

Western States One-Stop Shop for Rural Traveler Information

Research on Clarus System Data

Doug Galarus and David Veneziano
Western Transportation Institute – Montana State University

Sean Campbell
Caltrans Division of Research and Innovation

Ian Turnbull
Caltrans District 2

Broad Agency Announcement No. DTFH61-10-R-00015

- Posted by FHWA on March 15, 2010
- Proposals Due April 14, 2010
- *The goal of this Broad Agency Announcement (BAA) is to support research and scientific study on the use of Clarus System data to improve surface transportation weather management/operations, create innovative interfaces, and/or develop new applications including weather-responsive traffic management tools. The FHWA anticipates making up to seven (7) awards, but reserves the right to make more or fewer than seven (7) awards.*

WTI Proposal

- Proposal Submitted on Time
- Included signed letters of support from WSRTC member states: California, Oregon, Washington and Nevada
- GOAL: Expand the One-Stop-Shop Prototype to Cover all of California, Oregon, Washington and Nevada
 - ... to address the shortcomings of current (multi-state) web-based weather information sources for travelers (and DOT personnel) ...
- Project awarded on 9/24/2010

Tasks and Deliverables

Contract Start = 9/24/2010		Actual Start = 11/1/2010									End=9/23/2011		
	project month	1	2	3	4	5	6	7	8	9	10	11	12
System Concept													
• Concept Report		D											
Requirements													
• Technical Memorandum – Requirements			D										
Design and Development													
• Technical Memorandum – System Design				D									
• Technical Memorandum – System Documentation									D				
• Completed System									D				
• User Guide									D				
Evaluation/User Survey													
• Survey Instrument										D			
• Final Report													D

Duration = 12 months

Amount of Award = \$79,995

Data Sources

Source	Dataset	Known Coverage/ Availability
Clarus	ESS Sensor Data	CA, OR, NV, WA
MADIS and Mesowest	Other Weather Sensor Data	CA, OR, NV, WA
NOAA - NWS	National Digital Forecast Database (NDFD)	CA, OR, NV, WA
NOAA - NWS	Weather Warnings, Alerts, Advisories, Special Weather Statements	CA, OR, NV, WA
USGS	Elevation Data	CA, OR, NV, WA
State DOTs	CCTV Images	CA, OR, WA
State DOTs	Chain Requirements	CA, OR
State DOTs	Incidents	CA
State DOTs	Construction	CA, OR
State DOTs	Other Points of Interest: , Vista Points, Rest Areas, Truck Scales	CA

A look at the OSS Phase 1 Prototype:



OSS – March 3rd, 2010

One Stop Shop for Traveler Information

[About](#) || [Help](#)

CCTV – CMS – RWIS – Incidents – Chain Requirements – Construction

The map displays Northern California with various travel information layers overlaid. The layers include:

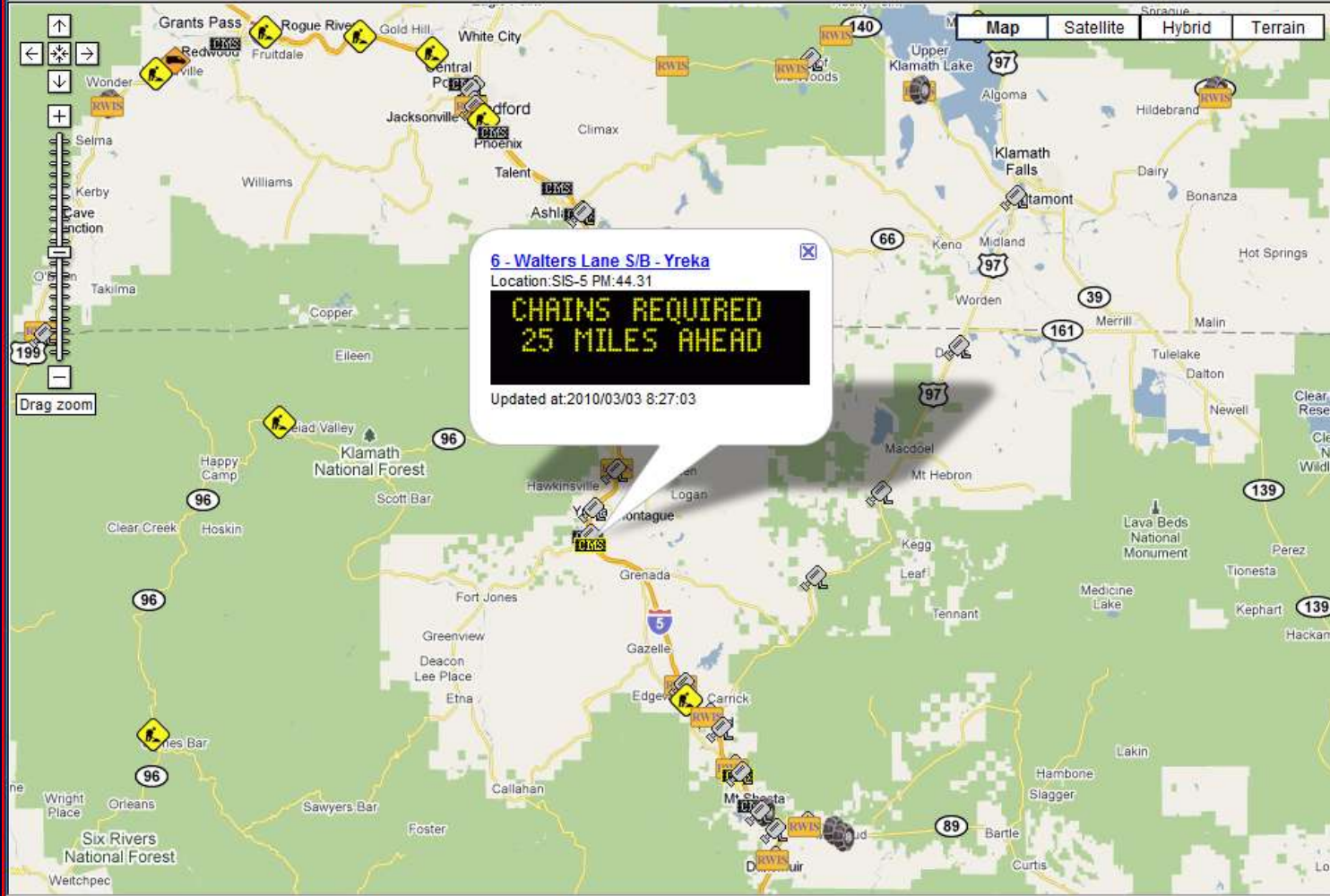
- Current Weather (CA only)
- Weather Forecast (CA only)
- DOT Field Elements
 - CCTV
 - CMS
 - RWIS
 - Incidents (CA only)
 - Chain requirements
 - Construction
- Mountain Passes (CA only)
- Vista Points (CA only)
- Rest Areas (CA only)
- Truck Scales (CA only)

The Trip Planner (Northern CA only) shows a route from Redding, CA (Point A) to Yreka, CA (Point B). The map interface includes navigation controls (directional arrows, zoom in/out, drag zoom), map style selection (Map, Satellite, Hybrid, Terrain), and a detailed legend on the right side.

CMS Message

One Stop Shop for Traveler Information

CCTV – CMS – RWIS – Incidents – Chain Requirements – Construction



Chain Requirement

One Stop Shop for Traveler Information
CCTV – CMS – RWIS – Incidents – Chain Requirements – Construction

The map displays the Siskiyou Summit NB area with various data points. A callout box provides the following information:

- SISKIYOU SUMMIT NB**
- Last Updated:** 03/03/10 06:49:12
- Temp:** 32 °F
- Snow Depth:** 2.54
- Snow Off Road:** 2.54
- Pavement Condition:** packed snow
- Driving Restrictions:** Carry chains or traction tires.
- Others:**

The map interface includes navigation controls (back, forward, zoom in, zoom out, pan) and map style options (Map, Satellite, Hybrid, Terrain). A 'Drag zoom' button is also visible. The map shows major roads like 96 and 97, and landmarks like Klamath National Forest and various towns.

Caltrans D2 CCTV

One Stop Shop for Traveler Information

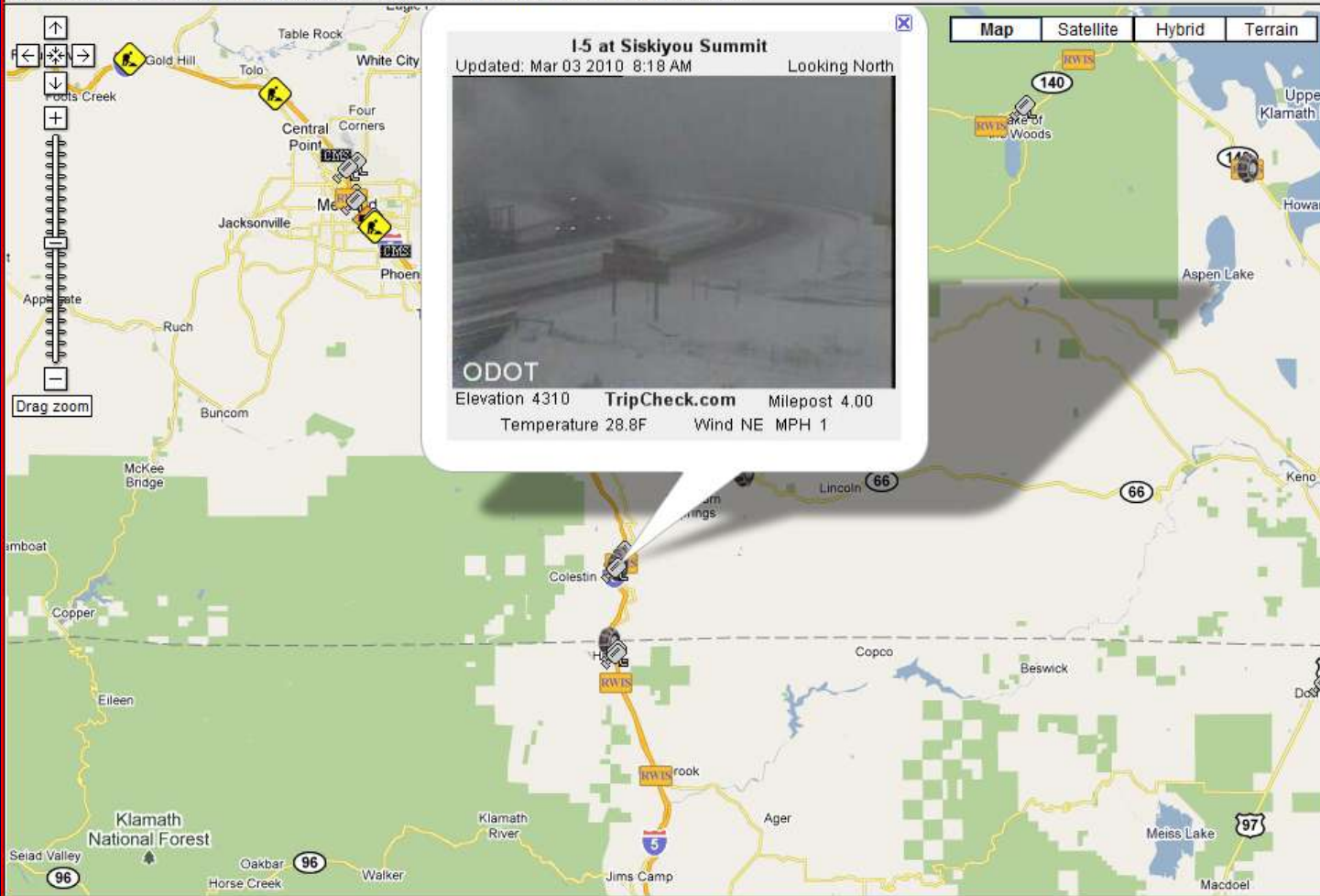
CCTV – CMS – RWIS – Incidents – Chain Requirements – Construction

The screenshot displays a web-based interface for traveler information. On the left, a vertical navigation menu includes icons for Home, Search, and various data layers. The main map area shows a geographic region with several orange icons labeled 'RWIS' (Road Weather Information System) and 'CMS' (Construction Management System). A callout window is open over a specific location, displaying a live video feed. The video feed shows a winding road through a wooded area, with the text 'HILT SANDHOUSE PRESET 6' overlaid in the top left corner. The video feed also features the Caltrans logo in the top right corner. The map interface includes a top navigation bar with 'Map', 'Satellite', 'Hybrid', and 'Terrain' options. A status bar at the top of the callout window indicates the location as 'Hilt Sandhouse' and the update time as '2010-03-03 07:34:03'. The map background shows major roads like Highway 96 and Highway 5, and geographical features like the Klamath River and Klamath National Forest.

ODOT CCTV

One Stop Shop for Traveler Information

CCTV – CMS – RWIS – Incidents – Chain Requirements – Construction



Caltrans D2 CCTV

One Stop Shop for Traveler Information

CCTV – CMS – RWIS – Incidents – Chain Requirements – Construction

Location: North Hilt
Updated: 2010-03-03 07:45:20

NORTH HILT
PRESET 1

Map Satellite Hybrid Terrain

Lincoln
Pinehurst State Airport

Oregon
California

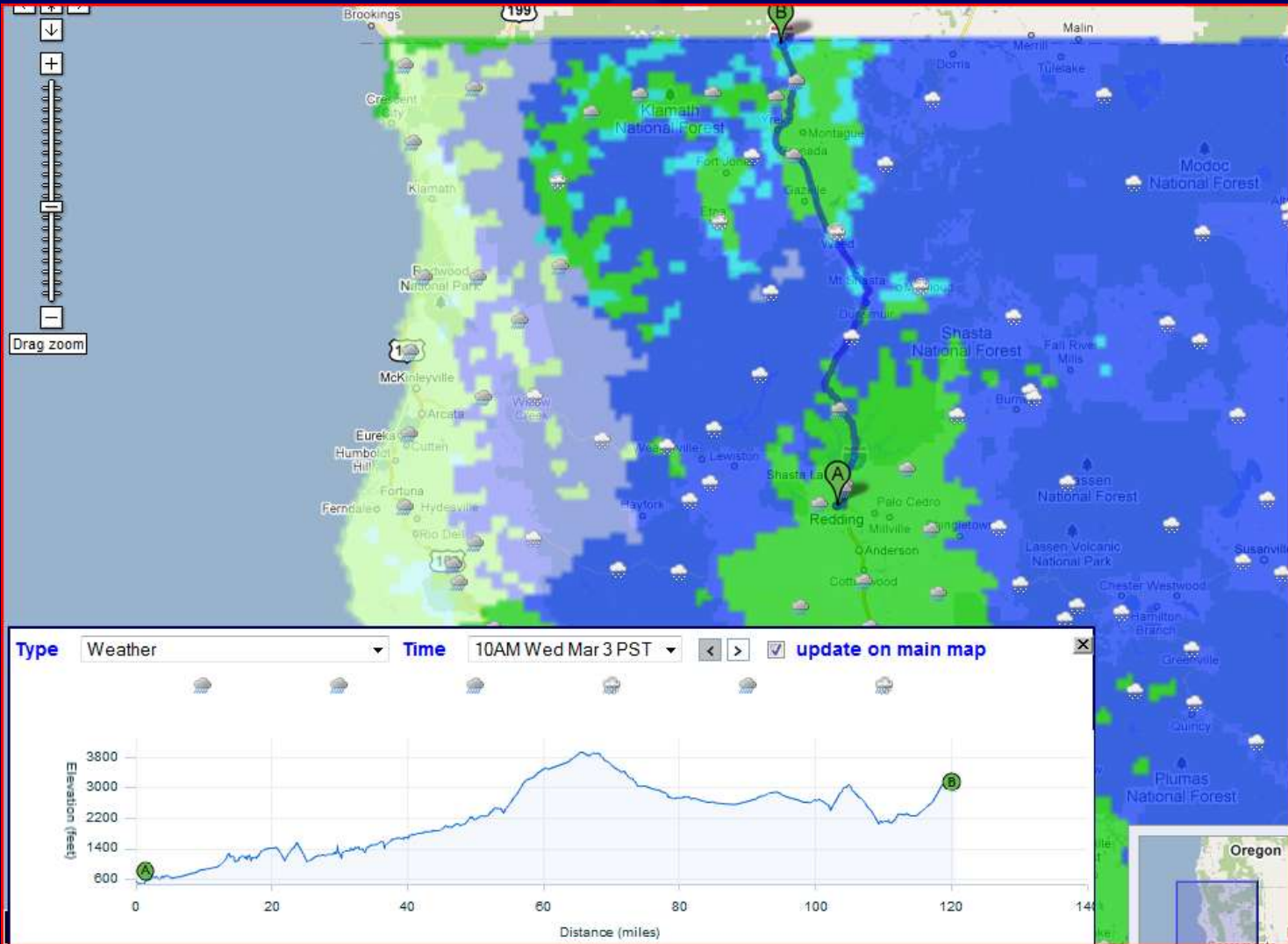
Copco

Hilt
RWIS

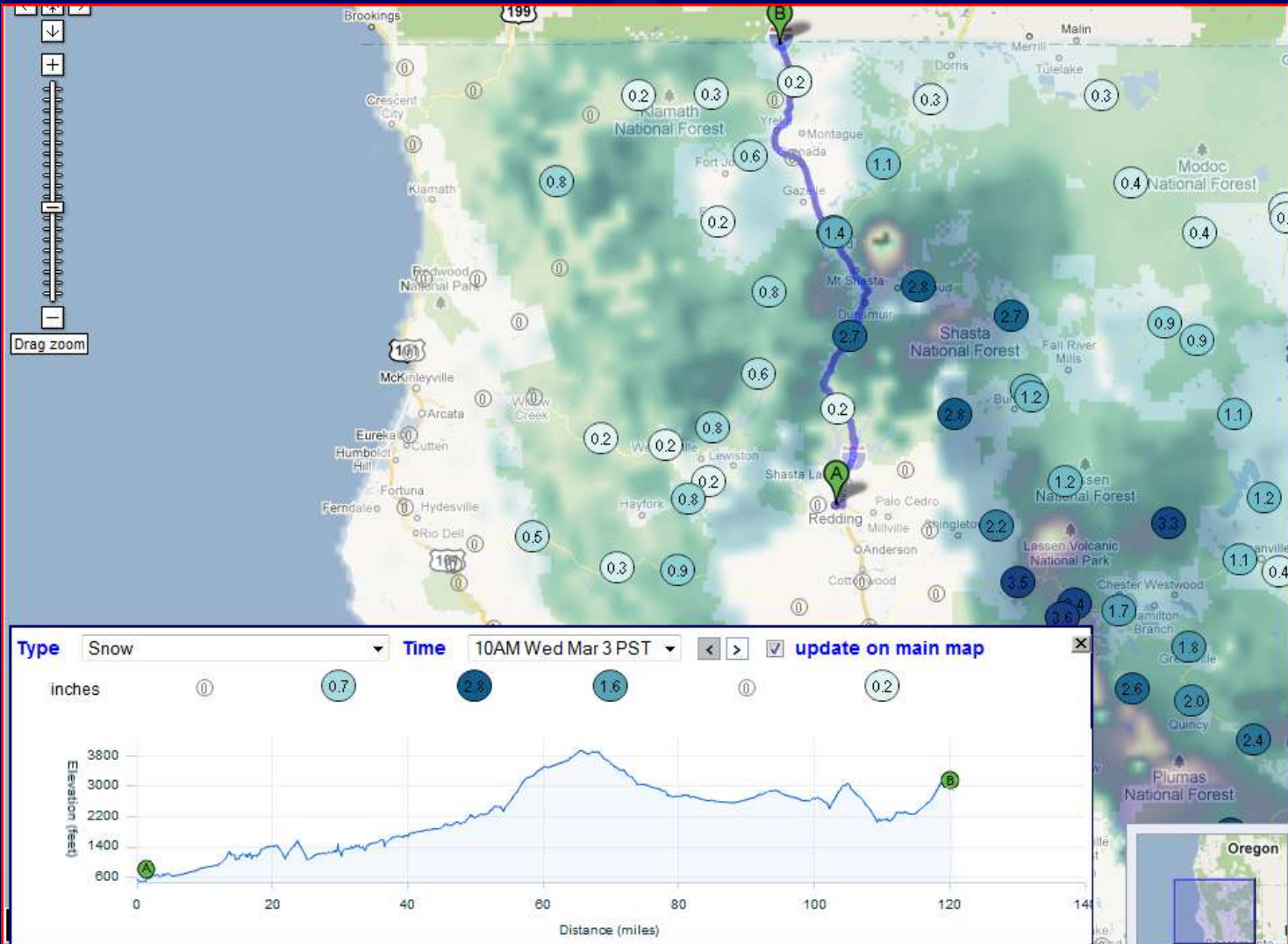
Hornbrook
RWIS

Map navigation controls: ↑, ↓, ←, →, +, -, Drag zoom

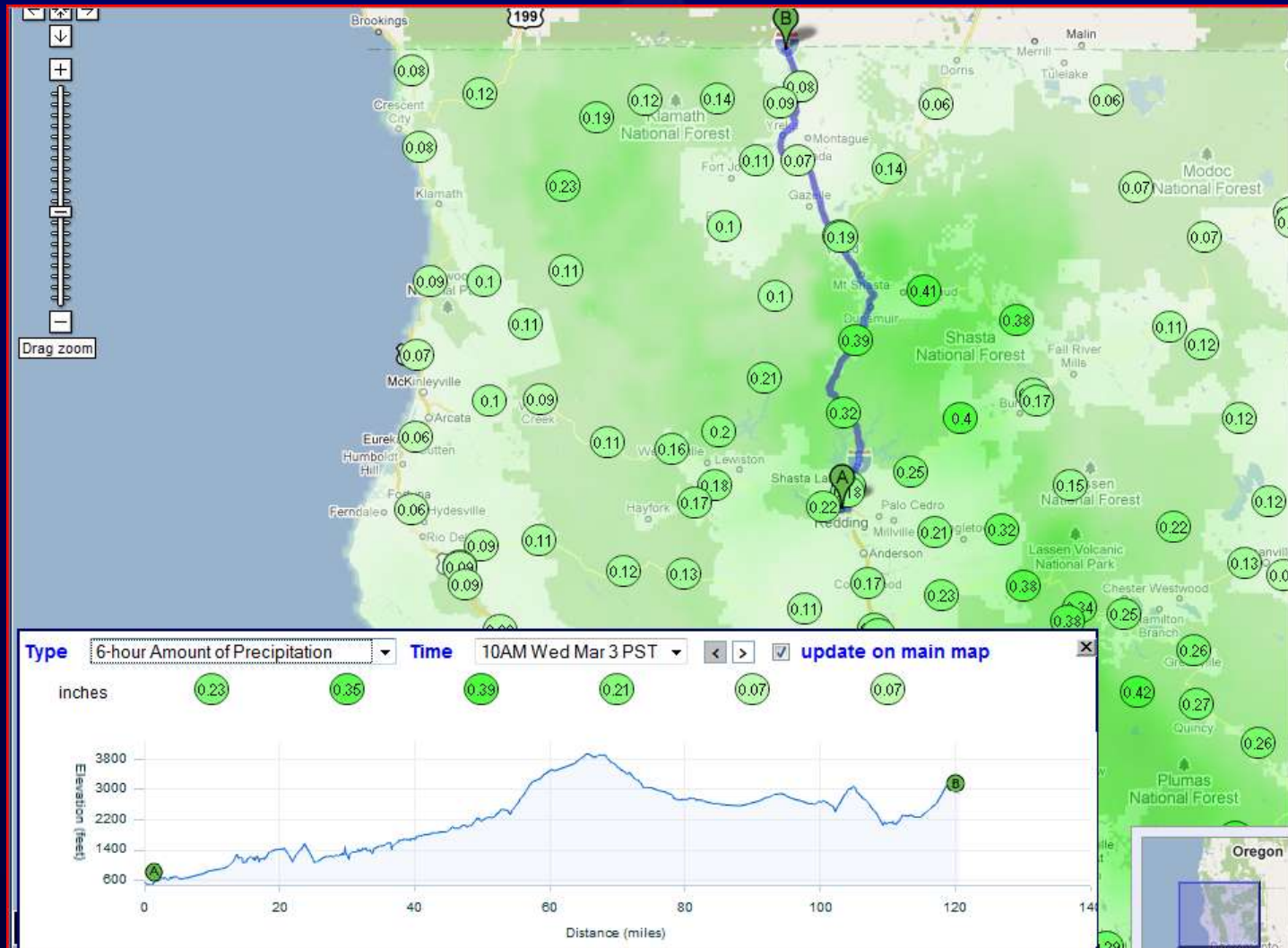
Route Planner – Weather Forecast



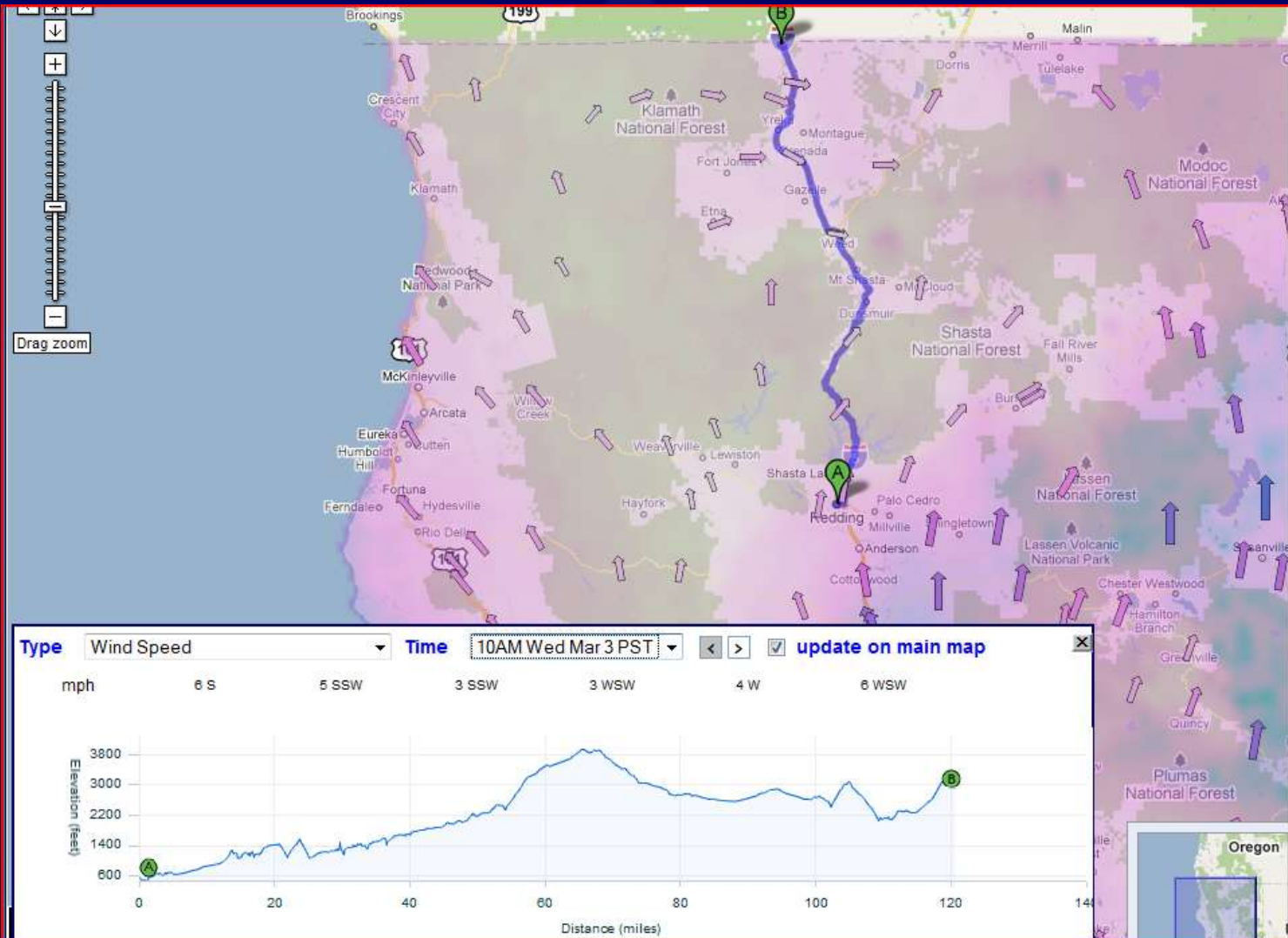
Route Planner – Forecast Snow Amount



Route Planner – Forecast Precipitation



Route Planner – Wind Forecast

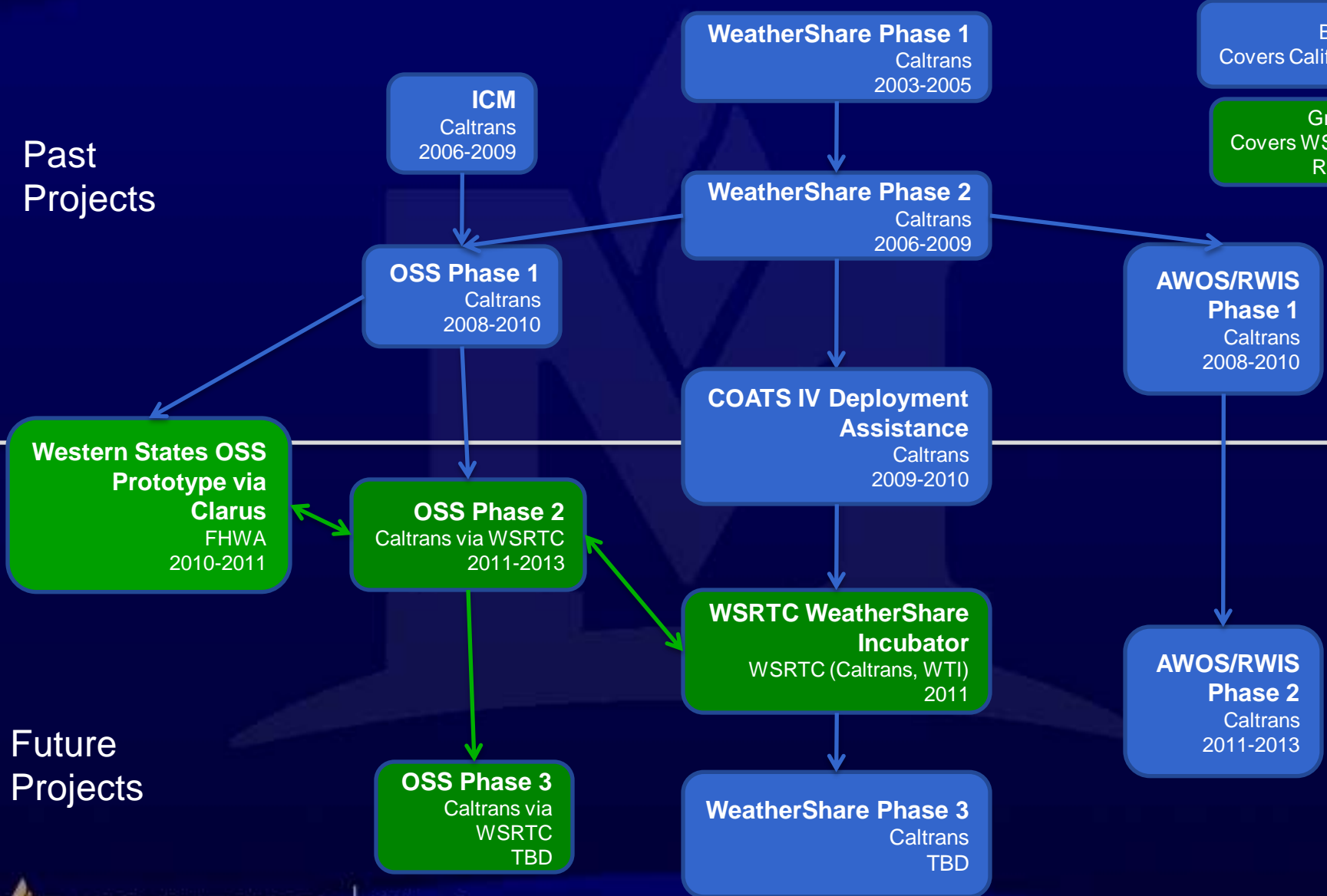


Closely related web-based efforts

Past Projects

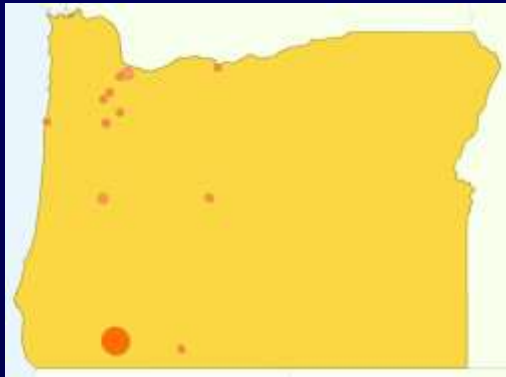
Blue =
Covers California

Green =
Covers WSRTC
Region



Future Projects

Existing Sites: Combined Usage 5/1/2010 – 11/3/2010



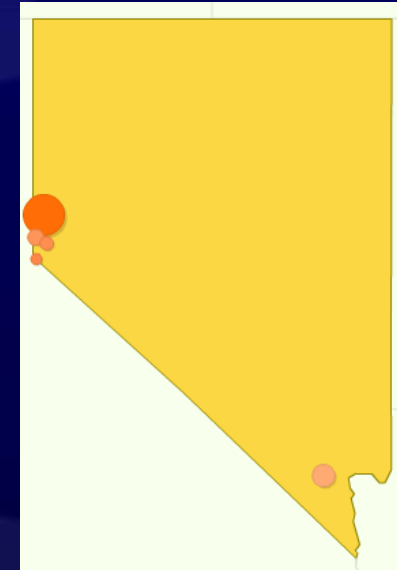
This state sent 45 visits via 12 cities



This state sent 16 visits via 10 cities



This state sent 1,537 visits via 87 cities



This state sent 26 visits via 5 cities

Note: These sites have been advertised very little outside Caltrans and don't provide coverage beyond California and Oregon (in part), so the use outside California is a surprise. Further, these numbers cover a time period with generally good weather ...

Links

- <http://oss.weathershare.org/>
- <http://www.westernstates.org/Projects/OSS/>
- <http://www.westernstates.org/> (includes links to related rural projects)

Discussion

