2014 Road Weather Management Stakeholder Meeting
August 13, 2014

Rob Clayton, P.E., PTOE
Utah Department of Transportation
Director, Traffic Management Division
Welcome to Utah!

- Home to 2,855,000 people
- Variety of climates
- 13 national parks bringing 8,981,000 visitors in 2013 and $596,500,000 in economic benefit
- 26,000 acres of skiing and over 4 million ski visitors/season
- Ski resorts get 400+ inches snow per year
- Kings Peak (Uinta Mountains) elevation 13,528 feet!
Common Utah weather challenges:

- Road snow & ice
- Avalanches
- High winds
- Wild fires
- Flooding
- Dust storms
Weather and Travel Time Reliability

Travel Time Index (systemwide)

- X-axis: Dates from 5/6/2013 to 7/30/2014
- Y-axis: Travel Time Index ranging from 0.7 to 1.8
- Blue dots represent different dates and corresponding travel time indices.
Weather and Travel Time Reliability

Travel Time Index (systemwide)

- Road snow (both commutes)
- Freezing rain event
- Road snow (AM)
- Road snow/ice (AM commute)
- All day snow
- Road snow/ice (AM commute)
- Heavy valley rain / mountain snow

Dates: 5/6/2013 to 7/30/2014
UDOT Citizen Reporter Program

- Incoming reports 99.97% accurate
- 2013-2014 season: 475 reporters
- 125 of 145 reporting routes covered

Reports received since November 1

- [I-15 Orem to Provo](#)
  - Road Surface: snow covered
  - Weather: clear
  - Restrictions: none
  - Last Updated: 10/23/2013 3:08 PM
UDOT Weather Responsive Traffic Signals

- Goal: Making UDOT’s traffic signal systems more responsive to changes in traffic demands and speeds due to weather
Snow storm starts
UDOT Winter Road Weather Index

• “WRWI” is a real-time measure of the severity of weather elements on a road surface
• Uses - Maintenance resource optimization, traffic congestion, variable speed limit, citizen reporting verification, Weather Responsive Traffic Management
• Tested 2013-2014, statewide use planned for the 2014-2015 winter season
• Data variables:
  – Road condition and “Grip” (or coefficient of friction)
  – Road temperature
  – Precipitation occurrence
  – Visibility (combined with precipitation occurrence to differentiate fog from snow)
  – Wet-bulb temperature (colder = drier snow)
  – Wind gust (>=20 mph)
Baseline WRWI = 1
WRWI > 1 means we are losing ground to weather impacts

- I-80 at Parley’s Summit, December 3, 2014
- Recall earlier: systemwide TTI = 1.7
- WRWI was 1.3 or greater all day
Freezing Rain

A winter storm will create slick roads across the northern half of Utah beginning Wednesday night and continuing into Thursday. The Thursday morning commute will be heavily impacted due to icy roads. Weather conditions will affect travel throughout the day on Thursday as the ice/rain turn to snow. Driving conditions in some areas may be hazardous.

The biggest impact areas include: The Wasatch Front, Tooele Valley, Cache Valley, lower mountain valleys such as Morgan and Heber, Delta and the West Desert and the Moab areas.

Motorists are advised to allow more time to reach destinations, consider cancelling unnecessary travel and increase following distances.
Thank you!