

Rural

MAY 2025

Project Title:

TPF-5(241) / TPF-5(494) Western
States Rural Transportation
Consortium

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Task Manager:

Andres Chavez
Senior Transportation Engineer,
Electrical (Specialist)
Andres.Chavez@dot.ca.gov



DRISI provides solutions and
knowledge that improves
California's transportation system.

Western States Rural Transportation Consortium

Updating and Evaluating Caltrans ITS Infrastructure

WHAT IS THE NEED?

Chartered in 2010, the Western States Rural Transportation Consortium (WSRTC) is a pooled fund comprised of the California, Oregon, Washington, Nevada, and Utah departments of transportation and is facilitated with help from the Western Transportation Institute at Montana State University.

The WSRTC facilitates and enhances safe, seamless travel throughout the western United States. The WSRTC promotes innovative partnerships, technologies, and educational opportunities to meet these objectives. Additionally, it provides a collaborative mechanism to leverage research activities in a coordinated manner to respond to rural transportation issues among Western states. The Consortium focuses on technology transfer/education and incubator projects centered on technology, operations, and safety pillars.

WHAT ARE WE DOING?

We focus on incubator projects, which are small-scale research projects intended to serve as a "proof of concept" for larger subsequent efforts. Such incubator projects have included:

- Regional Integrated Corridor Management Planning (Operations)
- Survey of Western States Safety Warning Devices (Safety)
- Radar Speed Trailer Deployment Warrants (Safety/Operations)
- Chain-Up Delay Tracking with Bluetooth (Technology)
- Evaluation of the Fredonyer Summit Icy Curve Warning System (ICWS) – Before and After Study of Long-Term Effectiveness (Safety/Operations)
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- Data Quality for Aggregation and Dissemination of DOT Traveler Information: An Analysis of Existing System Best Practices (Technology)

Successful incubator projects may lead to expanded research initiatives. Several successful, ongoing Caltrans research projects have been extended through WSRTC efforts, including the One-Stop-Shop for Rural Traveler Information, WeatherShare, and the Automated Safety Warning Controller.

In addition, the WSRTC sponsors the Western States Rural Transportation Technology Implementers Forum, which is an annual event where implementers of ITS technologies can share technical information on best practices and field deployment experiences with fellow professionals from across the western United States. It is an engineering practitioner's conference to provide a forum for highquality exchange of technical information that can help support better ITS deployment in rural areas. It is a forum for a dynamic discussion of practical and technical issues associated with rural ITS to promote the transferability of solutions and knowledge across the ITS community. Multiple, highly interactive technical presentations, ranging in length from 1 to 2 hours each, in-depth equipment demonstrations, and numerous opportunities for networking with peers are all part of the agenda.

WHAT IS OUR GOAL?

The WSRTC promotes innovative partnerships, technologies, and educational opportunities to facilitate and enhance safe, seamless rural travel throughout the western United States. The WSRTC does this by providing a framework to leverage research and promote collaboration in solving rural transportation issues. The goals include:

- To leverage research resources related to rural issues concerning technology, operations, and safety.

- Provide technology solutions in the form of technology transfer to rural areas and training on a regular basis.
- Recycle and reuse existing research, applying its results to rural issues.
- Development of a rural western states integrated corridor management system to improve seamless, coordinated, and safe transportation to the public.

WHAT IS THE BENEFIT?

The WSRTC is a collaborative mechanism to leverage rural research activities. Its impact on the member agencies and the rural transportation field includes the following benefits:

- Technology transfer activities through venues such as the Western States Rural Transportation Technology Implementers Forum
- Leveraging research resources for technology, operations, and safety related to rural transportation
- A framework for promoting collaboration and leveraging resources to solve rural transportation issues
- Recycling and reusing existing research for application to rural challenges among multiple states
- Regular training and transfer of technology solutions to rural areas

WHAT IS THE PROGRESS TO DATE?

- The 2022 Western States Rural Transportation Technology Implementers Forum was held in June 2022 in Yreka, CA. Eight presentations were made to participants from throughout the Western United States.
- The WSRTC is finalizing the results of TPF-5(241) and continuing the work in TPF-5(494).
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- Continuation of maintenance on several projects, including the One Stop Shop for Traveler Information, WeatherShare, and the Advanced Safety Warning System Controller.
- A new research effort considering tethered unmanned aerial systems has been executed and is in its early stages of work.
- The 2023 Western States Rural Transportation Technology Implementers Forum was held in June 2023 in Yreka, CA. Nine presentations were made to participants from throughout the Western United States.
- The 2024 Western States Rural Transportation Technology Implementers Forum was held in June 2024 in Yreka, CA. Seven presentations were made to participants from the Western United States.
- Representatives from the Member States attended NRITS 2024 where Doug Galarus presented on the One Stop Shop Continuation project.
- Weathershare has been funded through 2027.
- The 20th yearly WSF is scheduled for June 16th-18th 2025 in Yreka, CA. Seven topics have been chosen for presentation:
 - Evaluation and Application of Fotokite Tethered Drones in Rural Areas of Washington and California
 - Montana Transportation Management Center (TMC)
 - Pikalert: NSF-NCAR's Road Weather Hazard Prediction System
 - Developing The Plan – Integration of ITS into Mobility Plans
 - Powering ITS Devices in Challenging Environments
 - Drone Usage and Graffiti Detection
 - Redesigning the ITS Communication Network in the State of Wyoming

- New project has been approved and funded to be undertaken by CA based on previous presentation by NV. "Traffic Monitoring Using Fiber Optic Sensing"

IMAGES



Image 1: Logo for the Western States Rural Transportation Consortium



Image 2: Logo for the Western States Forum



Image 3: Participants listening to a presentation at the Western States Rural Transportation Technology Implementers Forum in Yreka, California