

## Broadband USA Applications Database

**Applicant Name:** BySky Inc.

**Project Title:** Fremont County Wireless Broadband Expansion

**Project Type:** Last Mile Remote

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### Executive Summary

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Executive Summary a) BySky currently services last mile customers in Fremont County Colorado via a network infrastructure it started building out in 2007. This network currently covers the underserved and unserved cities and communities of Canon City, Williamsburg, Coal Creek, Rockvale, Florence, Penrose, Wetmore, Pueblo West and several other smaller communities. We only service customers that can not obtain cable or DSL broadband. Our network is specifically designed to handle unserved areas. b) The BIP and BTOP funding would be used to expand the current network to even more remote areas and provide service to additional unserved areas beyond our current coverage, including many small towns and communities, such as Pueblo West, Sikes, Greenwood, Goodpasture, Burnt Mill, Cold Spring, Bragdon, Stern Beach, Cedar Grove, Beulah, Valley View, Hillside, and other unmarked communities throughout the mountain ranges in this new service area. Many of these areas have new ranch sub-divisions and can only be described by their development names or by their locations, such as Tallahassee Ranch or "up along Rt9" etc. We receive many telephone inquiries from people in these areas that are limited only to dial-up or satellite and can not get broadband services to accomplish functions like VPN and remote server control. Counting the mapped locations and unmapped developments, there are over 24 named communities this area will service and a large area of remote ranches and farms, all of which are in need of something other than dial-up or satellite. c) Number of households and businesses passed This number is difficult to quantify because these communities are so remote. We used the Census data reports and have come up with this area serving approximately 18,173 people in 8,684 households and 538 businesses. Note that because these areas have rough boundaries and our propagation program maps detailed coverage, there are "fingers" of coverage that hit areas we did not include in this coverage report because we could not define the census area. Therefore, the totals are most likely slightly larger than what we show here. d) Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with project (e.g., health care, education, libraries, etc.) There are 22 communities in this expansion area which are large enough to be on maps. There are about a dozen more that are ranch communities that are unincorporated yet consist of dozens of homes. We will work with each of these communities to involve them in extending the reach of the Internet to them. The communities we have approached to date have been non-committal because they do not have the funds, the time or expertise to work with us on these plans. We shall continue to be involved in this process over time. e) Proposed services and applications for the proposed funded service areas and users The proposed project is an extension of our existing wireless broadband network into more remote areas. We intend to offer the same broadband services as we have been, at the same price points and with the same quality and service.

We'll offer a base rate at \$34.95 of 412kbps bursting to 768kbps and then 4 tiers up to 7mbps throughput. We'll also offer unlimited VOIP telephone at \$24.95/mo through a partner. All users can have free email accounts and can use our web servers for hosting web sites. We install a Motorola Wireless Broadband radio (CPE) on the customer's building and point it at an access point on one of our towers. Our installers mount the radio and antenna, run CAT5 cable into the premises and test the customers computer for quality of connection. f) Approach to addressing the non-discrimination and interconnection obligations. These new tower locations will be equipped with managed switches and routers to allow us to map different subnets to any provider wishing to hook into the backhubs. There will be tower space available for non-frequency interfering radios to be mounted and for weatherproof equipment boxes. g) Type of broadband system that will be deployed (network type and technology standard) Our network utilizes Motorola Canopy equipment for all Point-to-Multipoint functionality. We manage the network using Motorola's Prizm software at the gateway point in Canon City, Colorado, on a server located there. All nodes are manageable and configurable remotely from anywhere in the world. All processes are monitored and alarmed and send text alerts so we can respond quickly to outages. Every tower is equipped with battery backup and surge protection. The proposed project expands the existing network, adding backhubs and new access points to an already well functioning network. h) Qualifications of the applicant that demonstrate the ability to implement and operate a broadband infrastructure, and/or be a sustainable broadband services provider John Waters is a graduate Electrical Engineer that has been in the computer and networking business for over 30 years. John has provisioned hundreds of networks and installed thousands of computers. The entire existing network now in operation for BySky was designed and installed by Mr. Waters. BySky works with corporate accounts nationwide to implement WANs and has recently installed a system for Henkels and McCoy at a remote operation in North Dakota that brought a 2 link backhaul over 50 miles to a site with 31 VOIP lines and the ability to handle 200 users in 9 trailers, all using Motorola Canopy gear and working perfectly. i) Overall infrastructure cost of the broadband system Since BySky already has its back-end infrastructure in place, this project only involves the expansion of coverage area by adding backhaul radios and access points. All the basic infrastructure costs are already accounted for. The only cost we've added in that affects the existing infrastructure is an enhancement to the Penrose, CO node and an upgrade to the new version of Motorola's Prizm (which is an upgrade license fee rather than a full cost license). Since we place our access points on high altitude sites, we only need 50ft or 60ft towers. So there really is no basic infrastructure cost included in this project. We have that covered. This project is for expansion equipment. j) Overall expected subscriber projections for the project We can estimate that the four expansion areas will probably generate about 200 new users in the first 12 months after we bring the new access points on line. We expect total penetration in five years to approach 15%, which would bring the total installed based under this expansion to approximately 1,300 users. k) Number of jobs estimated to be created or saved as a result of this project We estimate that we can add one full time installer and support person during the first 12 month period. then add one person per year as we expand the user base to 1,300 over five years. In addition, we don't know how many other people we will service in this area will benefit from having high speed service. In our current service area we know people that have been able to get additional business and keep their jobs because we have been able to provide them with service so they can work from home.