RITIS User Group

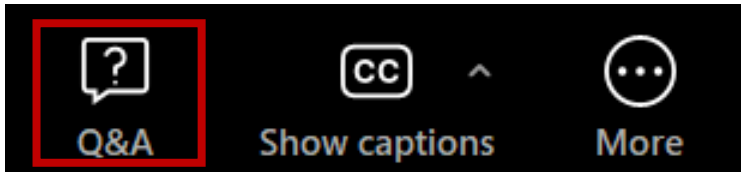
RITIS User Group Web Meeting

July 25, 2024

In collaboration with THE EASTERN TRANSPORTATION COALITION

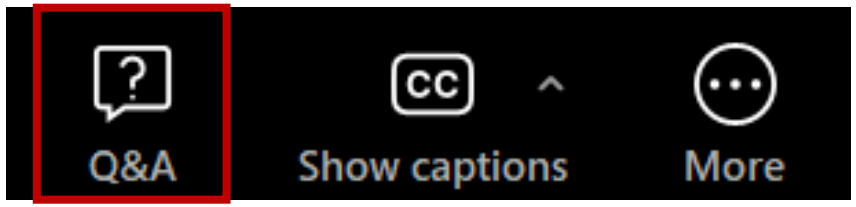
Welcome!

- We are using Zoom **Webinar**
- **AUDIO (Computer):** Use your computer speakers and microphone by clicking the "Join Audio" button at the bottom left of the screen. You will be muted.
- **Alternate Audio (Phone):** Call into the meeting by dialing the phone number based on your location (provided in the confirmation email) and enter the Meeting ID at the prompt. You will be muted.
- **This web meeting is being recorded.**
- **Questions** with the audio or web? Please contact Esther directly via email (ekleit@kmjinc.com)
- Please use the **Q&A box** for questions to the presenters. The **Chatbox** is not available to participants.

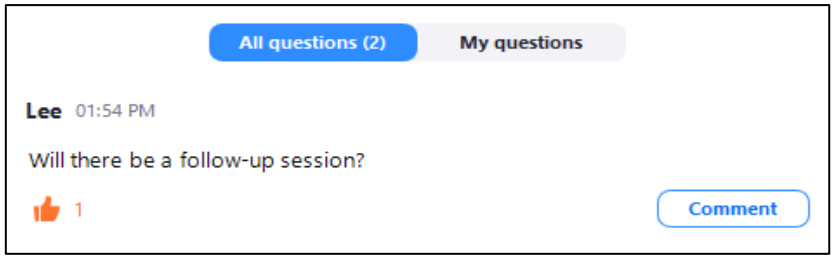


Asking Questions in the Q&A Box

- Click on the Q&A icon at the bottom of your screen



- The questions in the Q&A box will be monitored and answered at the end of each presentation or at the end of the meeting
- You can keep track of your questions in the “My Questions” tab in the Q&A box



Asking Questions Verbally

- Please raise your hand *(click on the hand icon at the bottom of the screen)* and a host will unmute you.

- Please give your name and agency before asking your question
- **Please mute yourself when you are finished speaking**

Coalition Update

Sheryl Bradley
The Eastern Transportation Coalition
TSMO Program Director

Nicole Forest
The Eastern Transportation Coalition
TSMO Program Associate

Coalition Update – Recent & Upcoming Events

Travel Info

Waze/3rd Party Mapping WG – 6/27/24

RITIS
User Group Mtgs
October 3, 2024
February 6, 2025
May 1, 2025
Workshop & Enhancement WG meetings – coming soon!

Cross-cutting

Bridge Strike Initiatives ongoing

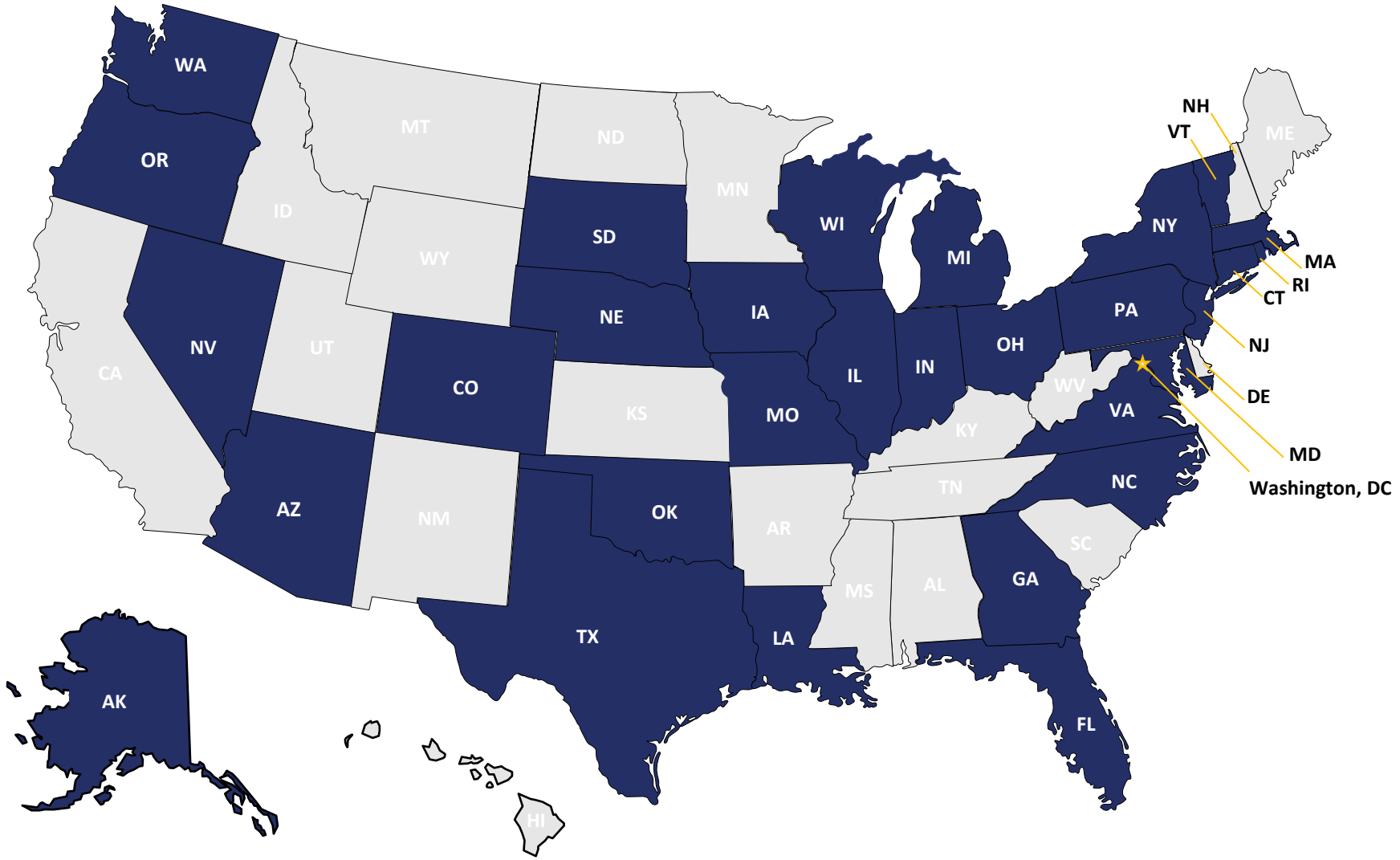
TDM

TDM Leadership Web Mtg – 11/7/2024
Upcoming - New Ancillary Products & TDM Vendor Forums

HOGs

In-person Exchanges – coming soon!

Welcome to our Meeting Participants



30 States are participating in today's virtual event!

- DOTs
- MPOs
- Transportation Authorities
- Federal Agencies
- Local Agencies
- Universities

STATE OF WEST VIRGINIA
DEPARTMENT OF TRANSPORTATION

THE EASTERN
TRANSPORTATION
COALITION

CONNECTING FOR SOLUTIONS

Welcome & Introductions

Matt Glasser
National TSMO Account Lead
Arcadis
RITIS User Group Co-chair

Today's Meeting

Coalition Update Welcome & Introductions	Sheryl Bradley, The Eastern Transportation Coalition Matt Glasser, Arcadis & RITIS User Group Co-chair
Spotlight Presentations	
Vermont Agency of Transportation - Use of RITIS for Operations	Ryan Knapp, Vermont AOT
Post Eclipse Analysis for Vermont AOT	Greg Jordan, UMD CATT Lab
Status of Enhancements & Major Updates to RITIS tools	Michael Pack, UMD CATT Lab
RITIS Product Enhancement Working Group Update & Future Enhancements	Bob Frey, Massachusetts DOT RITIS Product Enhancement Working Group chair
User Feedback Session & Wrap Up	Michael Pack & Matt Glasser

Today's Speakers

Michael Pack
UMD CATT Lab
Director

Ryan Knapp
Vermont AOT
ITS Section Chief

Greg Jordan
UMD CATT Lab
Senior Faculty Specialist

Bob Frey
Massachusetts DOT
Director of Project-Oriented Planning

Polls 1, 2, and 3

Poll 1: How often do you attend RITIS User Group Web Meetings?

a) 1-2 times per year
b) 3-4 times per year
c) This is my first meeting

Poll 2: How do you use the data and visualization results from RITIS tools (choose one)?

1. We use results directly from RITIS to develop products (reports, maps, etc.)
2. We download the data and use our own agency's in-house tools to create tables and visuals for product development
3. We do a little bit of both

Poll 3: Who is your primary audience for sharing information that was developed from RITIS and PDA Suite (choose one)?

1. Peers
2. Management
3. Executive Leadership
4. Elected Officials
5. General Public

Vermont Agency of Transportation - Use of RITIS for Operations

Ryan Knapp
ITS Section Chief
Vermont AOT

VERMONT
AGENCY OF TRANSPORTATION

Background

-April 8, 2024, Total Eclipse: known mobility impacts to be encountered due to path of totality across northern VT

-160,000 expected visitors, 60,000 estimated vehicles, widespread congestion in the North, with a mass exodus expected

-VTrans Incident Command System (ICS) activation planned for 4/8

-Various levels of uncertainty surrounding motorists' destinations

-"Northern and Northeastern VT"

-Staff attended various orientations and planning meetings based on previous mass traffic events.

Background continued

-There was no goal of mitigating congestion...

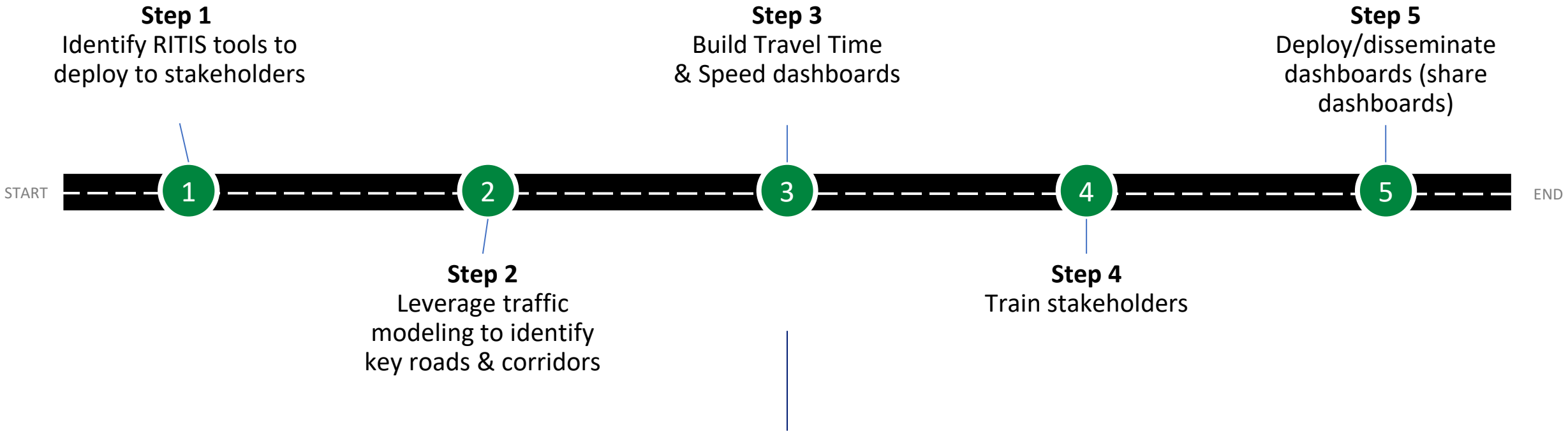
-Temper expectations

-Transportation Management Center's (TMC) becomes the Situation Unit, providing a **Common Operating Picture (COP) and situational awareness** of network status

How can RITIS support TICC operations?

1) Where and when is the congestion?
2) How long are bottlenecks?
3) Data validation and confidence
4) Real-time decision making
5) Inform stakeholders

Process Timeline



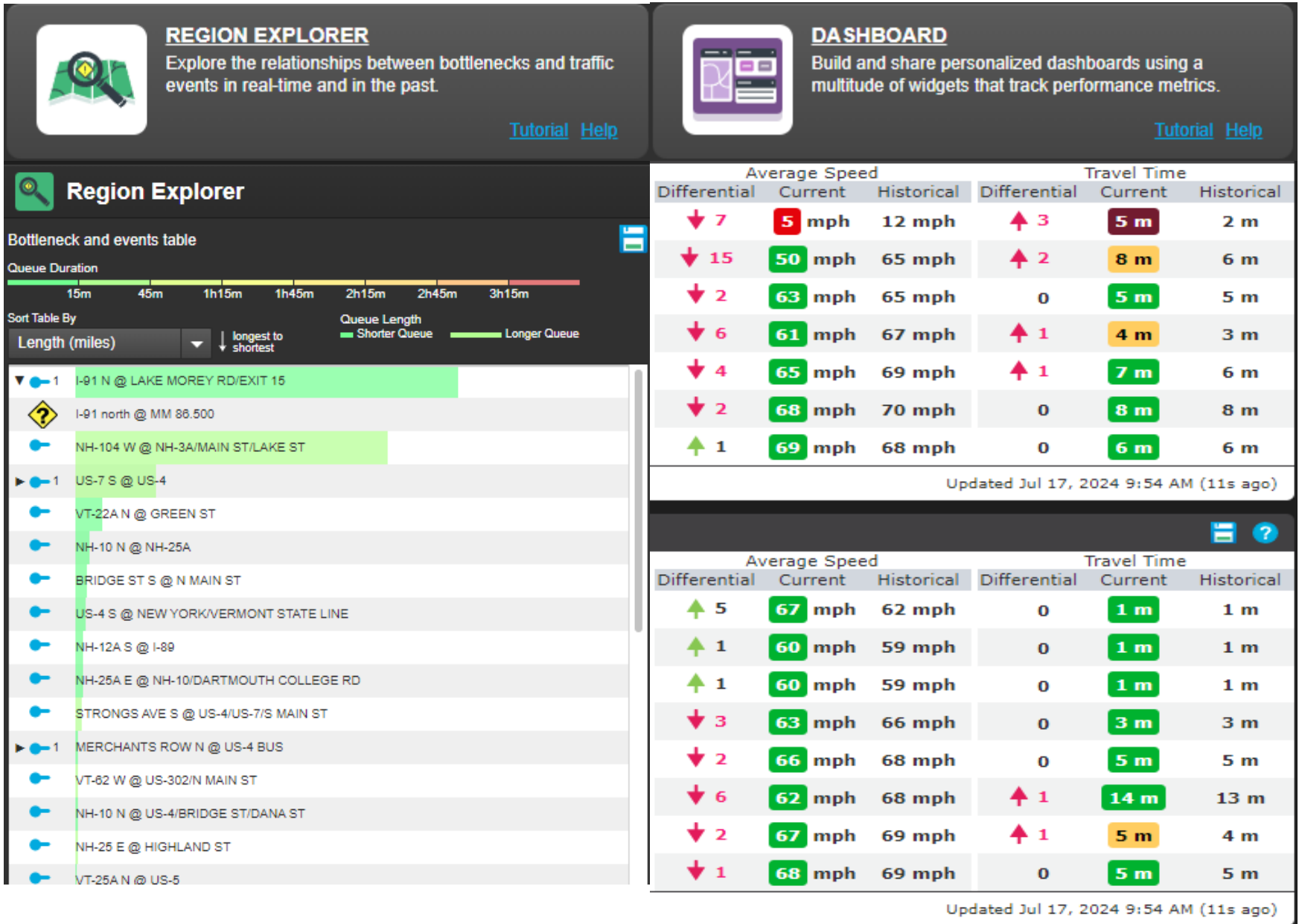
RITIS Products Used

Tools Used:

- Traffic Map
- Region Explorer (bottlenecks)
- Dashboards

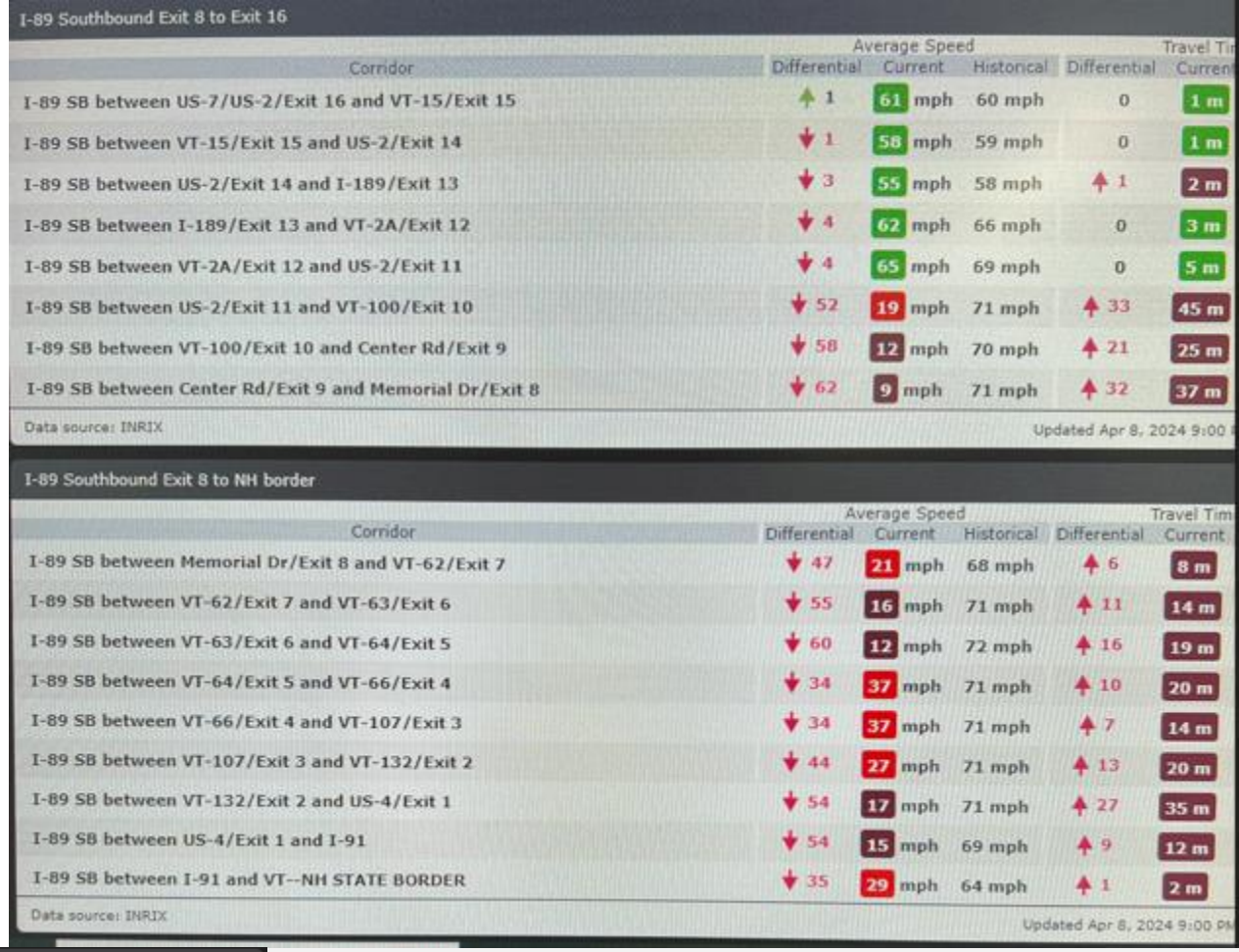
Supplemental Tools:

- Drone Teams
- Social Media
- Vermont Emergency Mangement



Results

- Better traffic management
- Saving time, effort, money
- Better use of public funds
- Improving analytical capabilities
- Improving communication



I-89 Southbound Exit 8 to Exit 16

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current
I-89 SB between US-7/US-2/Exit 16 and VT-15/Exit 15	↑ 1	61 mph	60 mph	0	1 m
I-89 SB between VT-15/Exit 15 and US-2/Exit 14	↓ 1	58 mph	59 mph	0	1 m
I-89 SB between US-2/Exit 14 and I-189/Exit 13	↓ 3	55 mph	58 mph	↑ 1	2 m
I-89 SB between I-189/Exit 13 and VT-2A/Exit 12	↓ 4	62 mph	66 mph	0	3 m
I-89 SB between VT-2A/Exit 12 and US-2/Exit 11	↓ 4	65 mph	69 mph	0	5 m
I-89 SB between US-2/Exit 11 and VT-100/Exit 10	↓ 52	19 mph	71 mph	↑ 33	45 m
I-89 SB between VT-100/Exit 10 and Center Rd/Exit 9	↓ 58	12 mph	70 mph	↑ 21	25 m
I-89 SB between Center Rd/Exit 9 and Memorial Dr/Exit 8	↓ 62	9 mph	71 mph	↑ 32	37 m

Data source: INRIX

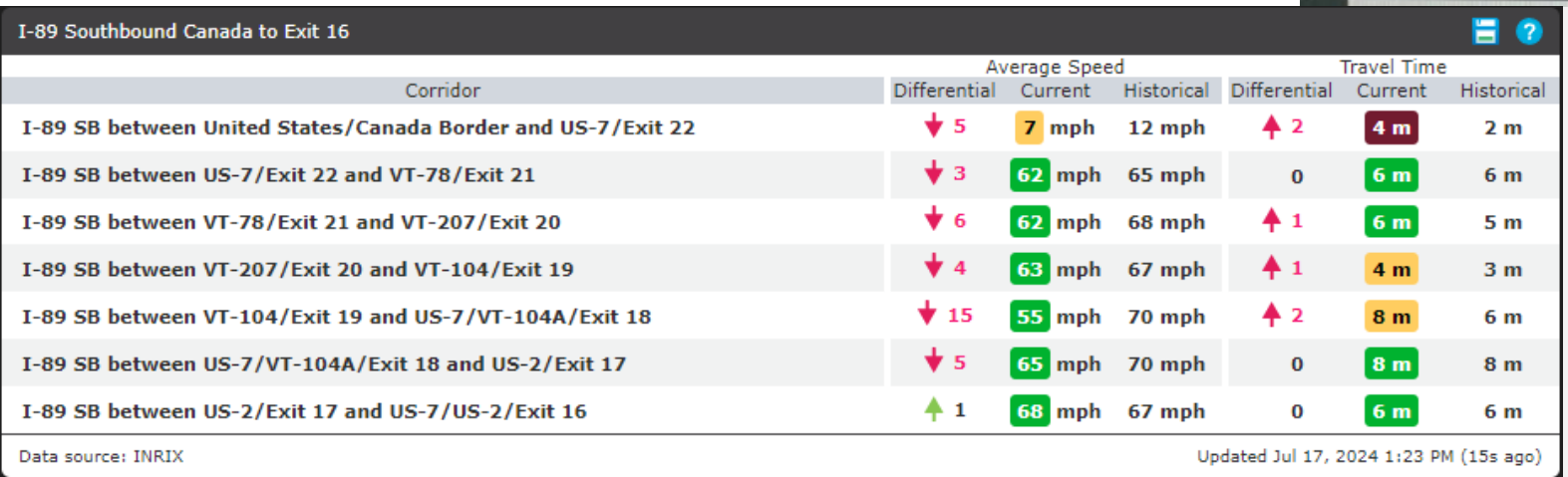
Updated Apr 8, 2024 9:00

I-89 Southbound Exit 8 to NH border

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current
I-89 SB between Memorial Dr/Exit 8 and VT-62/Exit 7	↓ 47	21 mph	68 mph	↑ 6	8 m
I-89 SB between VT-62/Exit 7 and VT-63/Exit 6	↓ 55	16 mph	71 mph	↑ 11	14 m
I-89 SB between VT-63/Exit 6 and VT-64/Exit 5	↓ 60	12 mph	72 mph	↑ 16	19 m
I-89 SB between VT-64/Exit 5 and VT-66/Exit 4	↓ 34	37 mph	71 mph	↑ 10	20 m
I-89 SB between VT-66/Exit 4 and VT-107/Exit 3	↓ 34	37 mph	71 mph	↑ 7	14 m
I-89 SB between VT-107/Exit 3 and VT-132/Exit 2	↓ 44	27 mph	71 mph	↑ 13	20 m
I-89 SB between VT-132/Exit 2 and US-4/Exit 1	↓ 54	17 mph	71 mph	↑ 27	35 m
I-89 SB between US-4/Exit 1 and I-91	↓ 54	15 mph	69 mph	↑ 9	12 m
I-89 SB between I-91 and VT--NH STATE BORDER	↓ 35	29 mph	64 mph	↑ 1	2 m

Data source: INRIX

Updated Apr 8, 2024 9:00



I-89 Southbound Canada to Exit 16

Corridor	Average Speed Differential	Average Speed Current	Average Speed Historical	Travel Time Differential	Travel Time Current	Travel Time Historical
I-89 SB between United States/Canada Border and US-7/Exit 22	↓ 5	7 mph	12 mph	↑ 2	4 m	2 m
I-89 SB between US-7/Exit 22 and VT-78/Exit 21	↓ 3	62 mph	65 mph	0	6 m	6 m
I-89 SB between VT-78/Exit 21 and VT-207/Exit 20	↓ 6	62 mph	68 mph	↑ 1	6 m	5 m
I-89 SB between VT-207/Exit 20 and VT-104/Exit 19	↓ 4	63 mph	67 mph	↑ 1	4 m	3 m
I-89 SB between VT-104/Exit 19 and US-7/VT-104A/Exit 18	↓ 15	55 mph	70 mph	↑ 2	8 m	6 m
I-89 SB between US-7/VT-104A/Exit 18 and US-2/Exit 17	↓ 5	65 mph	70 mph	0	8 m	8 m
I-89 SB between US-2/Exit 17 and US-7/US-2/Exit 16	↑ 1	68 mph	67 mph	0	6 m	6 m

Data source: INRIX

Updated Jul 17, 2024 1:23 PM (15s ago)

- Adjusted Traffic Incident Mangement strategy (VSP)
- Common Operating Picture
- Resource Management (staffing)

Reaction

The dashboards provided a visual of congestion on our interstate systems, border to border, exit to exit, at a glance.

- *“Field Ops kept calling in congestion that our command staff could already see on the big screen.”*
- *“It was easy to see picture how far the congestion stretched.”*
- *“This is really awesome. I had no idea we could do this.”*
- *“This information validated what our people were seeing in the field.”*
- *"I couldn't believe the accuracy of the information we were seeing."*
- *"Provided decision making power for operational changes."*

Next Steps

- Expand dashboard coverage to US routes and other high-volume routes. Consider seasonal traffic
- Monitor dashboards during Traffic Incident Management (TIM) response to crashes
- Consider recommendations for TIM operating procedures
- Continue quarterly workshops and RITIS training for target audiences

Contact

Ryan Knapp
ITS Section Chief
Operations & Safety Bureau, Highway Division
Vermont Agency of Transportation
ryan.knapp@vermont.gov

Post Eclipse Analysis for Vermont AOT

Greg Jordan

Senior Faculty Specialist

UMD CATT Lab

But first, a personal eclipse story...

New Brunswick, Canada looking southeast toward the Atlantic Ocean

NASA photo of eclipse shadow moving over New Brunswick, Canada, taken from the International Space Station at ~3:30 p.m. EST on April 8, 2024

Nova Scotia

Eclipse shadow 1,500 mph

Vermont

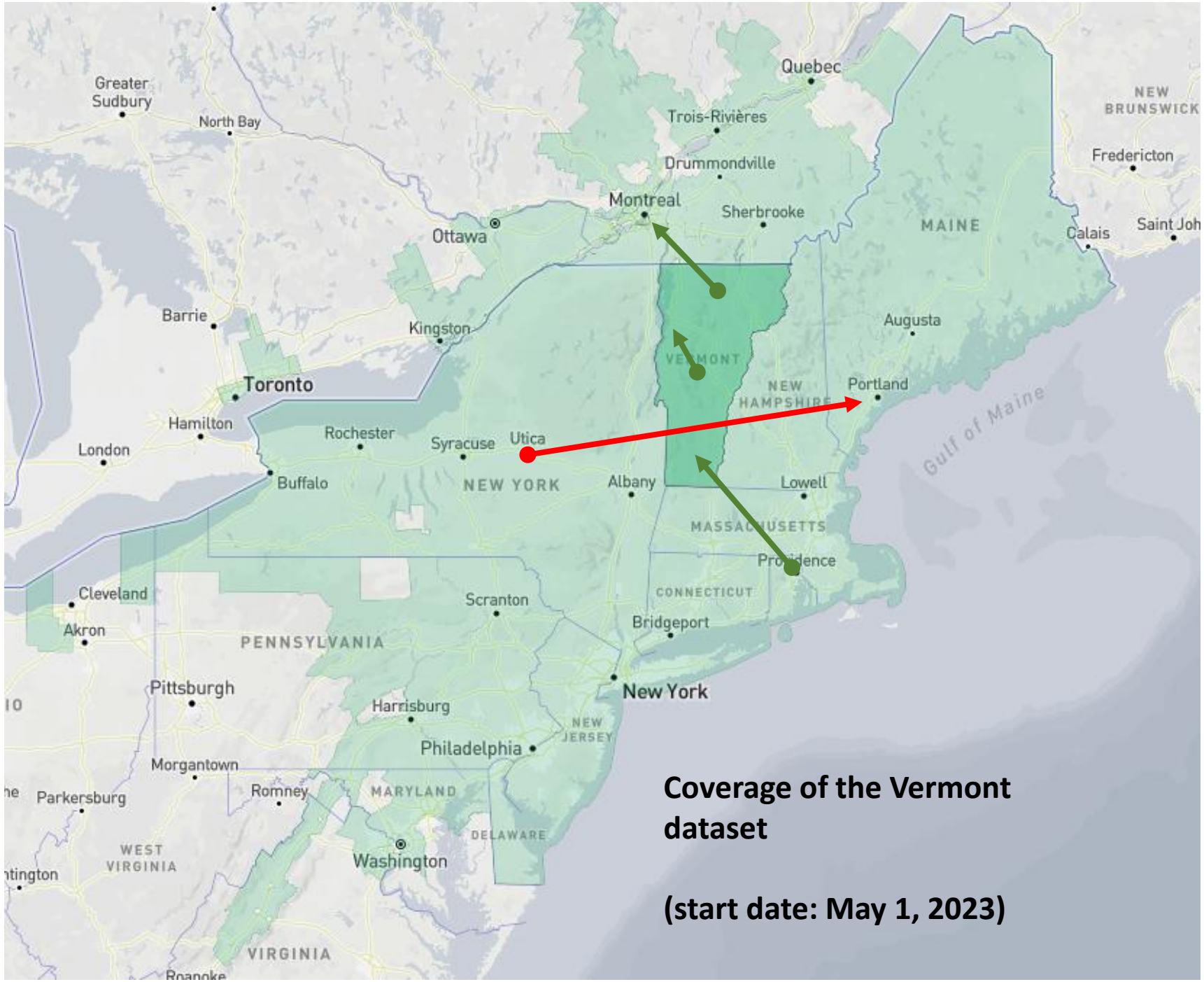
Totality was on Monday, April 8, 2024, at 3:30 p.m.

Where did travelers arrive in Vermont, and where did they come from...

- **...during the Fri-Sat-Sun before totality?**
- **...from midnight to 3:30 p.m. day-of-totality?**
- **... from noon to 3:30 p.m. day-of-totality?**
- **...during the last 90 minutes?**

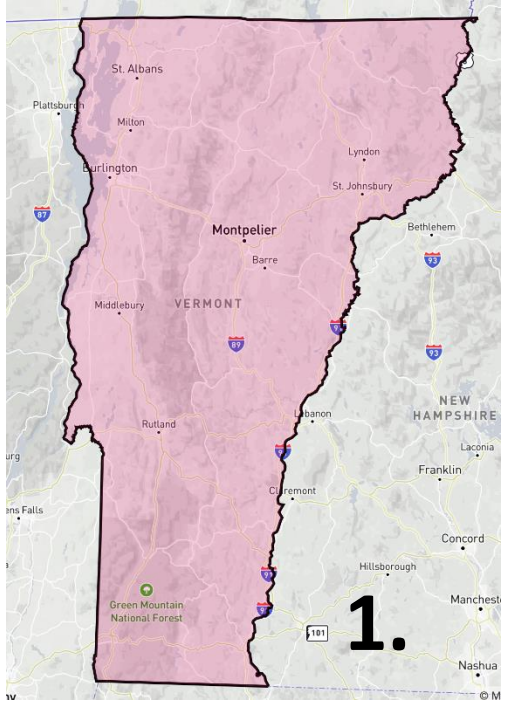
A large sampling of real-world auto or truck trips that started and/or ended inside Vermont are found in the Vermont dataset (green arrows)

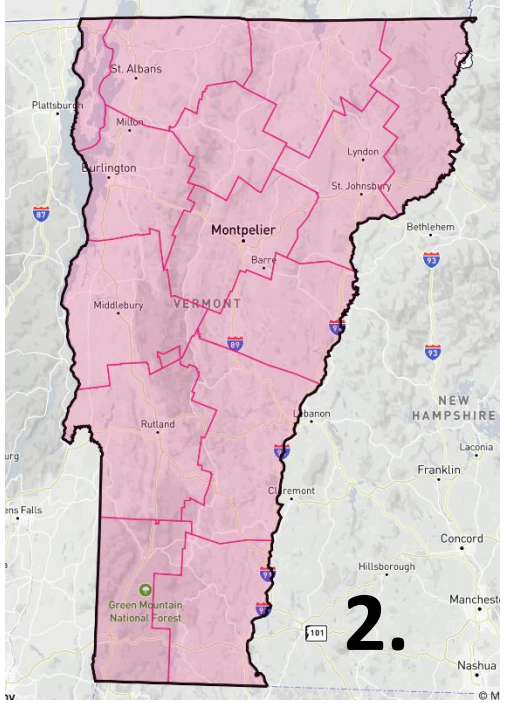
Trips that did not start or end inside Vermont are NOT found in the Vermont dataset (red arrow)

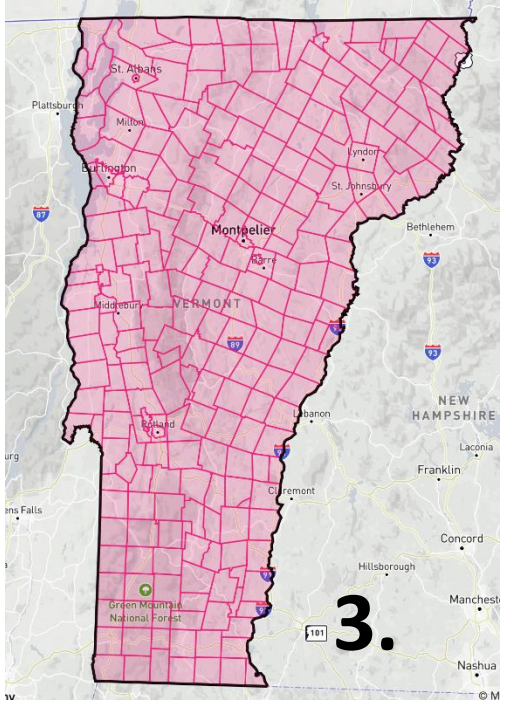


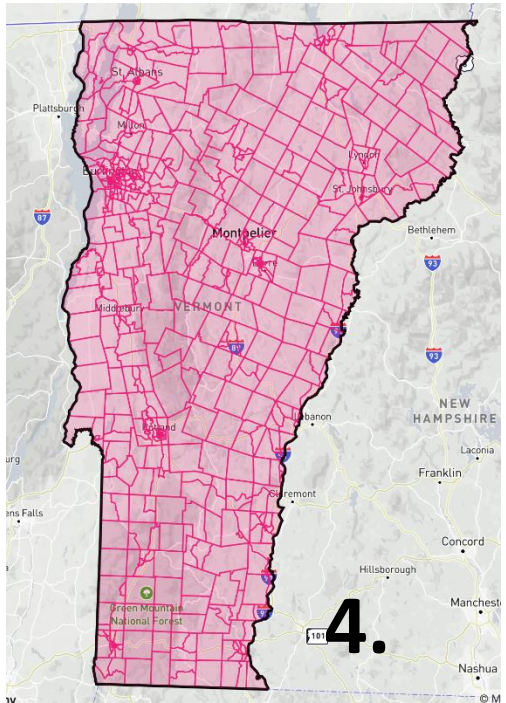
Available zone layers for reporting origins and destinations:

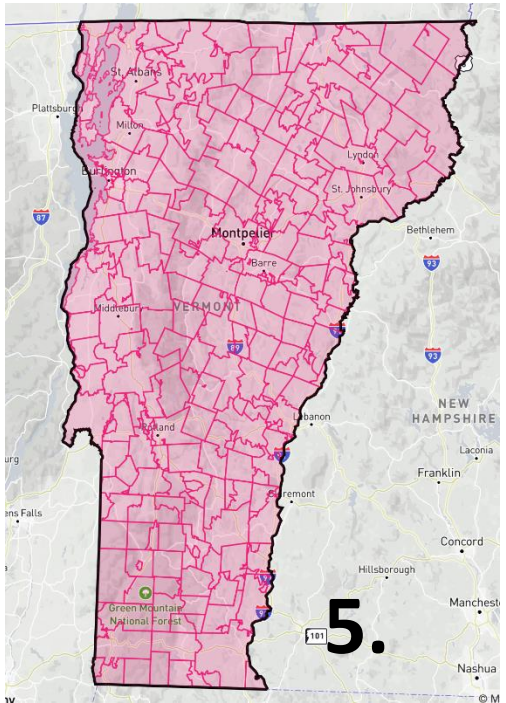
1. **STATE**
2. **COUNTY**
3. **SUB-COUNTY**
4. **TAZ (Traffic Analysis Zone)**
5. **ZIP Code**
6. **Custom (user-created)**

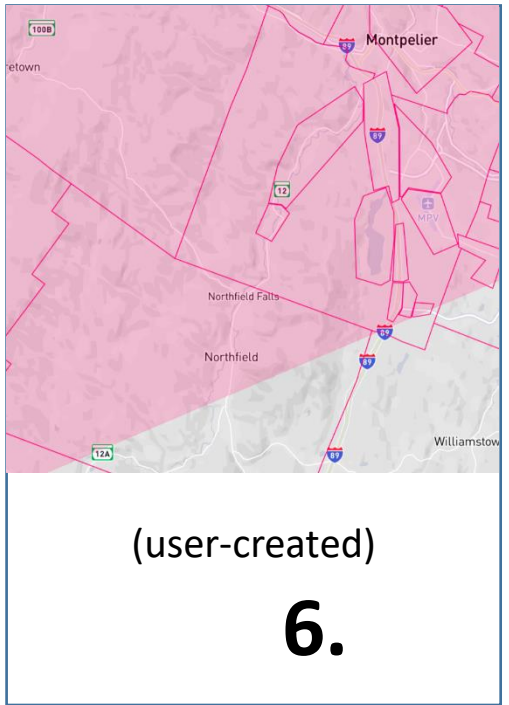


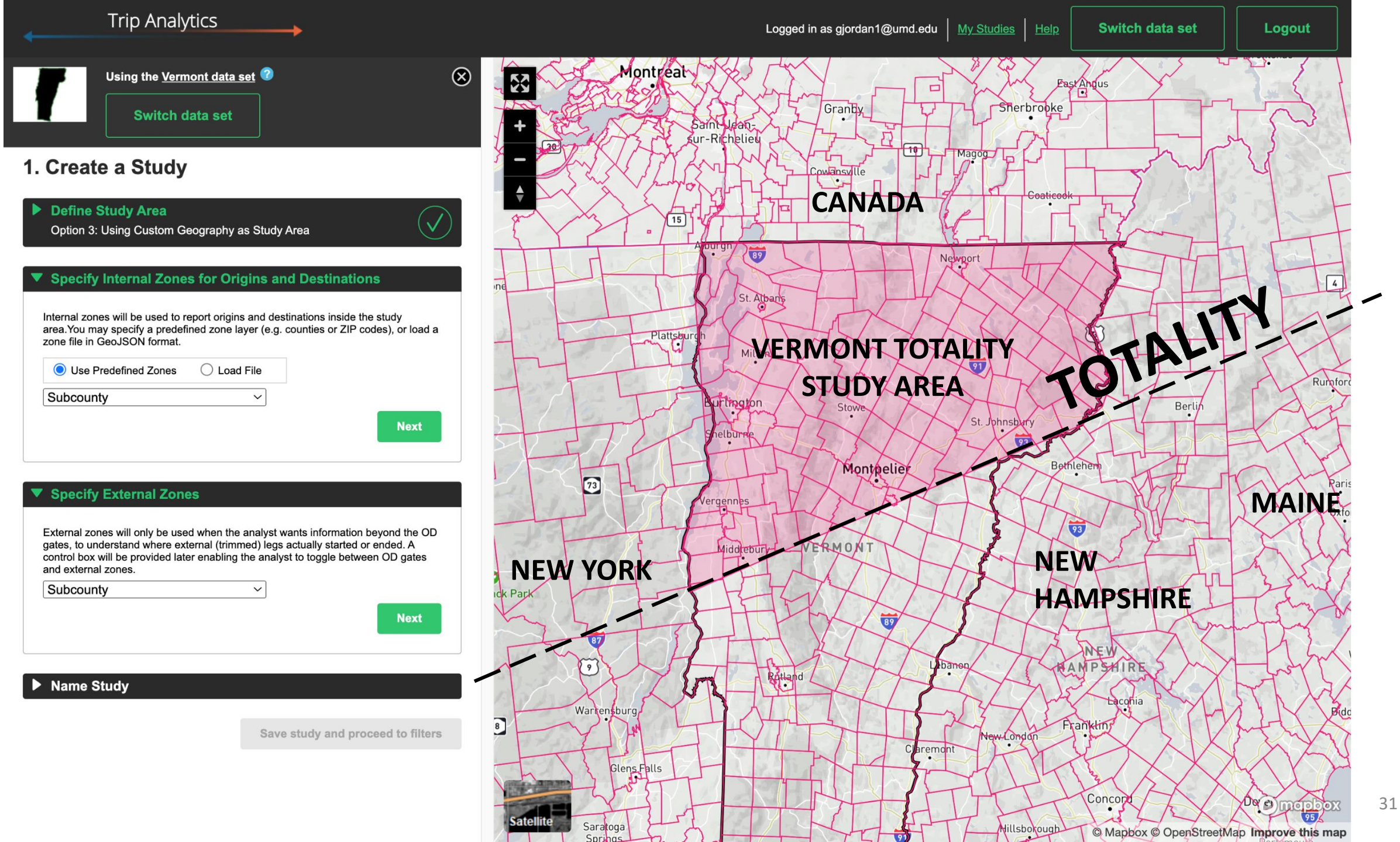











Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Using the Vermont data set
Switch data set
1. Create a Study
Define Study Area
Option 3: Using Custom Geography as Study Area
Specify Internal Zones for Origins and Destinations
Internal zones will be used to report origins and destinations inside the study area.You may specify a predefined zone layer (e.g. counties or ZIP codes), or load a zone file in GeoJSON format.
Use Predefined Zones
Load File
Subcounty
Next
Specify External Zones
External zones will only be used when the analyst wants information beyond the OD gates, to understand where external (trimmed) legs actually started or ended. A control box will be provided later enabling the analyst to toggle between OD gates and external zones.
Subcounty
Next
Name Study
Save study and proceed to filters
CANADA
VERMONT TOTALITY STUDY AREA
TOTALITY
NEW YORK
MAINE
NEW HAMPSHIRE
VERMONT
Montreal
Granby
Sherbrooke
East Angus
Magog
Cowansville
Newport
St. Albans
Plattsburgh
Burlington
Stowe
St. Johnsbury
Berlin
Montpelier
Bethlehem
Vergennes
Middlebury
Rutland
Lebanon
Laconia
Franklin
New London
Claremont
Warrensburg
Glens Falls
Concord
Hillsborough
Satellite
© Mapbox © OpenStreetMap Improve this map

2. Set Filters

Set Spatial Filter(s)

Study area Spatial Filter: custom

Include trips that: Started Outside and Ended Inside

Set Temporal Filter(s)

Spatial filters for this query span multiple time zones;
Please specify which one to use:

Time Zone:

(•) America/New_York ( ) America/Montreal

Choose a time range to analyze data in.

( ) Times (•) **Dates** ( ) Months ( ) Year

Start Date 04/05/2024

End Date 04/07/2024

Days of Week:

✓ Sun | Mon | ✓ Tue | ✓ Wed | ✓ Thu | ✓ Fri | ✓ Sat

3 days (2 days selected)

Time of Day:

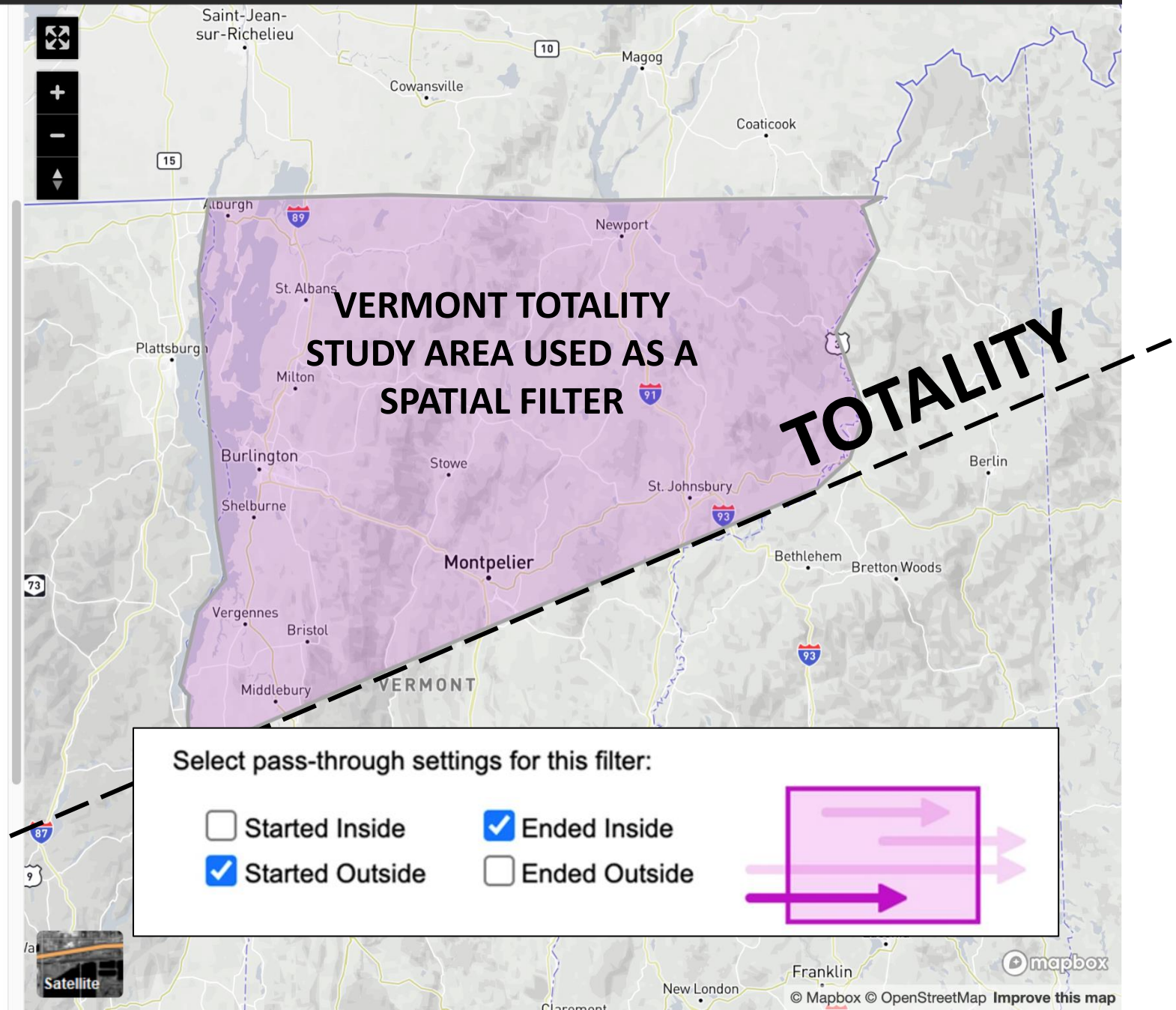
[ ] All day

12:00 AM - to - 03:30 PM

Next

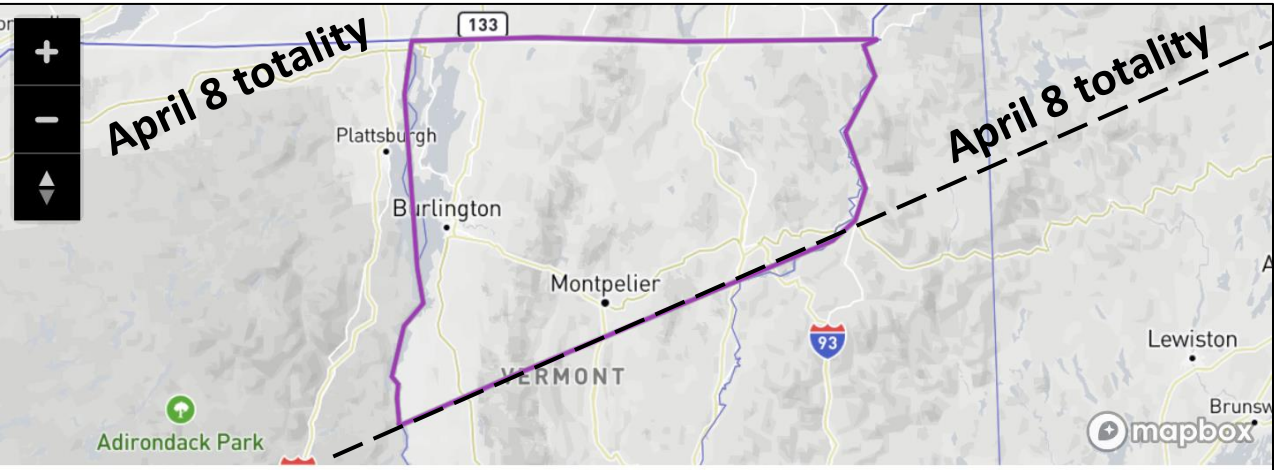
Set Other Filter(s)

Vehicle type: none



Filter settings for Vermont's totality study area (started outside, ended inside)

Find trips on Fri-Sat-Sun before eclipse, all day



Study area:
Vermont-Totality study area V2 precise.geojson

OD Definitions:
Internal – Vt_sub_county_merged.Geojson
External – Subcounties

Spatial filter:
Study Area
Started Outside
Ended Inside

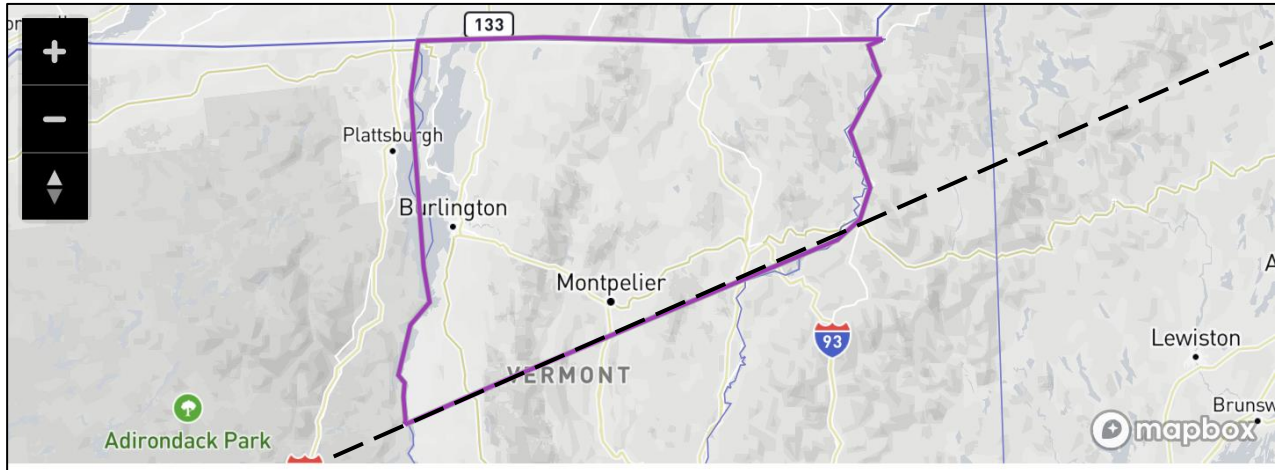
Temporal filter:
4/5/2024 - 4-/7/24
All hours
F-S-S

Other filters:
Vehicle type:
☑ Light
☐ Medium
☐ Heavy

Advanced settings:
Probe source type: CV, LBS

Eclipse-affected: April 5-6-7 (weekend prior)

Find post-eclipse trips for control, Fri-Sat-Sun 7 days later



Study area:
Vermont-Totality study area V2 precise.geojson

OD Definitions:
Internal – Vt_sub_county_merged.Geojson
External – Subcounties

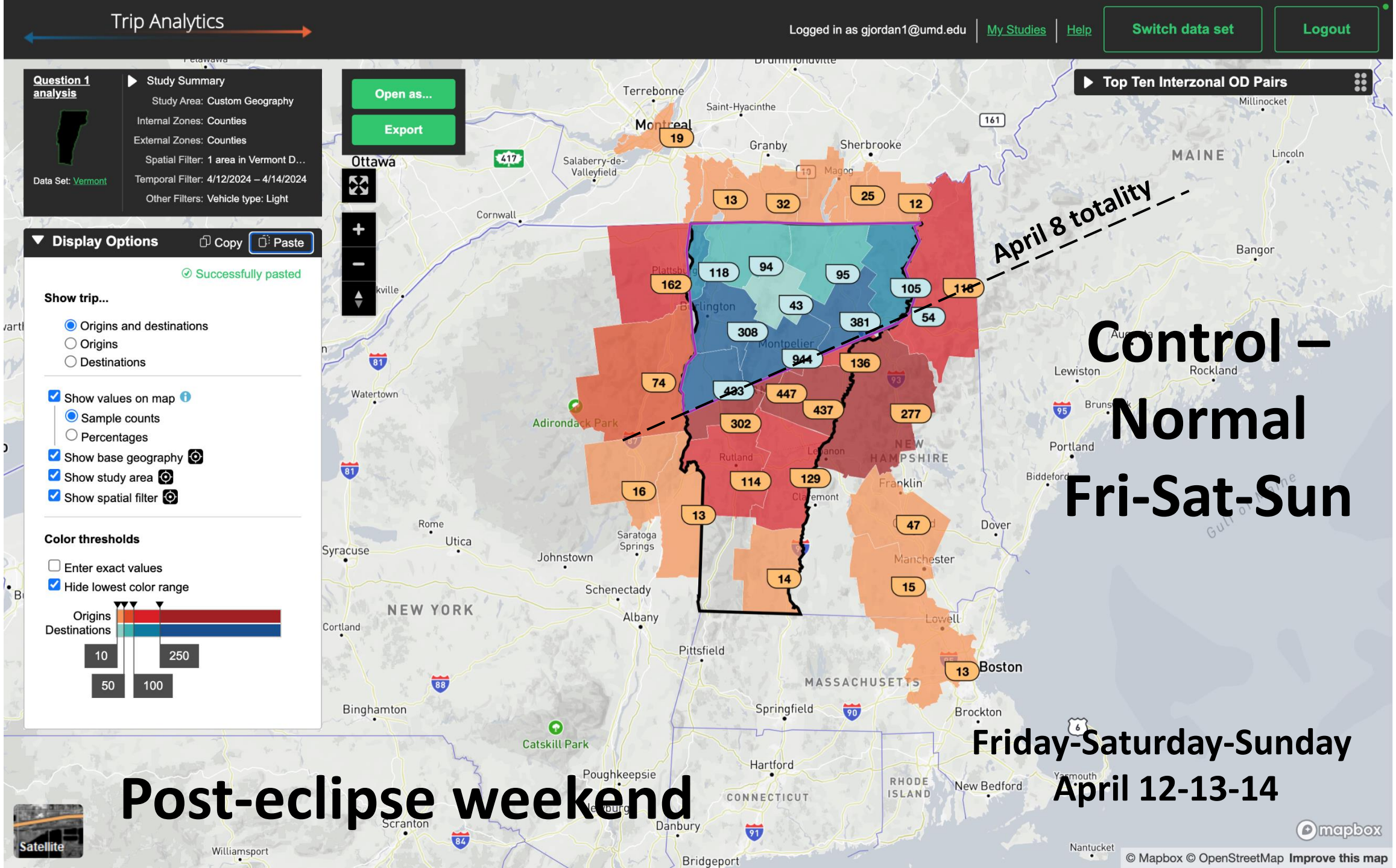
Spatial filter:
Study Area
Started Outside
Ended Inside

Temporal filter:
4/15/2024
12:00 PM – 3:30 PM (America/New_York)
M T W T F S S

Other filters:
Vehicle type:
☑ Light
☐ Medium
☐ Heavy

Advanced settings:
Probe source type: CV, LBS

Control: April 12-13-14 (one week later)


Trip Analytics
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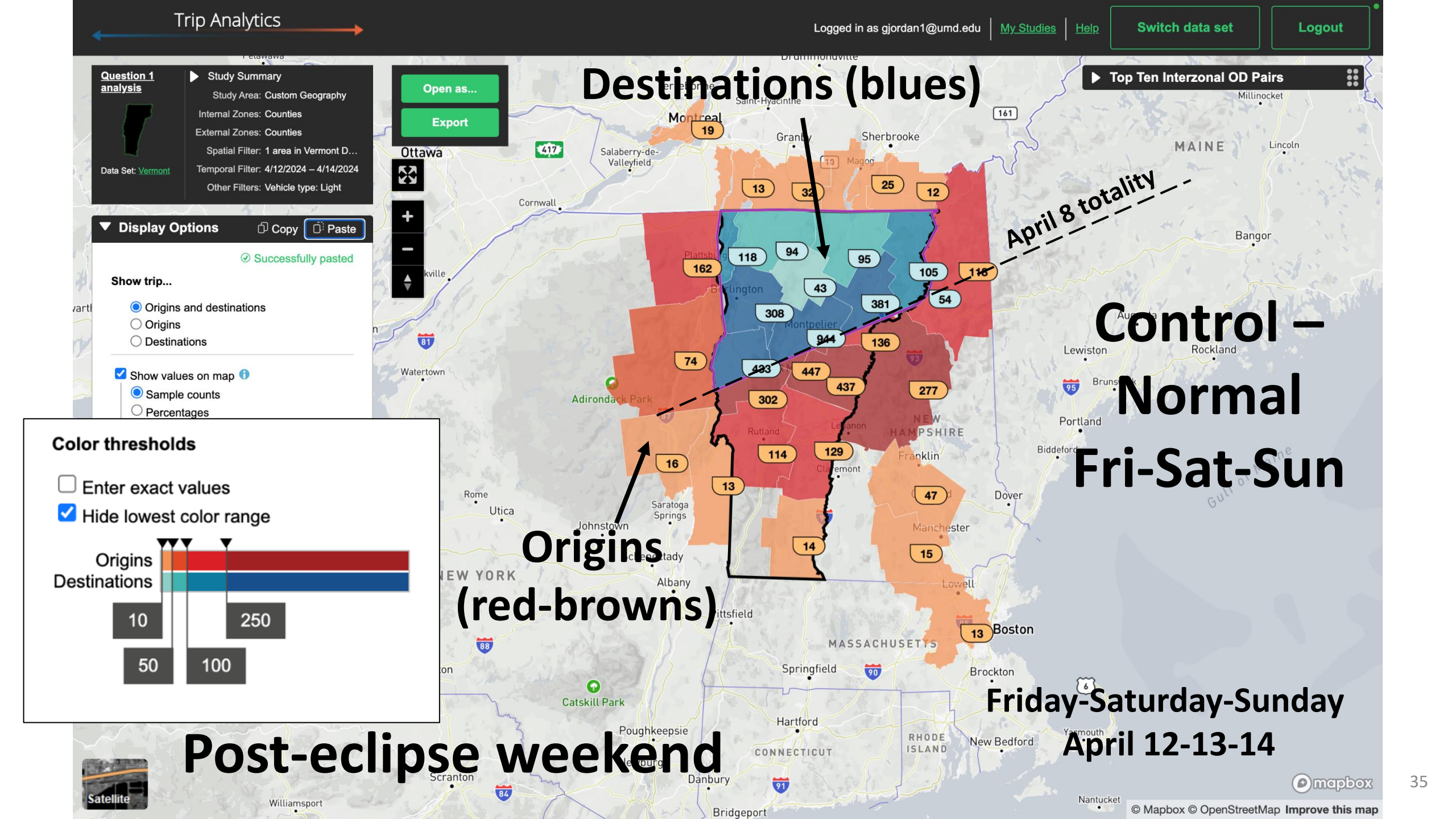
My Studies
Help
Switch data set
Logout
Question 1 analysis
Study Summary
Study Area: Custom Geography
Internal Zones: Counties
External Zones: Counties
Spatial Filter: 1 area in Vermont D...
Temporal Filter: 4/12/2024 – 4/14/2024
Other Filters: Vehicle type: Light
Data Set: Vermont
Open as...
Export
Top Ten Interzonal OD Pairs
Display Options
Copy
Paste
Successfully pasted
Show trip...
Origins and destinations
Origins
Destinations
Show values on map
Sample counts
Percentages
Show base geography
Show study area
Show spatial filter
Color thresholds
Enter exact values
Hide lowest color range
Origins
Destinations
10
250
50
100
April 8 totality
Control –
Normal
Fri-Sat-Sun
Post-eclipse weekend
Friday-Saturday-Sunday
April 12-13-14
Satellite
mapbox
© Mapbox © OpenStreetMap Improve this map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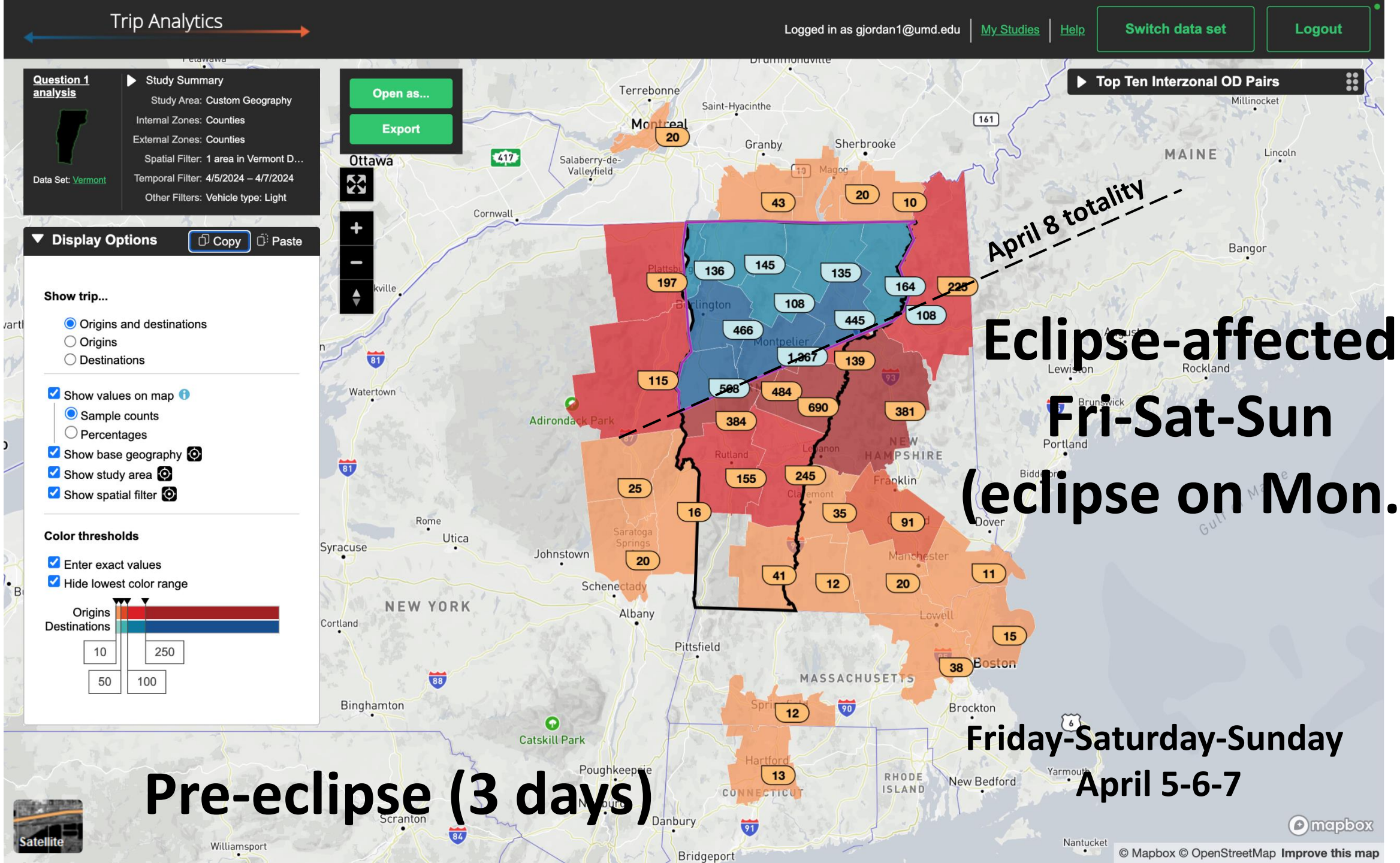
Show trip...
Origins and destinations
Origins
Destinations
Show values on map
Sample counts
Percentages
Color thresholds
Enter exact values
Hide lowest color range
Origins
Destinations
10
250
50
100
Destinations (blues)
April 8 totality
Control – Normal Fri-Sat-Sun
Origins (red-browns)
Post-eclipse weekend
Friday-Saturday-Sunday
April 12-13-14
Satellite
mapbox
© Mapbox © OpenStreetMap Improve this map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Other Filters: Vehicle type: Light
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Open as...
Export
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Display Options
Copy
Paste
Show trip...
Origins and destinations
Origins
Destinations
Show values on map
Sample counts
Percentages
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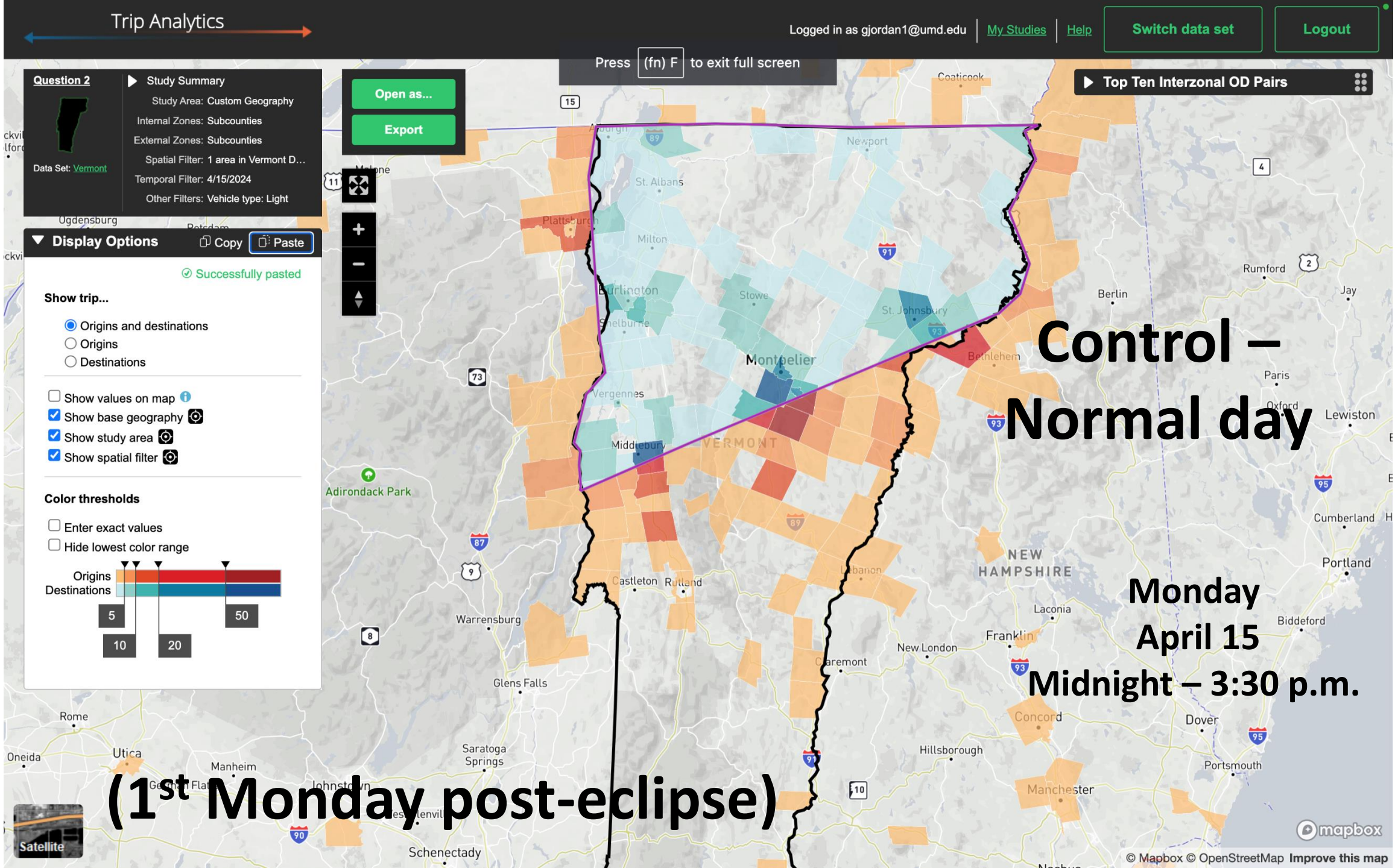
Color thresholds
Enter exact values
Hide lowest color range
Origins
Destinations
10
250
50
100
April 8 totality
Eclipse-affected
Fri-Sat-Sun
(eclipse on Mon.)
Pre-eclipse (3 days)
Friday-Saturday-Sunday
April 5-6-7
Satellite
mapbox
© Mapbox © OpenStreetMap Improve this map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Press (fn) F to exit full screen
Question 2
Data Set: Vermont
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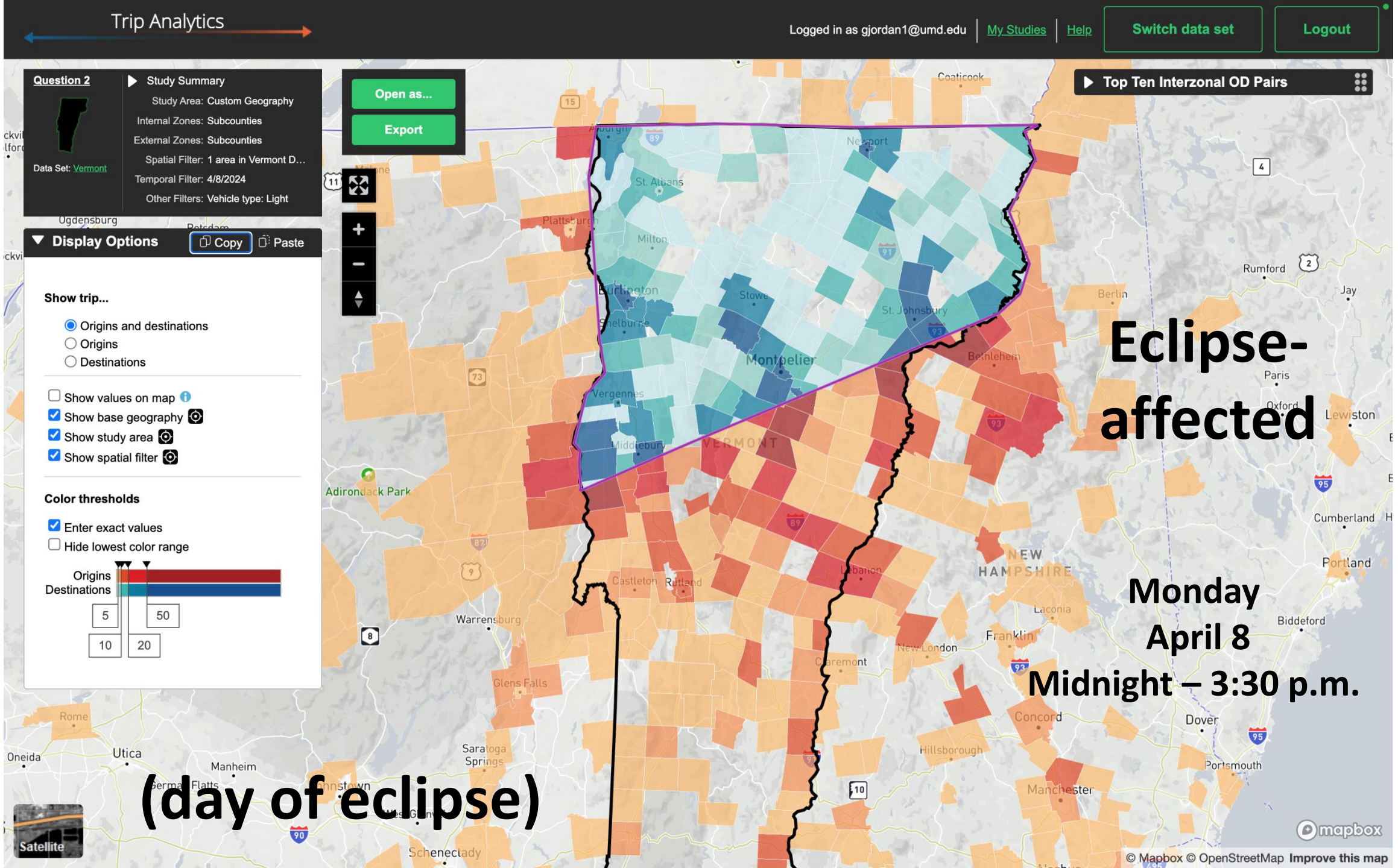
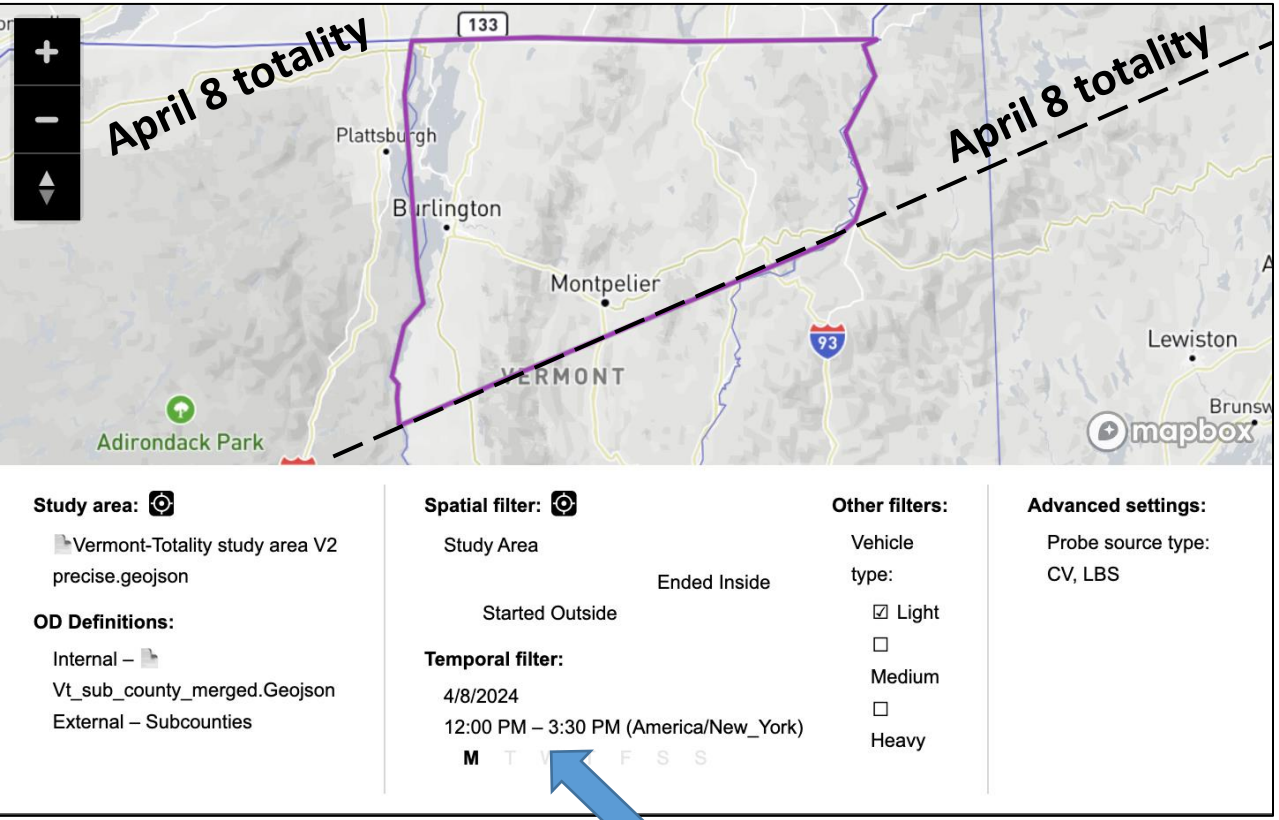
Spatial Filter: 1 area in Vermont D…
Temporal Filter: 4/15/2024
Other Filters: Vehicle type: Light
Open as...
Export
Top Ten Interzonal OD Pairs
Display Options
Copy
Paste
Successfully pasted
Show trip...
Origins and destinations
Origins
Destinations
Show values on map
Show base geography
Show study area
Show spatial filter
Color thresholds
Enter exact values
Hide lowest color range
Origins
Destinations
5
10
20
50
Control –
Normal day
Monday
April 15
Midnight – 3:30 p.m.
(1st Monday post-eclipse)
Satellite
mapbox
© Mapbox © OpenStreetMap Improve this map


Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Question 2
Data Set: Vermont
Study Summary
Study Area: Custom Geography
Internal Zones: Subcounties
External Zones: Subcounties
Spatial Filter: 1 area in Vermont D…
Temporal Filter: 4/8/2024
Other Filters: Vehicle type: Light
Open as...
Export
Top Ten Interzonal OD Pairs
Display Options
Copy
Paste
Show trip...
Origins and destinations
Origins
Destinations
Show values on map
Show base geography
Show study area
Show spatial filter
Color thresholds
Enter exact values
Hide lowest color range
Origins
Destinations
5
50
10
20
Satellite
Eclipse-affected
Monday
April 8
Midnight – 3:30 p.m.
(day of eclipse)
mapbox
© Mapbox © OpenStreetMap Improve this map

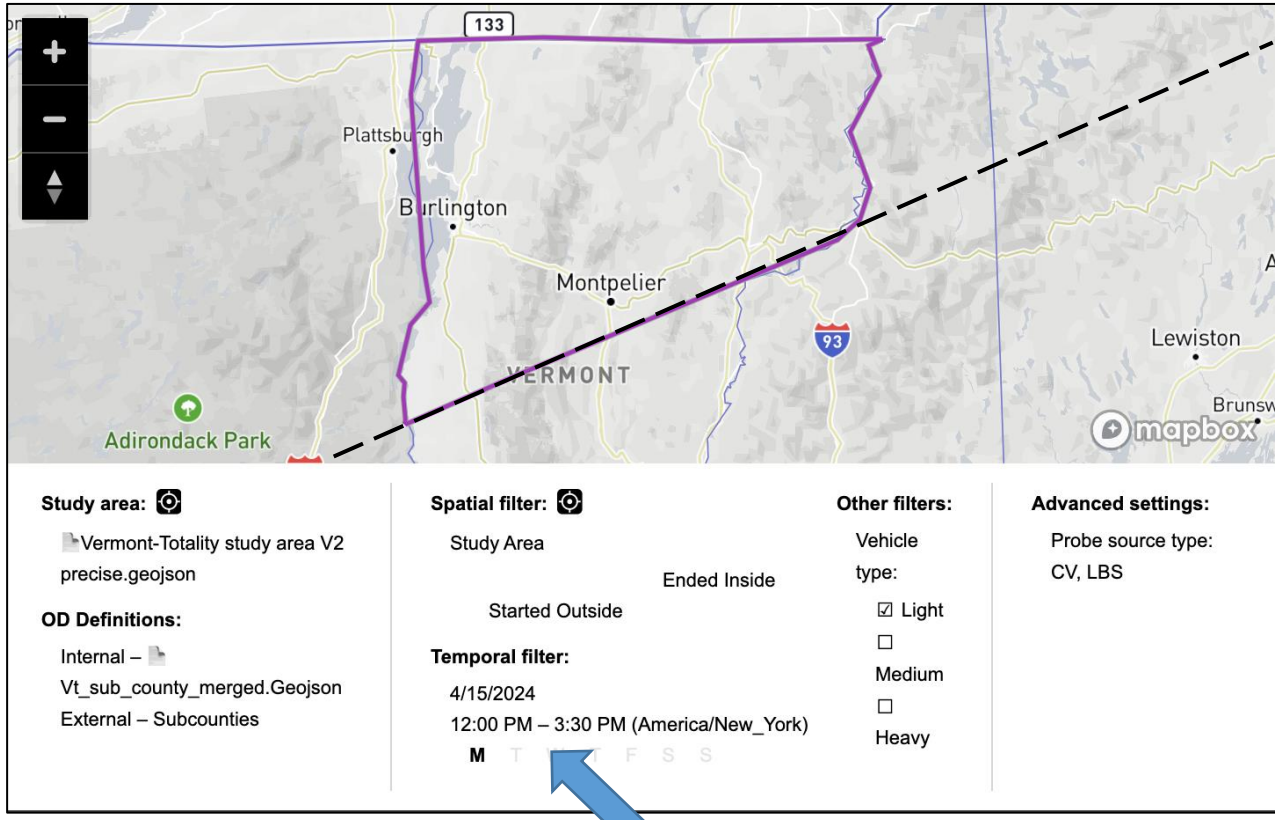
Travel during last 3.5 hours... Roadside parking?

Travel during last 3.5 hours... Roadside parking?

Day of eclipse, noon – 3:30 p.m.

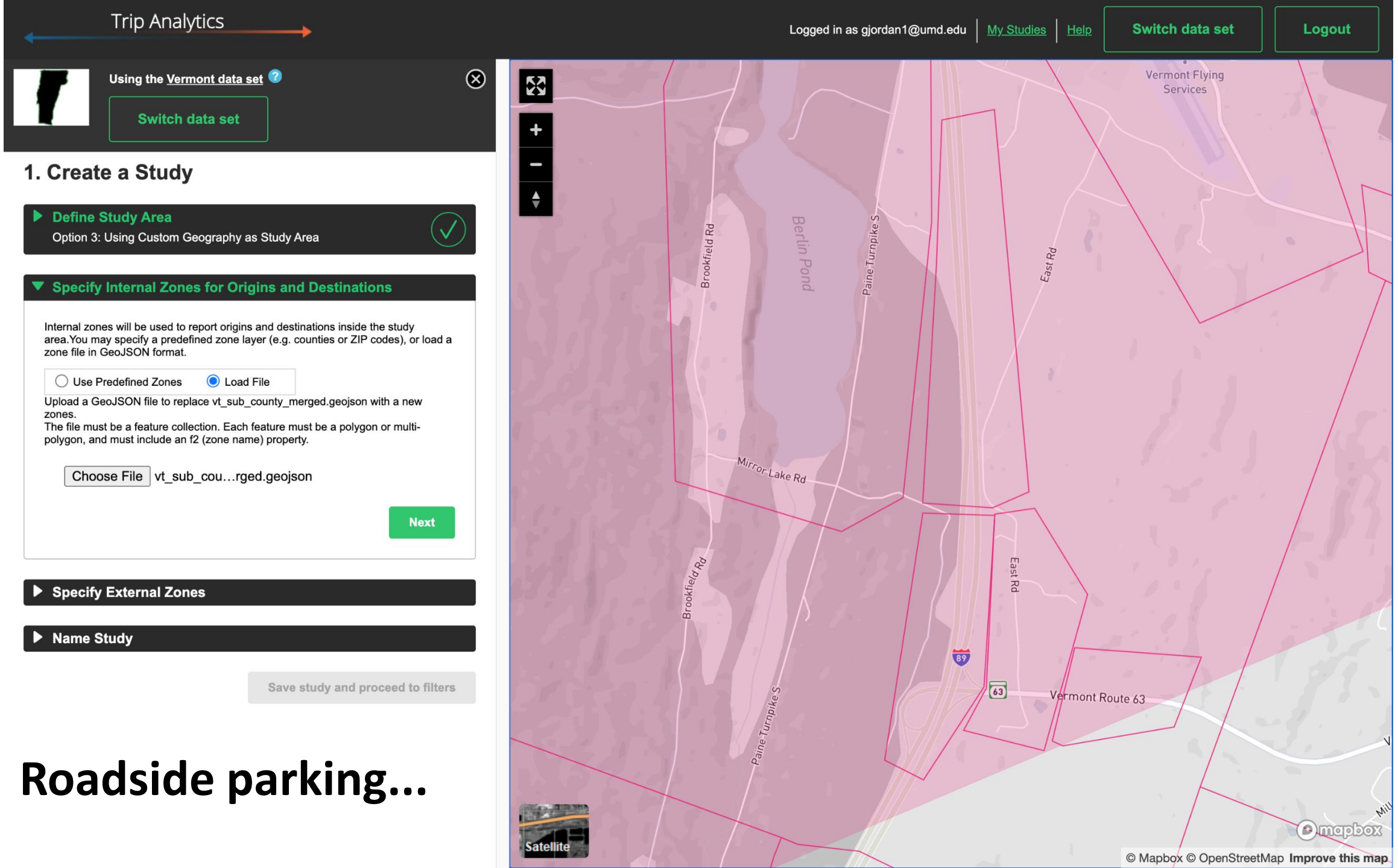


Normal day, same time

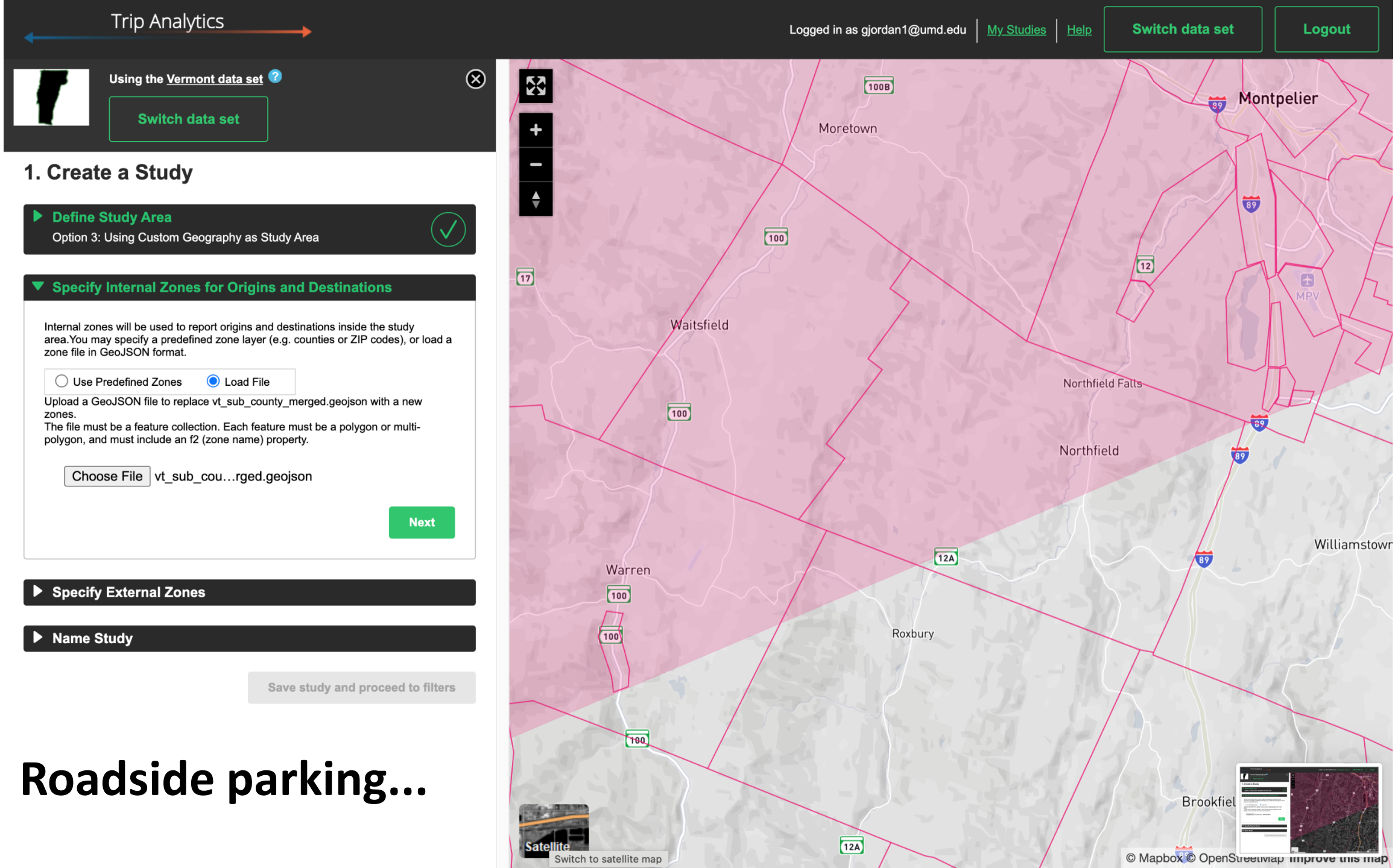


Auto trips on April 8th during last 3.5 hrs before totality

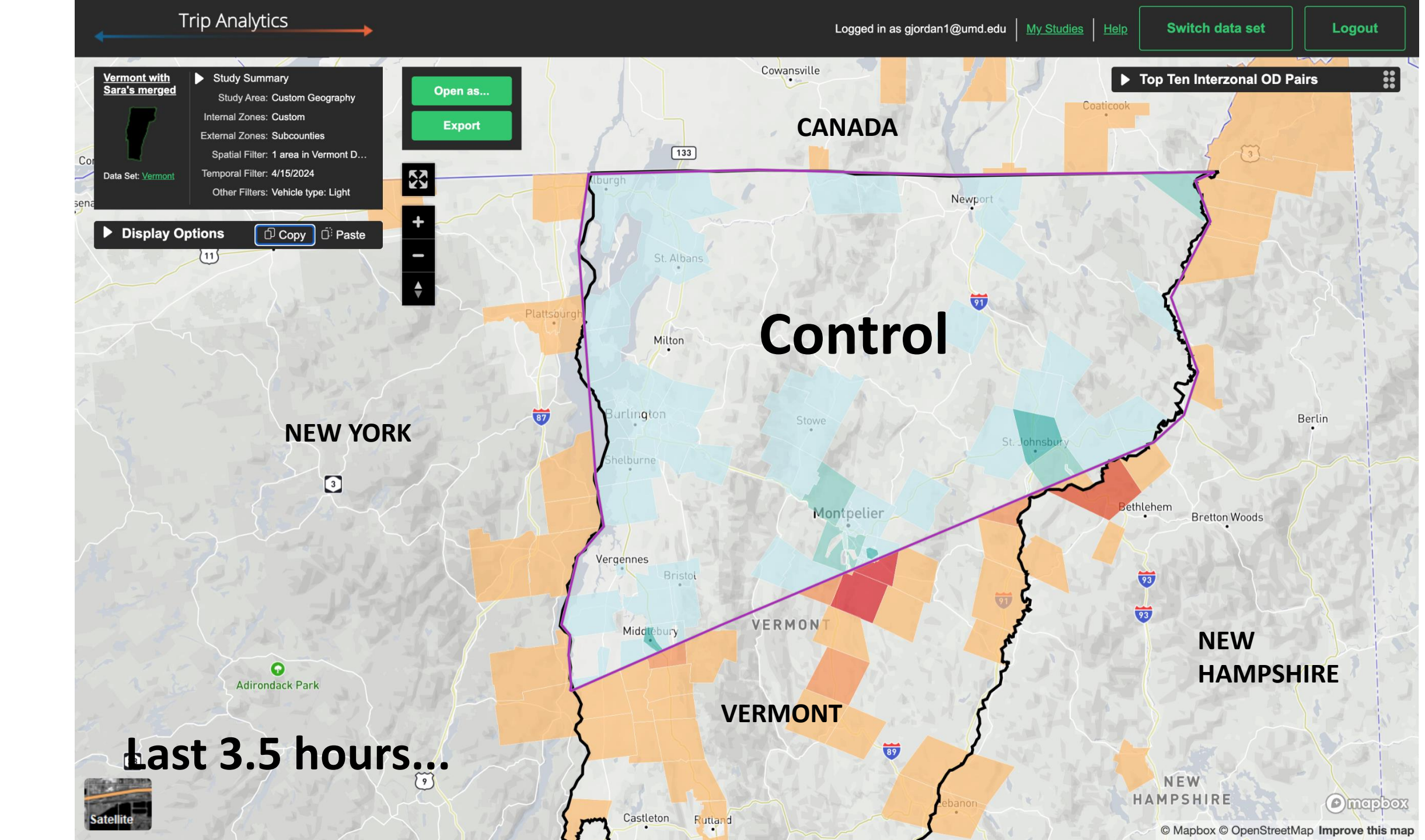
Control: April 15th (one week later)



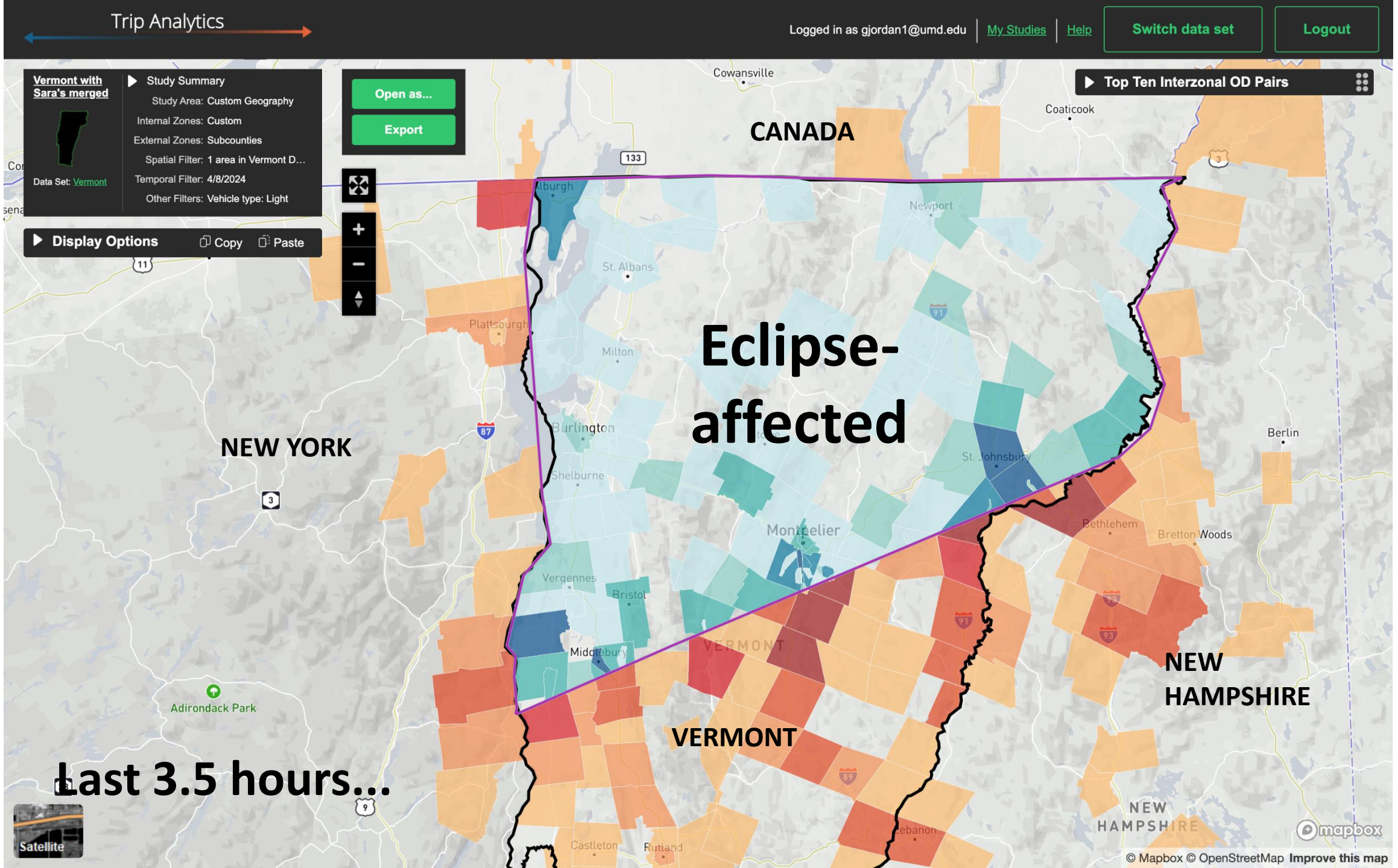
Roadside parking...

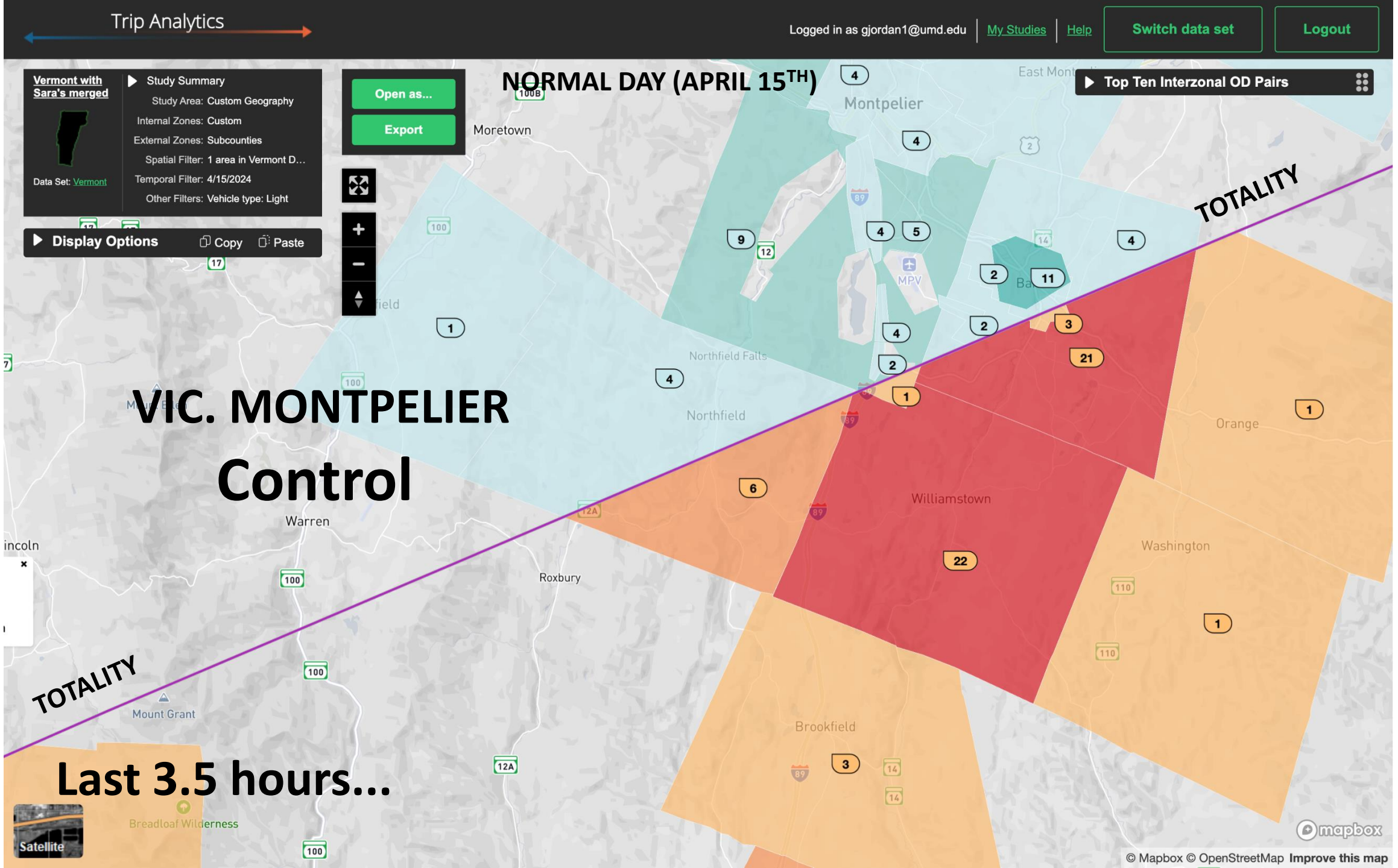


Roadside parking...



Last 3.5 hours...


Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Vermont with Sara's merged
Data Set: Vermont
Study Summary
Study Area: Custom Geography
Internal Zones: Custom
External Zones: Subcounties
Spatial Filter: 1 area in Vermont D...
Temporal Filter: 4/8/2024
Other Filters: Vehicle type: Light
Open as...
Export
Display Options
Copy
Paste
Top Ten Interzonal OD Pairs
CANADA
NEW YORK
VERMONT
NEW HAMPSHIRE
Eclipse-affected
Last 3.5 hours...
Cowansville
Coaticook
Newport
St. Albans
Plattsburgh
Milton
Burlington
Shelburne
St. Johnsbury
Berlin
Montpelier
Bethlehem
Bretton Woods
Vergennes
Bristol
Middlebury
Adirondack Park
Castleton
Rutland
Lebanon
Satellite
© Mapbox © OpenStreetMap Improve this map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Logout
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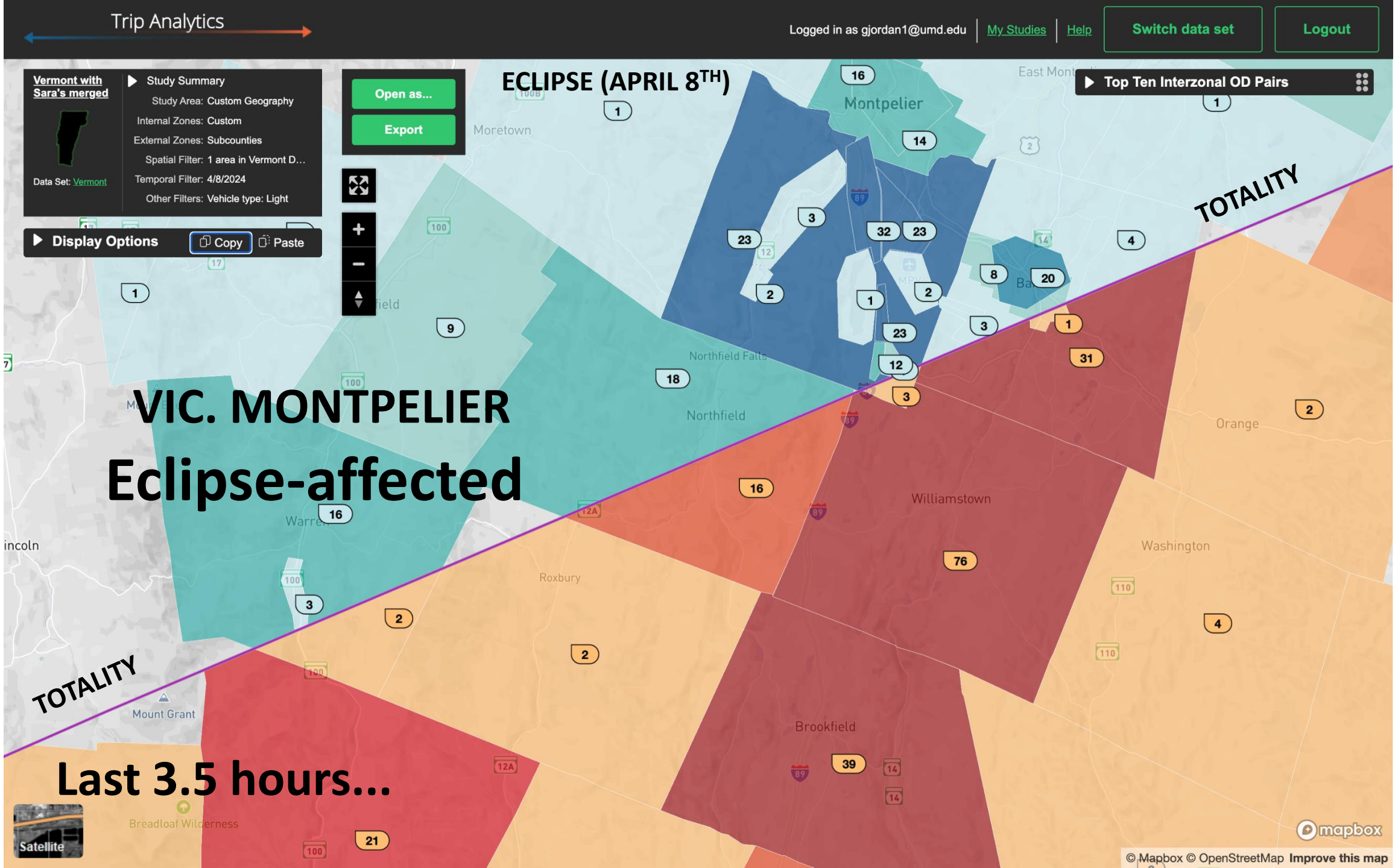
Internal Zones: Custom
External Zones: Subcounties
Spatial Filter: 1 area in Vermont D...
Temporal Filter: 4/15/2024
Other Filters: Vehicle type: Light
Data Set: Vermont
Display Options
Copy
Paste
Open as...
Export
NORMAL DAY (APRIL 15TH)
Top Ten Interzonal OD Pairs
TOTALITY
TOTALITY
VIC. MONTPELIER
Control
Last 3.5 hours...
Montpelier
Moretown
Northfield Falls
Northfield
Williamstown
Orange
Washington
Warren
Roxbury
Brookfield
Mount Grant
Breadloaf Wilderness
Satellite
mapbox
© Mapbox © OpenStreetMap Improve this map


Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Vermont with Sara's merged
Study Summary
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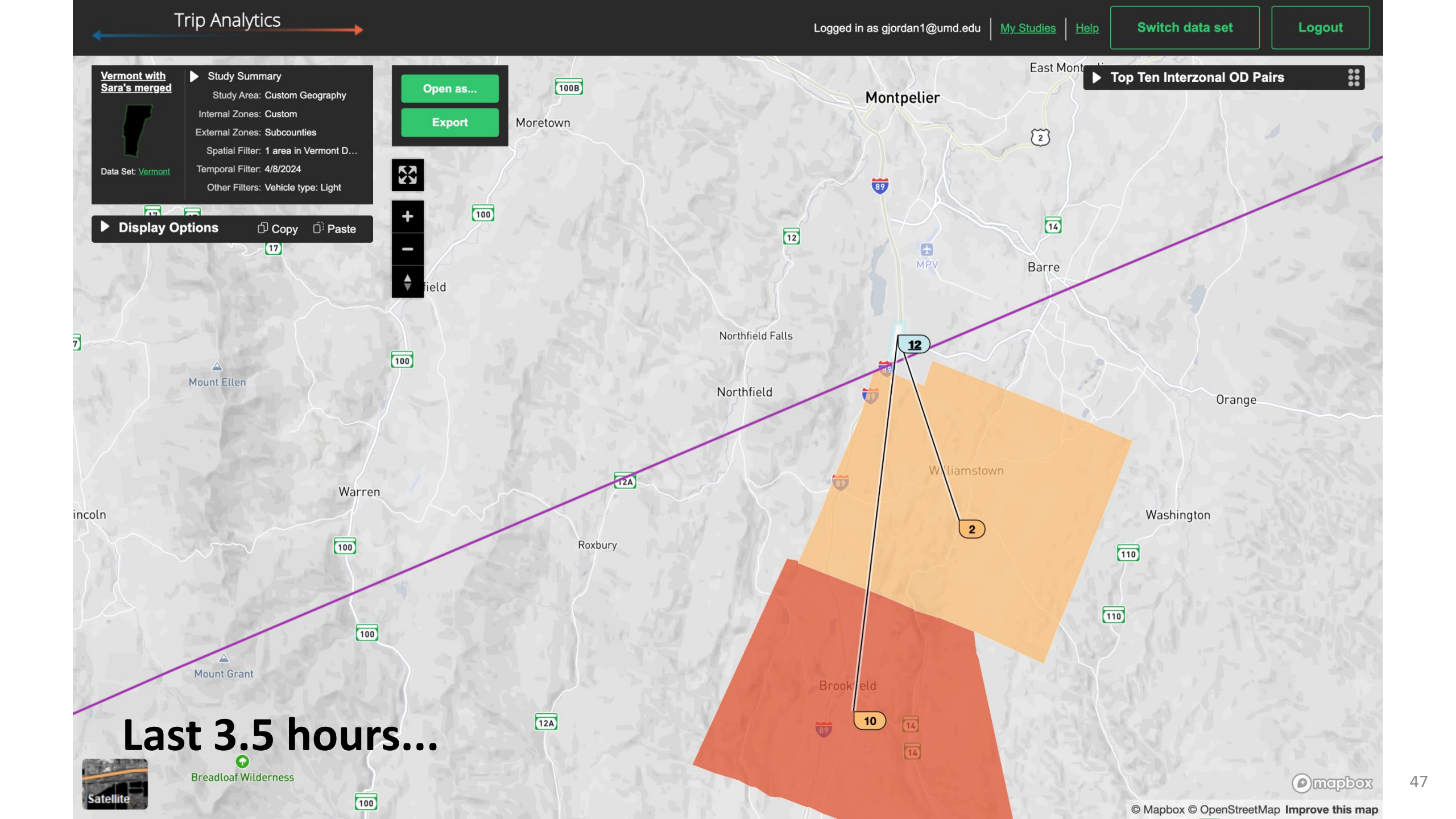
Internal Zones: Custom
External Zones: Subcounties
Spatial Filter: 1 area in Vermont D...
Temporal Filter: 4/8/2024
Other Filters: Vehicle type: Light
Data Set: Vermont
Open as...
Export
Display Options
Copy
Paste
ECLIPSE (APRIL 8TH)
Top Ten Interzonal OD Pairs
TOTALITY
TOTALITY
VIC. MONTPELIER
Eclipse-affected
Last 3.5 hours...
Montpelier
Moretown
Northfield Falls
Northfield
Williamstown
Orange
Washington
Roxbury
Brookfield
Warren
Mount Grant
Breadloaf Wilderness
Satellite
mapbox
© Mapbox © OpenStreetMap Improve this map


Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Vermont with Sara's merged
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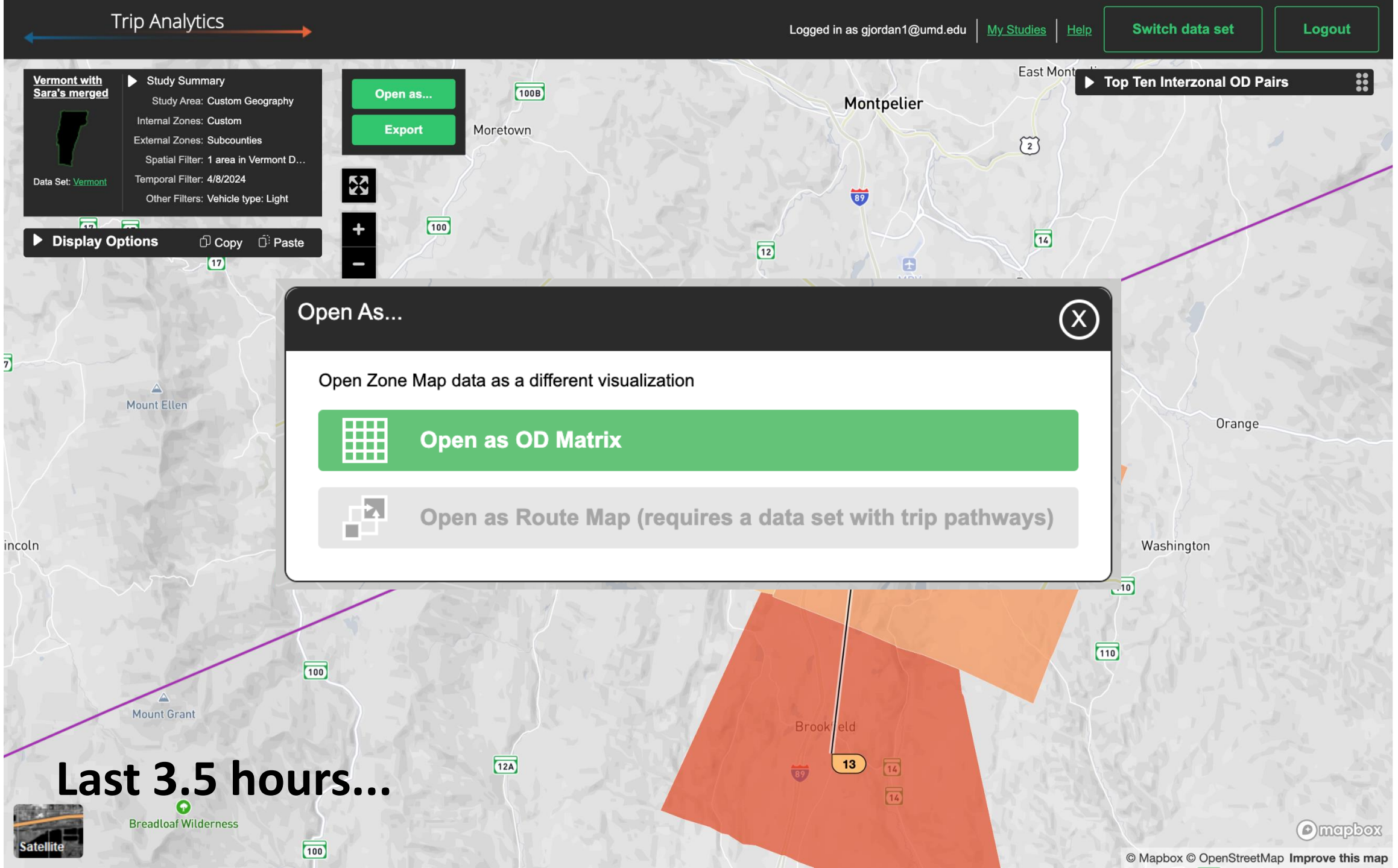
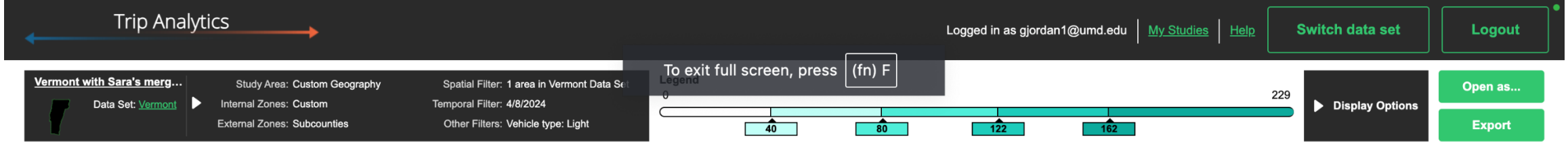
Temporal Filter: 4/8/2024
Other Filters: Vehicle type: Light
Data Set: Vermont
Open as...
Export
Display Options
Copy
Paste
Top Ten Interzonal OD Pairs
Montpelier
Moretown
Barre
Northfield Falls
Northfield
Orange
Warren
Roxbury
Washington
Mount Ellen
Mount Grant
Breadloaf Wilderness
Satellite
12
2
10
Last 3.5 hours...
© Mapbox © OpenStreetMap Improve this map


Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Vermont with Sara's merged
Study Summary
Study Area: Custom Geography
Internal Zones: Custom
External Zones: Subcounties
Spatial Filter: 1 area in Vermont D...
Temporal Filter: 4/8/2024
Other Filters: Vehicle type: Light
Data Set: Vermont
Open as...
Export
Top Ten Interzonal OD Pairs
Display Options
Copy
Paste
Open As...
Open Zone Map data as a different visualization
Open as OD Matrix
Open as Route Map (requires a data set with trip pathways)
Montpelier
Moretown
Mount Ellen
Orange
Washington
Mount Grant
Brookfield
Breadloaf Wilderness
Satellite
Last 3.5 hours...
© Mapbox © OpenStreetMap Improve this map



Sample counts

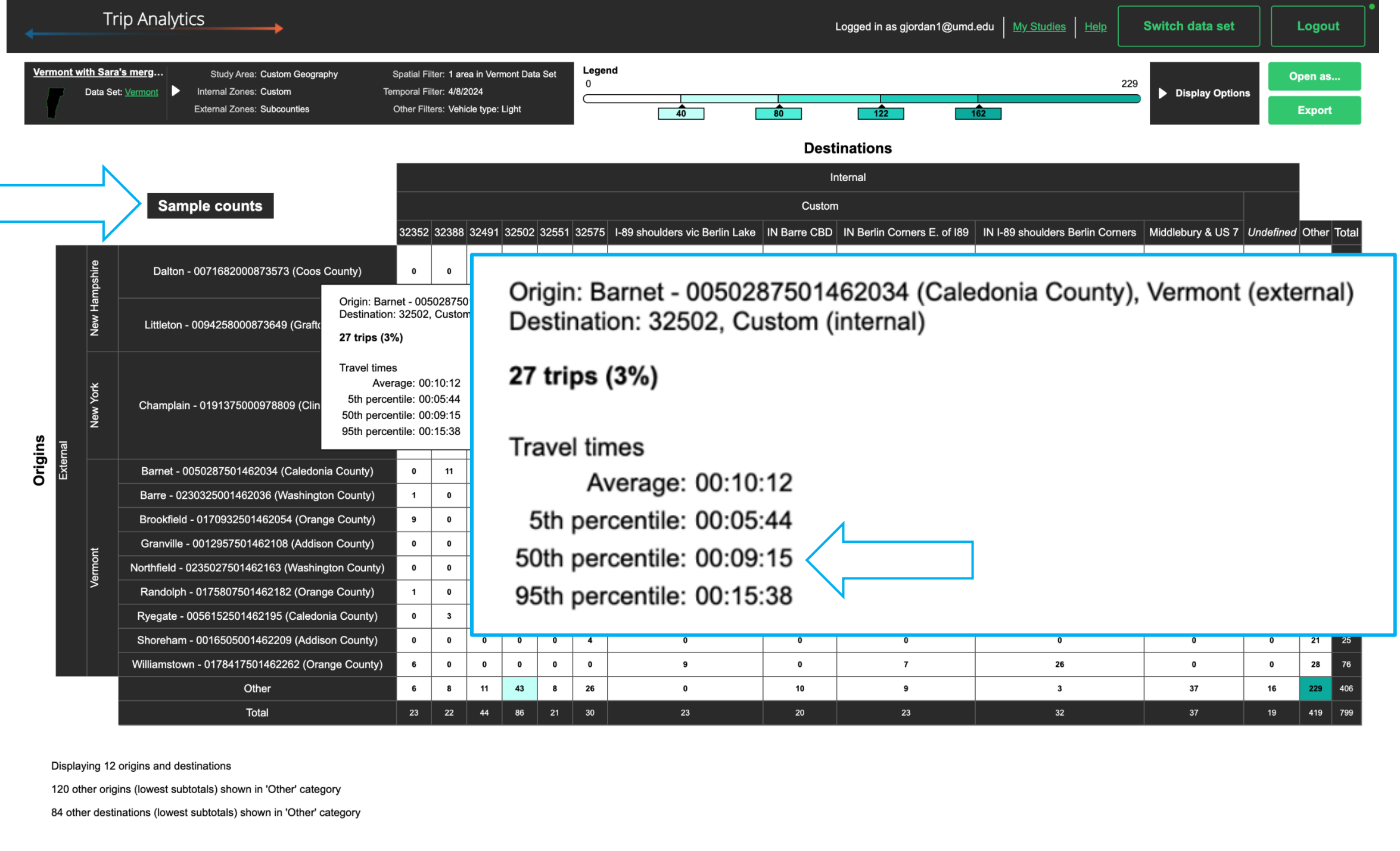
Destinations

Origins			Internal													
			Custom													
			32352	32388	32491	32502	32551	32575	I-89 shoulders vic Berlin Lake	IN Barre CBD	IN Berlin Corners E. of I89	IN I-89 shoulders Berlin Corners	Middlebury & US 7	*Undefined*	Other	Total
External	New Hampshire	Dalton - 0071682000873573 (Coos County)	0	0	0	0	0	0	0	0	0	0	0	2	15	17
		Littleton - 0094258000873649 (Grafton County)	0	0	13	10	0	0	0	0	0	0	0	1	19	43
	New York	Champlain - 0191375000978809 (Clinton County)	0	0	0	0	13	0	0	0	0	0	0	0	7	20
	Vermont	Barnet - 0050287501462034 (Caledonia County)	0	11	19	27	0	0	0	0	0	0	0	0	4	61
		Barre - 0230325001462036 (Washington County)	1	0	0	0	0	0	0	10	6	2	0	0	12	31
		Brookfield - 0170932501462054 (Orange County)	9	0	0	0	0	0	13	0	1	0	0	0	16	39
		Granville - 0012957501462108 (Addison County)	0	0	0	0	0	0	0	0	0	0	0	0	21	21
		Northfield - 0235027501462163 (Washington County)	0	0	0	0	0	0	1	0	0	0	0	0	15	16
		Randolph - 0175807501462182 (Orange County)	1	0	0	0	0	0	0	0	0	1	0	0	14	16
		Ryegate - 0056152501462195 (Caledonia County)	0	3	1	6	0	0	0	0	0	0	0	0	18	28
		Shoreham - 0016505001462209 (Addison County)	0	0	0	0	0	4	0	0	0	0	0	0	21	25
		Williamstown - 0178417501462262 (Orange County)	6	0	0	0	0	0	9	0	7	26	0	0	28	76
		Other	6	8	11	43	8	26	0	10	9	3	37	16	229	406
		Total	23	22	44	86	21	30	23	20	23	32	37	19	419	799

Displaying 12 origins and destinations

120 other origins (lowest subtotals) shown in 'Other' category

84 other destinations (lowest subtotals) shown in 'Other' category


Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Vermont with Sara's merg...
Data Set: Vermont
Study Area: Custom Geography
Internal Zones: Custom
External Zones: Subcounties
Spatial Filter: 1 area in Vermont Data Set
Temporal Filter: 4/8/2024
Other Filters: Vehicle type: Light
Legend
0
229
40
80
122
162
Display Options
Open as...
Export
Destinations
Sample counts
Origins
Internal
Custom
32352
32388
32491
32502
32551
32575
I-89 shoulders vic Berlin Lake
IN Barre CBD
IN Berlin Corners E. of I89
IN I-89 shoulders Berlin Corners
Middlebury & US 7
Undefined
Other
Total
External
New Hampshire
Dalton - 0071682000873573 (Coos County)
Littleton - 0094258000873649 (Graft
New York
Champlain - 0191375000978809 (Clin
Vermont
Barnet - 0050287501462034 (Caledonia County)
Barre - 0230325001462036 (Washington County)
Brookfield - 0170932501462054 (Orange County)
Granville - 0012957501462108 (Addison County)
Northfield - 0235027501462163 (Washington County)
Randolph - 0175807501462182 (Orange County)
Ryegate - 0056152501462195 (Caledonia County)
Shoreham - 0016505001462209 (Addison County)
Williamstown - 0178417501462262 (Orange County)
Other
Total
Origin: Barnet - 005028750
Destination: 32502, Custom
27 trips (3%)
Travel times
Average: 00:10:12
5th percentile: 00:05:44
50th percentile: 00:09:15
95th percentile: 00:15:38
Origin: Barnet - 0050287501462034 (Caledonia County), Vermont (external)
Destination: 32502, Custom (internal)
27 trips (3%)
Travel times
Average: 00:10:12
5th percentile: 00:05:44
50th percentile: 00:09:15
95th percentile: 00:15:38
Displaying 12 origins and destinations
120 other origins (lowest subtotals) shown in 'Other' category
84 other destinations (lowest subtotals) shown in 'Other' category

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Vermont with Sara's merg...

Data Set: Vermont

Study Area: Custom Geography | Spatial Filter: 1 area in Vermont Data Set

Internal Zones: Custom | Temporal Filter: 4/8/2024

External Zones: Subcounties | Other Filters: Vehicle type: Light

Legend

Display Options | Open as... | Export

50th percentile (median) travel time

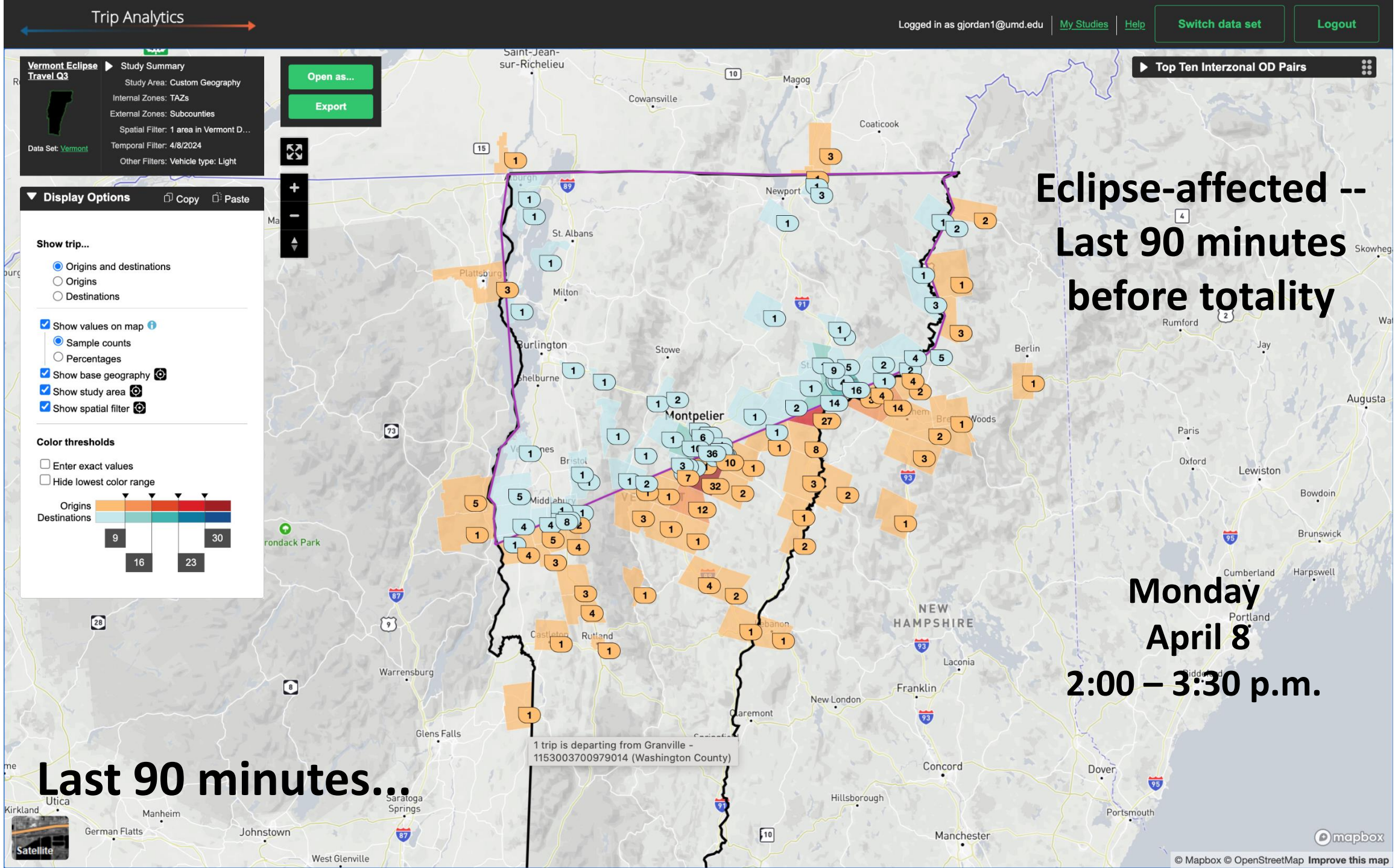
Destinations

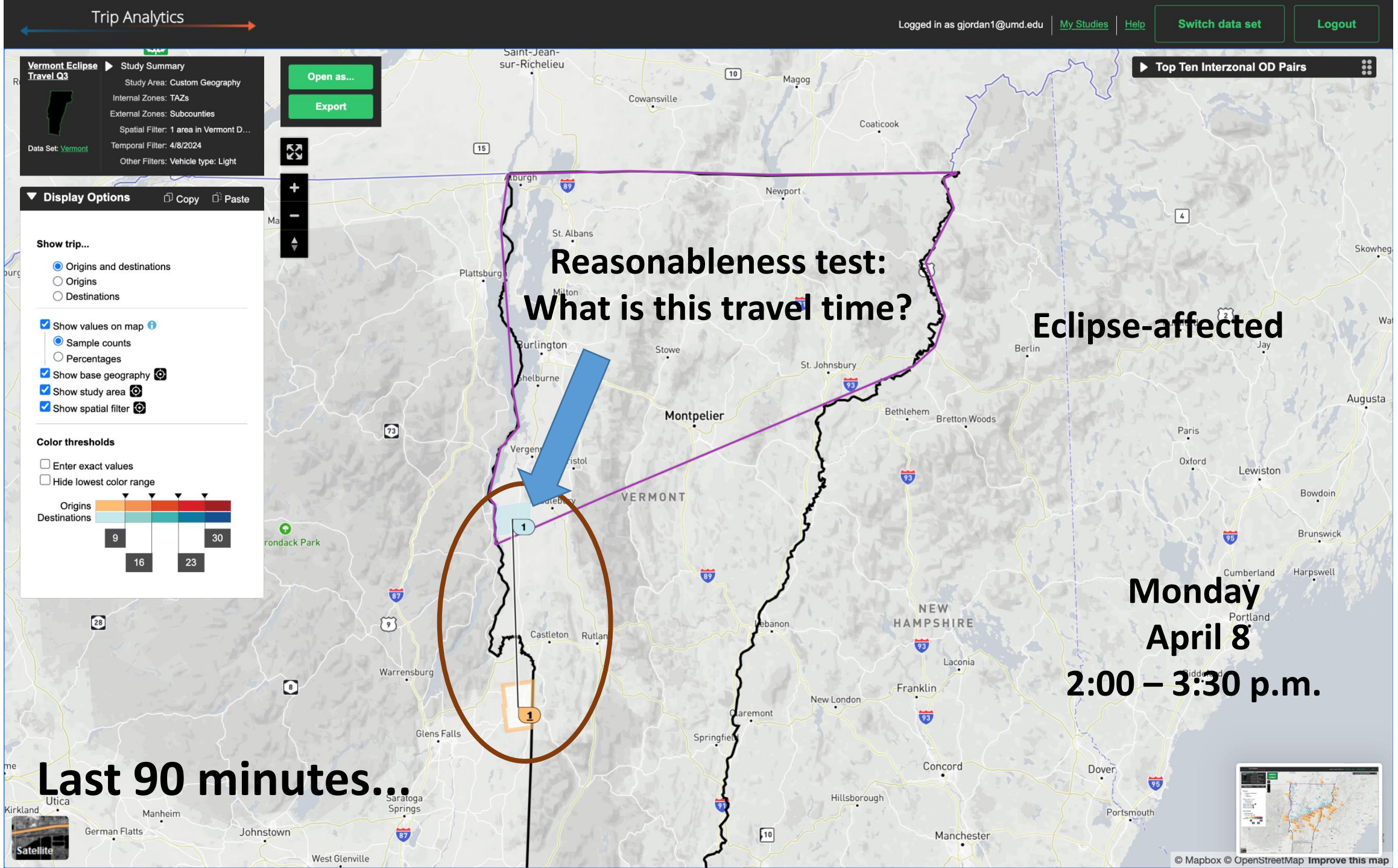
Origins			Internal: Custom													
													IN I-89 shoulders Berlin Corners	Middlebury & US 7	*Undefined*	Other	Total
External	New												-	-	00:15:00	n/a	n/a
External	Vermont	Barnet - 0050287501462034 (Caledonia County)	-	00:08:15	00:10:45	00:09:15	-	-	-	-	-	-	-	-	01:08:17	n/a	n/a
External	Vermont	Barre - 0230325001462036 (Washington County)	00:42:35	-	-	-	-	-	-	00:05:23	00:10:27	00:13:28	-	-	-	n/a	n/a
External	Vermont	Brookfield - 0170932501462054 (Orange County)	00:11:14	-	-	-	-	-	00:12:29	-	00:21:00	-	-	-	-	n/a	n/a
External	Vermont	Granville - 0012957501462108 (Addison County)	-	-	-	-	-	-	-	-	-	-	-	-	-	n/a	n/a
External	Vermont	Northfield - 0235027501462163 (Washington County)	-	-	-	-	-	-	00:08:48	-	-	-	-	-	-	n/a	n/a
External	Vermont	Randolph - 0175807501462182 (Orange County)	00:47:21	-	-	-	-	-	-	-	-	00:34:47	-	-	-	n/a	n/a
External	Vermont	Ryegate - 0056152501462195 (Caledonia County)	-	00:13:00	00:25:00	00:25:37	-	-	-	-	-	-	-	-	-	n/a	n/a
External	Vermont	Shoreham - 0016505001462209 (Addison County)	-	-	-	-	-	00:11:16	-	-	-	-	-	-	-	n/a	n/a
External	Vermont	Williamstown - 0178417501462262 (Orange County)	00:09:14	-	-	-	-	-	00:10:36	-	00:14:29	00:10:24	-	-	-	n/a	n/a
		Other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		Total	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Displaying 12 origins and destinations

120 other origins (lowest subtotals) shown in 'Other' category

84 other destinations (lowest subtotals) shown in 'Other' category


Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Vermont Eclipse Travel Q3
Study Summary
Study Area: Custom Geography
Internal Zones: TAZs
External Zones: Subcounties
Spatial Filter: 1 area in Vermont D...
Temporal Filter: 4/8/2024
Other Filters: Vehicle type: Light
Data Set: Vermont
Open as...
Export
Top Ten Interzonal OD Pairs
Display Options
Copy
Paste
Show trip...
Origins and destinations
Origins
Destinations
Show values on map
Sample counts
Percentages
Show base geography
Show study area
Show spatial filter
Color thresholds
Enter exact values
Hide lowest color range
Origins
Destinations
9
16
23
30
Eclipse-affected -- Last 90 minutes before totality
Monday
April 8
2:00 – 3:30 p.m.
Last 90 minutes...
1 trip is departing from Granville - 1153003700979014 (Washington County)
Montpelier
Burlington
Rutland
Middlebury
St. Albans
Newport
Plattsburgh
Saint-Jean-sur-Richelieu
Magog
Cowansville
Coaticook
Stowe
Berlin
Rumford
Jay
Augusta
Paris
Oxford
Lewiston
Bowdoin
Brunswick
Portland
Cumberland
Harpswell
NEW HAMPSHIRE
Laconia
Franklin
New London
Claremont
Concord
Dover
Portsmouth
Hillsborough
Manchester
Warrensburg
Glens Falls
Saratoga Springs
Johnstown
Utica
Manheim
German Flatts
West Glenville
Kirkland
Satellite
mapbox
© Mapbox © OpenStreetMap Improve this map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Open as...
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Display Options
Copy
Paste
Show trip...
Origins and destinations
Origins
Destinations
Show values on map
Sample counts
Percentages
Show base geography
Show study area
Show spatial filter
Color thresholds
Enter exact values
Hide lowest color range
Origins
Destinations
9
16
23
30
Reasonableness test:
What is this travel time?
Eclipse-affected
Monday
April 8
2:00 – 3:30 p.m.
Last 90 minutes…
Montpelier
Burlington
Stowe
St. Johnsbury
Berlin
Newport
St. Albans
Plattsburgh
Milton
Bethlehem
Bretton Woods
Lewiston
Portland
Concord
Manchester
Dover
Portsmouth
Laconia
Franklin
Lebanon
Claremont
New London
Hillsborough
Springfield
Castleton
Rutland
Warrensburg
Glens Falls
Saratoga Springs
Johnstown
Utica
Satellite
VERMONT
NEW HAMPSHIRE
© Mapbox © OpenStreetMap Improve this map

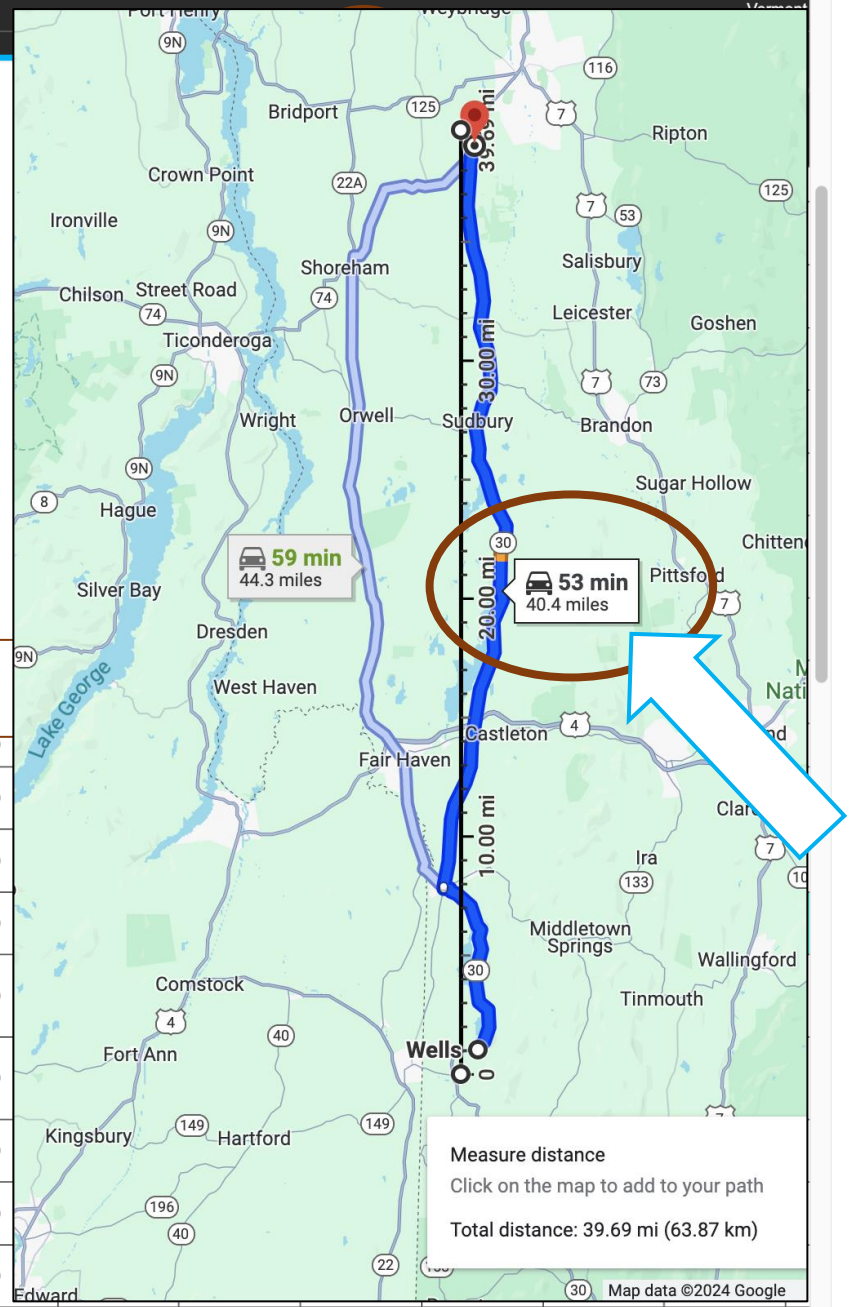
Origin:
Granville - 1153003700979014 (Washington County), New York (external)
Destination: 5000109609002, Vermont (internal)

1 trip (0%)

Travel times

Average: 00:53:10
5th percentile: 00:53:10
50th percentile: 00:53:10
95th percentile: 00:53:10

53 minutes travel time



Destinations

Origins

Origins		Destinations: New Hampshire	Internal
External	New Hampshire		
External	New York		
External	Quebec	Lacolle - 2456023 (Le Haut-Richelieu)	0
External	Quebec	Stanstead - 2445008 (Memphrémagog)	0
External	Quebec	Stanstead-Est - 2444050 (Coaticook)	0
External	Vermont	Barnet - 0050287501462034 (Caledonia County)	0
External	Vermont	Barre - 0230325001462036 (Washington County)	0
External	Vermont	Berlin - 0230565001462042 (Washington County)	0
External	Vermont	Bradford - 0170737501462046 (Orange County)	0
External	Vermont	Braintree - 0170760001462047 (Orange County)	0
External	Vermont	Brandon - 0210775001462048 (Rutland County)	0

In the spotlight…

Trip Analytics questions & guidance:

gjordan1@umd.edu

Greg Jordan

Catt Lab

FOR VTRANS

VERMONT
AGENCY OF TRANSPORTATION

Trips Analytics

Poll 4: How would you describe your daily job function? (choose one)

a. Planning
b. Modeling
c. Design
d. Operations
e. Maintenance

Poll 5: Once you have completed a query using Trips Analytics, how much additional processing time does your analysis require additional processing? (choose one)

a. 0-1 hours
b. 2-5 hours
c. 5-10 hours
d. 10+ hours

Poll 6: What functionality would help you reduce that additional processing time?

Please type your answer under the question in the pop-up box.

RITIS | PROBE DATA ANALYTICS SUITE

New RITIS & PDA Suite Updates and Demonstrations

Michael Pack
UMD CATT Lab
Director

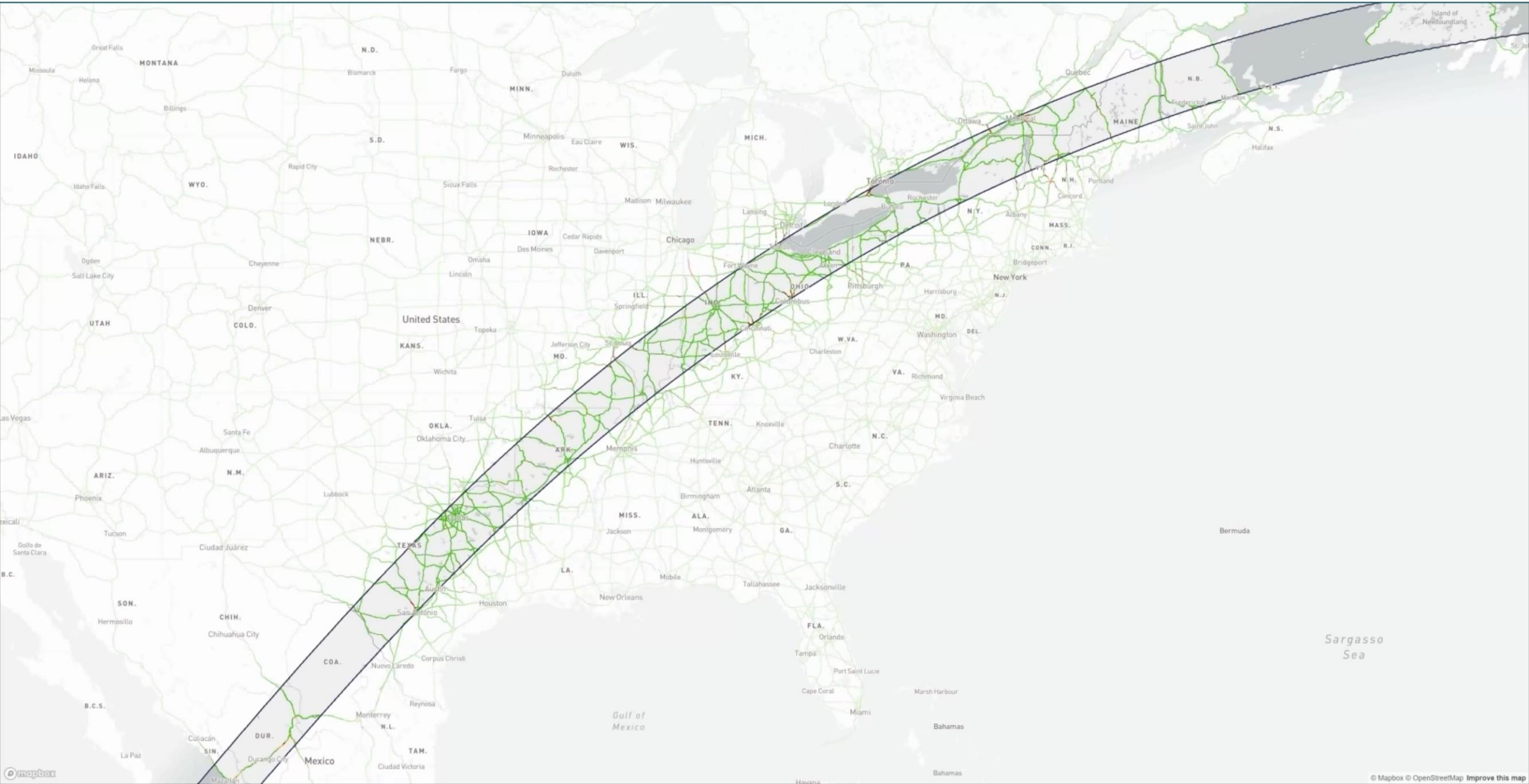

Eclipse Congestion Videos

12:13 PM

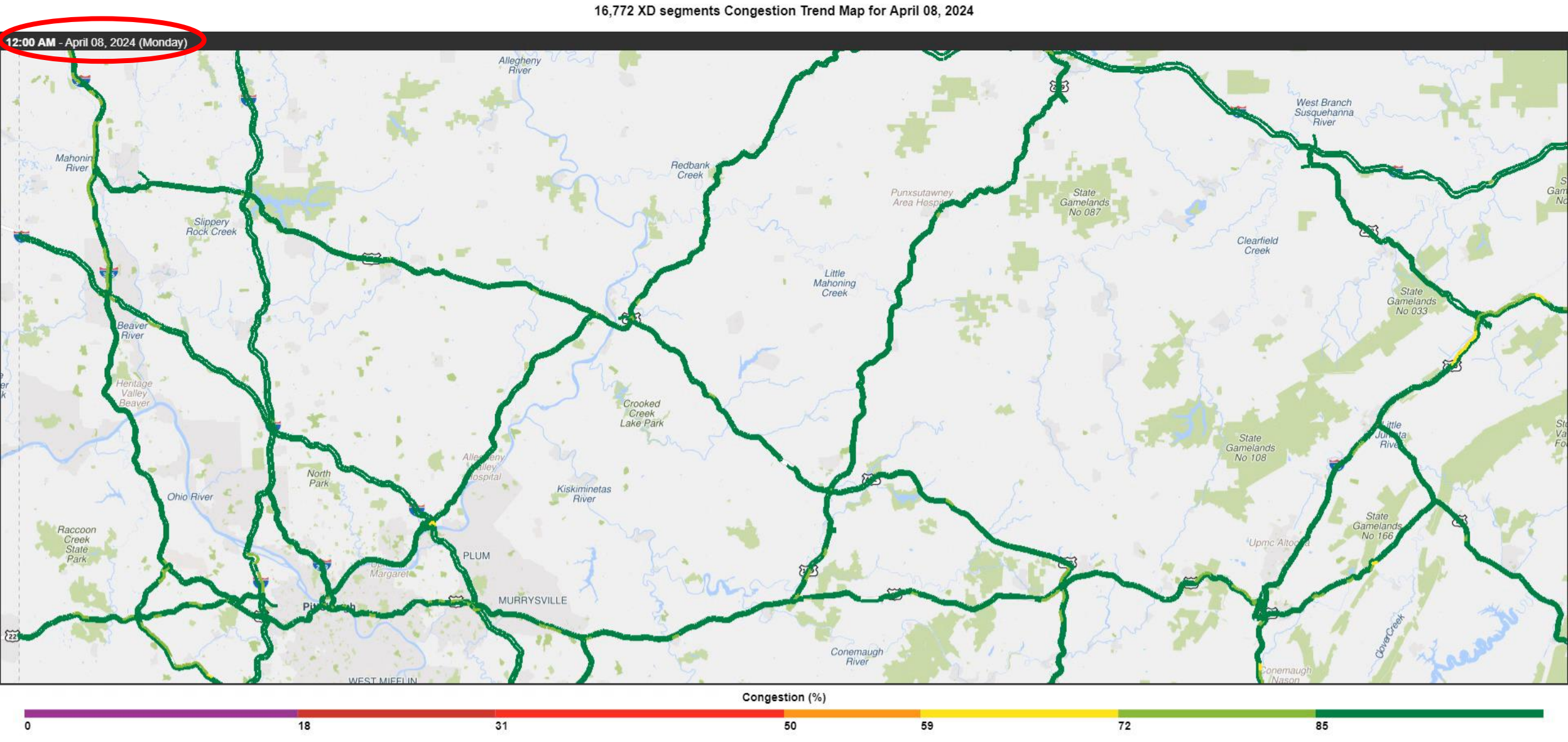
Pre-Eclipse Time Period

Solar Eclipse Impact on Congestion in North America (April 8th, 2024)

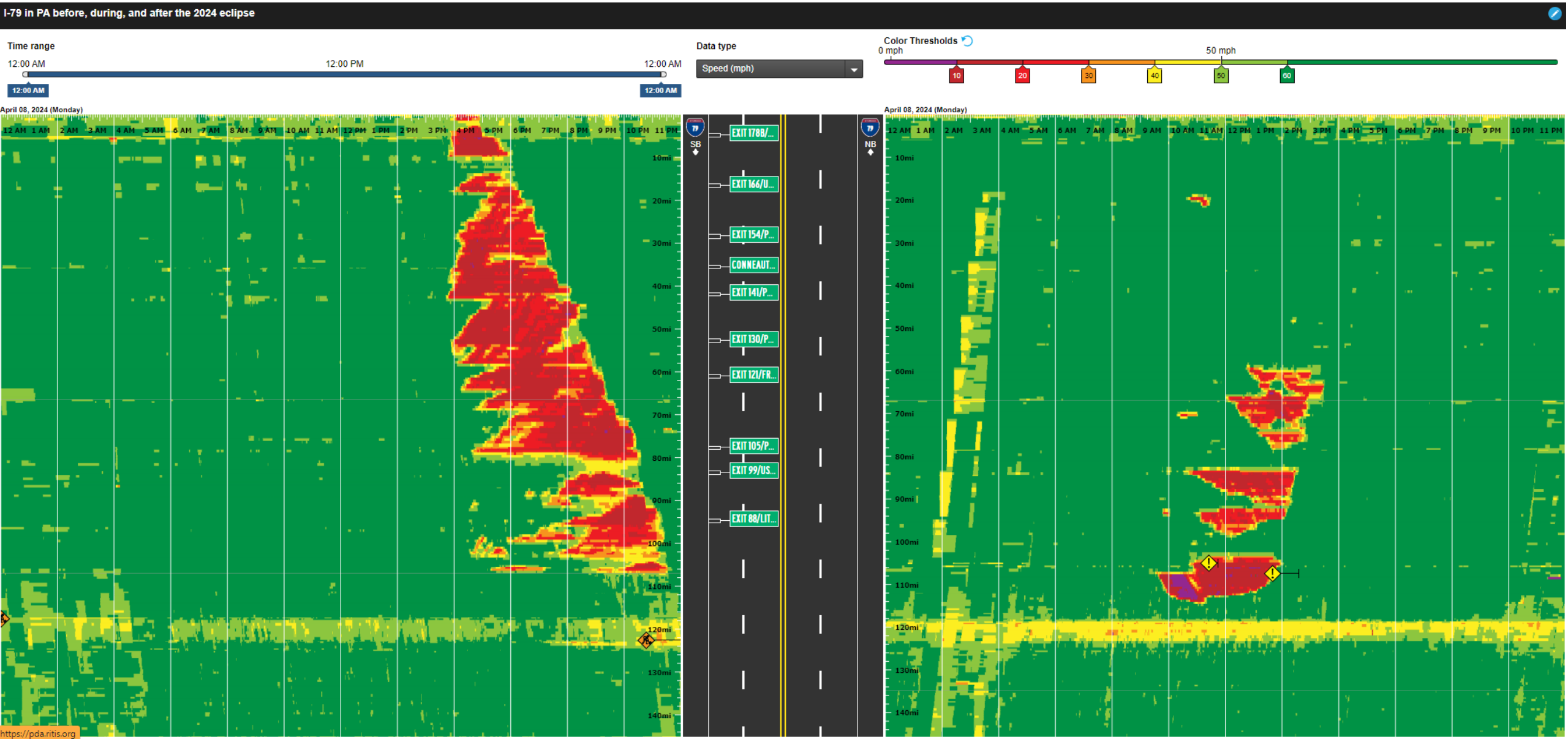
RITIS



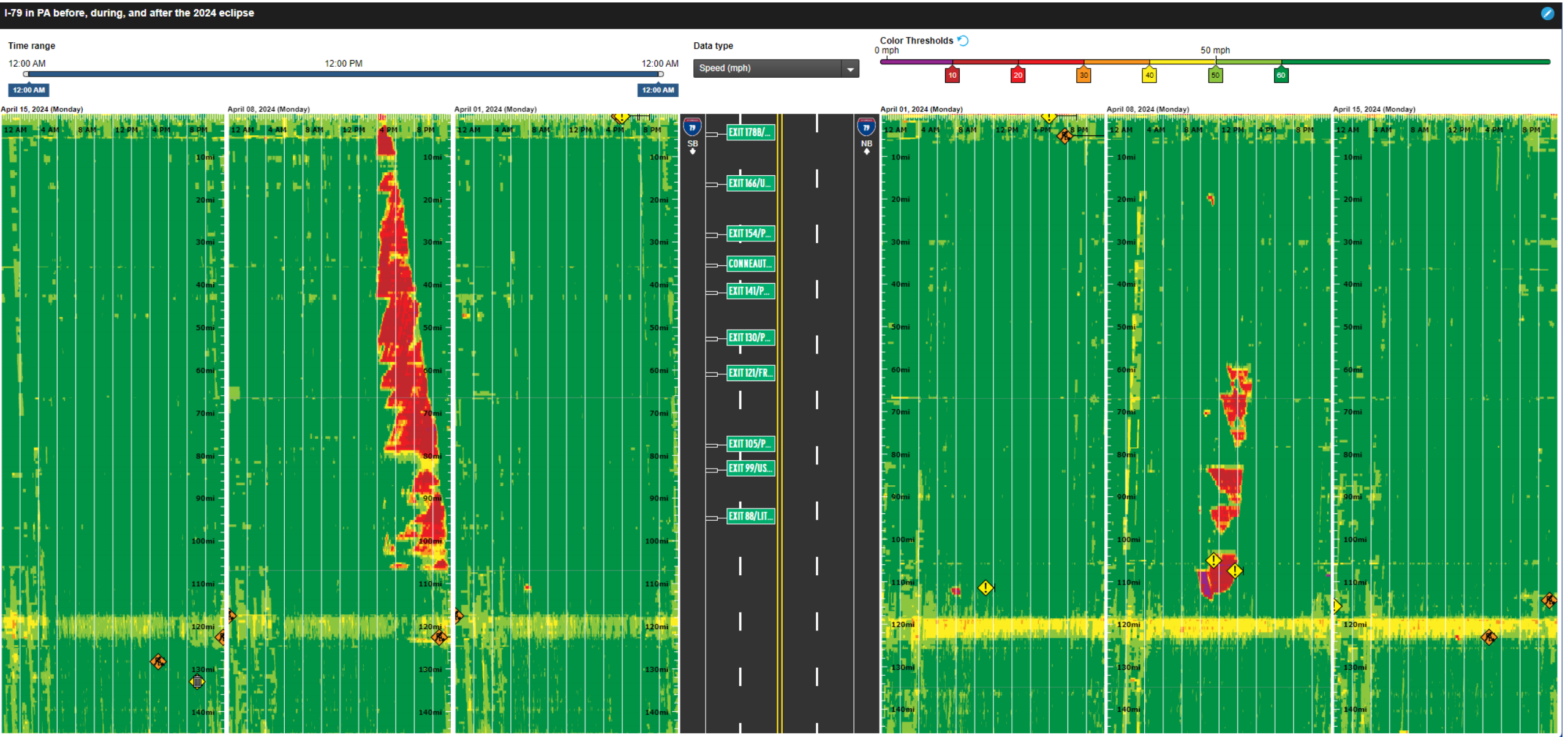
Western Pennsylvania



I-79 in Pennsylvania



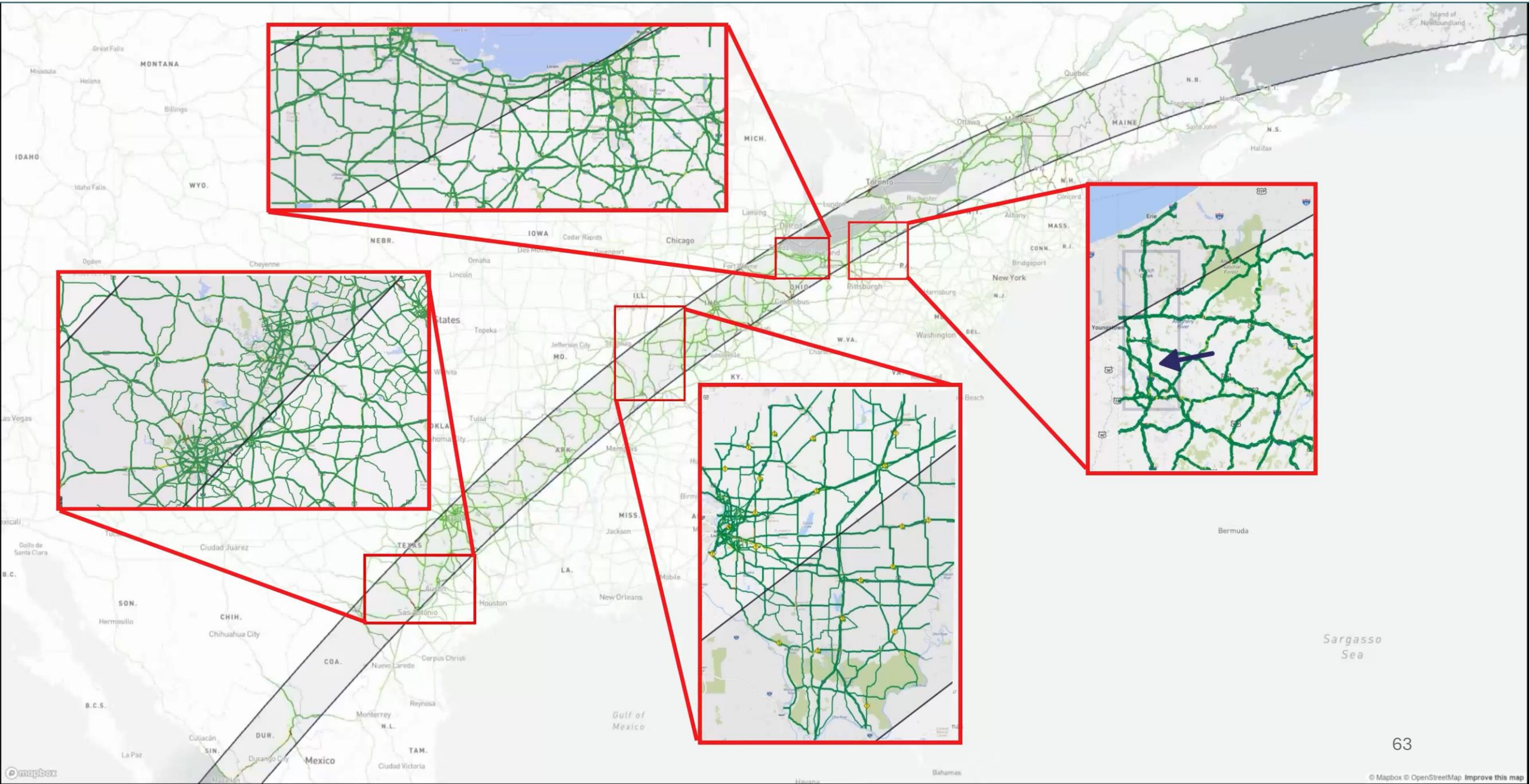
I-79 in Pennsylvania



09:00 AM (EST)

Pre-Eclipse Time Period

Solar Eclipse Impact on Congestion in North America (April 8th, 2024)



RITIS | Probe Data Analytics suite

RITIS Product Enhancement Working Group Update & Future Enhancements

Michael Pack
Director
UMD CATT Lab

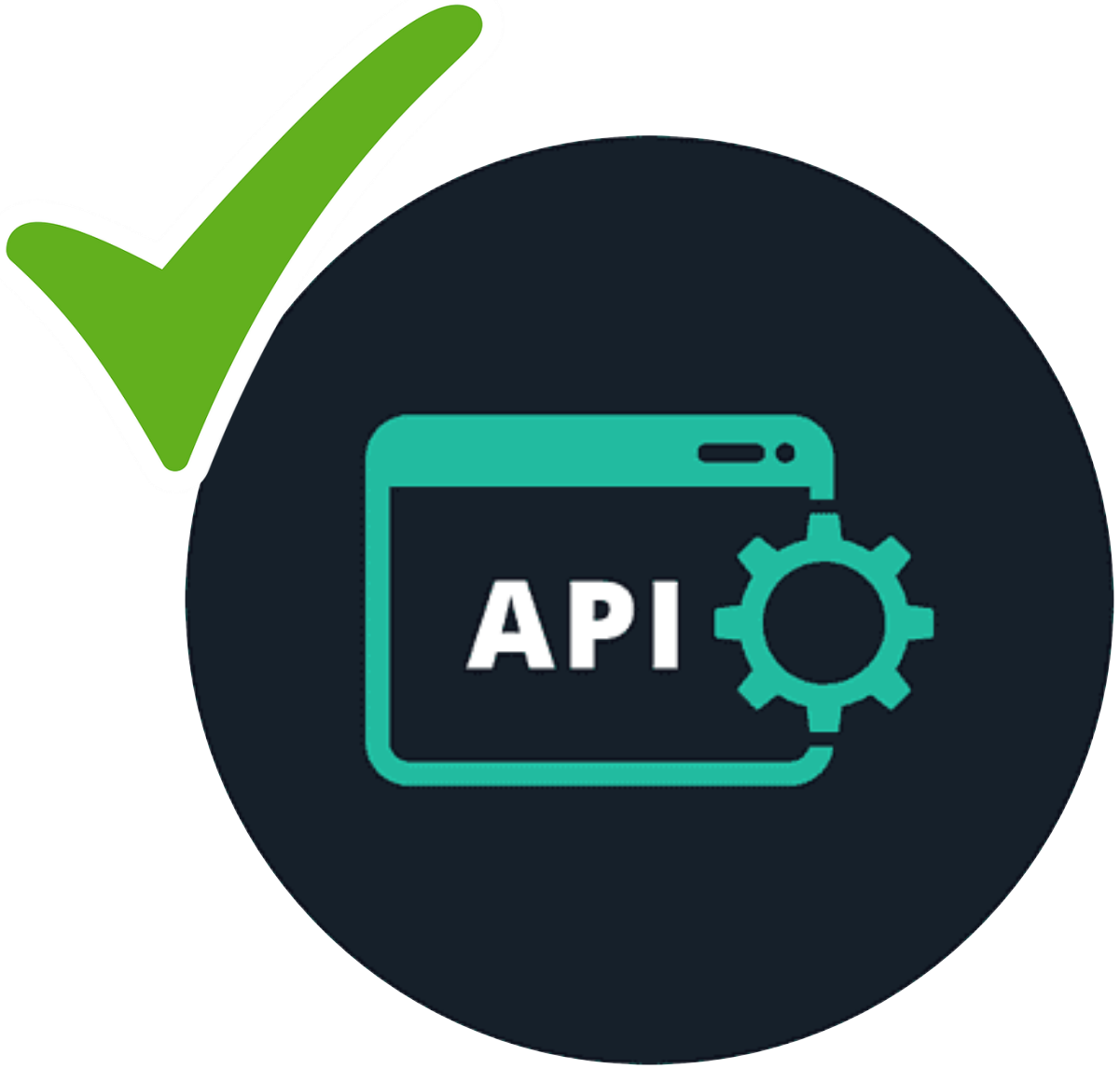
Bob Frey
Director of Project-Oriented Planning
Massachusetts DOT
RITIS Product Enhancement Working Group Chair

Enhancement Group Prioritized Features

Item	Notes
XD API Enhancements	Complete. Deployed.
Safety Analytics (Phase I)	Complete. Deployment next week.
Business use-case handbook	In-progress. Deployment next month.
Automated Work Zone Reporting	In-progress.
Mirror XD Selections + TMC Routing	Complete. Deployed.
Downloadable Volumes	Complete. Deployed.
Embedding Dashboards	Well defined
Advanced Time Selections	Well defined
AAR Queue Visualizations in EQT	
ROI Tool	Exploratory funding from a grant
PM3 Target Setting Support Tools	Needs more design. $$
Detour Analytics for disruptions	Partially funded by grant
XD Bottlenecks	High value, but long lead-time
Weather Overlays in Congestion Scans	Complete. Deployed.
XD in UDC Tool	
Energy & Emissions Analytics	Significant work already complete.

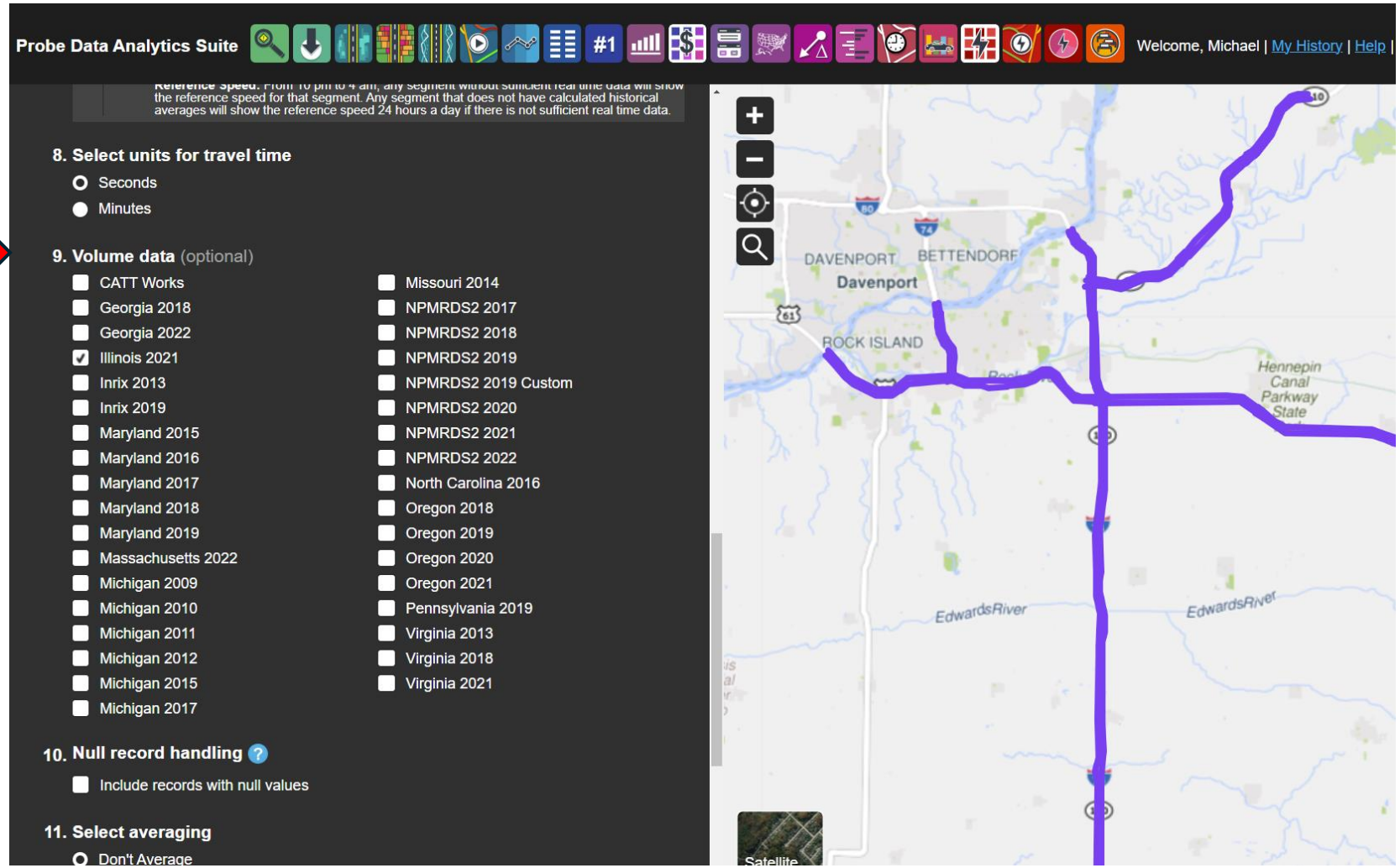
XD API Enhancements

- Deployed April 24th!
- If you want help, please contact support@ritis.org



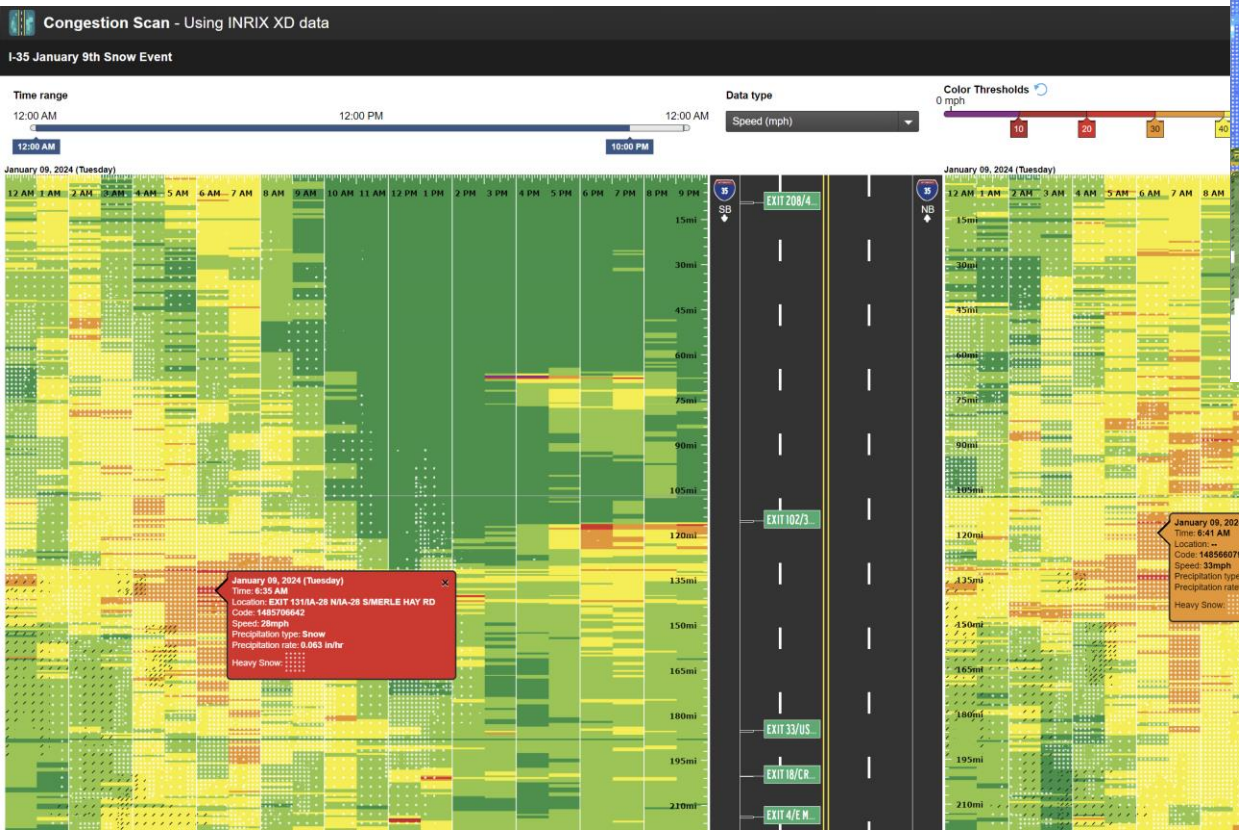
Status of Enhancements

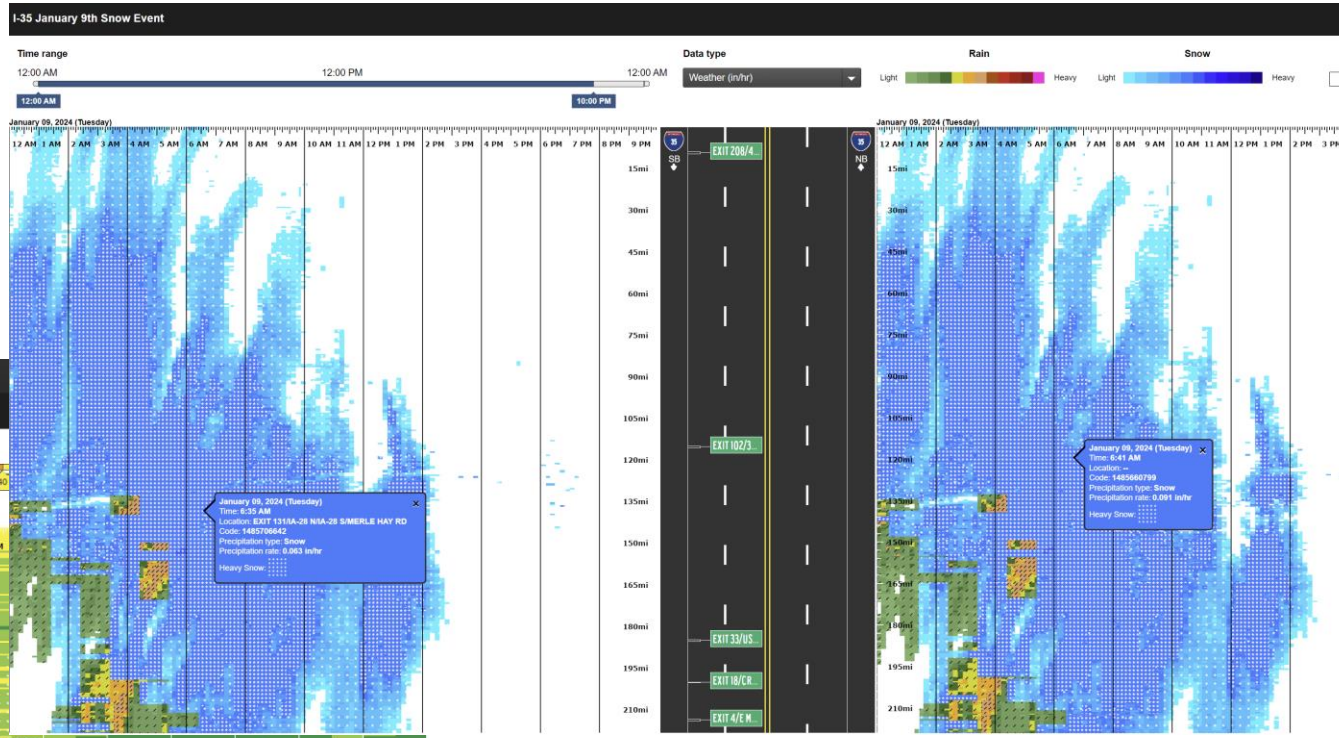
- Downloadable Volumes



Weather data in Congestion Scans

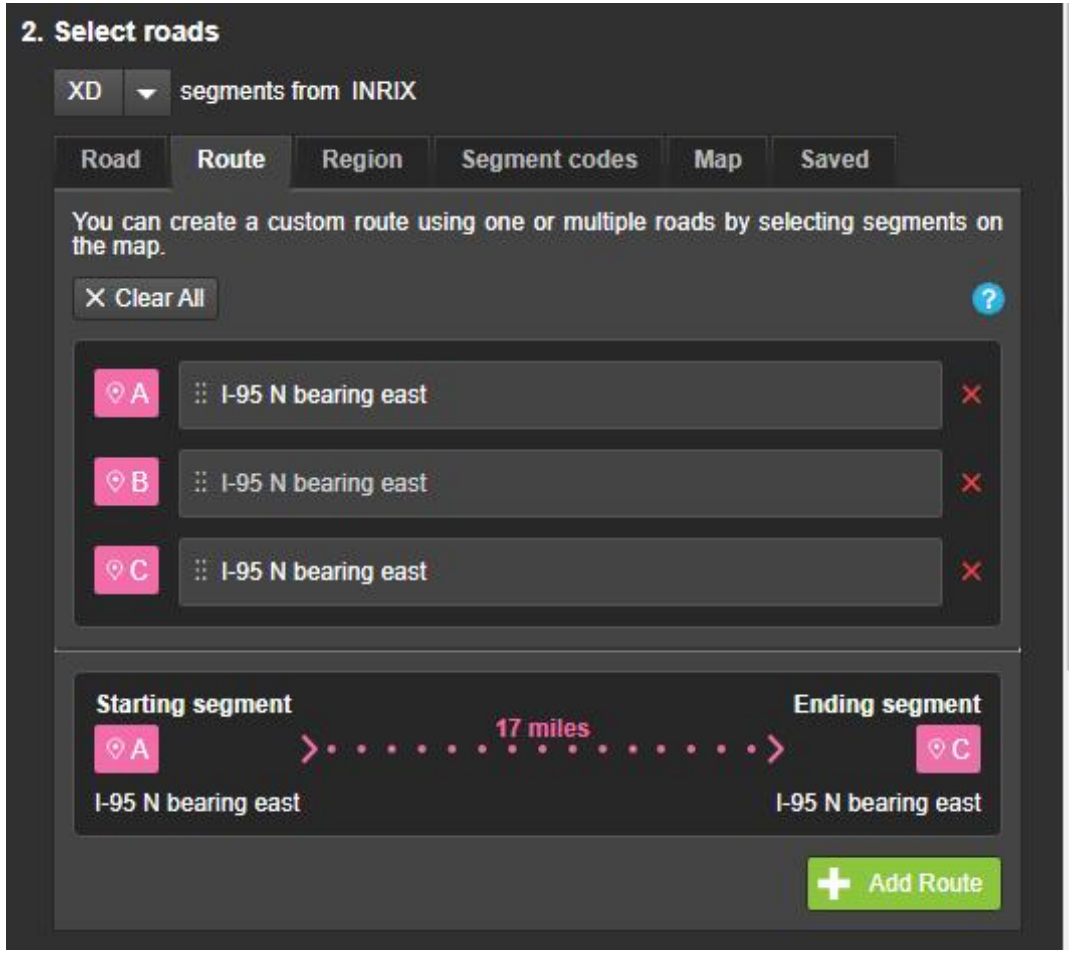
- Deployed.

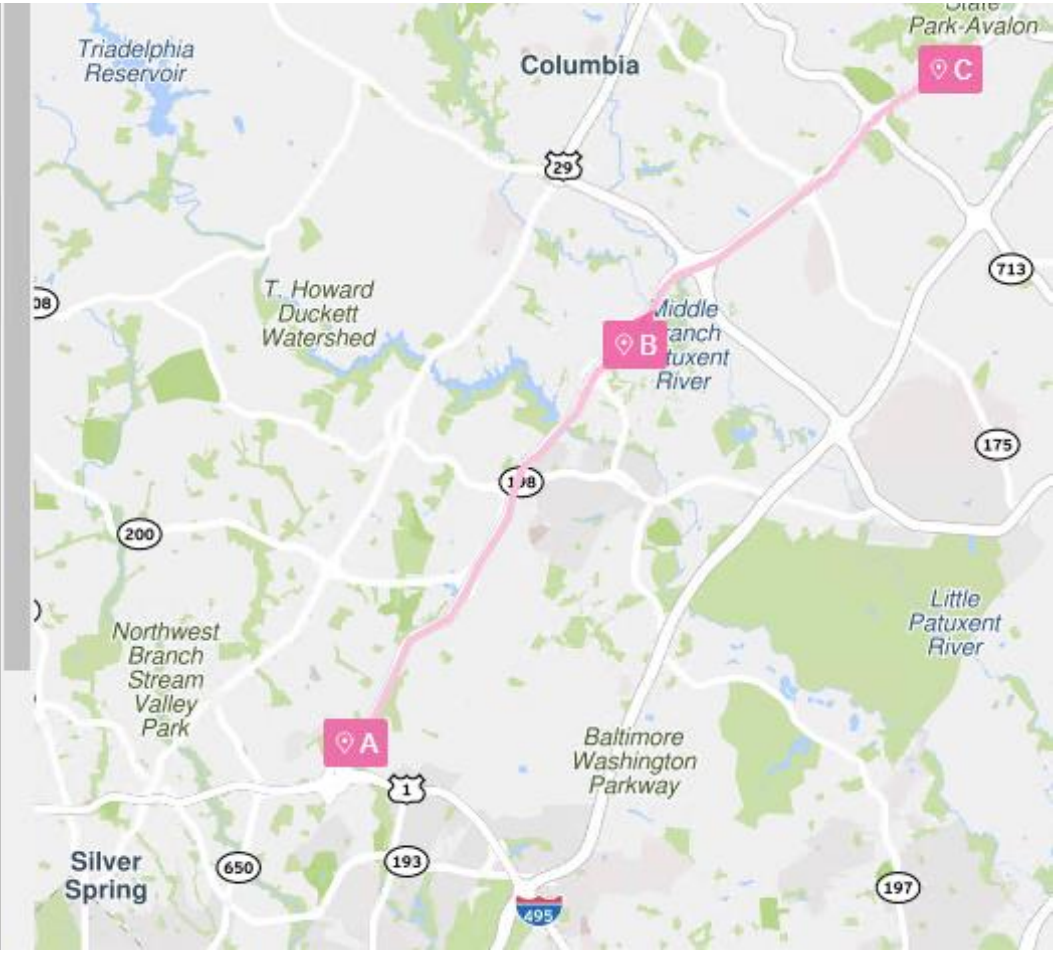




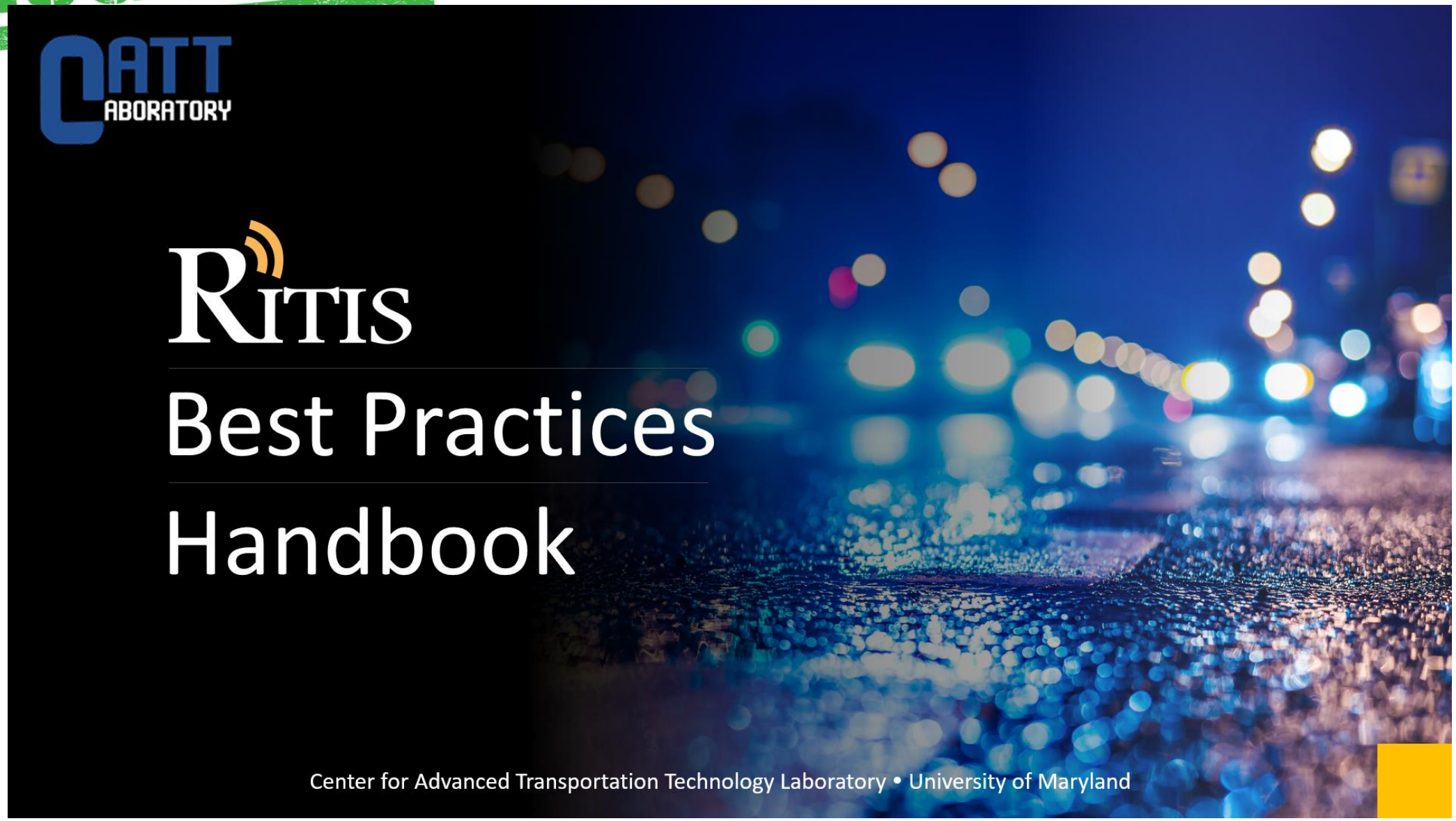
Mirror XD reverse selections and TMC Routing for INRIX data

- Complete & Deployed





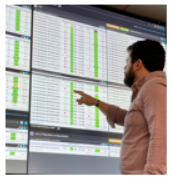
IN PROGRESS


CATT LABORATORY
RITIS
Best Practices
Handbook
Center for Advanced Transportation Technology Laboratory • University of Maryland

Introduction to Data Sources

The RITIS platform regularly ingests, processes, and distributes billons of data records and events each and every day. This data is made available to us directly from transportation agencies, from third-party probe data providers, and other national data sources. By fusing various data feeds into a common platform, agencies are to gain greater situational awareness of traffic operations. The number and types of data feeds available to RITIS grows on a regular basis and is limited only by resources and imagination. The most common sources of data in RITIS are described below and in the following section. **Click each data source for more detailed information.**

Agency Data



Traffic Management Center Data Feeds

CCTV Cameras
Computer Aided Dispatch
Dynamic Message Signs
Fleet Vehicle Locations
Incidents
Detectors
Events
RWIS

Volume Data

Traffic Volume

Incident Response

Evacuation Routes
Road Closure Plans

Transit Feeds

GTFS
GTFS-RT

Traffic Signal Data

Signal Locations
Signal Timing
ATSPM

Probe Data

There are two main categories of probe data, which are based on different data sets:

- Segment-based data is the "traditional probe data" used to compute speeds and travel times on fixed-length road segments.
- Trajectory data includes anonymized, high ping rate data based on individual vehicle movements, which can be used to calculate intersection performance and produce origin-destination studies.

Segment-Based Data

Speeds
Travel Times
Reliability

Trajectory Data

Trip Analytics
Signal Analytics

National Data Sets

National Weather Service Data

National Radar
National Forecasts

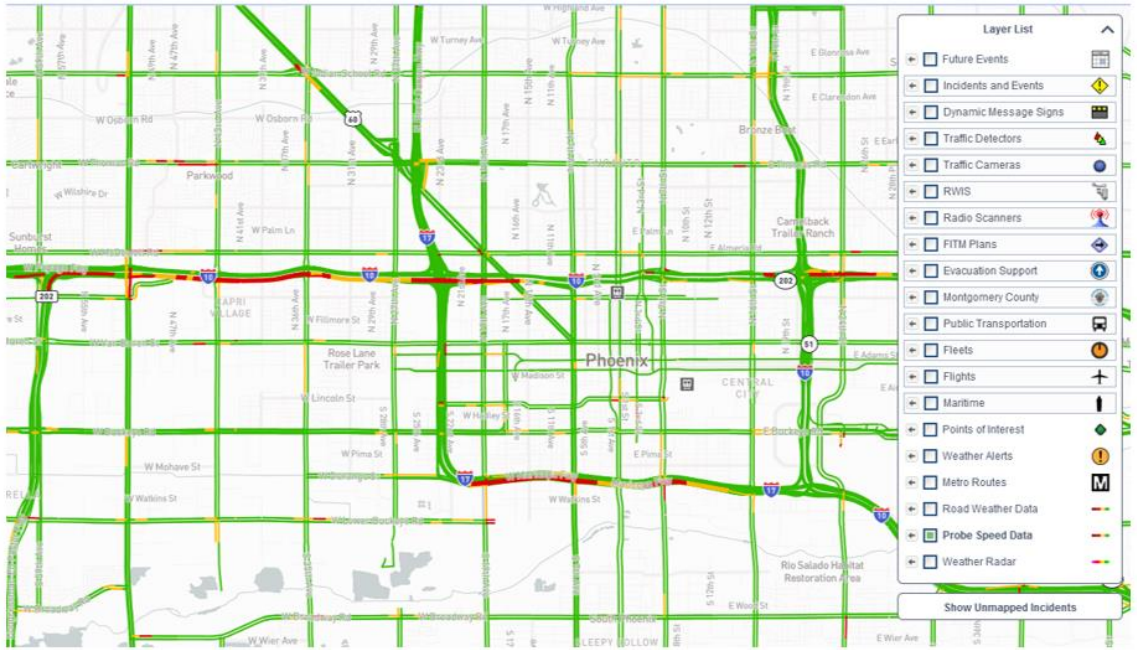
Waze

Crowdsourced Incident Data

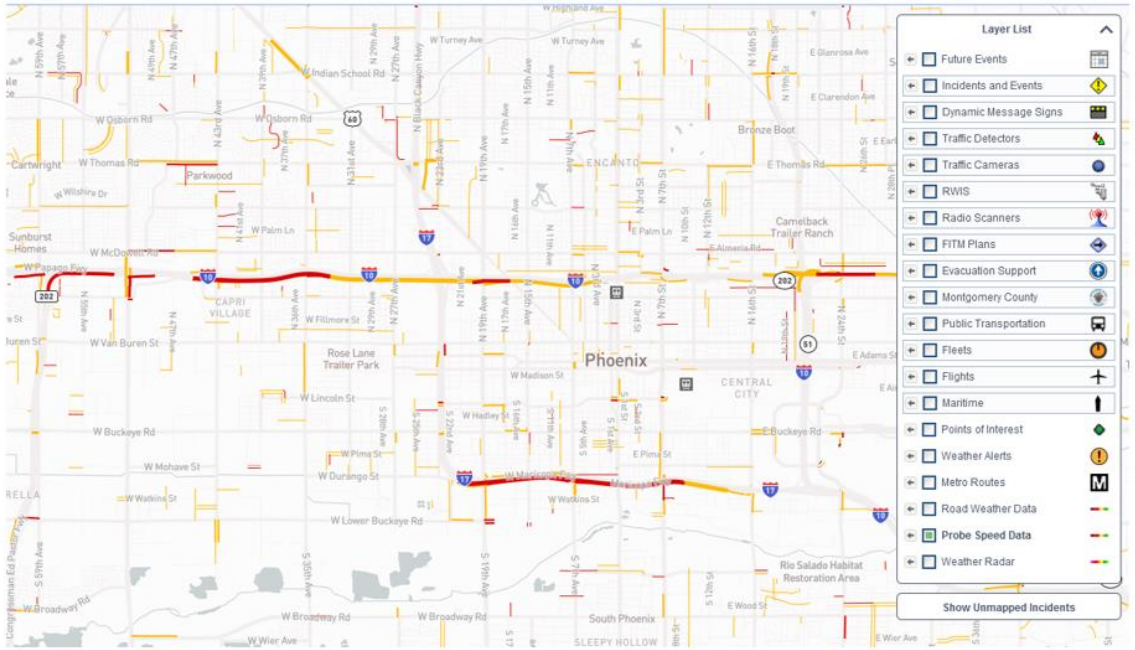
Radio Reference Feeds

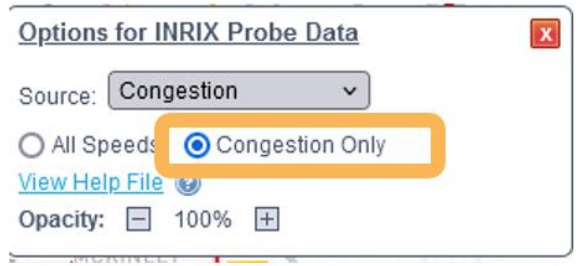
Radio Scanners

By default, the Congestion option shows all available speed color categories, from green to dark red. Since the majority of segments are usually green, this can make it hard for the yellow and red segments to stand out.



Clicking the option to show "congestion only" hides the green segments, thus highlighting segments where congestion is currently occuring.





Congestion Scan

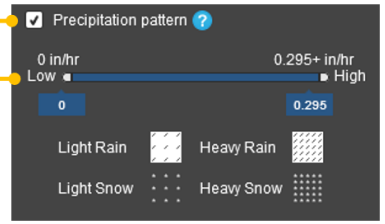
Congestion Scan lets you analyze traffic conditions by creating a congestion heat map of one or more contiguous stretches of road (you can see a video demonstration here)

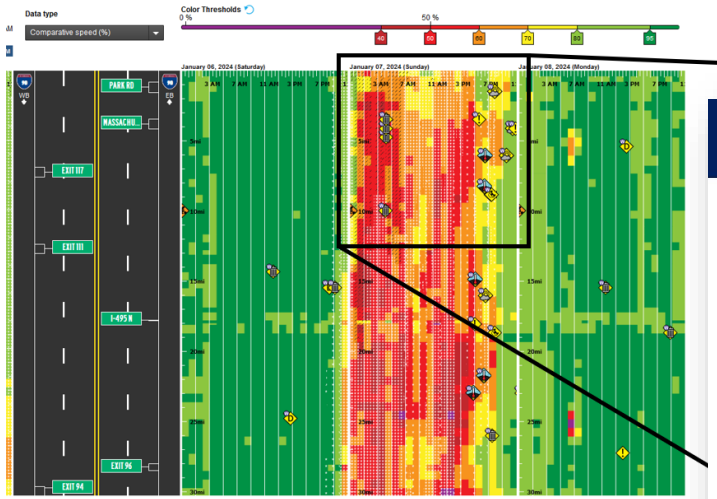
Precipitation Layer

In addition to displaying incident information, you can also turn on the precipitation pattern layer to superimpose road weather conditions on the Congestion Scan. In this example, a winter storm moved through the region on January 7. You can see how the reduced traffic correlate with heavy rain and snow associated with the storm. You can toggle the precipitation layer, along with filtering what is shown based on the precipitation rate. For example, if the display is too cluttered, you can use the precipitation slider to only show the highest rates of precipitation on the Congestion Scan.

Precipitation pattern
(Turn the precipitation pattern display on and off.)

Precipitation rate
(Adjust to filter out low or high precipitation maps from showing on the Congestion Scan.)



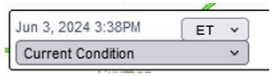


RITIS Portal (Transportation System Status – Traffic Map)

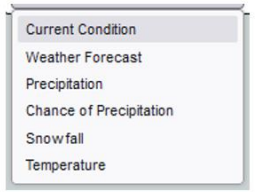
Weather Radar

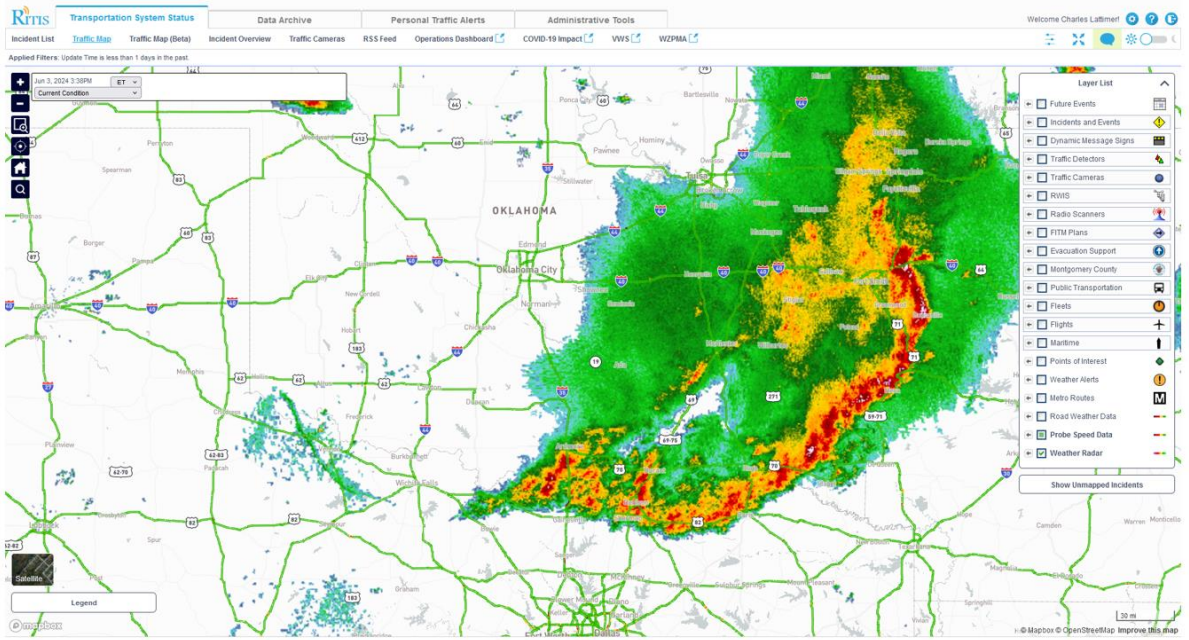
The Weather Radar layer allows you to display real-time precipitation radar from the National Weather Service on your traffic map.

To see the weather radar, make sure "Current Condition" is selected from the menu at the top left of the window.

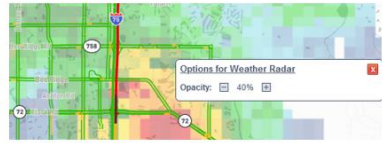


But, the Weather Radar layer has so much more information than just weather radar! The following pages show what other information is available.





If the probe speed data colors are hard to see alongside the weather radar, you can reduce the opacity of the radar layer to dim the intensity of this layer.



Safety Data / Police Crash Data Analytics (Phase I)

The Event Query Tool allows you to query for events during a specific time range, for specific agencies, and within specific geographies. If you only want to look at specific event types, the option to query for any number of events by type is also available. After running your query you will get a number of different visualizations to explore the applicable events.

DATA SOURCES

○ Traffic Event Data ◉ Police Crash Data

LOCATION

◉ Corridor ○ Region

View crashes along a specific road by selecting a county, road, and whether you want to search the whole road or a portion

Regions: Select a region

Road: Select a road within states and counties

☐ Look at the whole road

Start at intersection: Select an Intersection

End at intersection: Select an intersection

TIME PERIOD

Date Range

From: 07/17/2024

To: 07/17/2024

EVENT FILTERS

Check all the filters that apply to the event you are looking for to narrow your search.

- [x] Include all available event filters

Crash details (12/12) selected

- [x] Include all crash filters
  - [x] Head-on
  - [x] Rear-end
  - [x] Single vehicle
  - [x] Sideswipe - same direction
  - [x] Sideswipe - opposite direction
  - [x] Angle
  - [x] No collision
  - [x] Unreported
  - [x] Other
  - [x] Pedestrian
  - [x] Same Direction Other
  - [x] Opposite Direction Turn

Environment details (30/30) selected

- [x] Include all light filters
  - [x] Daylight
  - [x] Dark - Street lights
  - [x] Dark - No lights
  - [x] Dark - Unknown lights
  - [x] Dawn
  - [x] Dusk
  - [x] Unknown
  - [x] Other
  - [x] Not Reported
- [x] Include all road filters
  - [x] Dry
  - [x] Ice
  - [x] Slush
  - [x] Sand/Gravel
  - [x] Oil
  - [x] Snow
  - [x] Wet
  - [x] Water
  - [x] Other
  - [x] Unknown
- [x] Include all weather filters
  - [x] Clear
  - [x] Cloudy
  - [x] Sunny
  - [x] Snow
  - [x] Rain
  - [x] Icy
  - [x] Fog
  - [x] Sleet
  - [x] Hail
  - [x] Other
  - [x] Heat Wave

SUBMIT QUERY

NEW SEARCH

Crashes from Maryland that started between July 3, 2023 and July 4, 2023

Crashes: **603 of 603** Vehicles: **1,080** People: **1,295**

Expand all

Showing 11 out of 27 columns

ID	AGENCY	STANDARDIZED TYPE	START TIME	CLOSED TIME	TMC	XD	VEHICLE TYPE	MAKE
Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter		
CRASH_MD_AA01570012	MDOT_CHART	accidentsAndIncidents	2023-07-04T17:40:00-04:00	2023-07-04T17:40:00-04:00	110+06168	441043767	-	-
CRASH_MD_AA0168000F	MDOT_CHART	accidentsAndIncidents	2023-07-04T21:00:00-04:00	2023-07-04T21:00:00-04:00	110P04447	133927439	-	-
CRASH_MD_AB6341002L	MDOT_CHART	accidentsAndIncidents	2023-07-03T07:50:00-04:00	2023-07-03T07:50:00-04:00	110N12694	449100346	-	-
CRASH_MD_AB65950045	MDOT_CHART	accidentsAndIncidents	2023-07-03T01:56:00-04:00	2023-07-03T01:56:00-04:00	110-50250	441044913	-	-
CRASH_MD_AB65950046	MDOT_CHART	accidentsAndIncidents	2023-07-03T14:35:00-04:00	2023-07-03T14:35:00-04:00	110+50252	132680251	-	-
CRASH_MD_AB6976001B	MDOT_CHART	accidentsAndIncidents	2023-07-03T12:20:00-04:00	2023-07-03T12:20:00-04:00	110+50251	441044913	-	-
CRASH_MD_AB6987001J	MDOT_CHART	accidentsAndIncidents	2023-07-03T16:00:00-04:00	2023-07-03T16:00:00-04:00	110+07417	449097847	-	-
CRASH_MD_AB6987001K	MDOT_CHART	accidentsAndIncidents	2023-07-04T09:56:00-04:00	2023-07-04T09:56:00-04:00	110+07417	133351912	-	-
CRASH_MD_AB7088000R	MDOT_CHART	accidentsAndIncidents	2023-07-03T13:36:00-04:00	2023-07-03T13:36:00-04:00	110-12693	1310253634	-	-

NEW SEARCH

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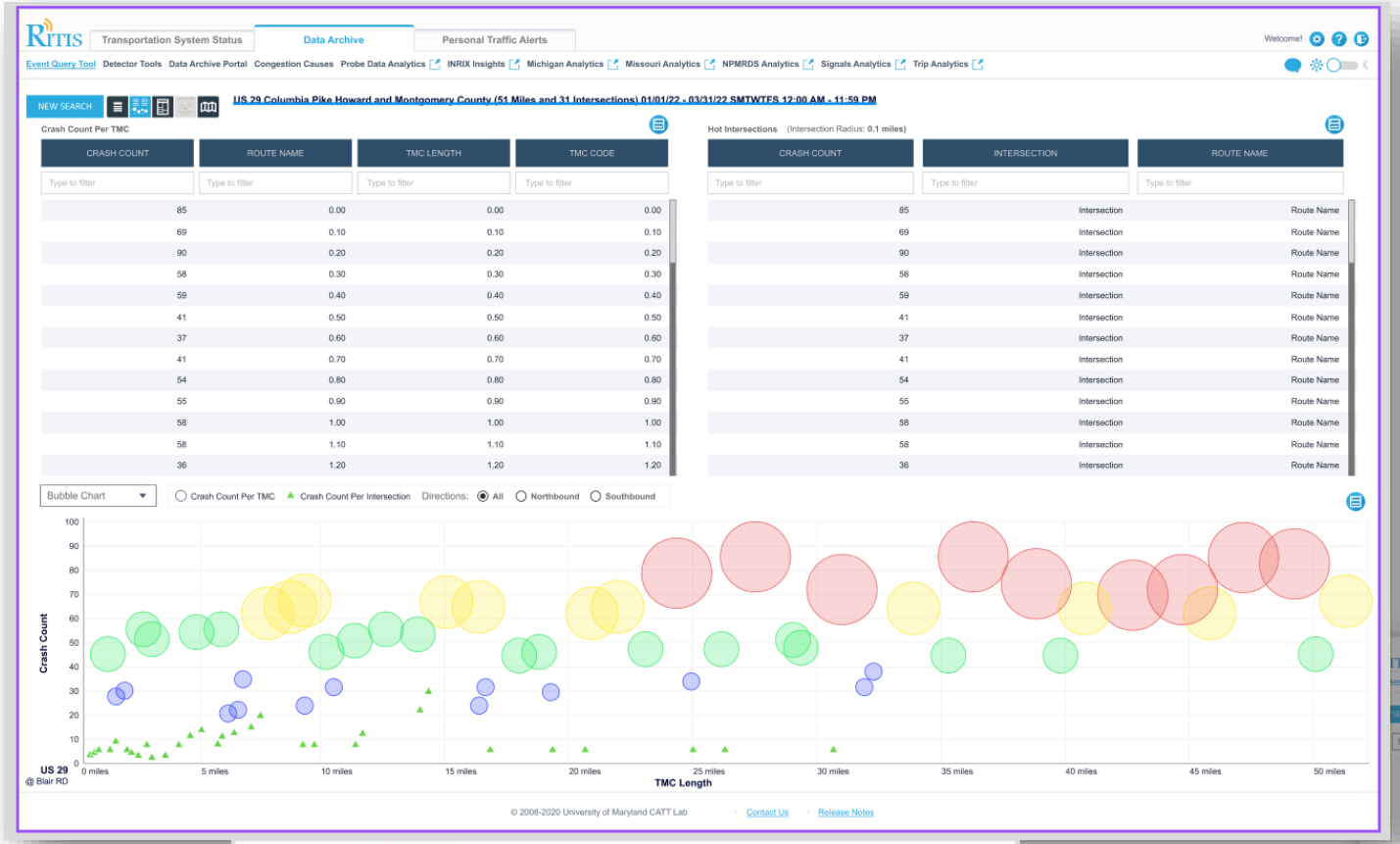
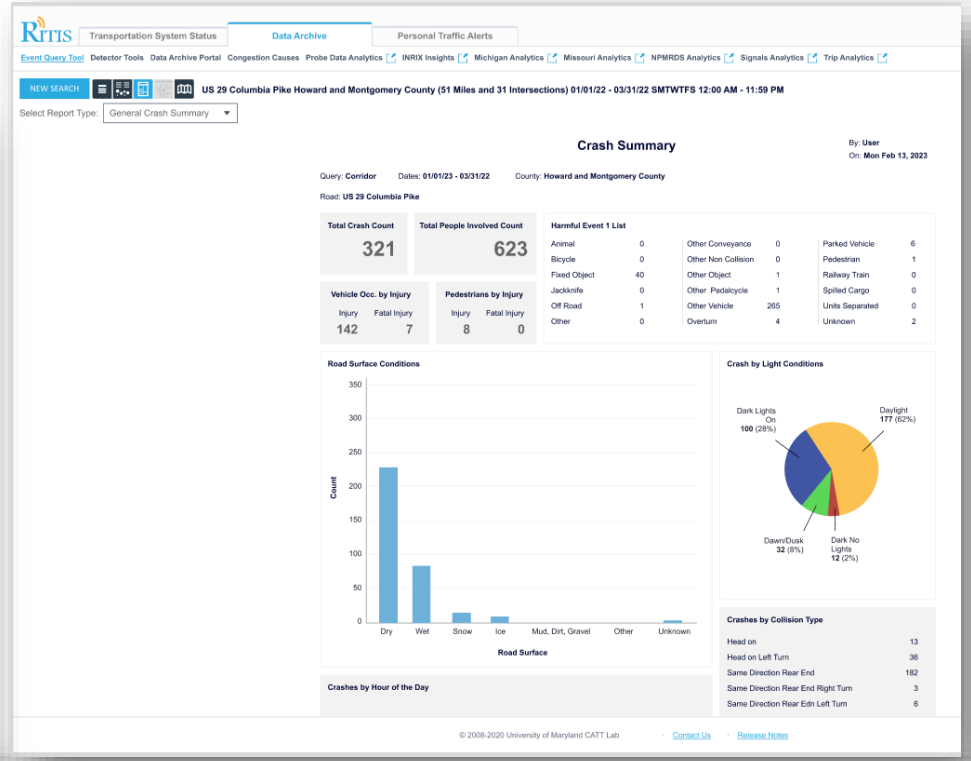
Expand all

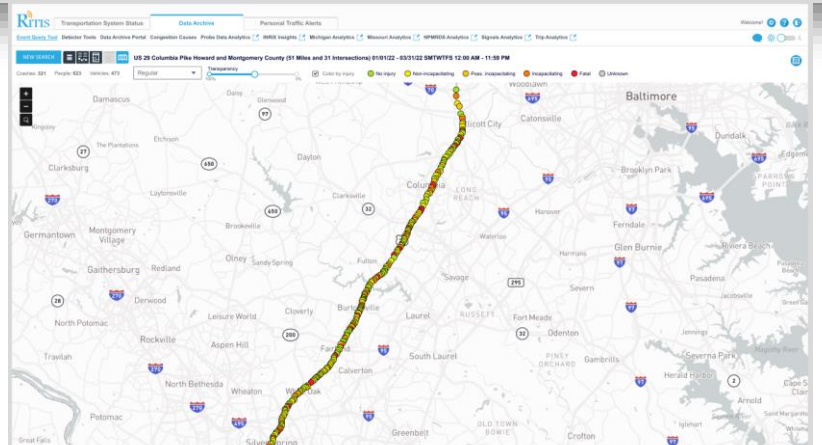
Showing 11 out of 27 columns

ID	AGENCY	STANDARDIZED TYPE	START TIME	CLOSED TIME	TMC	XD	VEHICLE TYPE	MAKE	MODEL	SEX
Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter				
CRASH_MD_AA01570012	MDOT_CHART	accidentsAndIncidents	2023-07-04T17:40:00-04:00	2023-07-04T17:40:00-04:00	110+06168	441043767	-	-	-	-
-	-	-	-	-	-	-	car	JEEP	COMPASS	-
-	-	-	-	-	-	-	car	VOLK	4S	-
-	-	-	-	-	-	-	-	-	-	M
-	-	-	-	-	-	-	-	-	-	M
CRASH_MD_AA0168000F	MDOT_CHART	accidentsAndIncidents	2023-07-04T21:00:00-04:00	2023-07-04T21:00:00-04:00	110P04447	133927439	-	-	-	-

Phase 2+ (later this year)







Automated Work Zone Reporting

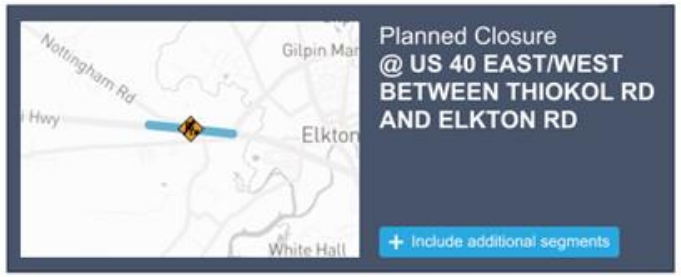
Work Zone Performance Report

Welcome Jenny | My History | Help

Report Parameters

1. Select roads

× Clear All



2. Select time period

00/00/0000 - through - 00/00/0000

3. Select day of week

✓ Sun | ✓ Mon | ✓ Tue | ✓ Wed | ✓ Thu | ✓ Fri | ✓ Sat

4. Select hours of operation

12:00 AM — 12:00 PM — 12:00 AM

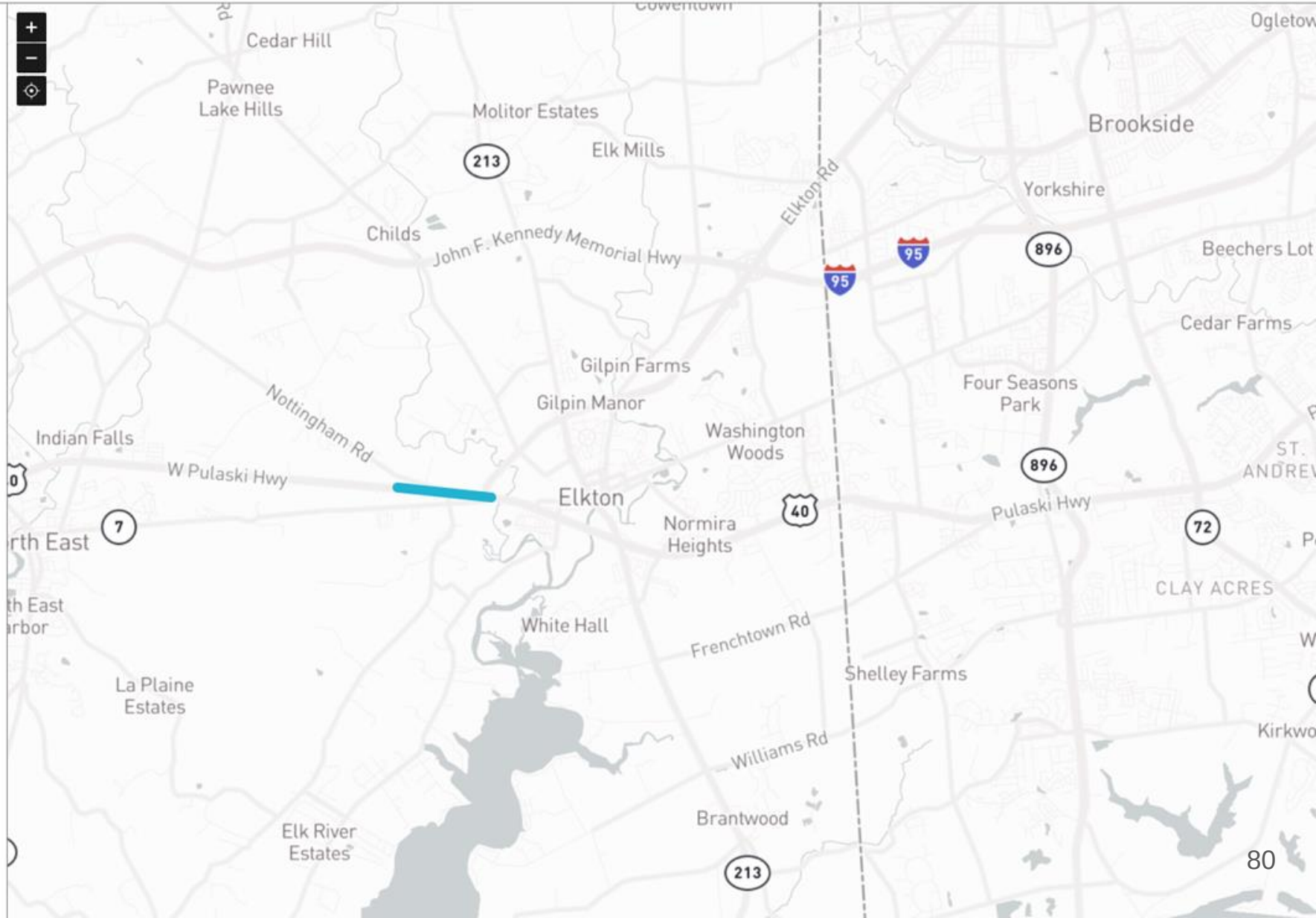
12:00 AM — 12:00 AM

5. Compare against another time period (optional)

☐ Include a comparison time period

An additional time period will be added to the multi line chart analysis page. You can use this to compare performances from week to week.

Generate Report



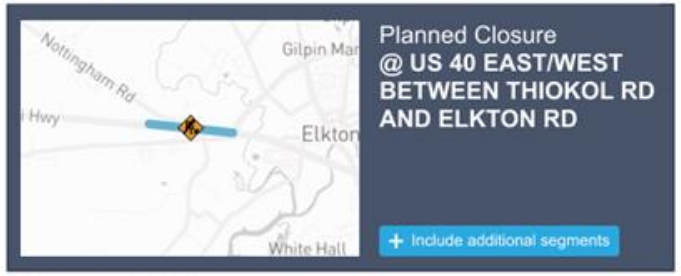
RITIS Work Zone Performance Report

Welcome Jenny | My History | Help

Report Parameters

1. Select roads

× Clear All



TMC segments from INRIX

Select from Map | Segment Codes | Road

You can define your work zone by selecting one or multiple segments on the map.

× Clear All

A ⠿ US-40 Eastbound at MD-213 ×

Starting segment	Ending segment
A	A
US-40 Eastbound at MD-213	US-40 Eastbound at MD-213

+ Add Segment(s)

2. Select time period

00/00/0000 - through - 00/00/0000

3. Select day of week

✓ Sun ✓ Mon ✓ Tue ✓ Wed ✓ Thu ✓ Fri ✓ Sat

4. Select hours of operation

12:00 AM 12:00 PM 12:00 AM

Work Zone Performance Report

Name Report | Enter a report name... | Export Report | Welcome Jenny | My History | Help

I-95 South Between MD 103 and Montgomery Rd

Date Range: May 12-16, 2022

Time Range: 9:00am - 3:00pm

Days of Week: SMTWTFS

Select planned lanes closed during operation

Possible Impacts

2 Incidents
Tuesday and Wednesday

3 Weather Events
Thursday and Friday

Holidays
May 12th Tuesday

Miles of Congestion

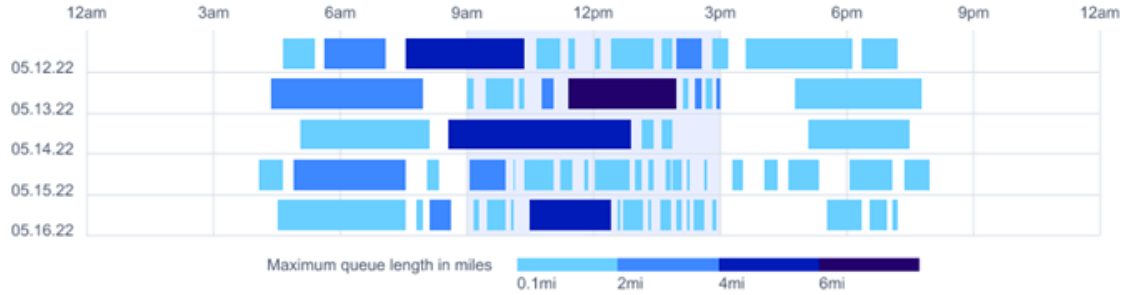
Goal

No queues longer than: 0 Miles

Lasting more than: 0 Mins

N/A

Congestion This Week



Speed & Travel Time

Goal

Don't let speeds drop below: 0 MPH

N/A

Average speed through Work Zone during operations

37 mph

Max speed through Work Zone

71 mph

Min speed through Work Zone

15 mph

Average travel time through Work Zone during operations

2 mins

Delay

Goal

Daily vehicle hours of delay no more than: 0 Hrs

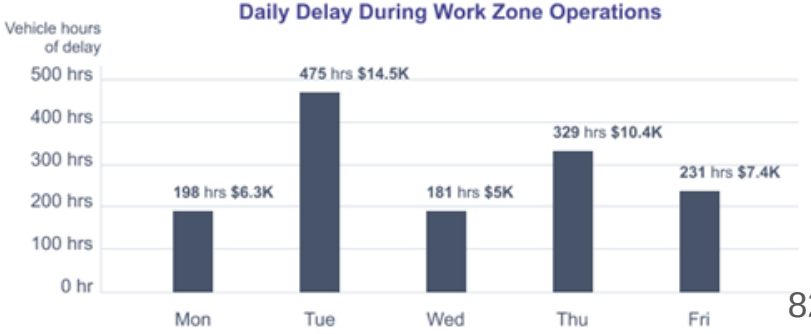
N/A

Daily average vehicle hours of delay

283 hrs

(or **$7.5K** UDC)

Daily Delay During Work Zone Operations



Work Zone Performance Report

Name Report | Enter a report name... | Export Report | Welcome Jenny | My History | Help

I-95 South Between MD 103 and Montgomery Rd

Date Range: May 12-16, 2022

Time Range: 9:00am - 3:00pm

Days of Week: SMTWTFS

Select planned lanes closed during operation

☐ ☐ ☐ ☐ ☐ ☐ ☐

Possible Impacts

2 Incidents
Tuesday and Wednesday

3 Weather Events
Thursday and Friday

Holidays
May 12th Tuesday

Miles of Congestion

Goal

No queues longer than: 5 **Miles**

Lasting more than: 20 **Mins**

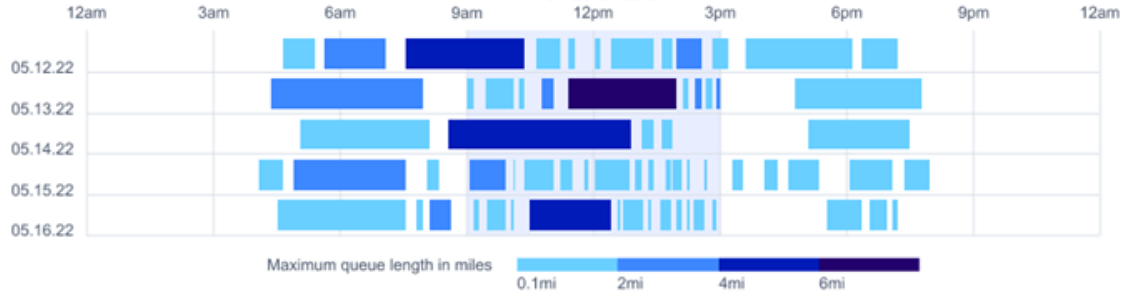
Work Zone operations met this goal

95%

of this week

Congestion This Week

Work Zone Hours



Speed & Travel Time

Goal

Don't let speeds drop below: 30 **MPH**

Work Zone operations met this goal

52%

of this week

Average speed through Work Zone during operations

37 mph

Max speed through Work Zone

71 mph

Min speed through Work Zone

15 mph

Average travel time through Work Zone during operations

2 mins

Delay

Goal

Daily vehicle hours of delay no more than: 200 **Hrs**

Work Zone operations met this goal

38%

of this week

Daily average vehicle hours of delay

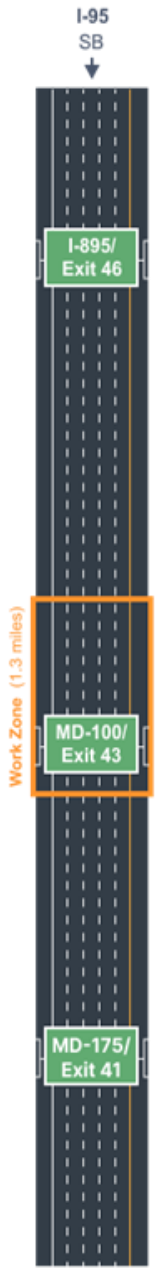
283 hrs

(or **$7.5K** UDC)

Daily Delay During Work Zone Operations

Work Zone Performance Summary

Miles of Congestion



Goal

No more than

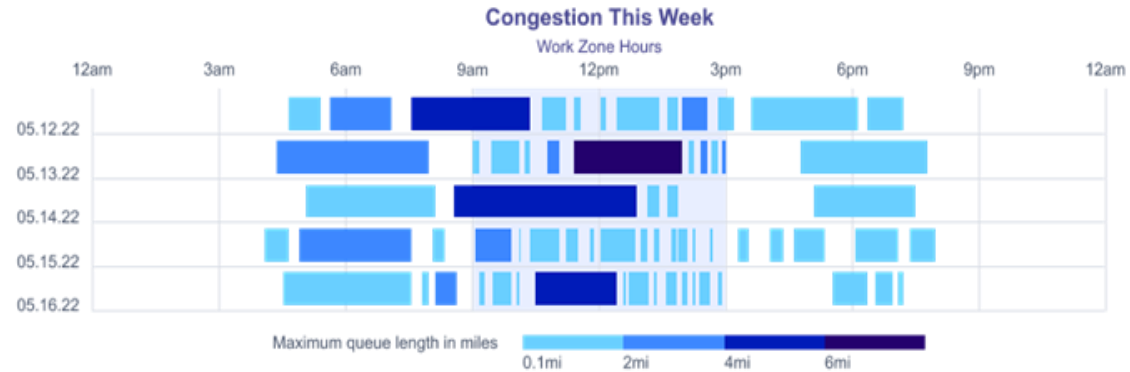
5.0 miles

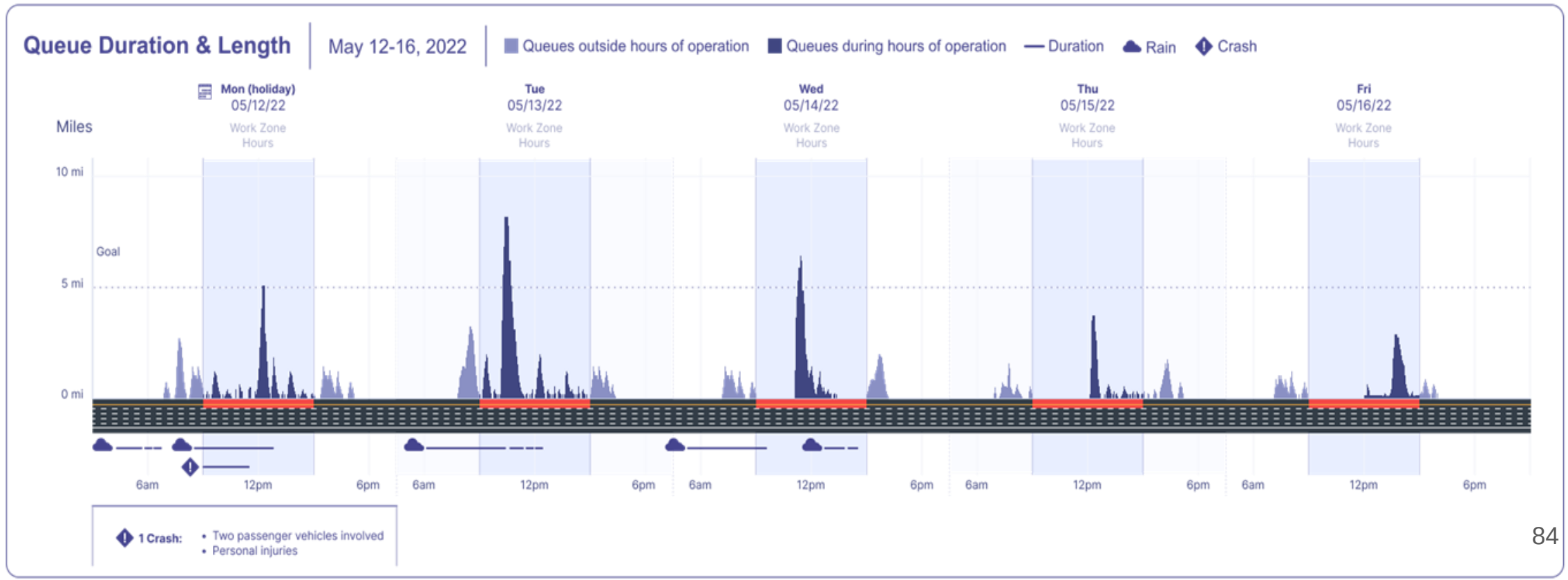
Lasting: **> 20 mins**

Work Zone operations met this goal

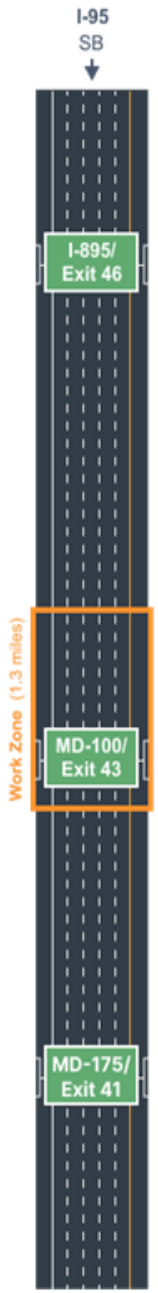
95%

of this week





Work Zone Performance Summary **Speed**



Goal

Don't let speeds drop below

30 mph

Lasting: **> 5 mins**

Work Zone operations met this goal

92%

of this week

Average speed through Work Zone during operations

37 mph

Max speed through Work Zone

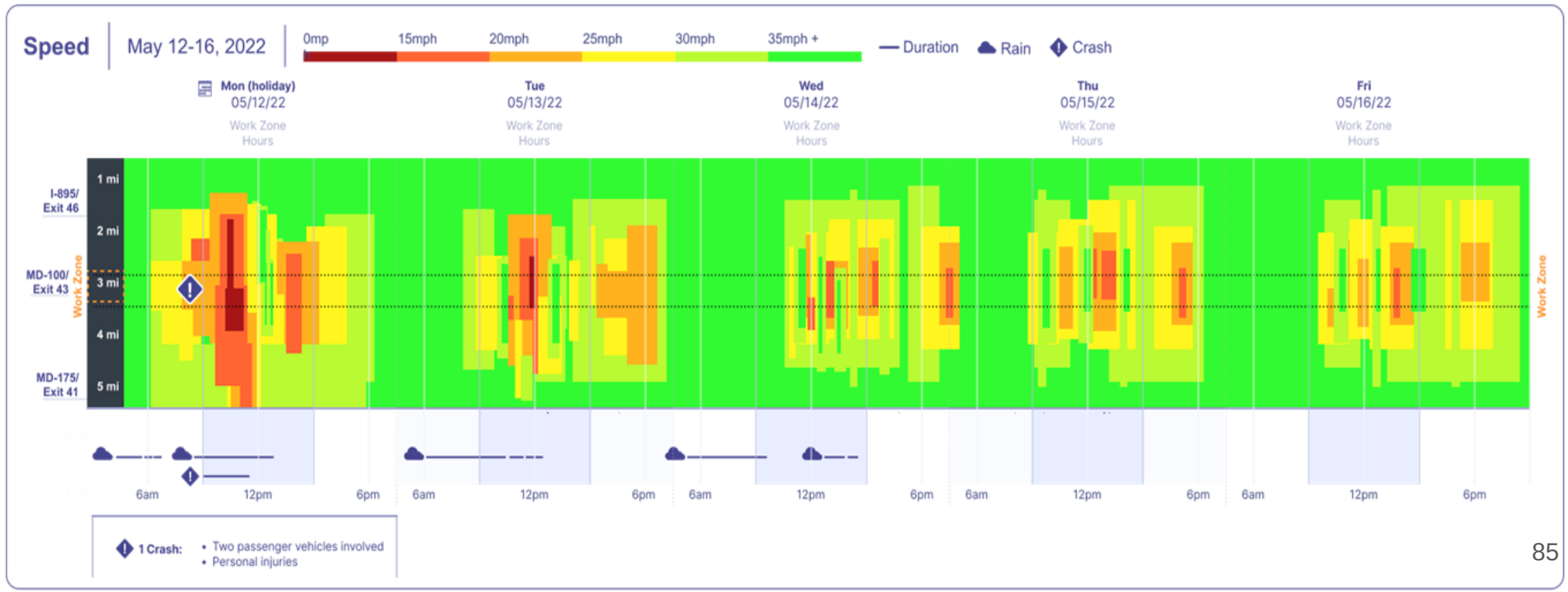
71 mph

Min speed through Work Zone

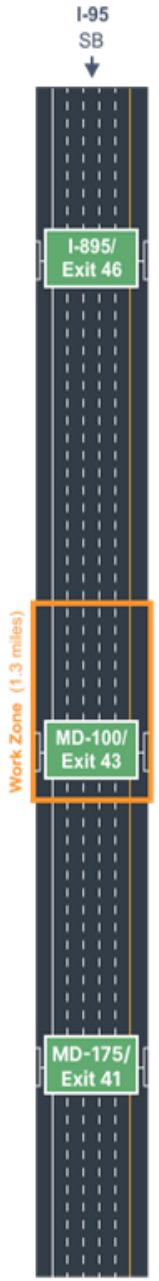
15 mph

Average travel time through Work Zone during operations

2 mins



Work Zone Performance Summary **Delay**



Goal

Daily vehicle hours of delay less than

200 hrs

(or **$6.5K** UDC)

Work Zone operations met this goal

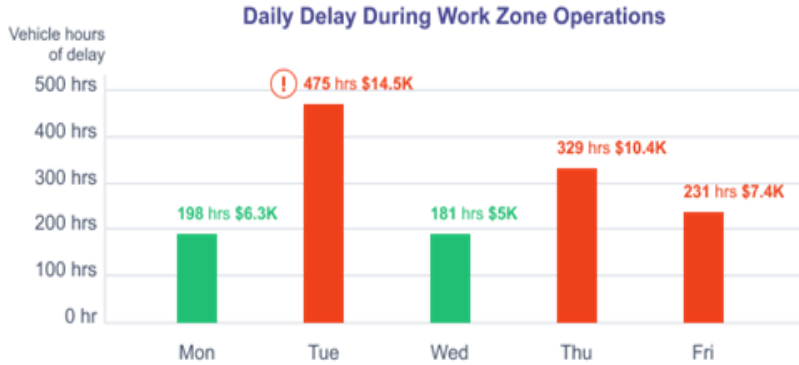
30%

of this week

Daily average vehicle hours of delay

283 hrs

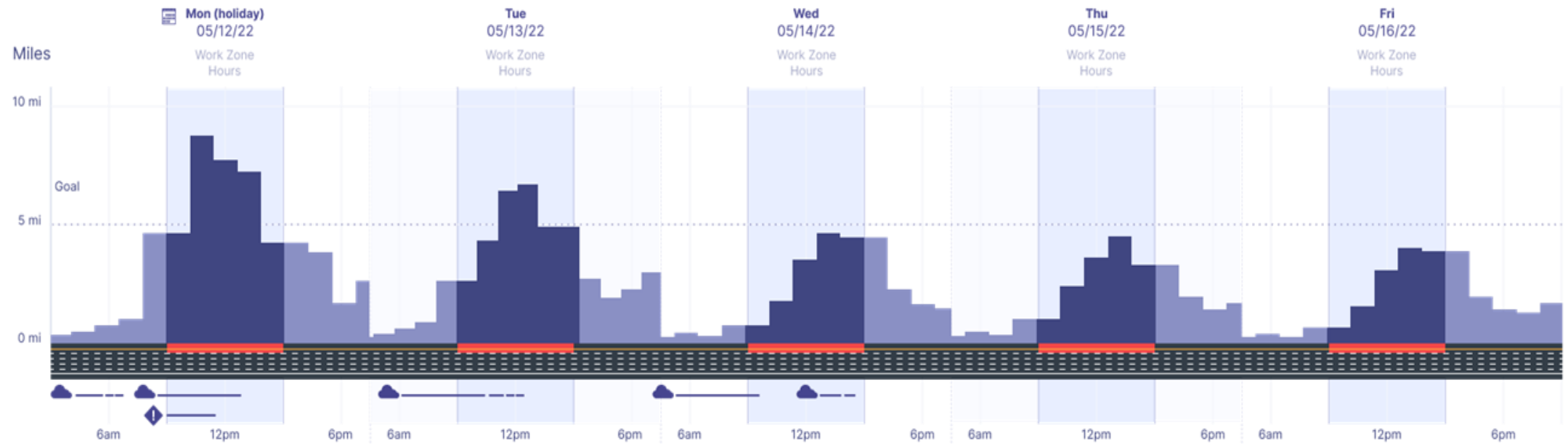
(or **$7.5K** UDC)



Queue Duration & Length

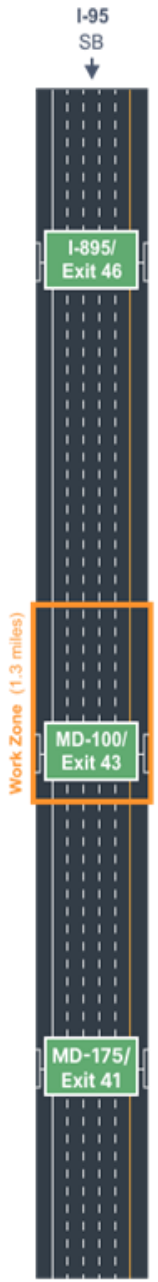
May 12-16, 2022

Queues outside hours of operation | Queues during hours of operation | Duration | Rain | Crash



1 Crash:
- Two passenger vehicles involved
- Personal injuries

Work Zone Performance Summary — Delay



Goal

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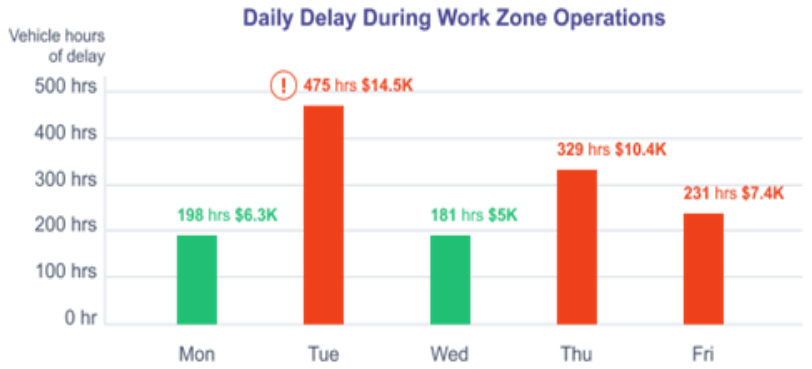
of this week

Daily average vehicle hours of delay

283 hrs

(or **$7.5K** UDC)



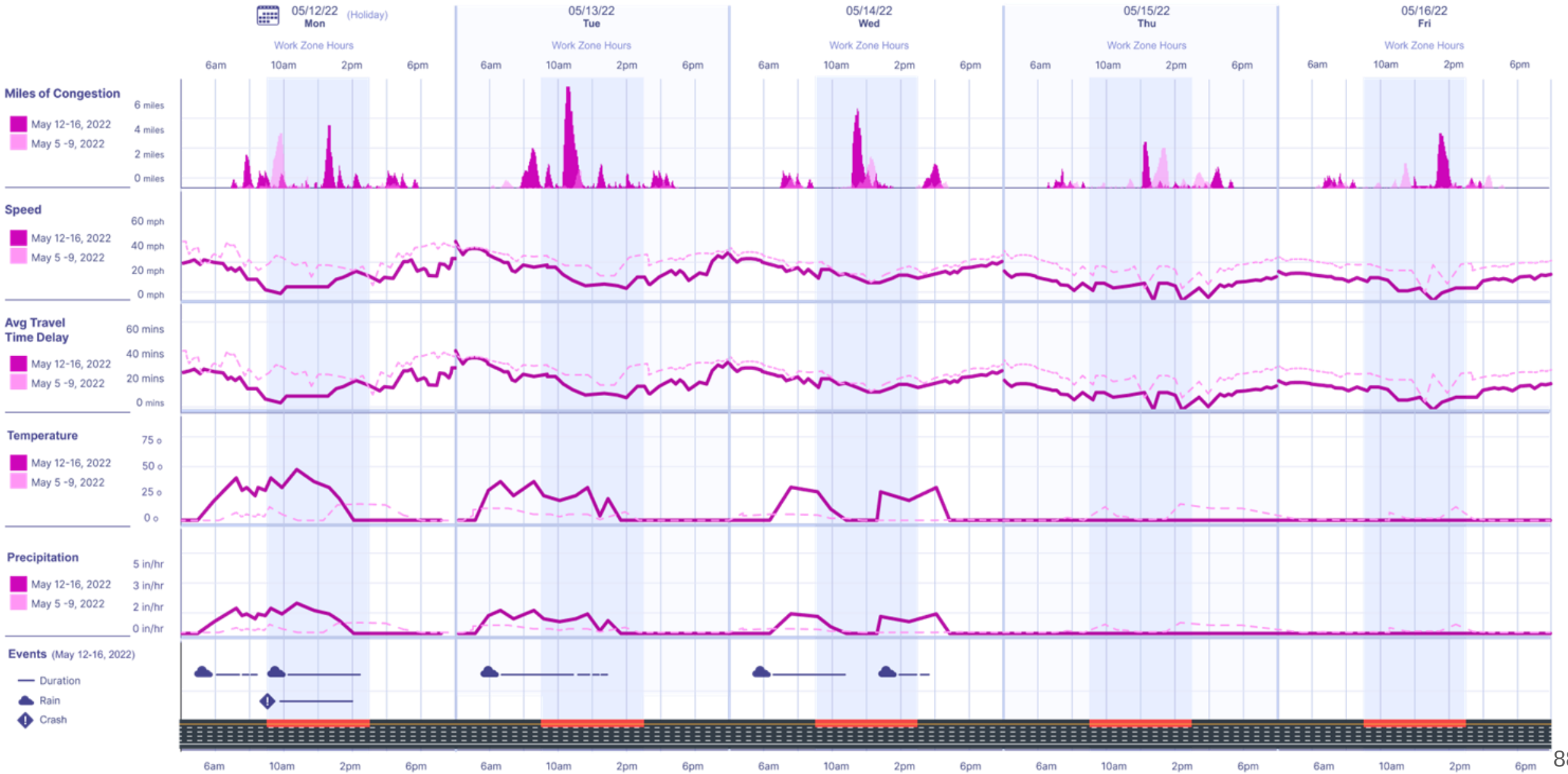
Vehicle Hours of Delay and User Delay Cost

Work Zone Hours

Lowest Hours/Cost — Highest Hours/Cost

	12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	
05/12/22 Mon (holiday)	0h	0h	0h	0h	0h	10h	35h	9h	15h	58h	42h	0h	0h	2h	0h	0h	0h	10h	9h	0h	8h	0h	0h	0h	198h
05/13/22 Tue	0h	0h	0h	0h	0h	23h	33h	12h	0h	14h	88h	16h	131h	108h	0h	0h	0h	15h	16h	12h	7h	0h	0h	0h	475h
05/14/22 Wed	0h	0h	0h	0h	0h	12h	13h	10h	8h	63h	20h	6h	1h	0h	0h	0h	0h	10h	23h	15h	0h	0h	0h	0h	181h
05/15/22 Thu	0h	0h	0h	0h	0h	8h	11h	3h	6h	198h	65h	0h	0h	3h	0h	0h	2h	5h	18h	3h	7h	0h	0h	0h	329h
05/16/22 Fri	0h	0h	0h	0h	3h	9h	8h	6h	0h	17h	0h	45h	69h	45h	14h	0h	0h	4h	8h	3h	0h	0h	0h	0h	231h
VHD	0h	0h	0h	0h	3h	62h	100h	40h	29h	350h	215h	67h	201h	158h	14h	0h	2h	44h	74h	33h	22h	0h	0h	0h	**16,814h**
05/12/22 Mon (holiday)	$0	$0	$0	$0	$0	$0.4K	$1K	$0.3K	$0.4K	$1.8K	$1.3K	$0	$0	$0.1K	$0	$0	$0	$0.4K	$0.3K	$0	$0.3K	$0	$0	$0	$6.3K
05/13/22 Tue	$0	$0	$0	$0	$0	$0.7K	$0.9K	$0.4K	$0	$0.3K	$2.7K	$0.5K	$4K	$3.3K	$0	$0	$0	$0.5K	$0.5K	$0.4K	$0.3K	$0	$0	$0	$14.5K
05/14/22 Wed	$0	$0	$0	$0	$0	$0.4K	$0.4K	$0.4K	$0.3K	$1.9K	$0.6K	$0.2K	$0.1K	$0	$0	$0	$0	$0.4K	$0.7K	$0.5K	$0	$0	$0	$0	$5.9K
05/15/22 Thu	$0	$0	$0	$0	$0	$0.3K	$0.4K	$0.1K	$0.2K	$6K	$2K	$0	$0	$0.1K	$0	$0	$0.1K	$0.2K	$0.6K	$0.1K	$0.3K	$0	$0	$0	$10.4K
05/16/22 Fri	$0	$0	$0	$0	$0.1K	$0.3K	$0.3K	$0.2K	$0	$0.5K	$0	$1.4K	$2.1K	$1.4K	$0.5K	$0	$0	$0.2K	$0.3K	$0.1K	$0	$0	$0	$0	$7.4K
UDC	$0	$0	$0	$0	$0.1K	$2.1K	$3K	$1.4K	$0.9K	$10.5K	$6.6K	$2.1K	$6.2K	$4.9K	$0.5K	$0	$0.1K	$1.7K	$2.4K	$1.1K	$0.9K	$0	$0	$0	**$89K**

Work Zone Performance Summary — Line Chart Comparsion



RITIS | Probe Data Analytics suite

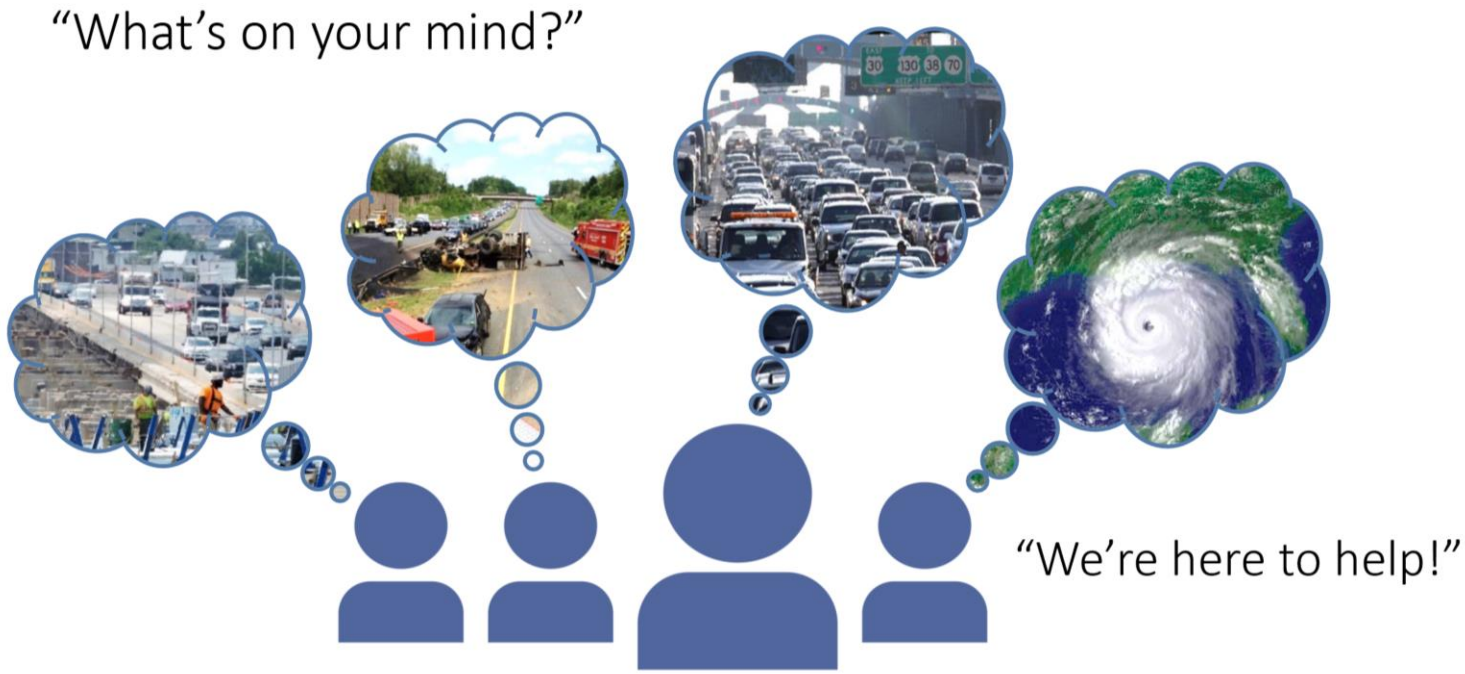
User Feedback Session, Q/A & Wrap Up

Michael Pack
Director
UMD CATT Lab

Matt Glasser
National TSMO Account Lead
Arcadis
RITIS User Group Co-chair

We want to hear from you!

- All features and functionality are driven by state/MPO users.
- You are welcome to join any of our User Groups / Working Groups / Listening Sessions to brainstorm/define these new features and functionality.
- You can also type your comments to us today either in the Q&A box or with an email to support@ritis.org

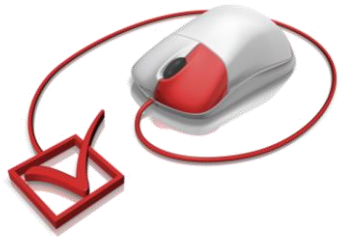


Agency Input – Polling and Open Discussion

Please type your answer under the question in the pop-up box.

Poll 7 - What kinds of things are you currently doing with RITIS - Planning/Ops, presentations, project/funding justification, etc.- that you'd be willing to share at a future meeting?

Poll 8 - Is there any topic you would like to see added to a future User Group meeting?



Wrap Up

Matt Glasser
National TSMO Account Lead
Arcadis
RITIS User Group Co-chair

Questions?

Sheryl Bradley (TETC)	sbradley@tetcoalition.org
Joanna Reagle (Logistics)	jreagle@kmjinc.com
Michael Pack (CATT Lab)	PackML@umd.edu
RITIS Tech Support	support@ritis.org
PDA Suite Tech Support	pda-support@ritis.org