

The Enhanced MDSS Application



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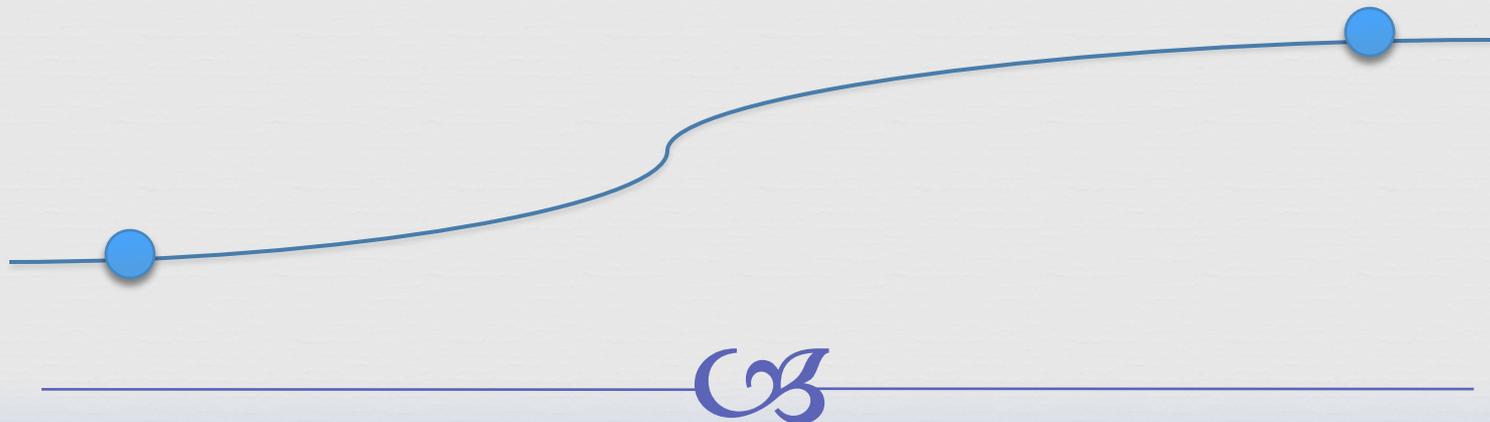
EMDSS - scenario

Burt Snape (a highly seasoned and experienced winter maintenance engineer) has use of MDSS and relies heavily on it's output for decision support...



EMDSS - scenario

Burt Snape (a highly seasoned and experienced winter maintenance engineer) has use of MDSS and relies heavily on it's output for decision support... He is interested in a how an incoming storm is impacting a major interstate.



EMDSS - scenario

Burt sits down in his office and takes a look at two RWIS locations over the affected area... The locations are around 70 miles apart...



EMDSS - scenario

Radar shows snow showers in the area and pavement temperatures hovering around freezing.

Air Temp - 35°F
Dewpoint - 27°F
Pavement Temp - 32.7°F
Precip - Mixed
Wind - 15MPH

A

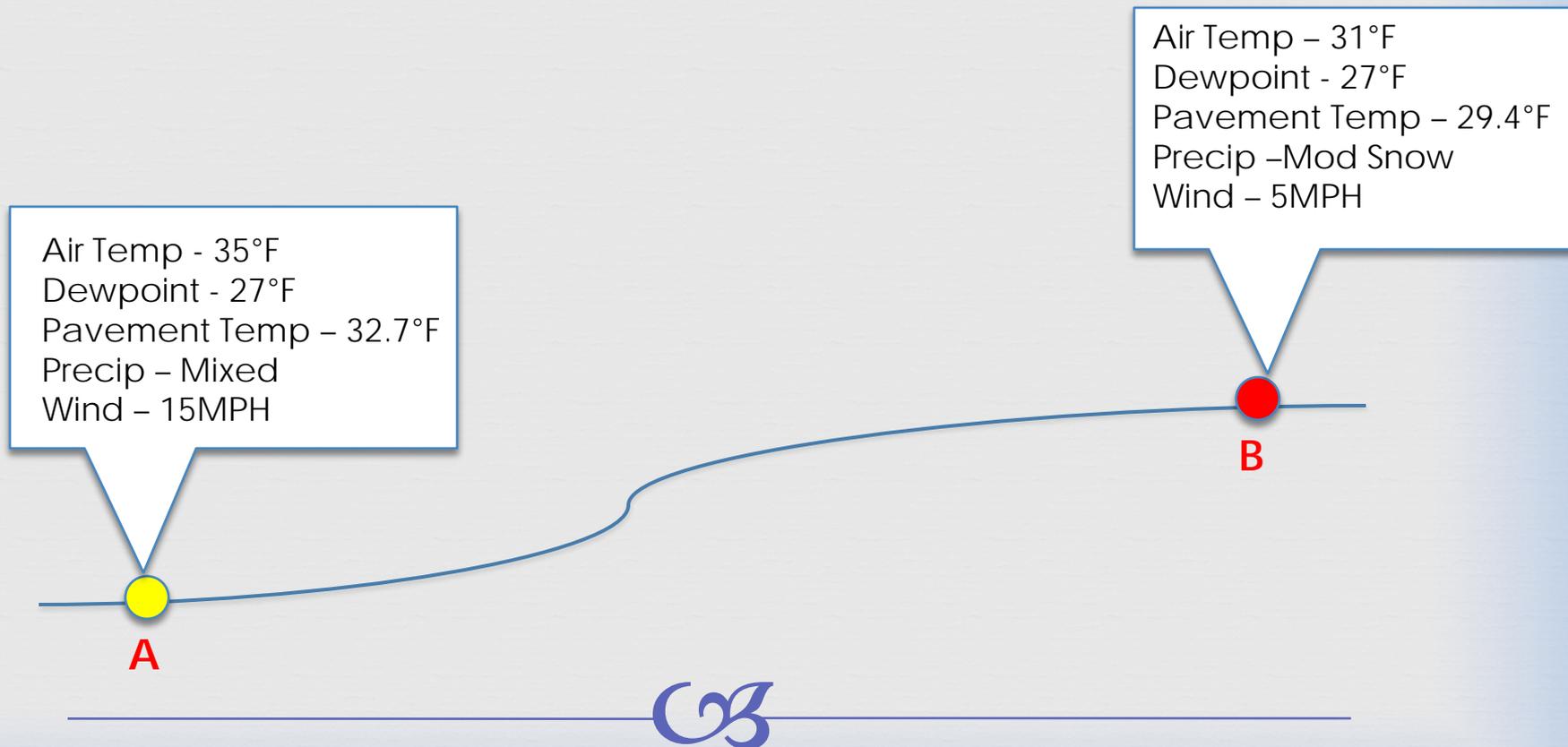
Air Temp - 31°F
Dewpoint - 27°F
Pavement Temp - 29.4°F
Precip - Mod Snow
Wind - 5MPH

B



EMDSS - scenario

Burt decides to deploy a plow to patrol the area around RWIS B.



EMDSS - scenario

40 minutes later the highway patrol calls and reports multiple accidents on several overpasses around 10 miles East of the RWIS A location.

Air Temp - 35°F
Dewpoint - 27°F
Pavement Temp - 33.7°F
Precip - Mixed
Wind - 15MPH

A

X X

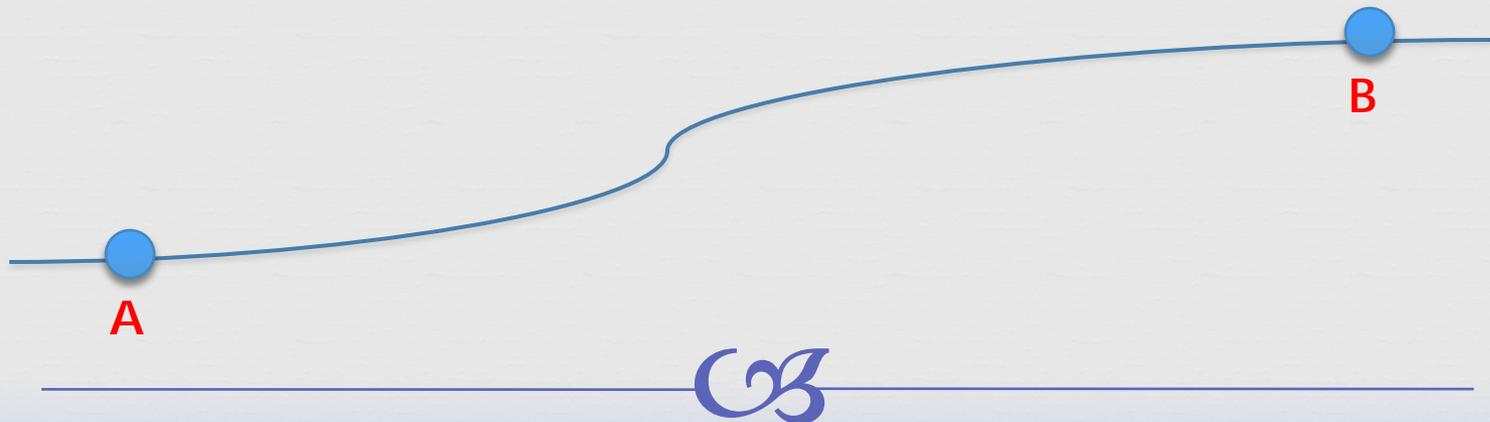
Air Temp - 31°F
Dewpoint - 27°F
Pavement Temp - 29.4°F
Precip - Mod Snow
Wind - 5MPH

B



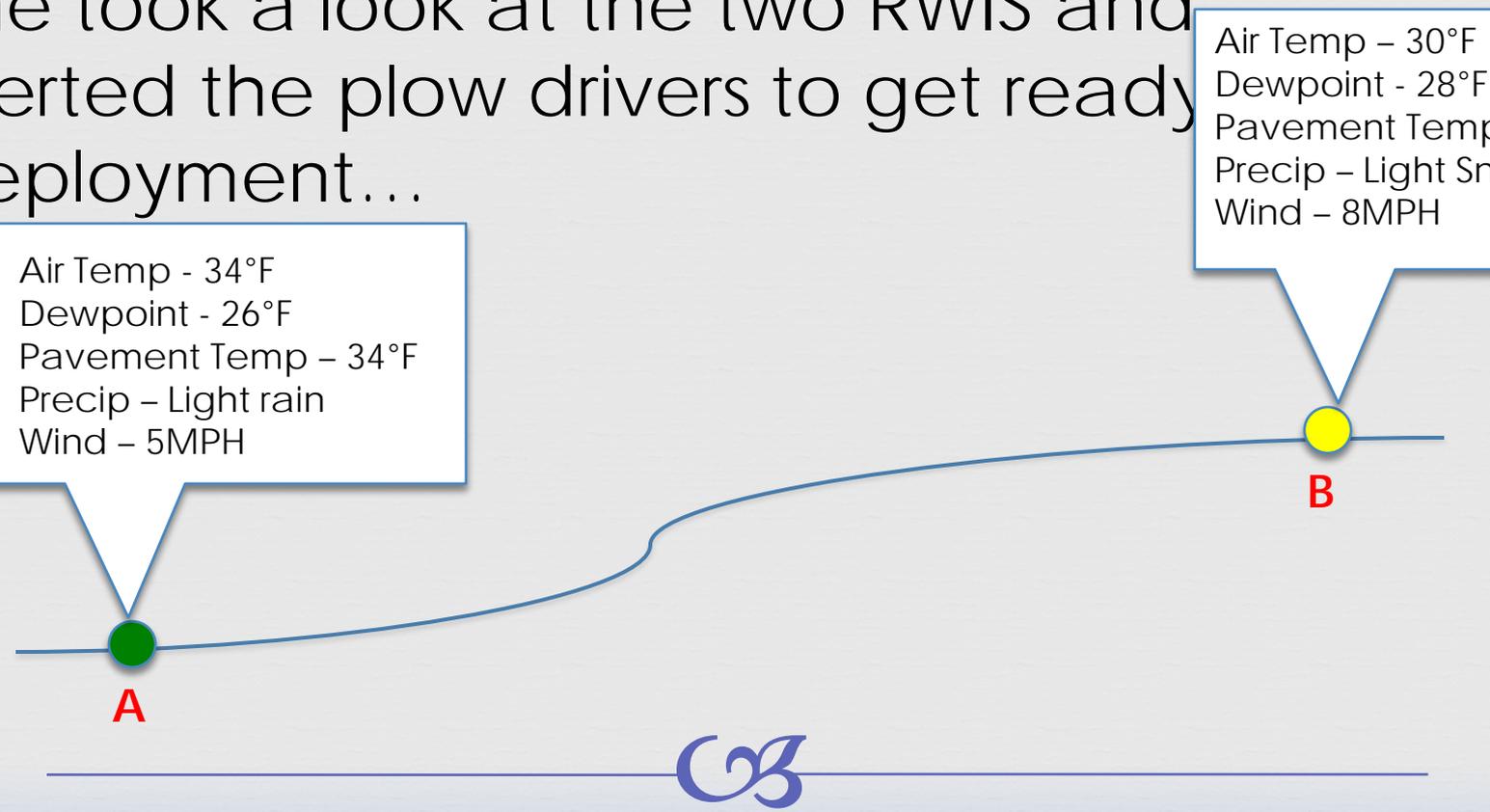
EMDSS - scenario

The next season, a similar storm impacted the same stretch of road. However, Burt has unfortunately been replaced by a new supervisor named Gina Meanfield.



EMDSS - scenario

Gina walked out to the garage and took a look at a new version of MDSS on her Ipad. She took a look at the two RWIS and alerted the plow drivers to get ready deployment...



Air Temp - 34°F
Dewpoint - 26°F
Pavement Temp - 34°F
Precip - Light rain
Wind - 5MPH

Air Temp - 30°F
Dewpoint - 28°F
Pavement Temp - 28.4°F
Precip - Light Snow
Wind - 8MPH

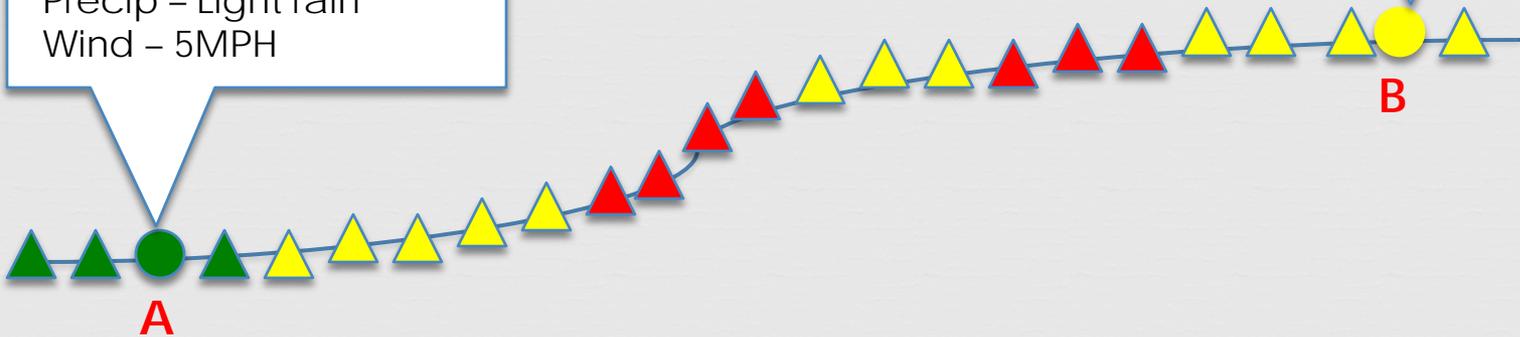


EMDSS - scenario

She decides to turn on the VDT layer of her MDSS. She is immediately alerted to two potentially hazardous areas between Two RWIS locations.

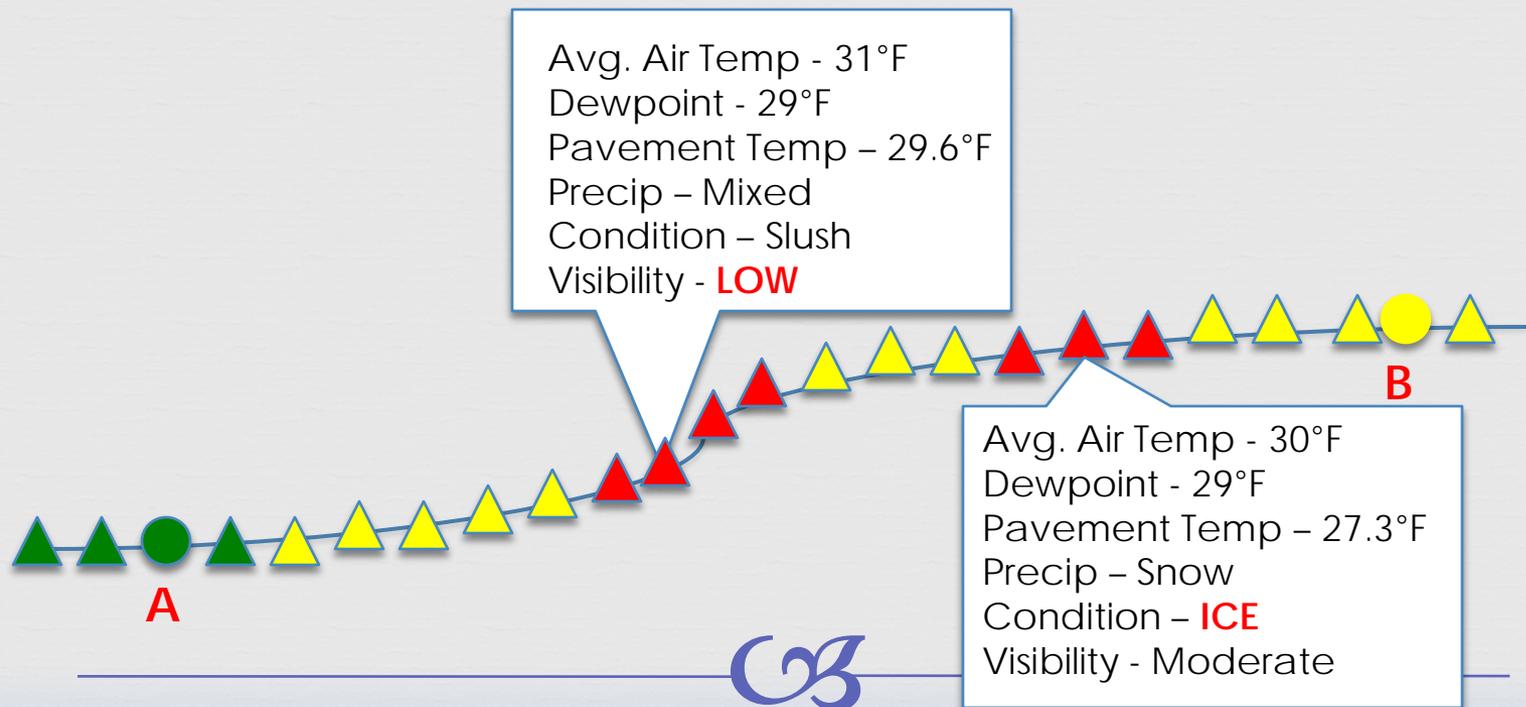
Air Temp - 37°F
Dewpoint - 26°F
Pavement Temp - 36°F
Precip - Light rain
Wind - 5MPH

Air Temp - 30°F
Dewpoint - 28°F
Pavement Temp - 28.4°F
Precip - Light Snow
Wind - 8MPH



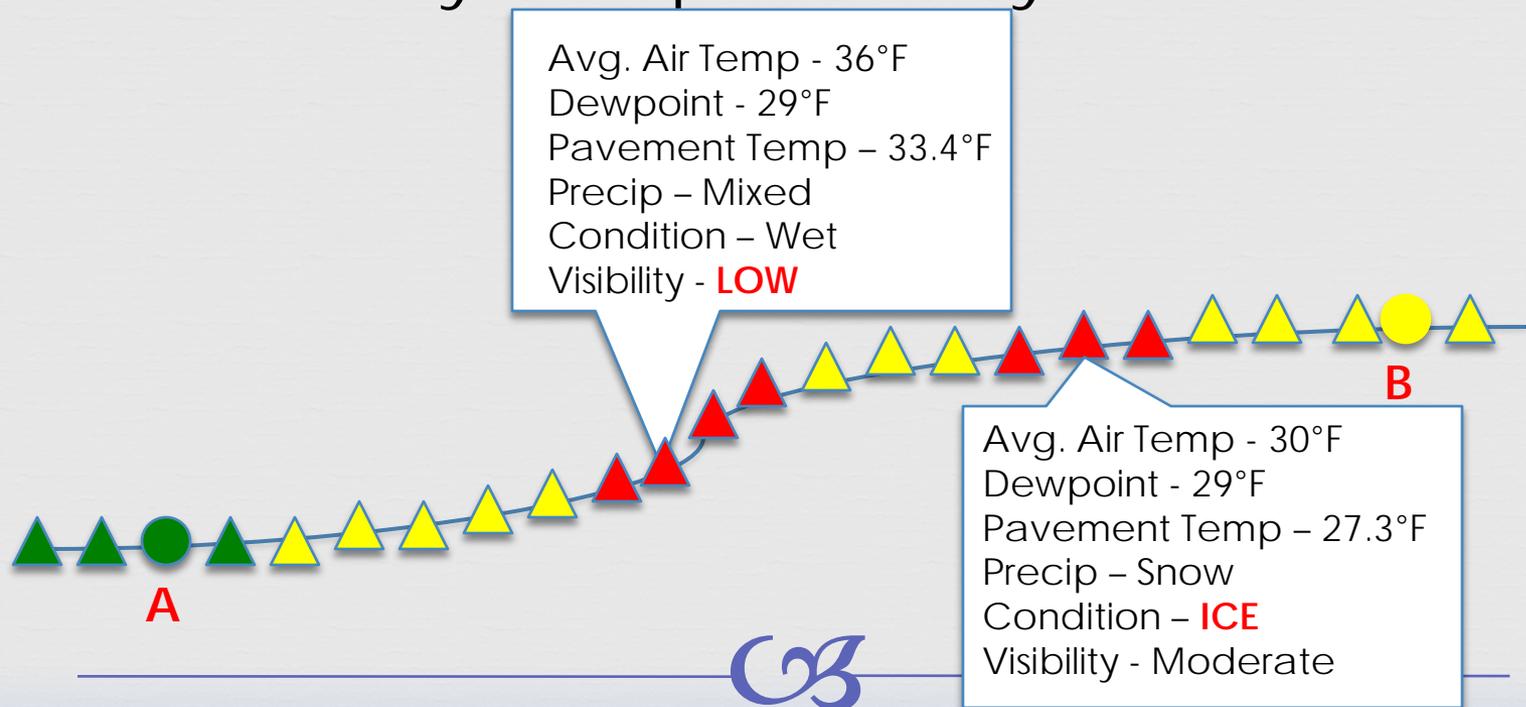
EMDSS - scenario

She decides to turn on the VDT layer of her MDSS. She is immediately alerted to two potentially hazardous areas between Two RWIS locations.



EMDSS - scenario

She deploys several plows to the area to the West of location B and and calls her coworker Dave Guevara to activate VMS signs to alert for low visibility and potentially slick conditions.



EMDSS

- ✧ MDSS has been deployed over many snow-affected states over the past 10 years
- ✧ EMDSS will be developed and deployed over three IMO states for the 2013-2014 winter season
- ✧ States have varying levels of experience with MDSS
 - Minnesota (Highly experienced)
 - Michigan (Just deployed last year)
 - Nevada (Not deployed but investigating)



EMDSS

- ✧ EMDSS will enhance existing MDSS by assimilating mobile and VDT output into the obs and forecast
- ✧ VDT can handle all mobile datasets – IMO, SHRP2, Weather Telematics, etc.
- ✧ The display will be web-based and can be accessed via any mobile device
- ✧ System is configurable for other weather needs – winds, lightning, heat, etc.



Thanks!

