



NTTA

NTTA TRIBAL BROADBAND SUMMIT
APRIL 2024

Set up for Success: Proven Feasibility and Business Planning for Broadband Viability

Feasibility and Funding 101





Feasibility Study 101

Market Data, Operational Cost,
Conceptual Design, and Capital
Requirements



THE OBJECTIVE

Tuba City

Market Data, Operational Cost, Conceptual Design, and Capital Requirements.

- Build to all Tribal Community Homes that are Unserved or Underserved with Fiber
- Ensure the Network is Constructable & Sustainable
- Identify Additional Revenue Opportunities FTTX

PROVIDERS IN THE AREA

Home Internet in Tuba City, AZ

1. Viasat



Speeds Up To
12 Mbps

*Not all internet speeds available in all areas.

Connection: Satellite
Availability: 100%

(866) 392-1638

[View Plans](#)

2. HughesNet



Speeds Up To
25 Mbps

*Not all internet speeds available in all areas.

Connection: Satellite
Availability: 100%

(844) 902-3107

[View Plans](#)

3. EarthLink



Call For Details:
(844) 795-1321

Connection: DSL
Availability: 15.8%

(844) 795-1321

[View Plans](#)

4. Frontier



Call For Details:
(866) 353-9310

Connection: DSL
Availability: 15.8%

(866) 353-9310

[View Plans](#)

Choice Broadband



Speeds Up To
25 Mbps

*Not all internet speeds available in all areas.

Connection: Fixed Wireless
Availability: 98.7%

(719) 626-0000

[View Plans](#)

Starlink



Download Speeds:
50 - 220 Mbps

*Not all internet speeds available in all areas.

Connection: Satellite
Availability: 100%

[View Plans](#)



Horrocks.



conexon

WHAT A BASIC ISP OPERATION LOOKS LIKE

Running an Internet Service Provider (ISP) involves a variety of operations and resources. Here's an overview of the main components:

- **Network Infrastructure:**
 - **Routers and Switches:** These devices are essential for directing traffic within the network and between networks.
 - **Fiber Optic Cables:** High-speed, reliable internet service often requires a fiber-optic network backbone.
- **Internet Backbone Connection:**
 - This connection is usually established through dedicated high-speed lines.
- **Software and Systems:**
 - **Billing and Subscriber Management Systems:** For managing customer accounts, billing, and subscription plans.
 - **Network Management Software:** To monitor network performance, troubleshoot issues, and manage configurations.
 - **Security Software:** Firewalls, intrusion detection/prevention systems, and other security measures are crucial to protect the network and its users.
- **Customer Support:**
 - **Help Desk/Support Staff:** For assisting customers with technical issues, billing inquiries, and service provisioning.
 - **Knowledge Base and Documentation:** Providing online resources and documentation for self-help and troubleshooting.
- **Legal and Regulatory Compliance:**
 - Compliance with local, national, and international regulations governing telecommunications, data privacy, and internet services.
 - Legal resources may be required to navigate regulatory issues and ensure compliance.
- **Human Resources:**
 - **Technical Staff:** Network engineers, system administrators, and IT specialists to design, deploy, and maintain the network infrastructure.
 - **Customer Service Representatives:** To handle inquiries, troubleshoot issues, and provide support to customers.
 - **Management and Administrative Staff:** Executives, managers, and administrative personnel to oversee operations, finances, and compliance.
- **Physical Facilities:**
 - Offices, data centers, and network operation centers (NOCs) to house equipment, staff, and administrative functions.
 - Power backup systems (UPS, generators) and environmental controls (cooling systems) to ensure continuous operation of critical infrastructure.
- **Marketing and Sales:**
 - Marketing personnel to promote services, acquire new customers, and retain existing ones.
 - Sales staff to negotiate contracts, onboard new customers, and manage accounts.
- **Financial Resources:**
 - Capital for infrastructure investment, including equipment purchases, network expansion, and technology upgrades.
 - Operational funds for day-to-day expenses such as salaries, utilities, and maintenance.
- **Monitoring and Maintenance:**
 - Regular monitoring of network performance and reliability.
 - Scheduled maintenance activities to upgrade equipment, apply software patches, and optimize network performance.

BASIC ASSUMPTIONS

Operations Budget: \$416,000 Annual

- Remotely provided through Tribal Telecom with a fee (24K Annual)
- Local Tech's: 2 (150K Annual)
- Motor pool, tools (2 Trucks, Bucket Truck): 40K
- Maintenance Budget: (100K Annual)
- Leased Backhaul Circuit 10G or higher: (60K Annual)

FACTORS TO CONSIDER IN A FEASIBILITY STUDY

- Running an ISP requires a multidisciplinary approach involving technology, business, legal, and customer service expertise. It's a complex operation that demands careful planning, investment, and ongoing management to ensure the delivery of reliable and high-quality internet services.
- Developing a market entry strategy for Fiber-to-the-Home (FTTH) and Fiber-to-the-X (FTTX) telecommunications services requires a comprehensive understanding of the market landscape, including customer needs, competitor analysis, regulatory environment, and technological trends. Here's a structured approach to conducting a market analysis:
 - **Market Size and Growth Potential**
 - **Customer Segmentation and Preferences**
 - **Competitive Analysis**
 - **Regulatory and Legal Environment**
 - **Technological Trends and Infrastructure**
 - **Financial Viability and Investment Requirements**
 - **Marketing and Distribution Channels**
 - **Risk Assessment and Contingency Planning**

WHAT DOES FINANCIAL SUSTAINABILITY LOOK LIKE

Financial Stability

- Develop a business model that enables the ISP to generate sufficient revenue to cover operating expenses and investments in infrastructure expansion and maintenance.
- Diversify revenue streams beyond traditional subscription fees, such as offering value-added services, advertising, or partnering with local businesses for revenue-sharing opportunities.
- Implement cost-effective strategies to minimize operational expenses while maximizing revenue, such as leveraging open-source software, optimizing network efficiency, and negotiating favorable vendor contracts.
- Conduct regular financial assessments and performance evaluations to monitor revenue trends, identify areas for improvement, and make informed decisions to ensure long-term financial sustainability.
- Foster partnerships with government agencies, philanthropic organizations, and private sector investors to secure funding, grants, or subsidies to support initial startup costs and infrastructure development, while aiming for self-sufficiency in the long run

By integrating financial sustainability into the broader framework of a sustainable ISP for tribal lands, it ensures that the internet services provided are not only accessible, reliable, and culturally sensitive but also economically viable and self-sustaining in the long term.

REVENUE DATA

FTTH

| | | | |
|---------|------|---------------|----------------|
| Houses: | 1200 | MRR \$75/home | Service 100/20 |
|---------|------|---------------|----------------|

FTTX

| | | | |
|------------------------------------------|----|---------------|------------|
| Critical Infrastructure Diverse Network: | 10 | MRR \$2K/site | Service 1G |
|------------------------------------------|----|---------------|------------|

| | | | |
|----------------------|----|----------------|------------|
| Commercial Location: | 50 | MRR \$500/site | Service 1G |
|----------------------|----|----------------|------------|

DESIGN DESCRIPTION

Critical Infrastructure Locations:

- To create a stable network for these facilities it is best to create a ring to deploy them on for diverse connections, reducing outages significantly.
- Diverse entrances into the faculties are key as well.

Non-Critical Infrastructure Locations:

- FTTH/FTTX locations built on laterals and single entrances.

Underground/Aerial:

- UG Plowing is affordable and low maintenance, reducing future costs annually.
- Aerial could be the best solution where plowing is not available.
- UG Directional Drilling could play a major role in the inner town, especially for critical infrastructure.

CAPITAL REVIEW

TUBA CITY

Budget Overview

| Name | Miles | Feet | CPF | Total OSP Cost |
|---------------|-------|---------|---------|----------------|
| Total Build | 40.46 | 213,628 | \$15.73 | \$3,361,034.74 |
| Totals | 40.46 | 213,628 | \$15.73 | \$3,361,034.74 |

SUMMARY OF SUSTAINABLE MARKET ANALYSIS

- Design – Feasible
- Capital Cost - \$3,361,034.74
- Operation Cost – \$476,000.00
- Revenue Analysis - \$1,120,000.00 (In Black)

Tribal Broadband Funding Opportunities



What opportunities are available?

- **Broadband Equity, Access, & Deployment (BEAD)**

- *\$42.45 billion NTIA grant program*
- *For broadband deployment to unserved & underserved locations*
- *State Broadband Offices (SBOs) are allocated funds to be awarded to ISPs & other eligible applicants*

- **Tribal Broadband Connectivity Program**

- *~\$3 billion NTIA grant program*
- *For tribal broadband deployment and adoption efforts*
- *NTIA will award directly to eligible tribal entities*

- **ReConnect Loan & Grant Program**

- *Rural Utility Service (RUS) grant program awarding \$150 million to tribal, impoverished, and socially vulnerable entities*
- *RUS's parent agency is the USDA*
- *Awards made to tribal governments are for broadband deployment on tribal lands*
- *RUS will award directly to eligible entities*

BEAD

Info & Resources

- [Notice of Funding Opportunity \(NOFO\)](#)
- [BEAD Initial Proposal Progress](#)
- Each SBO will have their own BEAD Initial Proposal detailing eligibility requirements

Considerations

- **Applicants must obtain a unique entity identifier through SAM.gov and provide it to the SBO**
- SBOs are holding challenge periods prior to the application periods; some have already completed
- Generally, expect application periods to open starting in fall 2024
- RDOF & other areas with enforceable commitments will likely not be eligible for funding

Tribal Broadband Connectivity Program

Info & Resources

- [Program Overview](#)
- [Round 2 NOFO](#)
- Round 1 awards [web map](#)
- The program is for both deployment and adoption efforts on tribal land

Considerations

- **The Round 2 application period has closed; expect a third funding round to open in the future**
- Each round has made \$980 million in funding available
- Only tribal entities are eligible to receive funding through this program
- Tribal entities that previously received funding through this program are still eligible for additional funding

TBCP Award Dashboard



TBCP Awards

Tribal Broadband Connectivity Program

Adoption & Use Awards:

Either

Infrastructure Deployment Aw...

Either

Planning, Feasibility, and Sust...

Either

BIA Region Selector

Alaska (ARO)

Eastern (ERO)

Eastern Oklahoma (EOR)

Great Plains (GPR)

Hawaii (Hawai)

Midwest (MWR)

Navajo (NRO)

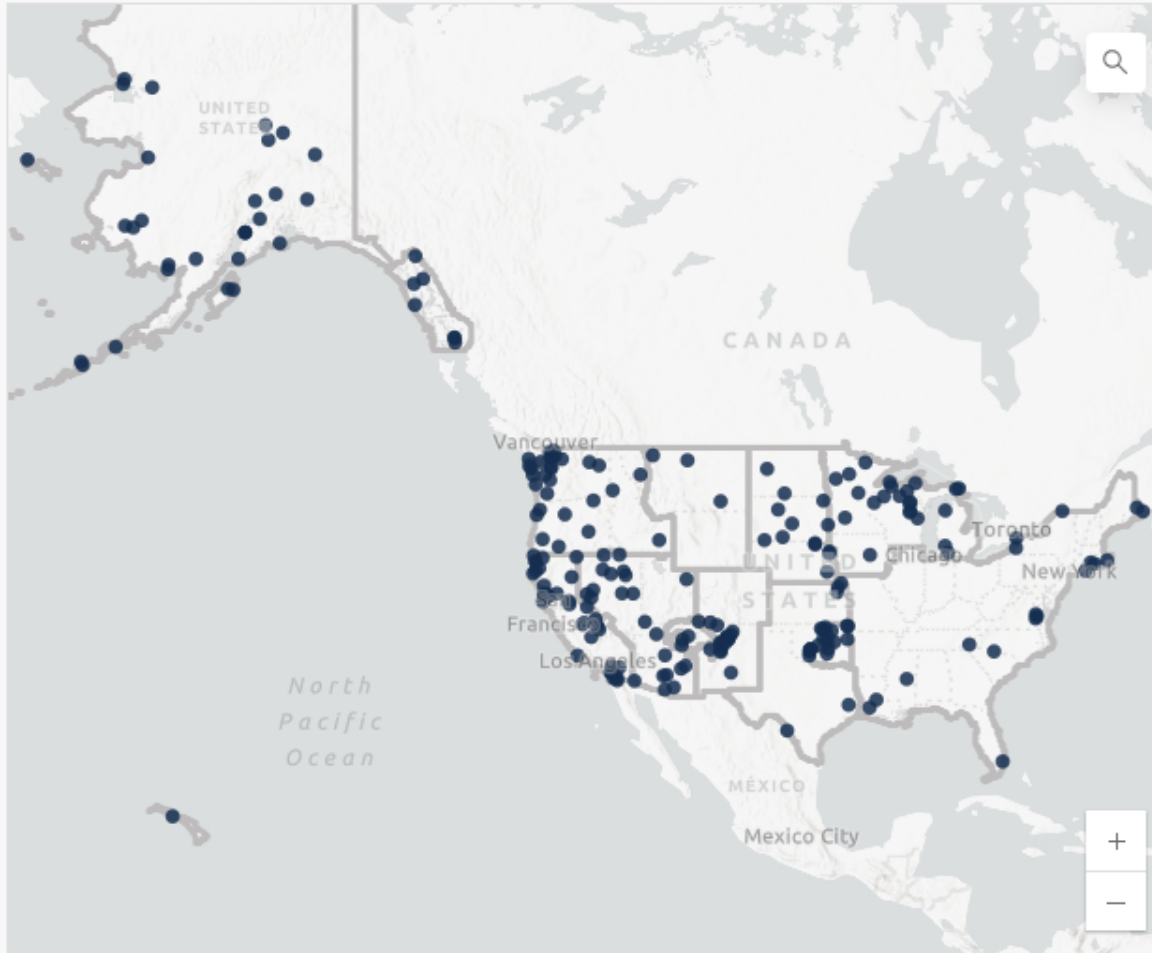
Northwest (NWR)

Total Projects

226

Total Amount Funded

\$1,862,042,625.57



Esri, TomTom, FAO, NOAA, USGS | Esri, USGS | Esri, US Census Bureau | NTIA

Powered by Esri

TBCP Awards

Ahtna Intertribal Resource Commission

Project Type: Use and Adoption & Planning, Feasibility, and Sustainability Studies

Award Amount: \$717,017.00

Summary: This dual Broadband Use and Adoption and Planning, Engineering, Feasibility, and Sustainability project will assist eight Tribal governments of the Ahtna region in developing programs and resources to address COVID-19 pandemic-related concerns and build capacity to use broadband services. This project is expected to enable broadband adoption activities, including, but not limited to, telehealth, distance learning, telework, and workforce development. Additionally, the Ahtna Intertribal Resource Commission will plan a community broadband roadmap, create partnerships, strategize network sustainability options, and create a future project plan for increased broadband connectivity within the region.

[Project Information](#)

Ak-Chin Indian Community

Project Type: Infrastructure Deployment

Award Amount: \$3,080,698.37

Summary: The Broadband Infrastructure Deployment project proposes to install fiberand wireless service connecting 255 unserved Native American households with 100Mbps symmetrical wired and 50/6 Mbps wireless speeds.

[Project Information](#)

Alabama-Coushatta Tribe of Texas

Project Type: Broadband Infrastructure Deployment

Award Amount: \$500,000.00

ReConnect Loan & Grant Program

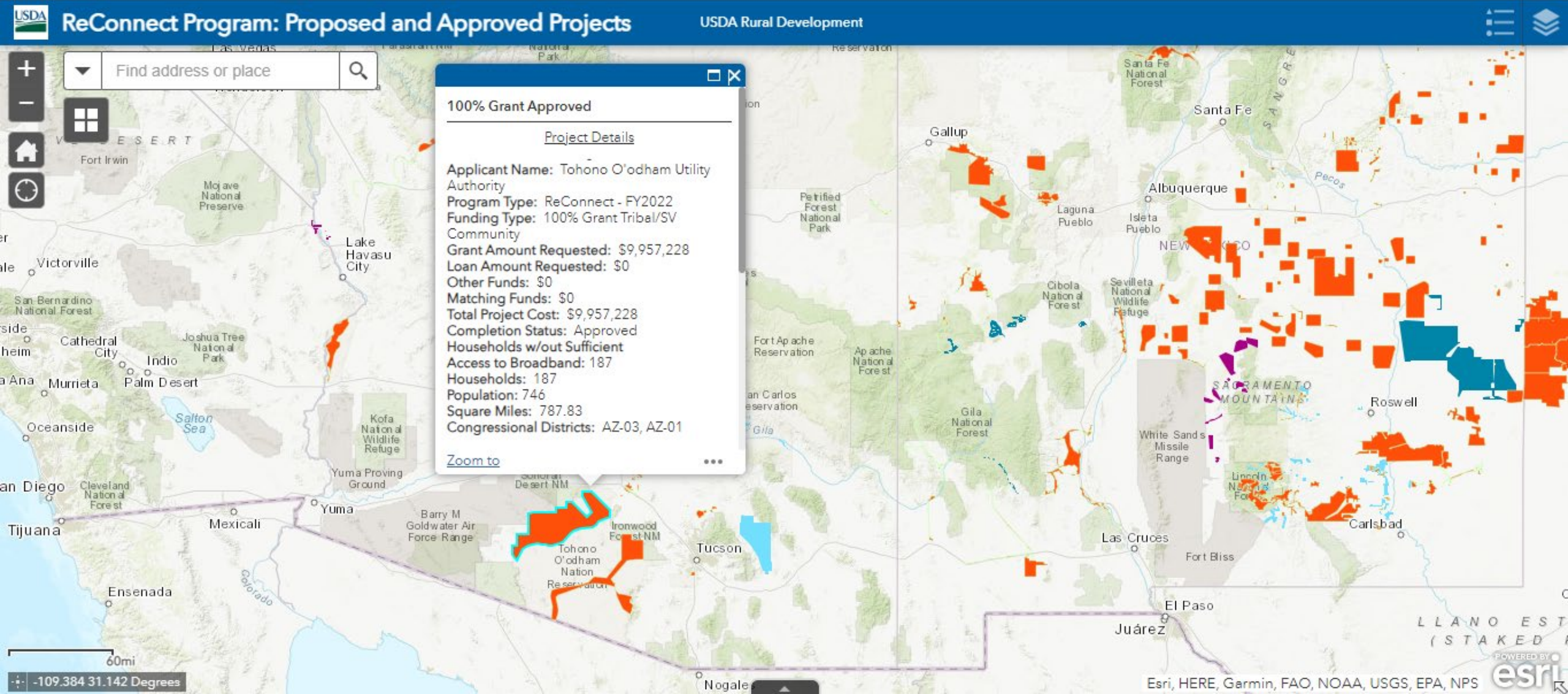
Info & Resources

- [Program Overview](#)
- [Fiscal Year 2024 NOFO](#)
- [NOFO Extension](#)
- ReConnect awards [web map](#)
- Apply under the “100% Grant for Alaska Native Corporations, Tribal Governments, Colonias, Persistent Poverty Areas and Socially Vulnerable Communities” Funding Category
- Up to \$150 million in funding available

Considerations

- **Submission deadline: May 21, 2024**
- 90% of households in the proposed funded service area (PFSA) must lack sufficient access to broadband as defined in the latest NOFO
- Proposed network must provide 100/100 Mbps service to every premises within PFSA
- Proposed network must be in a rural area as defined in the latest NOFO
- The maximum grant ask for a single application is \$25 million
- The minimum grant ask for a single application is \$100,000

ReConnect Award Interactive Map



Other Potential Opportunities

American Rescue Plan Act (ARPA)

- ARPA funds are sourced from the US Dept. of the Treasury. For states that have remaining ARPA rounds, such as Oklahoma, tribal entities may consider applying for funding. SBOs award ARPA funding to ISPs and other eligible entities for broadband deployment. ARPA funding consists of Capital Projects Fund money, State & Local Fiscal Recovery Fund money, or a combination of both. These funding pools both have their own compliance requirements for reporting to the Treasury.

Affordable Connectivity Program – Enhanced Tribal Benefit - (Program undergoing revision)

- Up to \$75/month discount on internet service and a one-time discount of \$100 on laptop, tablet or desktop computer. Possible Lifeline program benefit of \$34.25 month. Qualification required.

Connecting Minority Communities Program

- This NTIA pilot program has ended, however, NTIA may conduct another round of funding in the future. This program is to enable purchasing of broadband equipment and enhance IT capabilities at minority colleges and minority-serving institutions. See the pilot program [awards](#). NTIA awarded grants to 5 Tribal Colleges and Universities.

Connecting Minority Communities



CMC Awards

Connecting Minority Communities Program

Select Awardee Type (Multiple):

TCU

Select Region:

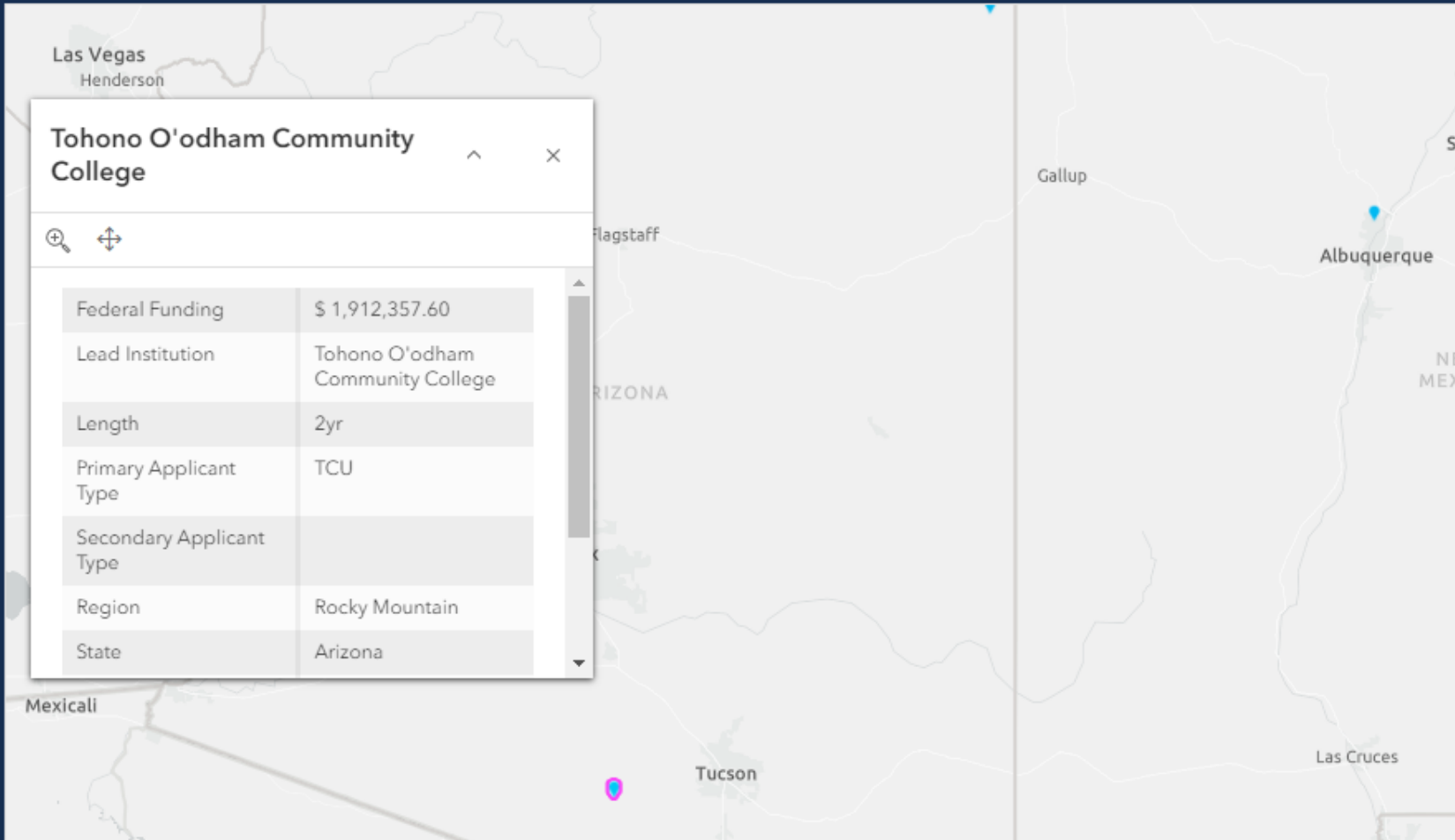
All

Select State (Multiple):

All

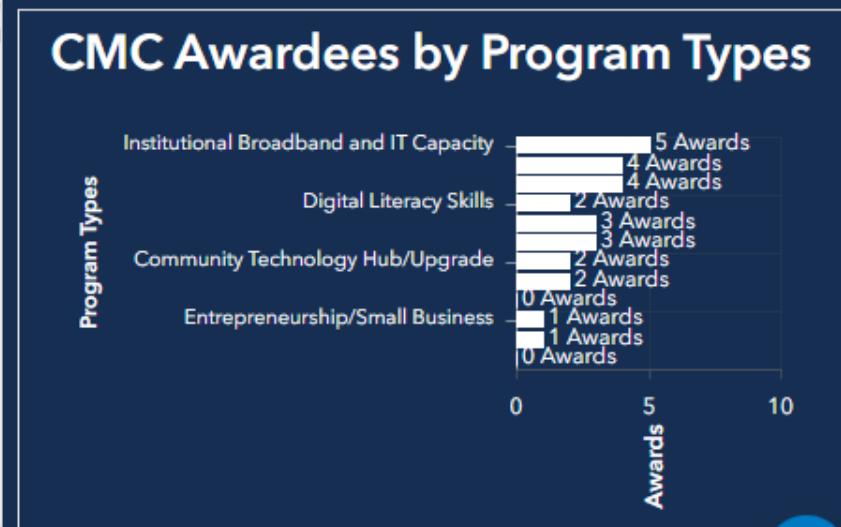
Select Institution Type

All



Total Awarded Grants
5

Total Amount Awarded
\$11,346,214.16



Program Chart

Designation Type Totals





Scott Carey
Senior Telecom Manager
Horrocks
(480) 863-6641
Scott.carey@horrocks.com



Carl Meyerhoefer
SVP, Business Development
Conexon
828.244.1359
Carl.meyerhoefer@conexon.us

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