



FALL TEXITE MEETING

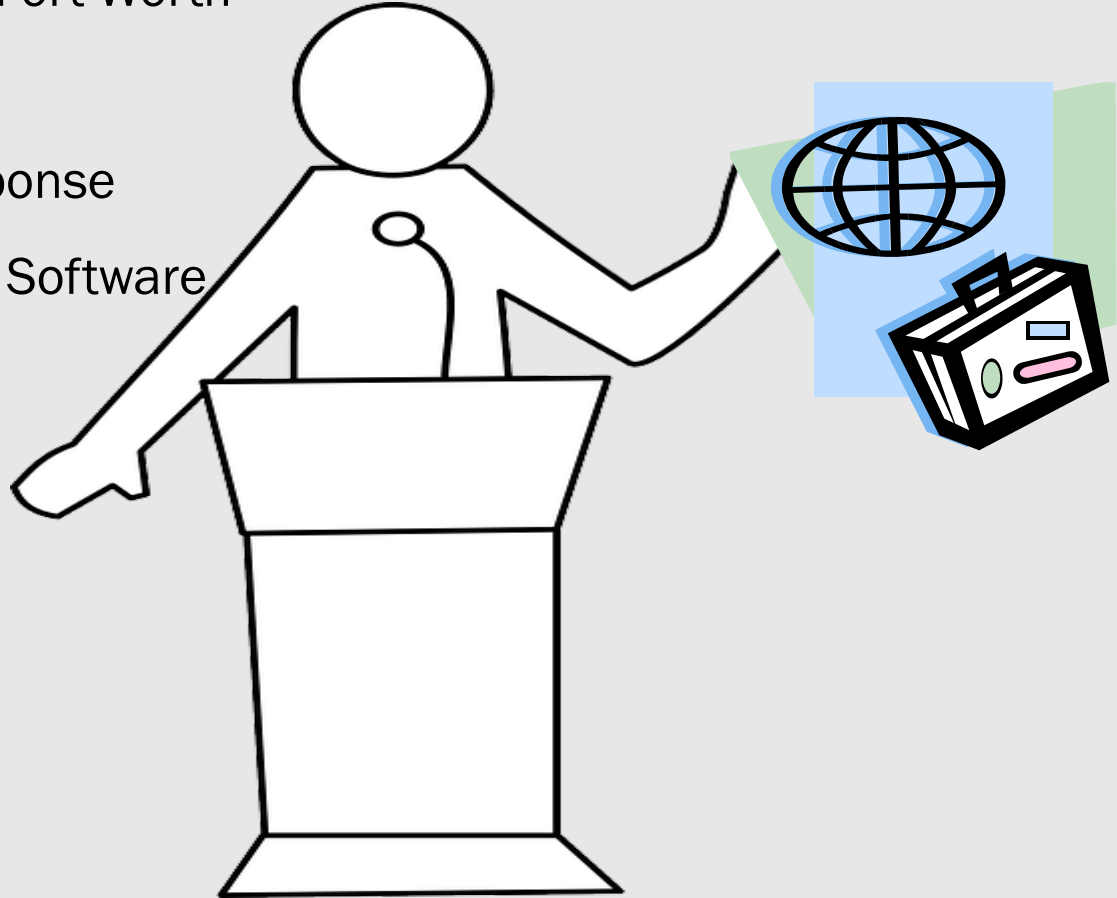
ITS and Weather Events



Photo by Liam Frederick

Agenda

- TxDOT & TransVision Fort Worth
- Weather Statistics
- TxDOT's weather response
- NWS Alerts/Lonestar Software
- Future Projects:
 - IH 20 ITS
 - Weather Stations



Who we are

Transportation Operations for the Fort Worth District of TxDOT

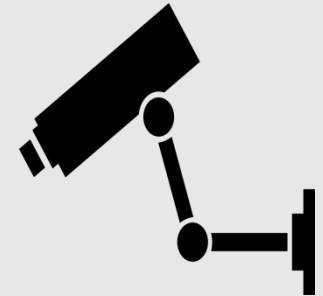
9 Counties

Approximately 60 employees

Traffic Engineering

ITS

Traffic Operations





24/7 TRAFFIC MANAGEMENT CENTER

- Covers 9 Counties in our District
- Dispatch center for Traffic Signals
- Currently handles after hours support for 3 districts.
 - Waco, Abilene, and Brownwood.
- Partner connections with multiple agencies.
 - City of Arlington
 - City of Fort Worth
 - City of Grand Prairie
 - Medstar
 - Tarrant County Sherriff's Office
 - North Tarrant Express

TransVISION Stats



ITS Devices



- 200 CCTV Devices
 - WTI and COHO
 - Both Fiber and Wireless connections



- 70 Three Line Dynamic Message Boards
- 9 One Line Dynamic Message Boards
 - Full Color Matrix



- 200 Wavetronix Sensors
 - Volume
 - Occupancy
 - Speed
 - Vehicle Classification

Day and Life of an TransVISION Operator



You never know what's going to happen on the roadways at TxDOT. From 18 wheeler fires, to visitors at our camera locations! No day is the same.



Severe Weather



Weather Stats

- Normal Operations: 16 accidents/day
 - Rain: 35 accidents/day
 - Ice/Snow: 60/day
-
- In the US, there are approximately 5.7 million vehicle crashes a year. About 22% of these crashes are weather related, with 73% of them happening on wet pavement (2005-2014 NHTSA data)



TxDOT Severe Weather Response

- Public Information
- Pre-Treatment/
 - Treatment of roads
- ITS

Provide the travelling public with the most up to date information & keep roads as safe as possible

Severe Weather Initiative

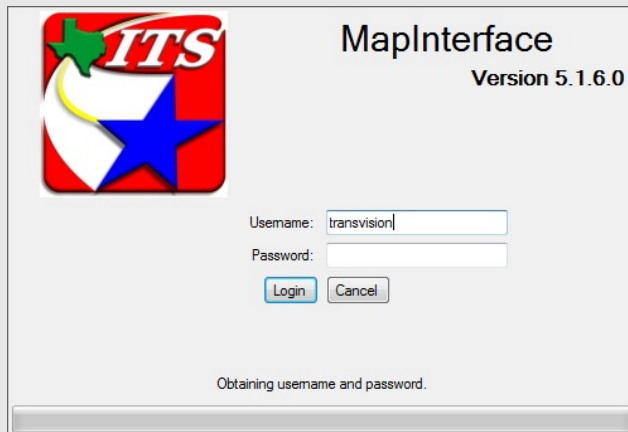
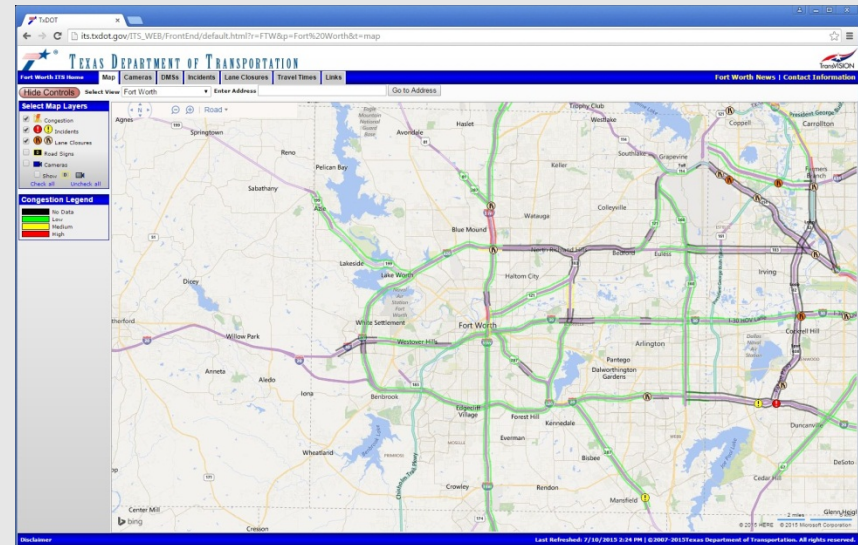
How can severe weather alerts be provided to our operators?

- North Central Texas Council of Governments
- TxDOT
- National Weather Service



Lonestar Software

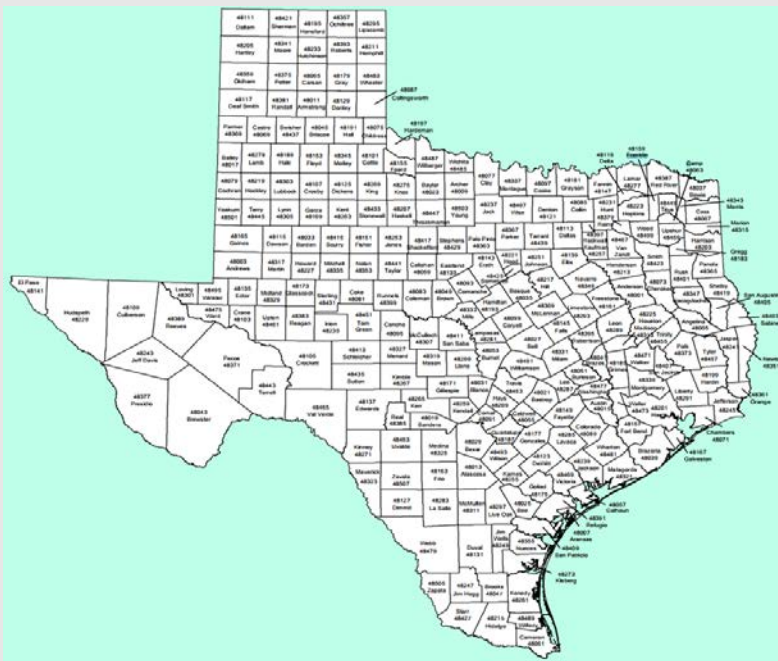
- Need to incorporate NWS alerts into Lonestar
- Integrate existing Environmental Sensor Stations into Lonestar
- Composition of message in response to Severe weather



- State owned software suite for TxDOT's Advanced Traffic Management Software
- Houses CCTV, DMS, and Sensor devices
- Map driven platform for ease of use
- Licensing Agreements

NWS Alerts Incorporation into Lonestar

- National Oceanic and Atmospheric Administration (NOAA) provides shape files with state and county boundaries.
- These contains alerts such as flooding, high winds, or winter weather
- Each County has a specific code
- Using these codes and the shape files, an alert can be defined and drawn



[Home](#) > [Alerts](#) > [Dallas \(TXC113\) Texas](#)

Watches, Warnings or Advisories for Dallas (TXC113) Texas

This page shows alerts *currently* in effect for Dallas (TXC113) Texas and is normally updated every two-three minutes. Please see [here](#) for other state and listing by county.

Last updated: 08:44 CST on 03-08-2016

Flood Warning Issued: March 08 at 8:44AM CST Expiring: until further notice Areas affected: Dallas	Urgency: Expected Status: Actual
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[Home](#) > [Alerts](#) > [Texas](#) > Flood Warning Issued by NWS Dallas-Fort Worth (Dallas - Forth Worth)

Message: NOAA-NWS-ALERTS-TX1255F010C130.FloodWarning.1255F01E1EACTX.FWDFLSFWD.e376786dbcd93367ad31d64807172bf9 from w-nws.webmaster@noaa.gov

Sent: 09:00 CST on 03-09-2016

Effective: 09:00 CST on 03-09-2016

Expires: 20:59 CST on 03-09-2016

Event: **Flood Warning**

Alert:

...The Flood Warning continues for the following areas in Texas...
East Fork Trinity River At McKinney Affecting Collin County
Chambers Creek Near Rice Affecting Navarro County
Trinity River At Dallas Affecting Dallas County
West Fork Trinity River Near Boyd Affecting Wise County
Denton Creek Near Justin Affecting Denton County
The Flood Warning continues for
The Trinity River At Dallas.

* At 0800 AM Wednesday the stage was 30.79 feet.

* Flood stage is 30 feet.

* Minor flooding is occurring and Minor flooding is forecast.

* Forecast...The river will continue rising to a crest near 35 feet by Friday morning then begin falling but remain above flood stage.
&&

Instructions: Do not drive cars through flooded areas. Caution is urged when walking near riverbanks. Stay tuned to NOAA All Hazards Radio for the latest river forecasts.

Target Area: Dallas

Forecast Office: NWS Dallas-Fort Worth (Dallas - Forth Worth)

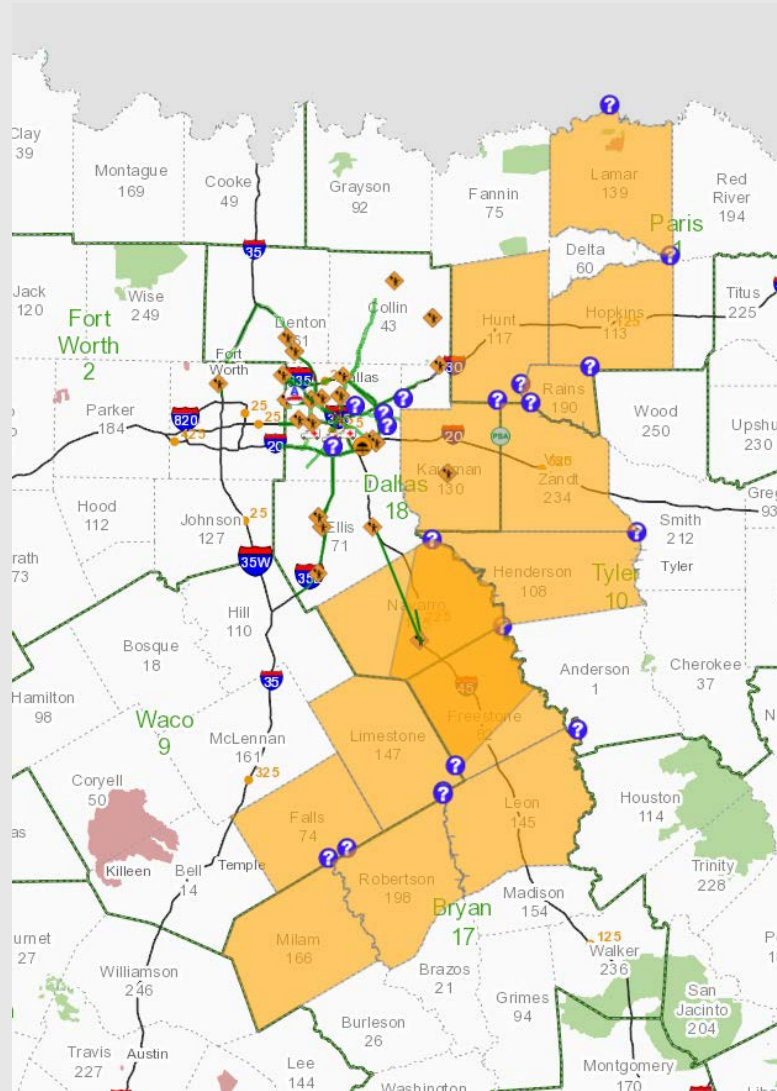
Types of Alerts

- Tornado Warning/Watch
- Winter Storm Warning/Watch
- Winter Weather Advisory
- Severe Thunderstorms
- Flash Flood Warning/Watch
- Red Flag Warning
- Heat Advisory
- Dense Fog
- Extreme Wind Warning
- Freezing Rain Advisory
- Ice Storm Warning
- Shelter In Place Warning

- [Subscribe by County](#)



Lonestar Map



Lonestar Map

The screenshot shows a Windows Photo Viewer window titled "severe storm.jpg". The main content is a map interface with a yellowish-orange background. The map features several black T-shaped markers and blue question mark icons. Handwritten blue text "WATCH" is visible in the upper left, and "WARNING" is in the lower right. A "Switch Video" panel is open on the right, showing a list of video sources and destinations. The video sources include various camera locations such as "IH635 @ Oakes", "IH635 @ Park Central", "IH635 @ Vetro Rd", "IH635 @ Preston", "IH635 @ Pousser", "IH635 @ Skillman", "IH635 @ T.J. Blvd East", "IH635 @ T.J. Blvd West", "IH635 @ Town East", "IH635 @ Town Center", "IH635 @ Waddle Chapel", "IH635 @ Wialki", "Loop 12 @ Anderson", "Loop 12 @ Graylock", "Loop 12 @ H30 North", "Loop 12 @ Jefferson", "Loop 12 @ Seward Road", and "Loop 12 @ SH 163 East". The video destinations include "IH20 @ Cell Line", "Operations Floor 11.4", "SH114 @ Bagnell", "Operations Floor 12.1", "All Cameras", "Operations Floor 12.2", "IH40 @ Lamar So", "Operations Floor 12.3", "IH20 @ Woodstock", "Operations Floor 12.4", "IH635 @ Skillman", "Operations Floor 2.1", "SH183 @ Cal Rd", "Operations Floor 2.2", "IH35F @ Franklin", "Operations Floor 2.3", "IH35F @ Star 39", "Operations Floor 2.4", "IH30 @ IH45 N.W.", and "Operations Floor 3.1". The map interface also includes a menu bar with options like "File", "Area Filters", "Camera Filters", "DMS Filters", "Event Filters", "SPFD Filters", and "TSS Filters". A "Select a Bookmark" dropdown is visible at the top left of the map area. At the bottom of the window, there is a navigation toolbar with icons for zooming, panning, and other map controls.

Messaging

Base Response Plan: ICE - STAGE 1

DMS Drag Device(s) or Response Plan

Message 1

- IH20 EB Bonnie View
- IH20 EB Duncanville
- IH20 EB Hampton
- IH20 EB Mountain Cr
- IH20 WB Cedar Ridge
- IH20.WB Fish Creek

DMS Message Info
Proposed Message
WX Advisory:50

**ICY
CONDITIONS
MAY EXIST**

Beacons **Pending**

Add DMS **DMS** Drag DMS here to add to group

T	O	R	N	A	D	O		W	A	R	N	I	N	G			
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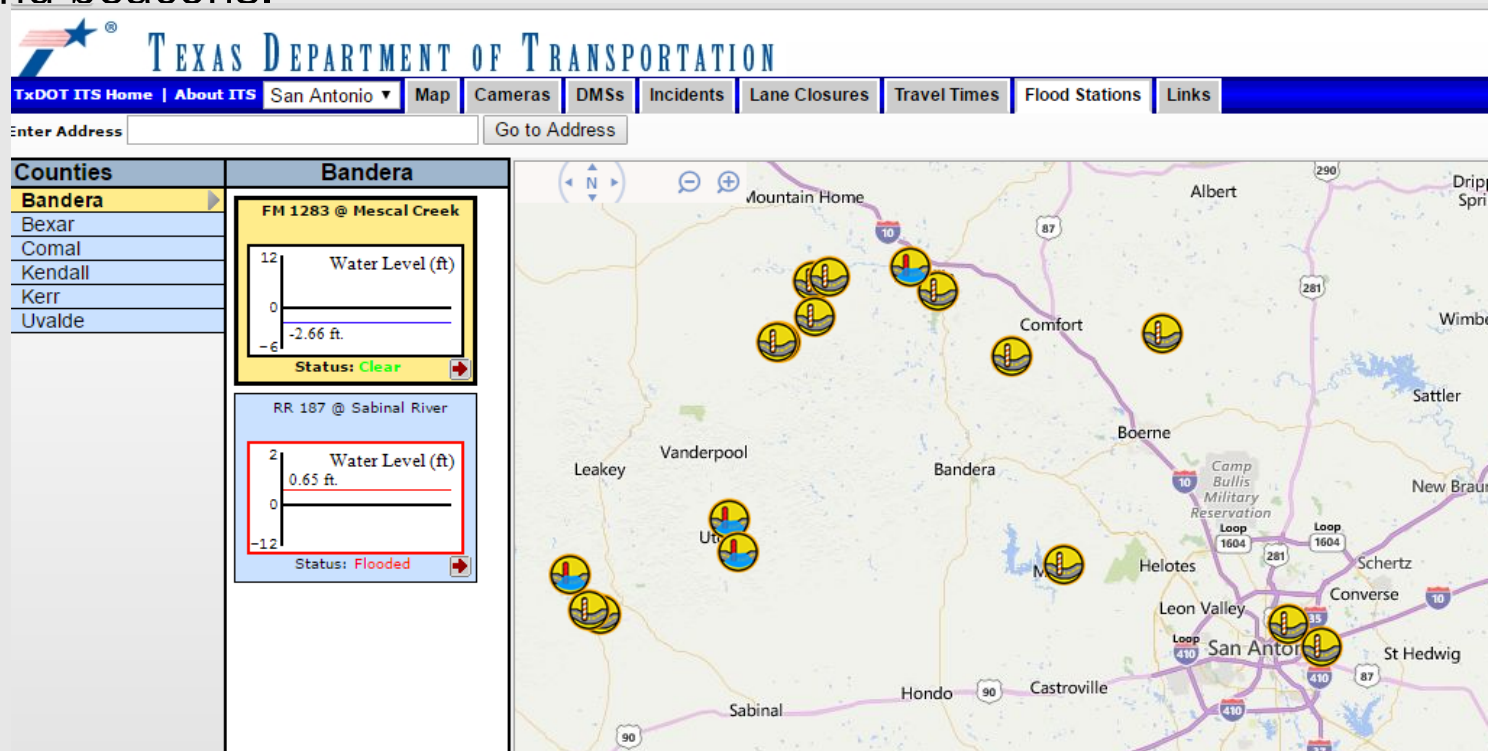
IH 20/Ranger Hill

- Working with Brownwood District, TxDOT was able to install cameras and DMS at Ranger Hill on IH 20
- Planning on adding more 3 more DMS on WB IH 20 and identifying needs on EB side



Weather Stations

- San Antonio has installed Flood Sensor/ Weather Stations
- Integrated into Lonestar
- When the road is flooded , the master unit automatically deploys the gate and beacons.



Weather Stations

- Mounted on a pole with a camera.
- Barometer, wind gauge, infrared to measure pavement temperature
- 2 will be installed on IH 30 between IH 35W and IH 820 (let Sept '17)
- Will eventually be integrated into Lonestar Software



Contact

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A special thank you to Lynne Randolph (SWRI), Matthew Pate (TxDOT), and Alex Bell (TxDOT) for their input.

