2019 TSMO365 Peer Exchange Workshop

June 25 & 26, 2019 (9:25-9:35 am)
Salt Lake City, Utah

AASHTO CTSO Community of Practice on Road Weather Management

AND

Building a Strong Transportation Systems Management and Operations (TSMO) Foundation

for

Weather Responsive Management Strategies and Solutions
Weather DATA!

What to do with it?

Collection and Management, Integration, Applications, etc.
ESS Auto Triggers Messaging/Warnings for Curves and Bridges
Active ESS Warning System Detects Slippery Road Conditions

Safety Benefits:
- Know when to pay attention (static signs can be just background & unnoticed)
- Alerts drivers when to pay attention
- Gives motorists extra time to react
ESS Data Triggers Auto Messaging to DMS

Current conditions:
- Air Temperature: 8.2 °F
- Dew Point Temperature: 5.9 °F
- Visibility: 492 ft

MI-03 Wayland 14:05
Sensor Site: Atmospheric Site
Rain State: m.snow (Medium snow)
Surface Temperature: 18.3 °F

Wind:
- Wind Direction: 248°
- Wind Speed: 23.5 mph

Roadside camera:
- US131 & 129th St. - Wayland 2019-01-29 14:02:23

Text overlay:
- BLOWING SNOW DETECTED AT M-179 (EXIT 61)
- Status: OK
- Event ID: 221408
ESS Image - Foggy Conditions
Examples of DMS Motorist Advisories/Warnings

**White Out Conditions**

WHITE OUT CONDITIONS ON I-94
REDUCE SPEED

**Icy Roads**

SLIPPERY ROADS
WB I-94
REDUCE SPEED

**Low Visibility**

LOW VISIBILITY
NEXT 5 MI
REDUCE SPEED

**Tornado Warning**

TORNADO WARNING
INGHAM COUNTY
8:00 – 10:00 AM
Michigan DOT Vehicle Data Collection Description

Vehicle Information

Michigan DOT Server

Communication Line

MiDrive website

Communication Line

DOT TOC/TMC

Communication Line

LOW VISIBILITY
NEXT 5 MI
REDUCE SPEED

changeable message board

RWIS

NWS, ASOS, AWOS, etc.
Snow Plow Trucks Images on MiDrive

www.Michigan.gov/drive

Trucks visible when:
• Driving >10mph
• & Within 50ft of trunkline
• & Plow down and/or spreading material
Data & Performance Metrics

FY 2017 MDOT Direct Force Salt Efficiency Data*

Salt Efficiency per Region
Period: 3/1 - 3/16

- Bay: 78.1%
- Grand: 74.4%
- Metro: 83.9%
- North: 80.0%
- Southw.: 81.1%
- Superior: 82.9%
- University: 76.9%

AVL Salt Tonnage per Region

- Total Salt (this period)
- DSE** (this period)

Statewide Direct Force Salt Usage Efficiency
3/1 - 3/16
Total Tons 7952
Efficiency 78.70%

Winter 2015/2016 Salt Efficiency per Region

- Bay
- Grand
- Metro
- North
- Southwest
- Superior
- University

* Based on AVL data and MDOT Salt Bounce and Scatter Study findings.
** Diminished Salt Efficiency (DSE) is a result of salting at speeds faster than 25mph.