



# NorthWest WeatherNet Inc.

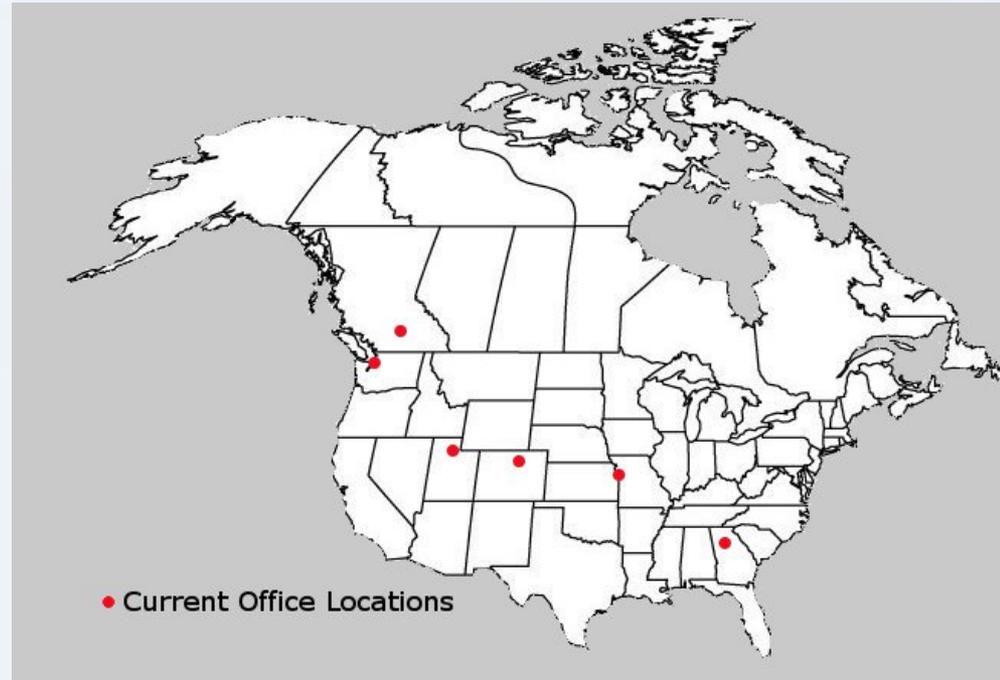
**Consulting Meteorologists**  
Established 1983  
Meteorological Services for  
Government and Industry

**Justin Connolly – Salt Lake City, UT**  
**Surface Transportation/Traveler Information Meteorologist**  
**NorthWest WeatherNet Inc.**  
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# About Weathernet

- Offices across the U.S. and Canada
- Meteorological consultants for government, engineering, construction, and energy trade.
- Runway pavement forecast for JFK, LGA, ORD, DIA, and SLC
- 20 Surface Transportation Meteorologists
- Growing since 1983



# UDOT Maintenance Forecasts/Event Coordination and Response

- **24/7 phone support**
  - Degreed Meteorologists
  - Fielded 5,000 inquiries in 2012
- **Route specific forecast for 82 sheds**
- **Deterministic Forecasting**
- **Alert UDOT personnel**
  - Localized phenomena/impacts
- **Support for agency projects**
  - Construction
  - Special events
- **Conduct pre-storm briefings**
  - Discuss expected impacts
  - Organize messaging
  - Enable inter-departmental cooperation and response
- **Work closely with the National Weather Service**
  - Assures a unified public message
  - Includes vital road information in NWS products

# Benefits for All Aspects of UDOT

- Maintenance Personnel
- Traveler Information
- Traffic Management
- Emergency Dispatch/Response
- Signal Timing Engineers
- Communications Dept.
- Utah Highway Patrol
- Ports of Entry
- Emergency Managers
- Incident Management Team
- Construction
- ATMS Electronics
- Renewable Energy

- Western Transportation Institute study in 2005-06 found a 10:1 cost/benefit ratio for the program with UDOT (only manpower and material usage)

# UDOT Traveler Information Products

- Road Weather Alert (Highlights/Route Specific)
  - Contains a statewide Red/Yellow/Green impact Graphic
  - Available on the UDOT Traffic website/app
- Road Weather Forecasts on 511 System
- Road Conditions Forecast
  - 24 hour forecasts in 3 hour increments
  - All major Interstates, highways, and important recreation routes
- UDOT Traffic Twitter
  - Tweet road weather forecasts, restrictions, crashes, and other important information to motorists
- Current Road Conditions
  - Input: UDOT Plow Crews/UDOT TI Mets/Citizen Reporters
  - Updated at a goal of every 2 hours
  - 144 route segments
- Variable Message Signs (VMS)
  - Winter Storm XXPM Tomorrow

|        | Degree of caution | Weather Impact on Travel  | Recommended Action   |
|--------|-------------------|---|--|
| GREEN  | Low               | Minimal   | Normal Caution   |
| YELLOW | Moderate          | Minor/intermittent weather related road concerns anticipated              | Monitor 511, UDOT Traffic Web page and NWS Weather Forecasts.  |
| RED    | High              | Travel expected to be impaired. Be prepared for hazardous road conditions | Monitor 511, UDOT Traffic Web page and NWS weather forecasts. Be prepared to alter travel plans as necessary |

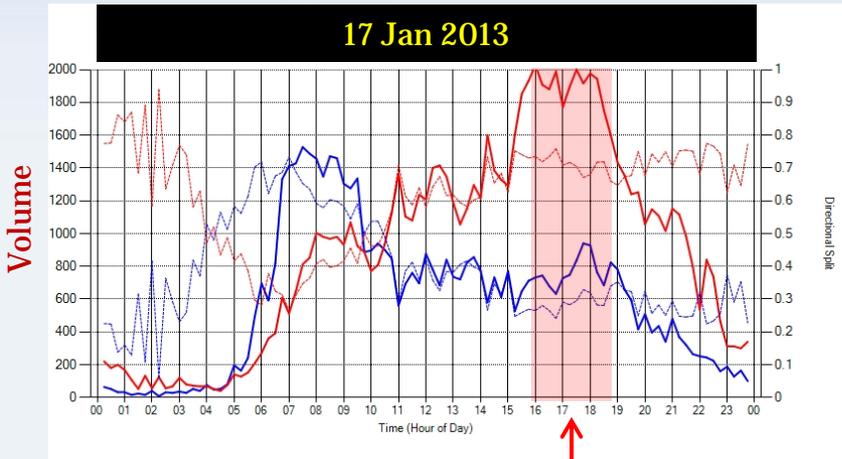
# Road Weather Information System

## RWIS

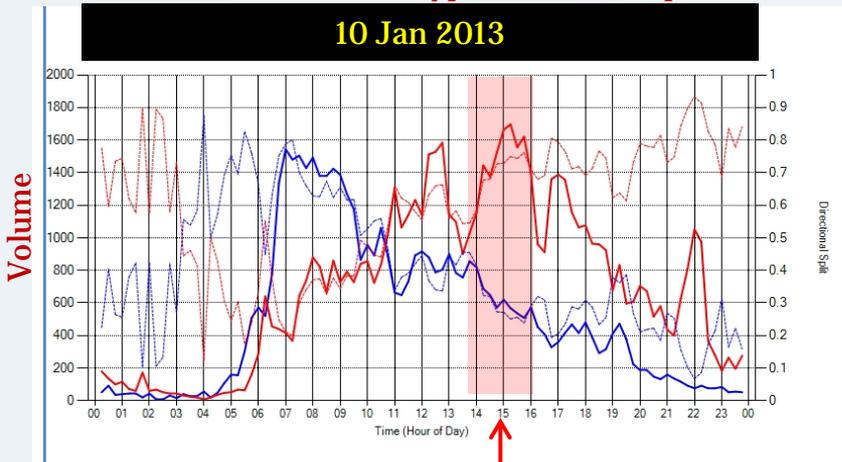
- 83 RWIS Stations in Utah
- Two annual preventative maintenance cycles
- >95% stations operational
- Install and maintain new instrumentation
- Response maintenance
- Siting for new locations
- Portable stations
  - Future planning
  - Storm response



# Impact of Message?



Typical commute peak



Early commute peak

— Southbound — Northbound

- Major commuter route near University of Utah shows impact of pre-storm messaging
- Afternoon peak commute (southbound) time was shifted based on forecast
  - Typical peak is 400-600 PM
  - On January 10<sup>th</sup> peak was 300-400 PM
- Reduced afternoon and evening (Noon-8 PM) travel based on forecast
  - 17 Jan – Total Volume 17,871
  - 10 Jan – Total Volume 13,540



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