RITIS User Group

Regular Meeting ◦Sept. 21, 2017

Webcast and audio information

- The call-in phone number is:

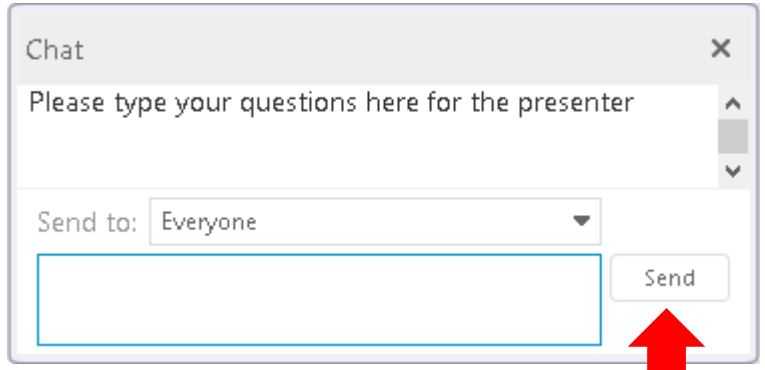
  +1-415-655-0002 & enter 732 257 442# at the prompt

  Please enter your attendee number, too!

- **Your phone line will be muted throughout the webcast**
- This web meeting is being recorded
- All materials will be available to participants after the web meeting

Asking questions

- Please pose your questions using the chat box
- Questions will be monitored, then answered by the speakers during their presentation or at the end of the webcast



Type your question here

then click here

Plan Ahead

- Next meeting is currently scheduled for **Thursday, January, 18th 10:30am – Noon (EDT)**
- Look for more information following this meeting!

Welcome & introductions

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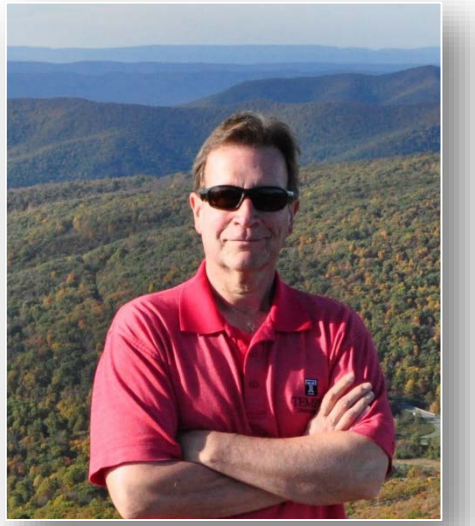

John Allen

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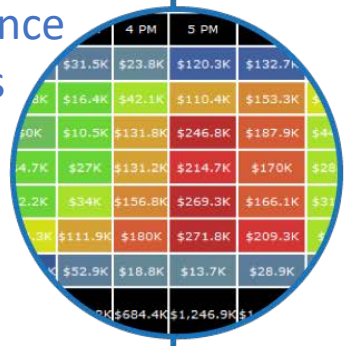
Our agenda for today

- What's new
- On the horizon…
- Spotlight Presentations
  - Eclipse
- "Pack's Pointers"
  - Weather
- RITIS Roadmap Update
- Agency Input Session
- Wrap up

Performance Measures



Planning

Operations

Communications

Now available to Coalition Members…

I-95 CORRIDOR COALITION

Work Zone Performance Monitoring

Application Quick Reference Guide

CATT LABORATORY

A *user-friendly* Quick Reference Guide to get you up and running *fast*…

2 Top Critical Work Zones

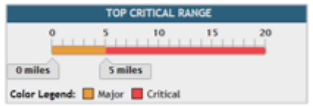
▸ This widget shows the top work zone locations by severity

Work Zone Performance Monitoring

How to use the **Top Critical Work Zones** Widget…

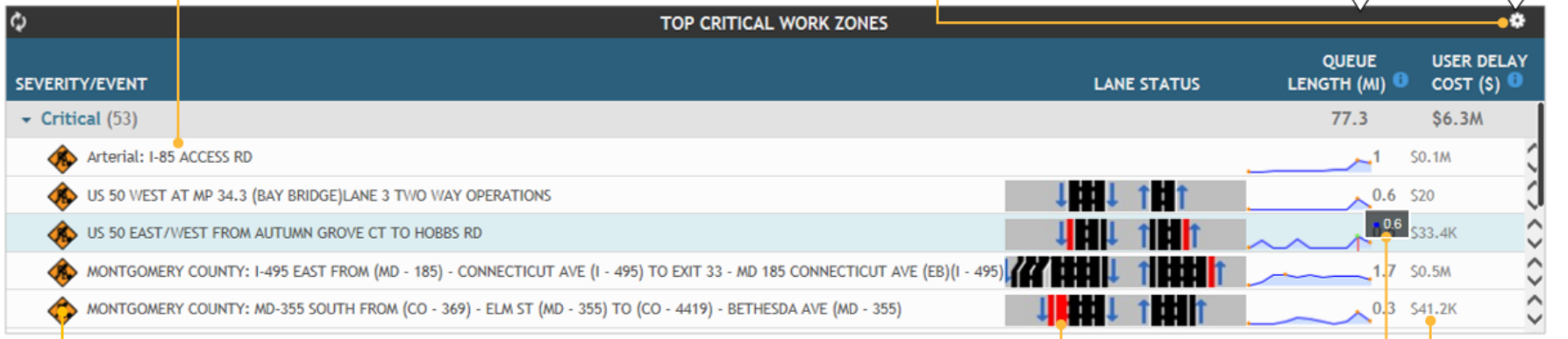
Click on an event name in the list to open an **Individual Work Zone Profile** for that location (*see page 12*).

Click on the gear icon to open the **Top Critical Range** scale, where you can set severity thresholds for Major and Critical events by simply dragging the sliders:



This image shows the queue length over the past 3 hours in 15 minute intervals. The orange spots represent the start and end points of the queue as well as it's minimum and maximum lengths. The number at the end of the chart is the current queue length.

Cumulative user delay cost for the last week of each work zone.



Click on an event icon in the list to center that event in the **Work Zones Locations** map (*see page 8*).

Lane Status provides a schematic of the lane configuration, with any affected lane(s) highlighted in **red**.

Roll your mouse pointer over the thumbnail graphic to show queue lengths (indicated 0.6 and green dots on the line graph) in 15 minute intervals over the last three hours.

The cumulative user delay cost for the last week is shown for each work zone, as well as a total for each severity category (**Major/Critical**).

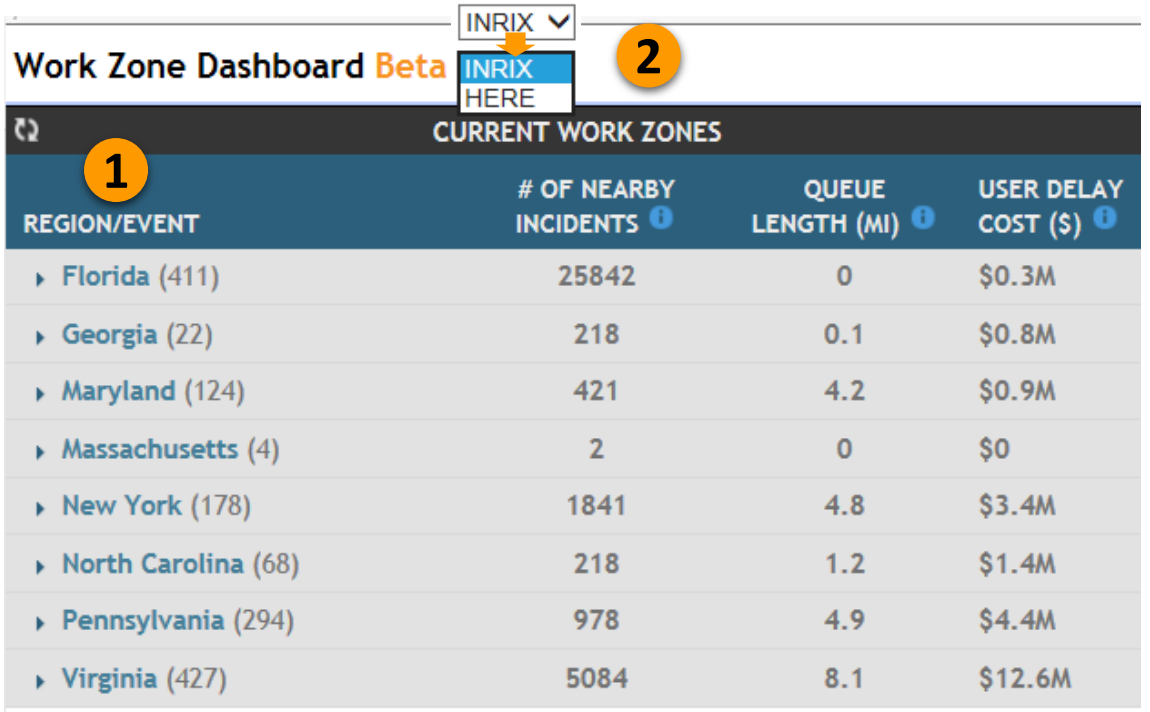
7

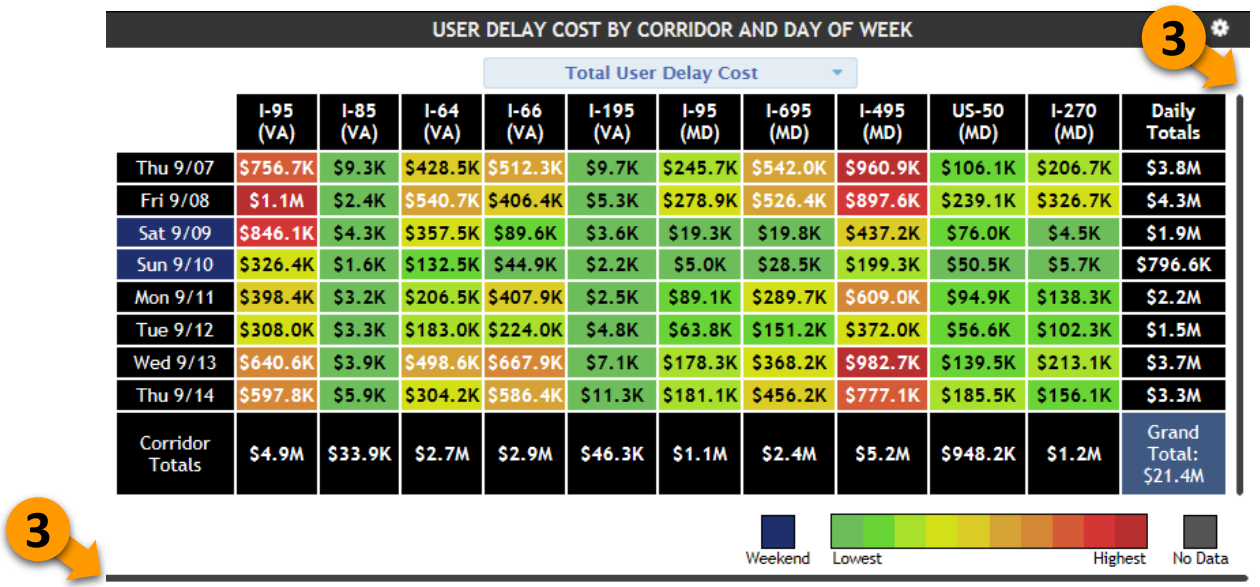
To download your copy, go to: http://i95coalition.org/...

What’s new…

WZPMA Dashboard

1. Added the Coalition states
2. Added a data source filter
3. Made the UDC table “scrollable”





RITIS Chat

- Significantly improved Chat login times
- *Prior to this release, login times were painfully slow—lasting several minutes sometimes (depending on one's bandwidth, current usage, etc.) Login times are now nearly instantaneous—allowing for collaboration immediately.*

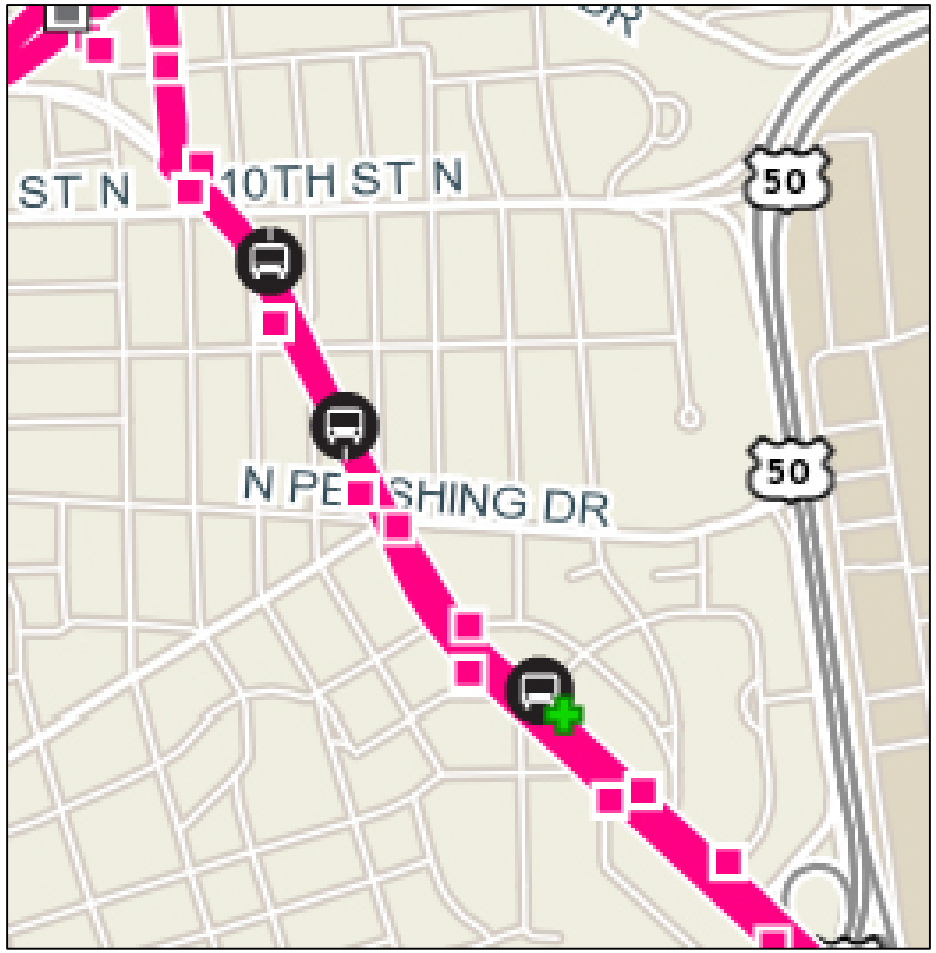
On the horizon…

Transit Integration

- **Vehicle icons:** The vehicle icons will display on the map. They will show the approximate direction the vehicle is traveling and the type of vehicle based on the icon.

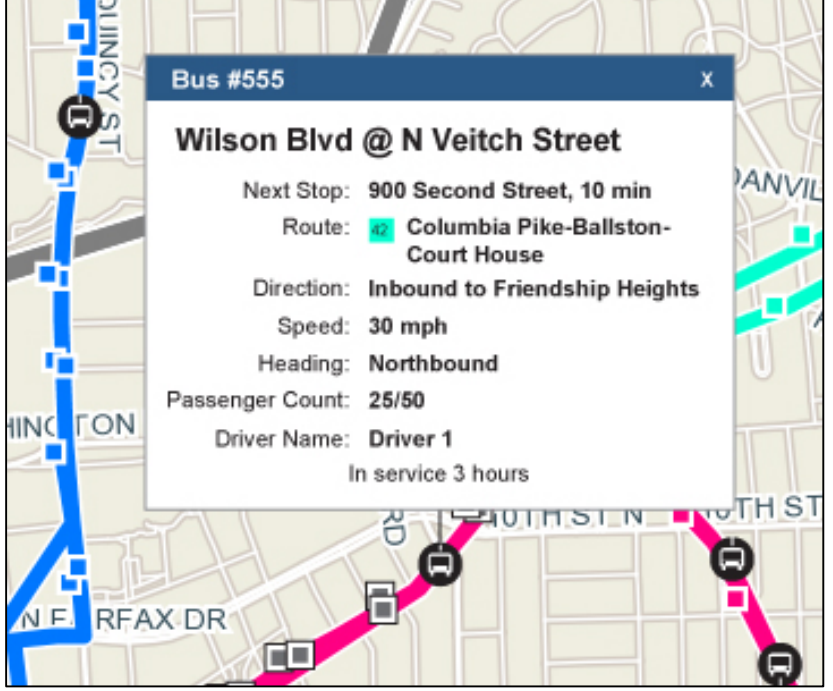
- Vehicles that are close to each other will be grouped the same way incidents are.

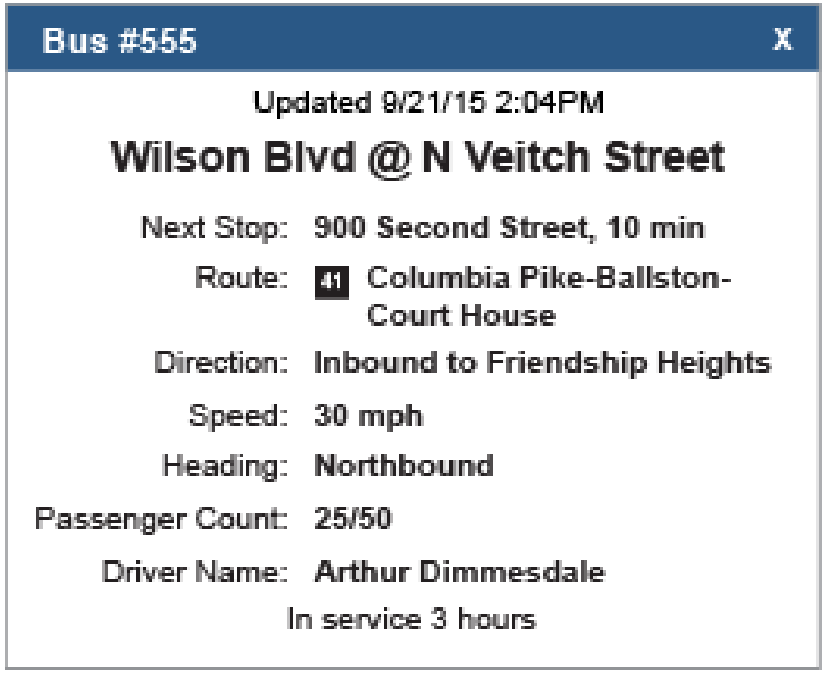
- **Transit vehicles that will be included:**
  - Bus
  - Metro/subway
  - Train
  - Trolley
  - Ferry



Transit

- Clicking on one of the vehicle icons will bring up this window.
- Each route will have a distinct identifying color. However, coloring the routes has its drawbacks, as there are a limited number of distinct colors.
- Clicking on the “X” will close the pop-up. The pop-ups are draggable, but will remain connected to their respective icons by a line between them.
- The pop-ups will include information on the vehicle’s next stop, the route it is traveling, direction of travel, speed, and driver/passenger information (if available).

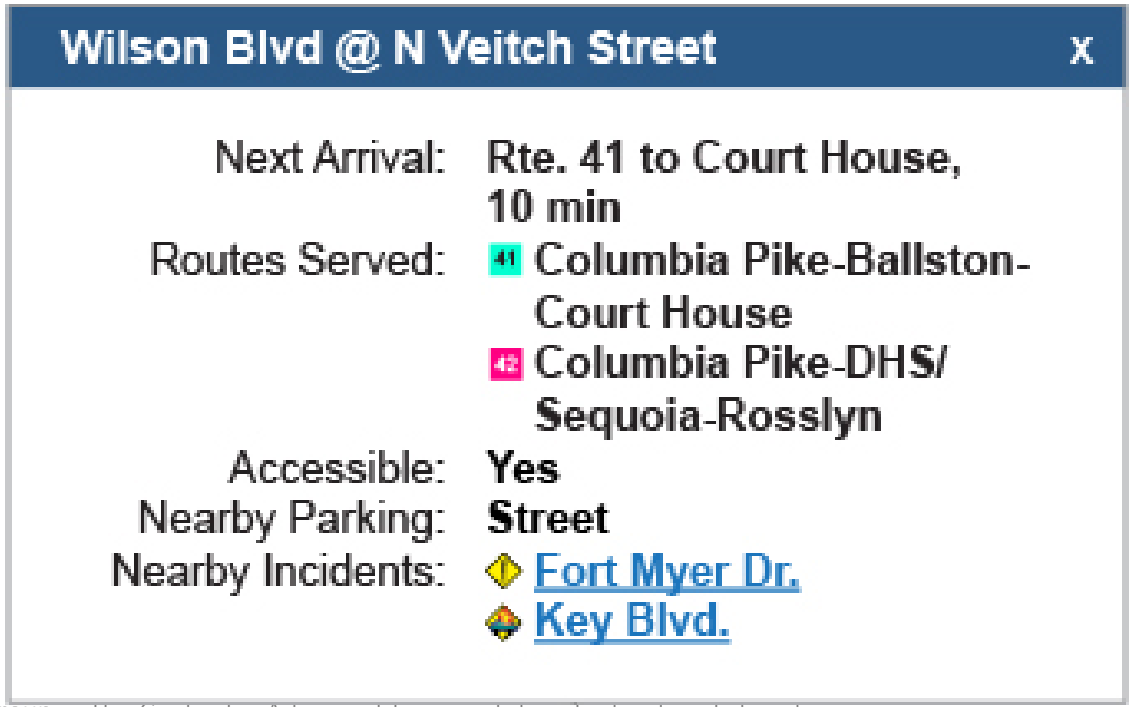


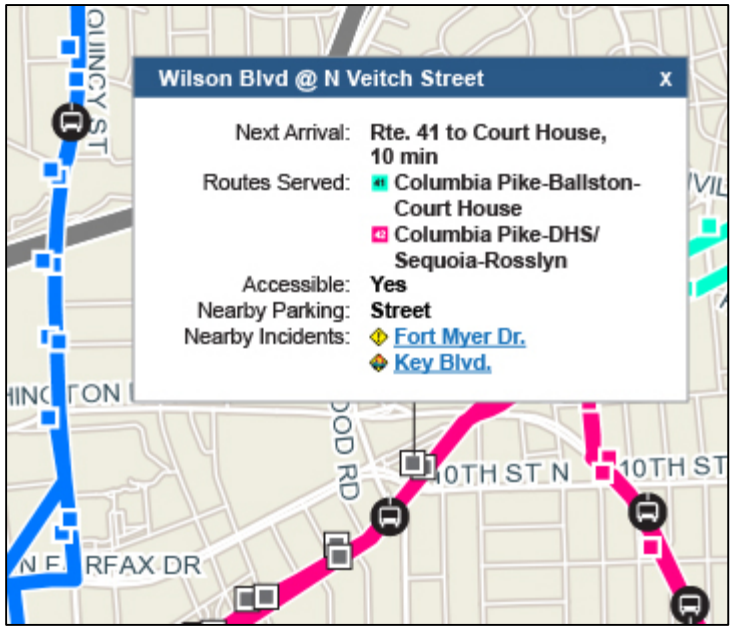


Transit Stops

- Clicking on one of the stop icons will bring up this window.

- Each stop pop-up will include (as applicable) a “Nearby Incidents” section, which will warn the user of any incidents that may obstruct a given route. In the example given, the two incidents listed would be within a 10-mile radius (or smaller) of the chosen stop, and would likely cause delays to the routes listed.

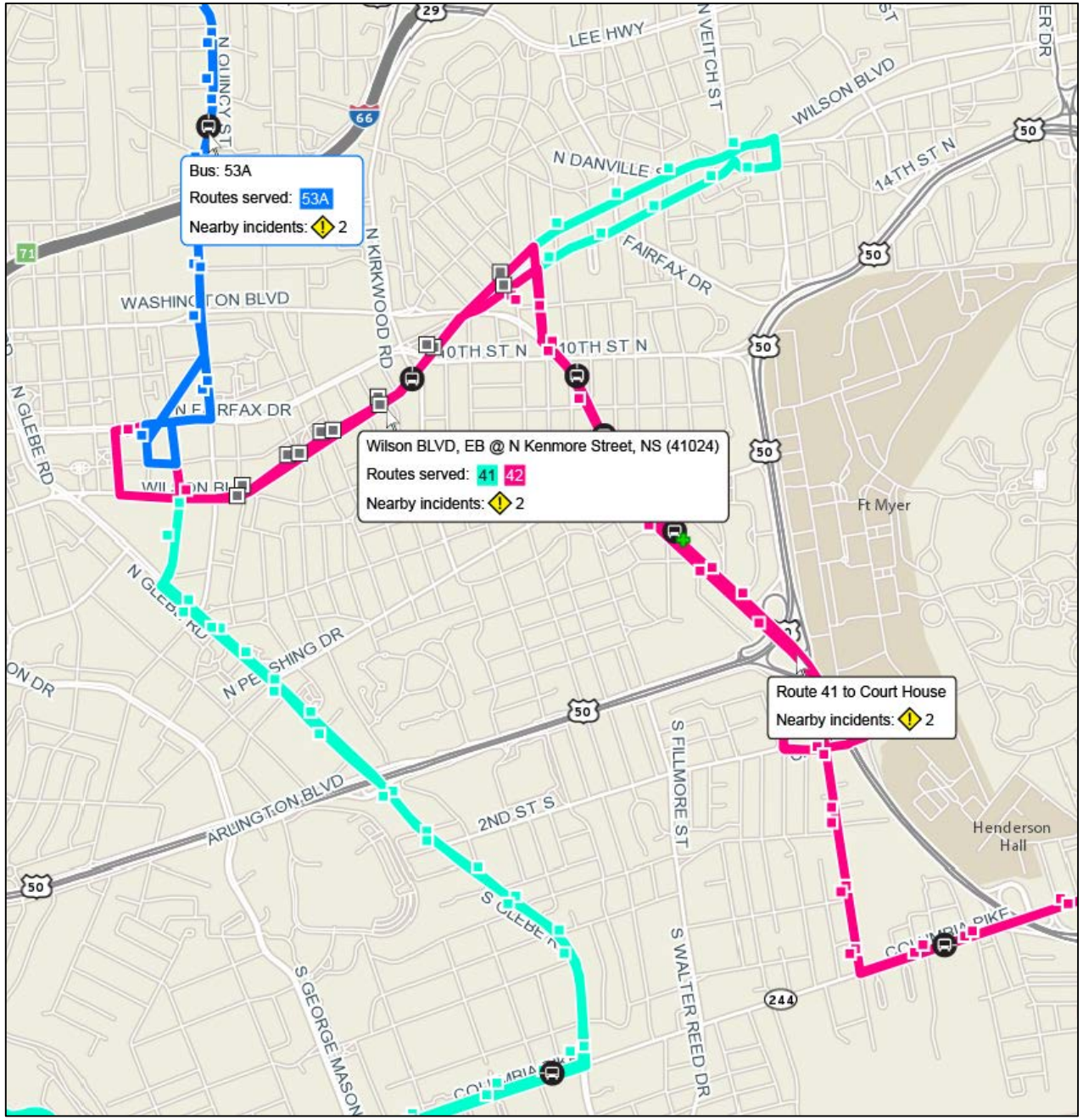




Transit Hovering

If there are any incidents that will affect a stop, vehicle, or route, the tooltips will reflect that.

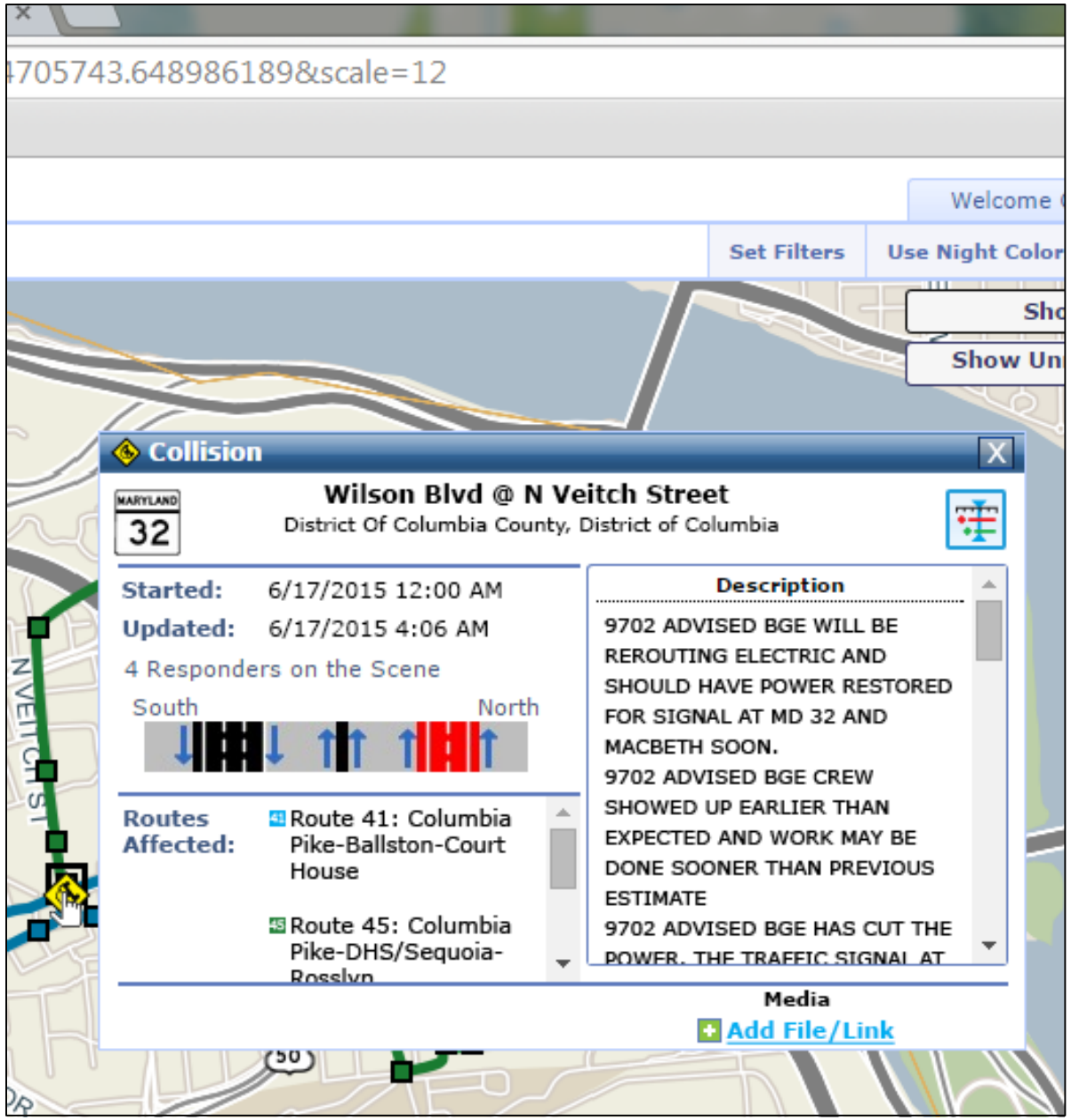
- **For vehicles:**
  - The type of vehicle
  - The vehicle ID/Number
  - The routes the vehicle is serving
  - Generic incident icon + number of incidents affecting the vehicle
- **For stops:**
  - The stop location
  - The routes the stop is serving
  - Generic incident icon + number of incidents affecting the stop
- **For routes:**
  - The route name
  - Generic incident icon + number of incidents affecting the route



Transit in Incident Popups

1. If an incident is situated on or near any public transit routes, it will include a “Routes Affected” section in its pop-up.

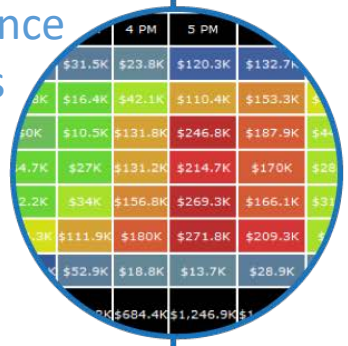
2. “Routes Affected” can expand to accommodate as many routes as necessary, and will scroll.



Waze Integration & Analytics Tasks

- Understand Waze data's affect on operations and planning
- Facilitate the archiving of Waze data for operations, planning, and research
- Explore solutions to Waze data challenges including:
  - Integration with agency ATMS and 511 platforms
  - Duplicates (from Waze)
  - Duplicates (Waze and Agency/CAD/Other)
  - Long-term storage
  - Analytics
- Document recommended practices for negotiating data sharing agreements

Performance Measures

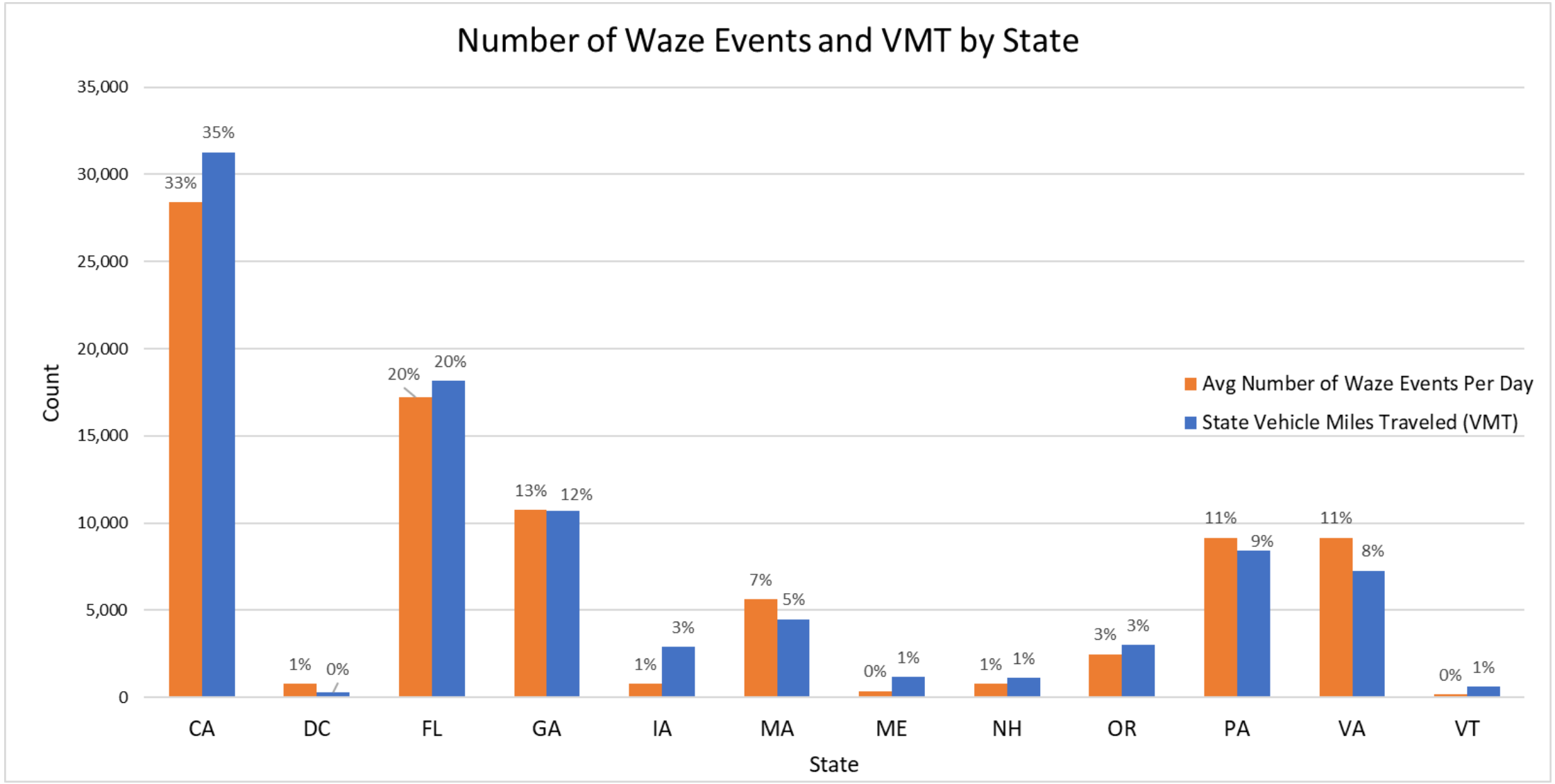


Planning

Operations

Communications

12 States for which we currently archive Waze

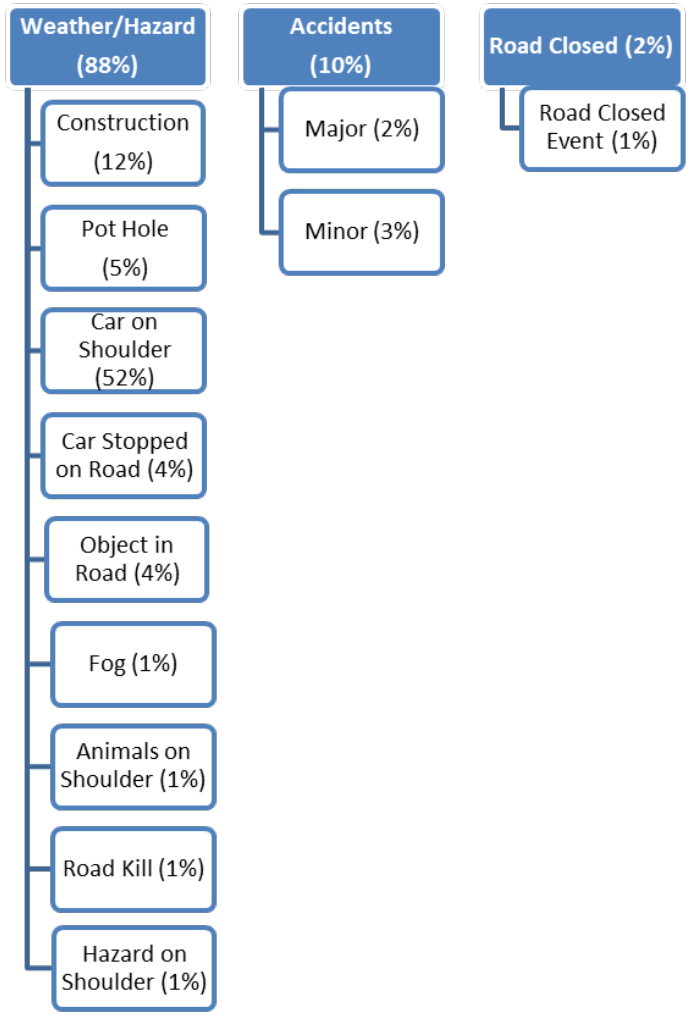


Note:

- Waze data excludes jams event type
- Waze 3 Month Period of 3/17 – 5/17 displayed

• Waze Dataset Overview

Waze Event Types

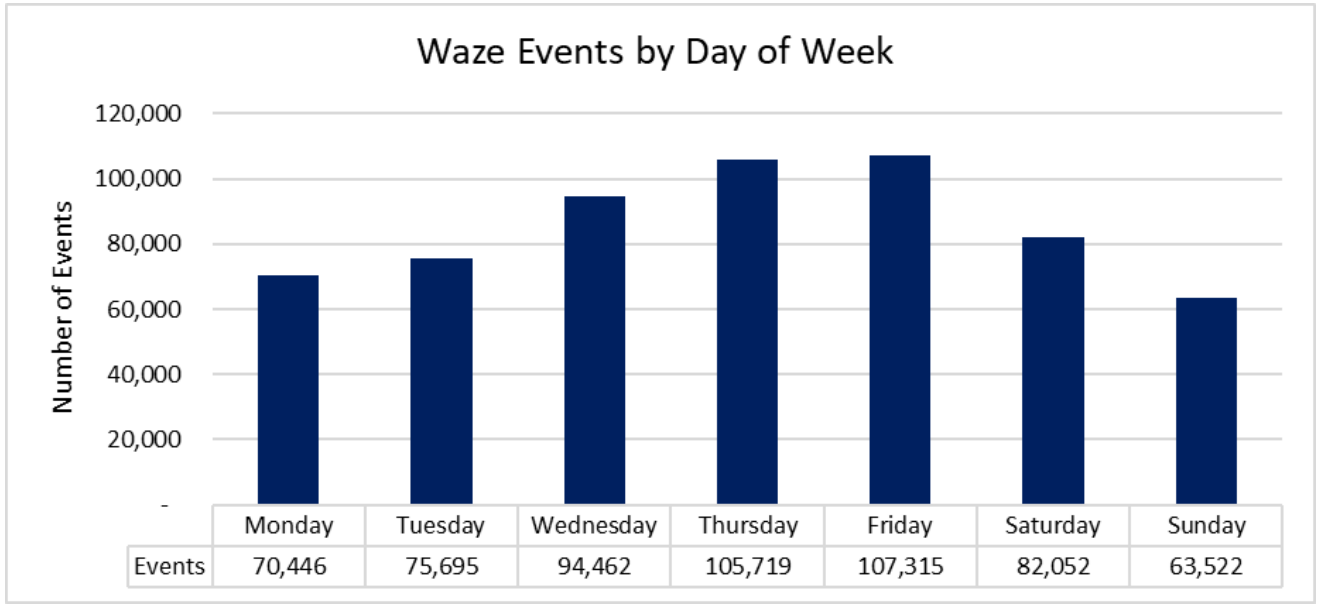


Note:

- Waze data excludes jams event type
- Waze 3 Month Period of 3/17 – 5/17 displayed

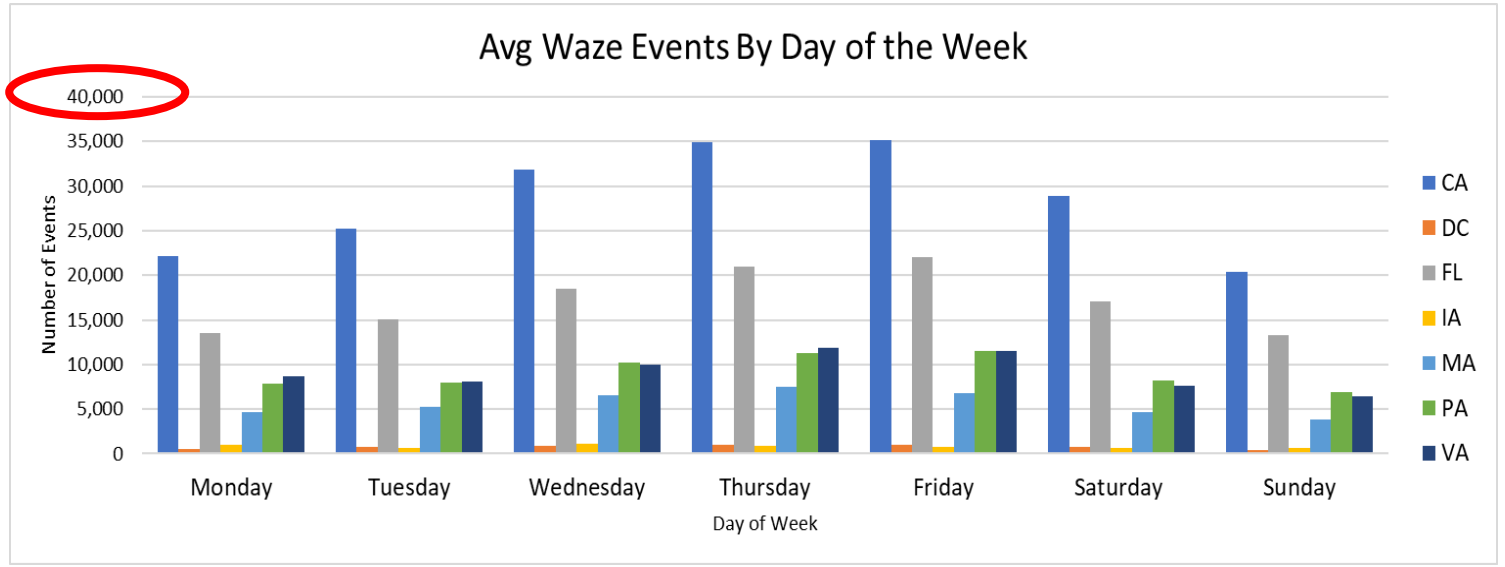
Waze Event Data Summary

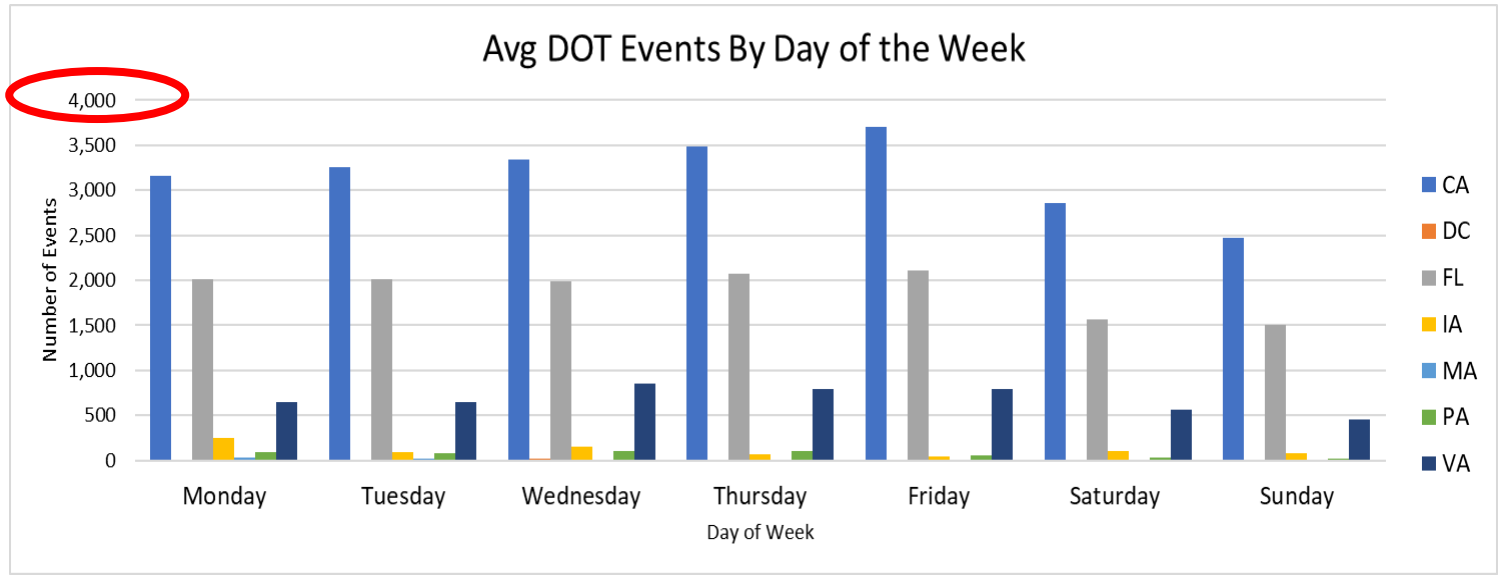
- Average number of daily / hourly events: 86,000 / 3,600
- Number of states: 12
- Day with maximum events: Thursday, 03/02/17 - 164,000
- Day with minimum events: Monday, 03/13/17 - 27,000



Events by Day of the Week: DOT vs Waze

10x more





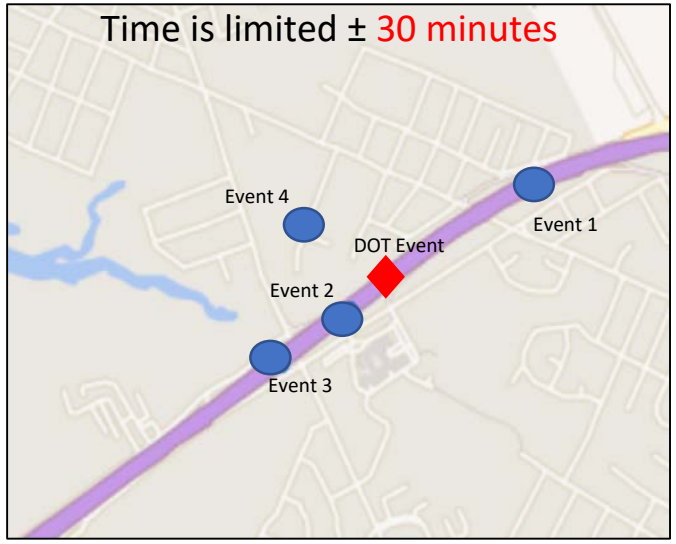
State	Avg Waze Events Per Day	Avg DOT Events Per Day
CA	28,389	3,184
DC	777	16
FL	17,210	1,895
IA	810	114
MA	5,613	14
PA	9,171	70
VA	9,168	681

Note:
- Waze data excludes jams event type
- Waze 3 Month Period of 3/17 – 5/17 displayed

Some Waze events are duplicates with the DOT

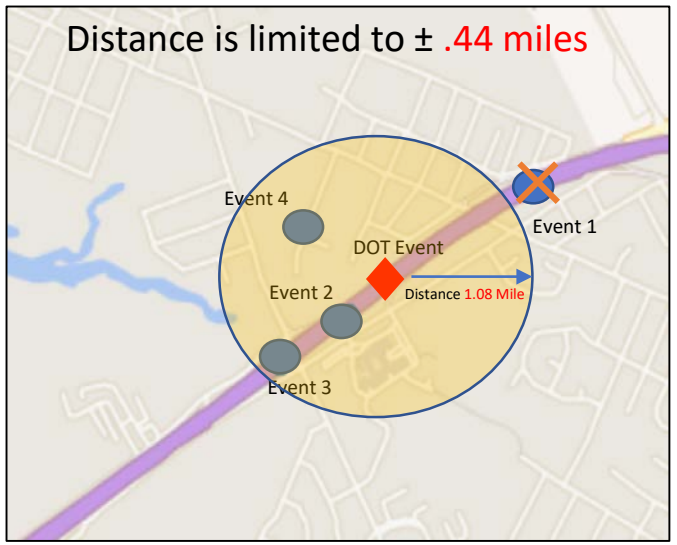
- Matched DOT reported events to Waze events from 3/01/17 to 5/31/17

Temporal Matching Threshold



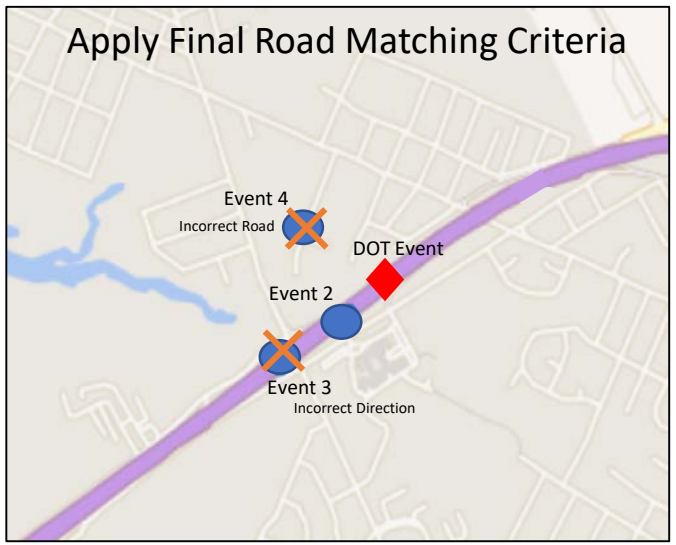
Identified 4 Waze events within ± 30 minutes of the DOT event

Spatial Matching Threshold



Determined that 3 of the Waze events were within ± .44 miles of the DOT event

Road Matching Rules



Determined that 1 of the Waze events was on the correct road and direction of travel

But there are a LOT of events that don't match up…

- Matched 41% (4,285) of VDOT disabled vehicle events to Waze
  - Found that in this 3 month period, 98.6% (364,646) disabled vehicle events from Waze were not matched to a VDOT event

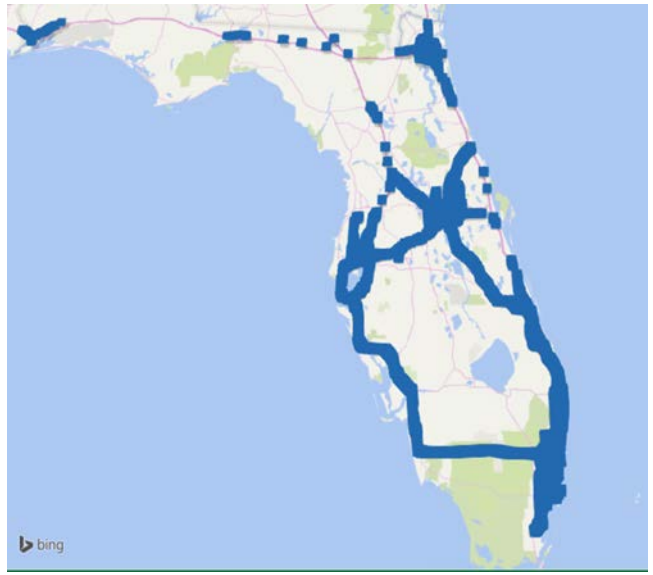
- Matched 34% (6,562) of FDOT disabled vehicle events to Waze
  - Found that in this 3 month period, 99% (751,208) of disabled vehicle events from Waze were not matched to a FDOT event

Matching Results: Florida Disabled Vehicles

Waze Events

FDOT Events

Waze vs FDOT Matches



Top 3 Roadway with Highest Number of Events for FDOT

	I-95	I-75	91 Mainline/ Turnpike
Waze Dataset	160,138 (21%)	146,723 (20%)	119,570 (16%)
FDOT Dataset	7,154 (37%)	3,436 (18%)	2,559 (13%)

3 Month Period of 3/17 – 5/17 Displayed

There are also duplicates in the Waze feeds…

- During this 3 month period, ~4% of disabled vehicle Waze event reports were duplicative
- **Removing duplicative reports increases usability of Waze data:**
  - FDOT: 309 fewer events a day / 13 fewer events an hour
  - VDOT: 187 fewer events a day / 8 fewer events an hour

Type of Event	Total Number of Waze Events During this Period	Total Number of Waze Events During this Period After Clustering	Percent Reduction in Events Due to Clustering
VA Disabled Vehicles	369,935	353,078	4.6%
FL Disabled Vehicles	758,956	731,149	3.7%

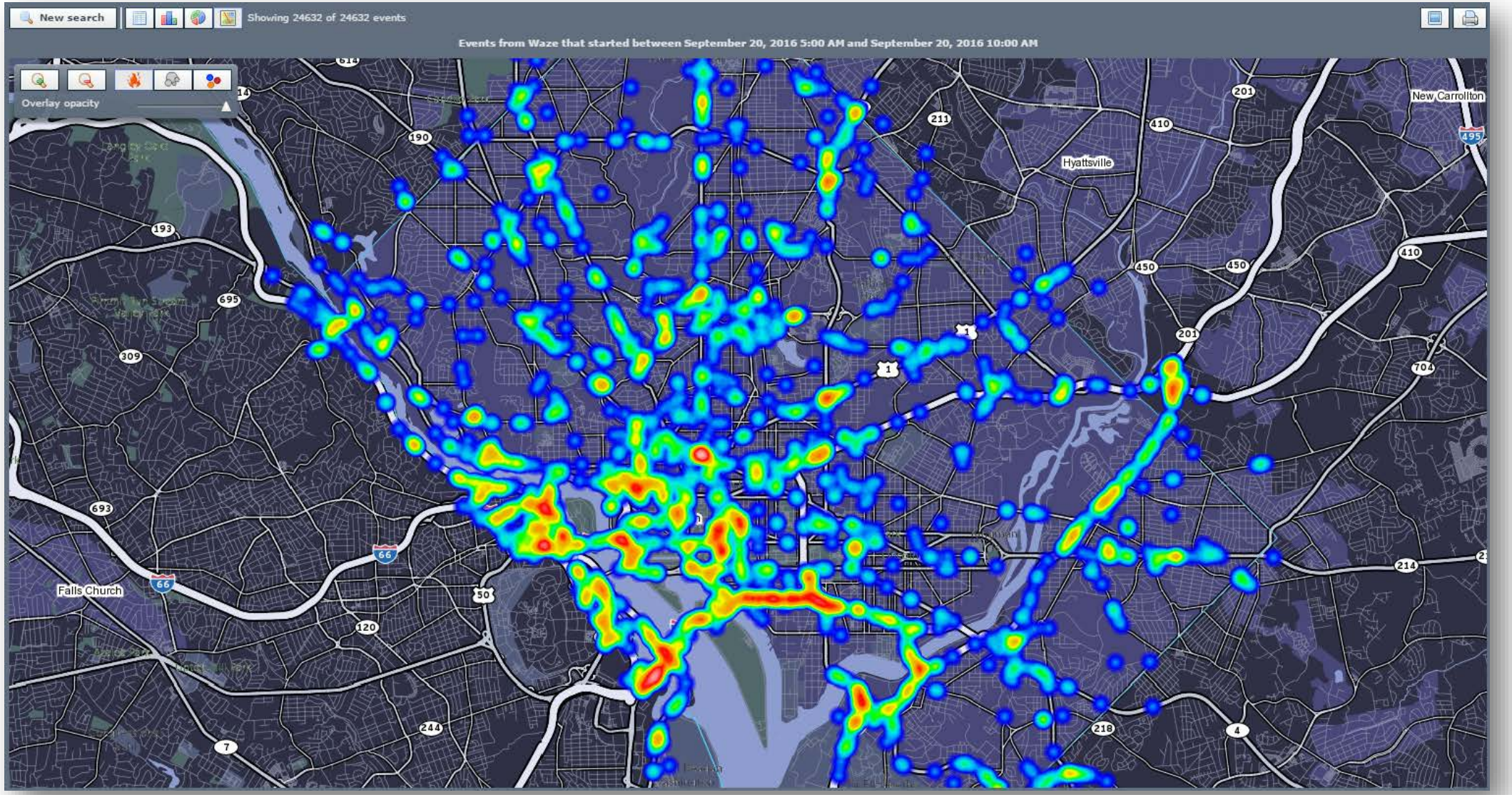
One benefit of Waze data: timeliness (especially for the smaller stuff)

- During this 3 month period, Waze events were reported sooner than through the DOT ATMS which has the potential to improve response times

Type of Event	Total Number of DOT Events During This Period	Total Number of Waze Events During this Period	Percentage of Events that were Reported By Waze First	Average Time that a Waze Event was Reported Before a DOT Event
VA Disabled Vehicles	10,341	369,935	**68%**	**14 Minutes Earlier**
FL Disabled Vehicles	19,310	758,956	**56%**	**13 Minutes Earlier**

3 Month Period of 3/17 – 5/17 Displayed

Visualizing Historic Waze data with Analytics

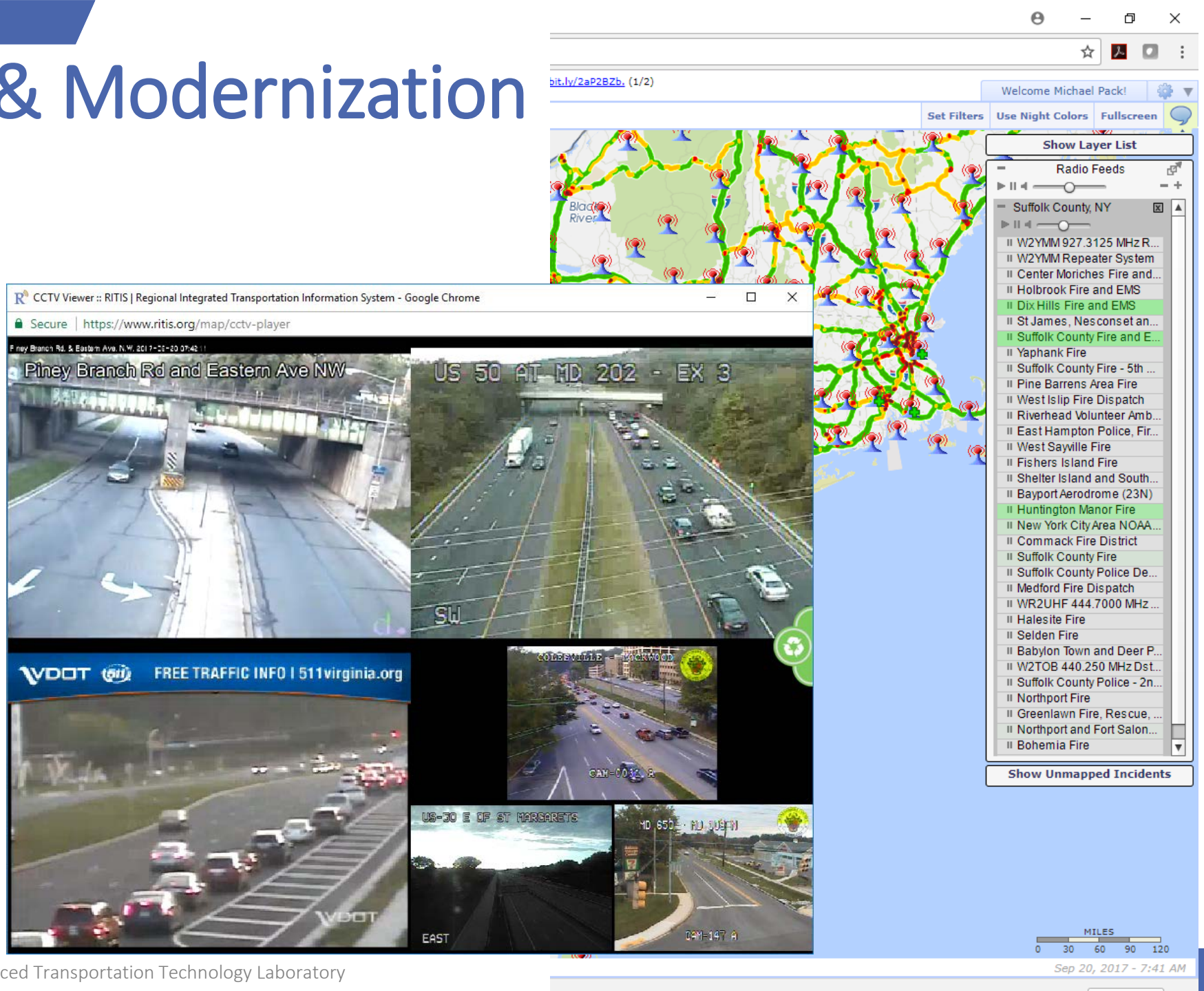


Next Steps

- Continue to analyze other event types (not just disabled vehicles)
- Evaluate other states
- Explore other duplicate-reduction algorithms that take into account speeds, speed limits, and other factors beyond time and space variables.
- Synthesize other benefits and technical approaches from state partners
- Document technical approaches to reducing duplicates, storage, etc.
- Document recommended practices for negotiating acceptable use to keep from repeating past mistakes.

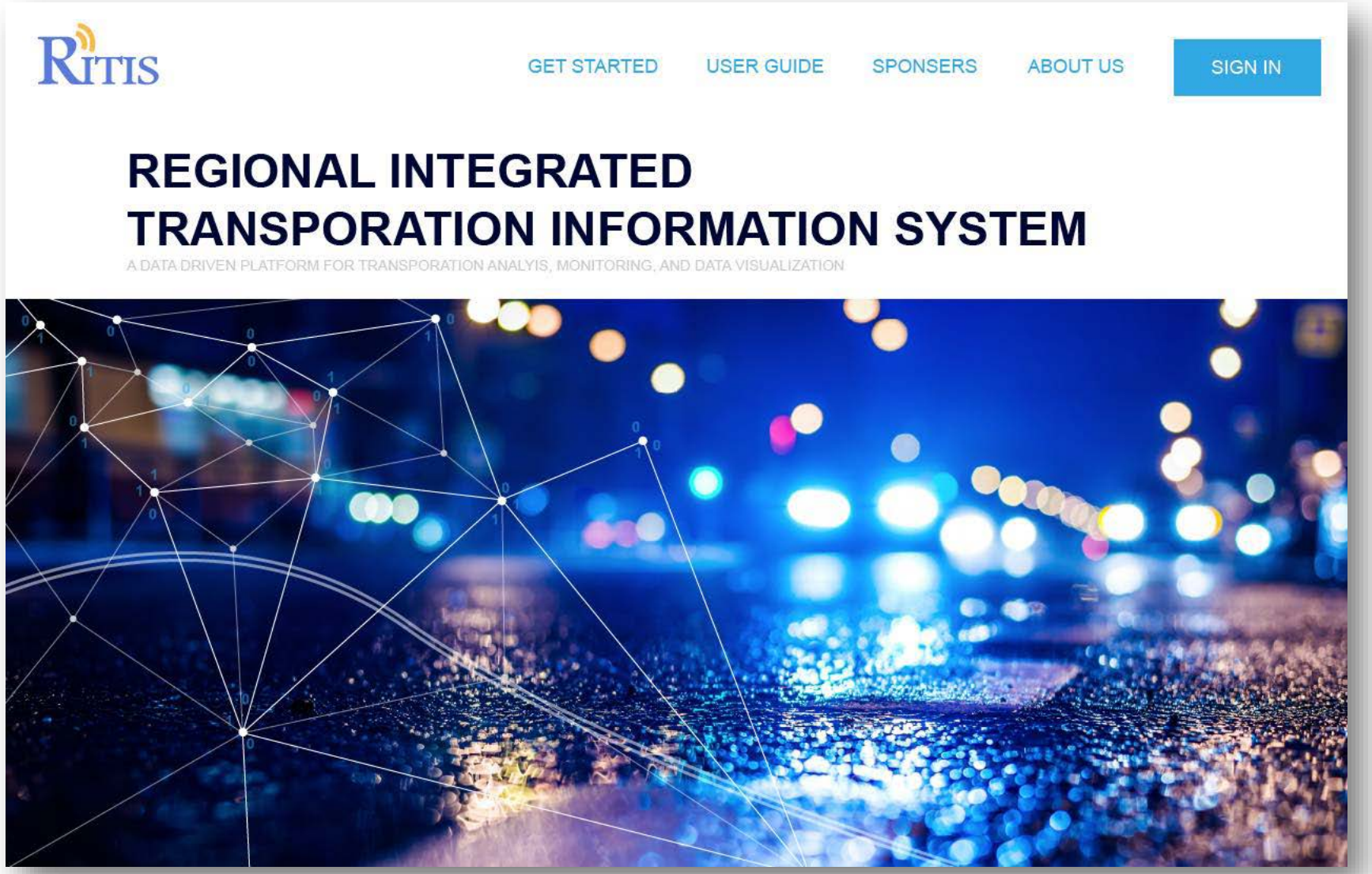
Flash Migration & Modernization

- CCTV
- Radio Player
- Security Patching
- More



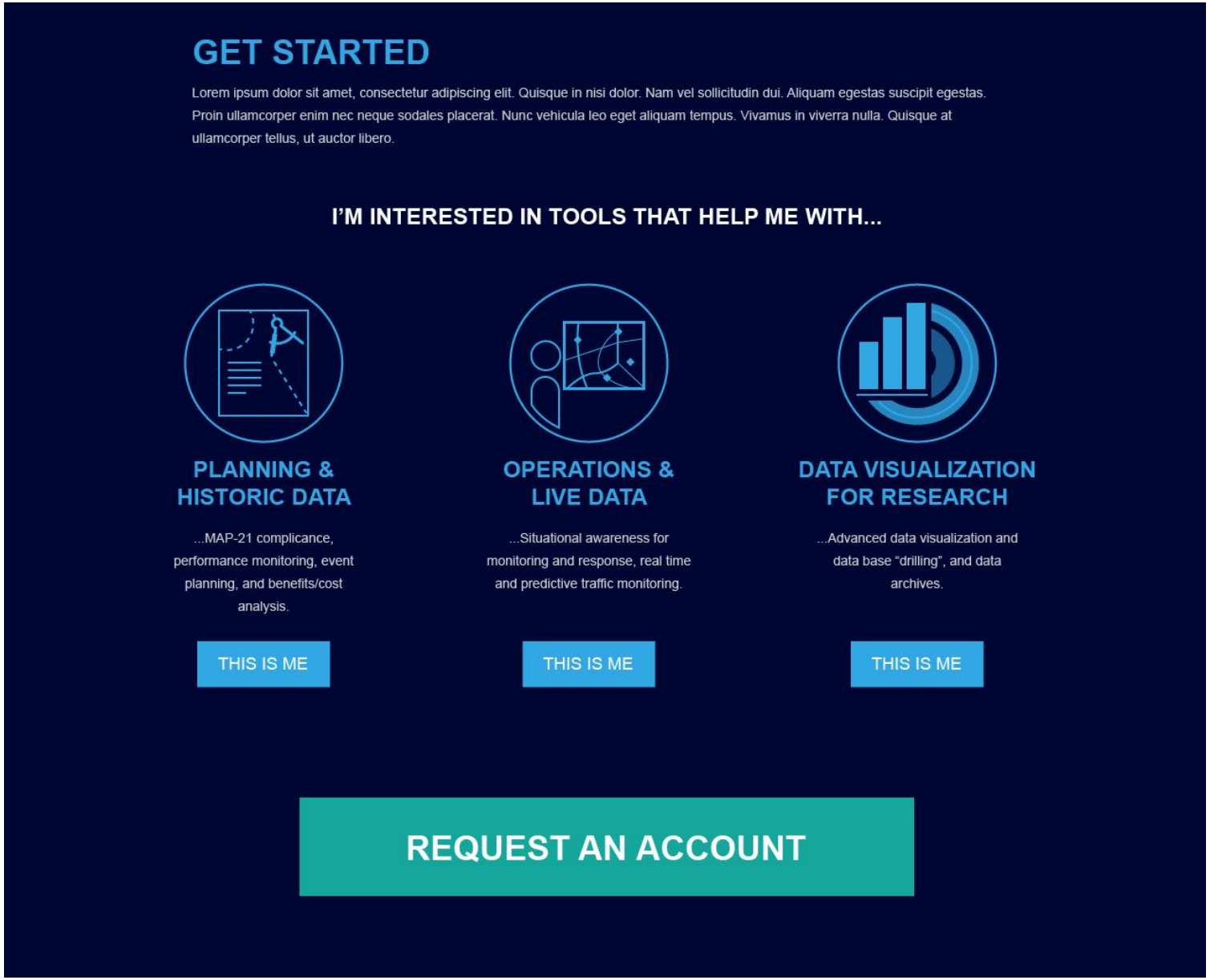
RITIS Modernization

- New look
- New layout
- New features
- Better integration
- Targets your needs



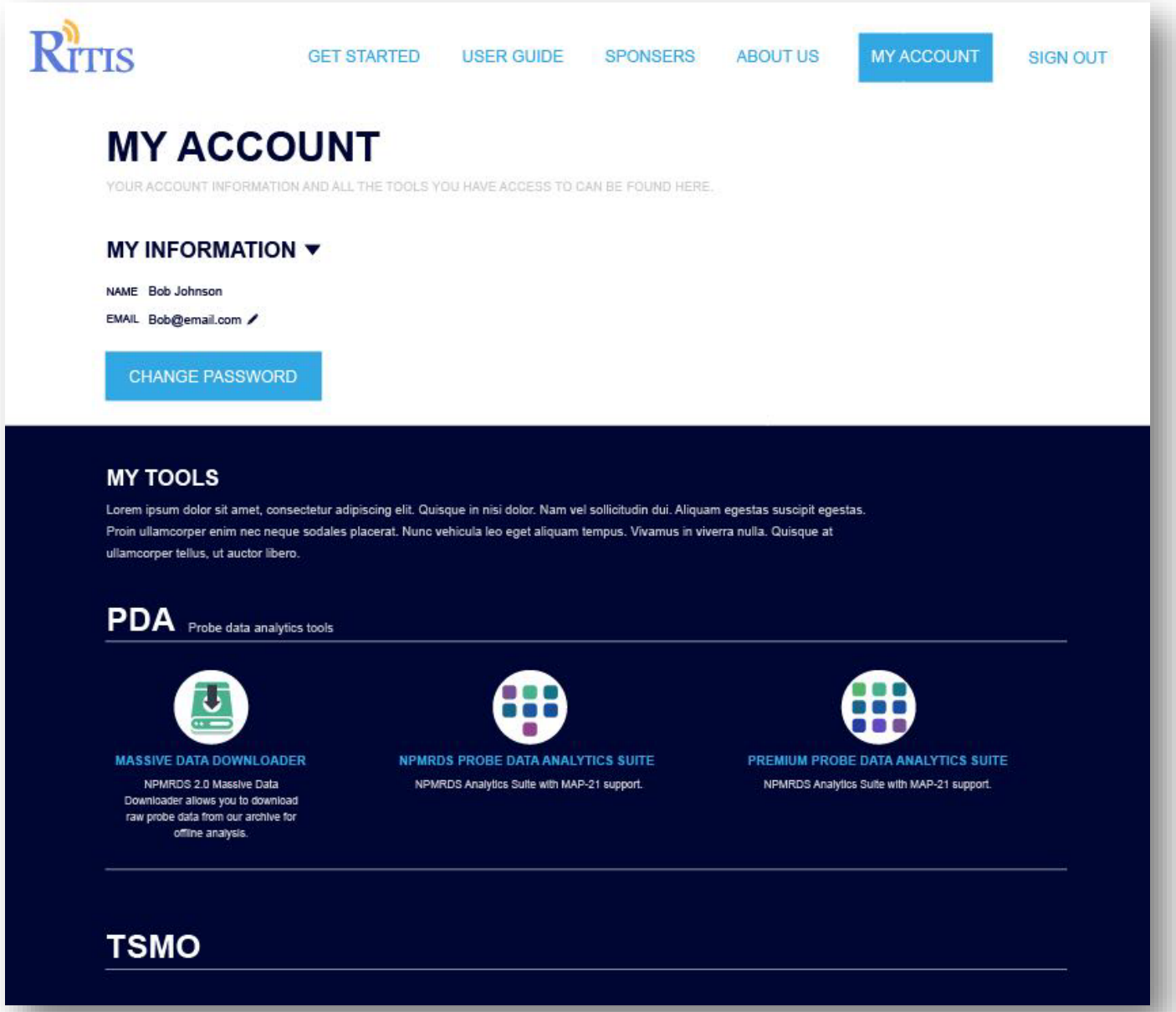
RITIS Modernization

- Learn about the tools that fit your area of need…



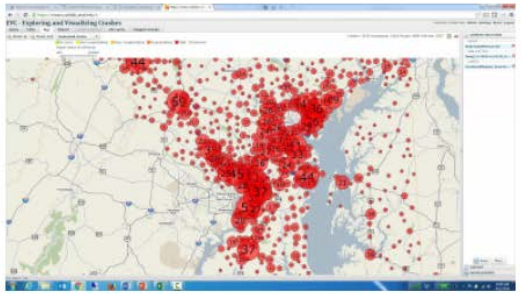
RITIS Modernization

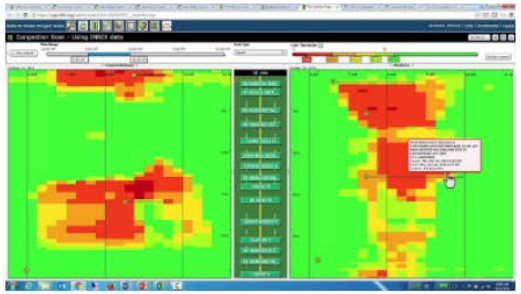
- A “my account” page to manage your RITIS account and all your tools…

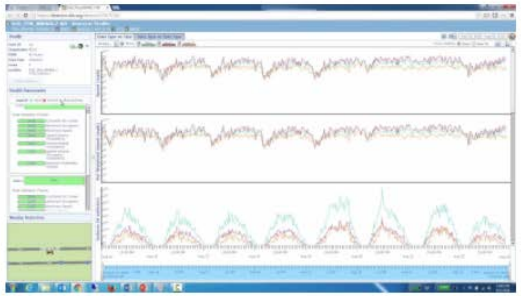


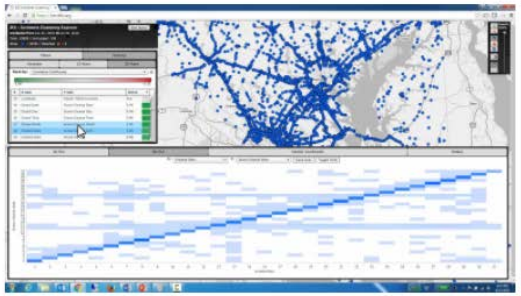
Updating Video Tutorials

- HD Tool Walk-throughs on Vimeo
  - NPMRDS / MAP-21: https://vimeo.com/208589756
  - Work Zone Performance Monitoring: https://vimeo.com/207291891
  - Traffic Sensor Analytics: https://vimeo.com/179847599
  - ATMS Data Analytics with ICE: https://vimeo.com/179841494
  - Analyzing Police Crash Records: https://vimeo.com/179830512
  - Transportation Project Prioritization: https://vimeo.com/179829037







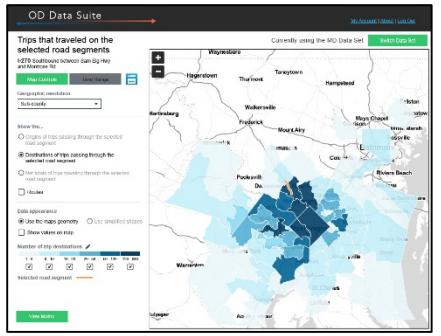


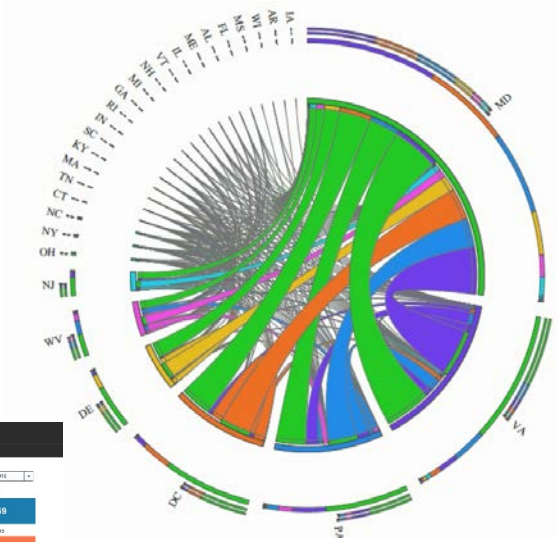
Online Course with RITIS Tutorials and Workshops

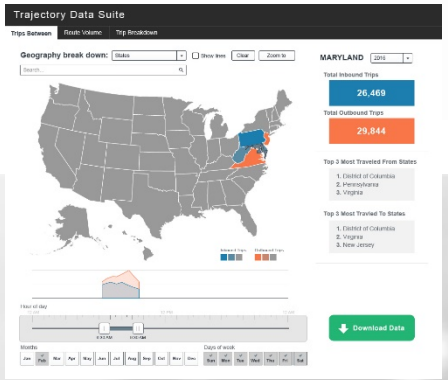
- **Archived Data for Planning, Operations, and Safety (Blended)**
- http://www.citeconsortium.org/course/archived-data-planning-operations-safety-2/

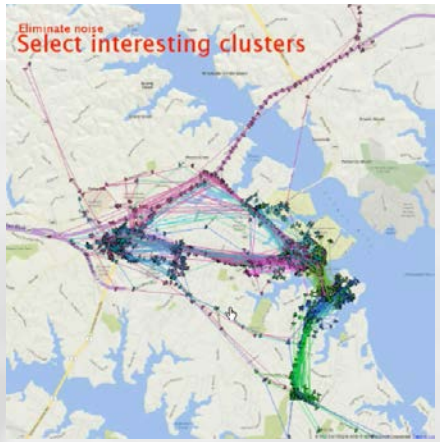
Further down the road

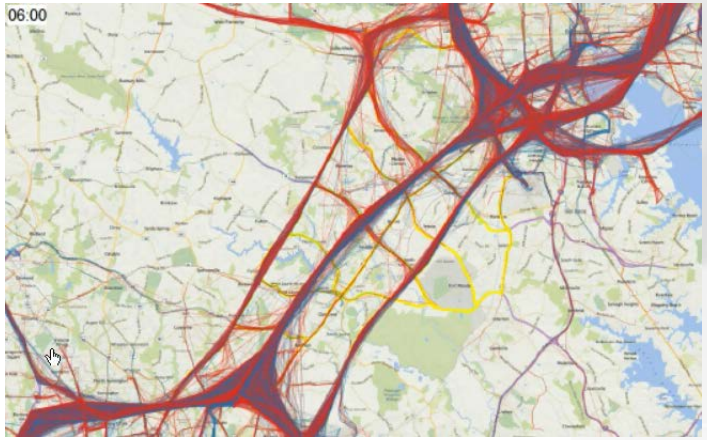
- O-D/Trajectory Analytics
- Signalized Arterial Timing Plan Optimization
- Transit Analytics
- More

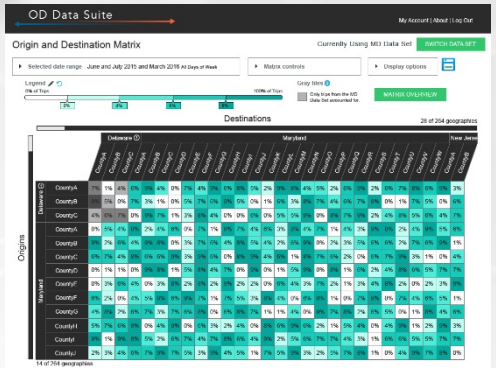


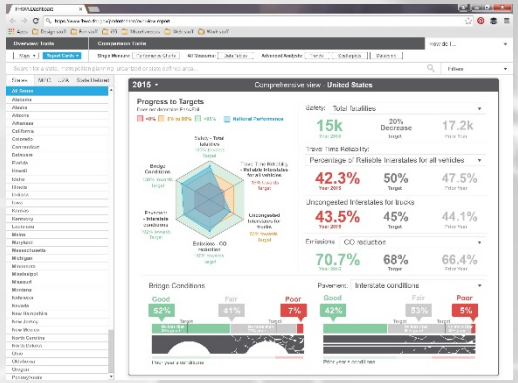






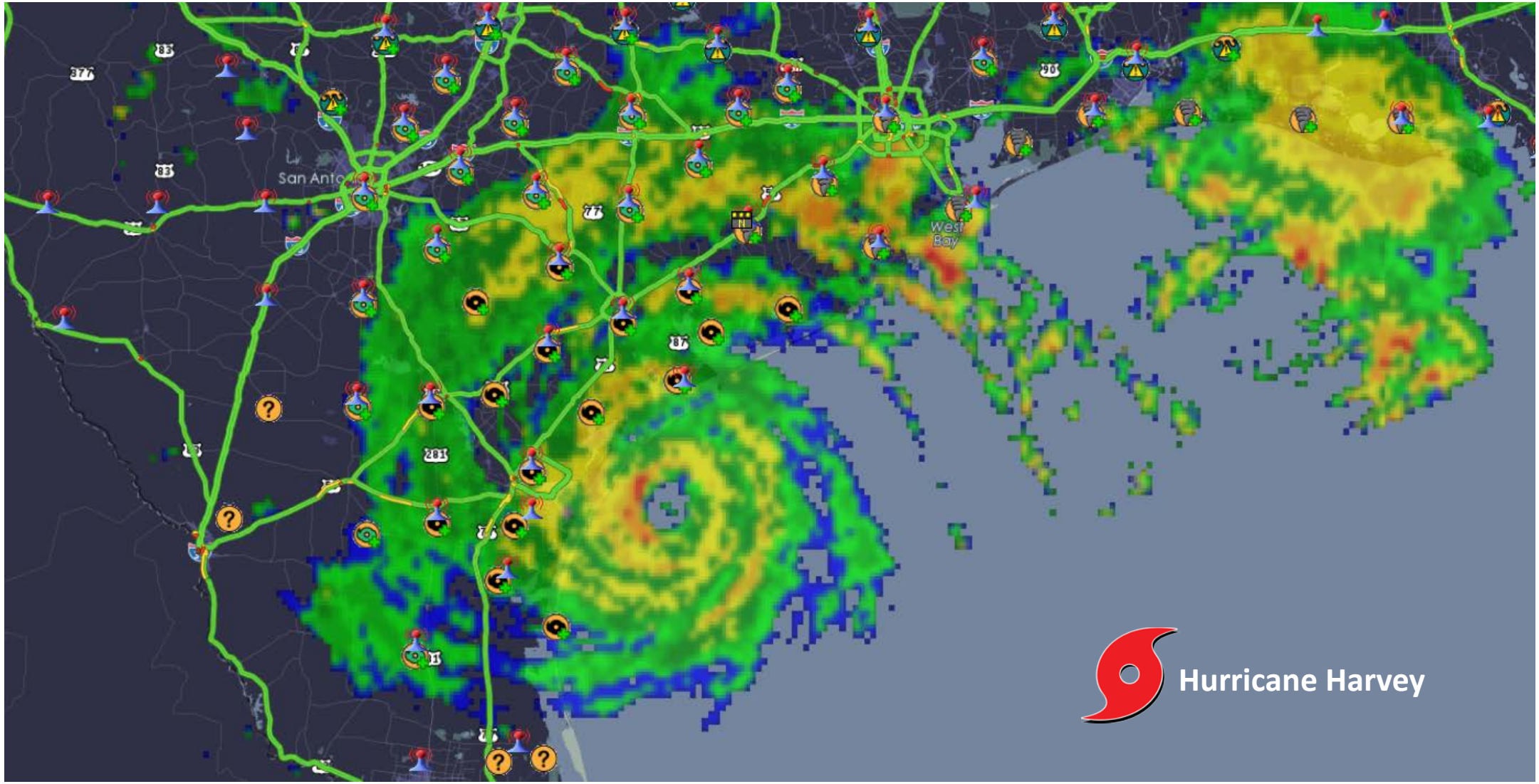




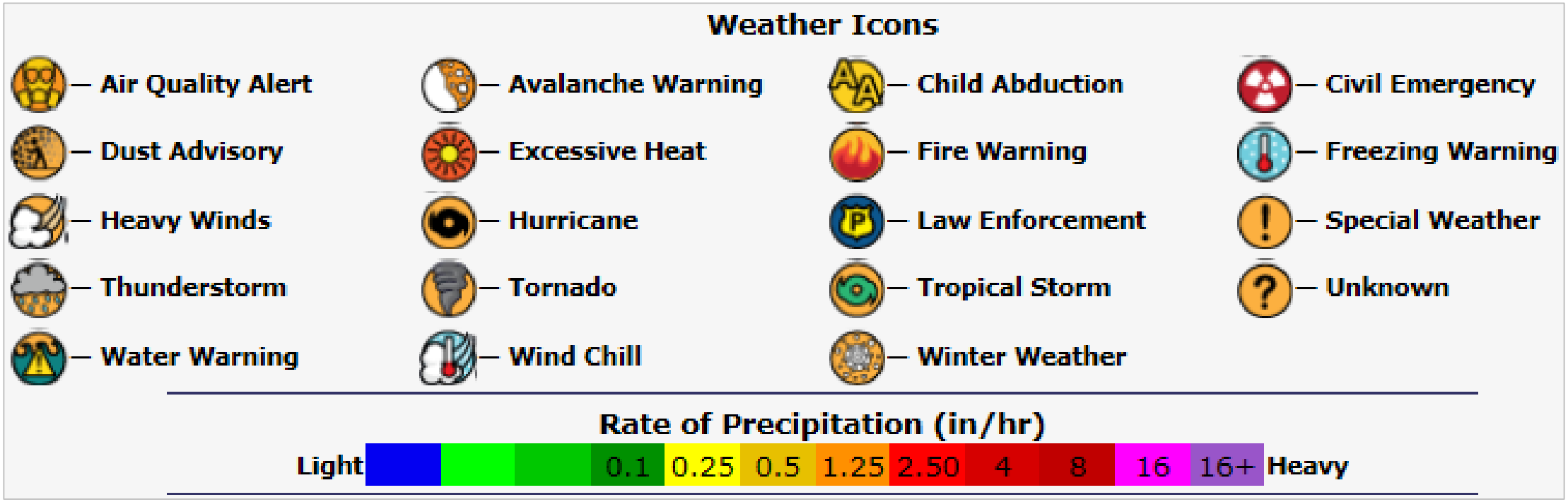


Pack's Pointers

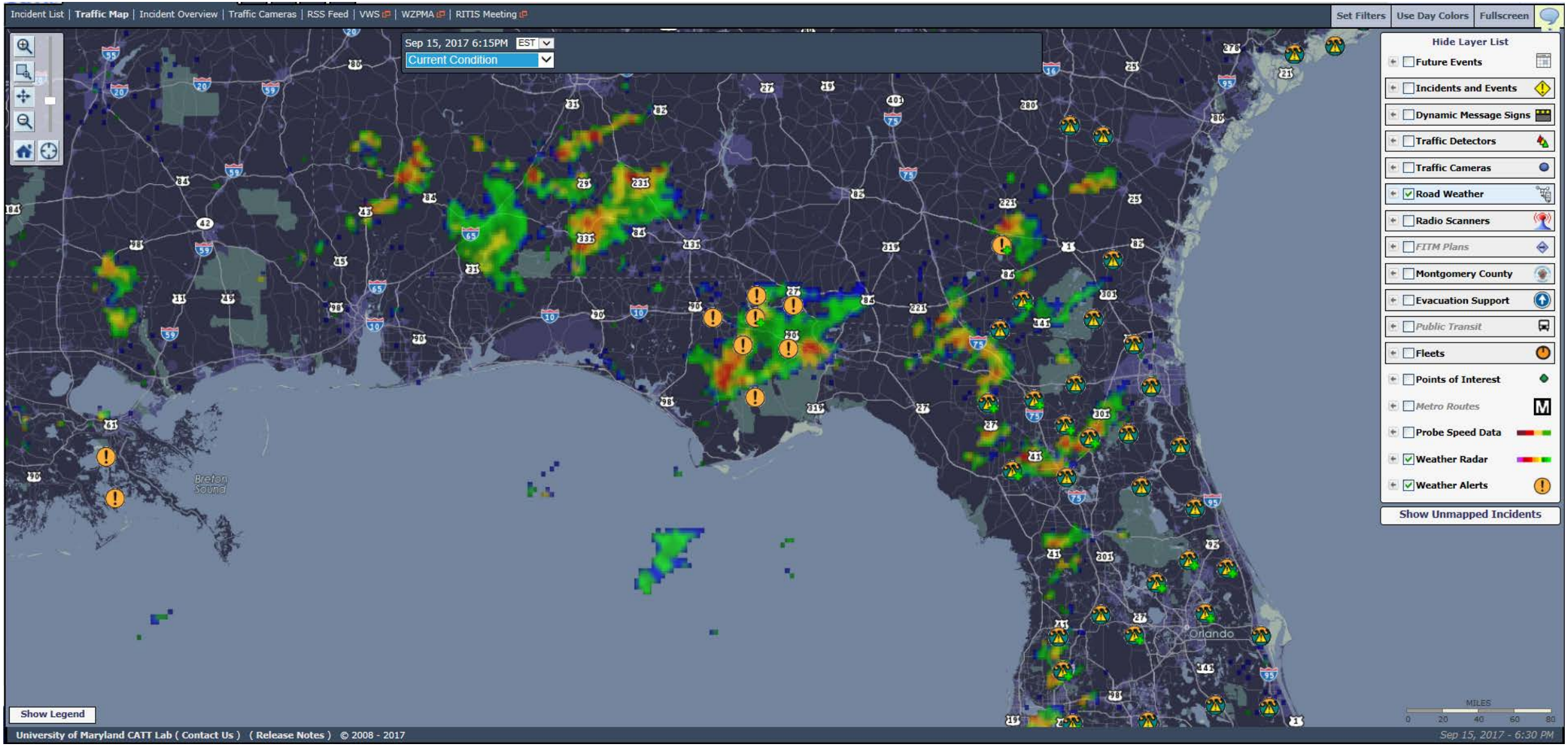
Extreme Weather



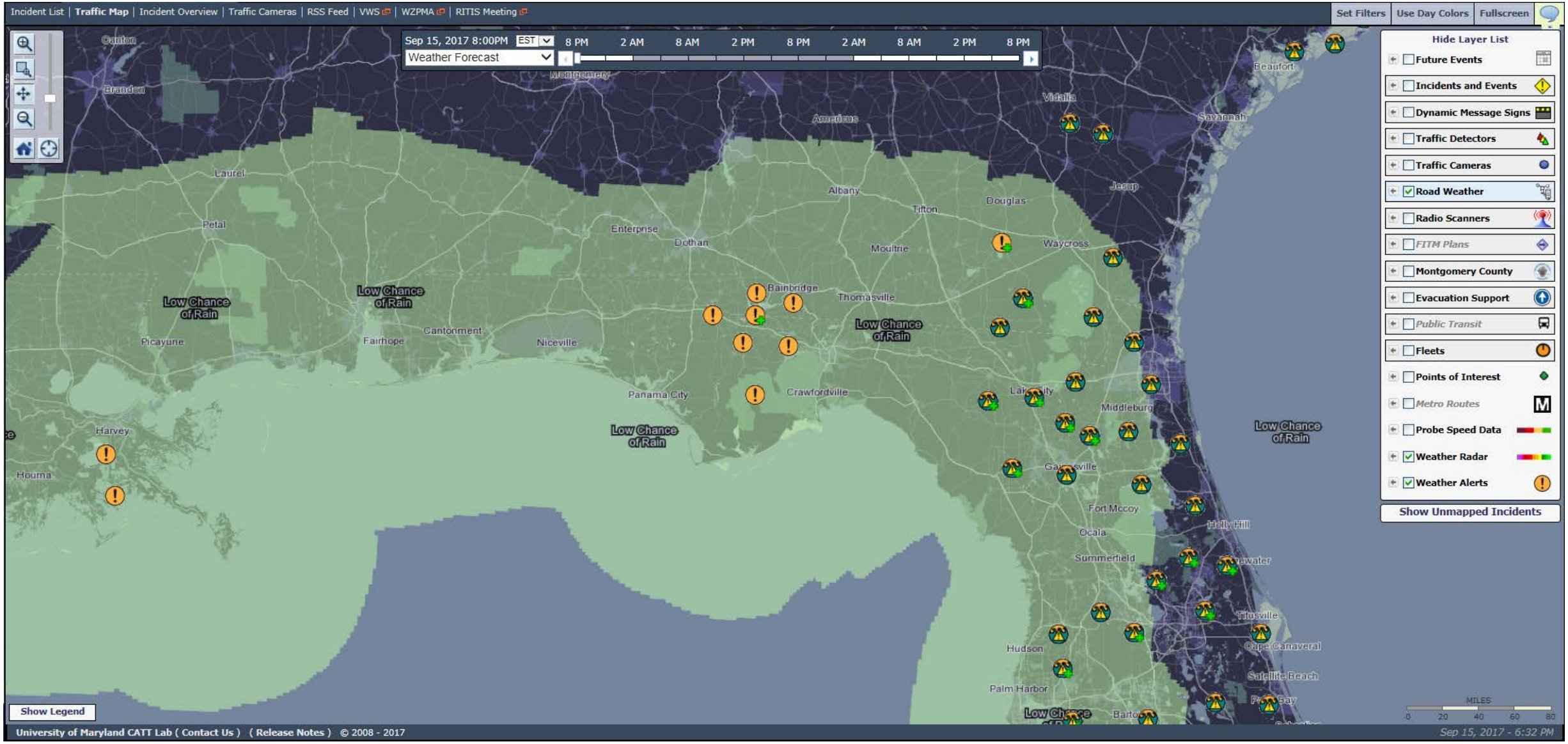
Extreme Weather (know your icons)



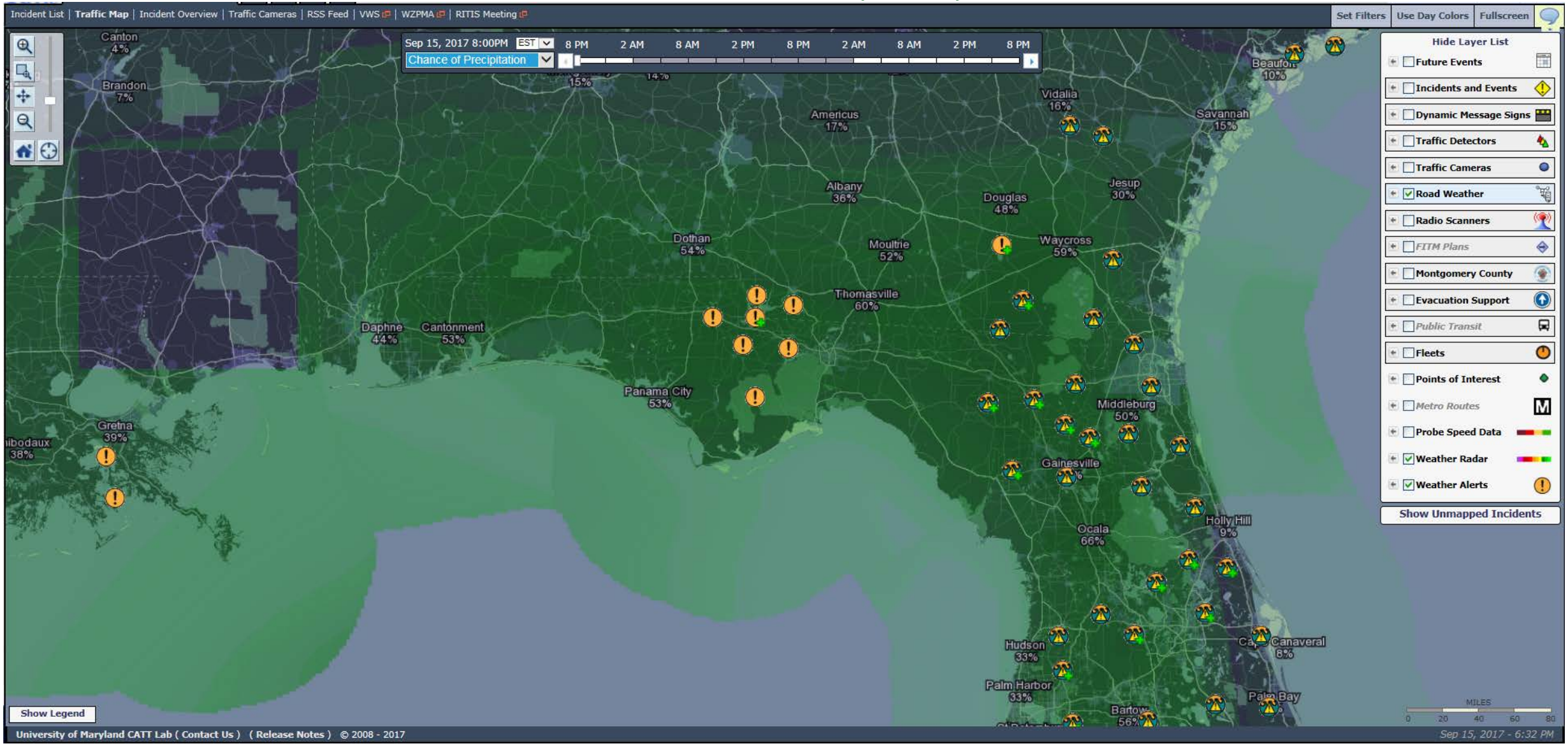
Extreme Weather (RITIS current conditions)



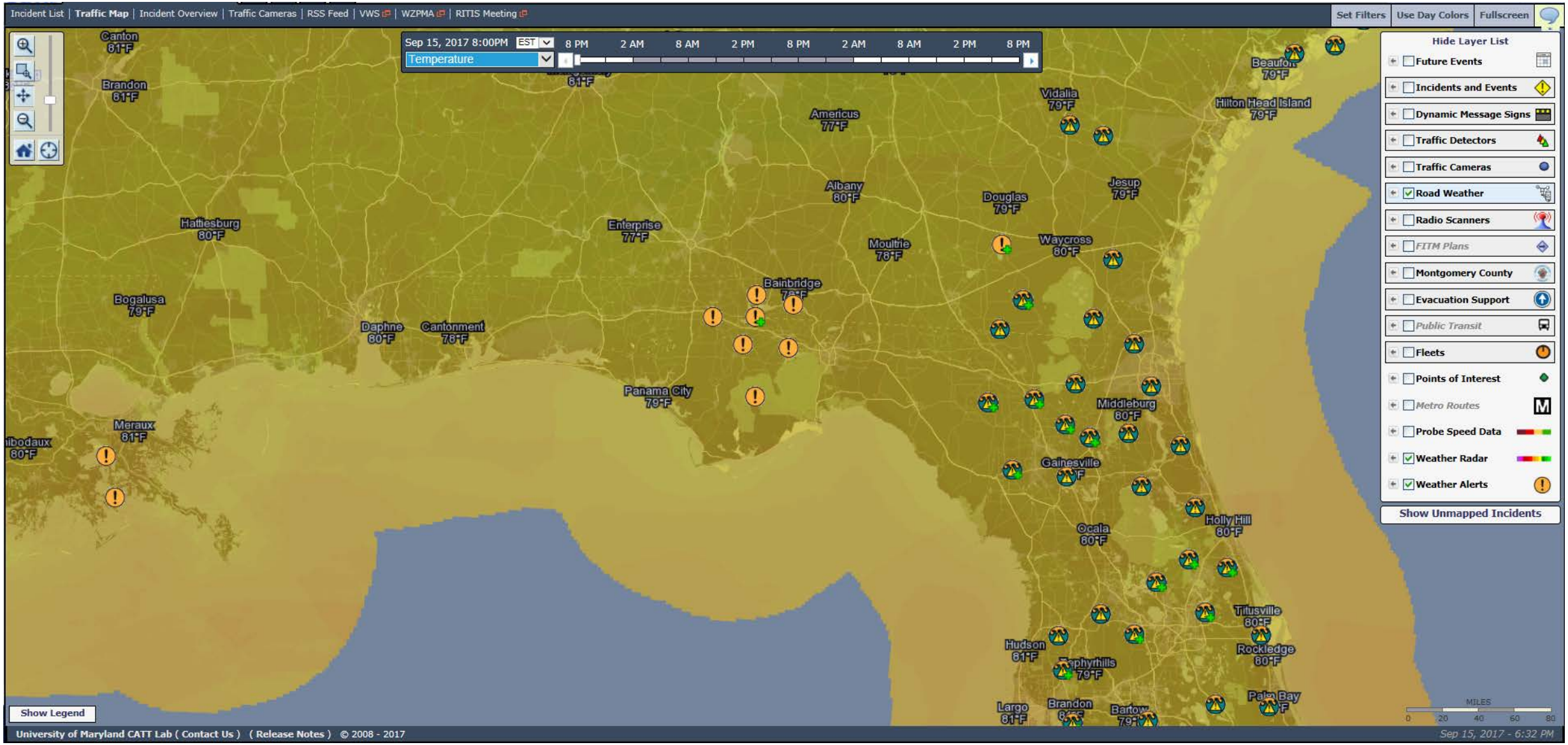
Extreme Weather (RITIS weather forecast – 48 hr. forecast)



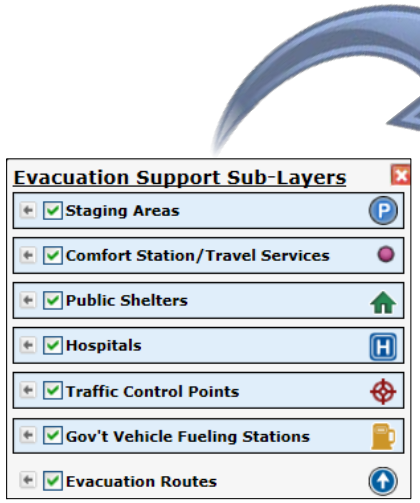
Extreme Weather (RITIS chance of precipitation – 48 hr. forecast)

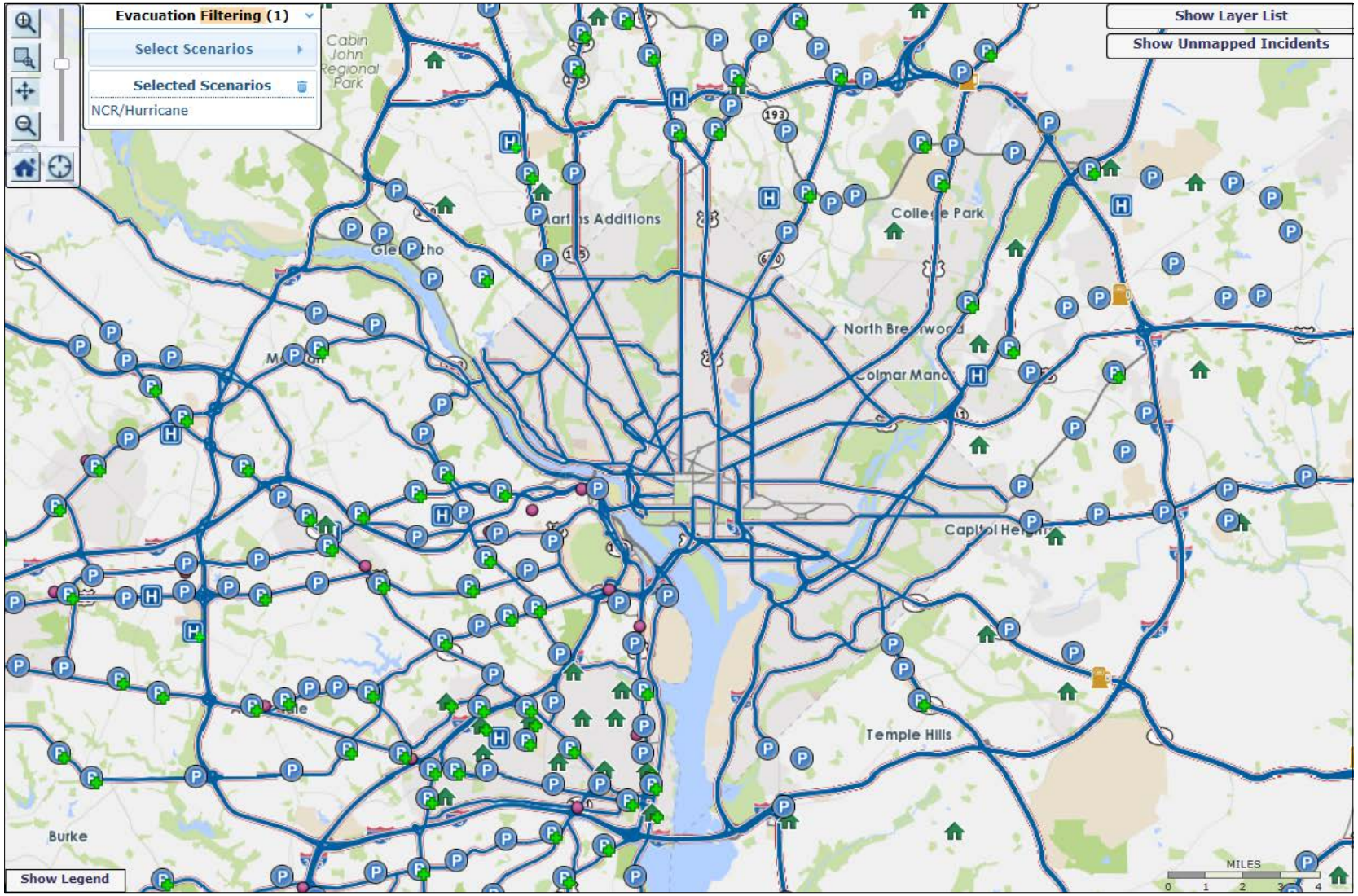


Extreme Weather (RITIS temperature – 48 hr. forecast)



Use RITIS Evacuation Support (for better coordination and management)





Use RITIS Evacuation Support (for better coordination and management)

Traffic Control Point at US 11/Win...

US 11/Winchester Ave @ CR 32 & Novak Dr
1-267 Novak Dr
WV 25405
Berkeley County
NCR/Hurricane

Traffic Control Point at US 11/Winchester Ave @ CR 32 & Novak Dr

University of Maryland CATT Lab (Contact Us) (Release Notes) © 2008 - 2016

Staging Area at Langley Park Sho...

4 of 6
PREV BACK TO LIST NEXT

Langley Park Shopping Center
7901 New Hampshire Ave
Langley Park Cdp, MD
Prince George's County
Function: **Shopping Center Parking**
Surface Type: **Paved**
Avail. Space: **396**
Lot Size: **Medium**
Truck Access: **No**
Area Information

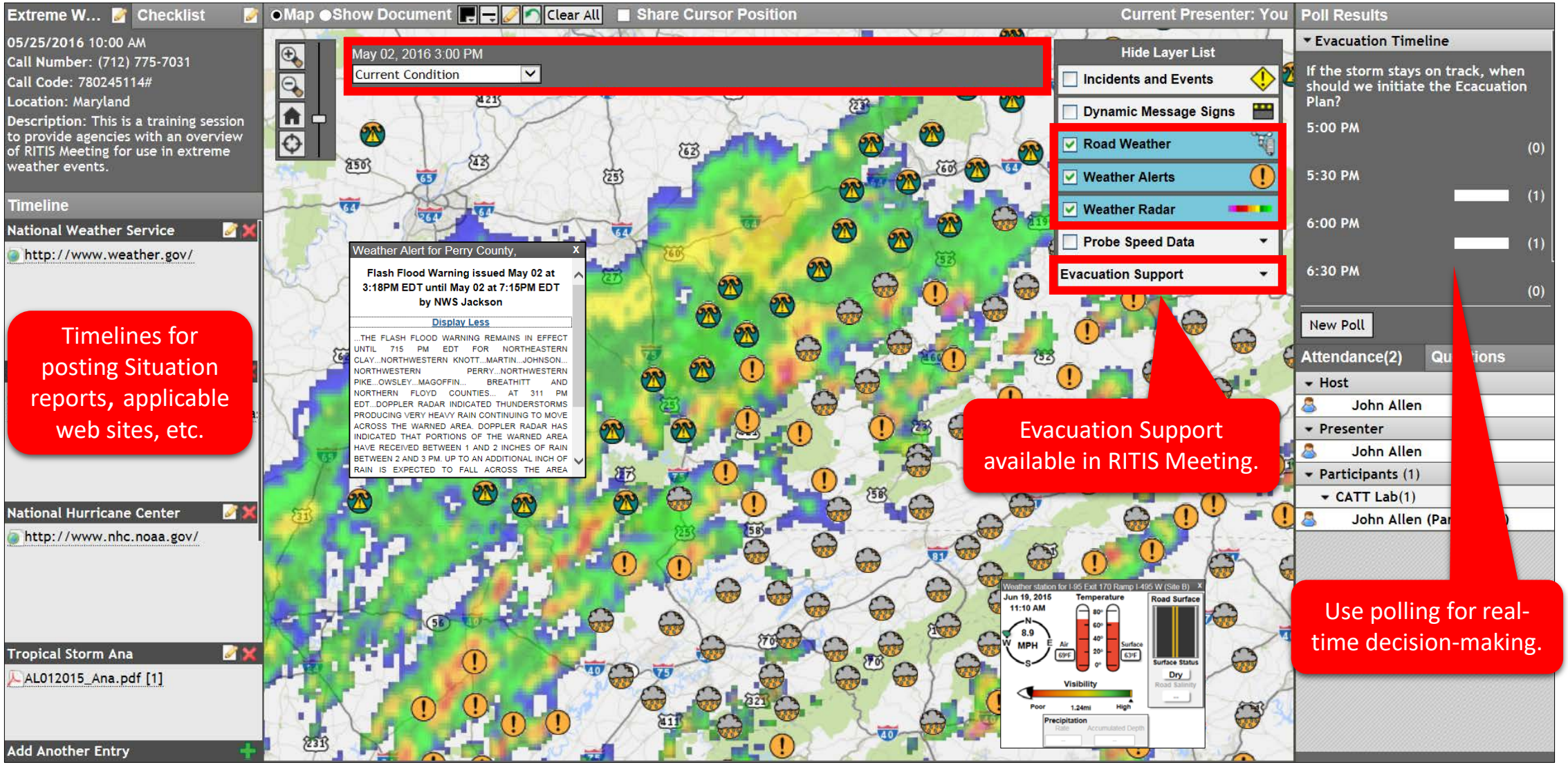
Staging Area at Langley Park Shopping Center

PG-S84: MD 193 (University Blvd) WB

PG-S84

University of Maryland CATT Lab (Contact Us) (Release Notes) © 2008 - 2016

Use RITIS Meeting (and its weather-related functions)



RITIS Roadmap

Calendar Year 2017

Q1 2017

- ✓ Separate Planned Events Layer
- ✓ WAZE Data Integration
- ✓ Flash migration for Probe Data Analytics
- ✓ Evacuation Documents Upgrade
- ✓ Basemap updates
- ✓ New CCTV Feed Integration
- ✓ Additional Agency-funded Customization/New Features*
- ✓ Additional Agency-funded new data sources†

Q2 2017

- ✓ WAZE Data aggregation and speed improvements
- ✓ National Transit Data Integration through GTFS Feeds (real-time and schedules)
- ✓ Flash Migration for Timeline
- ✓ Basemap Updates
- Dashcam CCTV integration for MDSHA
- ✓ Additional Agency-funded Customization/New Features*
- ✓ Additional Agency-funded new data sources†

Q3 2017

- ✓ Tiling infrastructure modernization
- ✓ Evacuation Documents Upgrade
- ✓ Basemap updates
- ✓ CCTV Enhancements
- Weather Radar Mapped to TMCs
- ✓ WAZE Analytics
- ✓ Additional Agency-funded Customization/New Features*
- Additional Agency-funded new data sources†

Q4 2017

- Basemap updates
- Police/Fire/Rescue Radio Audio on Timelines
- Evacuation Documents Refresh
- RITIS Input early designs
- TBD
- Additional Agency-funded* Customization/New Features TBD
- Additional Agency-funded new data sources TBD †

NOTE: Final list of priorities to be defined and prioritized with guidance from the RITIS User Group which will consist of members from each state in operations, planning, and research.

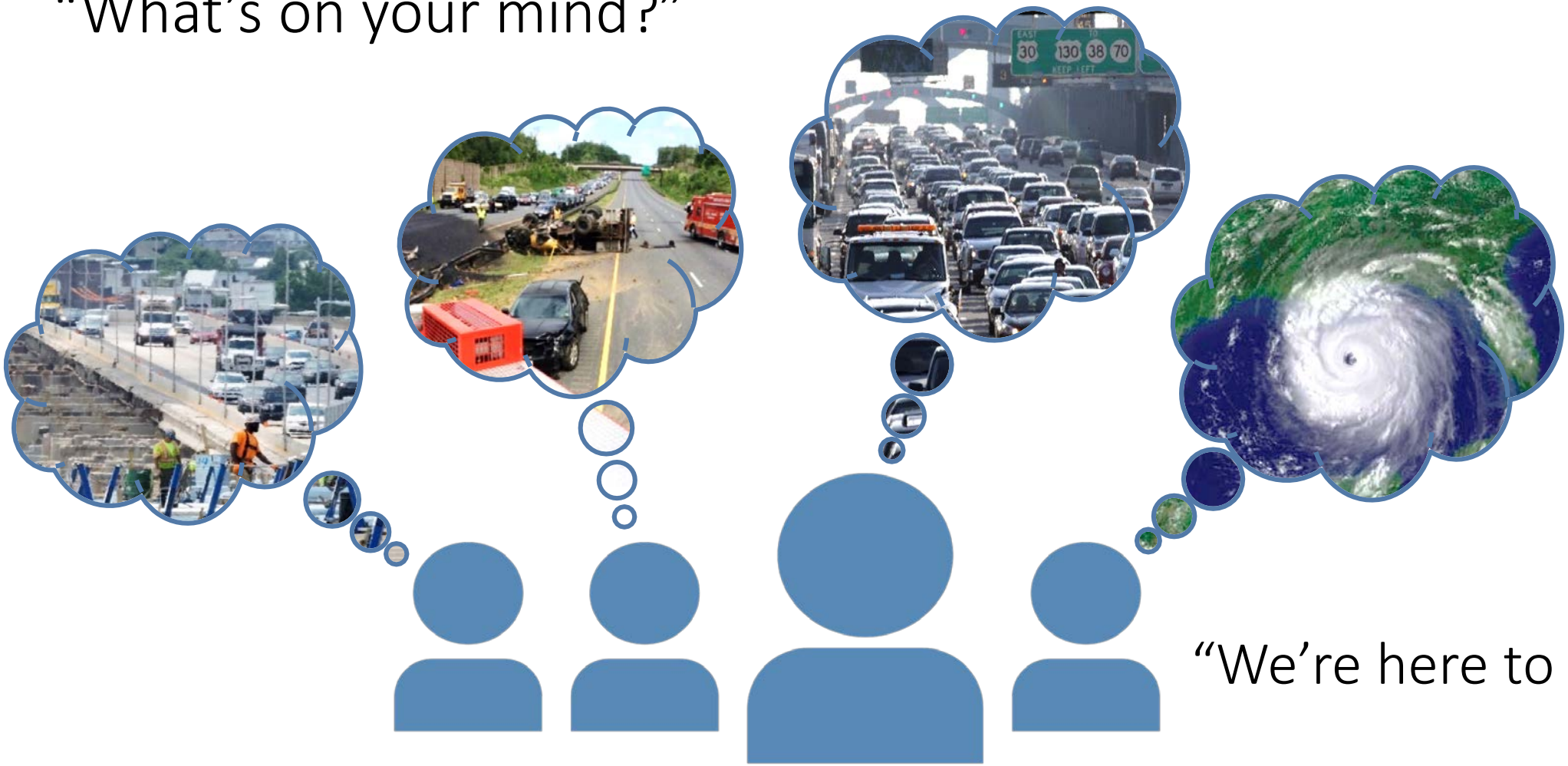
* - each state has the option of customizing features and/or building new functionality if state funding is available.

† - each state has the option of adding new data sources as requested if state funding is available.

✓ - complete ✓ - in progress

Agency input session

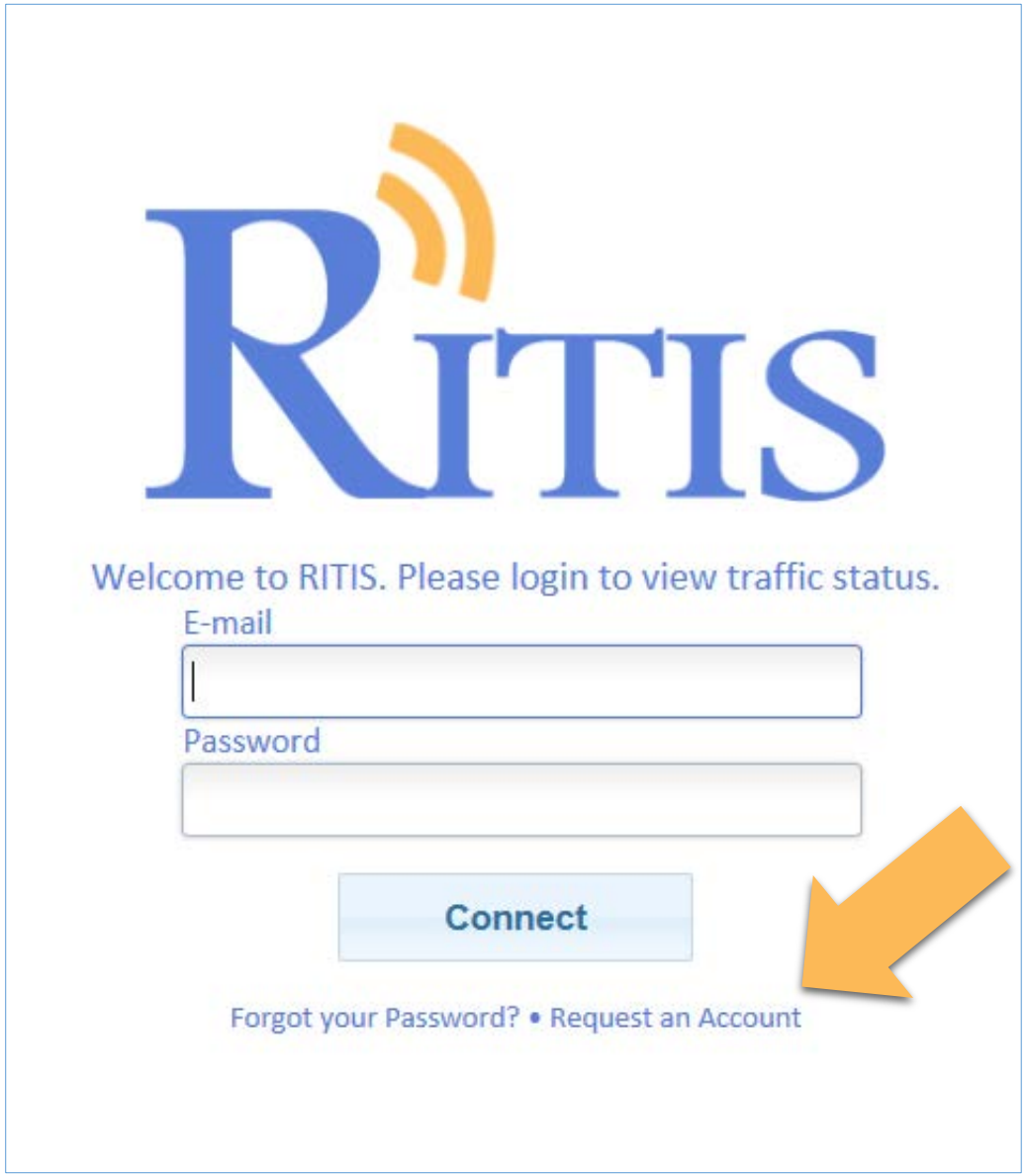
"What's on your mind?"



"We're here to help!"

How to get access

1. www.ritis.org
2. Click “Request an Account”
3. You’re on your way…



Member involvement

The **key** to success of the RITIS User Group is **your** involvement:

- Share common or unique use of the tools in your work
- Present after-action reviews, lessons learned
- Demonstrate accomplishments, big or small
- Contribute ideas, suggestions, feedback
- Help prioritize and guide RITIS feature enhancements

Free RITIS training

› **MATOC Staff** offer free monthly webinars to transportation, public safety, and emergency management agencies interested in incorporating the RITIS platform into their operations.

Remaining 2017 Webinar Schedule

RITIS 101
Learn the Basics

- **September 22nd**
- **November 17th**

RITIS Refresher / Advanced Features

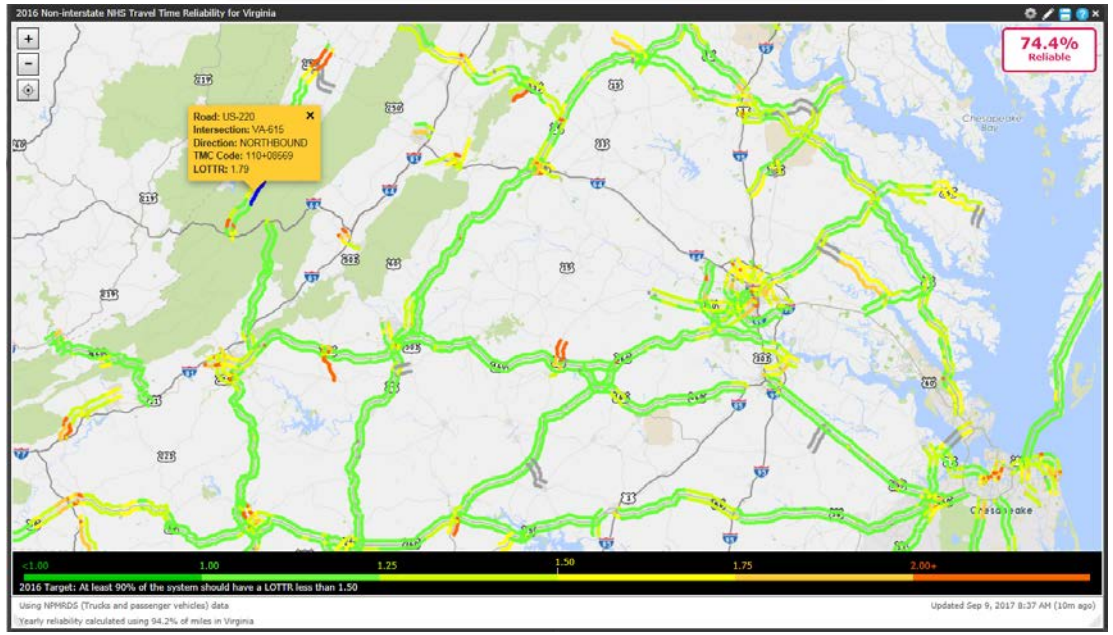
- **October 27th**
- **December 15th**

If you are interested in attending a webinar or would like additional information about these sessions please email: training@matoc.org

Free video tutorials

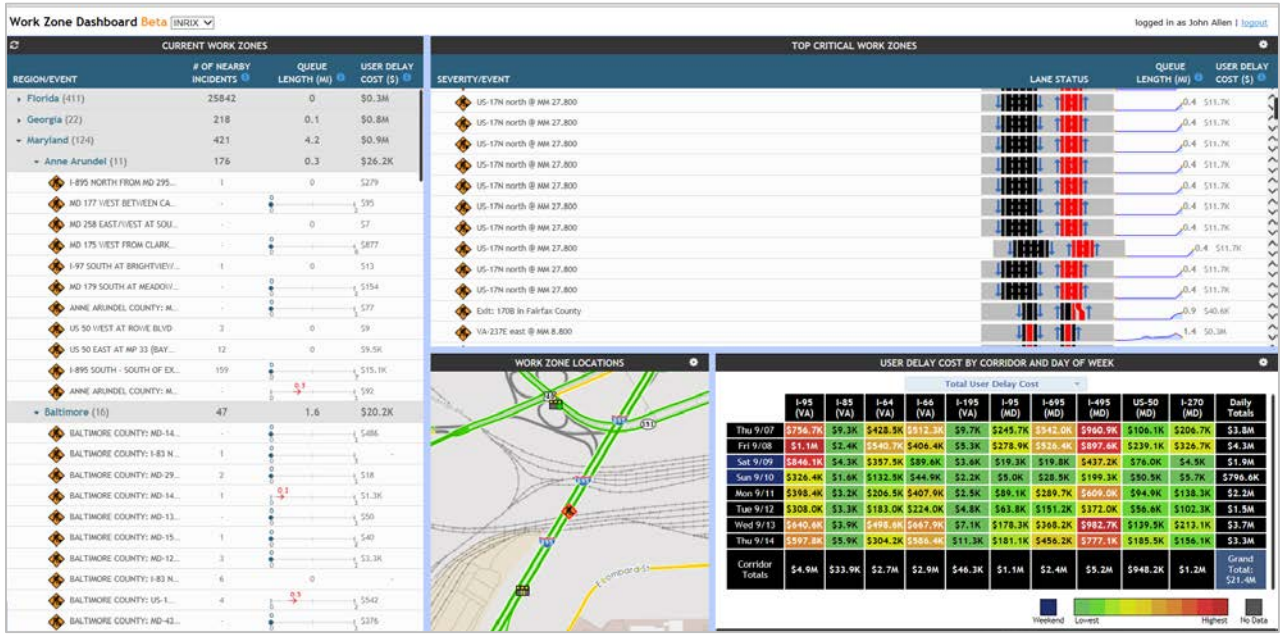
› Not sure how to use the tools? Come watch a video!

NPMRDS & MAP-21 Analytics



https://vimeo.com/208589756

Work Zone Performance Monitoring



https://vimeo.com/207291891

More are available; new videos added regularly here: https://vimeo.com/user55759816/videos

Contact info

I-95 Corridor Coalition TSMO

› Denise Markow | 301.789.9088 | dmarkow@i95coalition.org

RITIS technical support

› support@ritis.org

Thanks!

These slides will be made available after the call

Next meeting

January 18 2018 ◦ 10:30 AM – 12:00 PM