The Western States Forum

Western States Rural Transportation Implementers Forum

Going on 20 Years of Technical Content, Transparency and Trust

ITE Annual Meeting and Exposition / National Rural ITS Conference (NRITS)
Rural ITS Town Hall
Philadelphia, PA

Tuesday, July 23, 2024

Doug Galarus, PhD
Associate Professor, Computer Science Department,
Montana Tech

Jeremiah Pearce, PE
Chief, Office of ITS Engineering and Support
Caltrans, District 2

Disclaimer

The opinions, findings and conclusions expressed in this presentation are those of the authors and not necessarily those of the California Department of Transportation or the Western States Rural Transportation Consortium.

Abstract

The Western States Rural Transportation Technology Implementers Forum (WSRTTIF) is held annually at Yreka, California. The Forum just completed its 19th year and is made possible through a partnership between the California Department of Transportation and the Western States Rural Transportation Consortium (WSRTC). In-depth, nuts and bolts presentations by ITS practitioners are the core of the Forum, with source code, engineering diagrams, and component-level discussion brought out in 60–90-minute interactive sessions. Transparency is key, and presenters discuss not only success stories, but also failures and problems, so that participants can learn about what does and doesn't work, and why. Attendance is limited to maintain an atmosphere conducive of professional, peer-to-peer exchange of technical content and experience, the steering committee is actively seeking involvement from more practitioners from western state DOTs.

Western States Rural Transportation Technology Implementers Forum (WSRTTIF)

How it Started

Conceived by Ian Turnbull (Caltrans District 2), Sean Campbell (Caltrans Division of Research and Innovation) and Chris Strong (Western Transportation Institute at Montana State University) at ITS World Congress 2005 in San Francisco.

How it Started

The Western States Forum was created to address a need unmet by other transportation conferences and venues:

- Trade Conferences,
- Academic Conferences,
- TRB, ITSA, ITS World Congress,
- IEEE, ACM, etc.
- Even NRITS …

How it Started

It was formed within the California – Oregon Advanced Transportation System (COATS) Initiative.

(See later slides for information about COATS and the WSRTC.)

How it Started

The focus is the Rural ITS Engineer.

Western States Forum 2006

Chris Strong

Attendees

Sean Campbell

Ian Turnbull

Western States Rural Transportation Technology Implementers Forum

An engineering practitioner's conference held annually since 2006.

The Western States Rural Transportation Technology Implementers Forum is a two-day meeting where professionals involved with implementing transportation technology solutions exchange detailed technical information about how solutions are engineered and implemented. It is a time for dynamic discussion of practical and technical issues associated with rural ITS, to promote transferability of solutions and knowledge across the ITS community.

The WSF Core

Technical Content:

Presenters delve into how solutions were developed.

The focus is on applications that have been deployed.

How is it being used in live traffic situations?

The WSF Core

Discussion:

Attendance is limited.

Extended time is allocated to encourage detailed technical discussions.

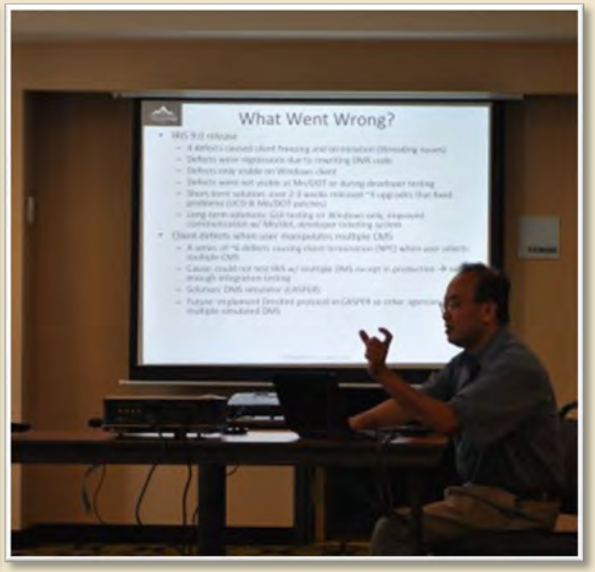
Longer presentation times ensure that details are presented and understood.

The WSF Core

Transparency and trust:

Presenters discuss not only success stories, but also failures and problems.

Participants learn what does and does not work and why.



Who attends?

ITS technology practitioners at the state and local level:

- Field engineers and maintenance staff
- Systems engineering, integration/networking engineers
- Wireless/communications technicians

Location: Caltrans District 2

Location: Caltrans District 2

19th Annual Western States Forum - 2024

Western States Rural Transportation Consortium

19th Annual Western States Forum - 2024

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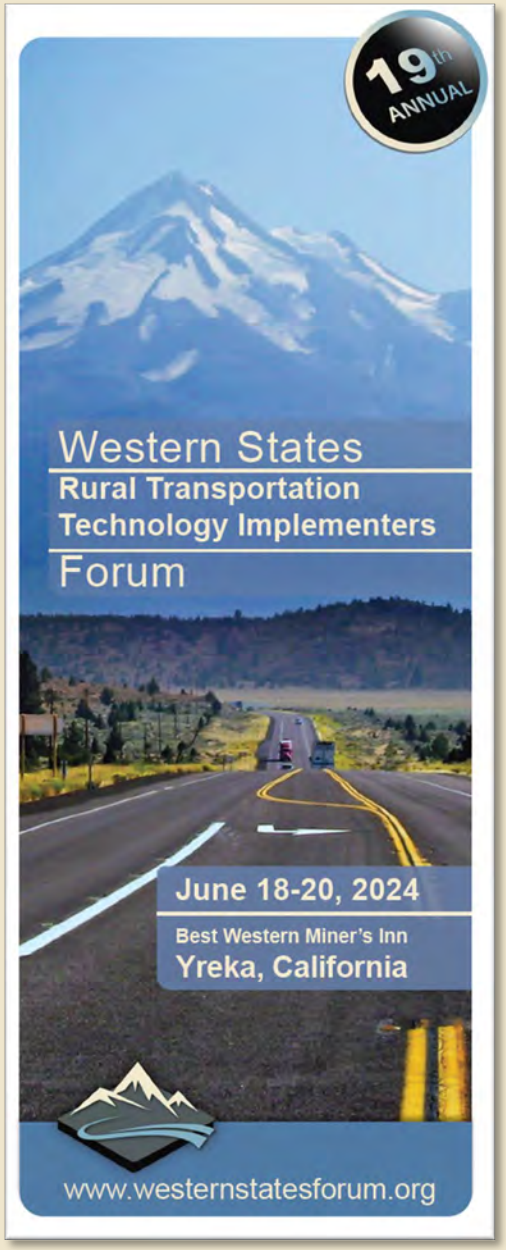
2024 Agenda



Western States Rural Transportation Technology Implementers Forum
Yreka, California

Meeting Agenda

Wednesday, June 19, 2024

Technical Presentations/Demonstrations

7:00 – 8:00 AM	Breakfast
8:00 – 8:10 AM	Welcome and Introductions
8:10 – 9:40 AM	*Utilizing Fuel Cell Technology to Power Transportation Management System Elements During Public Safety Power Shutoff Events* **Jeremiah Pearce, Caltrans District 2** **Dave Torick, AHMCT UC Davis** **Justin Ellis, Caltrans EQASI**
9:40 – 10:10 AM	Break (30 min)
10:10 – 11:40 AM	*Let There Be Light: Tunnel Lighting Controls* **Frederick Tydeman, Eric MacGill, Kevin Maxwell** **Nevada Department of Transportation**
11:40 – 12:45 PM	Lunch (65 min)
12:45 – 2:45 PM	*Evaluation of Starlink Satellite Broadband Communications for Caltrans ITS Field Elements* **Saeid Delshad** **Advanced Highway Maintenance and Construction Technology (AHMCT) Research Center** **University of California Davis**
2:45 – 3:10 PM	Break (25 min)
3:10 – 5:10 PM	*Washington's Virtual Coordination Center (VCC)* **Brent Quebedeaux, David Baker** **Washington State Department of Transportation**
5:10 – 5:20 PM	Comments / Discussion / Evaluations

2024 Agenda

Western States Rural Transportation Technology Implementers Forum
Yreka, California

Meeting Agenda

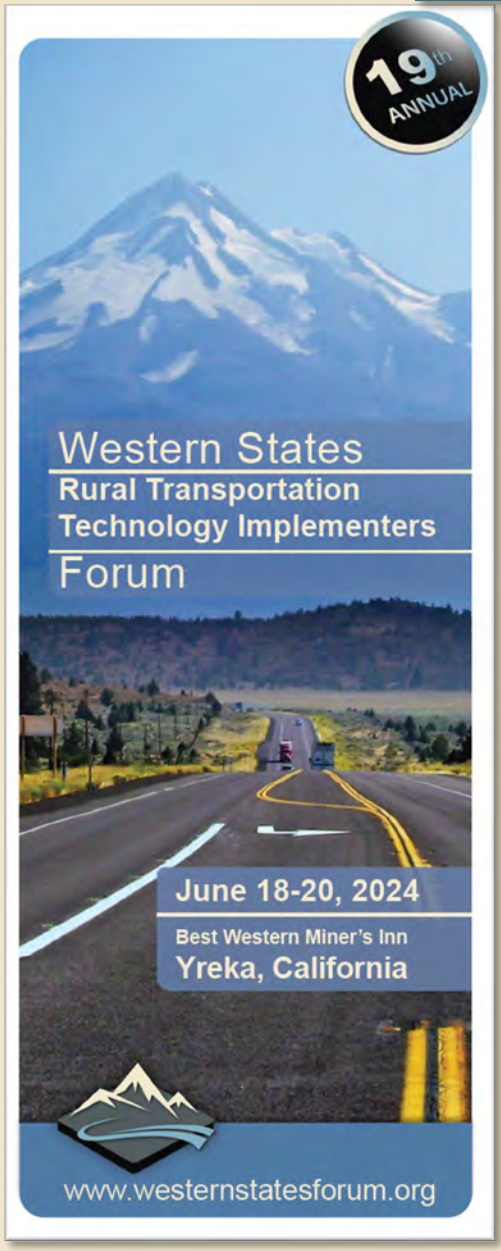
Thursday, June 20, 2024

Technical Presentations/Demonstrations

7:00 – 8:00 AM	Breakfast
8:00 – 8:05 AM	Welcome and Introductions
8:05 – 9:35 AM	*OSS by the Numbers - Analytics and their use on the One-Stop-Shop for Rural Traveler Information* **Douglas Galarus** **Montana Technological University**
9:35 – 10:00 AM	Break (25 min)
10:00 – 11:05 AM	*Streamlining ITS: Unifying Variable Speed Limits and Lane Control Across State Agencies* **Ansley Skillern** **Southwest Research Institute**
11:05 – 11:25 AM	Break (20 min)
11:25 – 12:10 PM	*Wrong-Way Driving (WWD) Detection Systems Update* **Kent Thurston, Adam Lough, P.E.** **Utah Department of Transportation**
12:10 – 12:30 PM	**Speaker and Attendee Recognition** **Concluding Remarks / Evaluations**
12:30 PM - end	**Lunch**

Thank you for attending the 2024 Western States Forum!

Please remember to complete and return your evaluations. Thanks!



2024 Presentations

Utilizing Fuel Cell Technology to Power Transportation Management System Elements During Public Safety Power Shutoff Events

Jeremiah Pearce, Dave Torick, Justin Ellis
Caltrans District 2, AHMCT UC Davis, Caltrans EQASI

2024 Presentations

Let There Be Light: Tunnel Lighting Controls

Frederick Tydeman, Eric MacGill, Kevin Maxwell

Nevada Department of Transportation

2024 Presentations

Evaluation of Starlink Satellite Broadband Communications for Caltrans ITS Field Elements

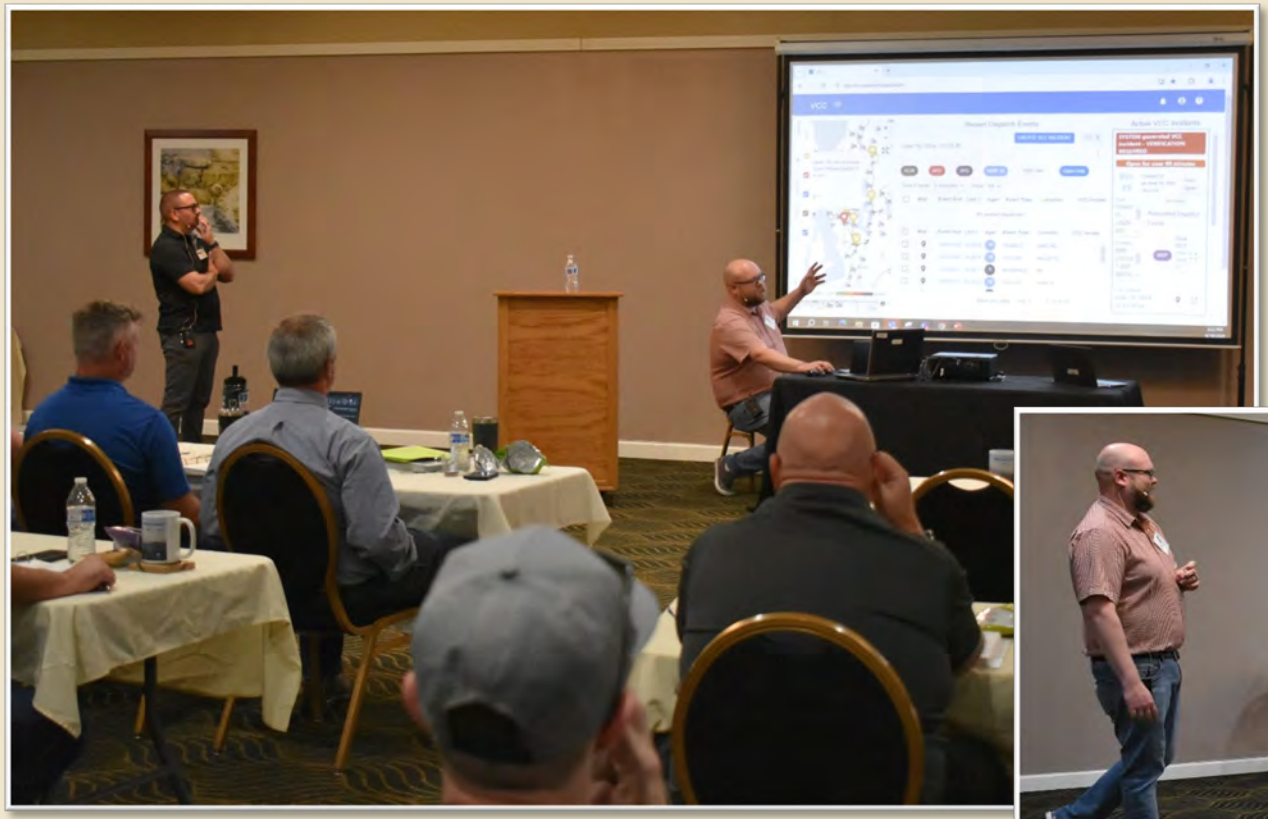
Saeid Delshad
AHMCT UC Davis

2024 Presentations

Washington's Virtual Coordination Center (VCC)

Brent Quebedeaux, David Baker

Washington State Department of Transportation



2024 Presentations

OSS by the Numbers - Analytics and their use on the One-Stop-Shop for Rural Traveler Information

Douglas Galarus

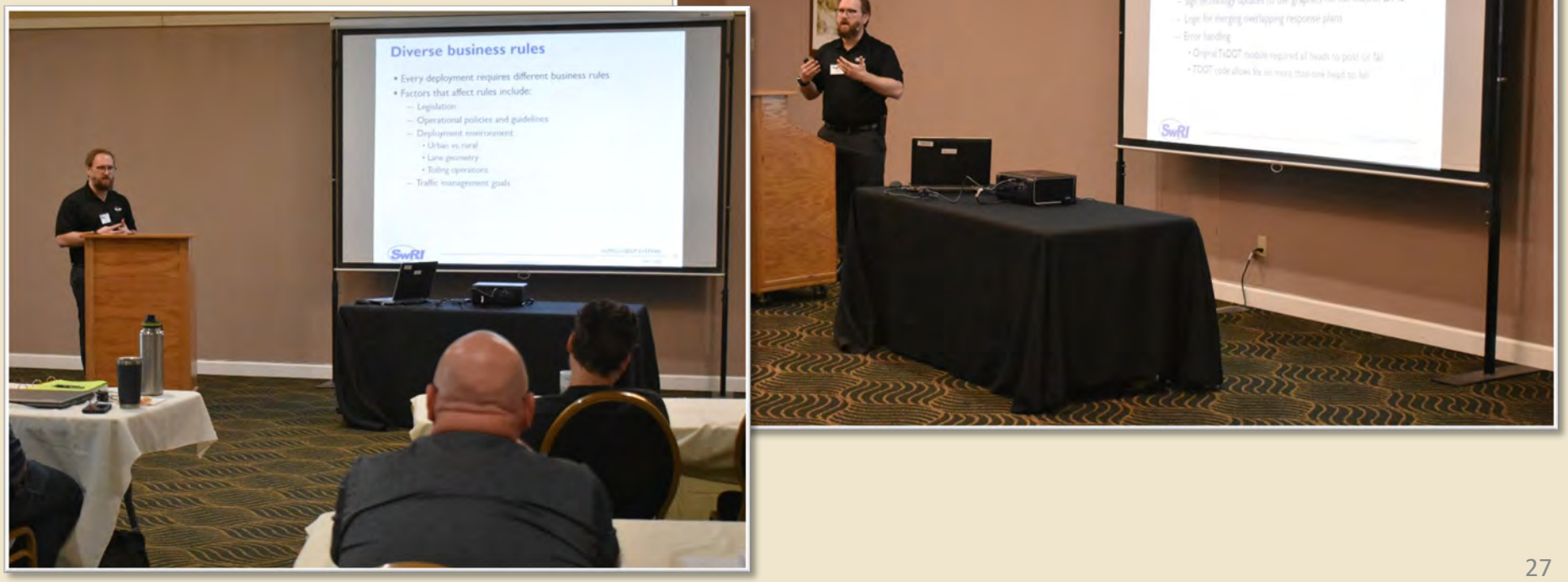
Montana Technological University

2024 Presentations

Streamlining ITS: Unifying Variable Speed Limits and Lane Control Across State Agencies

Ansley Skillern

Southwest Research Institute



2024 Presentations

Wrong-Way Driving (WWD) Detection Systems Update

Kent Thurston, Adam Lough

Utah Department of Transportation

2024 Recognition

2009 Networking Event

Western States Rural Transportation Consortium

2006 - 2024

A lot has been accomplished …

Presentations : 2006

Fiber Optic Network/Topology Design on State Highways

Microwave Communications for Rural ITS Applications

The Redding Responder Project: Mobile Data Communication Challenges and Solutions in Remote Rural Areas

Caltrans District 9 Mountain Pass Signs

Web-Based ITS Field Element Control

Presentations : 2007

Improving Traffic Data Collection Using Wireless Technology

Weather Warning Systems in Oregon and Region 5 Interstate Access Gates

Unlicensed Wireless Multipoint System in Sacramento Metro

Weigh-In-Motion NOT DONE ON A WHIM!

Presentations : 2008

A Tale of Two RWISs

WSDOT Field Tests of Wireless and Microwave Vehicle Detection Systems

TMC-TMS Communications: Overview and Demonstration

ODOT Traveler Information Systems

Hand Held Terminals

Automated Radio Network Design

Mesh Box

TMC-TMS Communications: Portable ITS Trailer and Communications Demonstration

Presentations : 2009

Ground System Design and its Role in ITS

Creation of an Ethernet/IP Backbone System for Wyoming's Department of Transportation

Automatic Traffic Data Collection Using Surveillance Video Cameras

Run-Away Truck Escape Ramp: A Trucker's Safety Net

Idaho Traffic Management System (ITMS)

Simple Network Contact Closure

Hand-Held Diagnostics Terminal

Caltrans WeatherShare System: A Look at Design, Development, and Usability

Presentations : 2010

Passive Repeater Applications for Rural ITS Communications Systems "The Prequel"

Passive Repeaters for Rural ITS Communications Systems

A ShakeCast User's Observations on the Benefits of Situational Awareness of Seismic Risk Management

Automated Safety Warning Controller (ASWC) Phase I - Proof of Concept

Support and Asset Inventory Management of ITS Devices

Mobile Inspection System

Field Experiments with Bluetooth Sensors

Presentations : 2011

Wireless Communications for Rural ITS

Photovoltaic Power Systems for Rural ITS

Voice Communications in Rural Areas (Voting Scan)

The IRIS Open Advanced Traffic Management System: Development, Deployment, Capabilities, and Maintenance

Redefining the Path to ITS Standards Training

The Power of Information

Avoiding the Remote Callout

Antenna Characterization for Bluetooth-based Travel Time Data Collection

MAC Address-based Delay Measurements at Rural "Gateways"

Presentations : 2012

Field Element Network Design for a Rural Transportation Management Center, Part One

Field Element Network Design for a Rural Transportation Management Center, Part Two

Travel Times Using Bluetooth

Technical Development of the Western States One Stop Shop for Rural Traveler Information

Mobile ITS Hotspot Trailers, an Evolving Technology

Using Wireless Data Collection Units as Point Detection Systems

California Highway Patrol (CHP) Rapid Response Vehicle (RRV)

Presentations : 2013

CCTV Image Relay

Design and Implementation of Video for Rural ITS - Nevada Department of Transportation

Automated Wind Warning System - Caltrans, District 9

Bike Detection in California

Procuring the Advanced Transportation Controller (ATC) for the Oregon Department of Transportation and the State of the National Standards

Field Element Data Quality Control from the Perspective of Data Redistribution

Design and Implementation of Nevada DOT's Wireless Point to Point and 3G/4G Rural Networks

Idaho's Winter Performance Measures

Error Assessment for Emerging Traffic Data Collection Devices

Presentations : 2014

The Field Element Communications End Game: From POTS to Licensed Microwave

WSDOT LED Adaptive Roadway Lighting and Illumination Reform

Control of DMS, CCTV, HAR, and 511

Traveler Information - The Preamble

Commercial Wholesale Web Portal 2: Providing Caltrans' Traveler Information Data to Third Party Developers

Model 2070 Controller and ATC: Present and Future

Organized Chain-Up: Save the Space - Bringing Order to Chaos

Presentations : 2015

Multnomah Falls Parking Management System

The Nevada Data Exchange (NDEX): An Internet Portal for Public and Strategic Partners to Publish Their Data and Subscribe to NDOT's Traveler Information

WYDOT Roadside WiFi and Tablet App

Advanced Variable Message Sign

Utah Department of Transportation (UDOT) Citizen Reporting Program

Safety Chain Control System

TranSync Mobile Tool (Traffic Signal Management and Retiming Tool) Pilot Project in Auburn and San Francisco Bay Area (Caltrans Districts 3 and 4): Improving Signal Timing and Coordination

Idaho Transportation Department Winter Performance Measures

Presentations : 2016

RWIS Deployment Update for Campbell-Datalogger-Based-RPU

Comparison of In-Pavement Versus Non-Invasive Pavement Sensor Technologies (AKA: The Lesser of Two Evils)

Joint Base Lewis-McChord (JBLM) Bluetooth Traveler Information and Integration

Local Adaptive Signal Timing on US 101 in Lincoln City, Oregon

Using iPads for Field Data Collection

Portable Work Zone Data Collection

Caltrans' Controller Cabinet Standards: Models 33x, 33xL and 34xLX Present and Future

Dedicated Short Range Communications (DSRC) Radio for Rural ITS

Connected Vehicle CRADA Partnership

Presentations : 2017

PPPoE Security on Networks Utilizing Ethernet Interfaces

Installing DSRC Systems for Vehicle to Infrastructure Applications

ITS Firmware for the Advanced Transportation Controller

An Iterative Approach to Intelligent Traffic Systems Asset Management

WeatherShare Phase 4

UDOT Automated Traffic Signal Performance Measures

Relating Naturalistic Global Positioning System (GPS) Driving Data with Long-Term Safety Performance of Roadways

Radar Technology for Distinguishing Between Bicycles and Cars

Presentations : 2018

Cellular Communications in Rural Applications

DWR Hydrology Data Acquisition System (HyDAS)

Active Traffic Management

From AWOS/RWIS to Caltrans Aviation Weather Information (AWI)

Managing Winter Maintenance Costs and Increasing Safety through an Advanced Weather Visualization Platform

UDOT's Snow and Ice Performance Measure

ITS, Signals, Signage, and Sign Structures Condition Rating Dashboard

Mobile Device App for Maintaining CMS Field Elements

Adapting an Advanced Traffic Management System for Rural Deployment

Presentations : 2019

Organic vs. Purchased Data for Travel Time Predictions

UDOT's Region Four Rural Intersection Conflict Warning Systems (RICWS) Design and Implementation

Design, Development, and Field-Testing of the Caltrans Responder System

Foresight is 2020: NDOT Building an ITS Network for the Next Decade and Beyond

Fiber Optic Systems in Rural Areas: Building and Leveraging Fiber Systems

ODOT Connected Vehicle Applications

Miovision Equipment for SPAT Challenge – Intended and Actual Outcomes

The Maintenance Decision Support System (MDSS)

Presentations : 2021

ASWSC Phase 3: Migration of the Automated Safety Warning System Controller to the Caltrans Advanced Transportation Controller Platform

UDOT's Statewide Wrong-Way Detection Project

Deterrence and Detection of Wrong-Way Drivers on California Highways

A Cost-Effective Solution for Truck Parking Based on Artificial Intelligence

Wrong Way Driver Systems: Technological Solutions for Behavioral Problems

Field Site Power Data Acquisition and System Reporting

Innovative Uses of Unmanned Aerial Vehicle (UAV) Technology

Presentations : 2022

Controlled Helter-Skelter: A Tale of Chain Controls and Traffic Queuing

UDOT's Region Four Variable Speed Limit (VSL) I-15 Corridor in Rural Utah

Evaluation of Road Weather Messages on DMS using Roadside Pavement Sensors

The Nevada TSMO Program – A Modern Approach to Solving Old Problems

Next Generation Work Zone Data Integration and Dissemination – Work Zone Data Exchange (WZDx) Development from Planning to Operations

UDOT's Region Four Conflict Warning System Phase 2

Commodity Traffic Cameras as Cost-Effective Alternative to Traditional Sensing Hardware

Traffic Monitoring using Fiber Optic Sensing

Presentations : 2023

Broadband Communications Design Strategies and Considerations for ITS Applications in Caltrans District 2

Playbook CMS Messaging via ActiveITS Databus

Caltrans Satellite Communications

UDOT Weather Operations' Wildfire and Debris Flow Response

Managed Lighting Control Systems

NDOT 3 GIS Telecommunications Infrastructure Management Software

C-Street Wrong Way Detection System

Presentations : 2024

Utilizing Fuel Cell Technology to Power Transportation Management System Elements During Public Safety Power Shutoff Events

Let There Be Light: Tunnel Lighting Controls

Evaluation of Starlink Satellite Broadband Communications for Caltrans ITS Field Elements

Washington's Virtual Coordination Center (VCC)

OSS by the Numbers - Analytics and their use on the One-Stop-Shop for Rural Traveler Information

Streamlining ITS: Unifying Variable Speed Limits and Lane Control Across State Agencies

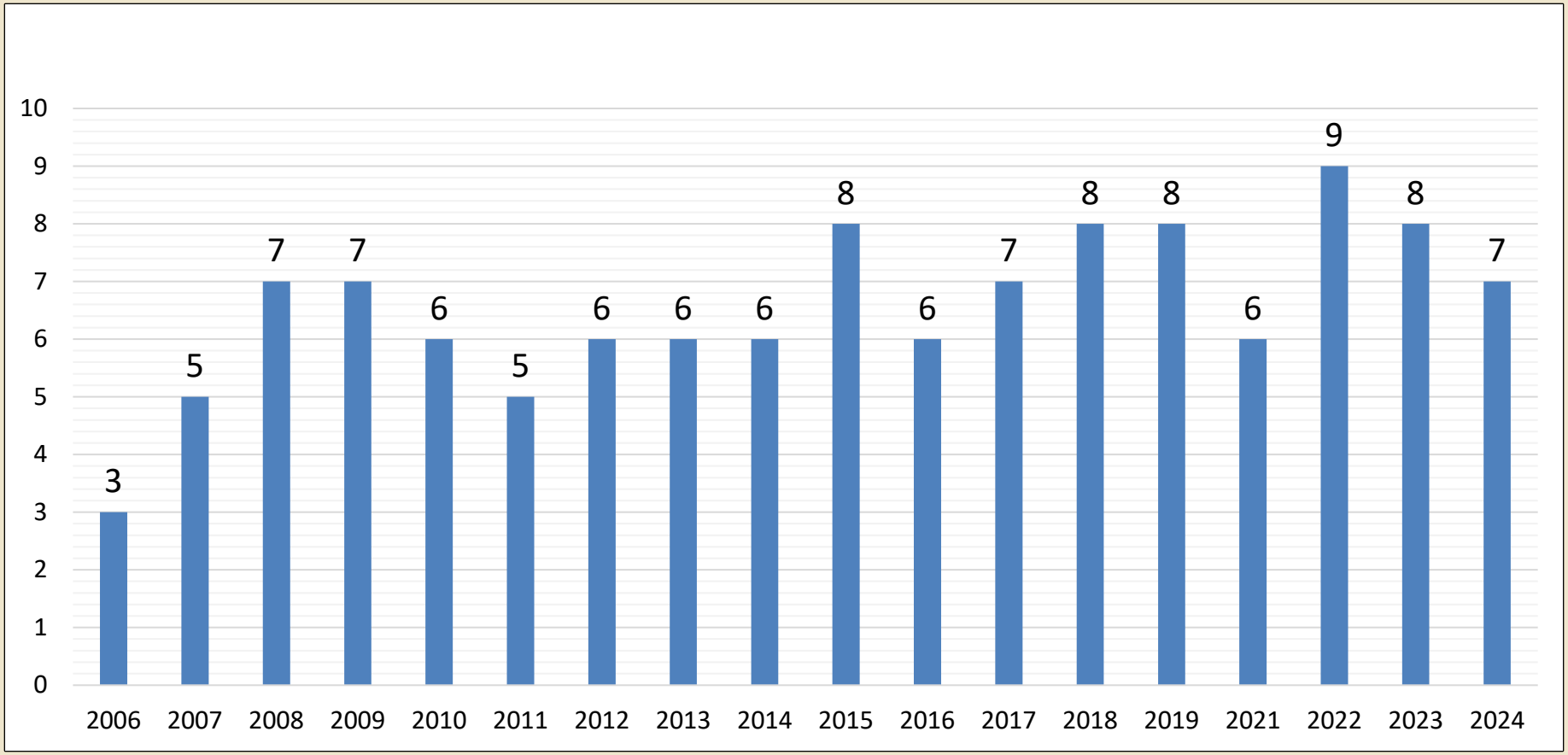
Wrong-Way Driving (WWD) Detection Systems Update

Representation

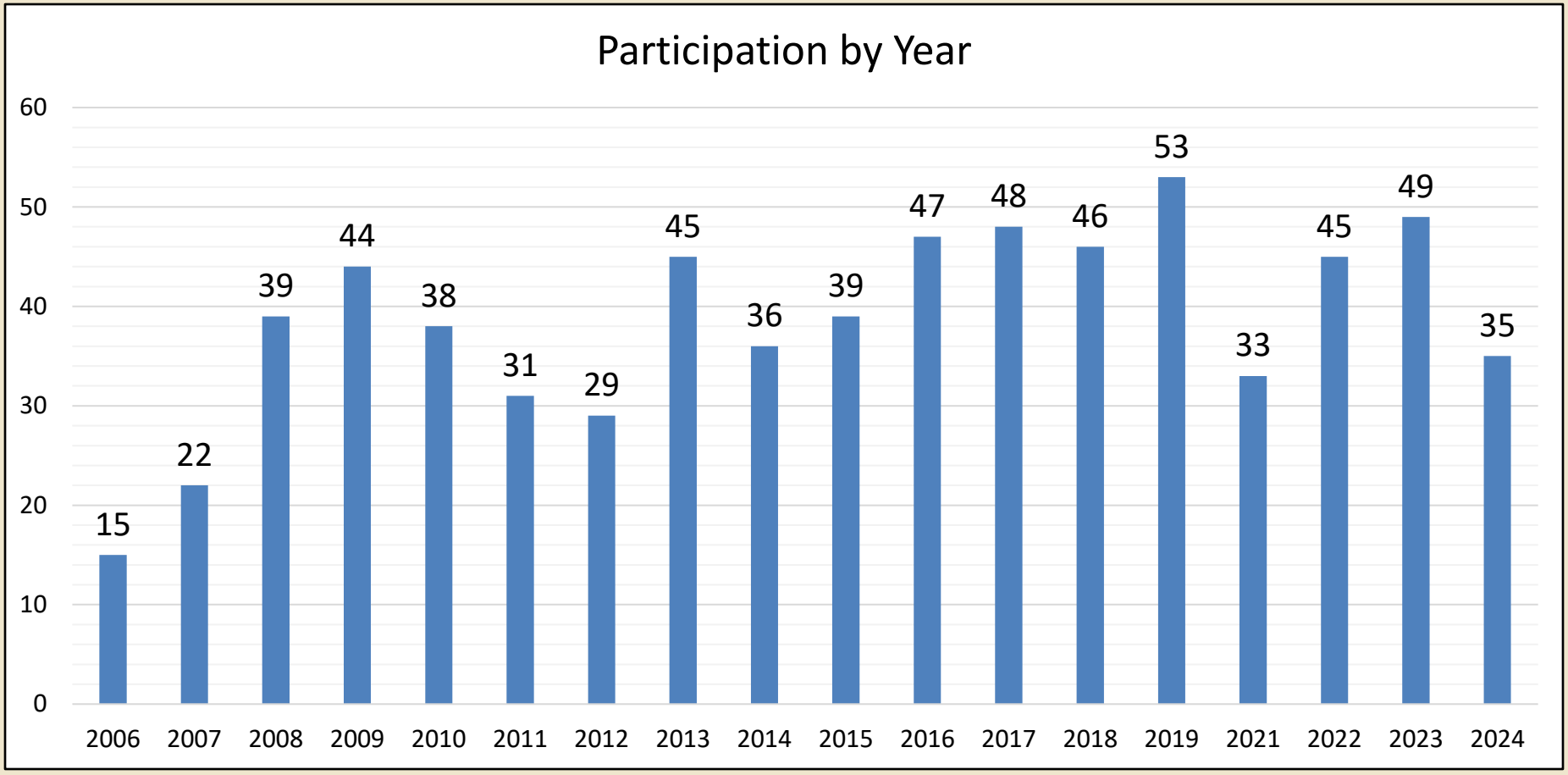
Attendees from 2006-2024 represent:

- 15 States,
- 10 State Departments of Transportation,
- 13 Universities,
- all 12 Caltrans Districts,
- multiple Caltrans HQ Divisions,
- California Highway Patrol,
- California Department of Water Resources,
- FHWA,
- and others.

State Participation



Individual Participation



Positive Feedback

How likely would you be to attend a similar event in the future? (5 = Very likely; 3 = Neutral; 1 = Not at all likely)

Year	Average Score
2023	4.6
2022	4.7
2021	4.8
2019	4.9
2018	4.6
2017	4.5
2016	4.7
2015	4.7
2014	4.6

Year	Average Score
2013	4.6
2012	4.6
2011	4.9
2010	4.6
2009	4.6
2008	4.7
2007	4.8
2006	4.8

Positive Feedback

Enjoyed very much and looking forward to next year.

I think what you, WTI & Caltrans, have put together is a wonderful program! Thanks for letting me attend. If there is anything I can do to help for next year's, please let me know.

Thanks much for your efforts. Thanks also for making this a "family-friendly" event.

Continue the practice of having more demonstrations and practical application info.

The presentations were very informative; picked up a lot of technical information.

Excellent Forum- Keep up the good work!

This is a wonderful format, love the network opportunities. Thanks.

Once again, I learned relevant info that I can take back to my dept.

Positive Feedback

It's already the best. Thanks for all the hard work.

I also made good connections and met supervisors and staff from other states and districts. It was an enriching experience.

Topics discussed are very relevant to my position.

Always good to see what other states are doing.

There were solutions presented to problems I have experienced. I will be using the material provided to fix those problems.

Great opportunity to use technologies and lessons learned from other DOTs in my State.

Campfire networking event was best yet.

Great food, great people.

Tech Transfer

Have you or someone in your department implemented or improved a project because of participating in a past Western States Forum?

Yes. Sign bridge chain control system for encouraging driver behavior during winter operations.

I intend to improve and modify our Truck Parking Availability System Pilot Project after attending this year.

I think we will use wrong way driving and edge computing ideas shared at this conference.

The purchased vs. organic data for travel time presentation a few years ago affirmed our thoughts on the pros / cons of such 3rd party data. We have since implemented 3rd party data in projects, going into them with a better understanding of limitations.

We learn about the software challenges they face and develop ideas to help solve them.

Yes, multiple times on improving projects due to knowledge gained at prior forums.

Yes at least once to implement a new project.

Western States
Rural Transportation
Consortium

Next Year (2025) is a Big One!

20th Annual Western States Forum

The Forum will be held Yreka, CA in June 2025 – the date has not been finalized.

If you are interested in attending or presenting, please contact Leann Koon:

Leann Koon:

- Phone: (406) 994-7643
- Email: leann.koon@montana.edu

For Further Information See:

Western States Rural Transportation Consortium

http://www.westernstatesforum.org

Acknowledgments

- Leann Koon, WTI/MSU, as the current Principal Investigator and longtime conference organizer.
- Caltrans for its financial support of this work
- The Western States Rural Transportation Consortium for its contributions to the scope and their support through the WSRTC Pooled Fund.
- Ian Turnbull, Caltrans (retired) as the early and longtime champion and co-founder of the WSF
- Sean Campbell, Caltrans (retired) as the longtime project manager and co-founder of the WSF
- Chris Strong, Transportation Manager at the City of Gresham, Oregon, as co-founder of the WSF.
- Marlene Woodard, longtime event planner for WSF.
- Tony Leingang and others of the Washington Department of Transportation for their support of WSF and management of the WSRTC Pooled Fund.
- Andres Chavez, Caltrans, as the current project manager for WSF.
- The many participants who have attended and speakers who have contributed to the Forum through the years …

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COATS and WSRTC Background

(if time allows)

Overview

- What the WSRTC is and what it does
- Origins and history of WSRTC
- Challenges it addresses
- Benefits it provides
- Incubator and spinoff projects
- Technology Transfer

WSRTC – What it is and does

- Facilitates and enhances safe, seamless travel throughout the western United States
- Promotes innovative partnerships, technologies and educational opportunities to meet these objectives
- Provides collaborative mechanism to leverage research activities in a coordinated manner to respond to rural transportation issues
- Focuses on technology transfer/education and incubator projects centered on the pillars of **technology, operations and safety**

Origins

- 1991- California Department of Transportation (Caltrans) inquired into rural concerns dealing with advanced transportation technologies
- 1995 - Program for Advancing Rural Transportation Technologies (PARTT), a rural ITS scoping study
  - Reviewed advanced transportation technologies, identified issues concerning them, and developed conceptual ideas for future activities
  - Geographic area in Northern California designated a study area to refine the need and application of rural ITS
  - Caltrans and the Oregon Department of Transportation (ODOT) expanded the study area into Southern Oregon to maximize resources, foster cooperation, and investigate feasibility of ITS in a bi-state study area
    - Result was California Oregon Advanced Transportation Systems (COATS)

COATS Phases

- COATS (1998-2000) - Identified several regional needs that ITS could address
- COATS Showcase (2001 – 2006) - Focused on demonstration and evaluation activities
- COATS Phase 3 (2005 – 2009) – Promote technology transfer and coordination
- COATS Phase 4 (2008 – 2011) – Continue technology transfer, initiate incubator project concept
- COATS Phases 5 and 6 (2011 – 2016) – Continue technology transfer and incubator projects
- COATS Phases 7 and 8 (2016 – 2023) – Continue support for the Western States Forum

WSRTC Origins

- June 2009 - Informal discussions occur regarding Consortium establishment/expansion of the COATS project/region
- August 2009 - Formal discussions between COATS members of expansion/consortium development result in agreement to pursue development of WSRTC
- August 2009 – October 2009 - Development of Consortium charter and mission/vision/goals documents undertaken
- November 2009 - Formal discussion between potential consortium members regarding charter and mission/vision/goals documents, intended roles and responsibilities, etc. occurs. All parties agree to move forward in formalizing Consortium
- February 2010 - Follow-up discussions on Consortium documents occur; Year 1 incubator projects are discussed,
- April 2010 - Scopes of Work completed for incubator projects

WSRTC TPF

TPF-5(241) (prior)

- https://www.pooledfund.org/Details/Study/469

TPF-5(494) (current)

- https://www.pooledfund.org/Details/Study/724

Challenges Addressed

- Tighter agency and research budgets reducing opportunities to conduct technology, safety and operational research aimed at rural transportation
- Projects must be justified, often requiring an initial proof-of-concept
- Research involving multiple agencies likely to be of interest and transferable to others
  - Mechanism to promote results and share developed products does not exist
- Need existed for agencies to partner and leverage research funding, share technical findings and products, and promote educational opportunities
- The WSRTC addresses these challenges through collaboration

Mission and Vision

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 and Benefits

- 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.
- Continued fostering of tech transfer activities through venues such as the Western States Forum

WSRTC Incubator Projects

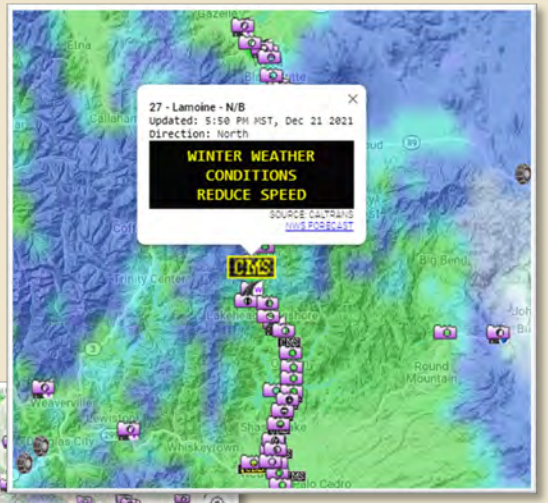
- Radar Speed Signs deployment guidance
- Evaluation of the Fredonyer Pass icy curve warning system
- Analysis and recommendations for optimization and deployment of web-based projects
- Survey of western states safety warning devices
- Regional Integrated Corridor Management planning
- Bluetooth and other passive ID technologies for weather-related rural travel times

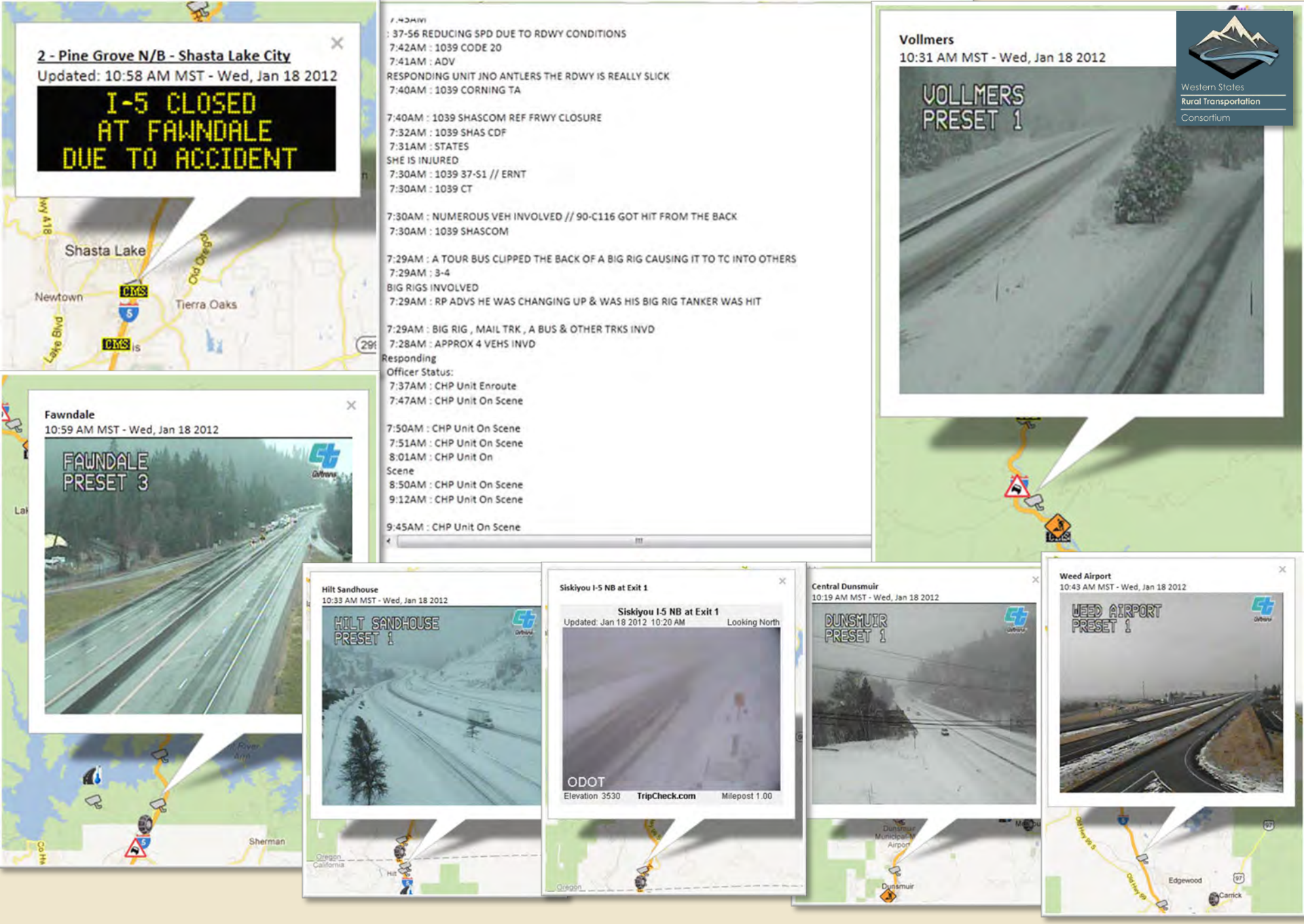
Spinoff Projects

- One Stop Shop for Rural Traveler Information
- WeatherShare
- Automated Safety Warning Controller
- Redding Responder
- Professional Capacity Building (PCB) for Communication Systems

One Stop Shop: https://oss.weathershare.org/

Western States Rural Transportation Consortium




2 - Pine Grove N/B - Shasta Lake City
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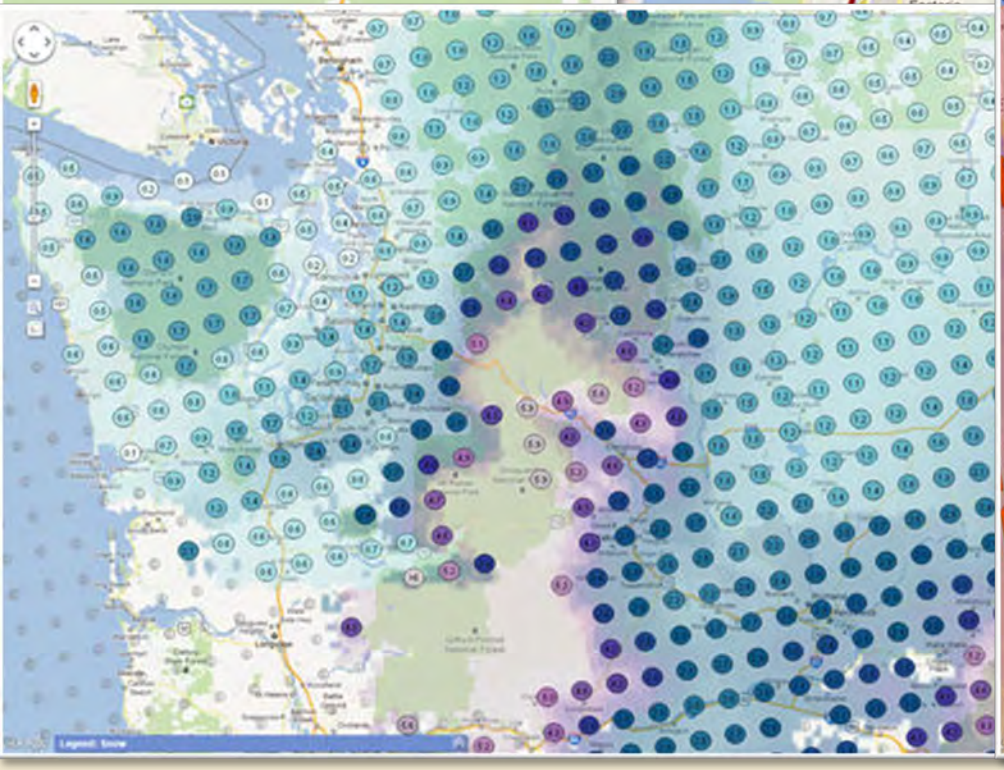
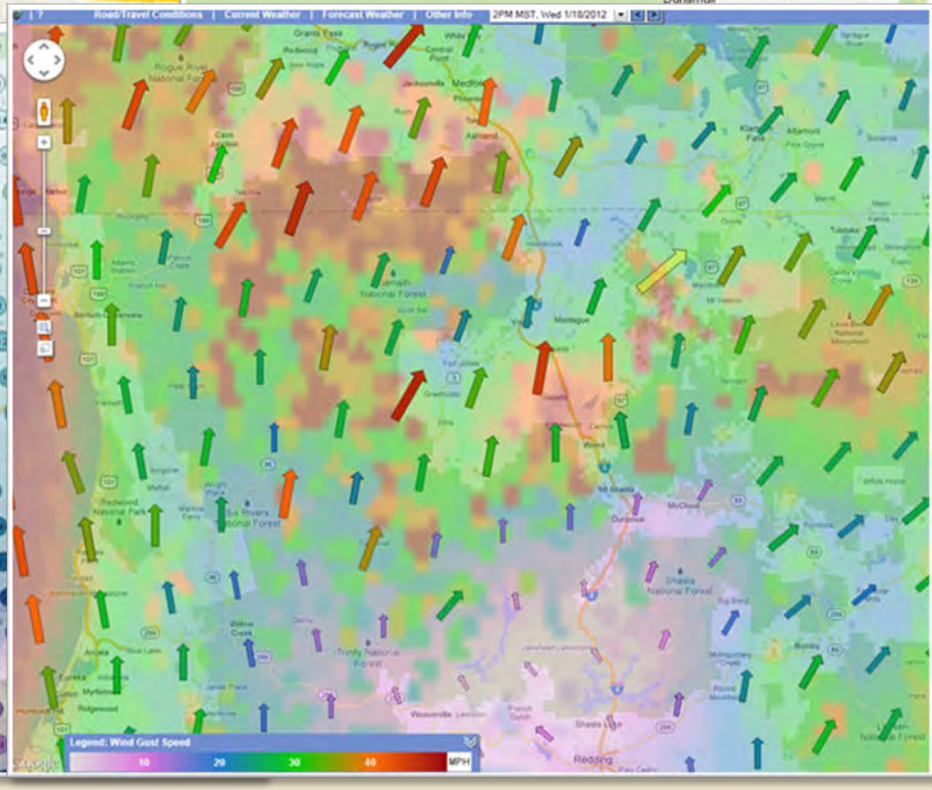
I-5 CLOSED
AT FAWNDALE
DUE TO ACCIDENT
Shasta Lake
Newtown
Tierra Oaks
CMS
CMS
: 37-56 REDUCING SPD DUE TO RDWY CONDITIONS
7:42AM : 1039 CODE 20
7:41AM : ADV
RESPONDING UNIT JNO ANTLERS THE RDWY IS REALLY SLICK
7:40AM : 1039 CORNING TA
7:40AM : 1039 SHASCOM REF FRWY CLOSURE
7:32AM : 1039 SHAS CDF
7:31AM : STATES
SHE IS INJURED
7:30AM : 1039 37-S1 // ERNT
7:30AM : 1039 CT
7:30AM : NUMEROUS VEH INVOLVED // 90-C116 GOT HIT FROM THE BACK
7:30AM : 1039 SHASCOM
7:29AM : A TOUR BUS CLIPPED THE BACK OF A BIG RIG CAUSING IT TO TC INTO OTHERS
7:29AM : 3-4
BIG RIGS INVOLVED
7:29AM : RP ADVS HE WAS CHANGING UP & WAS HIS BIG RIG TANKER WAS HIT
7:29AM : BIG RIG , MAIL TRK , A BUS & OTHER TRKS INVD
7:28AM : APPROX 4 VEHS INVD
Responding
Officer Status:
7:37AM : CHP Unit Enroute
7:47AM : CHP Unit On Scene
7:50AM : CHP Unit On Scene
7:51AM : CHP Unit On Scene
8:01AM : CHP Unit On
Scene
8:50AM : CHP Unit On Scene
9:12AM : CHP Unit On Scene
9:45AM : CHP Unit On Scene
Vollmers
10:31 AM MST - Wed, Jan 18 2012
VOLLMERS
PRESET 1
Western States
Rural Transportation
Consortium
Fawndale
10:59 AM MST - Wed, Jan 18 2012
FAWNDALE
PRESET 3
Sherman
Hilt Sandhouse
10:33 AM MST - Wed, Jan 18 2012
HILT SANDHOUSE
PRESET 1
Oregon
California
Siskiyou I-5 NB at Exit 1
Siskiyou I-5 NB at Exit 1
Updated: Jan 18 2012 10:20 AM
Looking North
ODOT
Elevation 3530
TripCheck.com
Milepost 1.00
Oregon
Central Dunsmuir
10:19 AM MST - Wed, Jan 18 2012
DUNSMUIR
PRESET 1
Dunsmuir Municipal Airport
Dunsmuir
Weed Airport
10:43 AM MST - Wed, Jan 18 2012
WEED AIRPORT
PRESET 1
Edgewood
Carrick

3 - Ream Road N/B - Mount Shasta
Updated: 1:44 PM MST - Wed, Jan 18 2012
ICY ROADS
REDUCE SPEED
Dorris
Macdoel
Mt Hebron
Scott Bar
Fort Jones
Greenview
Etna
Edgewood
Carnick
Weed
Mt Shasta
McCloud
Dunsmuir

SE 40th St
I-405
SE 40TH ST
©WSDOT
Jan 18, 2012 12:34 PM PST

Copper
Klamath
National Forest
Scott Bar
21 - Abrams Lake - N/B Wind Warning
Updated: 1:44 PM MST - Wed, Jan 18 2012
WIND ADVISORY
WEED TO YREKA
Fort Jones
Greenview
Etna
Edgewood
Carnick
Weed
Mt Shasta
McCloud
Dunsmuir




Legend: Wind Gust Speed
10
20
30
40
MPH

WeatherShare: http://www.weathershare.org/

Western States Rural Transportation Consortium

RWIS Timestamp: 04/01/2014 06:40:03 AM

Temperature

Air	30.20 °F
Wet Bulb	28.94 °F
Dewpoint	26.96 °F
24-hr Max	41.36 °F
24-hr Min	30.02 °F

Wind

Situation	
Avg	0 mph from 30°
Spot	0 mph from 3°
Max	0 mph

CCTV Timestamp: 04/01/2014 06:39:10

Near:	Quincy
Longitude:	-120.8184°
Latitude:	39.91438°
Elevation:	3813 ft
Direction:	West
County:	Plumas
Route:	SR-70
Milepost:	131.351

Current Conditions: Spring Garden

RWIS Timestamp: 04/01/2014 06:40:03 AM

Temperature

Air	30.20 °F
Wet Bulb	28.94 °F
Dewpoint	26.96 °F
24-hr Max	41.36 °F
24-hr Min	30.02 °F

Wind

Situation	
Avg	0 mph from 30°
Spot	0 mph from 3°
Max	0 mph

Precipitation

Y/N	NO
Situation	noPrecipitation
Rate	0 in/hr
1 hr	0 in
3 hr	0 in
6 hr	0.012 in
12 hr	3.413 in
24 hr	4.689 in
Start	4/1/2014 01:49
End	4/1/2014 01:50

Visibility

Visibility	
Visibility Situation	other

Other

Relative Humidity	88%
Water Depth	

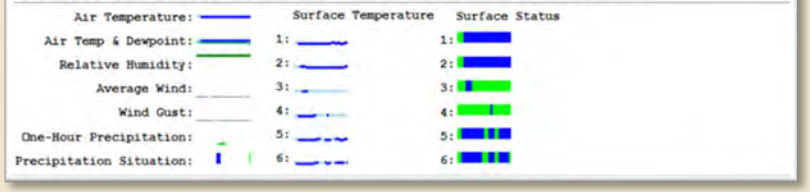
CCTV Timestamp: 04/01/2014 06:39:10

Near:	Quincy
Longitude:	-120.8184°
Latitude:	39.91438°
Elevation:	3813 ft
Direction:	West
County:	Plumas
Route:	SR-70
Milepost:	131.351

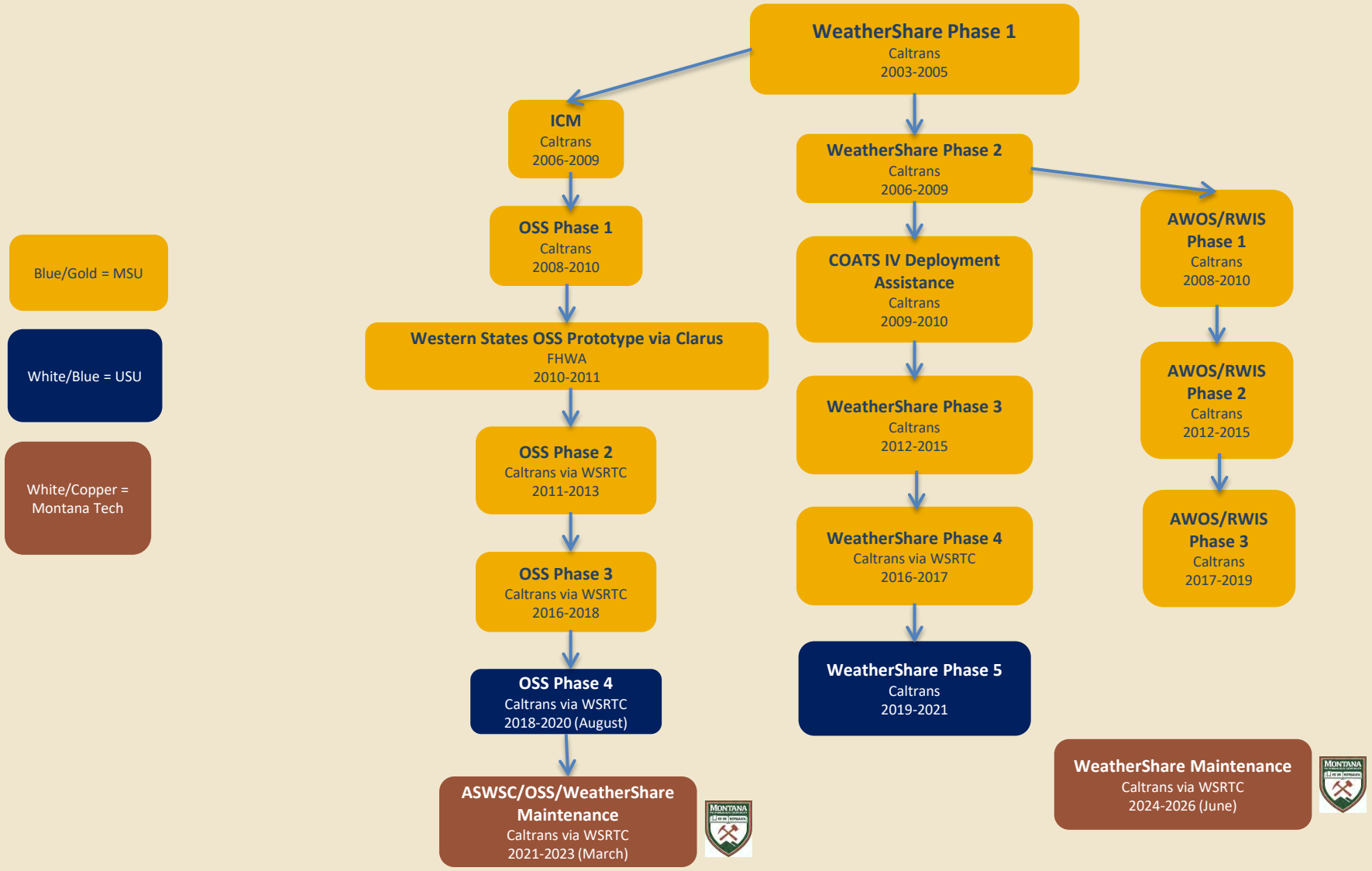
Surface Sensors

Sensor #	1	2	3	4	5	6
Surface Status	iceWatch	iceWatch	wet	wet	iceWatch	wet
Surface Temperature	31.64 °F	31.64 °F	33.08 °F	32.54 °F	31.82 °F	32.00 °F
Pavement Temperature						
Surface Water Depth						
Surface Salinity						
Surface Freeze Point						
Surface Black Ice Signal	other	other	other	other	other	other

Graphical Summary for 04/01/2014 00:00 through 04/01/2014 06:39



Prior and On-Going Investment in OSS and WeatherShare



Automated Safety Warning Controller

Redding Responder

Western States Rural Transportation Consortium

Responder Incident Organizer

Redding Responder Incident Organizer

Summary | Mapping | Photos | Weather | Sketches | Messaging

☐ Incident Closed

Responder Summary:

Organization: Caltrans
Date: 2/26/2004
District: 2
Time: 08 : 35 AM
Observer: Responder
Set to Current Date Time

Description: Add Timestamp to Description

Rockslide 1.5 miles west of Pulga. Includes more than 200 yards of material including some weighing well over 200 tons.

Facility: Lane blocked
Incident Type: Rockslide/ Mudslide

Location:

Update using entered Lat Lon
Latitude: ex: 39.77621 39.77621
Longitude: ex: -121.45579 -121.45579
Road / Address: SR-70, Oroville, CA 95965
Mile Marker / Landmark: BUT 70 39.52
City:
County: Butte
State: Califo

Maps and Location Data Set to Current Location

Responder Incident Organizer

Redding Responder Incident Organizer

Summary | Mapping | Photos | Weather | Sketches | Messaging

Add Blank Sketch | Remove Sketch | Erase Ink | Undo Last

sketch 1 | sketch 2 | sketch 3 | sketch 4 | sketch 5 | sketch 6 | sketch 7 | sketch 8 | sketch 9

Description: Relative size of slide

Pen Color: Red

email

sketch 3

Technology Transfer

Western States Rural Transportation Technology Implementers Forum (WSRTTIF)

Consortium Website

NRITS, etc.

Awards

Western States Rural Transportation Consortium

<u>One Stop Shop</u>

2014 ITS America's Best of ITS Award for Best New Innovative Practice – Research Design and Innovation (Awarded)

2013 California Transportation Foundation Tranny Awards (Finalist)

<u>Redding Responder</u>

2010 NRITS Best of Rural ITS Awards - Best New Innovative Product, Service or Application (Awarded)

2009 California Transportation Foundation Tranny Awards (Finalist)

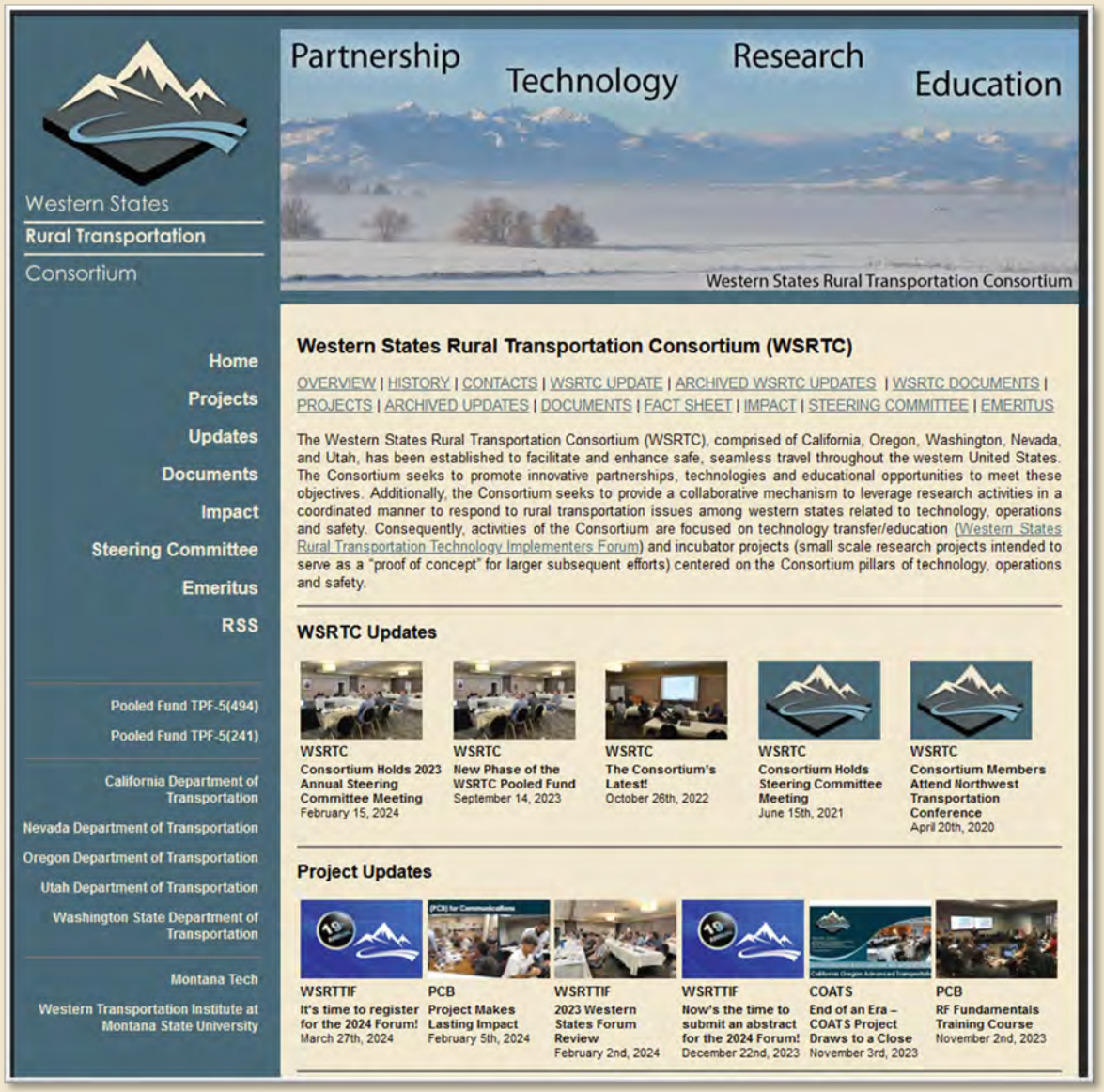
2007 ITS America Finalist: Best New Product, Service or Application (Finalist)

<u>Automated Safety Warning System Controller</u>

2014 Best of Rural ITS Award (Finalist)

<u>Western States Rural Transportation Technology Implementers Forum</u>

2012 NRITS Best of Rural ITS Awards - Best New Innovative Product, Service or Application (Awarded)

For Further Information See:

http://www.westernstates.org