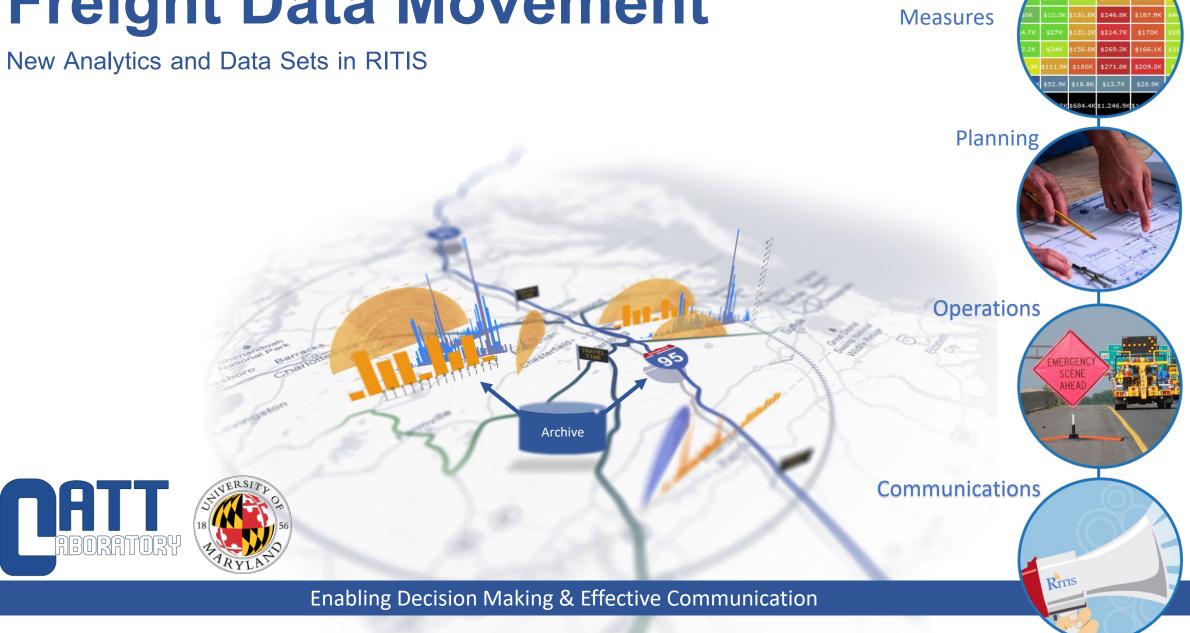
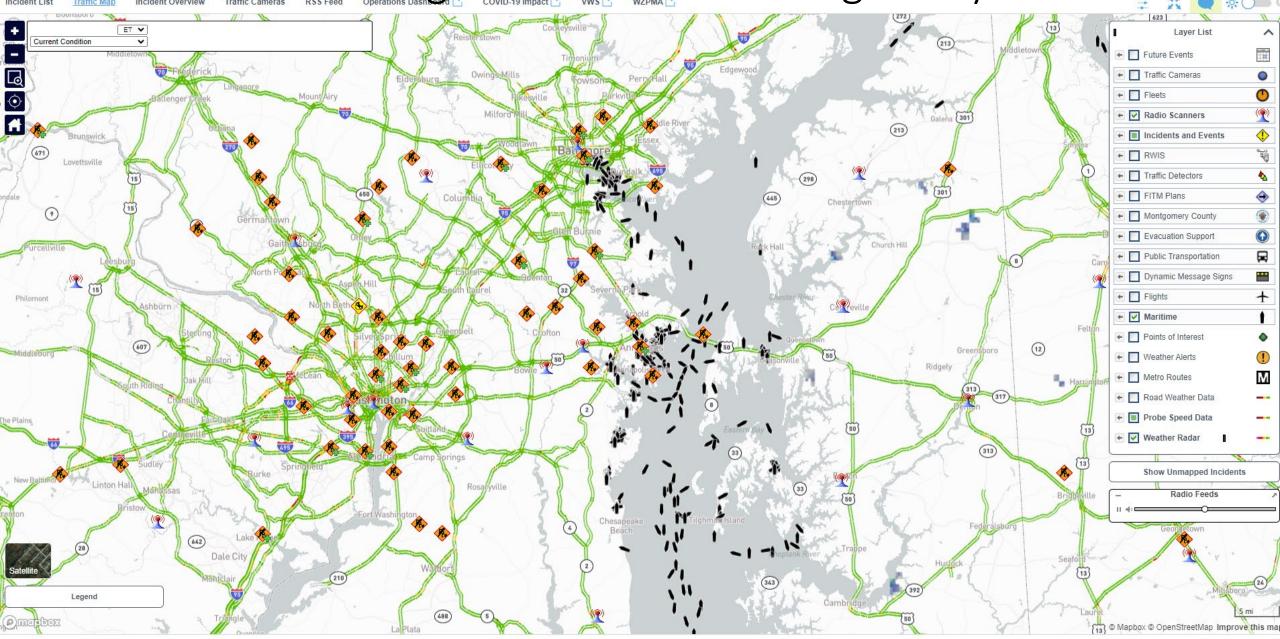
# **Freight Data Movement**

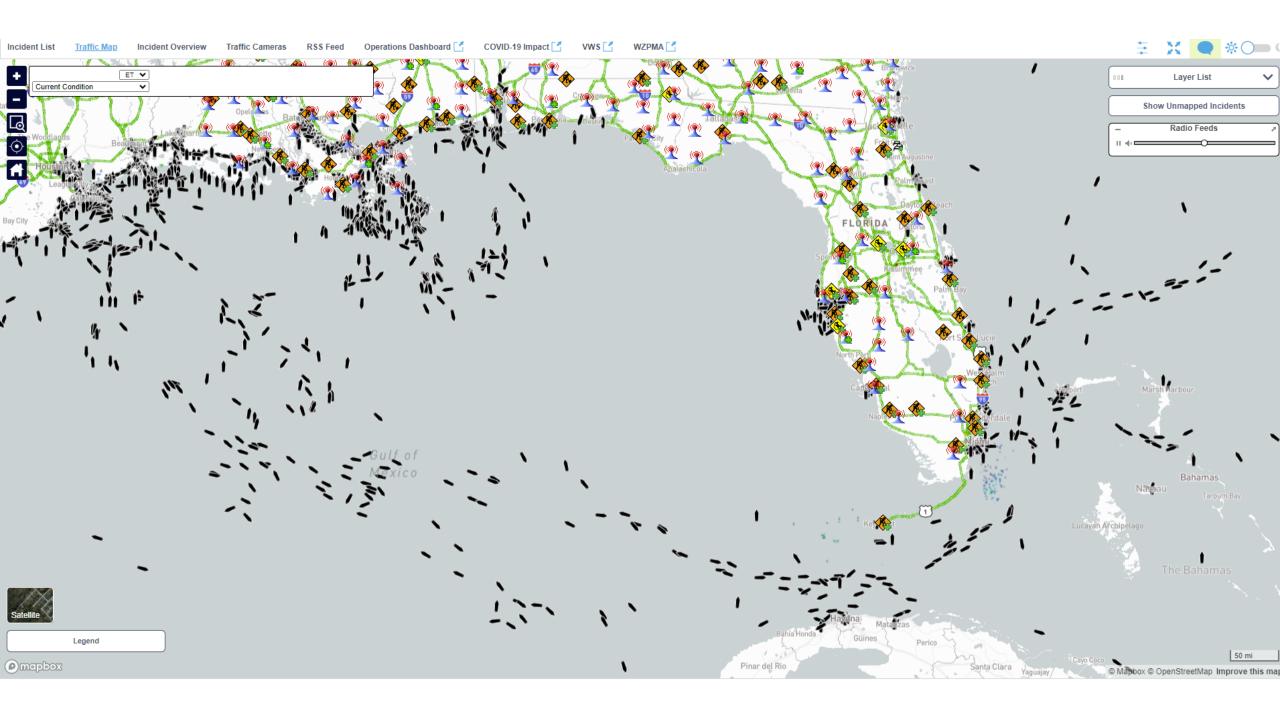


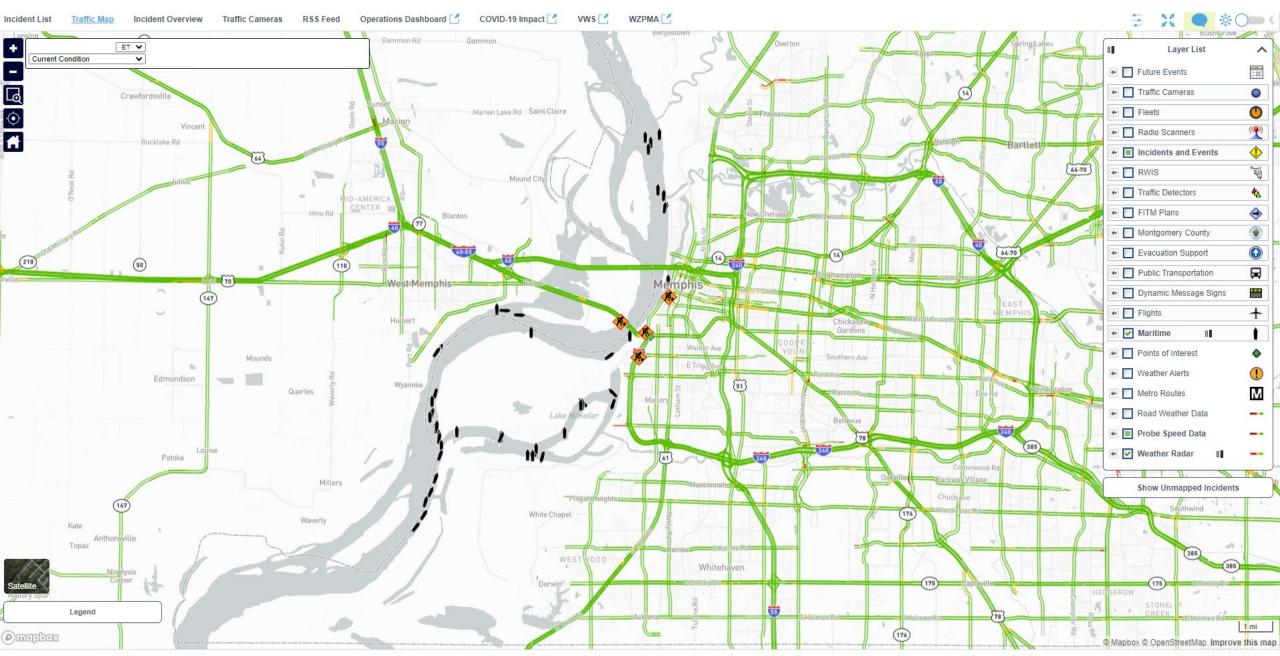
**Performance** 

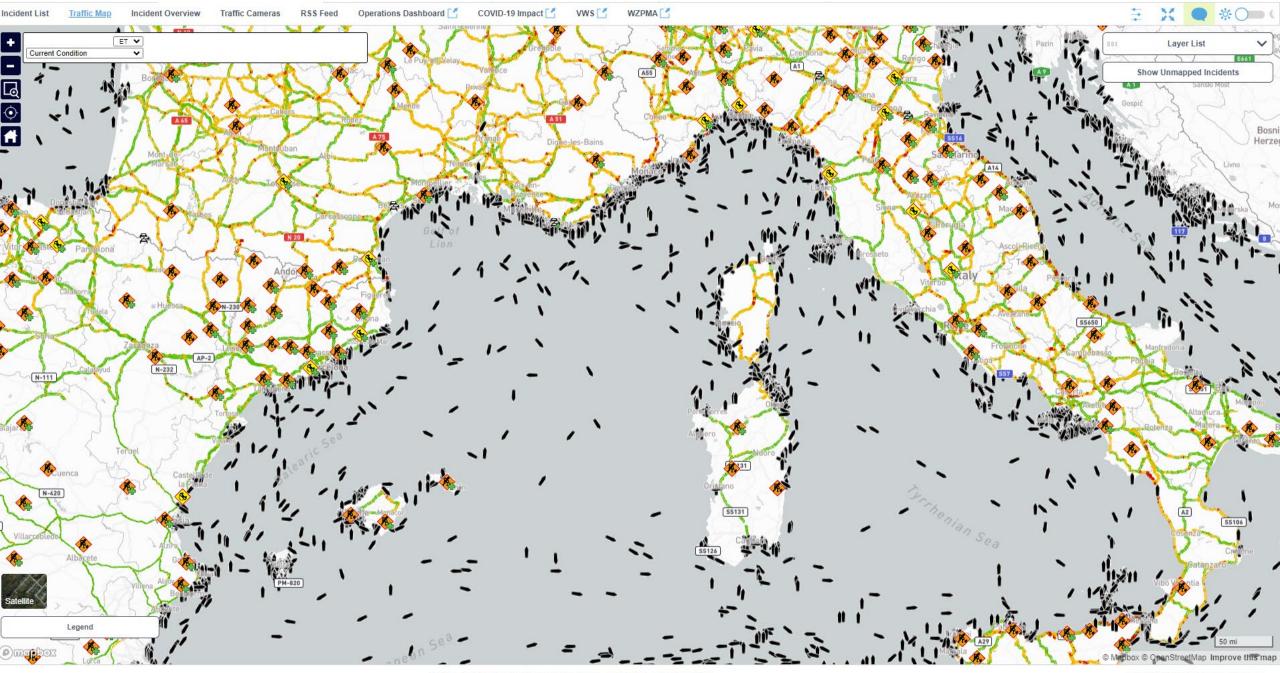
Tracking of maritime vessels globally



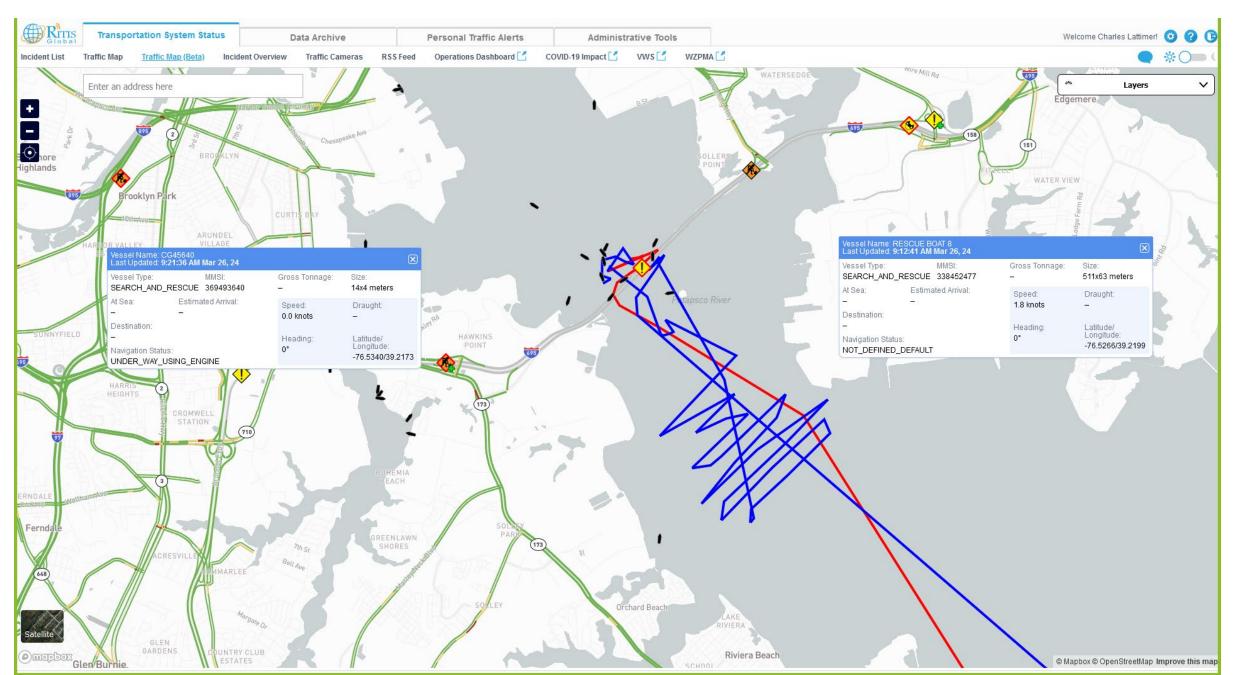
Tracking of maritime vessels globally Data Archive VIRGINIA



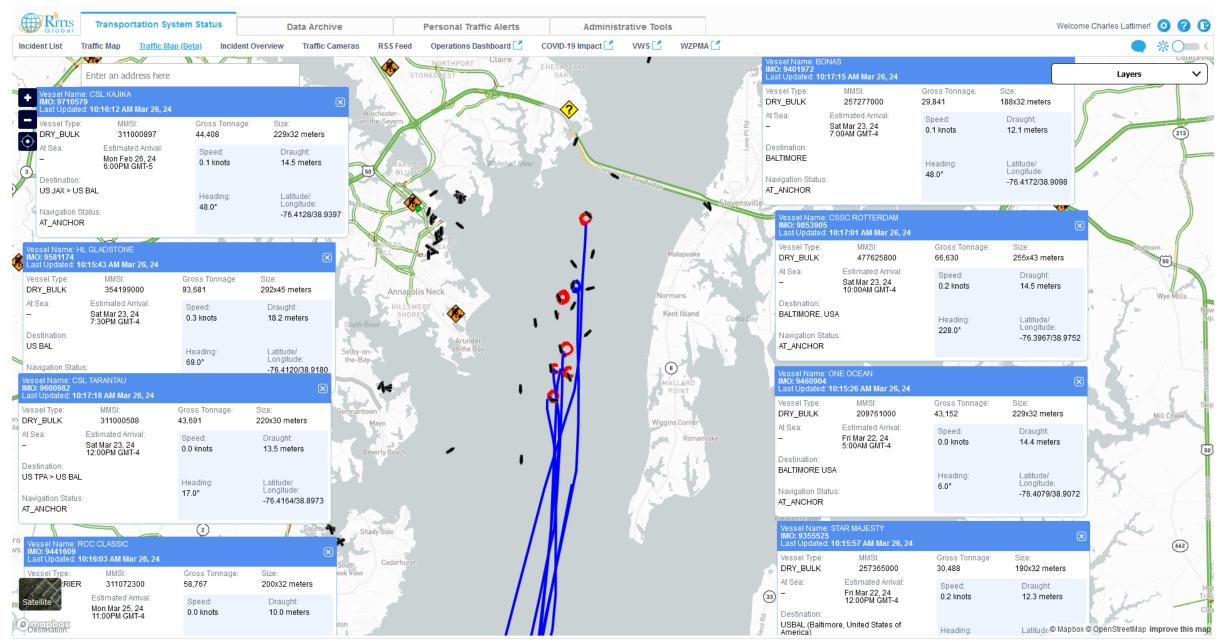




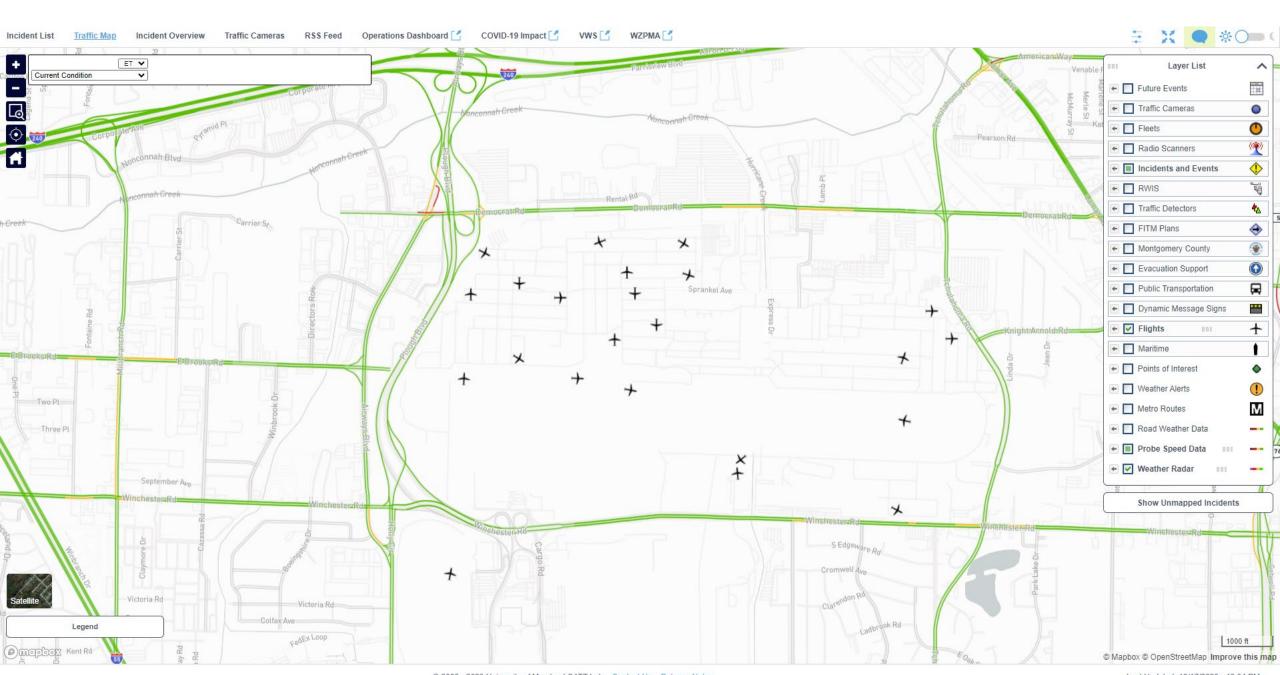
#### Maritime Search and Rescue Vessel Movements

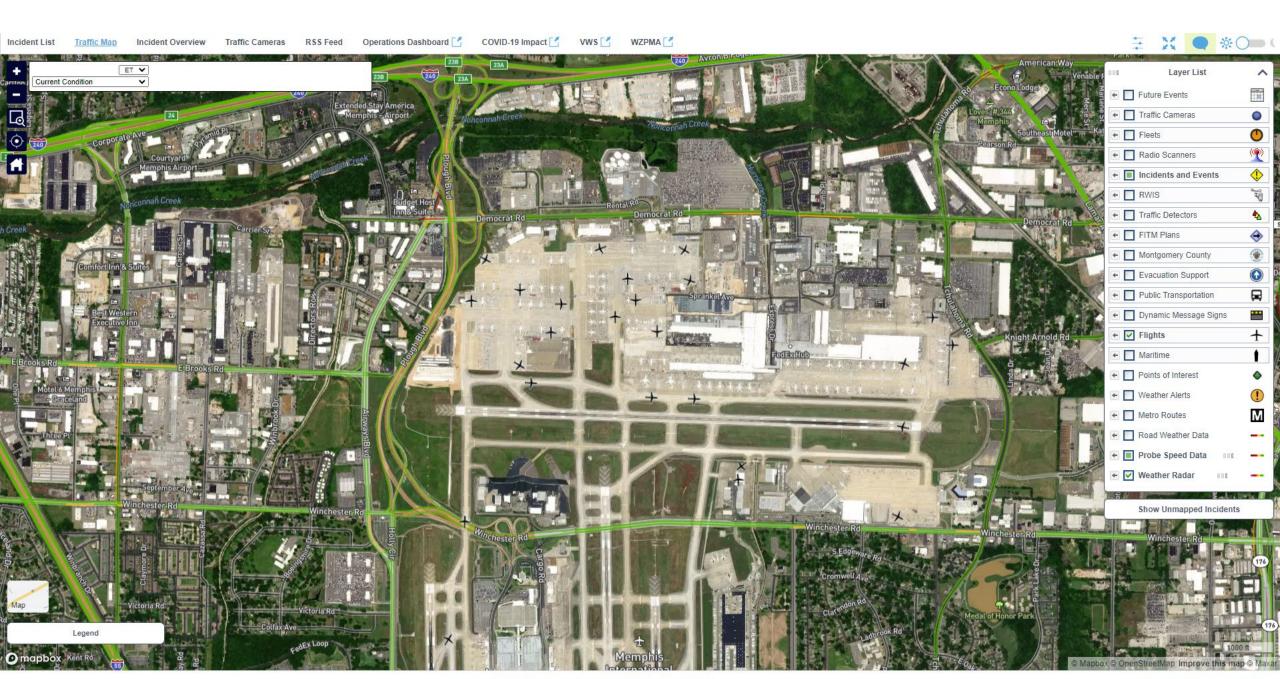


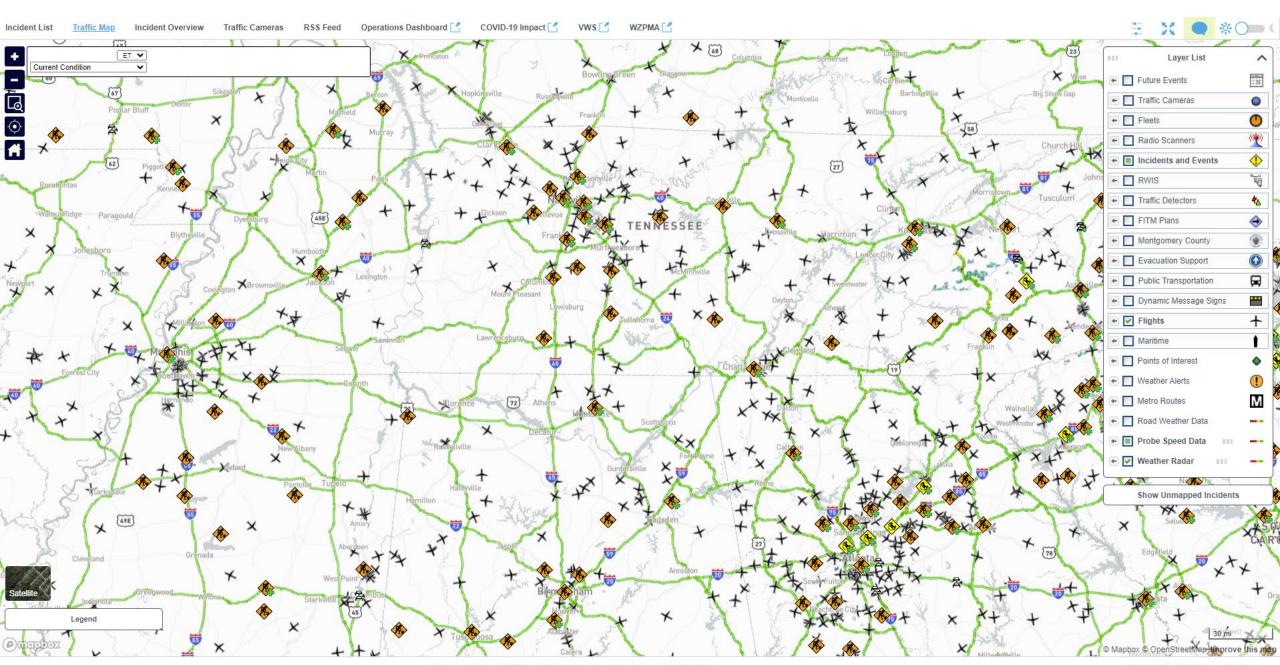
## Vessels bound for Seagirt were anchored/loitering

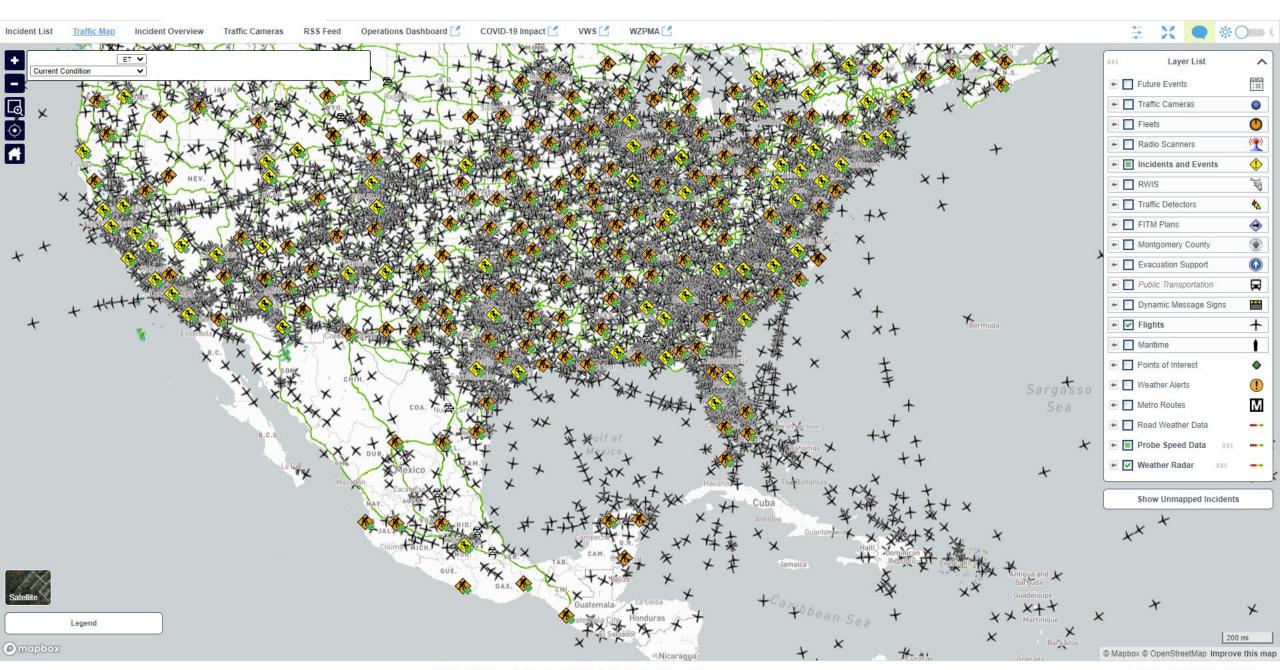


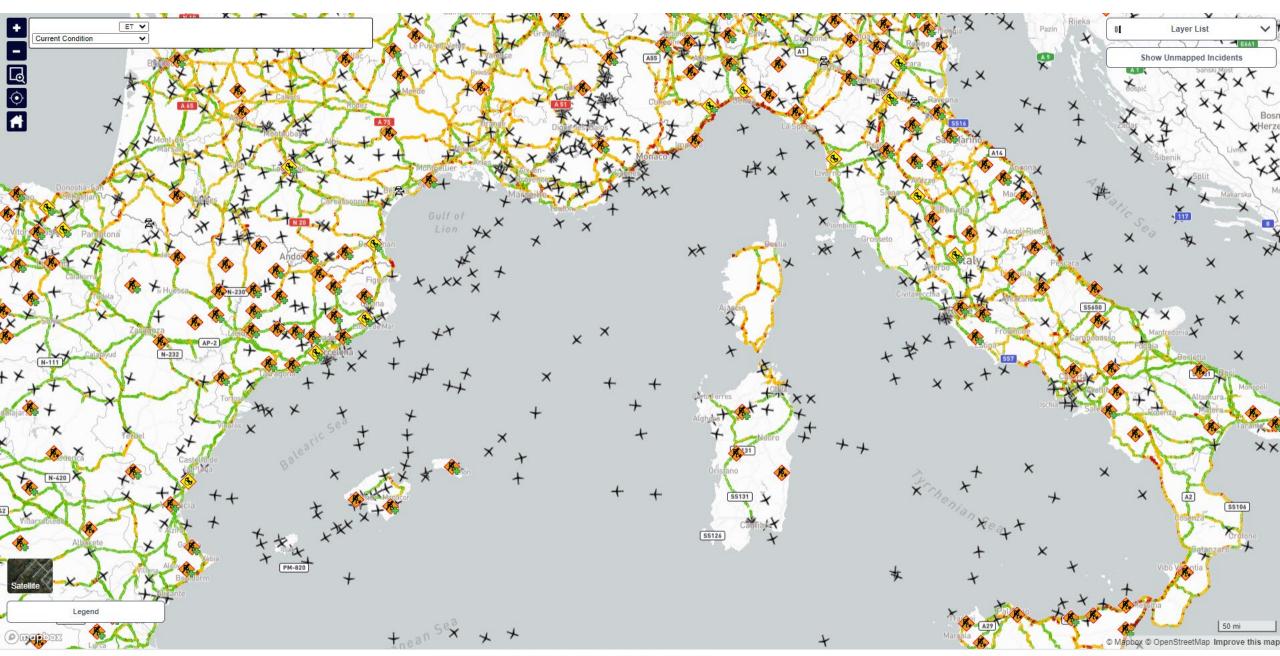
#### Tracking of Air Traffic Globally







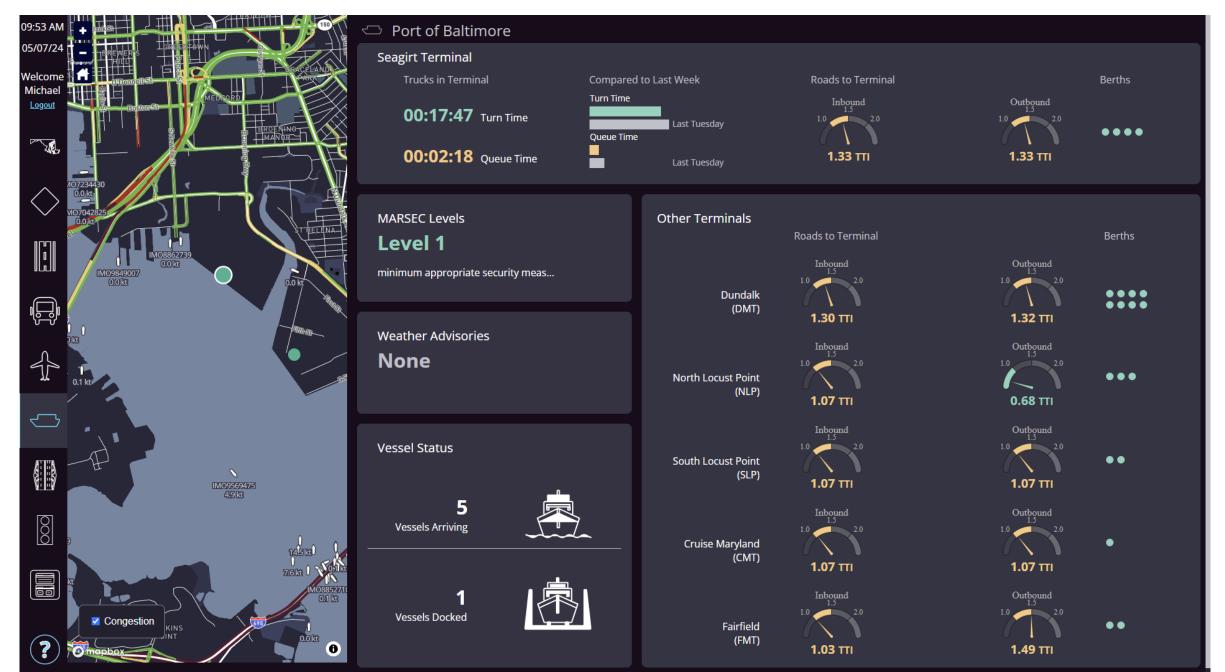




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Helicopter Monitoring / Search and Rescue Movements Transportation System Status Welcome Charles Lattimer! (1) Data Archive Personal Traffic Alerts **Administrative Tools** COVID-19 Impact [ VWS [ Operations Dashboard Traffic Cameras RSS Feed Enter an address here Layers GRAY MAN Future Events ← ☐ Live Incidents & Events ← ✓ Flights ast Updated: 9:42:43 AM Mar 26, 24 ← Maritime Aircraft Type: Airline: Registration: Role: ← ○ Overhead Signs Eurocopter AS350 N191NR Unclassified B3e Ecureuil (AS50) Traffic Cameras Scheduled Arrival: Speed: Altitude Radio Scanners 109.2 mph 600 ft ← Fleets Distance: Heading: 36.1° Public Transportation Arrival: Latitude/Longitude ← Weather Alerts -76.5216/39.2120 ← ☐ Weather Stations Edgemere Road Weather ← Probe Speed Data Baltimore Highlands ← ○ Weather Radar Brooklyn Park HAWKINS POINT @ Mapbox @ OpenStreetMap Improve this map

#### Real-time Port of Baltimore Performance

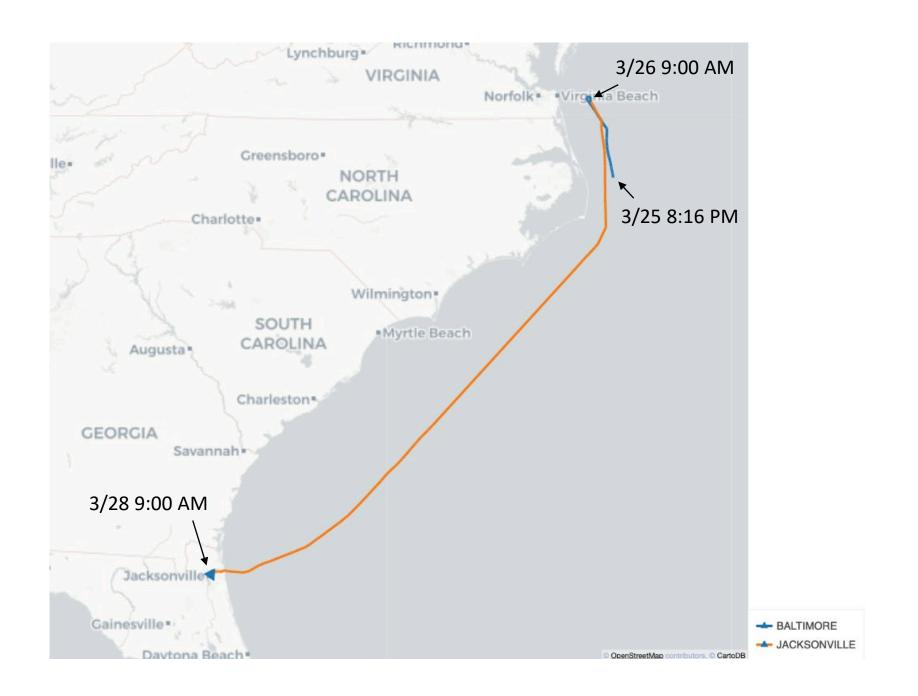


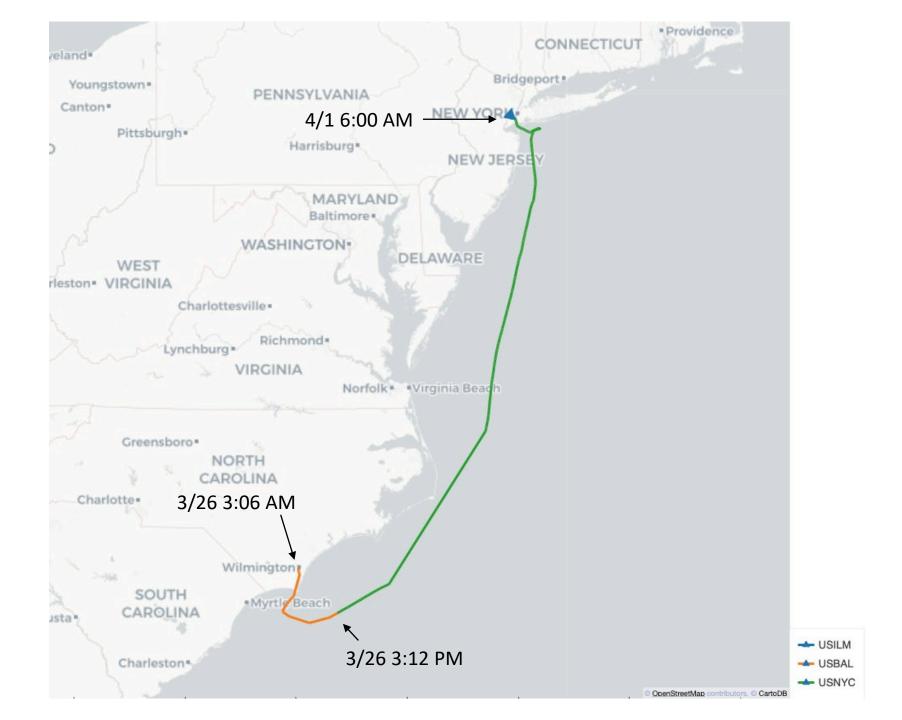


What can we do with the data?

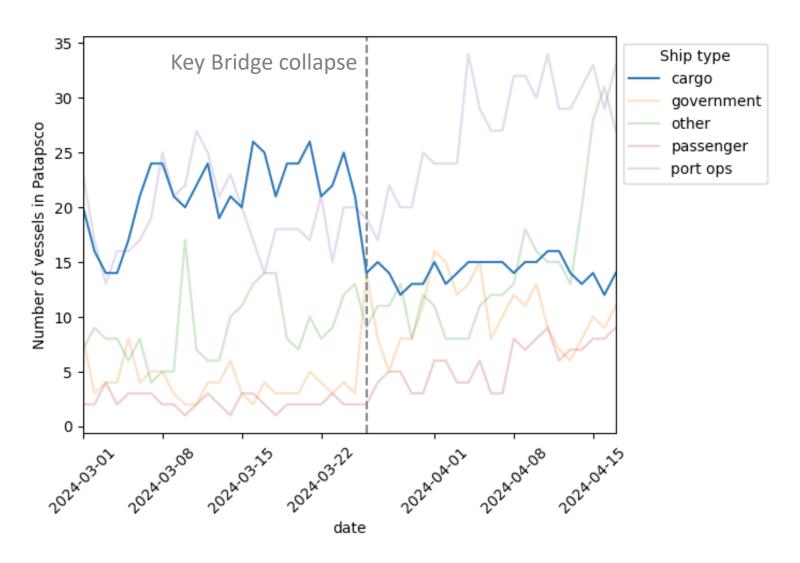
### Monitor Shipping Diversions (like right after the collapse)



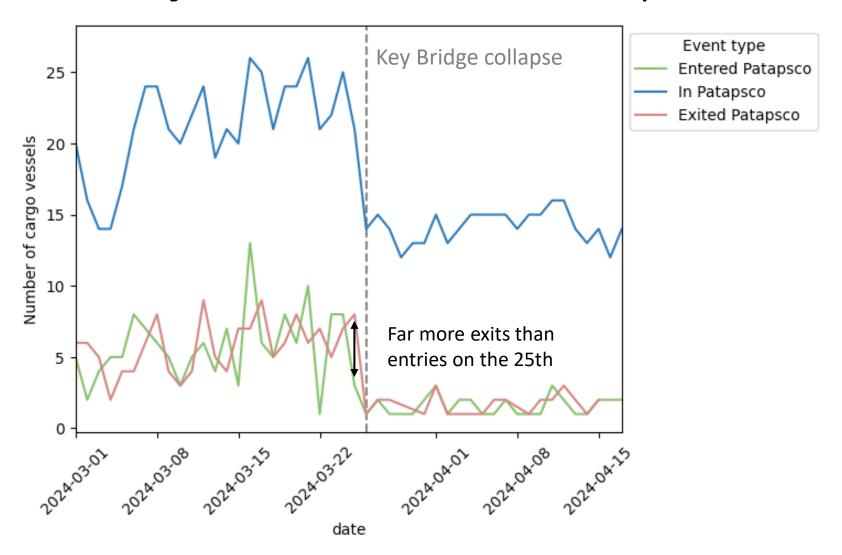




### The number of cargo vessels has decreased

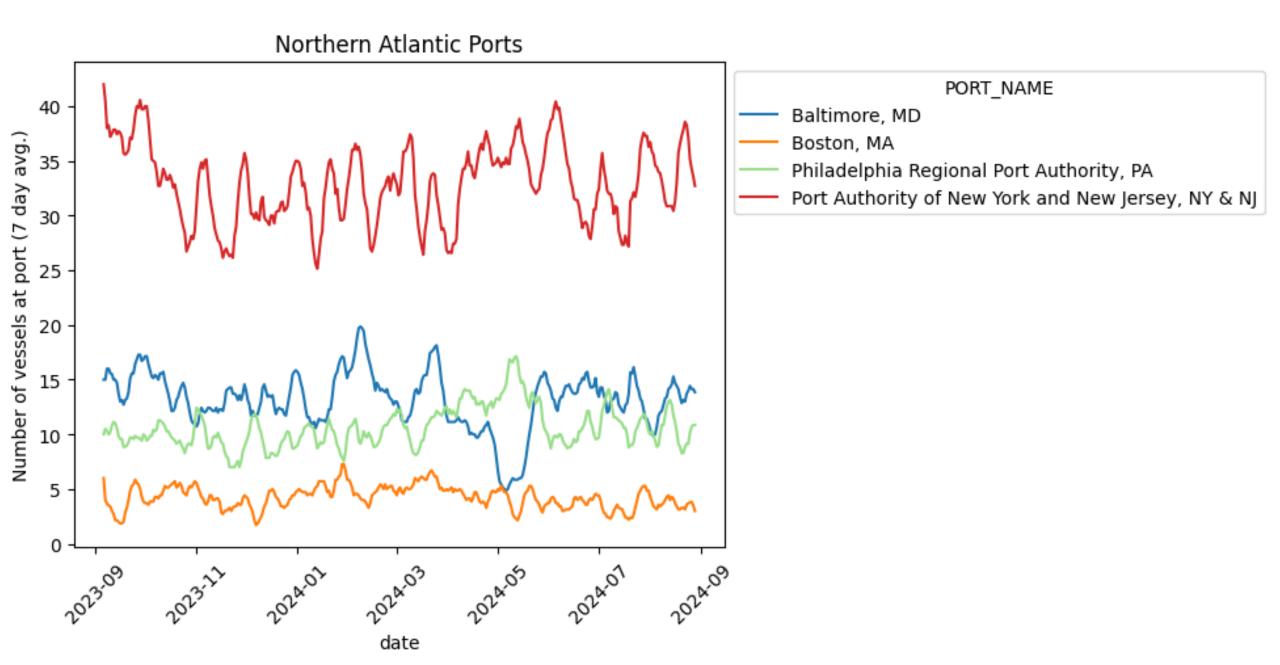


### Lots of exits just before the collapse

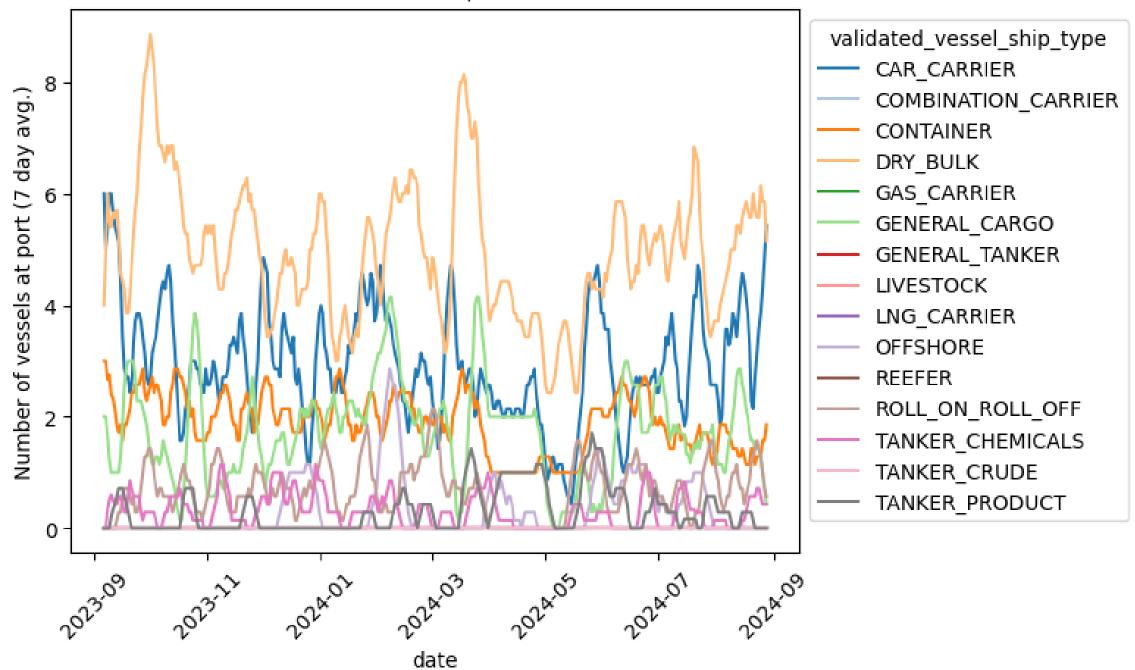


Understand potential ILA strike impacts.

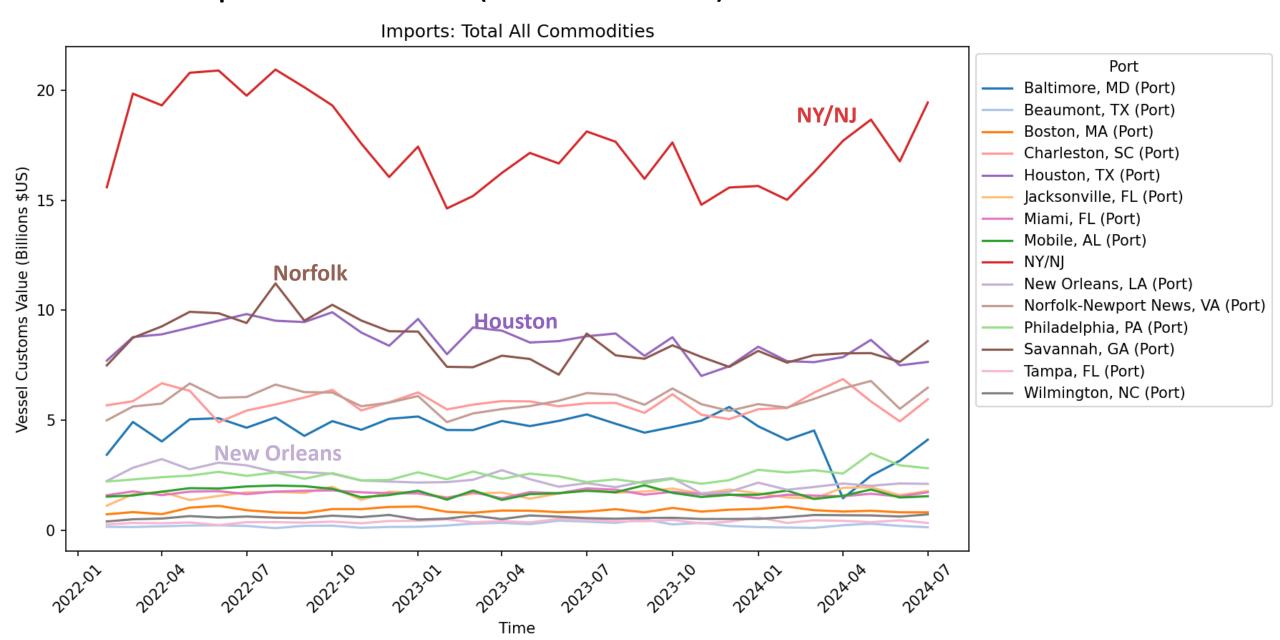
#### Northern Atlantic Port Ship Volumes: last 12 months



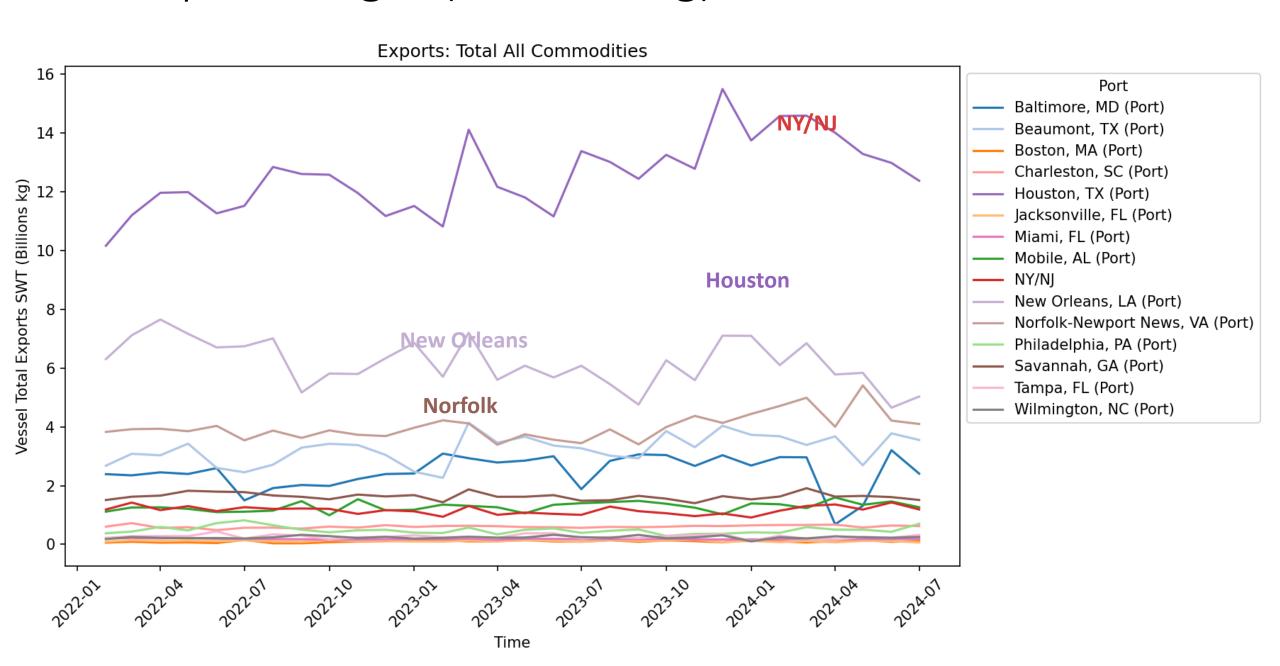
Baltimore, MD



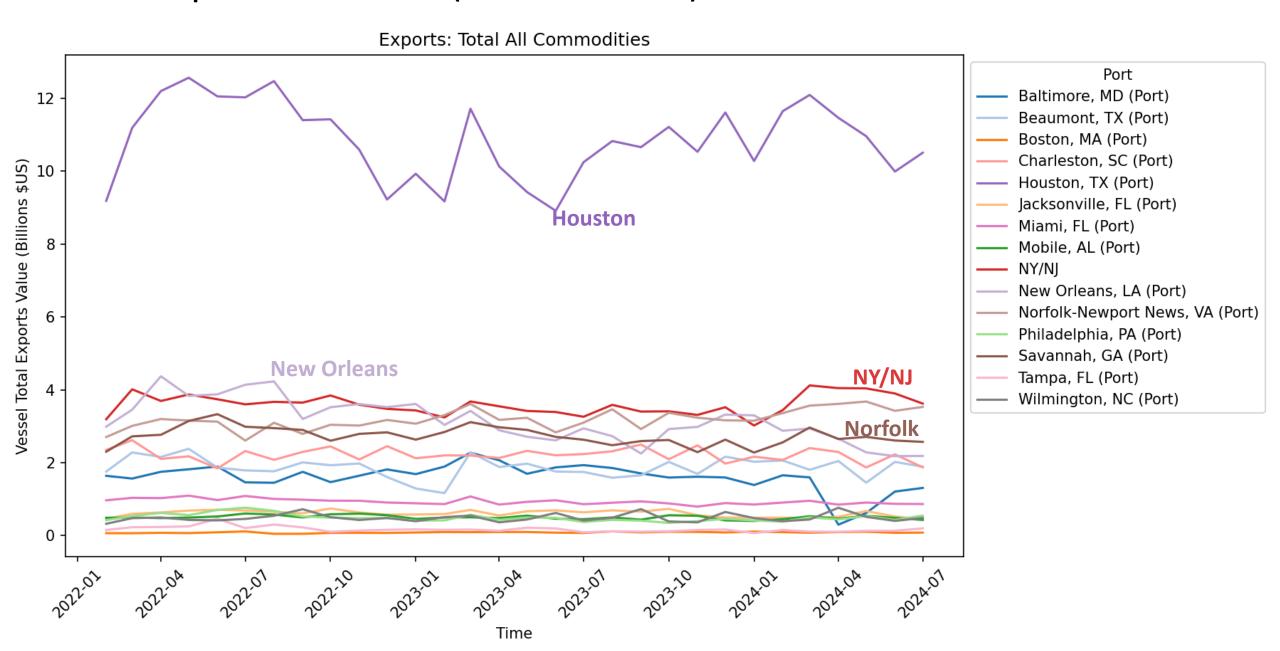
### Total Import Value (in Billions) for ALL Commodities



#### Total export weight (in billion kg) for ALL commodities



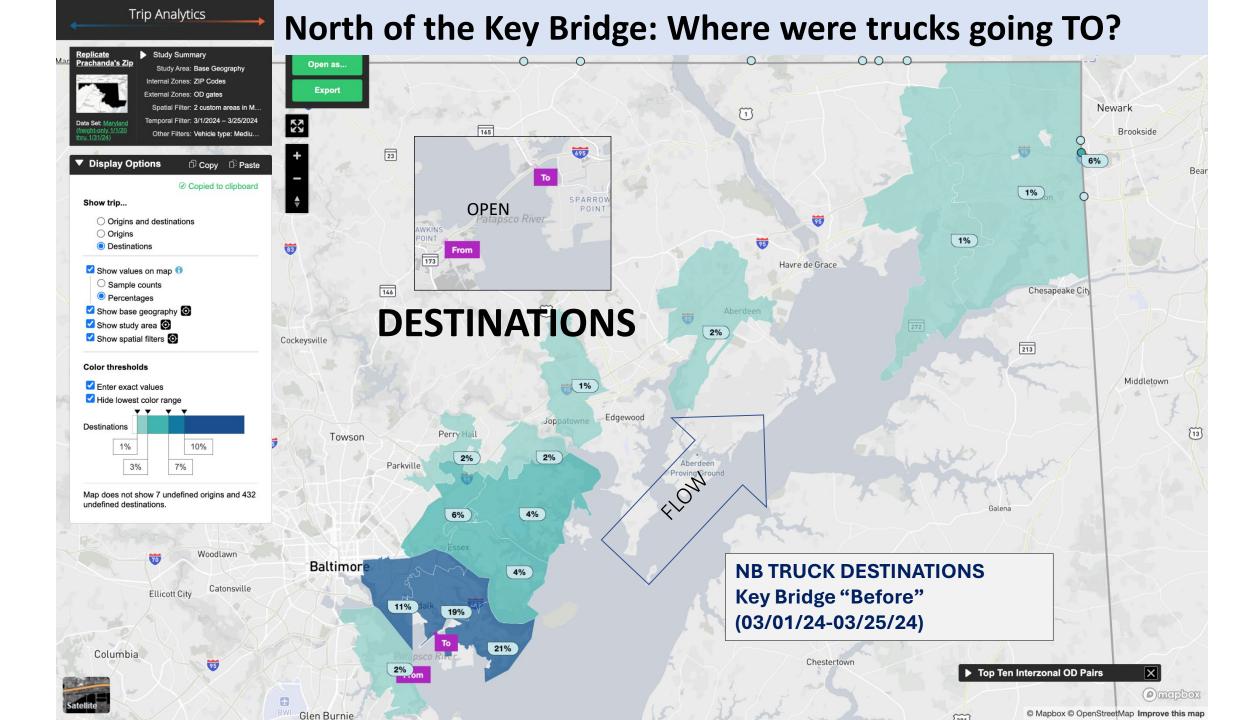
## Total Export Value (in Billions) for ALL Commodities

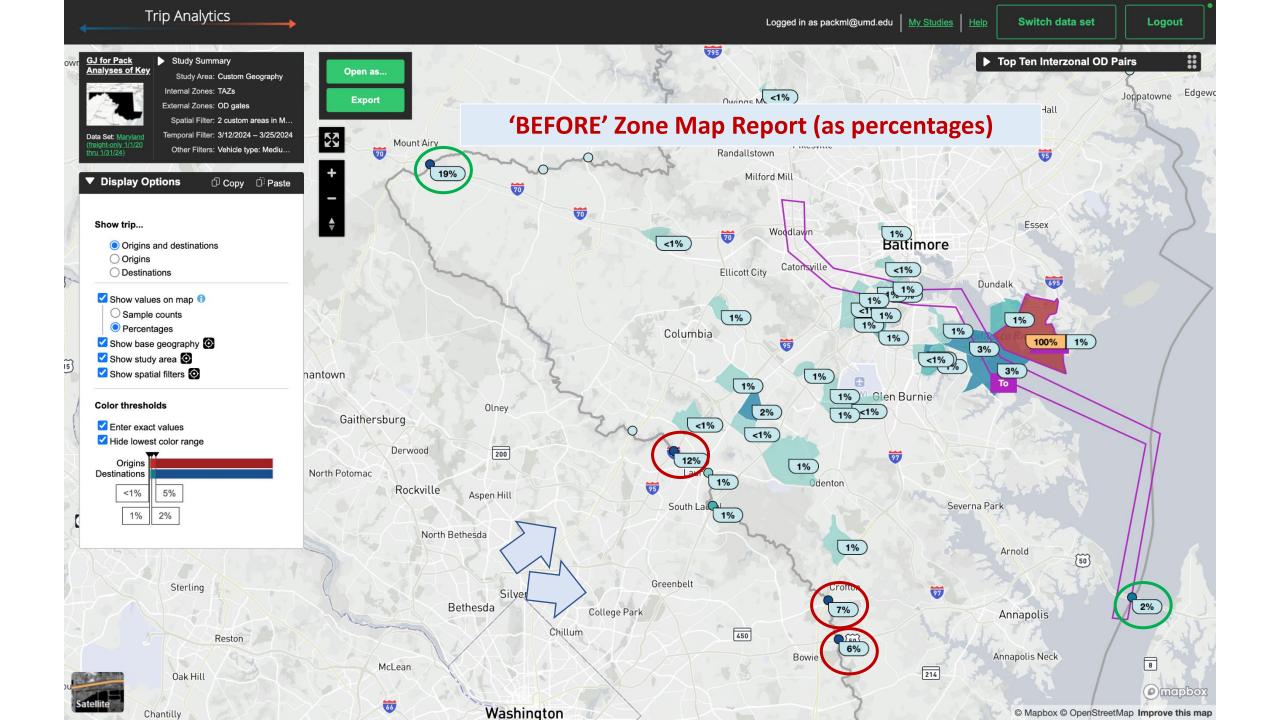


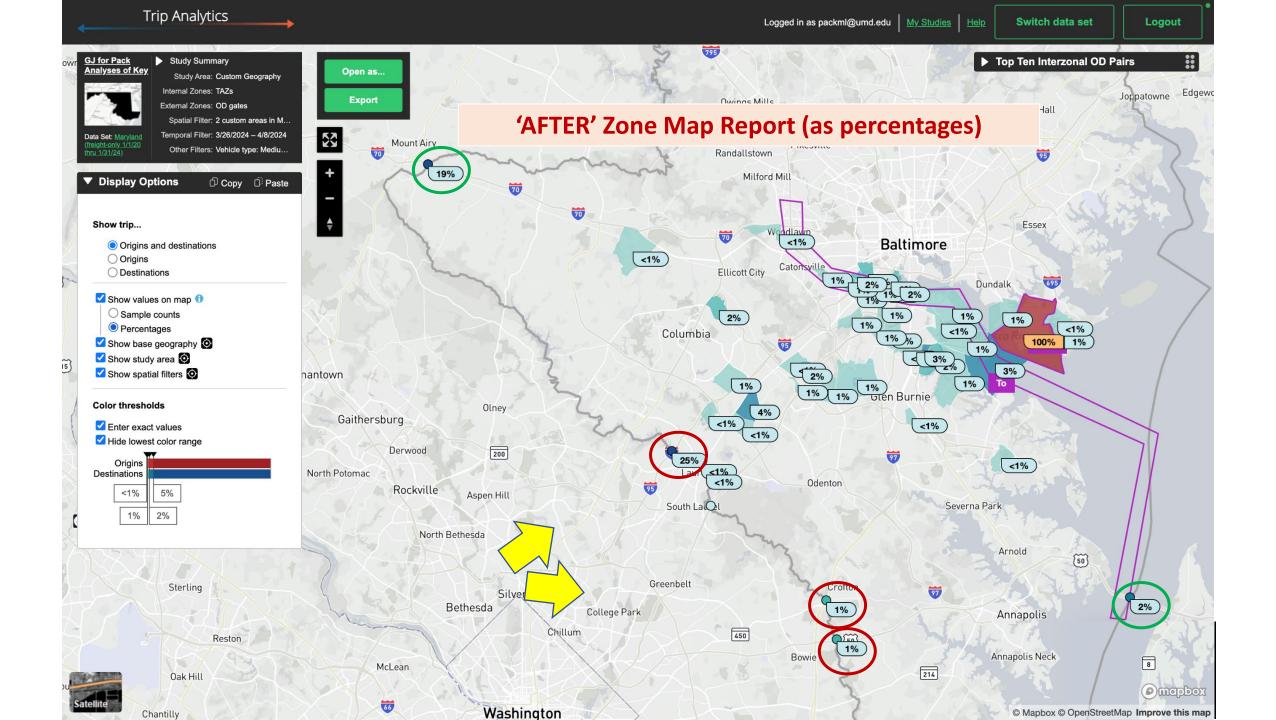
Freight Origins, Destinations, and Routes

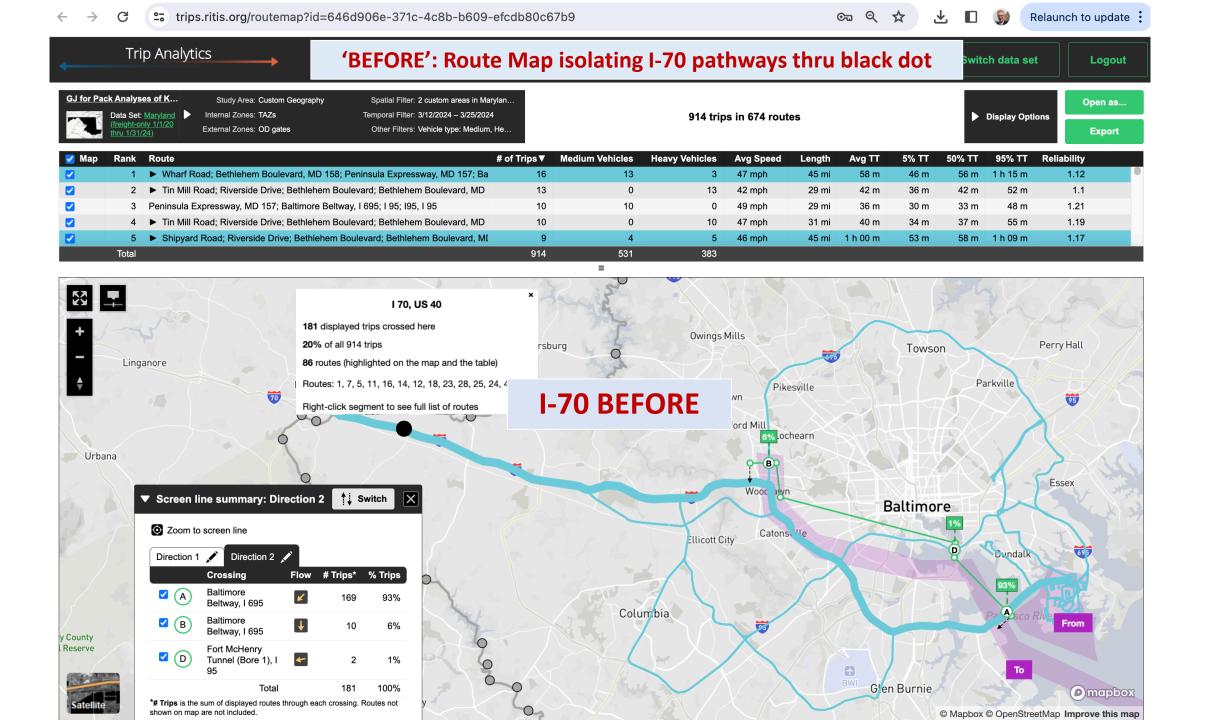
**Trip Analytics** North of the Key Bridge: Where were trucks coming FROM? Open as... Study Area: Base Geography Internal Zones: ZIP Codes Export External Zones: OD gates Newark 1 Temporal Filter: 3/1/2024 - 3/25/2024 Brookside Other Filters: Vehicle type: Mediu. 695 23 **▼** Display Options ☐ Copy ☐ Paste 1% Show trip... **OPEN** POIN' Origins and destinations Origins 1% Destinations 173 1% Show values on map ① O Sample counts 146 Chesapeake City Percentages **ORIGINS** Show base geography ( Show study area Show spatial filters O Cockeysville 213 Color thresholds Middletown ☐ Enter exact values 95 ✓ Hide lowest color range Edgewood Joppatowne Origins Perry Ha Towson 1% 1% ving Wd Parkville Map does not show 499 undefined origins and 5 4% 6% Woodlawn Baltimor 4% **SB TRUCK ORIGINS** Catonsville Ellicott City **Key Bridge "Before"** (03/01/24-03/25/24) Columbia Chestertow (D) mapbox © Mapbox © OpenStreetMap Improve this map

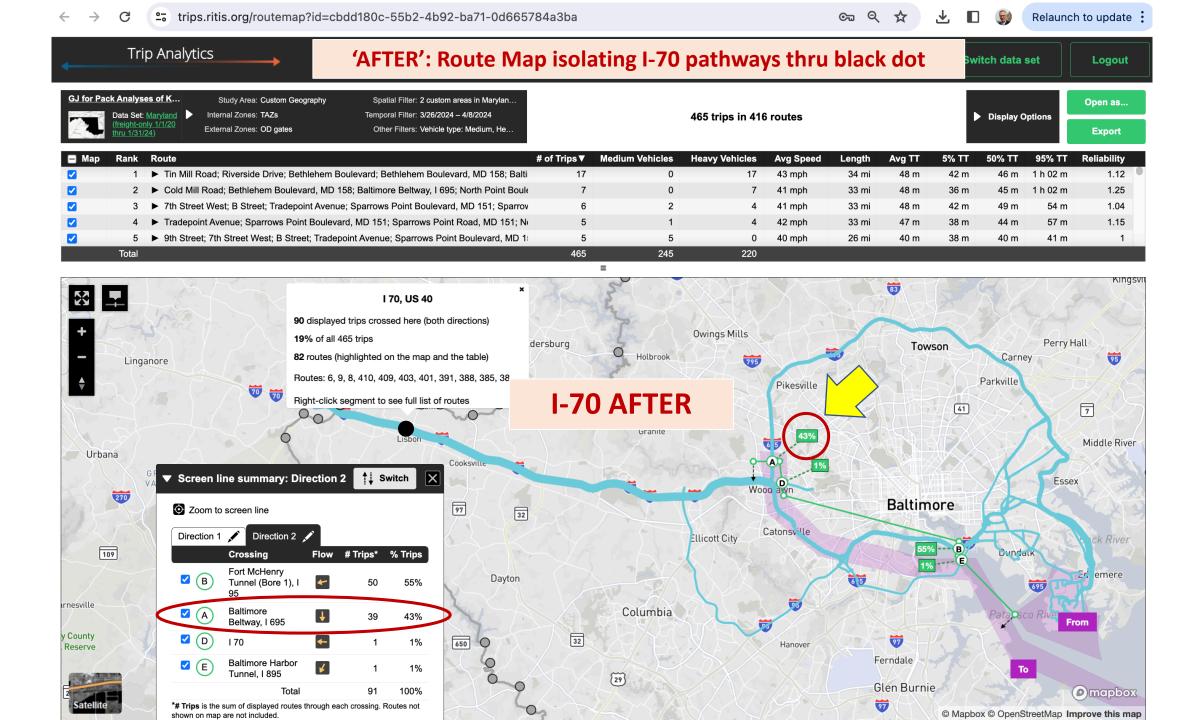
Glen Burnie











#### **'BEFORE': Route Map isolating I-95 pathways thru black dot**

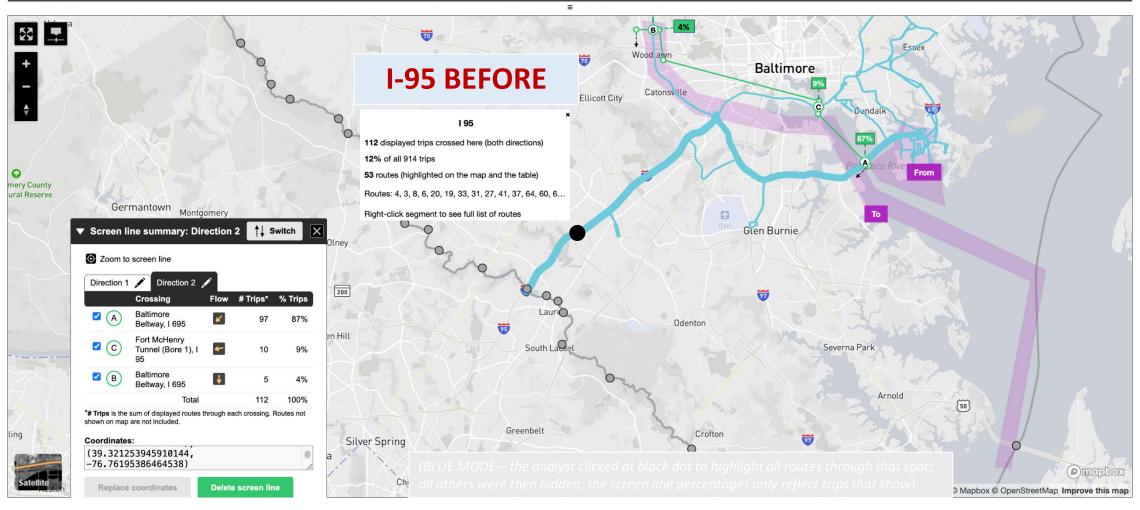
Help Switc

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✓ Map	Rank	Route	# of Trips▼	Medium Vehicles	Heavy Vehicles	Avg Speed	Length	Avg TT	5% TT	50% TT	95% TT	Reliability	
		▼ Wharf Road; Bethlehem Boulevard, MD 158; Peninsula Expressway, MD 157; Baltimore Beltway, I 695; I 70; I 70, US 40; Baltimore National Pike, I 70, US 40	16	13	3	47 mph	45 mi	58 m	46 m	56 m	1 h 15 m	1.12	•
	2	► Tin Mill Road; Riverside Drive; Bethlehem Boulevard; Bethlehem Boulevard, MD	13	0	13	42 mph	29 mi	42 m	36 m	42 m	52 m	1.1	
	3	Peninsula Expressway, MD 157; Baltimore Beltway, I 695; I 95; I95, I 95	10	10	0	49 mph	29 mi	36 m	30 m	33 m	48 m	1.21	
	4	► Tin Mill Road; Riverside Drive; Bethlehem Boulevard; Bethlehem Boulevard, MD	10	0	10	47 mph	31 mi	40 m	34 m	37 m	55 m	1.19	
	5	▶ Shipyard Road; Riverside Drive; Bethlehem Boulevard; Bethlehem Boulevard, Mi	9	4	5	46 mph	45 mi	1 h 00 m	53 m	58 m	1 h 09 m	1.17	
	Total		914	531	383								



Study Area: Custom Geography

Spatial Filter: 2 custom areas in Marylan.

GJ for Pack Analyses of K...

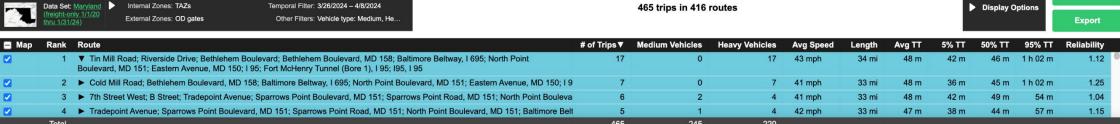
#### 'AFTER': Route Map isolating I-95 pathways thru black dot

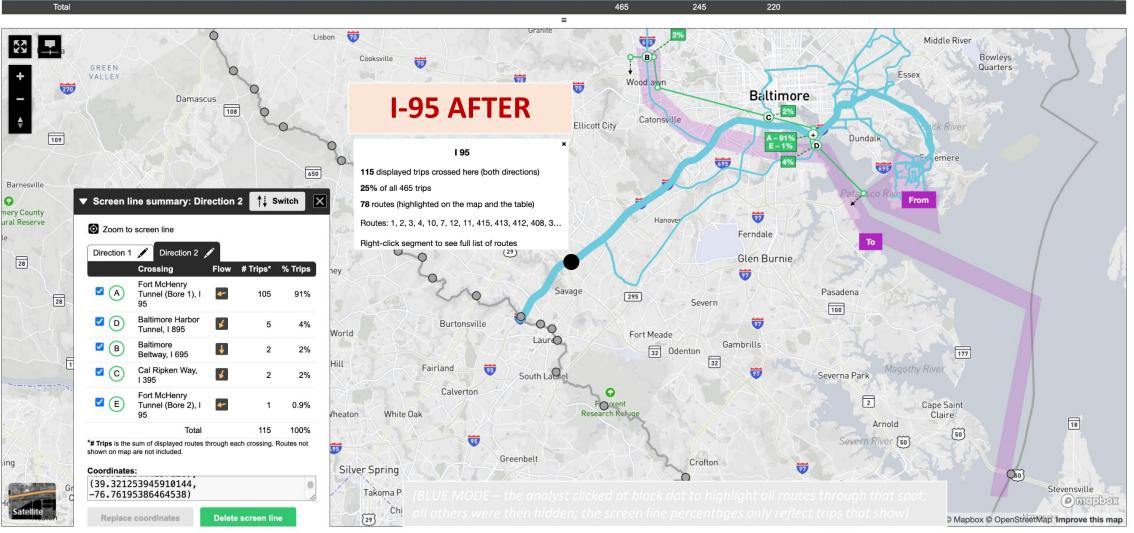
es <u>Help</u>

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Open as...





Study Area: Custom Geography

Spatial Filter: 2 custom areas in Marylan.

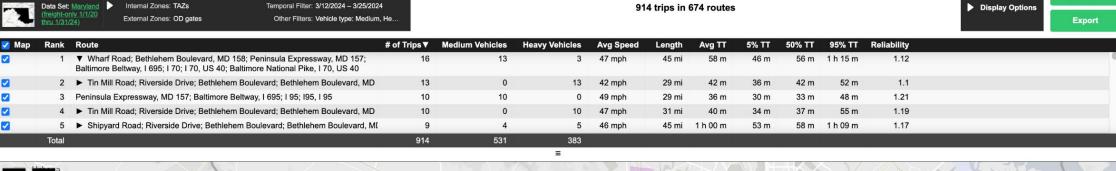
GJ for Pack Analyses of K...

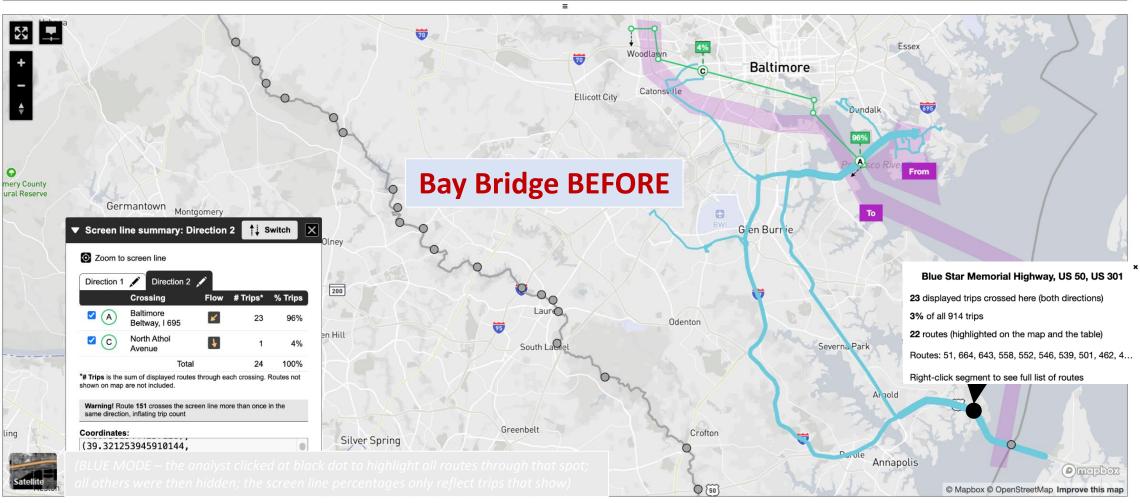
#### **'BEFORE': Route Map isolating Bay Bridge pathways thru black dot**

Switch data set

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Open as...

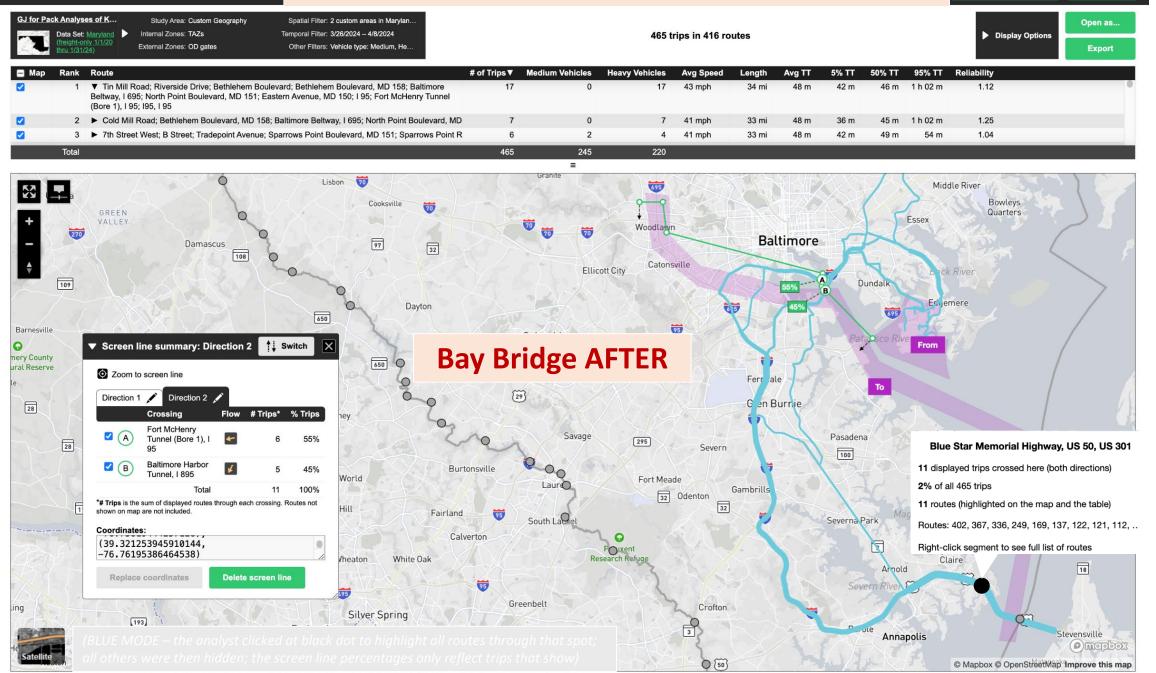




#### 'AFTER': Route Map isolating Bay Bridge pathways thru black dot

Switch data set

Logout





Michael Pack 240.676.4060 PackML@umd.edu cattlab.umd.edu