

Broadband USA Applications Database

Applicant Name: Siskiyou County Economic Development

Project Title: Siskiyou Broadband Middle Mile

Project Type: Middle Mile

Executive Summary

Siskiyou County, geographically the 5th largest county in the state of California covers more than 6,347 square miles is located in the northernmost section of California with a population of approximately 44,301 people. The county includes 9 incorporated cities including Dorris, Dunsmuir, Etna, Ft. Jones, Montague, Mt Shasta, Tulelake, Weed and Yreka, plus another 10 unincorporated population centers as well as various ranches, camps and businesses. The county has 32 local k-12 schools and local education agencies which serve some 6,200 students, as well as local community college. The county also contains 96 institutions (anchor tenants) that support local, state and federal emergency, health and support services. Siskiyou County's unemployment rate is consistently nearly double that of the state average; in December of 2007 the state unemployment rate was 5.9% while Siskiyou County struggled at 10.5%. Currently Siskiyou County has an unemployment rate of 18.10%. According to census data 18.6% of residents are below poverty level and an average of 51% have income below the median income level for the area and thus qualify as part of the targeted income group for federal grant programs such as HUD. Rural Broadband is an issue that affects all the communities in Siskiyou County. Each city has supported the Siskiyou County Economic Development Council (SCEDC) in pursuing this critical infrastructure opportunity. The SCEDC has formed a Broadband Coalition of local ISP/WISP providers, k-12 Education, Community College, healthcare, Karuk Tribal Council, business leaders, backbone service providers, Siskiyou Telephone (a former RUS Borrower) and public elected officials. The SCEDC has assessed the requirements and the opportunity, and has created the Siskiyou County Broadband Consortium (SCBC), a collaborative team of public and private leadership to bring broadband to rural remote Siskiyou County. The SCBC was established to address the lack of convenient, affordable broadband connectivity throughout the county. Currently, there is limited last mile infrastructure for broadband, and even where broadband technology exists, it is available only to a very small service area. The broadband services in these areas are primarily DSL based technology which is limited by the distance it must travel from the Telco Central Office (CO) to the customers address. This leaves large sections of the County without access to the DSL service. The majority of the region is served by terrestrial copper communications lines. The copper line systems are unable to provide widespread deployment of broadband solutions to the region due to nonexistent middle mile infrastructure. Satellite and Wireless broadband are an option; however, the hardware costs of more than \$700 for equipment and installation are financially prohibitive for the majority of the residents in the county. All of the current solutions that are available in the limited areas of the county average more than double the monthly recurring costs of broadband in metropolitan areas in the state. The principal barrier to delivering additional high speed connectivity is the fact that there is no access to the backbone of any

major carrier for broadband delivery in Siskiyou County. The lack of middle mile and the costs of backhaul have inhibited the opportunity, feasibility and affordability of broadband access to rural remote Siskiyou County. This Consortium is pleased to submit a collaborative application that offers a delivery model that will be easily replicated not only throughout California, but in rural communities throughout the United States. More importantly, this model provides a sustainable method for delivery of broadband services to any underserved area within the state. In recent months, the county has been unable to attract new businesses and jobs to the area because of the lack of communications infrastructure that would enable a business to be competitive in today's economy. This project will enable cost effective services for businesses and consumers resulting in positive job growth and population retention. Siskiyou County has a total of 21,947 households and 2,452 businesses. Our proposal will benefit virtually all of them. Siskiyou County has a total of 77 public buildings including government, schools, libraries, Tribes, and healthcare. Our proposal will benefit all of them as anchor tenants. The Consortium will provide an open, middle mile broadband infrastructure that will allow internet service providers points of connectivity to broadband access. The Consortium proposal is designed as an open system which bypasses any potential discrimination points by connecting into the wholesale internet infrastructure. Focusing on the problem of enhancing the middle mile instead of the technology of fiber optics, the terrain of Siskiyou County can become an asset for building a microwave network instead of a hindrance to building a fiber network. Once complete, this design and delivery method can be easily repeatable in other unserved or underserved regions of California as well as our nation. A cornerstone of our Middle Mile strategy is partnering with the State of California's (public sector) – specifically, the Office of the State Chief Information Officer's (OCIO) Public Safety Communications Division (PSCD). PSCD manages the State's 260 microwave towers, a number of which are located in Siskiyou County, and which the state has agreed to lease to the Siskiyou County to allow deployment of microwave radios linking final mile providers in Siskiyou County and their customers to the existing terrestrial fiber backbone of a major telecommunications carrier. Available and prepared to deploy, the Tier1 Internet provider owns and operates a state-of-the-art high-capacity broadband fiber optic network with a major fiber route running directly through Siskiyou County, and has regeneration stations in the cities of Dunsmuir and Montague. These regeneration stations will be upgraded to create a Siskiyou County access point, allowing direct broadband access without the prohibitive expense and distance limitations associated with the usual practice of backhauling traffic over 100 miles to carrier Points of Presence (POPs) in Redding, CA. This will create an alternative point of connectivity, bringing network access significantly closer to County residents, and allowing carrier-grade broadband to be priced comparably to the service offered in major metropolitan areas. Microwave technology is a reliable and proven broadband solution, and is pervasive throughout the world. Therefore, without the major disruptions, legal battles and certain delays accompanying any fiber cabling initiative, the SCEDC in partnership with the State of California, rural communities and private companies will create and sustain a microwave network backbone through new radio installations on the state's and privately owned existing tower array. Deployment would involve, literally, a matter of months rather than years, and at a fraction of the cost of a traditional fiber broadband network - transforming the economic model of broadband service completely. Finally, the program provides for open access which allows government, healthcare, libraries, business, tribal and citizen consumers to sign up for broadband. This creates the model for a sustainable program since the rates are projected to be competitive with rates

charged today in major metropolitan areas. In spite of, or perhaps as a direct result of, economic challenges exhibited by staggering statistical data, the citizens of Siskiyou County have joined together in collaborative efforts to bring growth, sustainability and economic opportunity to the region. All 9 cities and the county have formally joined together to obtain State recognition as an Enterprise Zone. This successful designation put economic development at the top of the strategic plan for all communities. The SCEDC was named by unanimous resolution in all 10 jurisdictions as the leader in Economic Development for the county. This leadership and collaborative style made the SCEDC the logical choice to take the lead bringing rural broadband connectivity to Siskiyou County. The SCEDC designed and created the Siskiyou County Broadband Consortium to implement this public/private partnership and create the middle mile opportunity for Siskiyou County. This Consortium is comprised of an executive team representing the public jurisdictions, a world renown microwave technology provider with a Tier 1 Internet backbone supplier, an experienced, locally owned Siskiyou County-based network operations management company, all closely coordinated by a project management and systems integration organization with a proven track record in successfully organizing, managing and deploying large, complex technology and telecommunication installations for public agencies in the state of California including the OCIO. Utilizing current, competitively bid, government procurement schedules including statewide sourced contracts, California Multiple Award Schedules (CMAS), as well as soliciting competitive bids for other product and services, the total cost for implementation and deployment of the Siskiyou Broadband Middle Mile Project is \$14,862,217 In a white paper on the effects of Broadband deployment on employment published by the Brookings Institute on July 2007, their findings were as follows: "We find that non-farm private employment and employment in several industries are positively associated with broadband use. More specifically, for every one percentage point increase in broadband penetration in a state, employment is projected to increase by 0.2 to 0.3 percent per year." Our proposal will increase broadband penetration in Siskiyou County by 90% which will create between 180 to 270 jobs per year in this region.