SMART

GRANTS PROGRAM

Intelligent Sensor Integration on Rural Multi-Modal System with an Urban Recreation Demand

Tahoe Transportation District

PROJECT PARTNERS

California Department of Transportation
Nevada Department of Transportation
United States Forest Service
Nevada State Parks

Parametrix
Tahoe Regional Planning Agency
California State Parks
City of South Lake Tahoe, California
El Dorado County, California
Placer County, California
Douglas County, Nevada

PROJECT CHALLENGE

The Lake Tahoe Basin provides unmatched outdoor recreation opportunities. Situated in the Sierra Nevada, Lake Tahoe is in close driving distance from San Francisco, Sacramento, and Reno Nevada metropolitan areas. Approximately 19.5 to 29 million visitors enter the Tahoe Basin annually via an estimated 7.8 to 11.6 million vehicles. The SMART Stage 1 allows the Tahoe Transportation District prototype certain ITS sensors and SAAS solutions to ground truth the number of vehicles entering and exiting the Tahoe Basin as well as other utilities such as push to user data on roadway congestion, public transit, and parking status.

IMPACT

Lake Tahoe is contained within the States of California and Nevada. Nearly 80% of land in the Basin is federally owned providing immense recreation visitation. Deployment of the Stage 1 Project sensors will occur at seven highway entry/exit point locations and key highway junctions within the basin. All work will be coordinated with California and Nevada DOT's and local jurisdictions. This Stage 1 Project will prototype ITS equipment within a rural alpine network to establish the best solution to ground truth visitation by vehicle and the impacts of such. Data will drive future transportation plans.

CURRENT STATE OF THE ISSUE

The Lake Tahoe Basin is home to approximately 50,000 residents. Lake Tahoe is 72 miles long, 12 miles wide, located within the Sierra Nevada Mountain range and contained within two states (CA/NV) and several local jurisdictions. Roadway network expansion is not permitted within the Basin. Alternatives to congestion must rely heavily on transit and active transportation programs and infrastructure. Future transportation planning will rely on consistent accurate data regarding vehicle, cycling, and pedestrian volumes.

POLICY QUESTIONS

1. How many vehicles are entering/exiting the Tahoe Basin? 2. What are the travel patterns while in the basin, and what kind of impacts does the demand place on the rural network? 3. How many vehicles are entering the basin are using federal and state recreation areas and how can the data create parking management and highway safety plans and projects addressing the use? 4. How can consistent, reliable data develop the RTP via public transit and multi-modal projects to decrease congestion, VMT and Greenhouse gas emissions?

STAGE 1 OUTCOMES

Identify ITS Equipment and SAAS solutions for use on rural high alpine network. Identify partnerships for data collection, housing, and distribution Create Stage 2 Implementation Plan for full build out of permanent ITS locations and data collection.

STAGE 2 VISION

Implementation of a full build consisting of sensors all around the basin in which data can be collected across multiple categories such as vehicle, pedestrian, cycling counts, near misses, and parking management. Collection, analytics, and data distribution through open source to Nevada and California DOT's, local jurisdictions, and the public.