Role of Road Weather Information in Wyoming’s Commercial Vehicle Operations

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WYDOT
Background Information

- I-80 is a major east-west commerce route
  - 11,000 vehicles per day
  - >50% truck traffic
- Other routes are also important for commercial vehicle operators
- Trucking industry is very important to Wyoming and the nation’s economies
Background Information

- Frequent severe weather events during winter
- Snow and Wind
  - Visibility problems due to blowing snow
  - Surface condition problems
  - Vehicle blowovers
- Frequent closures which effect commerce
Background Information

- Significant number of truck blowovers
  - I-25
  - I-80
Background Information

- Surface and visibility issues
Basis of Discussion?

- Meeting with I-80 Coalition
- CVO’s invited to attend
- CVO’s provided a wealth of information
- Made follow-up contacts with Wal-Mart and Swift trucking officials for detailed needs of the trucking industry
What do CVOs Want?

- One-stop shop
  - Current conditions
  - Construction information
  - Forecasted conditions

- Forecast
  - Tactical and strategic decisions
    - Push shipments
    - Delay shipments
    - Re-route
Forecasts

- 12, 24, 36, 48 hour IMPACT forecasts
  - Wind speed/gust
  - Visibility
  - Surface conditions
- Built specifically for CVO (truck routes)
- Includes National Weather Service Watches and Warnings
- Both Map and Text formats provided
Screen Shots – User Interface

WYDOT Commercial Vehicle Operator Portal

Road Impact Forecasts

Worst-Case forecasts for Wed Feb 22, 12:00 to 23:59 (Mountain Time)

Legend
- Forecast
  - Worst-Case
  - Visibility
  - Wind
  - Surface

- Time Frame
  - 0-12 Hours
  - 12-24 Hours
  - 24-36 Hours
  - 36-48 Hours

- Impact
  - Visibility Forecasts
  - Wind Forecasts
  - Surface Forecasts
  - NVS Alerts

- L = Low Impact
- M = Moderate Impact
- H = High Impact

Impact Levels
- Low
  - Minimal impacts expected, use general caution (see forecasts and present conditions)
- Moderate
  - Some impacts expected, use extra caution (see forecasts and present conditions)
- High
  - Dangerous impacts expected, use extreme caution, delay travel or consider alternate route (see forecasts and present conditions)
## Wind Speed
A forecast of average wind speed and possible gusts expected.

<table>
<thead>
<tr>
<th>Impact</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Use general caution</td>
</tr>
<tr>
<td>Moderate</td>
<td>Strong winds, use extra caution</td>
</tr>
<tr>
<td>High</td>
<td>Extremely high blow-over potential for light and high-profile vehicles</td>
</tr>
</tbody>
</table>

## Wind forecasts for Wed Feb 22, 00:00 to 11:59 (Mountain Time)

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Impact</th>
<th>Title</th>
<th>Message</th>
<th>NWS Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hwy 28 Farson through South Pass (mp 0-69)</td>
<td>Moderate</td>
<td>Strong winds expected</td>
<td>W winds at 20-30 mph expected, gusts to 40 mph</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-25 Colorado state line to Chugwater (mp 0-54)</td>
<td>High</td>
<td>Strong, sustained winds and gusts expected</td>
<td>W winds 35-45 mph expected, gusts to 60 mph</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-25 Chugwater to Wheatland (mp 54-80)</td>
<td>High</td>
<td>Strong, sustained winds and gusts expected</td>
<td>W winds 35-45 mph expected, gusts to 60 mph</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-25 Wheatland to Glendo (mp 80-115)</td>
<td>High</td>
<td>Strong, sustained winds and gusts expected</td>
<td>W winds 35-45 mph expected, gusts to 60 mph</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-25 Glendo to Casper (mp 115-191)</td>
<td>High</td>
<td>Very strong, gusty winds expected</td>
<td>W-SW winds 30-40 mph expected, gusts to 55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-25 Casper to Buffalo (mp 191-299)</td>
<td>High</td>
<td>Very strong, gusty winds expected</td>
<td>W-SW winds 30-40 mph expected, gusts to 55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-80 Utah state line to Lyman (mp 0-41)</td>
<td>Low</td>
<td>Breezy conditions expected</td>
<td>W-SW winds at 15 to 20 mph expected</td>
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<td></td>
</tr>
<tr>
<td>I-80 Lyman to Rock Springs (mp 41-104)</td>
<td>Moderate</td>
<td>Strong winds expected</td>
<td>W winds at 20-30 mph expected, gusts up to 45 mph</td>
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<td></td>
</tr>
<tr>
<td>I-80 Rock Springs to Rawlins (mp 104-214)</td>
<td>High</td>
<td>Very strong winds and gusts of wind expected</td>
<td>W winds 20-30 mph expected, gusts to 45-50 mph</td>
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<td></td>
</tr>
<tr>
<td>I-80 Rawlins to Arlington (mp 214-272)</td>
<td>High</td>
<td>Strong sustained winds, stronger gusts expected</td>
<td>W winds 40-55 mph expected, gusts to 65mph+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-80 Arlington to Laramie (mp272-311)</td>
<td>High</td>
<td>Strong sustained winds, stronger gusts expected</td>
<td>W winds 40-55 mph expected, gusts to 65mph+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-80 Laramie to Cheyenne (mp 311-359)</td>
<td>High</td>
<td>Strong sustained winds, stronger gusts expected</td>
<td>W winds 40-55 mph expected, gusts to 65mph+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-80 Cheyenne to NE state line (mp 359-403)</td>
<td>High</td>
<td>Strong, sustained winds and gusts expected</td>
<td>W winds 30-40 mph expected, gusts to 60 mph expected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-80 MT state line to Buffalo (mp 0-56)</td>
<td>High</td>
<td>Very strong, gusty winds expected</td>
<td>W winds 35-45 mph expected, gusts to 55 mph</td>
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</tr>
</tbody>
</table>
Lessons Learned

- CVOs are very willing to work with the DOT
- CVOs have very intelligent transportation people
Improvements

- 2013-2014
  - Forecast to 72 hours
  - Include link to truck parking
  - Include “wind grid” – more detailed forecast of wind events
Questions/Comments?