LOCAL BROADBAND PROJECTS AND INITIATIVES

LOCALLY BASED INITIATIVES

In the course of the Connected Assessment program, a number of communities took the discussions spurred by the Community Engagement process and created locally based initiatives and customized solutions to implement. This section highlights a number of those local projects along with other project suggestions that have been regarded by communities as future next steps and best practices for their areas, beyond the Connected Nation recommended items.

Broadband Access: Creation of a multi-county broadband purchasing consortium (Humboldt, Lander, and Pershing counties)

GOAL:
To identify the most credible and reliable broadband provider to serve the region's households and businesses through an RFP (request for proposals) process as a tri-county consortium to maximize buying power.

PROJECT DESCRIPTION:
The broadband committee, comprised of representatives of the counties of Humboldt, Lander, and Pershing, recommend to County Commissioners the consideration for implementation of this multi-county consortium. The consortium should be led by the three county governments, which would commit to a contract guarantee for a service provider to serve three counties (Humboldt, Lander, and Pershing). The guarantee of the consortium would allow for these communities (counties) to break into the heretofore-inaccessible fiber running through the I-80 corridor. Currently, this can be done at a very high cost to facilitate FTTP, or can be done in collaboration with WISPs (including fixed wireless providers). By creating the consortium-backed guarantee, the incentive is in place for a true broadband investment to be made. Thus, the local anchors are better capable of serving their citizenry. Local retail providers are given access to an alternative provider. In short order, fiber-fed broadband can serve not only the anchors, but also local WISPs, resulting in small business and residential customers being able to enjoy broadband on the same level as places like Reno and Las Vegas.

BENEFITS:

- By increasing speeds and access, this project would create a credible and reliable broadband consortium within these three counties to serve the residents and businesses. It would also provide the much-needed redundancy in these communities.

ACTION ITEMS:

- Establish a consortium within the counties to work with local county officials to facilitate fiber-fed broadband to CAI, local providers, and residents.

- Consider opportunities for leveraging community assets to promote broadband deployment.

- Develop a system of communication through single points of contact to providers regarding city/county planning initiatives.

- Identify all providers in the area, including contact names, service territory, and available speeds.

- Invite providers and local customers to ongoing technology meetings, identifying resources and challenges for both the community and providers.

09 MULTI-COUNTY BROADBAND MAP

Legend:
- ◉ City
- ── Interstate
- ── US Road
- ---- Municipal Boundary
- --- County Boundary
- Water
- National and State Lands
- Fiber Broadband Available
- Cable Broadband Available
- DSL Broadband Available
- Fixed Wireless Broadband Available
- Unserved Areas
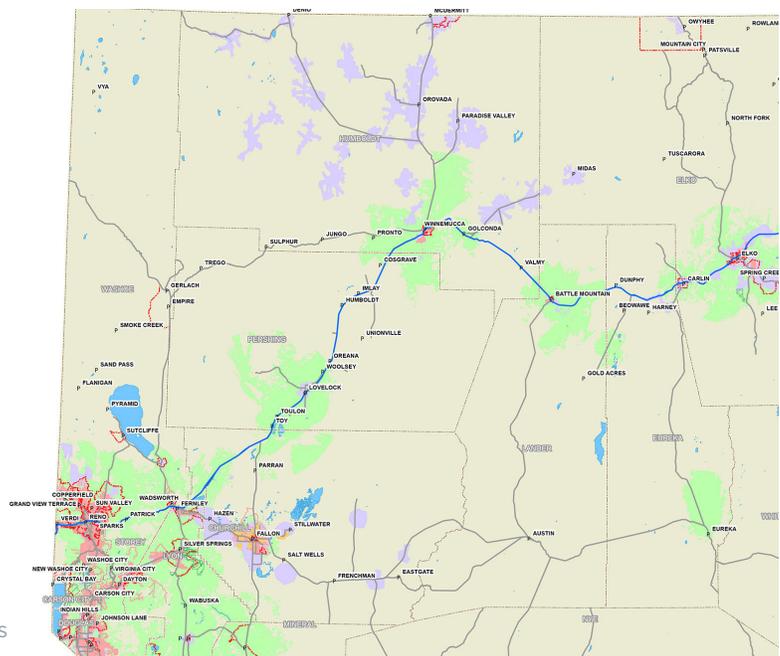
Broadband Access: Mineral County School District Internet Bandwidth Upgrade

GOAL:

The overall goal is to upgrade the Internet bandwidth in the School District to at least 12-18 Mbps or higher to accommodate faster connections for web-based applications, including but not limited to, MAPT testing, Teacher YouTube, PowerSchool, SmartBoards, etc.

PROJECT DESCRIPTION:

The Mineral School District plans to implement several web-based applications that will be hosted on the Internet. Its current Internet connection is limited to less than 5 Mbps download speed.

BENEFITS:

• Generate efficiency and cost savings by moving several applications to hosted services.

• Improve the level and quality of instruction and education in the school district.

• Improve capability for online instruction and learning in the Special Education Department (includes Compass Learning and Lexia to aid in the alternative education sessions).

ACTION ITEMS:

• Finalize contract with AT&T regarding the service.

• Execute the implementation plan as follows:

– Install 12 Mbps (AT&T Uverse service) line at the Hawthorne Elementary School by early December.

– Upgrade/install two other lines with AT&T (i.e., 12 Mbps in the school district office and 18 Mbps at the high school by winter break).

Broadband Adoption: Community Free Wi-Fi

GOAL:
Offer free Wi-Fi access in local tourism hotspots to encourage visitors to interact with local communities/governments and to increase economic footprint of tourism dollars.

PROJECT DESCRIPTION:
Offer free Wi-Fi through partnerships with local providers and businesses, allowing tourists to interact with communities and to access the Internet. In some cases, free Wi-Fi can also enable events and other activities in the town. For example, in Genoa, Nevada mobile access for vendors at the local Candy Dance is incredibly important to process payments.

The following communities have identified free Wi-Fi as a priority:

• Genoa, NV

• Downtown Minden/Gardnerville

• Lovelock, NV County Courthouse and Surrounding Community Park

ACTION ITEMS:

• Identify a provider that would be willing to install, support, and maintain the equipment required either through an RFP or through a local partnership.

• Identify a funding mechanism for the Wi-Fi network.

• Establish the exact areas to be covered.

• Support construction of the project and market the location as a Wi-Fi hotspot.

Broadband Adoption: Promote Computer Refurbishment or Recycling Programs

GOAL:
Promote and support existing computer refurbishment and recycling programs in order to expand broadband adoption in communities.

PROJECT DESCRIPTION:
Several communities in Nevada have established locally-based computer refurbishment and recycling programs, which assist in and promote broadband and technology adoption. According to Connected Nation's residential survey, approximately 119,000 Nevada households do not have a computer or device with which to access the Internet, and cost of any such device can be a barrier to adoption. These private efforts should be encouraged and promoted as opportunities to help bridge the broadband adoption gap in Nevada.

Computer refurbishment programs are often designed to help recycle computers donated by local businesses, government, schools, and other organizations, and then distribute them to low-income households and other households that face affordability barriers to computer ownership. Alternatively, community recycling programs help to reduce the amount of hazardous materials that may enter the environment.

BENEFITS:

• Computer refurbishing programs have shown to be an excellent work force training tool for correctional facilities, young adults, and the mentally and physically challenged. The correctional facility program trains inmates with computer skills that should help them find jobs upon their release.

• The process by which computers and other electronic equipment are refurbished or broken down to their basic parts is called demanufacturing. This helps conserve energy and raw materials needed to manufacture new computers and electronic equipment. These parts are then reused in upgrading other computers.

ACTION ITEMS:

• Support existing computer refurbishment and recycling programs.

• Develop a model for new computer refurbishing or recycling. A basic framework might include:

– Project Planning – Determination of minimum computer specifications; acquisition and storage of donated computers; determination and installation of appropriate computer operating system; calculation of costs needed to carry out the program.

– Inventory Management – Examine how equipment and software will be sorted and managed; manage inventory by identifying computers that are ready to be refurbished from those that are non-functioning.

– Volunteer Training – Review established residential refurbishment and recycling programs that the community can take advantage of such as Dell's Reconnect program, Earth 911, and Electronic Industries Alliance's Consumer Education inititative.

Broadband Adoption: Computer Literacy and Social Networking Classes in Eureka Senior Centers

GOAL:
Provide classes and training to improve computer literacy and teach social networking to senior clients at designated centers. Chosen senior centers include Eureka Senior Center in Eureka and Fannie Komp Senior Center in Cresent Valley.

PROJECT DESCRIPTION:
Create computer training programs and classes for seniors at the centers.

ACTION ITEMS:
• Create goals/objectives for the training program.

• Identify current statewide/local training opportunities for a possible partnership.

• Solicit funding for the program through grants.

• Set up computers and facilities for training.

• Find qualified trainers.

• Create training calendar.

• Market training to target audience.

SUPPORTING EXISTING LOCAL PROJECTS

Through the planning process many ongoing community broadband projects were identified. The local planning teams quickly realized supporting, understanding, and communicating the local projects was a top priority.

By supporting providers and community projects, community leaders realized they could encourage timely progress, maximize local resources, and create relationships of collaboration carrying into the future. In some cases this may lead to a reduction in cost for both infrastructure deployment and service to residents. Additionally, this will allow for a clear communication channel between residents, community leaders, and providers.

To support these current broadband projects, communities aim to:

- Identify all providers/projects in the area, including contact names, service territory, and available speeds.

- Invite providers and local customers to ongoing technology meetings, identifying resources and challenges for both the community and providers.

- Consider opportunities for leveraging community assets to promote broadband deployment, especially among community anchor institutions.

- Develop a system of communication through single points of contact to providers regarding city/county planning initiatives.

These projects include the following:

Eastern Nevada Food Bank (ENFB) serving White Pine

GOAL:
Support ENFB through the use of technology (where appropriate) to maximize the sourcing and distribution of healthy food resources. This includes support and collaboration in the following areas:

- Humanitarian healthy food distribution.

- New job creation for low-income veterans and families.

- Youth and adult education in agricultural and business management practices.

- Social disorder and judicial community service support.

PROJECT DESCRIPTION:
ENFB is a new organzation with the objective of achieving sustainability in rural communities that lack healthy food choices. As a Nevada non-profit, the organization has been established as a Community Development Corporation (CDC). As a CDC, it will provide programs, offer services, and engage in activities that promote and support community development. Local leaders should support the development of this organization, using technology as a catalyst for change to further develop the food network and assist in fundraising efforts.

Lincoln County School District Technology Upgrade Projects

GOAL:
To prepare Lincoln County School District for new growth needs in all areas of technology in order to create a better learning environment that is collaborative and meaningful for the students. Additionally, to facilitate communications within the school system as part of the Lincoln County School District Emergency/Crisis Management Plan.

PROJECT DESCRIPTION:
Overall technology upgrades in all schools of the Lincoln County School District to prepare for future needs and requirements including state-required online reporting and assessment (e.g., Smarter Balanced Assessment Consortium; NRS required teacher evaluation system).

BENEFITS:

• Improve the level and quality of education in all schools in the Lincoln County School District.

• Technology will support both teaching and learning in the classrooms (e.g., expanded course offerings and better learning materials; increased student engagement and motivation).

Action Items:

• Placement of new computer servers to accommodate needs.

• Installation and upgrades of wireless access points in each school.

Lincoln County Telephone System Fiber Cable Placement Project

GOAL:
To replace an aging copper plant in Lincoln County to enable increased broadband speeds in the county.

PROJECT DESCRIPTION:
Outside plant construction of a fiber line in order to expand service areas and increase broadband speeds by December 2013.

BENEFITS:

• Improve quality of service and customer satisfaction.

ACTION ITEMS:

• Install fiber 40 miles from Pioche to cover Dry Valley and Rose Valley.

• Install additional 14 miles of fiber between Panaca and Caliente.

Mt. Grant General Hospital Acute Hospital Electronic Health Record (EHR)

GOAL:

Participate in the Medicare and Medicaid Incentive Program under the American Recovery and Reinvestment Act (ARRA) that allows eligible hospitals to adopt, implement, upgrade, and demonstrate meaningful use of certified EHR Technology.

PROJECT DESCRIPTION:

Mt. Grant General Hospital decided to participate in the American Recovery and Reinvestment Act's Electronic Health Record Program. EHR is an evolving concept defined as a systematic collection of electronic health information about individual patients or populations. It is a record in digital format that is theoretically capable of being shared across different healthcare settings. In some cases this sharing can occur by way of network-connected, enterprise-wide information systems and other information networks or exchanges. EHRs may include a range of data, including demographics, medical history, medication and allergies, immunization status, laboratory test results, radiology images, vital signs, personal statistics like age and weight, and billing information.

BENEFITS:

• EHR improves the ability of the hospital to provide healthcare because the system is designed to capture and represent data that accurately capture the state of the patient at all times.

• It allows for an entire patient history to be viewed, thereby eliminating the need to track down the patient's previous medical record.

• It reduces data replication, as there is only one modifiable file that can constantly be viewed and updated.

• It minimizes the issue of lost forms or paperwork.

ACTION ITEMS:

• Identify and review potential EHR implementation and Meaningful Use (MU) timelines.

• Verify PECOS enrollment for 291300 and 292300.

• Calculate Medicare incentive funding estimates.

• Calculate MGGH CAH Medicaid Utilization (must be at least 10% or more).

- Analyze MU Stage 1 and Stage 2 deadlines and impact on the EHR implementation.

- Register with CMS in preparation for MU attestation.

- Attest with CMS after 90-day attestation period has been completed.

- Receive incentive payment from Medicare.

PROJECT SUCCESSES

In addition to the various project plans identified in communities, local community planning teams across the state experienced a myriad of successes as a result of bringing leaders around the table to talk about broadband in a comprehensive fashion. These community broadband successes have been documented below.

Eureka County Bandwidth Upgrade

GOAL:
To upgrade the bandwidth for the county LAN by 5-fold in order to make online resources more useable and accessible to rural residents and county government officials.

PROJECT DESCRIPTION:
A county-wide initiative to improve not only availability, but the quality of broadband for residents and local government through fiber build-out funded by Eureka County.

ACCOMPLISHMENTS:
The county completed construction of the project July 2013.

ROLE OF CONNECT NEVADA:
Connect Nevada facilitated conversations between local county officials and national providers with technical support and contacts.

Esmeralda County School District Network Upgrade

GOAL:
To upgrade the school district's Internet/data network in order to accommodate distance learning and provide better Internet access in the schools.

PROJECT DESCRIPTION:
The school district needed to increase its bandwidth to be able to implement more advanced technology and computer applications, including a 1:1 program.

ACCOMPLISHMENTS:
Implemented a 10 Mbps VLAN in the three ECSD K-8 elementary schools in Goldfield, Dyer (Fish Lake Valley), and Silver Peak and replaced outdated bonded T-1 connections for ECSD.

ROLE OF CONNECT NEVADA:
Connect Nevada facilitated initial conversations between ECSD and local provider Arizona Nevada Tower Corporation (ANTC) which resulted in an RFP, a proposal, and changes to the ANTC project to accommodate education facilities.

ANTC Fish Lake Valley (Dyer) Project

GOAL:
Provide robust community broadband service to Fish Lake Valley (Dyer) through a BIP project awarded to Arizona Nevada Tower.

PROJECT DESCRIPTION:
Part of Arizona Nevada Tower Corporation's Broadband Initiative Program in 30 communities across central Nevada. The project is currently in progress with an estimated completion date within the final quarter of 2014.

ACCOMPLISHMENTS:
BLM approval and beginning construction of the project.

ROLE OF CONNECT NEVADA:
After ANTC ran into permitting and Environmental Assessment issues, Connect Nevada facilitated several meetings and ongoing reports to resolve the issues and allow ANTC to get back on schedule for construction in 2014.

Baker, NV Mobile Access Project

GOAL:
Expand mobile access to Baker, Nevada while at the same time providing for the development of a more robust fixed wireless network.

PROJECT DESCRIPTION:
Baker, a small community east of Ely, is lacking a robust network for mobile access. This lack of infrastructure impacts public safety as well as the economic vitality of a community reliant on tourism dollars (Great Basin National Park). Baker has been working tirelessly for some time to identify a solution to this problem. The technology team, in collaboration with Connect Nevada, worked to identify a potential provider willing to expand both mobile broadband and fixed wireless broadband through collocation.

ACCOMPLISHMENTS:
Connect Nevada identified a provider, Commnet, and facilitated the construction of a tower for the town of Baker. The tower was completed early 2014, offering mobile access and an opportunity for collocation for Beehive Wireless. Great Basin National Park now plans to offer additional educational resources for the park via mobile applications.

ROLE OF CONNECT NEVADA:
Connect Nevada held initial meetings with community members, identified a provider, facilitated meetings, and initiated agreements between the two parties.

Lund, NV ANTC Broadband Project

GOAL:

Leveraging existing assets and current projects, the White Pine technology team will facilitate high-speed broadband access to 100% of residences and businesses, provide free basic Internet service to 100% of community anchor institutions, and provide a Personal Computing Center (PCC) operated at no cost to Lund for 24 months.

PROJECT DESCRIPTION:

Utilizing a new tower that is being constructed near the center of town along with fiber-fed TDM circuits available from the ILEC, ANTC – through its subsidiary, AtomSplash – will deliver high-speed access with download speeds up to 6 Mbps for every business and residence in the town of Lund. Leveraging the resources of TAG and ANTC's proven track record for securing Community Connect grant funding, ANTC will apply for (and expects to be awarded) the contract to support the deployment of fixed terrestrial wireless Internet to every home and business interested in subscribing to service. In addition, ANTC will construct and operate a PCC containing 10 computers for the community for no less than 24 months, free Internet access to those residents who do not elect to subscribe to the commercial service, as well as a free local Wi-Fi hotspot. Further, all local community anchor institutions will receive free basic Internet service during the same 24-month period.

ACCOMPLISHMENTS:

In partnership with Arizona Nevada Tower and the local technology team, a Community Connect grant was secured for Lund in 2013.

ROLE OF CONNECT NEVADA:

Connect Nevada coordinated the White Pine planning meetings and further coordinated the discussions that led to the partnership between White Pine Economic Development and Arizona Nevada Tower.

Genoa, NV Community Wi-Fi Project

GOAL:
Offer free Wi-Fi access in local tourism hotspots in Genoa, Nevada to encourage visitors to interact with the local community/government and to increase economic footprint of tourism dollars.

PROJECT DESCRIPTION:
Offer free Wi-Fi through partnerships with local providers and businesses, allowing tourists to interact with the community and to access the Internet. In Genoa, mobile access for vendors at the Candy Dance is incredibly important to process payments and to communicate with public safety officials.

ACCOMPLISHMENTS:
Douglas County created a solution for connectivity at their annual Candy Dance event (utilizing a C.O.W.S.) and is now looking at creating a permanent, open access Wi-Fi network for the town of Genoa. The town of Genoa lacks mobile coverage, which only grows exponentially with events hosted by the town as a result of the increase of visitors and the increase of transactions via mobile devices. The town has sought county redevelopment funds to initiate creation of an engineering plan and to create an RFP for local providers.

ROLE OF CONNECT NEVADA:
Connect Nevada hosted town meetings to discuss the issue, provided expertise, and contributed to the "findings" document to solicit funds from the county redevelopment agency.

Douglas County Speed Test Contest

GOAL:

Create a more detailed map for the community regarding available speeds, enabling the technology team and community stakeholders to better understand the broadband landscape and to address residential concerns anecdotally gathered at local technology team meetings. This also allows communities to initiate informed discussions with local providers to assist in addressing gaps in coverage and potential build out plans.

PROJECT DESCRIPTION:

Encourage residents to participate in data contribution through county-level speed testing, in order to validate available speeds of local providers and to better understand adoption trends among residents. Results from these speed tests can contribute to an overlay of broadband availability and show clusters of speed trends in a given area.

ACCOMPLISHMENTS:

Douglas County, in partnership with Arizona Nevada Tower, hosted a speed test contest over a 3 month period encouraging residents to perform speed tests from their homes. An iPad was awarded to one participant. The contest then gave the community additional data points, which were overlaid on a residential availability map. This map was used by the local technology team to discuss availability and adoption rates of residents.

ROLE OF CONNECT NEVADA:

Connect Nevada coordinated marketing of the contest, collected the data, and mapped the data for the team.

Douglas County Industrial and Commercial Overlays

GOAL:

To better understand business and industrial broadband access in Douglas County.

PROJECT DESCRIPTION:

In coordination with county GIS, collect and display industrial and commercial zones on the residential availability map. This map will be used by the local technology planning team to examine industrial and commercial access for both current businesses and future economic development opportunities.
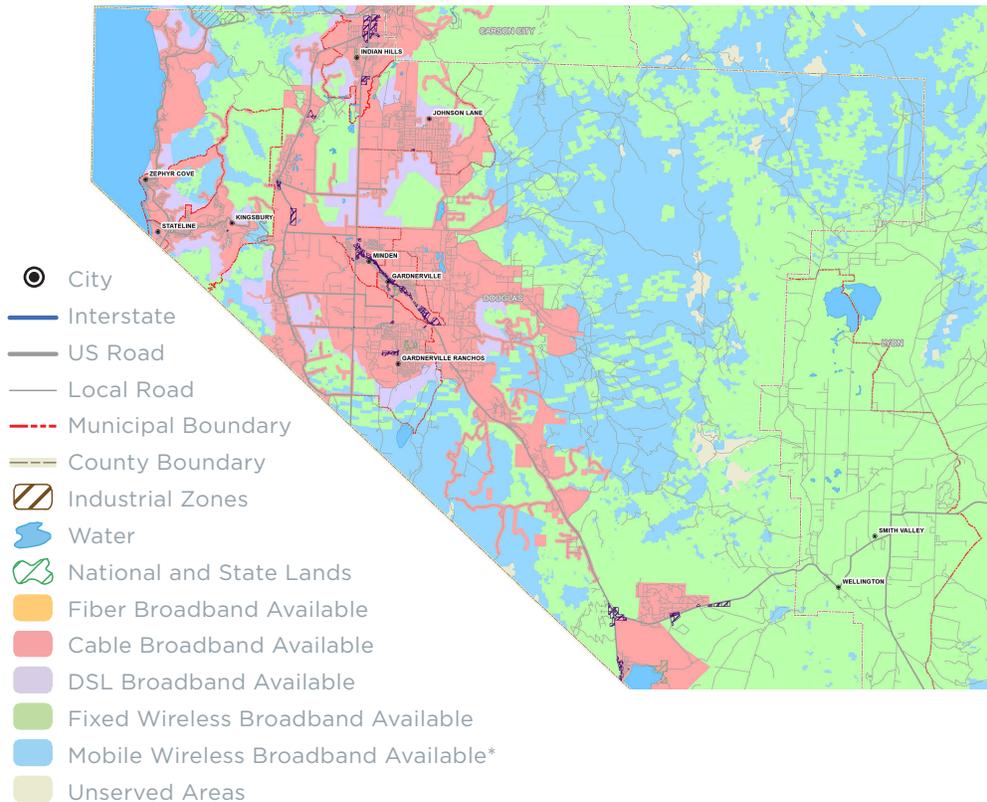
ACCOMPLISHMENTS:

A map was created for use by the local planning team to examine the industrial and commercial zones, and is now being used by the local economic development authority to inform the planning process.

ROLE OF CONNECT NEVADA:

Connect Nevada coordinated GIS data coordination between Connected Nation and Douglas County GIS and mapped the resulting data for use by the local technology team.

10 DOUGLAS COUNTY BROADBAND MAP

- ◉ City
- —— Interstate
- —— US Road
- —— Local Road
- --- Municipal Boundary
- === County Boundary
- ▨ Industrial Zones
- 🝔 Water
- National and State Lands
- Fiber Broadband Available
- Cable Broadband Available
- DSL Broadband Available
- Fixed Wireless Broadband Available
- Mobile Wireless Broadband Available*
- Unserved Areas

Storey County Government Access

GOAL:
To increase speeds to county government administrative buildings and to make those connections more reliable for business use.

PROJECT DESCRIPTION:
Identify an alternative provider to create competition, to facilitate faster speeds, to reduce costs and to create a more reliable connection for local government use.

ACCOMPLISHMENTS:
At a local technology planning meeting, it was discovered that county government's connection speeds were slow, unreliable, and expensive. Arizona Nevada Tower recognized it could serve the county via a tower located at USA Parkway. Arizona Nevada Tower put together a proposal for the county which ended up saving the county a significant amount of money, for a more reliable, faster connection.

ROLE OF CONNECT NEVADA:
Connect Nevada facilitated the local planning meeting and identified Arizona Nevada Tower as a potential provider for the location.

Additional Successes

- At a local planning meeting in Nye County, where broadband access issues were identified, a resident decided to start a fixed wireless company to serve Pahrump, Nevada called Wave Direct (now Jab Wireless).

- At the Nevada Broadband Summit 2012, S.W.I.T.C.H agreed to serve as a broker for local ISPs in Nevada, dramatically decreasing the cost per Mbps for local providers.

- Connect Nevada supplied feedback and facilitated meetings to redevelop the White Pine County website in order to be more inclusive of the county tourism and government resources.