DRISI
Caltrans Division of Research, Innovation and System Information

Research Notes

Rural

FEBRUARY 2022

Project Title:
Road Weather Information System (RWIS) Research

Task Number: 2649

Start Date: October 23, 2013

Completion Date: June 30, 2022

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Aurora Program - Aurora Road Weather Information (ARWI) Systems, TPF-5 (290)

Aurora Road Weather Information System (RWIS) Pooled Fund Study (PFS)

WHAT IS THE NEED?

California Department of Transportation (Caltrans) has over 100 Road Weather Information System (RWIS) installations statewide that are deployed for many purposes, such as automated fog, ice, and wind warnings; for traveler info online (on QuickMap); and for planning winter maintenance and other roadwork. The Aurora Program is a technical focused Pooled Fund Study (PFS) working on RWIS issues.

WHAT ARE WE DOING?

The Aurora Program is a consortium of public agencies focused on collaborative research, evaluation, and deployment of advanced RWIS that fully integrate state-of-the-art roadway and weather forecasting technologies with coordinated, multi-agency weather monitoring infrastructures. Aurora's research projects are designed to improve the efficiency of highway maintenance operations and distribute effective real-time information to travelers. Its initiatives are expected to result in technological advancement and improvement of the existing RWIS, significantly reducing the adverse impacts of inclement weather on mobility. Caltrans Division of Traffic Operations and the Rural Program Steering Committee are supporting this effort.

Pooled Fund Information:

- Iowa Department of Transportation (DOT) – Lead State for Pooled Fund Study PFS

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- 20 Participant State Department of Transportations
- DOT Members: Alaska, Arizona, California, Colorado, Delaware, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, New York State, North Dakota, Ohio, Ontario Ministry of Transportation, Pennsylvania, Utah T, Virginia, Washington State, Wisconsin. Maine became a member in late 2019

WHAT IS OUR GOAL?

The program's mission is to support cooperative research, evaluation, and deployment of innovative technologies that advance road weather monitoring and forecasting in highway design, construction, maintenance, and operations and to serve as an international advocate for expanded uses of these technologies.

Six primary goals are:

1. To improve dissemination of road weather information to transportation providers and end users, ultimately increasing safety by reducing potential weather-related incidents and improving transportation safety, reliability, and mobility in both urban and rural areas.
2. To improve the efficiency of maintenance operations.
3. To aid in the development of technologies that seamlessly integrate to facilitate the formation of partnerships between maintenance and operations and facilitate the dissemination of road weather information.
4. To develop initiatives that assist public agencies in deploying RWIS technologies and methodologies.
5. To encourage greater cooperation and information exchange between transportation agencies and the other agencies and groups.
6. To support development of expanded uses of RWIS technologies.

WHAT IS THE BENEFIT?

1. Caltrans involvement allows input on national standards, development, and implementation (device and communication)
2. Caltrans will learn best-practices from other states
3. Caltrans will be able to influence which studies are conducted, making California's priorities known.

WHAT IS THE PROGRESS TO DATE?

This project is coming to an end with all research contracts ending by December 31, 2021. The continued pooled fund effort has been approved and all funding and future work has been transferred to the new pooled fund study TPF-5(435).

PROJECT WEBSITES

- https://www.pooledfund.org/details/study/532
- https://www.pooledfund.org/Details/Study/658
- http://www.aurora-program.org/

IMAGE

Image 1: Aurora logo

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