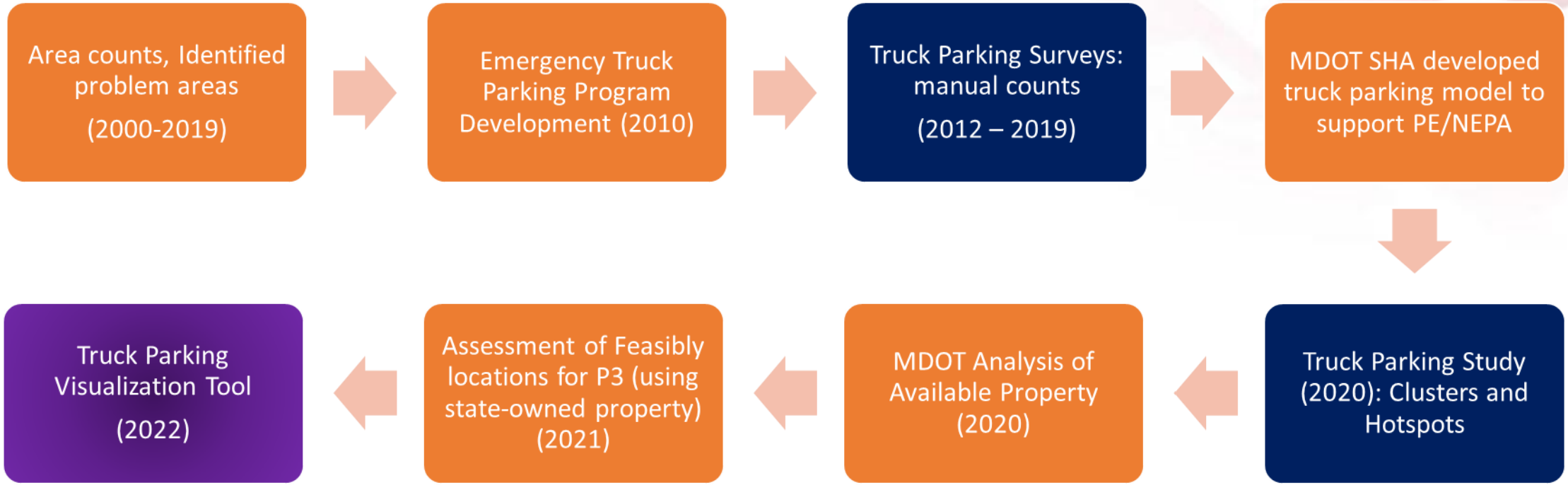
MARYLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ADMINISTRATION

Maryland Truck Parking Visualization Tool

12/15/2022

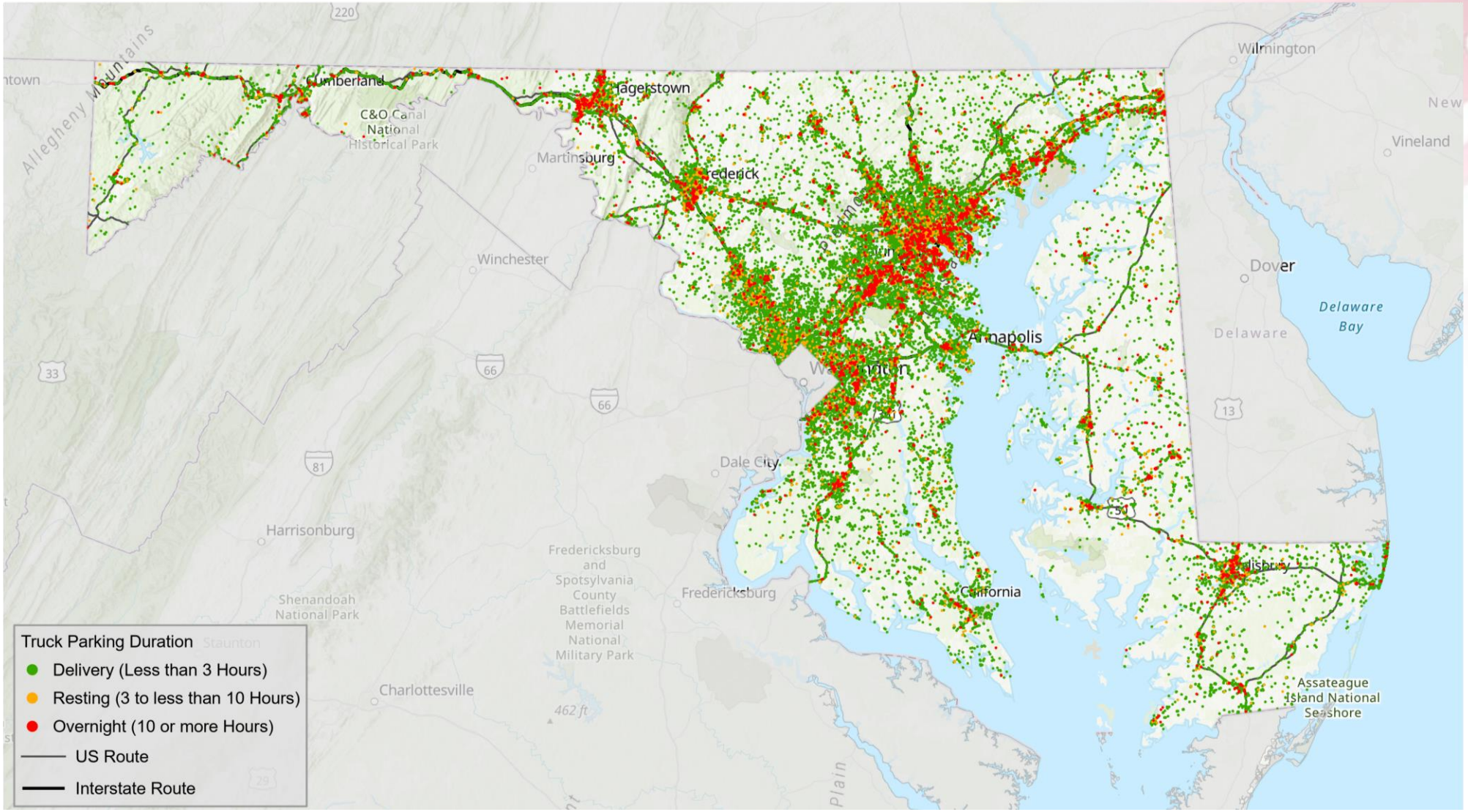
Evolution of Truck Parking Program at MDOT



Top Priority Areas - The 2020 Truck Parking Study

1. I-95 Welcome Center (Existing)
2. I-70 South Mountain Welcome Center (Existing)
3. City of Baltimore (Port Area)
4. Weigh Station in Adelphi (I-95/I-495) (Existing, parking allowed)
5. Roadways connecting to warehousing near US 1/MD 175 Jessup
6. Areas near I-95 at Maryland House (Existing)
7. Youghiogheny Overlook Welcome Center (Existing)
8. Area near I-70 at New Market Rest Area, Mount Airy (Existing)
9. Exit 22 in Grantsville
10. Emergency Vehicle Lot along I-495 at Exit 3
11. Emergency roadside shoulder on I-83 near Cockeysville
12. Truck Stop Overflow in Hagerstown and Exit 24 on I-70.
13. I-95/MD 279/MD 277 near Elkton
14. Roadways connecting to warehousing near US 50 in Landover
15. Roadways connecting to Warehousing near Exit 1 on I-81 in Williamsport
16. Monrovia Near I-70
17. US 301 Stevensville
18. Warehousing near US 50 near Salisbury

Truck Parking Study - Truck Parking by Duration



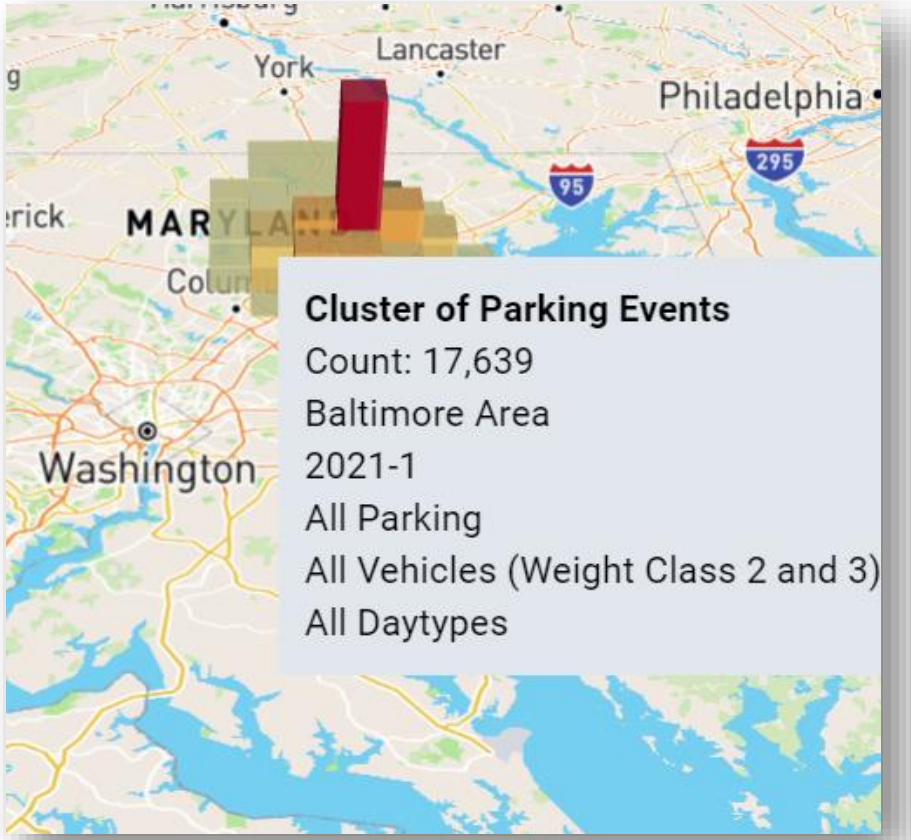
Truck Parking Visualization Tool

- Objectives:

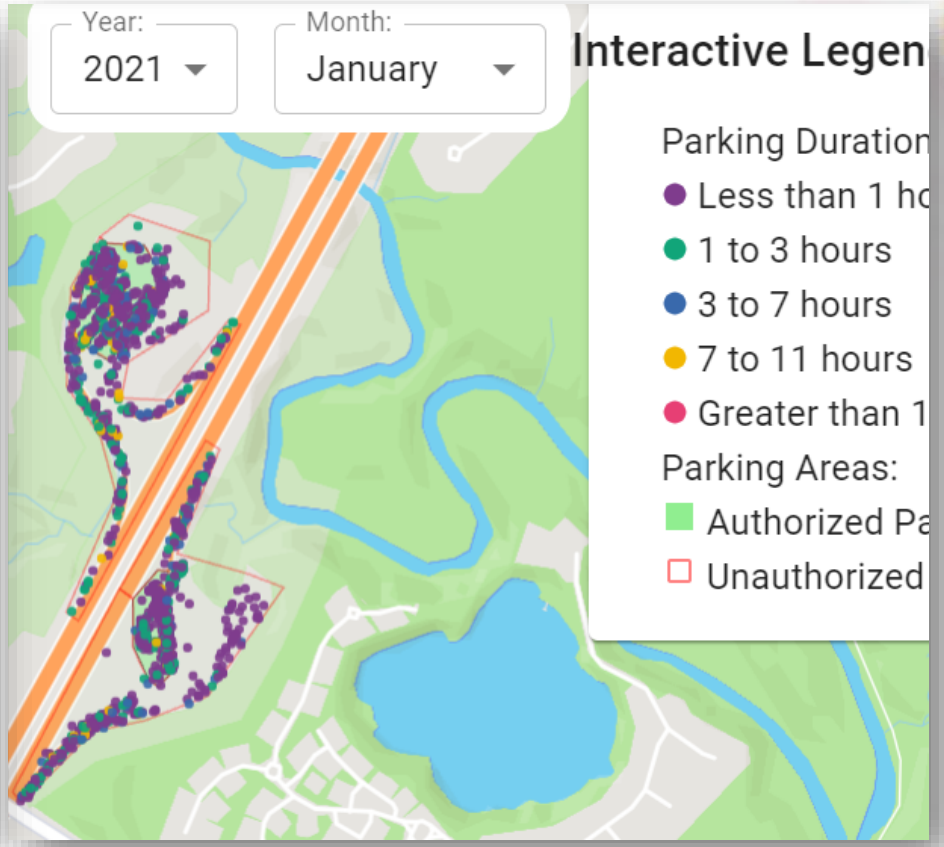
1. A cost-effective method to monitor/collect truck parking data
2. A tool for making stakeholders understand the current parking issues

- Data source: probe trucks (2018 – 2021)
- Available data: location, speed, parking duration
- Areas of Interest: 6 regions, 16 truck stops

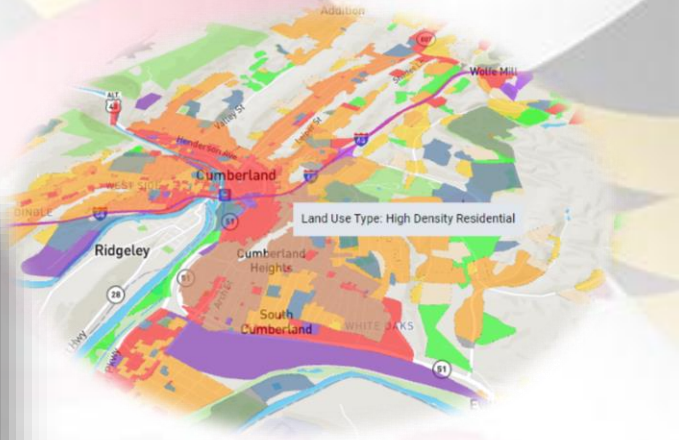
Truck Parking Visualization Tool

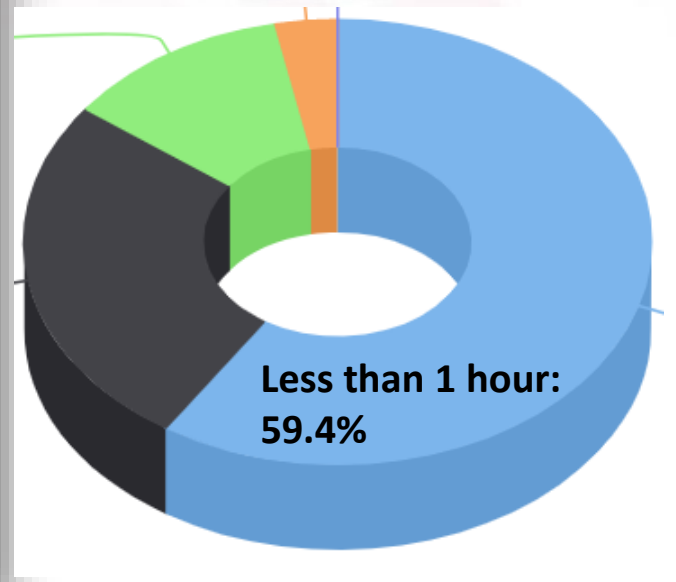


Region



Site



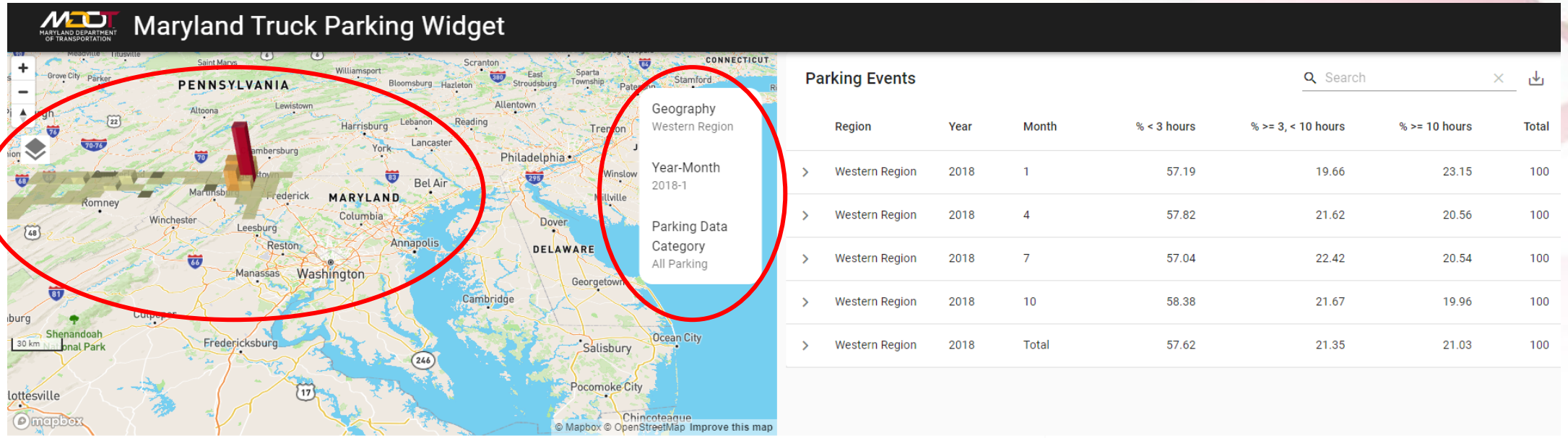


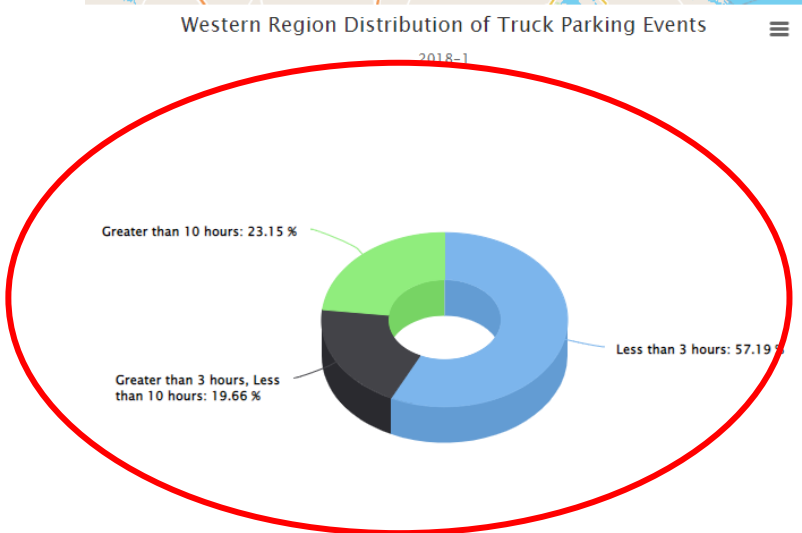
Land use/Statistics

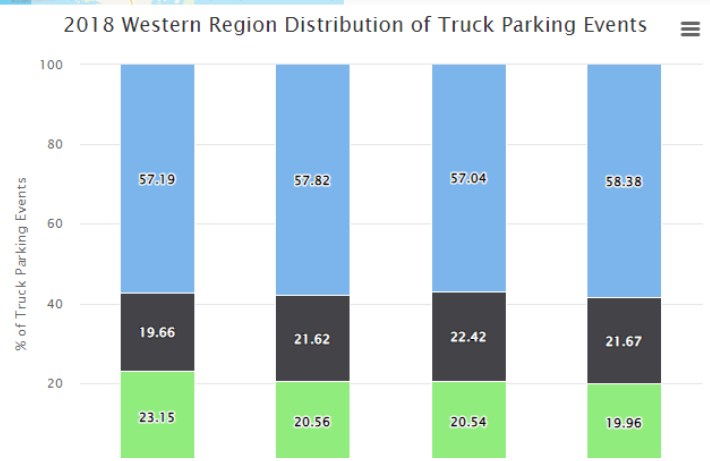
Truck Parking Visualization Tool - Benefits

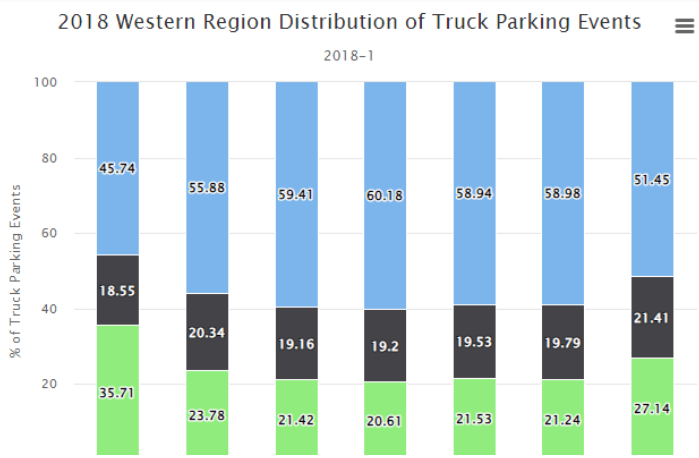
- **Broad coverage:** all public/private parking across Maryland
- **Continuous data:** time of day, day of the week, and seasonality effects
- **Parking behaviors:** vehicle weight class, parking duration, trucker's preference (e.g., TWIS), emergency parking, adverse weather conditions
- **Scalability:** four years of data with two more forthcoming (22-23)
- **Utility:** outreach to local governments, elected officials, and the public

Truck Parking Visualization Tool









Things to Note

1. These probes provide a rough idea of facility utilization
2. These sample data are not suitable for tracking a parking demand pattern over time (e.g., the year-over-year change in truck volume)
3. The expansion ratios are not designed for rigorous analysis (e.g., traffic engineering analysis)
4. The tool is not intended to use for enforcement

References

- TTI - Maryland Truck Parking Visualization Tool
- CPCS - Maryland truck parking study (2020)
- TTI - Using Probe Data for Truck Parking Decision-Making (2021)
- RITIS - Trip Analytics
- FHWA – Model Development for National Assessment of Commercial Vehicle Parking (2002)
- TTI - Using INRIX Trip Data to Identify Truck Parking Demand and Facility Use (2022)

MARYLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ADMINISTRATION

Critical Urban Freight Corridor Mileage Designation Plan

12/15/2022

Contents

1. Recap of Previous CUFC Designation
2. New mileage under IIJA Act
3. Methodology

- Segment identification #1: Truck AADT
- Segment identification #2: Proximity score

4. Result
5. Discussion

Previous CUFC Designation

- The FAST Act established a National Highway Freight Program to strategically direct Federal resources and policies toward improved performance of the National Highway Freight Network (NHFN)
- 23 U.S. Code § 167 (f): Critical Urban Freight Corridors

“States and metropolitan planning organizations may designate corridors”

Previous CUFC Designation

- Requirements:

1. an urbanized area
2. connects an intermodal facility to the interstate systems, primary highway freight system, or intermodal facilities
3. serves a major freight generator, logistic center, or warehouse land
4. is important to the movement of freight within the region

CUFC mileage: 75 miles (The 2016 FAST Act)

CUFC mileage: 150 miles (The 2022 IIJA Act)

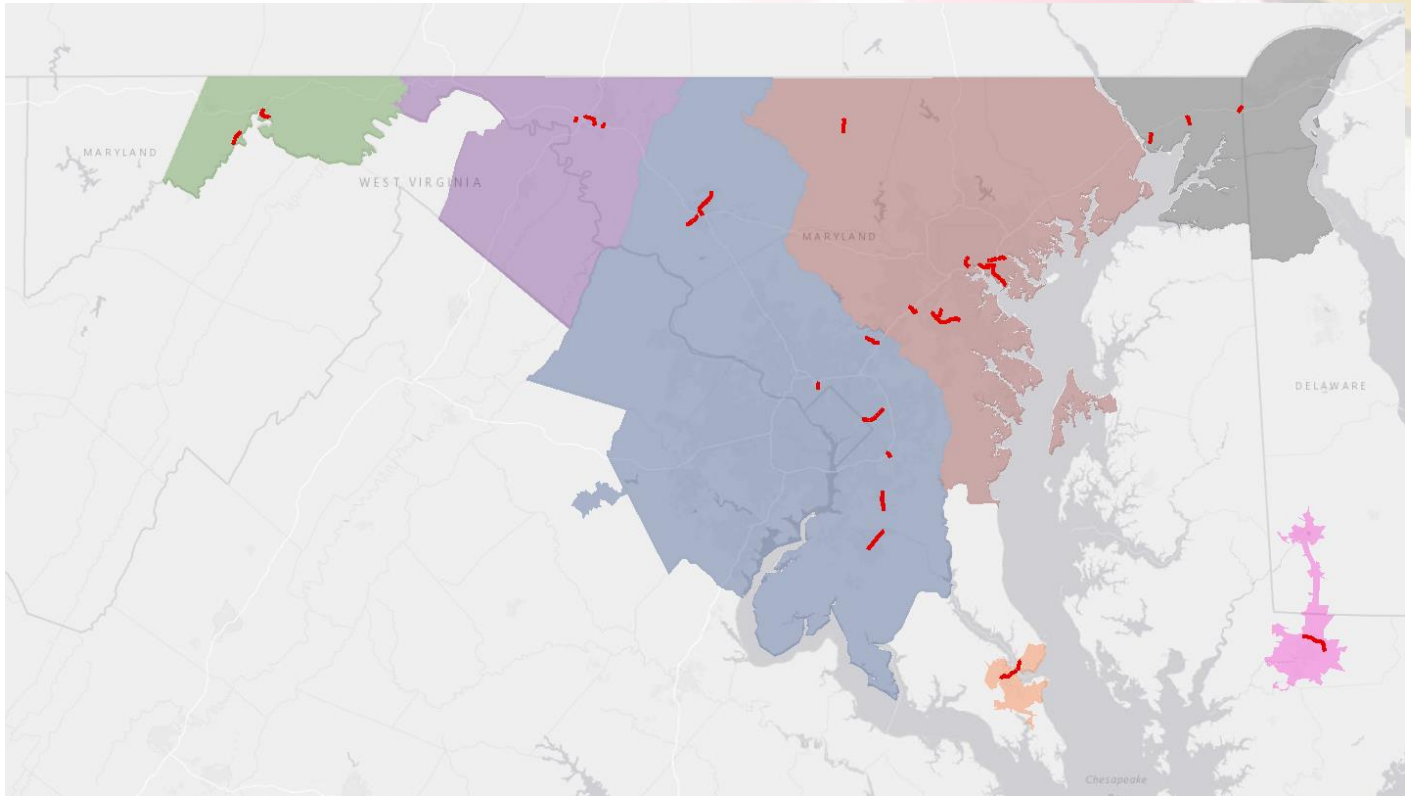
Previous CUFC Designation

- Under Maryland's 2017 Strategic Goods Movement Plan, the following mileage was assigned to seven MPOs

MPO	Mileage
Baltimore Regional Transportation Board (BRTB), BMC	25
Cumberland MPO	5
Hagerstown/Eastern Panhandle MPO (HEPMPO)	5
Metropolitan Washington Transportation Planning Board (TPB)	25
Salisbury/Wicomico County MPO	5
St. Mary's/Calvert County MPO	5
Wilmington Area MPO (Wilmapco)	5
Total	**75**

Previous CUFC Designation

- Under Maryland's 2017 Strategic Goods Movement Plan, the following mileage was assigned to seven MPOs



New mileage under IIJA Act

- Newer provisions in the 2021 IIJA **double** the state's mileage caps to 150 total CUFC miles and 300 total CRFC miles
- MDOT SHA evaluates expansion opportunities for additional mileage and designating additional CUFCs with Maryland's seven MPOs
- Focus is on routes with most freight movement or freight importance

Methodology

- Developing data for each highway segment based on the CUFC and CRFC criteria including:

1. Annual Average Daily Truck Traffic (AADTT)
2. Proximity Score

- Testing sensitivities in establishing data: impacted area boundary, threshold, proximity score, etc.
- Developing a database to support decision-making

Methodology

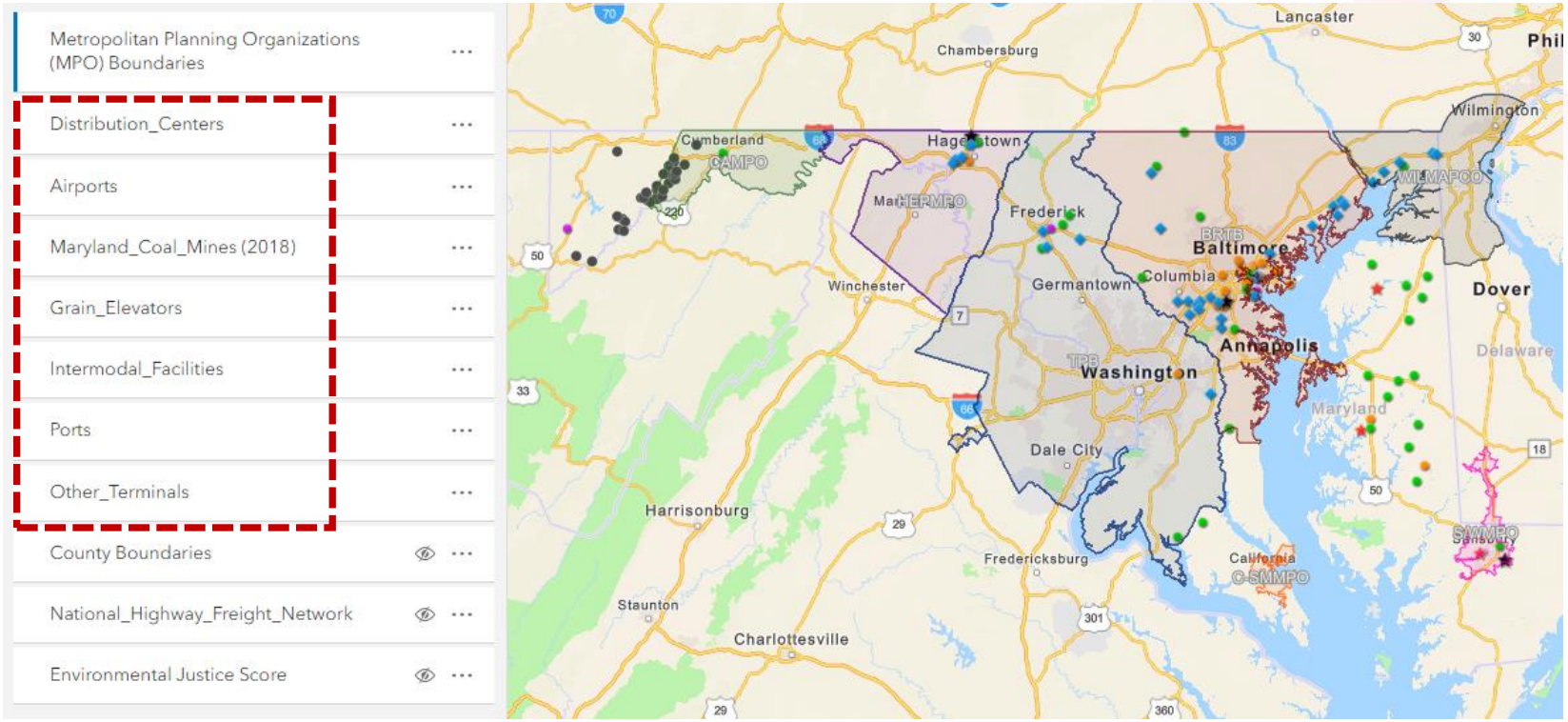
- Existing network is sorted by region’s population (urban area)

- The network links are sorted based on highest to lowest AADTT

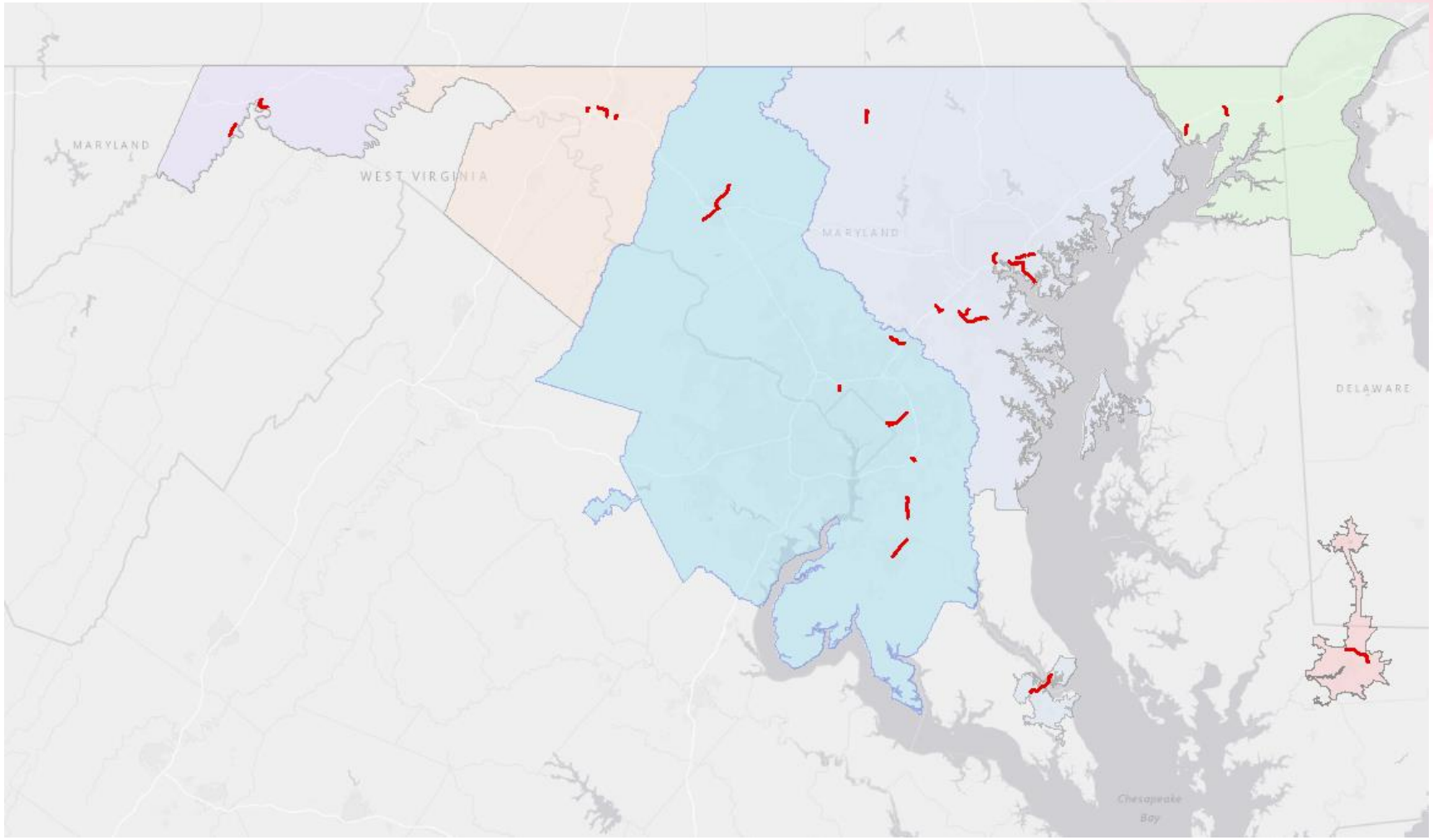
- The network is filtered out by **proximity score**

Methodology

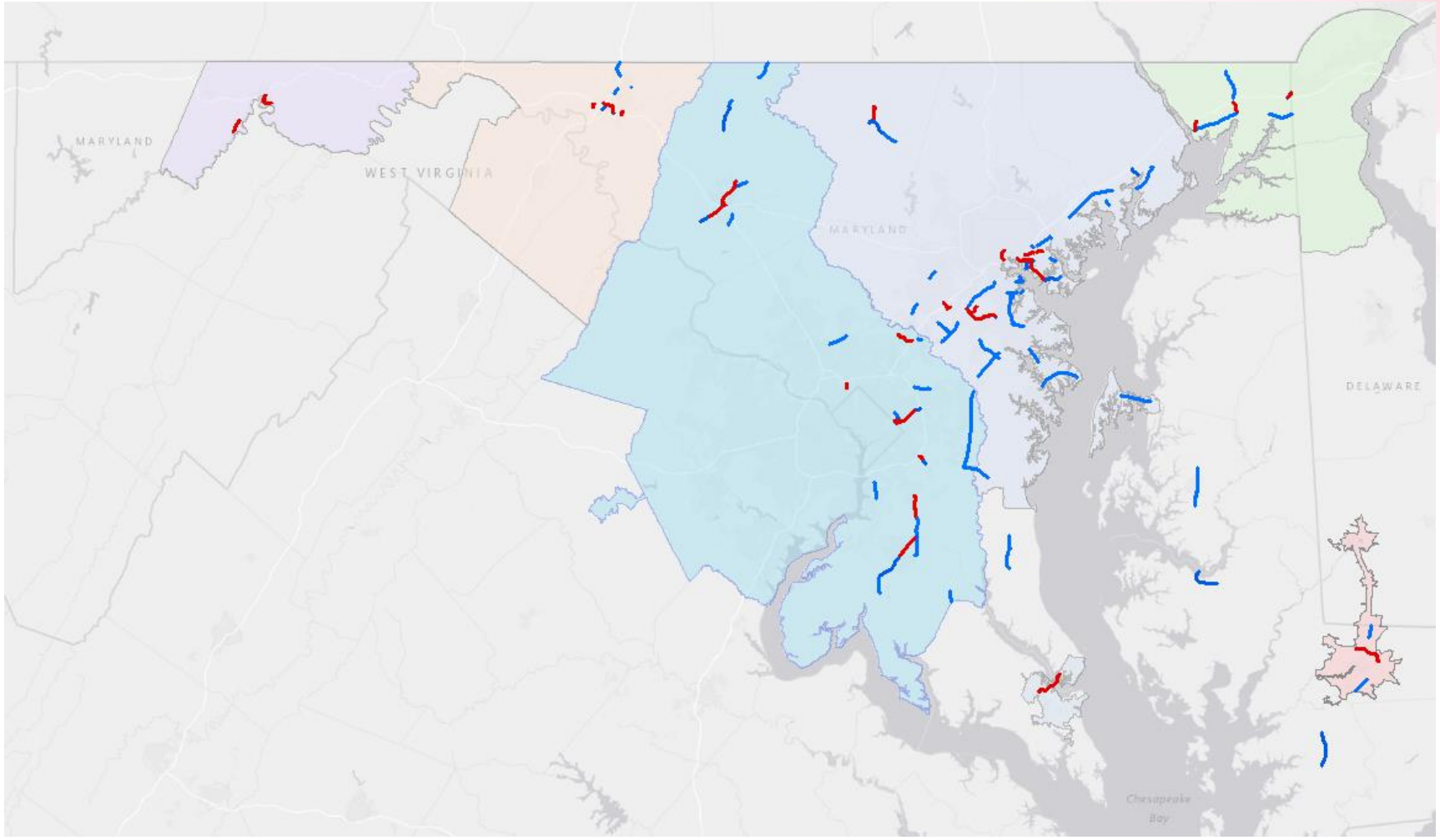
- **Proximity score:** a weighting factor/composite score based on how the roadway segment is close to each freight generator, infrastructure, and facility



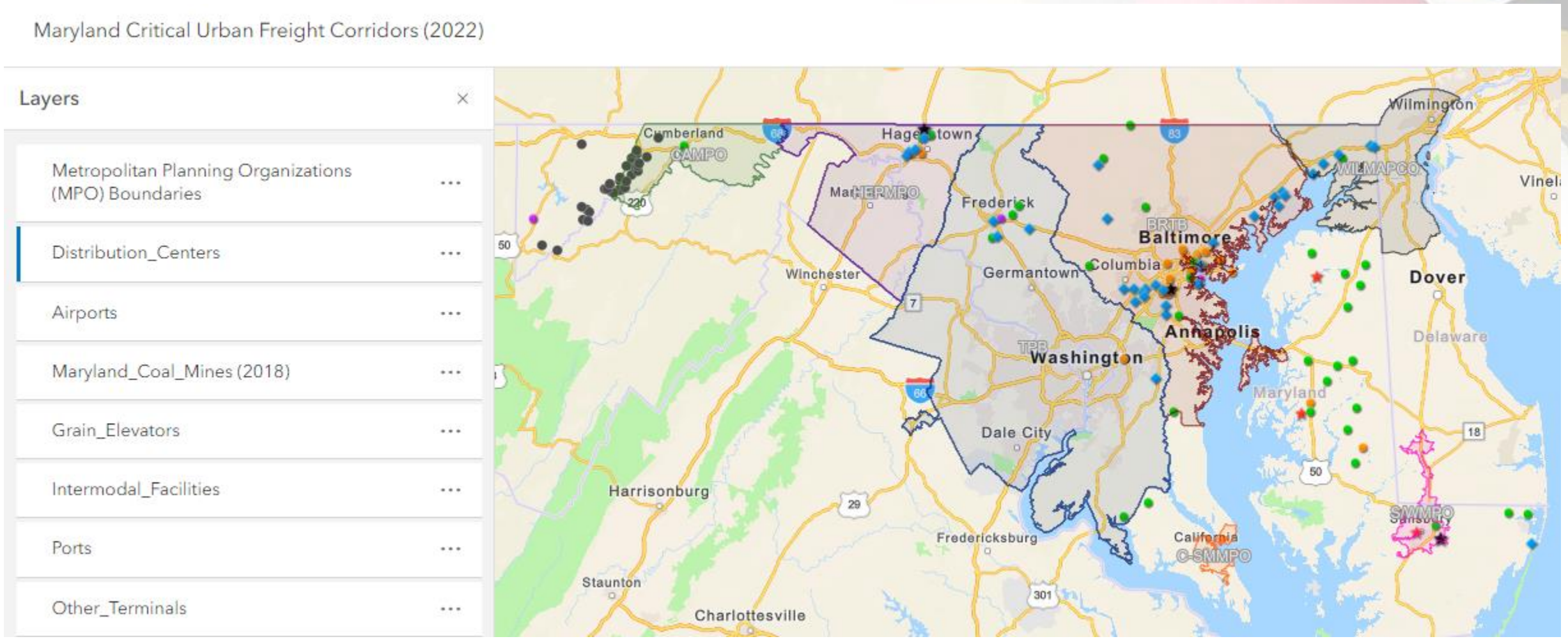
Result – Previous CUFC Segments



Result – Newly Identified Segments



Result – Interactive Map



Discussion

- Region’s hot topics, project locations
- Other available dataset that may be considered in designating
  - Freight bottleneck: https://mrptui.z21.web.core.windows.net/
  - Future truck volume growth (the 2045 projection)
  - Congestion measure (delay per mile)
  - Safety measure (crash)