CITIZEN REPORTING

A UDOT Program
UDOT Strategic Direction

- Preserve Infrastructure
- Optimize Mobility
- Zero Fatalities, Crashes, Injuries
### Historical Snowfall Statistics for ski resorts

<table>
<thead>
<tr>
<th>Name of Resort</th>
<th>Country</th>
<th>annual snowfall in inches (in)</th>
<th>annual snowfall in meters (m)</th>
</tr>
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<tbody>
<tr>
<td>Mt Baker Washington</td>
<td>USA</td>
<td>641</td>
<td>16.3</td>
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<tr>
<td>Mt Rainier Washington</td>
<td>USA</td>
<td>624</td>
<td>15.85</td>
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<tr>
<td>Alyeska</td>
<td>USA Alaska</td>
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<tr>
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<td>USA</td>
<td>520</td>
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<td>Snowbird Utah</td>
<td>USA</td>
<td>500</td>
<td>12.7</td>
</tr>
<tr>
<td>Soiitude Utah</td>
<td>USA</td>
<td>500</td>
<td>12.7</td>
</tr>
<tr>
<td>Jackson Hole Wyoming</td>
<td>USA</td>
<td>500</td>
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</tr>
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<td>Kirkwood Mt</td>
<td>USA</td>
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<tr>
<td>Rasutsu</td>
<td>Japan</td>
<td>472</td>
<td>12.0</td>
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<td>Stevens Pass Washington</td>
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<td>Sugar Bowl California</td>
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<td>464</td>
<td>11.78</td>
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<td>Grand Targhee Wyoming</td>
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<td>463</td>
<td>11.76</td>
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<td>Squaw Valley</td>
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<td>450</td>
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<td>Japan</td>
<td>433</td>
<td>11</td>
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<tr>
<td>Nagano</td>
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<tr>
<td>Hirafu</td>
<td>Japan</td>
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<td>11</td>
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<td>Mt Hood Meadows Oregon</td>
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<td>400</td>
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<td>400</td>
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<td>Mt Washington BC</td>
<td>Canada</td>
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<td>Wolf Creek Colorado</td>
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<td>379</td>
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<tr>
<td>Chamonix</td>
<td>France</td>
<td>377</td>
<td>9.6</td>
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<td>Winter Park</td>
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<td>369</td>
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<td>Mammoth Calif</td>
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<td>367</td>
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<td>Fernie BC</td>
<td>Canada</td>
<td>360</td>
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<td>Heavenly</td>
<td>USA</td>
<td>360</td>
<td>9.1</td>
</tr>
<tr>
<td>Canyons</td>
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<td>355</td>
<td>9.0</td>
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<td>Park City Utah</td>
<td>USA</td>
<td>350</td>
<td>8.9</td>
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<tr>
<td>Jay Peak Vermont</td>
<td>USA</td>
<td>350</td>
<td>8.9</td>
</tr>
<tr>
<td>Mt Bachelor</td>
<td>USA</td>
<td>350</td>
<td>8.9</td>
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<tr>
<td>Vail Col</td>
<td>USA</td>
<td>346</td>
<td>8.8</td>
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<tr>
<td>Furano</td>
<td>Japan</td>
<td>315</td>
<td>8.0</td>
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<tr>
<td>Valle Nevado</td>
<td>Chile</td>
<td>311</td>
<td>7.9</td>
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<tr>
<td>Aspen</td>
<td>USA</td>
<td>300</td>
<td>7.6</td>
</tr>
<tr>
<td>Portillo</td>
<td>Chile</td>
<td>295</td>
<td>7.5</td>
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</tbody>
</table>
Rare On-The-Job Death For Avalanche Forecaster In Utah

APRIL 12, 2013 7:05 PM ET

Dale Atkins has been tracking hundreds of avalanche deaths for years but the fatality report that arrived from Utah Friday morning was especially shocking.

"It's way too close to home," says Atkins, the Colorado-based president of the American Avalanche Association. "It's mind numbing...it's a slashing chill."

That's because the sixteenth avalanche victim in the United States this winter is Craig Patterson, 34, a seven-year veteran of avalanche forecasting for the Utah Department of Transportation. Investigators were still assessing the incident Friday but it appears Patterson was gauging snow conditions alone Thursday on a mountain slope known as Kessler Slabs above the Big Cottonwood Canyon highway outside Salt Lake City.

Colleagues concerned about his failure to return to his office called authorities and his body was spotted from a helicopter late Thursday. "A search found his body on the surface of the [avalanche] debris," reports Evelyn Lees of the Utah Avalanche Center.

The highway carries thousands of skiers, ski industry workers and mountain homeowners and the steep slopes above it are prone to avalanches. Some reach the highway, which is sometimes closed after major snowstorms while highway workers literally bomb the slopes to release newly-fallen snow.
TATS Segments
The goal of this Program is to allow trained Citizen Reporters to transmit road condition information (and possibly other information) to the UDOT TOC for inclusion into the TATS road reporting system.
Program Goals

- To provide consistent, reliable, accurate and timely information concerning roadway conditions to the traveling public.
- The Utah Citizen Reporter Program allows trained members of the public to report road and weather conditions on any of our over 140 segments that we collect data on.
- During the winter months (November – April) UDOT will be using road condition and weather reports to supplement other reporting. This information will be used on the UDOT Traffic website, 511 phone system and UDOT Traffic app.
- This project is NOT for dispatching plow operators.
- This project IS for trained volunteers to assist UDOT by providing timely and accurate information based on their observations.
Pilot Year

Public Information Messaging Triangle

What Happened?
What is Happening?

How does it affect me?
What does the public want to know?
What is UDOT doing to help solve the problem?

TRAFFIC MANAGEMENT DIVISION

Source: WRTM CITE Course
Logic

TI Mets (Reports valid for 6 hours have an exponential decrease to 0% and report expires. TI Met reports are never more valuable than a TATS report if they are reported at the same time.)

TATS (Reports valid for 1 hour then an exponential decrease to 6 hours when the report expires. TATS report have priority for 1 hour after reporting and are not overwritten by any other type of report)

Citizen Reporters (Reports valid for 3 hours and have an exponential decrease to 0% and report expires.)

Color that appears “on top” is the report that is used for the RYG (not including priority TATS report for 1 hour)

UDOT Weather Operations Program Data Input Sources

- Citizen Reporting Program
- RWIIS Instrumentation
- UDOT TOC Operator and TI Meteorologist Observations (Weather Cameras)
- TATS Reporting (UDOT Plow Crews)
SR-154 Bangerter Highway
Road Condition: dry
Weather Condition: overcast
Restriction: none
Updated 11/20/13, 5:40 PM

I-15 Point of the Mountain to Orem
Road Condition: snow covered
Weather Condition: snow
Restriction: none
Updated 12/29/14, 11:43 AM

SR-67 Legacy Pkwy
Road Condition: snow covered
Weather Condition: snow
Restriction: none
Updated 12/29/14, 11:44 AM
Training Program

• Introduction and Thank You
• Wyoming ECAR Program
• Reporter Selection Process/Criteria
• Program Goals
• Types of Road Users in Utah
• Safety!
• Type of Information to Report
• Definitions of Road Conditions
• Definitions of Weather Conditions
• UDOT Winter Operations information
• Driving Safe around Plows
• The Citizen Reporting app
The Reporting App

UDOT Citizen Report

Where and When
SR-201 Salt Air to Salt Lake
Report Time 10/16/13, 1:25 PM

Conditions
Road Dry
Weather Partly Cloudy

Comments
(Tap to enter additional info)

Submit

Select Segment

SR-20 I-15 to Top of Bear Valley
SR-201 Salt Air to Salt Lake
Last report: 10/16/13, 1:25 PM
SR-210 Lower Little Cottonwood Canyon
SR-210 Upper Little Cottonwood Canyon
SR-224 Kimball Jct to Park City
SR-224 Park City to Orem
SR-226 to Snowbasin
SR-24 Hanksville to I-70
SR-24 Loa to Hanksville
SR-24 Richfield to Loa
SR-248 Quinns Jct to Park City

Examples

Road Conditions
The following images present examples of road conditions.

Dry

Weather Condition
Clear
Partly Cloudy
Overcast
Rain
Mixed Rain And Snow
Snow
Fog
Blowing Snow

Examples
Statistics

• Pilot Program launched winter 2012-2013
  • 100 UDOT employee reporters

• Program launched to the public winter 2013-2014
  • End of season, 475 reporters
  • 135 of 145 routes covered by at least 1 reporter
  • 0.03% of reports submitted were determined to be inaccurate
  • Over 1800 reports submitted

• 2014 – 2015 Statistics
  • End of season, 600 reporters
  • 142 of 145 routes covered by at least 1 reporter
  • 0.04% of reports submitted were determined to be inaccurate
  • Over 3200 reports submitted
Statistics

Citizen Reporter App downloads by month

- iPhone
- Android

Reports received since November 1
Statistics

Citizen Reporter Inaccurate Report Percentages

<table>
<thead>
<tr>
<th>Month</th>
<th>Reports received since November 1</th>
<th>Flagged as inaccurate</th>
<th>% inaccurate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr-14</td>
<td>1802</td>
<td>32</td>
<td>1.78%</td>
</tr>
<tr>
<td>Mar-14</td>
<td>1677</td>
<td>9</td>
<td>0.54%</td>
</tr>
<tr>
<td>Feb-14</td>
<td>1473</td>
<td>9</td>
<td>0.61%</td>
</tr>
<tr>
<td>Jan-14</td>
<td>1154</td>
<td>5</td>
<td>0.43%</td>
</tr>
<tr>
<td>Dec-13</td>
<td>531</td>
<td>2</td>
<td>0.38%</td>
</tr>
</tbody>
</table>

Routes Covered by at least 1 reporter
FAQ

- Are you going to expand the program to allow reporters to submit other data?
- How do you encourage reporters to not use the app while driving?
- Are you concerned about unfiltered data going to the public?
To Become a UDOT Citizen Reporter

• Take the online training:  
  www.udottraffic.utah.gov/training/citizenreporter

• Download the free reporting app from your app store  
  (Search for “UDOT Citizen Report”)
Questions?

Lisa Miller
Utah Department of Transportation
Traveler Information Manager

lisamiller@utah.gov
(801) 887-3761

Weather plays a role in 25% of all crashes.
The annual cost of weather-related crashes is $42 Billion.
On average, in weather-related crashes each year:
7,400 people are killed
629,000 people are injured.
Weather causes 25% of all non-recurring congestion delays.
The total delay is about 5 billion hours per year.

Source: WRTM CITE Course