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**CASF GRANT APPLICATION FOR HAPPY CAMP TO SOMES BAR  
FIBER CONNECTIVITY PROJECT**

**1. PROJECT SUMMARY**

**a. Applicant's name**

The Siskiyou Telephone Company or "Siskiyou"

**b. Contact person**

Jim Lowers, President, The Siskiyou Telephone Company

**c. Project title**

Happy Camp to Somes Bar Fiber Connectivity Project

**d. Proposed Project Area Location (Community/County)**

The proposed project area is a 600' wide strip of land centered on Hwy. 96 between Happy Camp, CA and Somes Bar, CA. The project is approximately 22 miles long and its starting point is Siskiyou's subscriber carrier node at Clear Creek, and its terminating point is Siskiyou's subscriber carrier node near the US Forest Service compound at Ti-Bar. The entire project is located within Siskiyou County.

**e. Project Type (Last Mile or Middle Mile)**

The project is both Last Mile and Middle Mile, but its compelling value to Northwestern California is its Middle Mile elements.

**f. CASF Funding Requested (Amount of Grant / Amount of Loan)**

The project build cost is \$5,398,958.62 and the CEQA Review will cost \$398,762.64, for a Total Grant Cost of \$5,797,721.26. No loan is requested.

**g. Description of the Project**

The project places two conduits underground along the 22 mile route using hard rock directional boring and conventional trenching techniques. Aerial construction is not an option because Hwy. 96 is a “Wild and Scenic” highway. One 72-strand fiber optic cable will be placed in one of the conduits, with the other conduit serving as a spare in case of damage or the need to upsize the route. The fiber route will be optically powered via existing ADTRAN fiber optic shelves in Siskiyou’s Happy Camp and Somes Bar central offices. Initial capacity on this route will be 10 Gbps.

The project passes near 11 potential customer dwellings, and we have already had an expression of interest for 7 phone/data lines. We will contact all eleven landowners individually as construction progresses.

As indicated above, the primary benefit of the project is in its middle mile connectivity. The project would fill in the “missing link” in an otherwise contiguous fiber optic route between the I-5 corridor and the Hwy. 101 corridor. Light Speed Networks has already made inquiries about using this route to go from Yreka to Orick as part of a “Far North California” fiber ring. This project could be the tipping point in bringing broadband access to a wider range of areas in Siskiyou, Del Norte, and Humboldt Counties.

This project will bring additional bandwidth to the Somes Bar community and its anchor institutions. These include the Junction School, the Karuk Tribe compound at Somes Bar, the US Forest Service fire camps at Ti-Bar and Oak Bottom, and the Marble Mountain Guest Ranch. The Junction School has recently requested 100 Mbps service, and the Karuk Tribe has requested additional bandwidth as well. These requests will be difficult or impossible to fulfill without this project.

The project will also bring greatly increased service reliability to the citizens of Orleans in neighboring Humboldt County as well as increased bandwidth to the Orleans School and the Karuk Tribe’s competitive exchange carrier operation in Orleans. The Karuk Tribe has already requested more bandwidth than Siskiyou’s current microwave system can handle, and no additional microwave frequencies are available for this route.

Verizon Wireline has ordered two T-1 facilities from Orleans to Somes Bar (and on to Redding) to provide reliable voice service into and out of Orleans. Frontier Communications, who plans to buy the Orleans exchange from Verizon Wireline, has indicated verbally that it might be interested in a 1 Gbps Ethernet data route from Orleans, through Siskiyou Telephone’s network, to Redding.

The Karuk Tribe has already established fiber connectivity between Orleans and Somes Bar, and it wishes to acquire greater bandwidth between Orleans and Happy Camp and on to Yreka (along the I-5 corridor). Similarly, the Karuk Tribe has an interest in acquiring significant bandwidth (> 1 Gbps) between

Happy Camp and the Hwy. 101 corridor to Eureka.

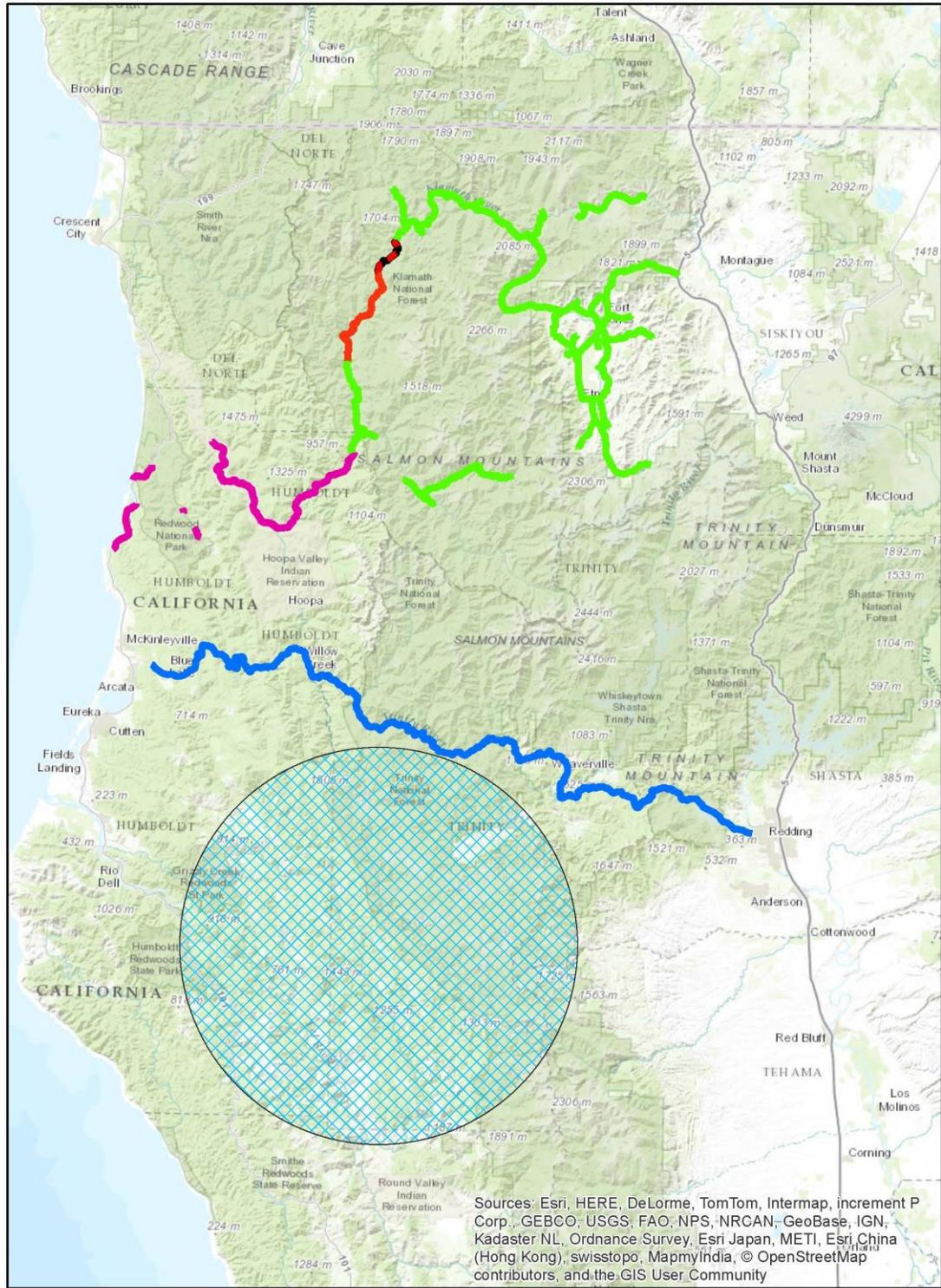
Even beyond the specific households to be served with the last mile aspect of the project, Siskiyou Telephone's broader customer base would benefit by connecting its Somes Bar office with its Happy Camp office. The Somes Bar to Happy Camp microwave radio already has inadequate capacity for carrying data its customers want, and it suffers from occasional data outages due to "rain fades" and "thermal ducting" during certain times of the year. These effects would be completely resolved with a fiber route between these communities.

Moreover, a fiber route between Somes Bar and Happy Camp would move Siskiyou a giant step closer to establishing a self-healing fiber optic ring around Siskiyou's 7 exchanges and Yreka. Once established, a self-healing fiber optic ring would allow Siskiyou to operate with one central office switch instead of 7 switches, which would increase operational efficiency considerably.

In the near term, having the Somes Bar exchange served by fiber optic broadband would place Siskiyou within one 8-mile project of providing fiber-fed broadband access to Siskiyou's Sawyers Bar exchange.

The Tribes in the area (Karuk, Yurok, and Hoopa) would benefit from Siskiyou's project by having more than adequate bandwidth between their tribal lands and the Karuk Tribe's headquarters in Happy Camp. Furthermore, all 3 Tribes would have a geographically diverse route to the Internet backbone if their route to the Hwy. 101 corridor failed.

The map on the following page illustrates the location of neighboring CASF grant projects that could potentially benefit from Siskiyou's proposed project. For example, at its nearest point, the T-17187 Grant along Hwy. 299 is only 22 miles from Weitchpec, which is along the Karuk/Yurok Grant T-17418. If a fiber link were built from Willow Creek to Weitchpec, the Hwy. 299 Grant could use the fiber route from Weitchpec to Yreka and south to Redding to complete a fiber optic ring.



# NW California CASF Grant Projects

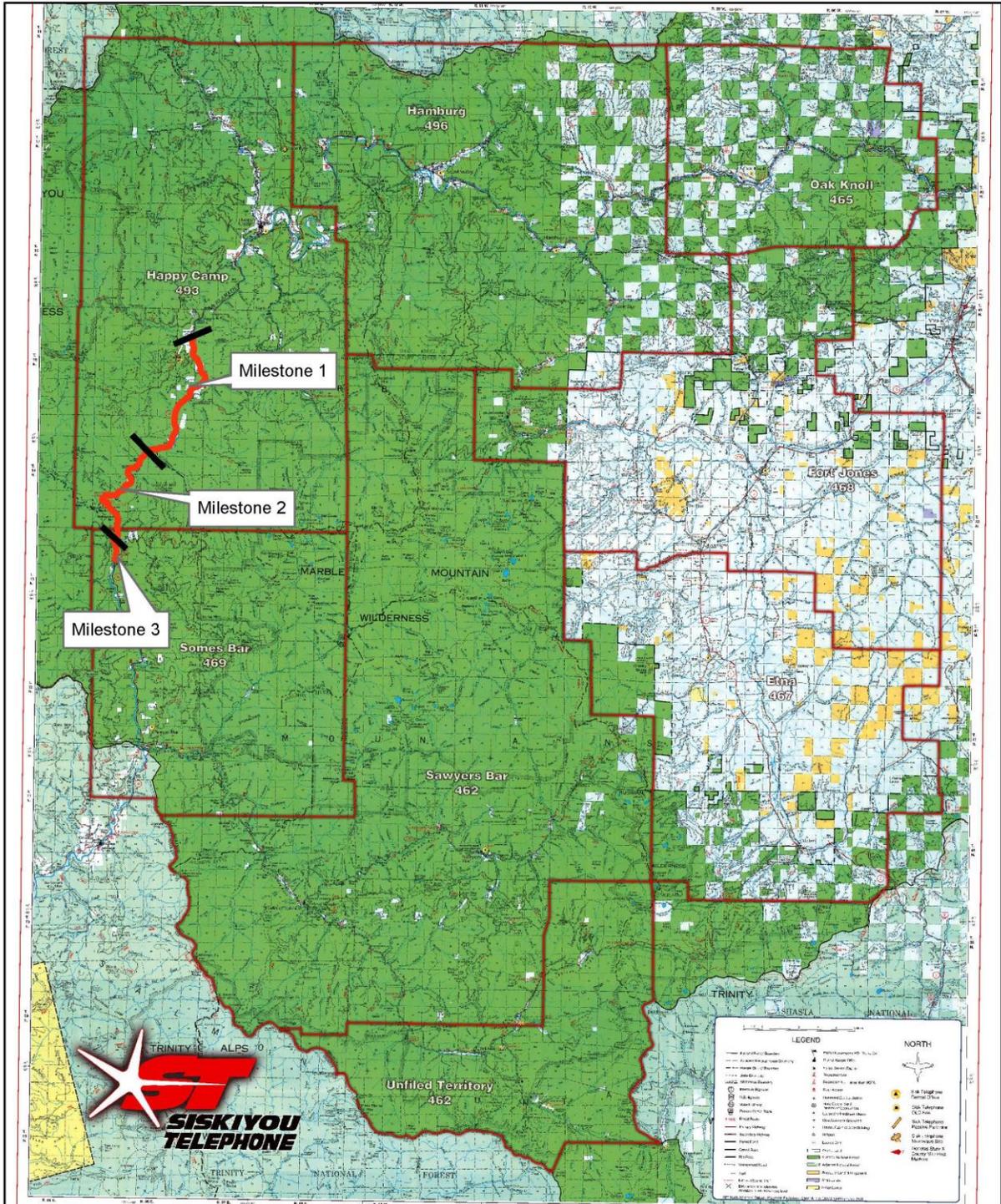
October 2015



## Legend

- Benjamin Creek To Clear Creek Fiber Project
- Happy Camp To Somes Bar Fiber Grant
- Subtype**
- Siskiyou Telephone Existing Fiber
- T-17187 Grant
- T-17418 Grant
- T-17227 Grant

h. Map of the Proposed Project



Happy Camp To Some Bar CASF Project Map  
Siskiyou Telephone  
October 2015

**i. List of Census Block Groups**

The entire project lies within one Census Block Group: 060930005003.

**j. List of ZIP Codes**

Two ZIP codes intersect the proposed project: 96039 (Happy Camp) and 95568 (Somes Bar).