostly unserved locations in Columbus in Luna County via 49 fiber miles. Community is a highly economically distressed border-town community with poverty rates 33% greater than state average. Project

		budget involves $5.699 million − 65 percent of which is grant funded. Awardee is the incumbent service provider.
Wave Three		
Oso Internet	$5.789M	• Leverages 10-year history in serving the Ramah Navajo reservation by connecting 109 unserved members in Pine Meadows through 49 miles of fiber, and complements two other federal projects to fiberize the tribal region. Project budget involves $8.11 million −71 percent of which is grant funded.
Penasco Valley Telephone Cooperative	$486.5K	• Constructs 12.5 miles of fiber to connect 41 unserved premises in Hagerman, building upon 60 years of experience in serving Southeast New Mexico. Project budget involves $648.7K − 75 percent of which is grant funded.
Pueblo of Jemez	$8.565M	• Connects 687 unserved units through the deployment of a 45-mile fiber network, and leverages several existing middle-mile assets to reach the Internet backbone. Project budget involves $15.21 million − 56.3 percent of which is grant funded.
Pueblo of Laguna	$9.055M	• Serves the state's largest-sized pueblo (and 2nd in terms of population) and connects over 1,500 unserved premises through 193 miles of fiber. Project budget involves $17.92 million − 50.5 percent of which is grant funded.
Pueblo of Nambe	$5.233M	• Deploys 30 fiber miles to connect 254 unserved units and leverages Redinet's middle-mile backbone; also constructs one cell tower to enable reliable wireless capabilities for public safety within remote areas of the Pueblo. Project budget involves $7.06 million − 74 percent of which is grant funded.
Pueblo of Santa Ana	$2.665M	• Connects 276 unserved premises through 18 new fiber miles, and leverages ARPA funding provided to the Pueblo. Project budget involves $3.95 million − 67.45 percent of which is grant funded.
Pueblo Santo Domingo	$9.22M	• Connects 870 units in the Pueblo and surrounding communities of Sile and Peña Blanca with 50 miles of fiber. Project complements a separate fiber span funded by the NTIA Tribal Broadband Connectivity Program. Project budget involves $15.02 million − 61.3 percent of which is grant funded.
Tularosa Communications	$4.247M	• Deploys 63 fiber miles to connect 574 unserved premises across the communities of Dog Canyon and Dog Ranch. Project budget involves $5.66 million − 75percent of which is grant funded.

➢ **Map of State and Federal Grant Funded Awards (2018-2023)**

Grant-Funded Areas (2018 - 2023)

- Connect New Mexico - Wave 3
- Connect New Mexico - Wave 2
- Connect New Mexico - Wave 1
- New Mexico Public Regulations Commission (PRC) (2018-2023)
- Community Connect Grant Program
- Connect America Fund - Phase I (CAF I)
- Connect America Fund - Phase II (CAF II)
- Enhanced Alternative Connect America Cost Model (E-ACAM)
- Rural Digital Opportunity Fund (RDOF)
- Rural eConnectivity (ReConnect) Program
- Telephone Loan Program
- Tribal Broadband Connectivity Program - NOFO 1 (TBCP)

NMR 29 Dec 2023

10.0 Broadband Availability: Key Priorities, Initiatives and Strategies

10.1 Strategic Priority: Grant Funding to Enable Broadband Deployment

Overview: A key obstacle preventing the deployment of high-speed, reliable broadband through terrestrial-based networks, especially in rural communities, involves the lack of a financially viable and sustainable business case funded through private capital. The challenges include the high costs of network deployment and operations and the low population densities that limit the revenue opportunity and spread the upfront and recurring costs across fewer potential customers. Grant funding is required to offset this financial gap.

OBAE's focus for 2024 involves two major infrastructure funding initiatives. First, OBAE opened the Connect New Mexico Fund in December 2023, and aims to select awardees by June 2024. Second, it aims to launch the federally-funded BEAD program, for which OBAE will serve as the administering agency.

10.1B	Connect New Mexico Fund: Awardee Selection
Overview	
Description	• The "Connect New Mexico Fund" was established in December 2021 by the Connect New Mexico Act from appropriations, gifts, grants and donations.[31] The fund of $70 million can be awarded to local governments, state agencies, public educational institutions, and Tribal governments. • The Connect New Mexico Act, through House Bill 10, established the Connect New Mexico Fund in December 2021, per Section N.M. Stat. § 63-9K-6.[32] The funding source comprises appropriations, gifts, grants, and donations. • Senate Bill 377 (Section 17B) allocated $70 million from the general fund to plan, design, engineer, construct, purchase, and equip broadband infrastructure statewide. [33] The legislation also requires that any unexpended or unencumbered funds shall revert to the general fund or public education reform fund at the end of fiscal year 2026 (June 30, 2026). • House Bill 262 provided further specificity regarding eligibility and evaluation factors for the Connect New Mexico Fund.[34] It directed the broadband office (i.e., OBAE) to implement a grant program to develop and expand broadband infrastructure and services and support digital inclusion.
Objectives	• Foster the deployment of broadband access to unserved and underserved locations (residents, businesses, and community institutions) through scalable, sustainable networks and financially viable business plans that serve the comprehensive community with reliable, reasonably priced high-speed solutions while promoting digital inclusion.
2023 Recap	• NOFO was issued on December 12, 2023; applications are due March 11, 2024.
2024 Action Plan	

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[31] See House Bill 10, December 21, 2021.

[32] House Bill 10, https://www.nmlegis.gov/Sessions/21%20Regular/final/HB0010.pdf

[33]   Senate Bill 377, https://www.nmlegis.gov/Sessions/21%20Regular/final/SB0377.pdf

[34] House Bill 262, https://nmlegis.gov/Sessions/23%20Regular/final/HB0262.pdf

Key Strategies	Key Action Items
• Foster program awareness.	• Host webinars, office hours, and 1:1 sessions to answer questions. • Launch an aggressive campaign to provide program awareness to local stakeholders through OBAE program managers.

• Select awardees that can best meeting program objectives.	• Commission an independent team of application reviewers.
	• Run Mapping Review process that invites existing providers to challenge the availability status of proposed funded locations.
	• Engage in due diligence of applications that score well.
	• Cure key concerns during due diligence. These may include:
	   – Opportunities for budgetary savings
	   – Reasonableness of pricing
	   – Adherence to all programmatic requirements
	   – Grant requested commensurate with demonstrated financial need (e.g., funding gap in the business case)
	   – Request for further information that is found to be missing, incomplete, redacted, unclear, or requiring clarification
	   – Consideration of justification for waiver of the minimum match requirement (if applicable)

• Develop post-award monitoring and tracking program.	• Sign grant agreement with all awardees within 60 days of announcement. • Develop all reporting templates. • Assign Project Manager to conduct regular checkpoint calls and site visits.

Implementation	
KPIs	• 2:1 ratio of funds requested vs. funds available which means strong participation to enable selection of highest quality projects based • Awardee selection by June 30, 2024 • Grant Agreements signed by August 31, 2024
Critical Success Factors	• Robust participation by service providers and submission of applications that target eligible locations and provide reasonable match commensurate with funding gap in the business gap

10.1B	Launch BEAD Funding Program
Overview	
Description	• The BEAD Program—created by the IIJA and administered by the NTIA—provided New Mexico federal funding of $675.4 million for broadband deployment, mapping, and adoption projects. The amount constitutes the largest sum in history for broadband deployment to unserved and underserved communities. • OBAE will apply the funds strictly for the deployment of broadband infrastructure. • BEAD requires the State to design a grant program that: - prioritizes projects designed to provide fiber connectivity directly to the end user;

	- requires funded projects to offer a low-cost option to eligible subscribers prioritizes proposals that improve affordability to ensure that networks built using taxpayer dollars are accessible to all Americans; ensures that the State has plans to address middle-class affordability; - require at least a 25 percent matching contribution and incentivizes higher contributions (a lower contribution may be allowed in certain specific circumstances delineated in the BEAD NOFO such as projects in designated "high-cost areas" and other cases in which NTIA has waived the matching requirement) • The State is required to engage with local stakeholders so they can note their local needs and inform the State's process—including through the development of detailed broadband availability data.
Objectives	• Connect all unserved locations across New Mexico and as many underserved locations and community institutions lacking 1 Gbps.
2023 Recap	• Completed the Five Year Action Plan by August 29, 2023. The Plan involves a multi-step process to develop a comprehensive strategy to connect unserved and underserved residential and business locations, and provide gigabit connections to community anchor institutions such as libraries and community centers lacking such connectivity. • Submitted Volumes One and Two of the Initial Proposal by the designated deadlines; expected proposal clearance sets the path for New Mexico to receive the appropriated amount later in 2024.

2024 Action Plan	
Key Strategies	**Key Action Items**
• Gain NTIA clearance to launch the program.	• Obtain NTIA approval of the Initial Proposal Volumes One and Two.
• Finalize eligible service areas.	• Launch the challenge process.
• Develop critical program design factors.	• Define PAU's that best serve program principles (e.g., inclusion of high-cost locations). Obtain input from key stakeholders (e.g., broadband service providers). • Determine reference price for each PAU.
• Develop application materials.	• Draft NOFO, application, scoring guide, templates.
• Pre-qualify potential applicants.	• Develop application for pre-qualification.
• Select awardees (this phase may span into 2025).	• Develop team of reviewers. • Review and assign scores. • Engage in negotiations. • Host Round Two (if required)

Implementation	
KPIs	• At least two bids for every PAU. • Match commensurate with the amount OBAE's business analytics deems reasonable. • Fund terrestrial solutions to the vast majority of all unserved locations (Note: OBAE will consider non-terrestrial solutions when terrestrial networks are impracticable to deploy due to geography, topography, or excessive cost barriers.)
Critical Success Factors	• Robust participation by qualifying broadband service providers. • Applicants able to bring reasonable match funding (internally sourced, lenders, equity investors, community contribution, etc.)

10.2   Strategic Priority: Robust Data for Spatial Data Management and Analytics

➢ **Overview**

Underpinning OBAE's goals is an understanding of the location, characteristics, and status of broadband initiatives across the State. This kind of understanding involves ingesting and managing information from a variety of stakeholders, spanning from individual end-users to service providers to decision-makers. Whether that information is used simply in an informational map or incorporated into data models for complex planning and decision-support, a robust information management system must be in place.

The OBAE has very specific requirements to provide public information in the form of maps as defined in Section 63-9J NMSA 1978. OBAE also has implied needs for data management and analytics to support many other functions such as quality review and analysis of the State's grants program awards; developing data-informed definitions of abstract concepts such as digital equity and high-cost areas, and putting those places on a map; and providing awareness among stakeholders and across initiatives to ensure efficiency and effectiveness.

OBAE's focus for information management and analytics in 2024 and beyond involves three major initiatives:

- Robust data for spatial data management and analytics, including audits of data used for funding and decision-making;
- Evolution of the primary, public-facing, informational broadband maps to ensure greater awareness and usability;
- Implementation of an information architecture that best supports the OBAE's initiatives and those of key stakeholders.

10.2A	Robust Data for Spatial Data Management and Analytics
Overview	
Description	• The Federal Communications Commission (FCC) manages a national database of broadband serviceable locations (BSLs) and broadband availability at those locations. These data are used by various funding entities to establish needs and priorities. Each year, the FCC publishes two versions of each dataset, and it is incumbent on the states to ensure their accuracy and completeness. This, in turn, ensures New Mexico its fair share of needed funding from the Federal government. The FCC continues to reject what NM constituents are filing as valid BSLs, and OBAE's tracking of these discrepancies for ongoing advocacy is critical. • Being a rural western state with low density populations, diverse land terrain and ownership, and cultural complexity, New Mexico has unique qualities that distinguish it from other states and national patterns. It is important that our work is based on sound data, which also accurately reflects our unique priorities. • New Mexico was allocated $675 million in NTIA BEAD funds to deliver broadband to all of the unserved locations in the state. The obligation of those funds depends on an open data challenge cycle that must be managed by OBAE prior to issuing the NOFO for the BEAD program. This must be completed by Q2 2024 to ensure NM awards money efficiently and accurately to those places most in need.

Objectives	• To have accurate data for serviceable locations and broadband availability so that New Mexico spends and receives funding efficiently and appropriately. • Support improvements in the quality of reference data including accuracy, completeness, and timeliness. • Expand awareness of the importance of the data for analysis and planning.
2023 Recap	• Challenge FCC Broadband Serviceable Location (BSL) Fabric and Broadband Availability Data: Submit an additional 24,000 location and almost 200,000 service availability challenges after a statewide assessment of data. Assess challenge methodologies relative to final FCC adjudication of the challenges. These findings are currently being reviewed with FCC and shared with stakeholders to best advocate with FCC on behalf of stakeholders when FCC data appear to be systematically in error. • Developed a SQL geodatabase model to manage the various "states" of data about locations and Internet service, including FCC claims, data challenges, and adjudications of those claims. • Conducted one-on-one sessions and workshops on methods and data for assessing FCC map accuracies and reporting issues. Compiled and submitted bulk challenges for multiple local and Tribal entities. • Deployed a basic data collection app for internal staff to capture important data while in the field. • Apply data analysis results to the proposed modifications in the NTIA BEAD Initial Proposal Volume 1, and scope the state challenge tool to be used in grant-making of the NTIA BEAD allocation to NM. • Developed a data inventory and set of standard operating procedures to guide the routine planning and maintenance of mapping tools and resources. A "functional data taxonomy" ties data and geographic information system (GIS) functions to OBAE's strategic initiatives and business functions. • Hosting five primary foundational datasets in SQL geodatabase, which are scripted to automate updates and use: 1) statewide speed test results for the past two years which is updated monthly; 2) a subset of relevant demographics data from Census and ACS; 3) the broadband serviceable location (BSL) data, including claimed and estimated broadband service availabilities; 4) grant program boundaries and enforceable commitment; 5) community anchor institutions and data on service status. Datasets are continuously being loaded and processed to support decision-making as the programmatic questions evolve.

Action Plan

Key Strategies	Key Action Items
• Use and improve local data sources that are most useful for understanding missing or inaccurate needs.	• Maintain a repository of data or data services with standard update cycles, using data-sharing agreements when needed. • Host data in various states of adjudication to provide context of ongoing data edits • continue to centralize and standardize data from initial ad-hoc repositories into the OBAE enterprise geodatabase, simultaneously improving upon layer naming, symbology, and descriptions, including metadata for all data. • deploy a cloud-based State Challenge Tool for conducting a robust, 120 day data challenge process as required by BEAD

	• Support efforts to build baseline, statewide inventories of relevant data like structures (building footprints) and addresses. • Add additional primary foundational datasets to SQL geodatabase for standardized management and integrated data analytic capabilities: 1) service area boundaries for non-grant related locations, which can impact eligibility for grant funding; 2) middle mile information for strategic planning; 3) field data to help with situational awareness; 4) challenges that have been submitted but not yet adjudicated by FCC
• Engage with New Mexico's service providers to ensure data timeliness and accuracy.	• Maintain and improve a secure data upload site where providers submit data. • Feedback loop with providers on data transmissions and issues. • Implement methods for tracking non-grant based project plans to minimize overbuilds
• Engage local and regional representatives as data challenge advocates.	• Technology transfer sessions with local, regional and Tribal entities on methodologies, tools, and data that they can then share with their own constituents. • Identify key collaborators to join and contribute content to the Broadband Community Mapping Hub. • Map-centric dashboard of challenge status by county, to document progress and encourage key stakeholder engagement at all levels.
• Engage the public, individuals, and businesses, to perform their own data challenges.	• maintain a dedicated web page on mapping hub for map and data challenges • host in-person workshops and recorded webinars on continuous data improvements, particularly in the form of challenges that will ensure the efficient use of grant funding • Provide alternative interfaces that support self-advocacy when the FCC map is inadequate – paper surveys, online survey forms, web maps. • Compile bulk-challenges as necessary to represent entities not able or willing to challenge the FCC directly.
• Continue to engage FCC and other federal entities on New Mexico's needs.	• Regularly analyze data and submit challenges as necessary, focusing on any areas not already being covered by other entities. • Facilitate meetings between federal agency staff, such as FCC and NTIA, and NM stakeholders, ensuring strength in our collective advocacy • Ensure data access for stakeholders via appropriate data licensing agreements , such as with CostQuest for FCC BSL Fabric
Implementation	
KPIs	• Dashboard of Challenge Status by County or other standard geographic boundaries continuously updated as new data are available. • Participate in and meet each FCC Location Data Challenge deadline.

	• Relevant map service data currently hosted in EDAC's environment will be migrated to OBAE geodatabase by the end of 2024. • Challenges made by external entities are incorporated into the NM Best data layer whenever they are received. • A data or application specification page exists and is being maintained for every public-facing app and OBAE-sourced data layer. • Metadata exists for any feature classes hosted in OBAE SQL geodatabase.
Critical Success Factors	• Purchase of a vendor-hosted cloud solution for the State Challenge Portal • Service providers contribute geospatial distribution and subscription data directly to the State.

10.2B	Evolution of the State Broadband Map
Overview	
Description	• New Mexico has had a statewide Broadband Mapping Program (https://nmbbmapping.org/mapping/) for over a decade and has had an online informational map for almost as long. The map has provided a dependable, centralized location for data used by multiple initiatives and stakeholder types. With the establishment of the OBAE, and a shift by the FCC to collecting data for point locations instead of census blocks, the main map has been updated to incorporate an updated data model that provides point-level information on both serviceable locations and availability, but and to incorporate the growing number of other variables important for understanding the state of broadband in New Mexico. • Increasingly users of different skill levels are engaged to provide subject matter expertise and local insights. It is important that the mapping capabilities support engagement, such as providing search, query, adjust, analyze, extract, and report tools. • As the methods for managing the fundamental data become more routine, greater focus can be on how best to represent those data. Understanding and engagement can be enhanced by presenting dynamic infographics for targeted audiences, including standardized maps and map-derived data.
Objectives	• Maintain public-facing interfaces that are responsive to the evolving needs of the communities who use them. • Build systems of data and technologies that most efficiently deliver the latest information.
2023 Recap	• A centralized public mapping interface (maps.connect.nm.gov), designed in coordination with the OBAE website, was deployed, which provides a one-stop-shop for accessing broadband map resources for NM. • Standardized mapping app templates have been developed to provide consistency and familiarity to end-users, incorporating branding, efficient mouse navigation, and balanced layout. • Data from initial ad-hoc repositories are being published in the new OBAE enterprise geodatabase and then synced to external servers for efficient and timely public access. Operations Plan functions that were developed include an SOP for deprecating old content and routine application testing, maintenance, and updates.

- Data aggregation of Ookla speed test results and FCC broadband map data are complete, and automated to manage routine updates coming from external sources. These are produced at scales appropriate to targeted user groups and licensing levels.
- Updated data available in public maps for community anchor institutions, indicators of digital equity, and middle mile resources and plans.
- Standardized, automated PDF map layouts have been produced to provide mapping data for web site users who do not have broadband.
- Ookla Swipe Tool was published to allow constituents to study the speed test evidence relative to the FCC published service claims.
- Publish a public-facing dashboard Federal Service Availability Status for NM (arcgis.com) enabling users to query by various areas of interest to return NM's best available information about FCC BSLs and service availability at those locations.

2024 Action Plan

Key Strategies	Key Action Items
• Encourage more end-user awareness, engagement, and understanding.	• maintain & tighten integration of mapping Hub with the main OBAE website • Continue to evolve the one map approach to address specific needs with new maps and tools • Evolve the standardized mapping app templates to incorporate accessibility requirements and ensure responsive design for better mobile user experience.
• Give the power of mapping to the end-users	• Enable end-user reporting for standard areas of interest such as counties, legislative districts, and exchange carrier service areas • Design "Community Profiles", built with infographics and maps and charts, summarizing indicators of interest such as demographics, within standard areas of interest. Provide these in the interactive public maps, but also as user-generated static outputs.
• Enhance user adoption and participation by improving data quality and dependability.	• Follow a standard data update cycle, that is ideally real-time or quarterly, but no longer than bi-annually. • Establish data-sharing agreements, formalize data delivery mechanisms, and adopt data standards when necessary to improve usability of incoming data. • represent the best data for any location by incorporating data from many sources into one interface, enabling constituents to make informed decisions based on all available information.
• Continuously improve data offerings to help complete the big picture of broadband for New Mexico.	• Update the public dashboard of un/under/served in NM that accounts for those already funded by existing grant programs (e.g., those with 'enforceable commitments'). These are "Grant Eligible" locations. • Incorporate new data such as the FCC point locations and availability, Middle-Mile network spans, Statewide Education Network (SEN) nodes [aggregation centers], 5G coverage • Identify any opportunities to make previously protected data sources available publicly, such as provider data and speed test data, perhaps using data generalization methods.

	• Subdivide previously generalized map layers as needed to refine the state of broadband, such as refining service definitions to reflect availability but also subscriptions (as an indicator of adoption).
• Organize technical infrastructure to support evolving needs.	• maintain data and hosting environments, and publish map services that can be shared across applications. • Identify key data custodians and data connections such as map services and API's that streamline data updates and increase dependability and accountability. • Onboard new staff and distribute the workload

Implementation	
KPIs	• All public apps will incorporate fundamental accessibility requirements and responsive design by the end of 2024. • Two standard community profile templates are built and can be generated on-demand by OBAE. • Publish four fundamental versions of BSL data by the end of 2024: FCC Official, NM Deduplicated, NM Best, and NM Implemented. • map layers in public maps contain explicit details on vintage and update cycles.
Critical Success Factors	•

10.2C	Implement Analytic and Decision Support Tools to Empower All Stakeholders
Overview	
Description	• The value of broadband mapping data is a function of its awareness, understanding, and usage. Information management responsibilities go beyond providing public-facing informational maps. These responsibilities include ingesting and synthesizing data from many disciplines and organizational levels, with touchpoints spanning development of statewide networks to managing and tracking outreach to assessment of digital equity and strategic planning. • As OBAE refines the definition of success for New Mexico, the information systems need to support data for new metrics, such as resiliency and security. Development of some strategic priorities such as PROP and Statewide Middle-Mile Networks will require data integrations and standards when interfacing with multiple providers such as state agencies, local governments, and private entities. Finally, accurate and timely information needs to be presented to decision-makers in a format that is readily accessible in analytic tools and dynamic dashboards. • Many local governments and representatives of New Mexico communities lack staffing or technological tools that can facilitate data development, improvement, and understanding in the context of broadband expansion.
Objectives	• Plan, develop, maintain, and support a robust decision support toolkit to help New Mexico stakeholders develop key insights and make critical decisions based on broadband availability.

	• Assemble the necessary data and technologies to accomplish OBAE's goals and strategic priorities.
2023 Recap	• Twenty-five (25) external stakeholders are using or have been directly engaged with the Broadband Community Mapping Hub. This web environment provides for "secure data consortiums" of users to assemble data for awareness and discussion. Additional stakeholders are expected in 2024 as more entities receive federal licensing required to access our value-added data products. • OBAE continues to participate in and lead priority technical working groups/meetings, and the advisory membership of the CNMC Mapping and Data Evaluation Working group has doubled. Current advisory and voting members represent private citizens, public education, advocacy groups, local government, industry, university and private consultants, with over twenty (20) members, each representing a unique entity. This working group meets every two weeks • The GIS needs assessment including an implementation roadmap is complete and is being applied by the team regularly to guide ongoing work and priorities. This process included 14 interviews with key stakeholders and research of the web-presence of other state broadband offices. • A secure, enterprise-level GIS environment was built on a virtual machine platform, which includes a SQL geodatabase for hosting and processing foundational data. These data include 1) statewide speed test results for the past two years which is updated monthly, 2) a subset of relevant demographics data from Census and ACS which is scripted to automate updates and use, and 3) the broadband serviceable location (BSL) data, including claimed and estimated broadband service availabilities. Datasets are continuously being loaded and processed to support decision-making as the programmatic questions evolve. • A requirements assessment of map and tool resources for NM tribes was completed as part of a Governor's Task force established in 2023. Two public interfaces are published (Tribal Communities | Broadband (arcgis.com) and Tribal Broadband Resource Library - CONNECT NEW MEXICO (nm.gov)) and secure data consortiums for mapping have been created for three tribes. • The hiring of three geospatial data management and analysis positions by the end of 2023 was deferred until 2024 because other program positions need to be filled first. • Continued contracting with RESPEC and EDAC to provide technical implementation and analysis support.

2024 Action Plan

Key Strategies	Key Action Items
• Develop foundational information technology architecture.	• Maintain enterprise ArcGIS environment on DOIT's cloud infrastructure, including SQL geodatabase and Active Directory user authentication model. • Implement the staging environment in accordance with best practices. • Hire GIS Manager, GIS Developer, and GIS Database Administrator • Refine Standard Operating Procedures (SOP's) to ensure system is kept current and compliant.

• Support existing OBAE initiatives.	• Revisit the 2023 Implementation Roadmap to guide the planned work pipeline • Support the grants review process by maintaining a provider mapping tool for data review and comment. • Implement the Project Area Unit planning tool for geospatial analysis and development of PAU's for the BEAD grant program. • Implement the Middle Mile Scenario Builder to support network planning and development. • Support the PROP initiative with custom tools • Ad-hoc data analysis and tools to support activities like targeted mailers, technology transfer and public information sessions, and strategic planning and reporting.
• Maintain awareness and engagement in technical and tactical needs of broadband.	• Participate in and/or host meetings with key stakeholders as identified in the ecosystem diagram (such as the existing DOT Rights-of-Way and Fiber Infrastructure meeting, NM Geospatial Advisory Committee, and the Mapping Data and Evaluation Working Group of the Connect New Mexico Council). • Study best practices and evaluate the work of other state broadband mapping programs to assess suitability for NM.

Implementation	
KPIs	• External stakeholders representing diverse needs and priorities have used or been directly engaged with the Broadband Community Hub • Serviceable locations and service status is published & maintained in four versions: FCC Official, Grant-Eligible, NM Best, NM Implemented • Active participation by OBAE in at least 70 percent of priority technical working groups/meetings. • Project Management Plan that formalizes the relationship between the 3-Year Strategic Plan initiatives and deadlines with the analytic tools being developed, and incorporates the findings of the Data Requirements, Strategy, and Ecosystem Diagram developed in 2023. • Centralized content repository containing standard operating procedures, application and data specifications, and design outlines for planned work. • Locally sourced data that are fundamental to broadband are stored in OBAE's secure, SQL geodatabase, and contain metadata.
Critical Success Factors	• OBAE technical staff are funded and hired by the end of FY24, or the office continues to be supported by contracted specialists. • Ongoing contractual support depends on successful implementation of the IT Professional Services Statewide Price Agreement, which expired in December 2023 and has not yet been contracted with awarded vendors. • Contracts with technical resources continue to perform well and achieve the objectives written in the statements of work. • Enterprise system support from DOIT continues to be timely and responsive.

10.3   Strategic Priorities: Removing Deployment Barriers Related to Permits, Rights of Way, and Pole Attachments (PROP)

Overview: The implementation of broadband networks requires significant planning and coordination to obtain approvals from government and private stakeholders before construction can begin. Prerequisites involve government permits (e.g., federal, state, Tribal, land grant), rights of way, and private easements.

To illustrate, federal and State authorities require an impact assessment to the environment and to cultural and historical assets and resources. Transportation authorities control the rights of way adjacent to major roadways, and have to grant access in exchange for fees. Pole owners require broadband providers to obtain authorization and incur expense for "Make Ready" – or preparing utility poles for safely receiving new broadband infrastructure attachments, as well as recurring costs for broadband infrastructure attached to utility poles ("Joint Use"). Local authorities require zoning approvals for wireless tower deployment. The process is complex and requires a great deal of time and expense.

The initiatives below are intended to facilitate and expedite the complicated processes of securing the Permits, Rights of Way, and Pole Attachment agreements. They will help facilitate and expedite the deployment of broadband infrastructure to connect unserved and underserved residences and businesses, and connect Community Anchor Institutions (CAIs). Better PROP processes are also needed to meet the NTIA requirements for BEAD funding distribution..[35]

NTIA Mandate
Identify steps that the Eligible Entity will take to reduce costs and barriers to deployment, promote the use of existing infrastructure, promote and adopt dig-once policies, streamlined permitting processes and cost-effective access to poles, conduits, easements, and rights of way, including the imposition of reasonable access requirements. Consistent with the goal that Eligible Entities seek to minimize the BEAD funding outlay on a particular project, Eligible Entities and their political subdivisions are strongly encouraged to remove time and cost barriers associated with BEAD projects, including by expediting permitting timelines and waiving fees where applicable, where doing so does not undermine other critical policy goals.

➢ **Connect New Mexico Council Working Group**

The Connect New Mexico Council (CNMC) established the Permits, Rights of Way, and Pole Attachments (PROP) working group to focus on essential processes that will make or break the effective deployment of broadband to all New Mexicans. The composition of the working group is diverse, including State and federal agencies, municipalities, tribal entities, electric utilities that own poles, and Internet service providers. The working group's goal is to develop policy recommendations that will improve existing processes and collaboration, supporting the deployment process.

➢ **Sovereignty of Tribal Nations**

OBAE is committed to honoring the sovereignty of the 23 Tribal nations of the State. This commitment will be reflected through: a) fostering government-to-government relations; b) understanding their unique status and jurisdiction with regard to approving projects that traverse Tribal lands; c) continuous consultations.

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[35] https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf

➢ **Major PROP Initiatives**

Three major PROP initiatives include:

- Permits and Rights of Way Streamlining: This effort is intended to facilitate and expedite the complicated processes of securing the Permits, Rights of Way agreements necessary from the many entities (local, state, and federal) having jurisdiction. The initiative is intended to put in place policy recommendations and processes that will better coordinate efforts between State and federal agencies, Tribes and Pueblos, municipalities, and other stakeholders.
- Modernization of Pole Attachment Policies and Practices: This effort is intended to facilitate and expedite the complicated processes of securing Pole Attachment agreements for "Make Ready" – or preparing utility poles for safely receiving new broadband infrastructure attachments.
- NMDOT Rights of Way Fee Waiver Program for In-Kind Fiber and/or Conduit Contribution: Effort involves obtaining Rights of Way for a significantly reduced charge by offering DOT and public agencies access to capacity or ability to install conduit.

10.3A	Permit and Rights of Way Streamlining
Overview	
Description	This effort is intended to facilitate and expedite the complicated processes of securing the Permits, Rights of Way agreements necessary from the many entities (local, state and federal) having jurisdiction. PROP will ensure NM entities have access to fast, fair, transparent, and cost-effective processes that support the deployment of broadband infrastructure to connect 100 percent of NM residents and organizations who want access to scalable, reliable, affordable, and secure Internet. The initiative is intended to put in place policy recommendations and processes that will better coordinate efforts between state and federal agencies, Tribes and Pueblos, municipalities, and other stakeholders. • Working Group under the Connect NM Council. • OBAE becomes the central repository of permits and Rights Of Way (ROW) for broadband work.
Objectives	• Coordinate processes between state, federal and other authorities having jurisdictions (and utility pole owners), eliminating overlaps, ensuring transparency, and realizing time and cost-efficiencies whenever possible. • Measure and improve on number of steps and duration from permit request submission to start of deployment. • Support improvements in the quality of permit requests submitted by broadband providers and (third-party) consultants.
2023 Recap	• The Connect New Mexico Council initiated a "Permits, Rights of Way and Pole Attachments" working group to foster collaboration with key permitting authorities, share best practices and solutions, and work with relevant authorities to implement reforms. • Informational, overview and working sessions received broad participation by municipalities, state agencies, Electrical utilities (investor owned and cooperatives), tribal organizations, Internet Service Providers (ISPs) and other partners, working to gather information and establish baselines for procedures currently in place. • DOT is reporting working to deploy the pilot ePermit system.

	• OBAE initiated discussions with several state agencies about the needed requirements to share information related to the permitting status for broadband infrastructure projects. • Developed a list of recommendations for policy and potential legislative action at state and federal level, including reducing cultural and environmental study requirements (as possible/appropriate) in pre-disturbed roadway and utility corridors.

2024 Action Plan

Key Strategies	Key Action Items
• Participate in working groups to study challenges and opportunities.	• Actively participate in and lead the Connect NM Council working group that focuses solely on broadband Permits, Rights Of Way and Pole Attachments (PROP) issues. • Establish a close working relationship with the Permitting Council, a newly establish federal organization that coordinates the many federal agencies involved. • Strengthen the working relationship with Tribes and Pueblos. Develop collaborative approaches and shared resources to develop permits and ROW. • Coordinate with local partners – counties, municipalities, individuals, etc.
• Develop and advocate for policies that drive meaningful reform.	• OBAE is recommending legislative changes that will expand the same benefits available to other essential services (telephone, water & sewer, electricity) to broadband infrastructure. • Establish "Dig Once" and conduit sharing policies. • The NM legislature should establish a group (task force or working group) with authority, expertise, and resources that will work with stakeholders and resolve disputes in a timely fashion
• Identify opportunities to leverage technology.	• Leverage technology such as the newly developed ePermit (DOTs electronic permitting system) to automate, implement efficiencies and add transparency to the complicated permitting and ROW process.
• Develop tools and materials to mobilize change.	• Develop a "PROP Manual" regularly updated and available on the OBAE website that will guide applicants through the processes & steps required. • Leverage the Fast41 and the Permit Council federal process that streamlines the federal agencies review, establishing a single Point of Contact and a timeline for all federal agencies involved in the permitting process. • Ensure adequate resources (permit specialists, contract firms, funding) are in place to support the large volume of work expected with the large amounts of private, local, state and federal funding investments in broadband infrastructure.

Implementation

KPIs	• Formal written recommendations to OBAE and Connect New Mexico Council to streamline permits and rights of way processes within state agencies.
	• Collect, review and publish KPIs relevant to the permitting process for broadband infrastructure projects:
	    o Number / type of jurisdictions involved in the permitting process
	    o Average duration (number of days) for permit issuance
	    o Number of permits submitted deemed "complete"
	    o Average cost for permits

Critical Success Factors	• Adoption of best practice approaches and procedures by all partners involved in the permitting & ROW review and issuance.

	• Adequate/qualified resources from the vendors (applicants) and the federal/state/local authorities with jurisdiction.
	• Adequate resources within OBAE to implement the "One Stop Shop" for all broadband permits & ROW information system in the coming years.
	• Additional Project Managers and other resources with knowledge of Permits and ROW processes within OBAE to help with the coordination efforts.
	• Focus on collaboration, sharing resources, simplifying processes by all partners.

10.3B	Modernization of Pole Attachment Policies and Practices
Overview	
Description	• This effort is intended to facilitate and expedite the complicated processes of securing the Permits, Rights of Way and the Pole Attachment agreements for "Make Ready" – or preparing utility poles for safely receiving new broadband infrastructure attachments; the initiative is intended to put in place policy recommendations and processes that will better coordinate efforts between vendors deploying broadband infrastructure and utilities and/or municipalities (utility pole owners) and other stakeholders.
	• PROP will work to ensure NM entities have access to fast, fair, transparent and cost-effective processes that support the deployment of broadband infrastructure to connect 100% percent of NM residents and organizations who want access to scalable, reliable, affordable and secure Internet.
Objectives	• Coordinate processes between vendors/contractors and utility pole owners, eliminating overlaps, ensuring transparency, and realizing time and cost-efficiencies whenever possible.
	• Ensure adequate resources are in place to eliminate or minimize delays.
	• Have clear expectations for all parties to adhere to. Continuously monitor progress and measure KPIs.
	• Resolve disputes in a timely manner to ensure momentum on deployment is maintained.
2023 Recap	• The Connect New Mexico Council initiated a "Permits, Rights of Way, and Pole Attachments" working group to foster collaboration with key permitting authorities, share best practices and solutions, and work with relevant authorities to implement reforms.
	• OBAE met multiple times with utility pole owners (NMRECA and Electric Cooperatives) as well as investor owned utilities (such as PNM and El Paso Electric) to develop and share best practice approaches and.
	• Proposed draft legislation as well as goals and objectives for a "Statement of Purpose" document to govern the process of attaching broadband infrastructure to utility poles have been reviewed with the partner utility pole owners.
2024 Action Plan	
Key Strategies	Key Action Items
• Participate in existing working groups and form new ones that	• The Connect NM Council established a working group focused solely on broadband permits, Rights of Way and Pole Attachments (PROP) issues.

bring more partners together.	• The NM legislature should establish a group (task force or working group) with authority, expertise and resources that will work with stakeholders and resolve disputes in a timely fashion.
• Advocate for policies that drive meaningful reform.	• OBAE is recommending legislative changes that will expand the same benefits available to other essential services (telephone, water & sewer, electricity) to broadband infrastructure. Develop "One Touch Make Ready" policies.
• Develop programs and policies to make "Make Ready" costs more efficient and transparent.	• Find ways to develop engineering and "Make Ready" Cost estimates earlier to avoid cost and project budget overruns. • Establish a way to timely develop fair, predictable and transparent charges for "Make Ready". • Implement "One Touch Make Ready" policies that will reduce cost for all and benefit all parties. • Establish a "Pole Replacement" fund that will cover the costs associated with utility pole replacements in specific circumstances, in particular for projects in hard to reach areas. • Establish a fair, transparent and predictable cost-sharing methodology for pole replacements.
• Collaborate with pole owners to identify opportunities to streamline the application, approval, and execution process.	• Support improvements in the quality of permit and Make Ready requests submitted by broadband providers and (third-party) consultants. • Establish a process and a framework for expedited dispute resolution. • Work closely with utility pole owners in unserved areas, including municipalities and electric cooperatives, to identify quickest broadband deployment strategies. • Employ technology tools that allow better asset tracking (existing pole conditions and attachments), minimizing the need for physical inspections
• Develop tools and resources that foster education and address barriers.	• Develop a "PROP Manual" regularly updated and available on the OBAE website that will guide applicants through the processes, and steps required. • Ensure adequate resources (permit specialists, contract/engineering firms, funding) are in place to support the substantial volume of work expected with the large amounts of private, local, state and federal funding investments in broadband infrastructure.

Implementation	
KPIs	• Formal written recommendations to OBAE and Connect New Mexico Council to create a consistent, fair and predictable process to secure Pole Attachment agreements. • Written procedures to streamline and measure current processes, steps, and fees. • Develop metrics to evaluate the process of attaching to utility poles.
Critical Success Factors	• Establishing baselines for procedures currently in place. • Have all non-regulated utility pole owners agree to consistent and more streamlined processes associated with attaching broadband infrastructure to utility poles. • Increase the specialized pool of resources and up-to-date information available to all parties. • PROP Statement of Purpose / Pole Attachment Manual written, edited, and released.

10.3C	NMDOT Rights of Way Fee Waiver Program for In-Kind Fiber and/or Conduit Contribution
Overview	
Description	• The NMDOT has been developing right-of-way management policies and rules to allow private broadband entities to be treated as utilities under 23 CFR Part 645, for several years, beginning with revising the Utility Accommodation Rule 17.4.2 NMAC to allow private businesses to have similar access to public rights-of-way that Public Regulation Commission (PRC) consumer rate regulated traditional utilities like water, electricity and gas have enjoyed. • The New Mexico Department of Transportation (NMDOT) makes controlled public right-of-way available to private broadband entities for deployment of conduit and fiber and wireless towers or poles. NMDOT encourages Dig Once by either: 1) installing state owned conduit and fiber at the same time as the private facilities are deployed; 2) requesting a fair equitable reduction in billable broadband services provided to the State by the broadband entities or their partners. The State's exchange of access and use of the public right-of-way, for conduit and fiber or broadband service on a monthly or annual billable basis, complements the FCC's infrastructure sharing statute 47 USCS §224. FCC statute 47 USCS § 253 supports the authority of a State or local government to manage the public rights-of-way and to require fair and reasonable compensation from telecommunications providers, on a competitively neutral and nondiscriminatory basis, for use of public rights-of-way on a nondiscriminatory basis.
Objectives	• Foster Dig Once and enhance project financial sustainability by significantly reducing or eliminating rights of way fees in exchange for providing NMDOT and other New Mexico government agencies a commensurate value of network capacity – such as dark fiber and fiber maintenance, or allowing NMDOT to install their own conduit and fiber.
2023 Recap	• The NMDOT has also been developing an on-line web accessed right-of-way use permit system that will expedite the process, from use-permit application, to approval of shovel ready projects. This system is being enhanced to support the processes necessary for broadband infrastructure deployment work. • NMDOT has been implementing a publicly available four-year future Statewide Transportation Improvement Program (STIP) access portal so that broadband companies can plan on future route deployments simultaneously with NMDOT highway improvement projects, complying with a dig-once policy of getting in, getting out, and staying out, to minimize deployment congestion and maximize public safety. • OBAE assisted with the passage of HB160 to allow DOT to waive or reduce fees for broadband expansion, especially in rural/tribal/ other unserved areas of the state.
2024 Action Plan	

Key Strategies	Key Action Items
• Obtain legislative approval on in-kind policy.	• Host discussions with legislators and partners on the value of this program.
• NMDOT to publish the new program in 2024.	• Publish this program across all information channels managed by OBAE.

• Encourage beneficiaries of Connect NM Pilot Program to participate in this program.	• Publish this policy in guidance. • Make this part of the recurring checkpoint calls.

Implementation	
KPIs	• 75 percent of grantees (for broadband deployment projects) using NMDOT right of way participate in program to reduce operating expense for ROW in exchange for contributing fiber or conduit space for state agency usage.
Critical Success Factors	• NMDOT needs to develop a rulemaking to adopt HB160. • Dependent on the enabling legislation resulting from amendment to the New Mexico Constitution, Article IX, Section 14 creating new section (H), the NMDOT may need additional broadband design review engineers, Geographical Information Service (GIS) experts, surveyors, data management experts, web portal and public facing web page design support, environmental, cultural, and historical preservation experts, field agent inspectors, right-of-way legal support and engineering support staff.

10.4 Strategic Priorities: Workforce Development

10.4A	"All Hands on Deck": Statewide Broadband Workforce Development Strategy
Overview	
Description	• A large, highly skilled workforce, across the State, constitutes a critical success factor to allow for the planning, design, deployment, testing, and operations of broadband networks funded by hundreds of millions of investment. • Several federal funding programs (e.g., NTIA BEAD, Middle-Mile, etc.) require the State to help create, maintain, and retain a highly skilled workforce in the State capable of deploying and operating the broadband networks across the State.
Objectives	• Cultivate a New Mexico-based workforce that can support the increased demand for professionals and skilled labor to support network infrastructure projects (fiber and wireless) that will could potentially involve billions of dollars over the next 10 years.
2023 Recap	

Key Accomplishments	• Surveyed ISPs, community colleges, universities, electric co-oops, municipalities, and other stakeholders to begin creating an evidence-based needs and gaps analysis. This analysis is included in OBAE's BEAD Initial Proposal, Volume II.
	• Began engaging with stakeholders to solicit feedback and identify resources, and tools from:
	   - State government partners regarding existing programs and wrap-around services such as the Department of Workforce Solutions, Economic Development Department, Human Services Department, Early Childhood Education and Care Department, and the Public Education Department.
	   - Industry associations such as wireless Industry Association and other telecom and ISP associations.
	   - Tribes and Pueblos.
	   - Rural New Mexico counties and municipalities.
	• Connected three (3) ISPs with Department of Workforce Solutions Pre-Apprenticeship Program during the Connect NM Pilot Program.
	• Launched Be Pro Be Proud (https://beprobeproud.org/) workforce training program in November 2023, in conjunction with the New Mexico Chamber of Commerce, Department of Workforce Solutions, New Mexico Higher Education Department, and New Mexico Public Education Departments.
	• Hosted a round table discussion with NM Department of Workforce Solutions and key stakeholders at the first NM Broadband Summit in December 2023.

2024 Action Plan	

Key Strategies	Key Action Items
• Workforce Development Project Manager	• Hire a Workforce Development Project Manager.
• Secure necessary funding.	• Use federal funds provided for in BEAD, DE, and MM in scope of the integrated plan developed in phase one.
• Allocate planning dollars to workforce development.	• Economic Impact Assessment to determine what returns New Mexico receives by making investments in broadband workforce.

	• Create an Integrated Workforce Plan to include funding strategy including existing funding, BEAD, DE, MM, additional state funds, private sector, public-private partnerships. The Integrated Workforce Plan will also include stakeholder programs and/or private sector partnerships, registered apprenticeships, and labor-management training programs to meet the requirements of BEAD, DE, and MM funding.

• Develop strategies to address the gaps.	• Pilot programs to address gaps with proof of concept. Some strategies to consider are bootcamps in rural communities, Tribal areas, and Pueblos to address access and ability for rural and diverse communities to access workforce training and address rural ISP needs for a skilled workforce. Bootcamps will also need to consider wrap-around services such as childcare during training.
	• Potential strategies include:
	  - Work with trade schools, non-profits, to build and fund certificate programs to meet entry level to mid-career trade and skilled labor certifications.
	  - Develop portable programs that can meet the workforce and the employers where they are.
	  - Work with community and Tribal colleges to build and fund entry level to mid-career certificate programs, associate level degree programs.
	  - Work with colleges and universities to build and fund bachelor level programs to meet needs of New Mexico employers for careers like network and systems engineers.
	  - Work with universities to build and fund masters level programs to meet the needs of New Mexico employers for careers that require advanced degrees.
	  - Work with ISPs and other employers to build apprenticeship programs to connect workers to careers.
	  - Work with labor organizations and trade unions to develop training programs for skilled labor.

• Conduct ongoing comprehensive financial analysis – including resources required, available funding, additional investment required, and return on investment.	• Recognizing that workforce conditions will change continuously, ongoing analysis is required. • Evaluate funding opportunities to support workforce training programs, including Integrated Workforce Plan to include funding strategy including, existing funding, BEAD, DE, MM, additional state funds, private sector, public-private partnerships. The Integrated Workforce Plan will also include stakeholder programs and/or private sector partnerships, registered apprenticeships, and labor-management training programs to meet the requirements of BEAD, DE, and MM funding. • Assess the economic impact to determine what returns New Mexico receives by making investments in broadband workforce.
• Continue fostering strategic partnerships with state agencies and other	• Partner with other state agencies to provide wrap-around services during broadband training programs.

labor-affiliated stakeholders.	• Learn from and evolve pilot programs to grow the necessary workforce in NM. • Use metrics to measure the success of the integrated plan to see if plan goals are met. • If plan goals are not being met, adjust to support successful strategies, and end, adapt, or modify unsuccessful strategies.
Implementation	
KPIs	• Requested workforce in place for FY24 and FY25
Critical Success Factors	• OBAE has requested FY24 state funding to perform a needs assessment to survey both the workforce enablers (e.g., community and Tribal colleges, universities, technical schools) and demanders (e.g., Internet service providers (ISP), electric co-ops).

10.5   Strategic Priority: Technical Assistance Programs to Empower Local Communities

10.5A	**Technical Assistance Programs to Empower Local Communities**
Overview	
Description	• The Technical Assistance Program (TAP) has a two-part component focused on OBAE capability over time. OBAE has a statutory requirement to assist Tribes, counties, and other public sector entities in perpetuity with broadband projects. Currently OBAE has a TAP funded through a CARES Act program that will run through 2024. OBAE has developed a midrange plan to use some of the Capital Outlay Fund to provide programs to support broadband infrastructure builds in NM. Lastly, OBAE has requested recurring general funds to staff a TAP program in perpetuity.
Objectives	• Empower local communities to effectively participate in grant-funding programs.
2023 Recap	• Four counties and municipalities sought and received assistance from CARES Act EDA-TAP. Four projects are complete and seven are ongoing.
2024 Action Plan	
Key Strategies	**Key Action Items**
• Continue the existing EDA TAP.	• Economic Development Administration (EDA) TAP has a contract with CTC Technology and Energy to perform projects for 11 applicants. Each project is a result of specific project assistance requested by the applicant. Four projects are complete, while seven remain outstanding. Based on the results of the four completed projects and the pending BEAD funding in Summer of 2024 OBAE has decided to use the remaining funding to create a guidebook for communities to walk them through broadband funding.
• Launch several grant programs to provide technical assistance.	➢ **Technical Assistance Programs** • The Technical Assistance Program (TAP) is designed to provide direct support for aspiring applicants for federal and state-funded grant programs. Participants will be selected on an equity basis, with direct consultative support and application preparation services available, tailored to participant needs. Structured engagement will engage qualified communities, Tribes, providers, and others poised to leverage public

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funding, leadership, or partnership to drive local broadband expansion –
often through cross-sector collaboration.

- Because OBAE is the grantor, it will build clear role-based duties and define access within the office to ensure no conflicts of interest exist between the assistance programs and grant programs. OBAE will separate the TAP division personnel, contractors, and programs from the grant division.
- Support local governments and Tribes in leveraging broadband infrastructure funding and building cross-sector collaboration. Provide consultation and access to capacity-building support and resources.

➢ New Mexico Grant Writing, Engineering, and Planning Program (GWEP)
- Program is designed to help drive community planning for broadband access and adoption. The Office of Broadband Access and Expansion (OBAE) will award financial assistance grants to aid Tribal governments and local governmental units in procuring grant writing, engineering, and/or planning assistance to help identify community broadband needs and to support applying for other funding sources for broadband-related projects.
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- Build a dedicated team to plan, design, implement and monitor these grant-funded TAP initiatives.
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- The projects in the mid-range plan will require OBAE oversight. OBAE has requested the addition of three positions to oversee the TAP program. These employees will long the initiatives above and oversee contractor to launch and maintain the programs.
- Beyond FY24, OBAE will need to be strategic about the projects that the TAP Department takes on and assists. On an as needed basis OBAE will contract with technical experts to ensure the assistance required can be delivered to the governmental agency seeking it.
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Implementation	
KPIs	- Completion of Broadband Guidebook - Creation of the mid-projects. - Currently five project managers are working across the state to achieve these goals. - Encourage participation from providers to Bead Program and State Infrastructure Fund - Ensuring CAI's are considered in funded Areas. - Working with State Departments in order to connect providers with State Anchor Institutions - Developing providers service offering to participate in the SEN and the RGON
Critical Success Factors	- Continued Outreach to Providers and Communities to encourage participation. - Managing projects of Funded Areas including RDOF Reconnect and the NM Pilot Program and ensuring success of future projects. - Creating a tool set to monitor the success of projects and their adoption of Service.

11.0 Digital Equity

11.1 Strategic Priority: Participation in NTIA Program for Digital Equity

➢ **Overview**

As directed by the IIJA, NTIA distributed Digital Equity planning funds to states and territories to fund the creation of Digital Equity Plans. New Mexico received $740,534.91 to develop the State Digital Equity Plan (State DE Plan). To enable New Mexico to get the maximum value from the next phase of the federal Digital Equity Act funding opportunity, the State launched a phased approach in accord with NTIA guidelines to develop the State DE Plan draft:

a. Outreach and stakeholder engagement
b. Asset inventory, needs assessment, and foundational data collection and analysis
b. Creation of measurable objectives and development of potential and recommended implementation strategies and activities.
c. Initial plan draft and review, including 30-day public comment period

After NTIA granted New Mexico an extension, the State DE Plan draft was posted for a 30-day public comment period starting on December 21, 2023. The final State DE Plan is due for submission to NTIA by February 13, 2024, and will be a pivotal step towards NITA determining and allocating to New Mexico a portion of the $1.44 billion in implementation funding available through the federal State Digital Equity Capacity Grant Program.

The amount of implementation funding that New Mexico will receive after the State DE Plan is submitted to NTIA is expected to be announced late spring or early summer 2024 and is intended to fuel a State Digital Equity Capacity Grant program that will enable New Mexico to support the objectives, strategies, and activities identified in the State DE Plan. The State DE Plan is designed to support broadband access, adoption, and use for New Mexico residents, families, and communities, especially for the 8 Covered Populations identified by NTIA. The State DE Plan is designed to address key barriers while complementing, as required by NTIA, infrastructure objectives outlined in the State's Broadband, Equity, Access, and Deployment (BEAD) Plan.

Digital Equity Planning Framework

Covered Population
1. Low-income households
2. Aging populations
3. Incarcerated individuals
4. Veterans
5. People with disabilities
6. People with language barriers
7. Racial and ethnic minorities
8. Rural inhabitants

Key Barriers
1. Availability and Affordability
2. Online Accessibility and Inclusivity
3. Digital Literacy
4. Online Privacy and Cybersecurity
5. Device Availability and Affordability

Areas of Impact
1. Economic and workforce development goals, plans, and outcomes
2. Educational outcomes
3. Health outcomes
4. Civic and social engagement
5. Delivery of other essential (and emergency) services

11.1A	Development of the Digital Equity Plan
Overview	
Description	• To enable New Mexico to attain maximum value from the federal funding opportunity, the OBAE will: - successfully complete, submit, and implement the State Digital Equity Plan - support development a local network of pilot programs and partnerships to strengthen and expand Digital Inclusion activities for Covered Populations - coordinate and manage the State Digital Equity Capacity Grant program once implementation funding is allocated and received from NTIA
Objectives	• Improve broadband access, adoption, and use for New Mexico residents, families, and communities, especially for Covered Populations • Maximize opportunities for eligible non-profits, community organizations, and tribal and local government agencies to access federal funds and support digital equity initiatives while building local capacity and long-term sustainability
2023 Recap	• The State facilitated extensive outreach and stakeholder engagement activities, asset inventories, needs assessments, and data collection and analysis to develop the State DE Plan draft, which was posted for public comment December 21, 2023. • OBAE launched an online resource portal https://connect.nm.gov, which is accessible in English and Spanish, as well as outreach materials, social media pages, and newsletters. • The State Digital Equity Plan draft was developed and posted for public comment on December 21, 2023. • The State's portion of DE Planning Grant funds were received, managed, and reported on in accordance with the grant requirements and timeline.

2024 Action Plan

Key Strategies	Key Action Items
• Successfully complete, submit, and implement the State Digital Equity Plan	• Effectively address public comments to create the final version of the State Digital Equity Plan including measurable objectives for digital equity to address Key Barriers across Covered Populations and Impact Areas and providing recommended initial implementation strategies and potential activities and assessments. • Submit the final version of the State Digital Equity Plan to NTIA by February 13, 2024 • Successfully complete the curing process to secure the maximum NTIA funding allocation for the State Digital Equity Capacity Grant program • Adjust and adapt the State Digital Equity Plan based on lessons learned through implementation and ongoing evaluation and assessment
• Support development a local network of pilot programs and partnerships to strengthen and expand Digital Inclusion activities for Covered Populations	• Support local network of pilot programs and partnerships • Effectively and formally engage agencies and organizations serving Covered Populations • Engage Community Anchor Institutions (CAIs) • Share best practices and build local capacity. Highlight local successes, promote effective digital equity efforts, and gather and share positive Digital Equity stories from Covered Populations and Impact Areas. • Launch Digital Equity Technical Assistance Program (DE TAP) to gather and share information on NTIA State Digital Equity Capacity Grant and other Digital Equity grant opportunities, to support local programs and partners

	to apply for federal, state, and private Digital Equity grants, and to support development of a local cohort of Broadband and Digital Equity grant-writers • Launch a Digital Equity Pilot Program to support and fund initial local Digital Equity programs and partner pilots to support Digital Inclusion activities that serve covered populations, explore collaborative assessment and longitudinal study possibilities, and examine scaled expansion or replication opportunities. • Work with agencies and organizations to integrate successful digital equity practices into existing systems and services
• Coordinate and manage the State Digital Equity Capacity Grant program once implementation funding is allocated and received from NTIA	• Effectively receive, manage, and report on the State Digital Equity Capacity grant program and funding in accordance with state and NTIA federal grant requirements and timelines. • Secure additional OBAE staff including a Tribal Coordinator and a Digital Equity Coordinator to oversee design and deployment of the State Digital Equity Capacity Grant program and funding. • Develop a governance and operating model, program evaluation framework, data collection and assessment resources, DE mapping and data hub, DE Program Directory, and sustainability indicators for digital equity and implementation of the State Digital Equity Plan • Support effective implementation of the State Digital Equity Plan including measurable objectives for digital equity across Covered Populations, impact areas, and key barriers and prioritization of implementation strategies, activities, and assessments to support successful digital inclusion activities, local capacity-building, and long-term digital equity sustainability
Implementation	

KPIs	• Complete and submit the final Digital Equity Plan by February 13, 2024, to be eligible for State Digital Equity Capacity Grant program funds from NTIA.
	• Increase in local Digital Equity grant submissions and awards.
	• Number of Tribal and local organizations and communities participating in digital equity grant workshops and applying for Digital Equity Capacity Building grants
	• Enable gigabit services at community anchor institutions that provide Internet access to covered populations.
	• For members of covered populations:
	  - Expand access to computing devices and tech support
	  - Expand access to digital skills training through a range of community learning options
	  - Expand access to information and opportunities to learn online safety and privacy practices
	  - Improve accessibility and access to government and essential services online
	• Increase the number of Tribal and local communities and organizations that have the resources and expertise to support and implement digital equity efforts.
	• Number of local digital equity programs, facilitators, and navigators.
	• Support of culturally respectful and community driven data collection methods and tools that support development of local expertise and data sovereignty.

	• Digital equity information and programs that are culturally developed or available in the local language. • Development of data and informational resources to support digital equity efforts and initiatives.
Critical Success Factors	• Active stakeholder participation, effective cooperation with agencies, organizations, and CAIs, and stronger collaboration among State, Tribal, local, and nonprofit entities. • Launch of Digital Equity Technical Assistance Program (DE TAP) and Digital Equity Pilot Program. • Accounting of investment in local solutions and capacity building. • Strengthening of the State's capacity to support local digital equity efforts and initiatives. • Hiring of OBAE Digital Equity Manager. • Meet all submission, management, and reporting requirements in accordance with state and NTIA guidelines and timelines.

11.2 Strategic Priority: Digital Equity and Inclusion within Tribal Communities

11.2A	Fostering Digital Equity and Inclusion within Tribal Communities
Overview	
Description	• OBAE aims to assist and support New Mexico Tribes in developing and deploying broadband infrastructure through Tribal consultation, engagement and partnerships that leads to expanded access to health care, education and economic opportunity and includes strategies for access to funding, technical assistance, project management support, workforce development and sustainability while honoring and protecting Tribal sovereignty. • OBAE is committed to engaging New Mexico's 23 Tribes with respect and integrity honoring the rich history, culture, diversity and sovereignty of each Tribal nation in the State. • Ongoing collaboration with CNMC Tribal Workgroup. • Results to date have been documented in the stakeholder engagement. Official tribal consultation with 23 Tribes in New Mexico, 25 electronic newsletters, Tribal convenings, bi-weekly CNMC Tribal Workgroup and workshops that provided in-person technical assistance for data mapping and funding.
Objectives	• Honor and respect Tribes and Tribal sovereignty in all aspects of NM broadband initiatives. • Collaborate and build New Mexico's relationship with Tribes. • Work together to improve health, education, and economic development outcomes for New Mexico Tribes.
2023 Recap	• Completed official tribal consultation with 100% of New Mexico's 23 tribal governments to foster digital equity and inclusion. Supported NM Indian Affairs Department with Tribal Dashboard Taskforce to build 1) build a dashboard 2) identify tribal broadband priority areas (challenges and solutions).

	• Led the planning and development of recommendations for the Tribal Broadband Working Group (please see Appendix for details)

2024 Action Plan

Key Strategies	Key Action Items
• Ensure 100 percent of NM Tribes have options to engage and learn about broadband opportunities (ongoing).	• Communicate to all Tribes via electronic newsletter and other mechanisms. • Meet one-on-one with Tribes as requested. • Set up working sessions with the Pueblos. • Attend NM Indian Affairs Department weekly tribal leader meetings. • Follow up with Tribes by phone and email. • Look for opportunities to present at G2G Tribal meetings. • Communicate technical assistance opportunities to Tribes. • Communicate funding and grant opportunities to Tribes.
• Expand quality broadband access to 100 percent of NM Tribes by January 2026 (Note: Martinez/Yazzie ruling to provide students with technology).	• Establish a Tribal department inside of OBAE that includes a 1) Project manager 2) Grants manager 3) Technical assistance expertise by June 2024. • Build philanthropic partnerships to ensure NM Tribes have options for matching grant requirements. • Develop NM legislative strategies to ensure Tribes are funded and resourced. • Ensure Tribes get fair compensation for right of aways that promote and stimulate economic development opportunities and overall sustainability. • Support Tribes when requested on supply chain issues for broadband build out. • Support Tribes in developing strategies to ensure their broadband initiatives are sustainable when federal and state funding is limited. • Support Tribes in developing workforce opportunities for their Tribal members and surrounding communities. • Set the stage and develop legislation for G2G between Tribes and OBAE (or ensure inclusion in Education G2G). • Develop NM specific Tribal broadband toolkit that includes an FAQ. • Communicate via electronic newsletter at least six times a calendar year about funding opportunities, technical assistance, tools, etc.
• Ensure NM Tribes have access to affordable, quality, high speed Internet, including access to modern devices by January 2026.	• Collaborate with Tribes to create workforce development training tailored for Tribal communities. • Support training among Tribal communities and members as it relates to maximizing broadband usage, including training on devices. • Support Tribes in developing affordability strategies for Tribal communities.
• Support NM Tribes in maximizing broadband uses to support cultural preservation, economic development,	• Support to develop engaging applications • Providing information and resources that support economic development • Providing information and resources that support telehealth

education and telehealth by January 2026.	• Providing information and resources that support tribal education initiatives.
• Support NM Tribes in the area of cyber security and data sovereignty	• Invite subject matter expert speakers to the Tribal Working Group • Solicit articles for electronic tribal broadband newsletter
• Leverage the Connect New Mexico Tribal Working Group (ongoing)	• Engage and define membership • Include discussion from the *Tribal Broadband Taskforce Findings and Strategies* (October 2023) in Tribal Working Group meetings
• Maximize Tribal Success in federal and state grant opportunities (ongoing)	• Require the NM broadband grant programs include tribal consent, right-of-first refusal, and defined dispute resolution process in CNMC Funds grant programs funding infrastructure deployment • Make request to NM Legislature to appropriate funding to meet the fiber-optic connectivity goals for New Mexico • Collaborate with CNMC to provide flexibility in grant opportunities to include holistic broadband needs in all domains (such as anchor institutions, education, public safety, health)
• Support the development of long term financial sustainability for Tribal ISPs by January 2026	• Work with the NM PRC to simplify ETC designation rules for tribal ISPs to access Universal Service Funds to ensure that broadband networks in tribal areas receive the help they need, either in the form of support from the state USF program or to create a new state-funded tribal ISP support fund • Work with the NM PRC to consider the issue of sustainability support for broadband services in rural Tribal areas of New Mexico immediately. The FCC recently continued its policy of recognizing the "unique challenges of deploying high-speed broadband in rural Tribal communities" and adopted a Tribal Broadband Factor that increases support for electing carriers serving locations in tribal areas.
• Implement a tribal broadband advocacy framework for state and federal policy issues by June 2024	• Continue to engage Tribal Working Group
Implementation	
KPIs	• Strong awareness and participation by New Mexico Tribes in the broadband initiatives
Critical Success Factors	• Legislative authorized funding to establish a Tribal department inside of OBAE that includes: 1) Project manager 2) Grants manager 3) Technical assistance expertise by 2024.

11.3 Strategic Priority: Broadband Affordability

11.3A	Robust Participation in Affordable Connectivity and Low-Cost Service Options
Overview	
Description	• The Affordable Connectivity Program (ACP) is a federally funded monthly subsidy to help New Mexicans pay for Internet service. The reduced rate is $75 per household on sovereign nations and $30 per household in the rest of the State. The ACP program will require congressional approval for further funding appropriations to continue when the initial funding runs out. • OBAE also intends to promote and foster adoption in low-cost service offerings through its grant programs and encourage ISPs to offer low-cost service options as a normal, standardized business practice.
Objectives	• Enroll all eligible households in affordable connectivity and low-cost service offerings • Increase enrollment among eligible households in affordable connectivity and low-cost service offerings such as Affordable Connectivity Program and ISP low-cost programs • Increase affordable connectivity and low-cost service offerings available in the State
2023 Recap	• OBAE shared information about ACP online and at events. • OBAE promoted the National Affordability Connectivity Hotline. • OBAE collaborated on ACP enrollment events for covered populations. • Multiple entities in the state received federal grant funding to promote ACP enrollment.
2024 Action Plan	
Key Strategies	**Key Action Items**
• Support community outreach and engagement to drive enrollment in affordable connectivity and low-cost service options.	• Include information about affordable connectivity and low-cost service options at every event. • Collaborate to leverage existing programs and materials that promote affordable connectivity and low-cost service options. • Collaborate on community outreach to promote affordable connectivity and low-cost service options. • Collaborate with local schools and regional partners to enrollment in affordable connectivity and low-cost service options for households with students. • Collaborate on events and activities to promote affordable connectivity and low-cost service options.
• Work with national, state, and tribal agencies and ISPs to expand affordable connectivity and low-cost service options	• Collaborate to support continuation and expansion of affordable connectivity and low-cost service options. • Work with ISPs to encourage participation. • Work with schools and local providers to support creative collaborations and solutions to connect unconnected student households. • Diligent monitoring of all grantees regarding their performance to promote and enroll eligible households.
Implementation	
KPIs	• New Mexico places among the top 10 states for enrollment percentage among eligible households.

	• Every Digital Equity public presentation includes information on affordable connectivity and low-cost service offerings. • 100 percent compliance by NM grant awardees with regard to affordable connectivity and low-cost service options. • Increase in the number of affordable connectivity and low-cost service offerings.
Critical Success Factors	• Hiring of OBAE Digital Equity Manager. • Federal, state, tribal, and ISP support for affordable connectivity and low-cost service offerings. • Genuine commitment by NM ISPs to promote and enroll eligible households. • Cooperation with school districts to enroll eligible student households in affordable connectivity and low-cost service offerings. • Legislature provide funding for the State to continue the ACP should the federal program be discontinued.

12.0 Next-Generation Statewide Networks

12.1 Statewide Education Network (SEN)

12.1A	Launch of Statewide Education Networks
Overview	
Description	**Statewide Education Network (SEN)** • The Statewide Education Network will connect all interested public schools and public libraries together and to scalable, reliable, affordable, and secure Internet.
Objectives	• Connect public schools and public libraries together and to secure Internet, while maximizing E-rate funding. • Allow schools to share instructional resources, increase opportunities for students and teachers • Leverage the school's buying power and access to predictable federal funding to establish the sustainable foundation for broadband growth for the entire State. • Create neutral aggregation points for Middle Mile and connections between networks. Nodes will serve as launching points for connectivity in the region.
2023 Recap	• Agreements for Phase 1 of the SEN are finalized and being executed. • Upgrades to the Gallup regional aggregation node are complete. Upgrades to the remaining nine nodes in different stages of development. • MOUs for the ten SEN Nodes drafted/reviewed/completed. • SEN equipment has been delivered. • High-level Design (general design) was completed. • Low-Level Design initiated (on target to be completed Q1 of 2024) • Network Management resources for Phase1 mobilized • Phase 2 RFP (SEN expansion – additional potential participants and nodes) issued.

2024 Action Plan	
Key Strategies	**Key Action Items**
• Complete procurement process.	• Complete the next major procurement for Phase 2 of the SEN that could add 56 participants and five node locations and associated agreements. • Initiate and complete the procurement for the SEN Network Management services.
• Upgrade nodes.	• Complete node upgrades and operational agreements for all the ten initial nodes.
• Transfer the Broadband program and personnel from PSFA to OBAE	• Public School Capital Outlay Council (PSCOC) approved a Joint Powers Agreement between Public School Facilities Authority (PSFA) and the Office of Broadband Access and Expansion (OBAE), yet the transfer has to be in statute to allow the streamlining and expediting of the SEN implementation.
• Foster outreach regarding program.	• Continue to conduct webinars, presentations, and one-on-one meetings with schools and other stakeholders to build awareness regarding the benefits for participants, the implementation steps, and timeline.
Implementation	
KPIs	• All ten nodes upgraded by December 31, 2024. • SEN backbone operational in the first half of 2024. • Schools and libraries connected, in phases, beginning second half of 2024.
Critical Success Factors	• Successful legislative transfer of personnel, funding and SEN mandate from PSFA/PSCOC to OBAE. • Contracts executed spring 2024 to upgrade and operate nodes. • Additional procurements (s.a. Network Management services) initiated in 2024

12.2   Statewide Middle-Mile Network

➢ **Overview**

Middle-mile infrastructure can be defined as the connection between a local network, also called a "last mile" connection, and the backbone Internet network. Middle-mile networks serve several roles:

- Catalyst for last-mile network deployment and upgrades involving fiber or next-generation fixed wireless;
- Catalyst for the coverage expansion for mobile and public safety networks (e.g., FirstNet) which require high-speed backhaul;
- High-capacity bandwidth solution for public institutions, including: State, Tribal and local government agencies; community institutions; research and education networks (e.g., higher-ed and K-12);
- Enabler for Intelligent Transport Systems when crossing major roadways;
- Requirement for hyperscale data centers requiring ultra-high-speed fiber backbone networks with redundant pathways; and

- Enabling redundancy and resiliency of critical network infrastructure.

➢ **Key Gaps**

OBAE recognizes that many unserved and underserved communities lack affordable high-speed middle-mile networks. Due to this gap, last-mile service providers are unable to cost-efficiently upgrade or extend their last-mile networks, which must interconnect with the middle-mile networks to reach the Internet backbone. Moreover, several stakeholders depend upon dedicated high-speed backhaul, including mobile network operators (MNOs), data centers, research and education networks, public agencies, large enterprises, etc.

The significant challenges facing New Mexico include limitations of existing networks on major interstate corridors, an ever-evolving deployment with current and new entrants into the middle mile market, physical terrain, environmental reviews and permitting, and the constant pressures of workforce and supply chain demands. OBAE must work collaboratively with stakeholders and the private sector to aggressively pursue a strategy to maximize the funding opportunities on the near horizon. These challenges articulated above can be mitigated or improved through cohesive problem-solving and joint design advocacy to enhance the overall funding and construction environment

OBAE has worked with the current Middle Mile Providers to Identify key current assets throughout the State as well as future Projects funded by the NTIA's TBCP and Middle Mile Grant. Additionally, OBAE has worked with DOIT and DOT to leverage key existing assets to help fill in the Middle Mile gaps. Specifically the Rio Grande Optical Network or RGON that follows the North South BNSF route and the META middle Mile project that connect Los Lunas to Clovis.

12.2A	Middle-Mile Expansion Strategy through Public-Private Collaboration
Overview	
Description	• The State's middle-mile strategy involves a three-phased approach: 1) all three interstate highway corridors (I-25, I-40, I-10) have open-access, dark fiber networks with frequent interconnection points; 2) form regional rings off those corridors and then laterals into communities with an open-point of interconnection to enable the deployment of advanced broadband networks and future upgrades; 3) make Albuquerque a major regional carrier hotel that lowers IP transit costs, keeps intrastate traffic local and improves network performance and resiliency for all New Mexico ISPs. • OBAE plays several vital roles in achieving this middle-mile strategy as a funder, convener, coordinator, and implementer. A high standard of fiber-based projects with high fiber conduits, multi-channel conduits, and the installation of frequent interconnection points for providers, communities, and institutions to easily connect to the network.
Objectives	• All New Mexico communities should benefit from close proximity to open-access middle-mile networks that offer reasonably priced, high-speed lit services and dark fiber to facilitate backhaul and support private links for government, large enterprises, data centers, educational institutions, and others requiring at least 1 Gbps connectivity. • This strategy requires a multifaceted response involving large-scale funding and active coordination of open-access middle-mile network deployment.

2023 Recap	- Negotiate participation in the RGON. 4 strands of Dark Fiber that Starts in El Paso TX and Ends in Denver Colorado. The RGON currently has five locations with equipment that allows the ability to add high speed services. El Paso, Las Cruces (NMSU), Socorro (NM Tech), Albuquerque (UNM GigaPOP), and Santa Fe (DOIT Data Center) - OBAE is working on accessing locations in Encino NM (NM Spaceport), Las Vegas NM (NM Highlands), Wagon Mound (unknown), and Raton (unknown). These new locations will allow for future additional high-speed services so communities and providers can reach Albuquerque and El Paso where Dedicated Internet is more affordable. - NMDOT and OBAE are beginning to explore the possibility of Partnering to use DOT existing projects that are disturbing the area beyond the pavement (Easement) in order to add up to an additional conduit and fiber to disturbed areas in addition, we are working to ensure that bridges that have significant work can have conduit and open fiber huts for future use. - DOT has 12 pairs of fiber along the META Middle Mile route across Central to Eastern NM. OBAE is working with DOT on creating a process to access the fiber for add drop capabilities to Eastern and Central NM.

2024 Action Plan

Key Strategies	Key Action Items
• Refresh the gap analysis	- Review and socialize priority routes within these four regions determined by Finley Engineering (consultancy). - Define the technical requirements for all the routes. - Identity various public-private partnership models. - Develop the program design. - Incorporate and Leverage existing assets to build middle mile infrastructure that is easily assessable to Communities and Providers as well as coordinating our efforts with PEN, Plateau, and REDDINET
• Develop and publish the State's detailed middle-mile strategy that complements the 5-Year Action Plan for BEAD.	Reevaluate costs associated with Middle Mile Network needs based on new information of leveraging existing assets.
• Seek funding from legislature for middle-mile investment.	- Establish a dedicated middle-mile investment program to foster middle-mile across all priority routes across the State and Tribal regions. - Strengthen the SEN, Higher Education facilities, DoIT, and DOT nodes with the following activities: upgrades to equipment, increase cybersecurity efforts, other necessary infrastructure improvements (e.g., cooling systems), and support redundancy and resiliency efforts to develop in a ring formation point-to-point 100G wave connections between SEN POP sites, denoted as Exhibit 4 in the Appendix. - Support the implementation of locations where last mile providers and other stakeholders can easily access the middle mile infrastructure, otherwise referred to as 'meet me' aggregation points. OBAE has identified at least twenty locations that can be utilized as aggregation points and enable

	more last-mile connectivity throughout the State. These opportunities can assist in lowering providers' cost of middle-mile connectivity by providing an open access point with minimal resources required. • Extend Existing Middle Mile Networks from 505 Marquette Ave to BigByte Data Center, Cyxtera, and Oso Grande to expand Low Cost foot print from Tier 1 Internet providers
• Initiate a state-led middle-mile investment program.	• Establish a dedicated middle-mile investment program to foster middle-mile across all priority routes across the State and Tribal regions. • Strengthen the SEN, Higher Education facilities, DoIT, and DOT nodes with the following activities: upgrades to equipment, increase cybersecurity efforts, other necessary infrastructure improvements (e.g., cooling systems), and support redundancy and resiliency efforts to develop in a ring formation point-to-point 100G wave connections between SEN POP sites, denoted as Exhibit 4 in the Appendix. • Support the implementation of locations where last mile providers and other stakeholders can easily access the middle mile infrastructure, otherwise referred to as 'meet me' aggregation points. OBAE has identified at least twenty locations that can be utilized as aggregation points and enable more last-mile connectivity throughout the State. These opportunities can assist in lowering providers' cost of middle-mile connectivity by providing an open access point with minimal resources required.

Implementation	
KPIs	• Legislature-approved Budget Authority: State requires $25 million to fund middle-mile networks using DOT and Dig Once program. Final estimate being presented to legislature • Coordination with SEN: OBAE will consider SEN and Higher Education assets that may benefit and receive additional support due to the new infrastructure. The network has 65 participating locations, nine of which serve as backbone nodes. Investments in middle-mile access have been shouldered primarily by local institutions, with State support being provided occasionally over the years. The resources needed to upgrade or enhance services typically far exceeds budget requests by schools, libraries, and higher education institutions. The forthcoming resources to invest and accelerate middle mile interconnectivity is another high priority for OBAE to advance redundancy and resiliency efforts. • Coordination with Recently Awarded Projects: NTIA awarded funding for several middle-mile projects. Any statewide strategy will carefully coordinated with consistent updates and dialogue amongst the principals from each entity denoted. The constant discussion, planning, and comparison of construction schedules may yield synergies in coordination activities, the anticipation of supply chain challenges, and the identification of other challenges that may arise and can be quickly addressed by the leadership. Another key benefit of regular and consistent communication is that it will

	lead to the development of prospective partnerships and collaborations for future endeavors.
Critical Success Factors	• Executing RGON contract expected January of 2024. • Negotiating agreements to add locations along RGON path in order to add high speed connectivity and reduce Internet costs • Create a program that allows OBAE to offer Middle Mile transport to ISP's and Communities • Finalize agreements with DOT to optimize dig once policy. • Legislative funding for dig once activity. • Develop a plan of action for utilizing META middle mile.

12.3 Coverage Expansion of Mobile Broadband and Public Safety Networks

➢ **Overview**

Mobile networks operators (MNOs) provide vital voice and broadband connectivity to mobile users. Moreover, several regional and national MNOs increasingly offer fixed wireless by leveraging existing towers and base stations. One national carrier, T-Mobile, is largely focused on rural communities. [36] 5G networks cover over 315 million Americans (95 percent of population) and constitutes the fastest-growing segment of the home broadband market. [37]

Over the last twenty years, MNOs in New Mexico have invested billions to improve coverage and capacity. Nevertheless, signals remain weak or non-existent across many rural-based roads. Moreover, rural-based residents and businesses cannot turn to these networks for broadband data service, in contrast to those living in urban and suburban settings, who have broadband choice where a mobile hotspot can be an adequate substitute for fixed broadband service. Key limitations include lack of towers and high-speed backhaul. OBAE aims to engage in several collaborative initiatives to address these limitations.

12.3A	Rural 5G Coverage Acceleration
Overview	
Description	• Involves a comprehensive program to: a) identify coverage holes across rural communities and highly trafficked roadways; b) identify gaps in the public safety networks (e.g., FirstNet); c) understand the mobile network operators' specific plans to address these gaps; d) gain industry feedback on key barriers toward achieving quality coverage and capacity; e) determine approaches on how current and planned last-mile grant programs can be used to facilitate 5G coverage expansion (e.g., open-access requirement for backhaul networks; shared usage of towers for fixed and mobile broadband); f) design other programs to foster universal 5G coverage (e.g., investment, integration statewide middle-mile initiative, permit streamlining, etc.)
Objectives	• Improve the 5G signal strength (and future generations of mobile wireless technology) across all of rural New Mexico so that: 1) every rural community and highly-trafficked

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[36] The Office of -Mobile's fixed wireless sub base skews heavily rural – study. https://www.lightreading.com/5g/t-mobiles-fixed-wireless-sub-base-skews-heavily-rural---study/d/d-id/776745

[37] https://www.ctia.org/news/u-s-wireless-investment-hits-record-high

	roadway includes reliable voice and data services; 2) first responders have strong signals from FirstNet and other public safety networks: 3) mobile broadband networks can offer access, choice, and resiliency to unserved and underserved residents and businesses.
2023 Recap	• The Connect New Mexico Fund highlighted 5G networks as an eligible project category for the Connect New Mexico Fund. The proposal must enable 5G coverage in areas both lacking reliable signal strength AND having a concentration of unserved and underserved locations • Also provide additional points for those applications that can serve the broader needs of the community, including fostering 5G cellular service (e.g., sharing towers, open-access backhaul, other collaboration with the 5G mobile network operators). • Limited resources prevented the issuance of the RFI in 2023. OBAE is committed to issuing the RFI in 2024.

2024 Action Plan	
Key Strategies	**Key Action Items**
• Obtain industry and stakeholder input.	• Issue RFI to obtain input from MNOs and key stakeholders to develop a comprehensive record on investment plans, key barriers, and public-led solutions to over 5G coverage gaps. • Make 5G coverage gaps a key topic in local community and Tribal engagements. • Engage with satellite operators to understand how new generations of satellites can provide backhaul to base stations in highly remote areas.
• Conduct inventory of all major coverage mobile gaps.	• Work with EDAC to develop tools to comprehensively identify coverage gaps. • Collaborate with FCC to ensure its 5G data set (in the Digital Opportunity Data Collection) accurately reflects coverage gaps in New Mexico.
• Find synergies with other grant programs to facilitate rural 5G expansion.	• Ensure all fiber-based middle-mile spans and new towers funded by any federal and State offer open access and tower leases, respectively, at reasonable prices • Convene meetings between federal and State awardees and their potential to leverage existing assets. • Communicate all existing awards and asset footprints to the mobile sector.

Implementation	
KPIs	• High-quality, reliable 5G coverage across all rural communities and highly-trafficked roadways.
Critical Success Factors	• Accurate identification of all coverage and capacity gaps. • Hiring of OBAE staff member to own this initiative (50 percent of time). • Legislative appropriation for: a) middle-mile funding which can address lack of backhaul which can stymie industry's efforts to improve rural 5G coverage; b) 5G funding to help subsidize network construction in high-cost areas.

12.4　Network Resiliency and Cybersecurity

➢ **Overview**

It's imperative that all network elements – last-mile, middle-mile, SEN, PEN, and mobile wireless networks – are always operational, reliable, and secure. Network downtimes and cyberattacks can impede the productivity and safety of residents, businesses, and institutions. For example, disruptions not only interfere with telework, remote learning, and telehealth – but life-impacting services such as Enhanced 911.

A variety of external threats not only interfere with daily functions, but may lead to recent broadband adopters to stopping using and meaningfully engaging with online resources. These threats include environmental, human error, criminal, etc. Recent wildfires, and their potential frequency due to climate change, unfortunately, make network resiliency a critical priority. The network designs should reflect best practices around: a) redundancy through backup paths and systems that minimize downtime; b) defense against physical attacks (man-made or environmental); c) defense against cyberattacks; d) long-term sustainability.

Cybersecurity is a major risk to all New Mexico institutions including K-12 Schools, Higher Education, State, Municipal, and County governments. These same organizations must have resilient Internet and telephony services to secure the wellbeing and safety of all New Mexicans. OBAE has been developing a plan to ensure these institutions have the support of DoIT in resolving potential issues through multiple projects that provide distributed Cybersecurity resources via the Middle Mile Plan. OBAE is addressing New Mexicans' online security issues by incorporating security services like Distributed Denial of Service (DDOS), Intrusion Detection Services (IDS), and Intrusion Protection Service (IPS) across the State Education Network (SEN) and the Network Aggregation Points associated with the State's Middle Mile plan.

12.4A	Statewide Network Resiliency and Security Program
Overview	
Description	• Develop a comprehensive program that: a) identifies weak points for every network type across the State; b) understands industry's attempts to build highly resilient, secure networks; c) ensures network resiliency and security as part of every infrastructure funding program (e.g., program design, scoring, evaluation, and project implementation); d) identifies other opportunities for public-private collaboration.
Objectives	• Eliminate any and all vulnerable and weak points across the myriad public and private networks so that the impact of network downtime and cyberattacks is inconsequential.
2023 Recap	• OBAE has worked to ensure the SEN and Middle Mile Network has Cybersecurity and Network Resilience as a cornerstone to the Strategic Broadband Plan. The network will bring diversity to single-thread communities by connecting to the RGON and META Middle Mile fiber. • As the rollout begins OBAE has begun to map out a Cybersecurity path the includes fully managed DDOS, IPS, and IDS to ensure the broadband being delivered is safe.
2024 Action Plan	
Key Strategies	Key Action Items

• Develop a comprehensive fact-set on network resiliency and security.	• Review best practices and lessons from other states and their broadband offices. • Gather stakeholder input during all meetings for the development of the Five-Year Action Plan. • Integrate RGON to the SEN. • Integrate META Middle Mile to the SEN. • Develop a program to assist Rural Healthcare Providers to access USDA rural broadband funding similar to ERATE.
• Ensure all public networks owned and operated by the State (or planned) are fully resilient and secure.	• Ensure all network aggregation points for the SEN and PEN reflect the best-in-class designs and technologies to withstand network outages and cyberattacks. • Leverage network aggregation points to enable resiliency and security for commercial network providers, public safety, etc. • Select best-in-class vendors through an exhaustive. procurement process that not just protects state networks, but can by synergistic to all non-state networks.
• Ensure network resiliency and security are part of every infrastructure funding program	• Integrate network resiliency, redundancy and security objectives, best practices, strategies, and other current and planned programs in the BEAD Five-Year Action Plan. • Make review of network resiliency and security part of every site visit.

Implementation	
KPIs	• SEN and PEN adoption of network resiliency and security provisions in award agreements. • Outreach to critical infrastructure providers such as First NET and E911 and PSAPs to develop strategies to leverage existing state Middle Mile assets that are resilient. In addition, prioritize the most vulnerable locations for future resilient connectivity. • Insure CAI's providing critical services are included with all NM Pilot, Connect NM, and BEAD funding.
Critical Success Factors	• Secure funding for Middle Mile. • Secure funding for Cybersecurity assets.

13.0 Program Stewardship

An unprecedented amount of grant funding will be invested in New Mexico over the next five years for both broadband infrastructure development and digital equity and inclusion programs. These funds will require scrutiny to prevent waste, fraud. Moreover, given the high level of need relative to the potential funding amounts, the process must be based on the principles of transparency and accountability. This applies to both the government agencies issuing the funds and the awardees (grantees) receiving the funds. Thus, the three-year plan recognizes the immense value of program stewardship. OBAE leadership and staff are committed to the utmost transparency and accountability of its programs. Moreover, the awardees must be fully committed to meeting all programmatic and compliance requirements.

13.1 Strategic Priority: OBAE Transparency and Accountability

➢ **Overview**

The Governor's Office, along with the OBAE team, recognize the immense responsibility and trust placed by the public into these institutions to ensure that the grant funds are used most effectively and efficiently. OBAE is committed to transparency regarding programs, initiatives, and results.

Moreover, OBAE has been very transparent across the programs that defined its first full year, such as the Connect New Mexico Pilot Program. The program materials clearly defined the scope, purpose, process, and evaluation criteria. The public expects transparency as well as measurable results that yield universal broadband availability, adoption, meaningful usage, and a complementary set of statewide networks. It is these results which will help drive social and economic advancement for all New Mexicans. In all aspects, OBAE will be fully accountable for its decisions.

OBAE intends to launch three initiatives in the year 2023. They include: a) rulemaking initiative; b) an Annual Report updating progress associated with the initiatives in this Broadband Plan; c) partnership with the New Mexico academic community to engage in program evaluation and community impact.

13.1A	Rulemaking for Broadband Grant Programs
Overview	
Description	• The rulemaking initiative involves the establishment of rules that apply to the development, award and administration of grant programs within the jurisdiction of DoIT, the Office of Broadband Access and Expansion ("OBAE"), the Connect New Mexico Council ("Council"), or to any public body administratively attached to DoIT, directly or indirectly. These rules also apply to a subject grant program, as applicable, and to any person who applies, or intends to apply, for a grant under a program that is subject to these rules. These rules do not apply to contracting. • These rules are required pursuant to Paragraphs A and B of Section 9-27-6 NMSA 1978; Paragraph C of Section 63-9K-4 NMSA 1978.
Objectives	• Develop rules that establish standards and practices that foster grant applicant participation, program transparency, consistent standards of evaluation. • Rules should be clear, adaptable, reasonable and still allow for program flexibility.

2023 Recap	• The Notice of Proposed Rulemaking (NOPR) had been published in the New Mexico Register on December 27, 2022, establishing a public comment period through the date of the public rule hearing on January 30, 2023. Rules were adopted in April 2023. Note: Website :https://www.doit.nm.gov/rulemaking/

2024 Action Plan

Key Strategies	Key Action Items
• Revise rules to allow for rural telephone and electric cooperatives to participate in programs tied to the Connect New Mexico Fund.	• Draft revised rules. • Present the rules to the Council for consideration. • Incorporate any other relevant feedback. • Publish the rules.

Implementation

KPIs	• Final rules published by February 2023.
Critical Success Factors	• A large, cross-section of New Mexico service providers and other stakeholders file comments in the Notice of Proposed Rulemaking process. • Connect New Mexico Council approves program strategy, design, and materials.

13.1B	OBAE: Year End Annual Progress Report

Overview

Description	• OBAE had considered producing a separate annual report to provide a progress update on the identified strategic priorities and initiatives listed in each Three Year Broadband Plan. The assessment includes the progress made by OBAE, and stakeholders involved with the initiatives (e.g., awardees' progress with grant-funded projects). • For the purpose of efficiency and information centralization, OBAE decided to provide a detailed progress update in the "Achievements" section of the Three-Year Broadband Plan (Section 8.0).
Objectives	• Transparent reporting of the progress achieved across the myriad initiatives under OBAE's purview.
2023 Recap	• OBAE's Data Analytics Team developed a Master Project Plan, which involves an extensive spreadsheet to track progress for each listed initiative, strategy, and action item. • OBAE provided a list of all achievements in in the Data Collection Report (submitted in October 2023). Those progress update has been updated in Section 8.0 of this 2024 Broadband Plan. • Developed a Press Release on 2023 accomplishments.

2024 Action Plan

Key Strategies	Key Action Items
• Continue to track results quarterly across the Master Project Plan.	• Each initiative owner will update their individual plan for each initiative listed in the Three Year Plan.
• Share with the public OBAE's key achievements.	• Publish the 2024 Achievements list in the 2025 Three Year Plan. • Issue a press release to highlight the achievements.

• Implementation

KPIs	• Annual report published on or before January 1, 2025

Critical Success Factors	• Staff requirements must be addressed to enable the execution of the initiative, which will impact the progress in the Annual Report.

13.1C	Program Evaluation and Socioeconomic Impact Assessment
Overview	
Description	• OBAE aims to develop a partnership with researchers from New Mexico's higher education community. The scope involves three aspects to measure: a) effectiveness of program design and implementation, b) grantee results, and c) community impacts and outcomes. These can be done through case studies, for example. • Professors can lead project research in collaboration with graduate and undergraduate students.
Objectives	• Provide the public transparency regarding the performance of OBAE's programs and awardees results, and well as community impact and outcomes.
2023 Recap	• Engaged in Formal Discussions: The initiative focused on extensive outreach efforts in engaging and collaborating with 6 university partners. Established connections and fostered relationships within the higher education landscape was a cornerstone for the success of this initiative. • Strategic Drafting: OBAE is continuing to work on drafting a Scope of Work (SOW) in collaboration with the University of New Mexico's Bureau of Business and Economic Research (BBER). This partnership aimed to explore potential collaborative opportunities for this type of Impact Assessment. • Identified Collaborative Opportunities: Explore specific areas of mutual interest where joint research initiatives can be undertaken. Identify key faculty members, research areas, and potential projects that align with OBAE's objectives. • Defined Metrics and Indicators: Work collaboratively with university partners to define and finalize the metrics and indicators crucial for establishing baseline data. Determine the parameters for measuring program effectiveness, grantee outcomes, and community impacts.
2024 Action Plan	

Key Strategies	Key Action Items
• Develop detailed design of this assessment.	• Review similar program evaluation initiatives that federal and state governments have implemented (e.g., NTIA BTOP collaboration with ASR Analytics). • Work collaboratively with university partners to define and finalize the metrics and indicators crucial for establishing baseline data. Determine the parameters for measuring program effectiveness, grantee outcomes, and community impacts.
• Obtain feedback from stakeholder community by identifying collaborative opportunities.	• Socialize program with university partners to obtain their feedback, insights, and level of interest. • Explore specific areas of mutual interest where joint research initiatives can be undertaken. Identify key faculty members, research areas, and potential projects that align with OBAE's objectives.

	• Issue a RFI to obtain feedback from the broader stakeholder community.
• Finalize a partnership with higher education institutions.	• Develop a detailed budget. • Develop a Memorandum of Understanding (MOU). • Use the Connect New Mexico Pilot Program as the initial initiative for future OBAE program studies.
Implementation	
KPIs	• MOU with at least one New Mexican institution of higher education by June 2024
Critical Success Factors	• Obtain funding support from the Legislature • Interest and participation by academic community • Staffing resource to manage the program

13.2 Strategic Priority: Grantee Accountability for Programmatic and Compliance Requirements

The unprecedented level of federal and state grant funding for both infrastructure expansion and digital inclusion constitutes a generational investment. The grantees, or awardees, will engage in the "heavy lifting" to plan, deliver, and sustain the projects – most of which are complex, lengthy, and involve several dependencies. Nevertheless, the grantee is making a commitment to fulfill all programmatic obligations and compliance requirements. While OBAE will strongly consider an applicant's ability to execute across all facets of the grant award, the ultimate responsibility rests with the grantee for: project execution; compliance with state and federal laws and rules; preventing waste, fraud, or abuse with regard to expenditures; and tracking and maintaining records for all reporting requirements. OBAE is developing an elaborate system to foster accountability throughout the life of the grant-funded project.

13.2A	Comprehensive System to Foster Grantee Accountability
Overview	
Description	Involves a comprehensive system to foster accountability by award recipients, but also to provide assistance and support to position awardees for success. Key elements include the following: - Award Agreements: Clearly defined agreements that list all program and compliance requirements. - Reporting: Quarterly and annual reporting on funds expended, key performance indicators (e.g., miles deployed, training classes held, etc.), project outcomes, key risks and mitigation approaches, etc. - Communication: Frequent communication by OBAE staff with grantees to gauge project performance, assess compliance, and understand key challenges and risks (and help grantee navigate them). - Program Resources: Develop tools to enable grantees to position awardees for success in meeting programmatic and compliance requirements (e.g., guidelines, FAQs, best practice summaries, webinars, technical assistance, etc.) - Site Visits: Periodic visits to the offices and field to directly witness and evaluate grantee performance and compliance.

Objectives	• This system aims to: 1) ensure awardees fully understand their programmatic and compliance obligations; 2) hold awardees accountable for fulfilling their obligations; 3) provide tools and resources to position the awardees for success; 4) proactively manage challenges and risks to minimize any negative impact; 5) leverage the experience and knowledge of the New Mexico and national grantee community to share best practices, risk mitigation strategies, etc.
2023 Recap	• Maintained 100% compliance for subgrantees and OBAE on all federal and state awards managed by OBAE. • Implemented a grants management software called Submittable to handle all future applications to grant programs, document retention, compliance reporting, and program resource communications. Additional training and resources will continue through January 2024. • Landing pages are under construction for all grants OBAE will manage, to be completed by Q1 2024. These webpages will house program resources to assist subrecipients with maintaining compliance. We are also undergoing an extensive overhaul of the entire Connect NM website. • Site visit standard procedures are being developed by our project management team; we aim to have a set process in place February – March 2024. Only one grant has progressed far enough to begin granting subawards, and all the sub-awarded projects are in the contract finalization/engineering & planning phases. So, we are still on track to ensure timely programmatic support.

2024 Action Plan

Key Strategies	Key Action Items
• Develop award agreements that lists all program and compliance requirements.	• Develop robust contracts to ensure grant recipients have a clear understanding of all programmatic and compliance obligations. • Develop a payment release mechanism that ties payments to programmatic execution. • Determine policy on imposing binding penalties for grantee for non-compliance or non-performance.
• Develop and enforce reporting requirements.	• Publish reporting requirements and guidance that considers all federal and state mandates specific to grant program. • Design internal procedures and methods to collect, track, and report on data collected. • Develop reporting template based on reporting requirements. • Make funds receipt contingent upon fulfilling reporting requirements. • Build reporting requirements into Grants Management System. • Enforce FCC policy Broadband Consumer Labels for all New Mexican grant awardees
• Actively communicate with awardees.	• Host frequent checkpoints (bi-weekly or monthly) by the grants program officer. • Create a forum by which all grantees meet once a year to discuss progress. • Highlight performance and best practices in OBAE newsletter.

• Develop comprehensive set of tools to support grantee performance.	• Develop the following tools: guidelines, FAQs, best practice summaries, webinars, technical assistance sessions, office hours, etc. • Evaluate and apply best practices from federal and state broadband programs for TA support on adherence to programmatic and compliance requirements.
• Perform site visits to directly witness and evaluate grantee performance and compliance.	• Develop policy framework on scope and timing of site visits. • Develop site visit checklist.

Implementation	
KPIs	• 100 percent conformance with programmatic and compliance requirements by awardees. • 100 percent quarterly and annual reports submitted on-time by awardees (and State for federal projects).
Critical Success Factors	• Awardee participation. • Legislative appropriation to fund staffing requirements to enable monitoring, enforcement and support.

13.2B	Connect New Mexico Pilot Program: Awardee Monitoring
Overview	
Description	• This program allocated $115.7M in grant funds to foster broadband availability across unserved and underserved areas (areas lacking 100/20 Mbps through wireline). • The Department of Treasury grants the funds through the American Rescue Plan Act (ARPA) of 2021, the Coronavirus Capital Projects Fund, and authorized by New Mexico House Bill 2. Program materials can be found on the OBAE website. [38] • Awarded projects cover six pueblos (Jemez, Laguna, Nambe Santo Domingo, Santa Ana, Ohkay Owingeh) and one reservation (Ramah Navajo). • The program funded three electric cooperatives, enabling them to enter the broadband services market.
Objectives	• Fund sustainable, scalable networks and financially viable business plans and serve the comprehensive community with high-quality, reasonably priced solutions.
2023 Recap	• Completed the selection of 19 awards constituting $115.7 million in grants matched by $71.9 million in cash and in-kind contributions for a total investment of $187.7 million. • Projects will connect 22,400 unserved and underserved locations and involve the deployment of 1,340 fiber miles; to illustrate this size, this involves 3.6 times the State's distance from north to south (a distance of 370 miles). Projects span across 14 of the State's 33 counties. • Incorporated lessons learned and feedback into the NOFO, scoring guide and application for the Connect New Mexico Fund.
2024 Action Plan	
Key Strategies	**Key Action Items**
• Execute all signed Grant Agreements.	• Complete two remaining outstanding Grant Agreements.

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[38] https://www.doit.nm.gov/programs/broadband/connect-new-mexico-pilot-program/

• Institute project monitoring.	• Assign a Project Manager to each award. • Host monthly check-in calls to track project planning, cost budgeting, scope conformity, etc. • Develop a site visit plan and perform site visit awardees engaging in network deployment.
• Closely monitor awardee performance in meeting programmatic and compliance requirements.	• Develop detailed reporting requirements (e.g., quarterly and annual progress performance reports). • File required reports with U.S. Department of Treasury.
• Develop and apply lessons learned to future programs.	• Engage in stakeholder outreach for feedback. • Develop and publish report on key findings. • Integrate feedback into the BEAD NOFO.
Implementation	
KPIs	• 100 percent funds allocated and matched by significant degree of private capital • 100 percent compliance with Treasury rules by OBAE (Recipient) and awardees (sub-recipient) • Quarterly and annual progress performance reports submitted on-time
Critical Success Factors	• External challenges and risks can be mitigated (e.g., supply chain, PROP, etc.) • Several applicants from Wave One and Two start to deploy fiber by Q4-2024.

14.0 Critical Success Factors

Several critical success factors (CSFs) significantly influence the planning and execution of the initiatives, and ultimately, the achievement of the four strategic goals. These include: a) fulfilling all OBAE staffing requirements; b) obtaining required federal and state funding, especially for network infrastructure grant programs; c) other legislative actions defined below.

14.1 OBAE Staffing Requirements

The statutory requirements for OBAE requires sufficient staffing. In FY22, OBAE operated with a small team and remains small in FY23 with 6.5 FTE.

Through the executive budget, OBAE requested to grow to 21 general fund positions: 14.5 new positions and 6.5 existing positions. In addition, OBAE will create five federally funded positions. This will increase the total staff count to 26. Failure to grow rapidly will impede OBAE's ability to meet its mission and obligations – e.g., pursue funding opportunities, administer grant programs, develop technical assistance programs, develop rights of way repositories, or map resources.

Built into the ask is $1.7 million in additional funding over FY23. The ask incorporates desired classifications, salaries at midpoint, benefits and additional costs for computers and office subscriptions. Also built into the cost is a request to fund salaries at 15 percent above midpoint. While this is outside the normal budgeting for State government, the request is important because OBAE is using generic classifications that do not consider the specialized nature of the work of the project managers and broadband specific positions. OBAE

is competing for a limited number of highly skilled workers with knowledge of broadband, telecom, and electrical industries. Please see Appendix (15-4) for the proposed budget for additional staffing.

In the long term, OBAE anticipates the need to grow to 50 FTE in succeeding years to build programs over time to meet goals and statutory obligations.

14.2 Grants for Network Infrastructure and Other Funding Matters

Engineering estimates indicate that the State requires from $2.5 to $5.5 billion for broadband infrastructure – depending upon assumptions regarding technology, ability to leverage existing assets and accuracy of broadband mapping data. OBAE has reviewed the engineering and utilized internal staff expertise and industry knowledge to determine that the midpoint $4 billion is a realistic need for infrastructure needs across the State.

The State currently has approximately $1 billion authorized for broadband expansion in grant funding. To illustrate the gap in funding, for discussion purposes only, the $1 billion currently authorized would represent ONLY about 25 percent of the midpoint ($4 billion) between the $2.5 and $5.5 billion total required amount. While the applicants will be asked to contribute at least 25 percent through matching funds, assuming all providers invest the minimum 25 percent, and taking into account funds awarded to non-State entities for broadband infrastructure (approximately $728 million), the State would then need at least an additional $2.07 billion in grant funding. This amounts to approximately $230 million annually over nine (9) years.

➢ **Legislative Request(s)**
For the 2024 legislative session, OBAE is seeking:
Appropriation of $250 million to Connect New Mexico Fund during the Second Session of the 56th legislature. Approximately $230 million would be for last, middle-mile expansion, and 5G expansion, while approximately $20 million would be for other non-infrastructure programs (grant-writing support, ACP supplement, workforce development, etc.).

Should the requested funding be appropriated, OBAE would no longer need to use any grant funds for administrative purposes and could allocate them entirely to broadband expansion projects.

14.3 Other Legislative Requirements

OBAE has additional priorities for the Second Session of the 56th Legislature. These are critical toward achieving this Plan's strategic goals, priorities, and initiatives.

A) Move the Public School Facilities Authority (PSFA) State Education Network (SEN) program from PSFA to OBAE.
➢ **Context**
The New Mexico Broadband Deficiency Correction Program (BDCP) was created by Senate Bill (SB) 159 in March 2014 to assist K-12 public schools with correcting technology infrastructure deficiencies. The Public School Capital Outlay Council (PSCOC) may spend up to $10 million annually over five years to correct

broadband infrastructure problems in public schools statewide. The State Education Network (SEN) is a state coordinated "middle-mile" or "broadband highway" network to provide better connectivity and expert network management for New Mexico schools and school districts. The SEN is similar to the Pueblo Education Network (PEN) run by Santa Fe Indian School. The PSFA SEN team works with OBAE through a Memorandum of Understanding (MOU), but there have been challenges rolling out the SEN in this manner. Moving the entire SEN program, people, and funding from PSFA to OBAE will enable more efficient operations and faster deployment of the SEN.

➢ **Legislative Request(s)**
- Enact legislation to move $10M for broadband for schools from PSFA to OBAE and to move BDCP staff and funding from PSFA to OBAE.
- Enact legislation to move education technology infrastructure to OBAE.
- Enact legislation to remove PSFA's seat on the Connect New Mexico Council (CNMC) and add the Secretary of the Public Education Department (PED), or their designee, to CNMC.
- Enact legislation authorizing the director of OBAE to certify up to $10M of proceeds of supplemental severance tax bonds per fiscal year needed for expenditures relating to education technology infrastructure.

B) Allow for Small Cell Towers to be Placed on State Land
➢ **Context**

The transition from 4G to 5G mobile wireless technology requires significantly more infrastructure to be deployed in order to realize connectivity goals. Current statute allows municipalities and counties to control the installation, modification and replacement of wireless support structures and utility poles, but not the State of New Mexico.

➢ **Legislative Request(s)**
- Amend the Wireless Consumer Advanced Infrastructure Investment Act to include the State of New Mexico under the definition of an "authority" for the purposes of the Act. This will allow the State to roll out fixed wireless projects and 5G cell towers on State Lands.

C) Give Rule Making Authority to OBAE Over Utility Pole Owners Not Currently Regulated
➢ **Context**

Currently, rural electric and telephone co-ops are exempted from PRC rulemaking on pole attachment pricing, leading to inconsistencies in pricing that can hinder broadband deployment. OBAE has been working with industry associations to find a non-legislative solution to this problem; however, if a solution cannot be found we will move forward with this legislation.

➢ **Legislative Request(s)**
- Enact legislation allowing OBAE to establish rules directing currently unregulated pole owners to use the FCC rate model for pole attachment pricing. Impacted entities would include rural electric and telephone co-ops not currently subject to the FCC rate structure and would not impact poles on sovereign Tribal lands. This would achieve clear and consistent pricing for utility pole attachments, streamlining broadband deployment in the state.

D) Authorizing Utility Easements for Broadband
➢ **Context**

Currently, holders of easements in New Mexico are not required to allow broadband infrastructure to be added to the easement like other utilities; broadband service providers must negotiate for their own easements under the current framework. By authorizing utility easements for broadband in the future,

broadband service providers would only need to negotiate with a single party (the easement holder) instead of a multitude of parties, thereby streamlining broadband deployment projects.

➢ **Legislative Request(s)**

- Enact legislation to allow utilities to add communications equipment to future easements and renewals.

E) Procurement Code

➢ **Context**

Currently, New Mexico Procurement Code states that contracts for professional services may not exceed four years. Standard practice in the broadband industry is for such contracts to last up to 25 years.

➢ **Legislative Request(s)**

- Amend the Procurement Code to allow contracts for services connected to the design, engineering, or operation of broadband infrastructure to exceed four (4) years.

F) Make OBAE an Independent Office

➢ **Context**

OBAE is currently administratively attached to the Department of Information Technology (DoIT). OBAE's mission differs significantly from DoIT's, and OBAE operates at a different pace and has more funding than DoIT, which has created a high workload for DoIT Administrative Services staff. OBAE needs to continue to move quickly, and operating independently from DoIT will allow both organizations to better execute their missions.

➢ **Legislative Request(s)**

- OBAE has submitted a budgetary request to operate independently from DoIT.
- Enact a temporary provision to transfer all broadband infrastructure owned, leased or operated by DoIT pursuant to the Broadband Access and Expansion Act to OBAE.

14.4 Other Critical Success Factors

Much of the future success of OBAE depends on multiple stakeholders collaborating in unprecedented ways to meet the strategic goals of OBAE. Other issues that will determine the success of capital projects across the State will be impacted by how well OBAE can mitigate the instability and uncertainty of the supply chain for critical components such as fiber, generators, and other critical components needed by ISPs to build broadband networks. Lastly, the state of the skilled workforce in New Mexico as it relates to broadband is unknown. Determining the workforce landscape and how to build and enhance it will be critical.

➢ **Multi-Stakeholder Collaboration**

To successfully create, build, and maintain broadband networks across the State, OBAE will need to have strong relationships with counties, municipalities, Tribes, Pueblos, non-profits, colleges, universities, technical schools, labor-management organizations, ISPs, and other providers. Each of these entities touches the communities that are underserved and unserved already. Many provide services to these communities, or will be partners in the communities that need service or additional services. Without participation, collaboration and cooperation, OBAE will not be as successful in its mission. For instance, counties and municipalities are instrumental to the process of establishing accurate data, helping update maps, and

connecting OBAE to community leaders. Tribes and Pueblos are sovereign nations that can help connect additional communities to the larger State broadband plan, and help build redundancies in the network. ISPs, non-profits, colleges, universities, technical schools, and labor-management organizations will be critical partners in developing the workforce that New Mexico needs to build and maintain broadband networks over the next 20 years. The ISPs and other providers will be critical partners for building networks in unserved and underserved communities and maintaining access into the future. OBAE, while fulfilling an important role, primarily facilitates coordination among various stakeholders with a piece of the pie.

➢ **Workforce Development**

OBAE has identified the broadband workforce as a CSF. Obtaining funding to do a workforce needs assessment across ISPs, telecom, and construction industries is a critical hurdle to developing a strategic workforce development plan. Involving additional stakeholders such as community colleges, Tribal colleges, universities, technical schools, Tribes, Pueblos, non-profits, and labor-management organizations is fundamental to successfully building a skilled workforce capable of both building the networks and developing a career trajectory for workers who will be needed to maintain the networks for the next thirty years (See 6.4A). OBAE's request for funding is important to accomplish the lofty goals of workforce development, with the understanding that it will be necessary to manage the stakeholder relationships to ensure a cohesive and integrated strategy of training workers across the State. This includes programs in rural communities where ISPs and electric co-ops will need to recruit skilled labor to perform network installations, construction, and maintenance.

➢ **PRC Price Rulemaking**

The Commission anticipates that it will complete, in January 2024, its pending rulemaking concerning statutory amendments adopted in 2021 to coordinate the Commission's Broadband Program with OBAE's Statewide Broadband Plan as well as the digital equity and digital inclusion initiatives of the Connect New Mexico Council. The Commission plans to adopt amendments to its State Rural Universal Service Fund ("SRUSF") Rule, 17.11.10 NMAC, particularly, the Broadband Program provisions of the rule, at 17.11.10.31 NMAC. The amendments will align the rule with the Broadband Access and Expansion Act and the Connect New Mexico Act, as well as amendments to the Rural Telecommunications Act, which provides for the administration of the Broadband Program by the Commission. The Commission will take into consideration the comments filed in the rulemaking by OBAE, Staff of the Commission's Telecommunication Bureau, and broadband carriers, when adopting amendments to the rule.

15.0 Recap of Key Priorities, Initiatives and Strategies

The following table summarizes the key strategic priorities, initiatives, and strategies/actions for year 2024.   This program plan will serve as an activity roadmap for OBAE.

15.1 Goal: Broadband Availability

Goal: Universal Broadband Availability		
Strategic Priorities	Major Initiatives	Key Strategies (2024)
Grant Funding to Enable Broadband Deployment	Connect New Mexico Fund	• Foster program awareness. • Select awardees that can best meeting program objectives. • Develop post-award monitoring and tracking program.
	Launch BEAD Funding Program	• Gain NTIA clearance to launch the program. • Finalize eligible service areas. • Develop critical program design factors. • Develop application materials. • Pre-qualify potential applicants. • Select awardees (this phase may span into 2025).
Current and Accurate Broadband Maps	Robust Data for Spatial Data Management and Analytics	• Use and improve local data sources that are most useful for understanding missing or inaccurate needs. • Engage with New Mexico's service providers to ensure data timeliness and accuracy. • Engage local and regional representatives as data challenge advocates. • Engage the public, individuals, and businesses, to perform their own data challenges. • Continue to engage FCC and other federal entities on New Mexico's needs.
	Evolution of the State Broadband Map	• Encourage more end-user awareness, engagement, and understanding. • Give the power of mapping to the end-users • Enhance user adoption and participation by improving data quality and dependability. • Continuously improve data offerings to help complete the big picture of broadband for New Mexico. • Organize technical infrastructure to support evolving needs.

	Launch of Analytic and Decision Support Tools to Empower All Stakeholders	• Develop foundational information technology architecture. • Support existing OBAE initiatives. • Maintain awareness and engagement in technical and tactical needs of broadband.
Removing Deployment Barriers Related to Permits, Rights of Way and Pole Attachments (PROP)	Permits and Rights of Way Streamlining	• Participate in working groups to study challenges and opportunities. • Develop and advocate for policies that drive meaningful reform. • Identify opportunities to leverage technology. • Develop tools and materials to mobilize change.
	Modernization of Pole Attachment Policies and Practices	• Participate in existing working groups and form new ones that bring more partners together. • Advocate for policies that drive meaningful reform. • Develop programs and policies to make "Make Ready" costs more efficient and transparent. • Collaborate with pole owners to identify opportunities to streamline the application, approval, and execution process. • Develop tools and resources that foster education and address barriers.
	NMDOT Rights of Way Fee Waiver Program for In-Kind Fiber and/or Conduit Contribution	• Obtain legislative approval on in-kind policy. • NMDOT to publish the new program in 2024. • Encourage beneficiaries of Connect NM Pilot Program to participate in this program.
Workforce Development	"All Hands on Deck": Statewide Broadband Workforce Development Strategy	• Hire a workforce Development Project Manager • Secure necessary funding. • Allocate planning dollars to workforce development. • Develop strategies to address the gaps. • Conduct ongoing comprehensive financial analysis – including resources required, available funding, additional investment required, and return on investment. • Continue fostering strategic partnerships with state agencies and other labor-affiliated stakeholders.
Technical Assistance Programs	Technical Assistance Programs to Empower Local Communities	• Continue the existing EDA TAP. • Launch several grant programs to provide technical assistance. • Build a dedicated team to plan, design, implement and monitor these grant-funded TAP initiatives.

15.2 Goal: Broadband Adoption and Meaningful Usage

Goal: Broadband Adoption and Meaningful Usage		
Strategic Priorities	Major Initiatives	Key Strategies (2024)
Participation in NTIA Programs for Digital Equity	Development of the Digital Equity Plan	• Successfully complete, submit, and implement the State Digital Equity Plan • Support development a local network of pilot programs and partnerships to strengthen and expand Digital Inclusion activities for Covered Populations • Coordinate and manage the State Digital Equity Capacity Grant program once implementation funding is allocated and received from NTIA
Digital Equity and Inclusion for Tribal Communities	Fostering Digital Equity and Inclusion within Tribal Communities	• Ensure 100 percent of NM Tribes have options to engage and learn about broadband opportunities (ongoing). • Expand quality broadband access to 100 percent of NM Tribes by January 2026. • Ensure NM Tribes have access to affordable, quality, high speed Internet, including access to modern devices by January 2026. • Support NM Tribes in maximizing broadband uses to support cultural preservation, economic development, education and telehealth by January 2026. • Support NM Tribes in the area of cyber security and data sovereignty • Leverage the Connect New Mexico Tribal Working Group (ongoing) • Maximize Tribal Success in federal and state grant opportunities (ongoing) • Support the development of long term financial sustainability for Tribal ISPs by January 2026 • Implement a tribal broadband advocacy framework for state and federal policy issues by June 2024.
Broadband Affordability	Robust Participation in Affordable Connectivity and Low-Cost Service Options	• Support community outreach and engagement to drive enrollment in affordable connectivity and low-cost service options. • Work with national, state, and tribal agencies and ISPs to expand affordable connectivity and low-cost service options

15.3   Goal: Next Generation Networks

Goal: Next Generation Networks		
Strategic Priorities	Major Initiatives	Key Strategies (2024)
Statewide Education Network (SEN)	Launch of Statewide Education Networks	• Complete procurement process. • Upgrade nodes. • Transfer the Broadband program and personnel from PSFA to OBAE • Foster outreach regarding program.
Statewide Middle-Mile Network	Middle-Mile Expansion Strategy through Public-Private Collaboration	• Refresh the gap analysis • Develop and publish the State's detailed middle-mile strategy that complements the 5-Year Action Plan for BEAD. • Seek funding from legislature for middle-mile investment. • Initiate a state-led middle-mile investment program.
Coverage Expansion of Mobile Broadband and Public Safety Networks	Rural 5G Coverage Acceleration	• Obtain industry and stakeholder input. • Conduct inventory of all major coverage mobile gaps. • Find synergies with other grant programs to facilitate rural 5G expansion.
Network Resiliency and Cybersecurity	Statewide Network Resiliency and Security Program	• Develop a comprehensive fact-set on network resiliency and security. • Ensure all public networks owned and operated by the State (or planned) are fully resilient and secure. • Ensure network resiliency and security are part of every infrastructure funding program.

15.4 Goal: Program Stewardship

Goal: Program Stewardship		
Strategic Priorities	Major Initiatives	Key Strategies (2024)
OBAE Transparency and Accountability	Rulemaking for Broadband Grant Programs	• Revise rules to allow for rural telephone and electric cooperatives to participate in programs tied to the Connect New Mexico Fund.
	Year End Annual Progress Report	• Continue to track results quarterly across the Master Project Plan. • Share with the public OBAE's key achievements.

	Program Evaluation and Socioeconomic Impact Assessment	• Develop detailed design of this assessment. • Obtain feedback from stakeholder community by identifying collaborative opportunities. • Finalize a partnership with higher education institutions.
Awardee Conformance with Programmatic and Compliance Requirements	Comprehensive System to Foster Grantee Accountability	• Develop award agreements that lists all program and compliance requirements. • Develop and enforce reporting requirements. • Actively communicate with awardees. • Develop comprehensive set of tools to support grantee performance. • Perform site visits to directly witness and evaluate grantee performance and compliance.
	Connect New Mexico Pilot Program: Awardee Monitoring	• Execute all signed Grant Agreements. • Institute project monitoring. • Closely monitor awardee performance in meeting programmatic and compliance requirements. • Develop and apply lessons learned to future programs.

16.0 Appendix

16.1 Background: Tribal Task Force

The Tribal Broadband Task Force was created by Governor Michelle Lujan Grisham at the August 2023 Government to Government Summit. The Pueblos of Laguna, Jemez, and Cochiti were appointed to serve as members under the coordination of the NM Indian Affairs Department. While broadband is complex and evolving in nature, the core findings reflect the priority areas to successfully connect rural tribal lands, include:

- Leveraging the Connect New Mexico Tribal Working Group
- Maximizing Tribal Success in federal and state grant opportunities
- Developing long term financial sustainability for Tribal ISPs
- Implementing a tribal broadband advocacy framework for state and federal policy issues

Leveraging the Connect New Mexico Tribal Working Group
Finding: The New Mexico Office of Broadband Expansion and Access (OBAE) established in NMSA 1978, 63-9k provides the administrative capacity to address the findings cited below. The Connect New Mexico Council (CNMC) created in NMSA 1978 63-9J, and its Tribal Working Group, comprised of tribal broadband officers, ISPs, IT staff, and other subject matter experts are uniquely qualified to research, articulate solutions, and implement the findings of this task force.

Maximizing Tribal Success in federal and state grant opportunities
Finding: Tribes must apply for all state and federal broadband infrastructure opportunities. The pandemic revealed access to high-speed Internet as essential to access education, health care, remote work, and participate in the global digital economy. The resulting influx of both federal and state funding to connect the unserved, provides the ability for tribes to install broadband infrastructure on their tribal lands that meets their unique connectivity needs, builds IT capacity, and exercises self-determination as sovereign nations.

Developing long term financial sustainability for Tribal ISPs
Finding: The long-term financial sustainability of new tribal ISP operations requires immediate action to create viable business models. Grant funding to install broadband infrastructure does not provide for continuing operations and maintenance costs, which are higher on rural tribal lands. The majority the 23 tribes in New Mexico will operate their own networks in the next five years providing an opportunity for collaboration and strategic planning to address sustainability challenges.

Implementing a tribal broadband advocacy framework for state and federal policy issues
Finding: Developing a state and federal advocacy framework will unify tribal voices to achieve robust state and federal policies that enable tribal success in broadband deployment and sustainability. Emerging state and federal grant opportunities, along with the establishment of state broadband offices, creates an opportunity for tribes to participate in the development of these programs. For existing, programs such as the Universal Service Fund, the inclusion of tribal ISPs requires policy reform that reflect the evolving broadband landscape in New Mexico.

Table 16A: CNMC Tribal Working Group Action Areas

Maximizing Tribal Success in federal and state grant opportunities
An estimated 35% of residents on Tribal lands lack access to broadband compared to 2.1 percent of urban area residents. Nationally, the Infrastructure Investment and Jobs Act (IIJA) and the Consolidated Appropriations Act of 2021 rightly prioritized Tribal sovereignty by providing $3 billion to Tribes in new funding opportunities such as the Tribal Broadband Connectivity Program (TBCP) and $1.9 billion to existing broadband programs like the ReConnect Grant and Loan Program. In the IIJA, Congress appropriated $42.5 billion to the Broadband Equity, Access, and Deployment (BEAD) Program, which includes building infrastructure and supporting digital equity programs within Tribal communities. New Mexico's BEAD allocation is $675 million. The State of New Mexico has established the Connect New Mexico fund to include an initial $70 million in grant funding in addition to a $127 million pilot grant funded with pandemic-related American Rescue Plan Act of 2021.
Actionable Areas for Tribes: • Technical Assistance for grant writing, financial modelling, post award grant compliance • Professional Assistance in the development of fiber optic wired and wireless network designs on or near tribal lands • Consortium development for a tribal middle-mile network connecting tribal and non-tribal rural New Mexico • Lead a tribal 5G coordinated project to fund tribally-owned towers, for mobile carriers and tribally owned infrastructure • GIS Support and training to engage in required state and federal mapping requirements and network management • Work the CNMC Permits, ROW and Pole Attachments Working Group Permits to elicit support and provide guidance for current and future projects on tribal lands • Capacity-building: Create a tribal IT and ISP workforce through workforce training programs for tribal members to enter and lead the industry • Work with OBAE to ensure regular engagement the NM PRC plan development regarding RUSF reform
State Advocacy: • Require the NM broadband grant programs include mandatory tribal consent, right-of-first refusal, and defined dispute resolution process in CNMC Funds grant programs funding infrastructure deployment on tribal lands • Call on the NM Legislature to appropriate additional funding to meet the fiber-optic connectivity goals for New Mexico, that despite the influx of funding, is not able to connect all New Mexicans with high-speed Internet • Urge the CNMC and OBAE to provide flexibility in grant opportunities to include holistic broadband needs in all domains, i.e. anchor institutions, education, public safety, health
Federal Advocacy: • Call upon the FCC, NTIA, and USDA to require Internet service providers and awardees to obtain Tribal consent during the application period and before funds are awarded for broadband infrastructure activities on tribal lands. Tribal consent is a fundamental aspect of respecting the rights and interests of Tribal Nations and should be a prerequisite for any infrastructure development that impacts their lands. By failing to enforce the tribal resolution of consent requirement, federal agencies risk the delay or loss of resources intended for tribal and non-tribal awardees, which grantors have a responsibility to prevent and deconflict prior to making an award. Furthermore, the FCC, NTIA, and USDA have not

published guidance on the challenge and dispute resolution process for Tribes when Tribal Consent was not obtained but the projects were awarded.
- Urge the FCC to normalize all future FCC spectrum auctions to include Rural Tribal Priority Windows, granting tribes sovereign use to the airwaves over tribal lands, modelling the success of the first ever Rural Tribal Priority Window for the 2.5 GHz band
- For tribes awarded spectrum under the 2021 FCC 2.5 GHz Rural Tribal, urge the NTIA and USDA to expedite the obligation of funds for broadband infrastructure projects on Tribal lands so that tribes can meet network build out requirements and/or urge the FCC to allow flexibility given on-going state and federal grant processes.
- Call up on the NTIA BEAD program to allow for flexibility for tribal applications regarding Letter of Credit requirements, given the challenges to collateralize tribal trust assets, such as land

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Developing long term financial sustainability for Tribal ISPs

Sustainability funding would provide Tribal ISPs, and others, with the support needed to
help operating, maintain, and upgrade broadband networks once they are deployed. There is a historic level of broadband deployment funding currently available, however, the need for support does not end once the network is deployed, but rather the focus changes - instead of network design, construction, and business process development, the new ISP must ensure the high costs of operations, maintenance, and upgrades can be covered. These costs, which are higher in rural tribal areas as compared to many other areas of the country, must be covered by the tribal ISP while at the same time ensuring that the end user prices of broadband services remain affordable.

Actionable Areas for Tribes:
- Develop a tribal ISP sustainability strategy plan
- Tribal coalition-building for centralized operations and management that benefit from operational efficiencies and economies of scale, i.e. network operations center, billing, technical support, security
- Develop ISP offerings beyond residential services, i.e. 5G towers, middle-mile transport
- Create community-oriented Digital Equity plans and grant applications
- Work the NMDOT to develop dig once mechanisms on tribal lands, including information transparency for third-parties seeking to use the NM DOT right-of-way to install broadband infrastructure.
- Build tribal capacity by creating a class of tribal broadband professionals, i.e. legal, business operations
- Develop data sovereignty policies, procedures, and controls

State Advocacy:
- Call upon the NM PRC to simplifying ETC designation rules for tribal ISPs to access Universal Service Funds to ensure that broadband networks in tribal areas receive the help they need, either in the form of support from the state USF program or to create a new state-funded tribal ISP support fund.
- Urge the NM PRC to consider the issue of sustainability support for broadband services in rural Tribal areas of New Mexico immediately. The FCC recently continued its policy of recognizing the "unique challenges of deploying high-speed broadband in rural Tribal communities" and adopted a Tribal Broadband Factor that increases support for electing carriers serving locations in tribal areas.

Federal Advocacy:
- Urge Congress to protect and continue the Universal Service Fund allowing for modernization
- Urge Congress to appropriate more funds to the Affordable Connectivity Program, which provides a $75 subside to low-income subscribers on tribal lands
- Call upon the FCC to create a broadband only ETC designation, or other tribal ISP access to USF subsidies, i.e. Lifeline

End of Document