# ALA POLICY *PERSPECTIVES*

## Built by E-Rate: Executive Summary

### A Case Study of Two Tribally-Owned Fiber Networks and the Role of Libraries in Making It Happen

**KRISTEN BATCH**

Six tribal libraries and two schools in north-central New Mexico aggregated their demand for broadband and built two tribally-owned and -operated, 60-mile fiber-optic networks. The first tribal projects of their kind since the Federal Communications Commission (FCC) launched the E-rate modernization in 2014, and the largest E-rate award in the state of New Mexico in 2016—the high-speed broadband networks deliver superior speeds at significantly lower costs, with an ability to scale their usage to meet future broadband demand. (See **Box 1** for the consortia network maps).

Tribal libraries were critically important in the development of these broadband networks. Tribal libraries reside at the heart of their communities in every sense— from their central location within their pueblos, to their core functions of language preservation and learning. They played a key role in building trust among their tribal leadership and educating leaders about the value of connectivity for their communities. With the complexities, challenges, and duration of these E-rate projects, tribal libraries provided a collective voice on the importance of broadband, and they continue to play a vital role in digital inclusion and digital literacy efforts, bridging generational divides and integrating new technologies to support their traditional communities.

Even though most tribal libraries have temporarily closed in response to Covid-19, they have remained a gateway for connectivity. Leaving their WiFi networks on, community members continue to access the signals from library parking lots, at a time when internet connectivity has been more critical than ever for accessing education, health resources, and connecting socially.

As with the development of all library broadband networks, no one person or organization bore sole responsibility for the creation of these two tribal broadband networks. Making them a reality required leadership, cooperation, and coordination across federal, state, and tribal levels. Reaching agreements with neighboring tribes and managing the implementation of the networks across tribal lands required significant time and attention. External support also was needed—ranging from learning about the new E-rate rules and application process to adhering to E-rate requirements as well as state and federal regulations during the construction phase. The success of this broadband infrastructure build-out depended on assembling a diverse team, leveraging existing relationships, and developing new partnerships.

> **"We have gone beyond being known as the underserved and want to step it up and be known as equally served across Indian Country. For me as a tribal member bringing fiber optics to Pueblo land, we will be known as equally served for the future."**
>
> —Cynthia Aguilar, librarian of Santo Domingo Pueblo Library

By working together to build the infrastructure, the tribes gained many benefits. Applying as consortia yielded far greater results than operating alone. The tribes were able to share resources, such as IT expertise, as well as allocate rights-of-way and codify their legal agreements as necessary. The tribes also were able to plan their networks to maximize fiber connectivity.
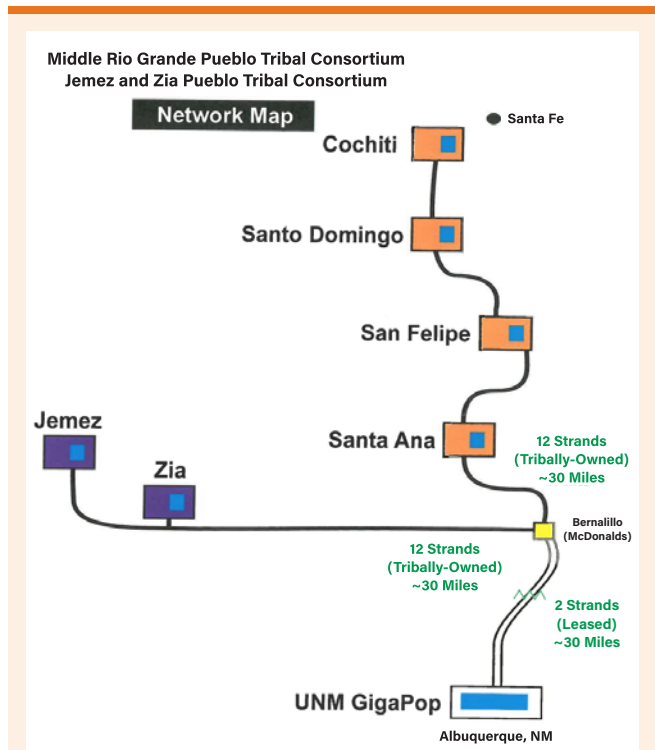
The design of the networks was an integral component to their success. Combining self-provisioned fiber and leased dark fiber to construct their networks, the consortia dramatically increased their access to the internet. By connecting their networks to a major internet interconnection point, rather than the nearest service line, they gained numerous efficiencies and near-limitless capacity. Tribal libraries and schools will have the ability to scale their usage over time, based on demand, without a corresponding increase in costs as their usage increases. This flexibility opens countless opportunities for libraries and schools to add new services as well as gain access to advanced education networks, including Internet2.

**Special construction through E-rate—though far from a simple or standard solution—may be the only cost-effective option for small, rural, and remote communities that struggle with limited, expensive, or unavailable broadband access.**

Among the broad range of libraries represented by the ALA and its affiliates, tribal libraries are the least connected. As the work of libraries demands robust and reasonably priced broadband for the education, employment, entrepreneurship, and empowerment of local communities, advancing policies and programs that support the increased demand for broadband access is a central priority. Furthermore, solutions that bring high-speed internet access to libraries on tribal lands also can benefit public libraries in rural and remote locations facing similar broadband access challenges. Special construction through E-rate—though far from a simple or standard solution—may be the only cost-effective option for small, rural, and remote communities that struggle with limited, expensive, or unavailable broadband access.

While E-rate modernization offers greater flexibility in choosing how to acquire broadband connectivity,



Middle Rio Grande Pueblo Tribal Consortium
Jemez and Zia Pueblo Tribal Consortium

BOX 1. **Consortia Network Maps**

Forming two separate consortia, tribal libraries and schools in six pueblos aggregated their demand for broadband and built two tribally-owned and -operated, 60-mile fiber-optic networks. Each consortium received 95 percent of their funding, roughly $3.9 million of the $4.2 million total costs, from the E-rate program; state and tribal matches contributed the remaining amount. As a result of their network design, the consortia dramatically increased their internet access speeds (from 3 Mbps to 100 Mbps) and decreased costs (from $106/Mbps to $3/Mbps), with ability to scale up to 10 Gbps.

the implementation of special construction projects, especially on tribal lands, is not without challenges. In addition to a steep learning curve for the E-rate program, the management of special construction E-rate projects requires significant time and leaves little room for error. Administrative mistakes or omissions can result in projects being delayed or denied. Furthermore, implementing telecommunications projects on tribal lands adds another layer of complexity, as broadband deployments are often subject to regulations from different federal and state agencies. While much-needed updates

Pueblo Governors at the Middle Rio Grande Groundbreaking in December 2017 at San Felipe Pueblo. (L-R) San Felipe Former Governor Michael T. Sandoval & Lt. Governor Carl Valencia, Santo Domingo Former Governor Everett F. Chavez & Governor Brian Coriz, Project Manager Kimball Sekaquaptewa, Cochiti Governor Eugene Herrera & Lt. Governor Bernard Suina, Santa Ana Lt. Governor Arnold Lujan, and Pueblo youth.

to regulations governing rights-of-way agreements on tribal lands are improving previous barriers to advanced telecommunications deployments, these additional requirements increase the time and expense of these projects and often require outside expertise to assist with their implementation.

Drawing on the challenges and lessons learned from the network projects, three sets of recommendations are offered to enhance support for tribal libraries and their participation in the E-rate program. These recommendations cut across state and federal agencies and focus on three areas: promoting awareness of E-rate opportunities and processes; advocacy for the eligibility and inclusion of tribal libraries in E-rate opportunities and initiatives; and technical support throughout E-rate application and implementation steps.

**Recommendations for decision makers are informed by challenges and lessons learned from the consortia networks and include:**

- **The FCC must revise the definition of tribal libraries** to reflect the language in the 2018 reauthorization of the Museum and Library Services Act (MLSA) amending the definition of a library. Doing so will increase the number of tribal libraries eligible to participate in the E-rate program.

- **The Institute of Museum and Library Services (IMLS) is urged to convene workshops and increase support** for tribal libraries to learn from and share experiences of the benefits of increased broadband connectivity to better leverage broadband opportunities at the federal and state levels.

- **States are encouraged to support tribal libraries by explicitly including them** in state level initiatives and funding opportunities, as well as by lending technical and administrative assistance to tribal library E-rate application processes and procedures.

**Read the complete report at:** ala.org/advocacy/pp/pub/policy

**A rainbow over the Jemez-Zia fiber optic route at the edge of Jemez lands after the network was completed and the fiber had begun transmitting data to Jemez Pueblo.**

**FOR FURTHER INFORMATION ABOUT THIS PUBLICATION, CONTACT:**

Kristen R. Batch (**kbatch@gmail.com**)
or Marijke Visser (**mvisser@alawash.org**)

**ALA** American Library Association