

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Washington State Department of Transportation

INSTRUCTIONS:

Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # <i>(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i> TPF-5(494)	Transportation Pooled Fund Program - Report Period: ☐ Quarter 1 (January 1 – March 31) ☐ Quarter 2 (April 1 – June 30) ☒ Quarter 3 (July 1 – September 30) ☐ Quarter 4 (October 1 – December 31)	
Project Title: Western States Rural Transportation Consortium (WSRTC) (Phase 2)		
Name of Project Manager(s): Tony Leingang	Phone Number: 360-709-8002	E-Mail Tony.Leingang@wsdot.wa.gov
Lead Agency Project ID: TPF5494	Other Project ID (i.e., contract #): N/A	Project Start Date: January 31, 2022
Original Project End Date: March 31, 2027	Current Project End Date: March 31, 2027	Number of Extensions: 0

Project schedule status:

☒ On schedule
 ☐ On revised schedule
 ☐ Ahead of schedule
 ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
\$1,100,918.00	\$825,570.98	74.99%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
	\$67,578.88	74.99%

Project Description:

The Western States Rural Transportation Consortium (WSRTC) was established with the following mission, vision and goals:

Mission

The WSRTC shall provide a collaborative mechanism to leverage research activities in a coordinated manner to respond to rural transportation issues among western states related to Technology, Operations and Safety.

Vision

The WSRTC shall promote innovative partnerships, technologies and educational opportunities to facilitate and enhance safe, seamless rural travel throughout the western United States.

Goals

- Provide a framework to leverage research and promote collaboration in solving rural transportation issues.
- 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.

Project work is assigned via task order, and 5 task orders have been executed in Phase 2 of the pooled fund through the end of this quarter:

- WTI Task Order #2 - WSRTC Meeting Coordination, Western States Forum Travel Support and Website Maintenance (\$110,000). This task order concluded 6/30/2024.
- WTI Task Order #6 - WSRTC Meeting Coordination, Western States Forum Travel Support and Website Maintenance (\$121,977). This task order concluded 6/30/2025.
- WTI Task Order #7 - Connected Vehicle Highway Grip Factor Reporting for Snowplows (\$128,775).
- WTI Task Order #8 - WSRTC Meeting Coordination, Western States Forum Travel Support and Website Maintenance

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

WTI Task Order #7 - Connected Vehicle Highway Grip Factor Reporting for Snowplows

Task 1: Project Management

Subaward paperwork was completed, reviewed, and amended. The budget and balance spreadsheet of expenditures were reviewed and updated.

A draft fact sheet was worked on along with content for the project's web presence on the WSRTC website.

Task 2: Literature Review / Background

The research team conducted online searches for relevant literature. Sources were reviewed and organized. A team drafted a literature review report.

Task 3: State of the Practice for Winter Maintenance Decision Making Processes

The research team drafted question sets for the two surveys to characterize the state of the practice for winter maintenance decision making processes. The surveys were prepared for review by the MSU IRB for human subjects determination.

Task 4: Evaluation of Virtual RWIS for Use in Road Weather Management Applications

No work was completed on this task during this quarter.

Task 5: Develop a Framework for Evaluating a Connected Vehicle Automated Safety Warning System

No work was completed on this task during this quarter.

WTI Phase 2, Task Order #8 - WSRTC Meeting Coordination, Western States Forum Travel Support and Website

Anticipated work next quarter:

WTI Task Order #7 - Connected Vehicle Highway Grip Factor Reporting for Snowplows

Task 1: Project Management

Any remaining subaward paperwork will be finalized and the subaward executed. A project fact sheet will be completed. A balance spreadsheet of expenditures will be updated.

Task 2: Literature Review / Background

The research team will review literature to characterize the state of the practice relative to connected vehicles, RWIS station to vehicle data communication in rural/remote locations, the use of virtual RWIS networks, and performance metrics used by agencies in winter operations. The review will specifically include identifying data elements used by agencies in CVs during winter operations. Information will also be sought on decision matrixes used, and processes and procedures agencies have in place.

The literature review report will be drafted and reviewed.

Task 3: State of the Practice for Winter Maintenance Decision Making Processes

In conjunction with the literature review, the research team will prepare two surveys to distribute within Caltrans and to other state agencies. These surveys will characterize the state of the practice for winter maintenance decision making processes.

Task 4: Evaluation of Virtual RWIS for Use in Road Weather Management Applications

The research team will begin identifying virtual RWIS providers and reviewing system implementations.

Task 5: Develop a Framework for Evaluating a Connected Vehicle Automated Safety Warning System

Work on this task will be completed subsequent to tasks 2, 3, and 4.

WTI Phase 2, Task Order #8 - WSRTC Meeting Coordination, Western States Forum Travel Support and Website Maintenance



Significant Results:

WTI Task Order #7 - Connected Vehicle Highway Grip Factor Reporting for Snowplows (\$128,775).

Two State of the Practice surveys and a literature review document were drafted.
Subaward paperwork was facilitated.

WTI Phase 2 Task Order 8: WSRTC Meeting Coordination, Western States Forum, Website Maintenance

The WSRTC supported the participation of four individuals in the 2025 NRITS Conference and ITE Annual Meeting in Orlando, Florida.

Ten travel reimbursement requests were received, reviewed, processed, and disbursed.

The Forum and Consortium websites were updated.

Planning commenced for the 21st Annual Western States Forum to be held in June 2026.

Montana Tech Phase 2, Task Order #2 - Chain-Up Delay Tracking and Estimation

Work continued on the Chain-Up Delay Tracking and Estimation project, data collection continued overlapping with some bad weather and several chain-up events at Fawndale, and analysis was conducted on this data.

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

Due to a relatively mild winter two years ago and data quality issues discovered last year, we requested a no-cost time extension on the Chain-Up Delay Project to allow for further data collection to support algorithm development.

Potential Implementation:

Tech Transfer and prospective implementation is anticipated from round-table discussions and affiliation with the Western States Forum.

Chain-Up Delay Tracking and Estimation is planned for ongoing research and development and subsequent implementation.