

Truck Parking Overview, Tools, and Needs

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Texas A&M Transportation Institute

January 8, 2024

**ACS60 Truck and Bus Data
Subcommittee meeting**



Background

TRUCK PARKING DEVELOPMENT HANDBOOK

September 2022



In 2018,

885 truck drivers died and

4,600+ people Died in collision with trucks.

– (Jerry Hirsch. “Trucking Fatalities Reach Highest Level in 30 Years.” 2019) NHTSA

13% of commercial motor vehicle drivers were considered **fatigued** at the time of their crash

– Large truck crash causation study

Background

TRUCK PARKING DEVELOPMENT HANDBOOK

September 2022



Federal Motor Carrier Safety Administration

Hours-of-Service (HOS) rules
&
National truck parking shortage

In 2021, ATRI, ATA reported

56 minutes of available drive time every day
looking for parking

11+ truck drivers for every one parking space available

98% of truck drivers report problems finding safe truck
parking

Parking illegally

Drive illegally

Overview of Truck Parking & Data



Truck Parking Tools

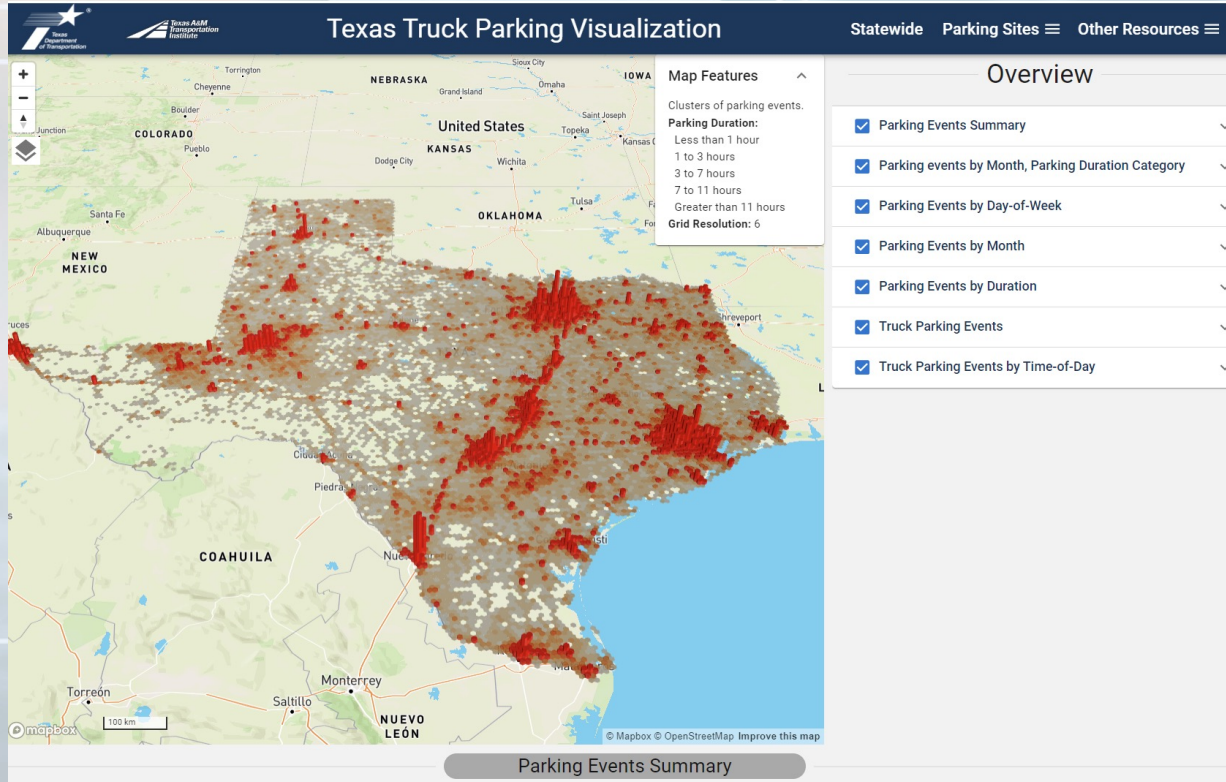
Based on probe data

Macro level

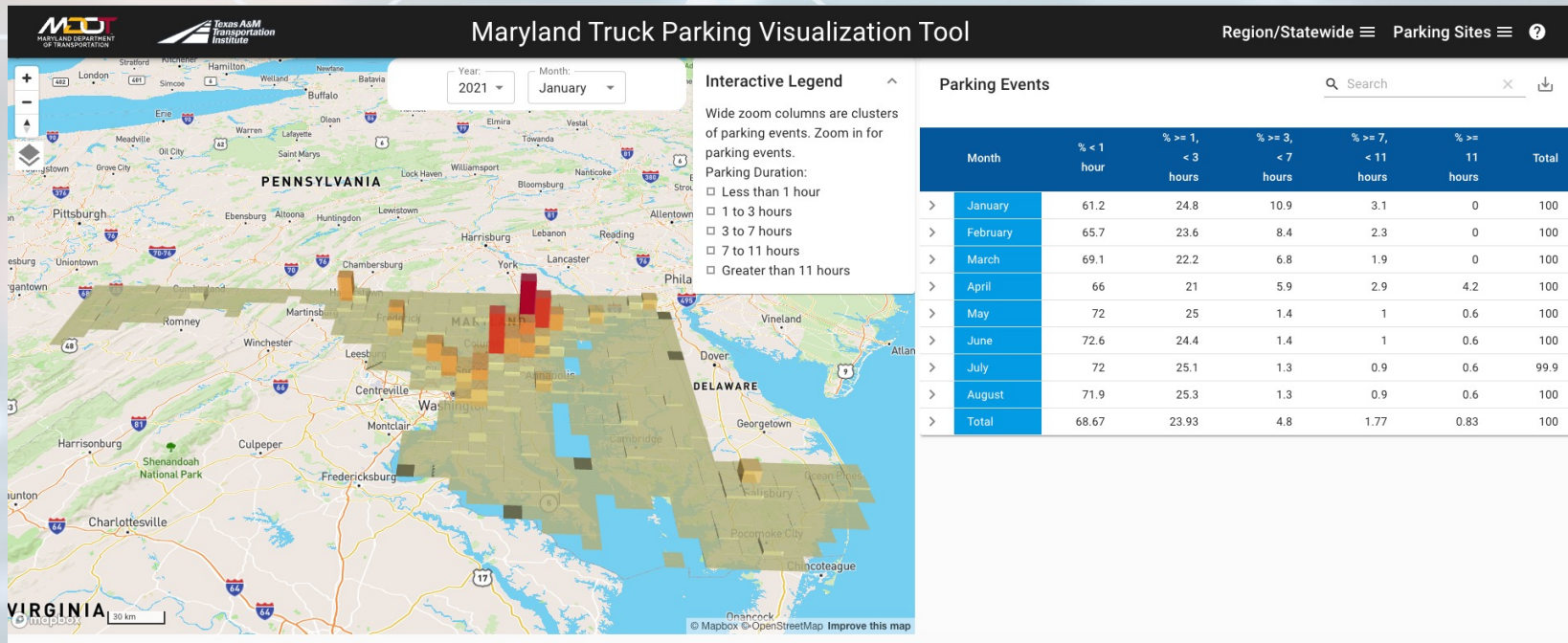
Micro level



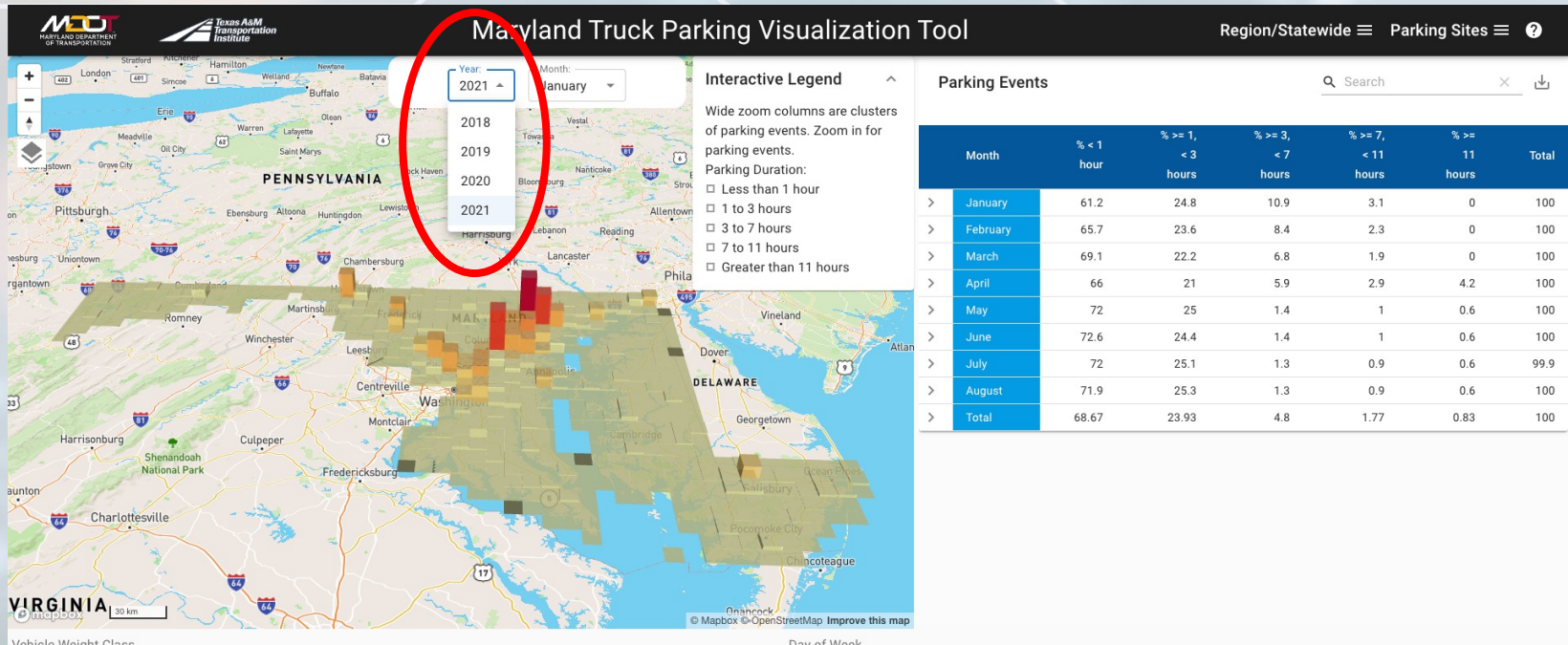
Macro level



Truck Parking - statewide



Truck Parking - statewide



Truck Parking - statewide



Maryland Truck Parking Visualization Tool

Region/Statewide ≡ Parking Sites ≡ ?

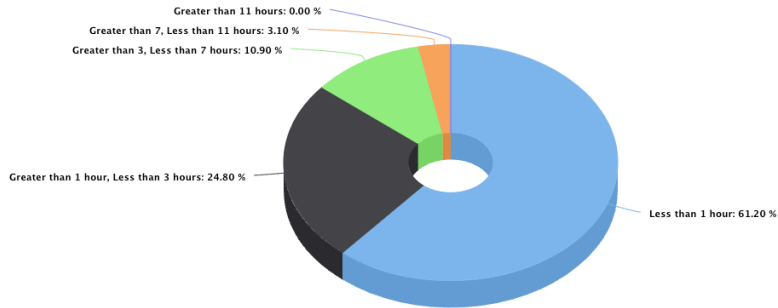
Vehicle Weight Class

- All Vehicles (Weight Class 2 and 3)
 Vehicle Weight Class 2
 Vehicle Weight Class 3

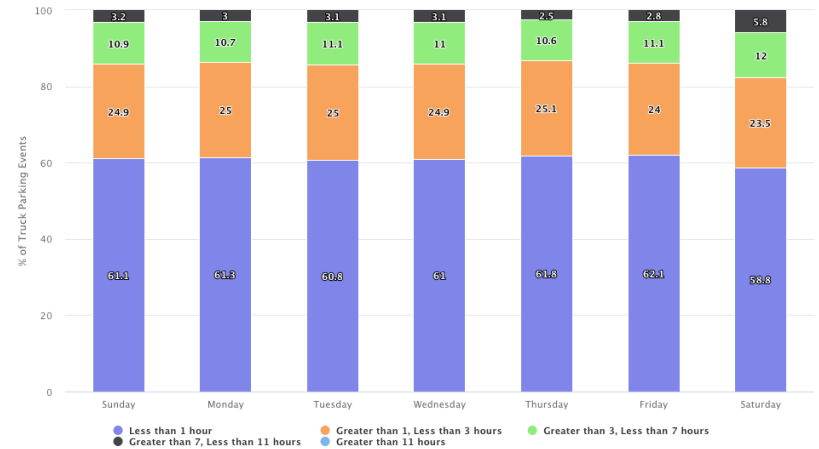
Day of Week

- All Daytypes
 Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday
 Sunday

State Truck Parking Events By Duration
January-2021, All Vehicles (Weight Class 2 and 3)



State Truck Parking Events By Day-of-Week
January-2021, All Vehicles (Weight Class 2 and 3)



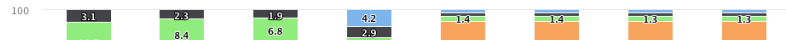
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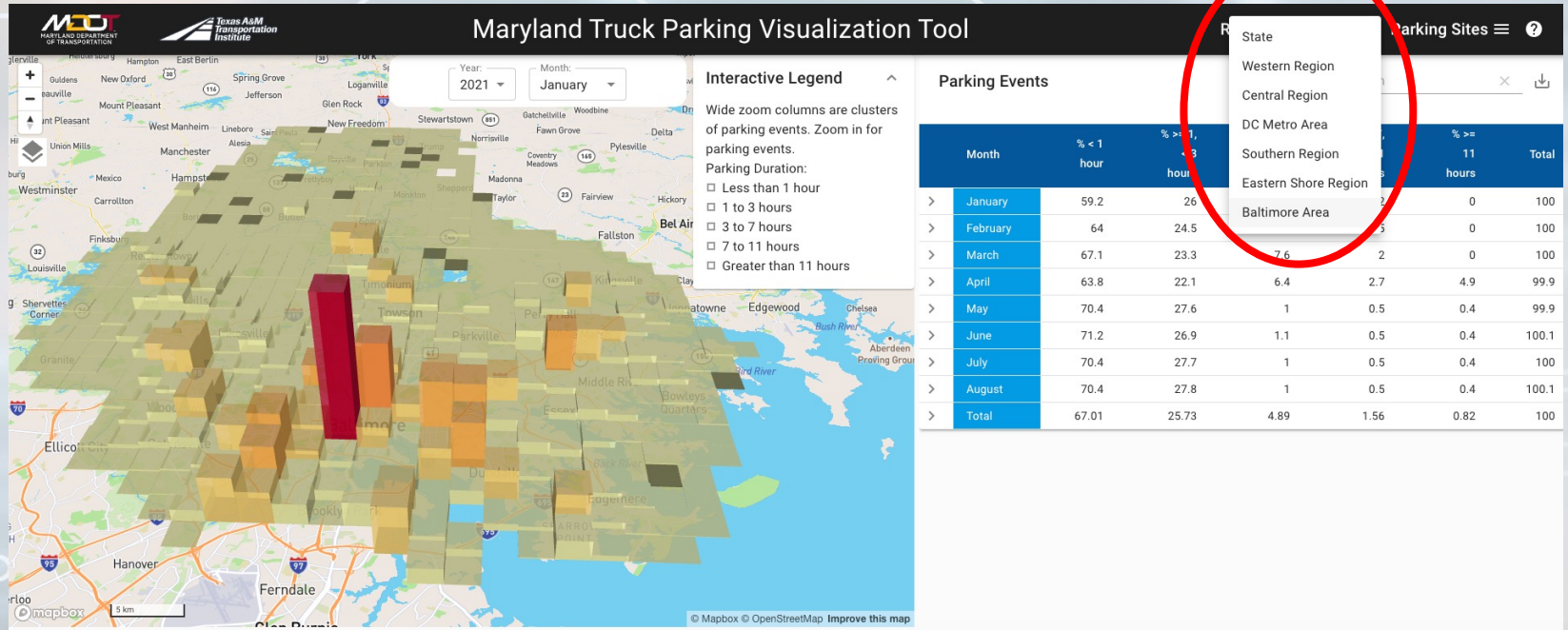
2021 State Truck Parking Events By Month
All Vehicles (Weight Class 2 and 3)



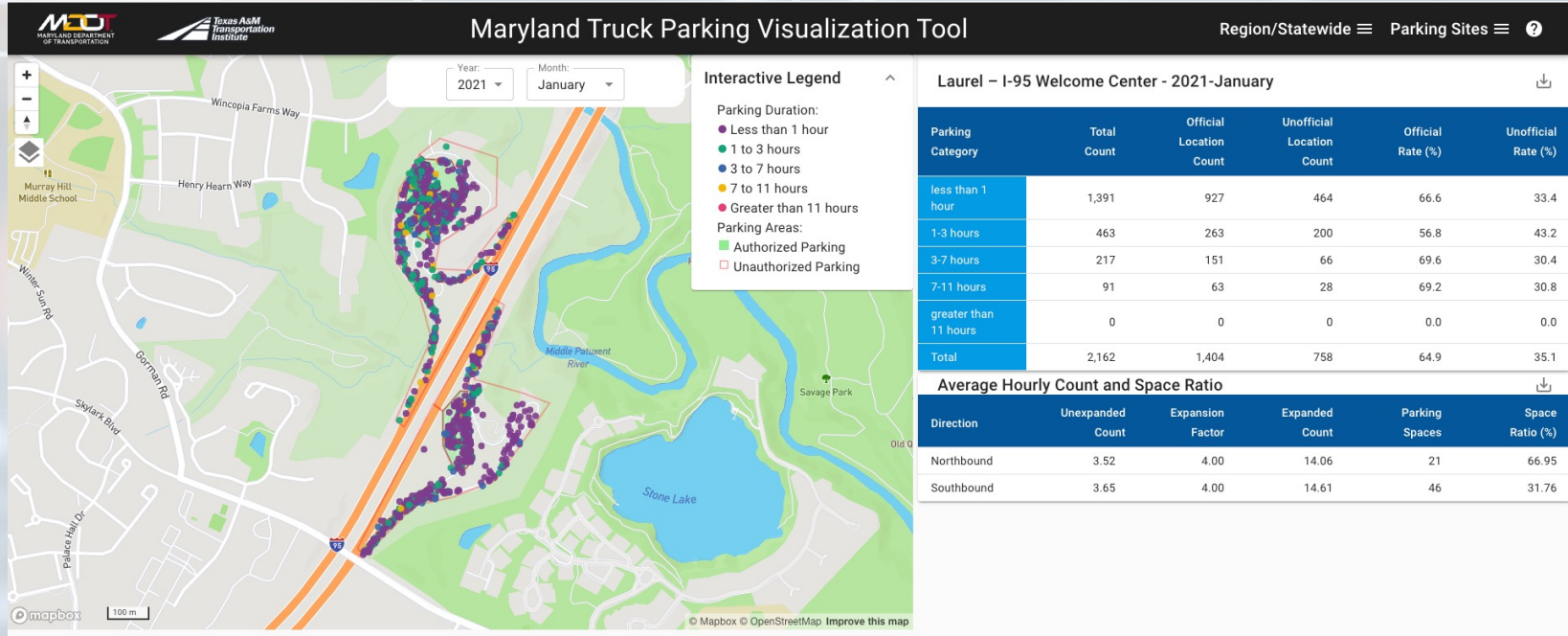
January-2021 State Truck Parking Events By Duration Bin
All Vehicles (Weight Class 2 and 3)



Truck Parking - statewide

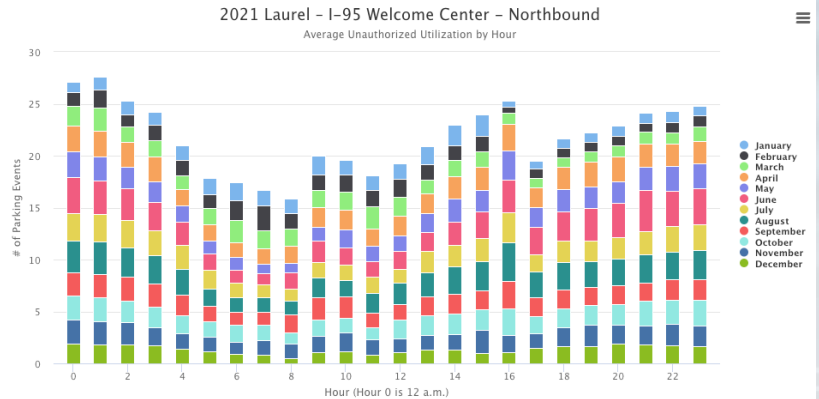
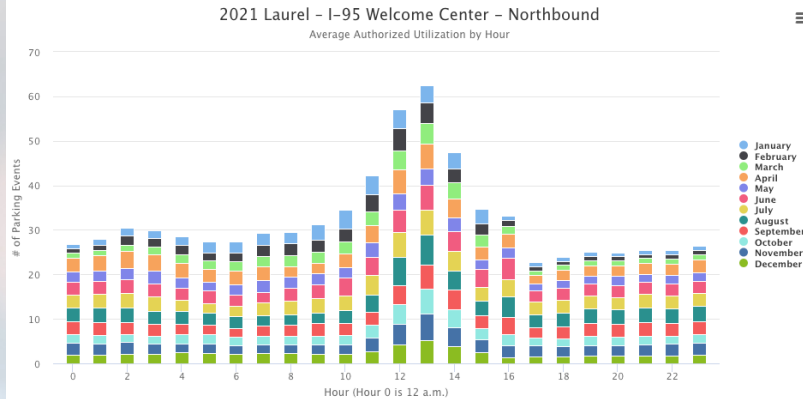


Micro Level



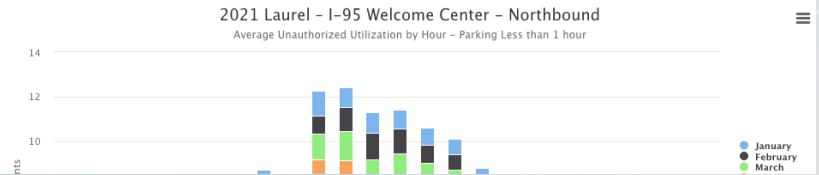
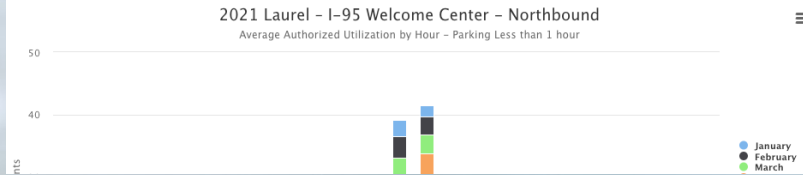
Truck Parking – parking facility

Usage by Hour - 2021 Laurel – I-95 Welcome Center - Northbound

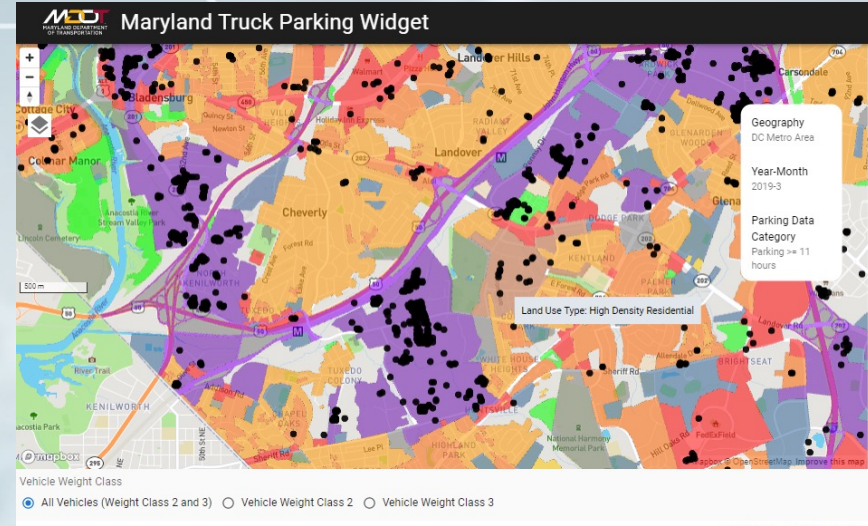
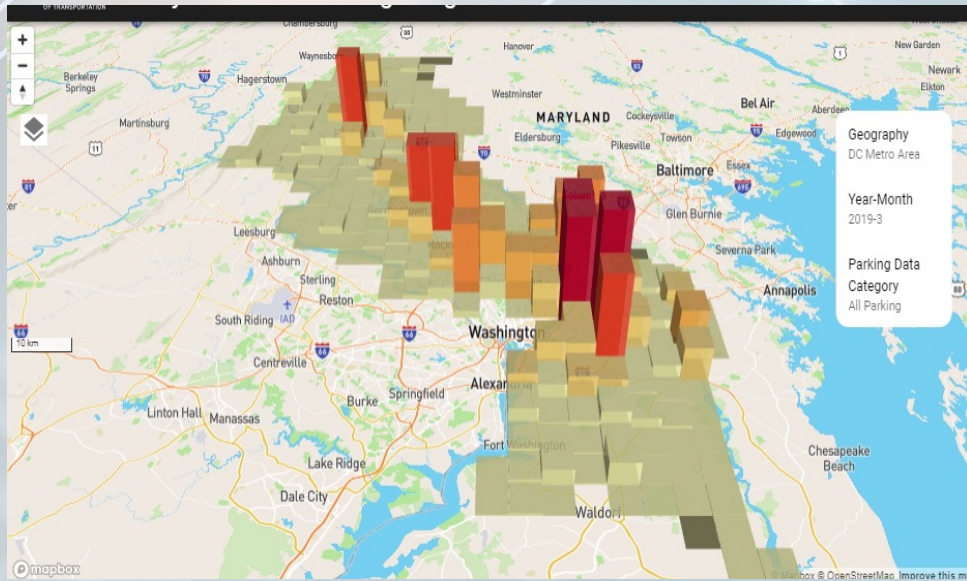


Parking Duration

- Less than 1 hour
 Greater than 1, less than 3 hours
 Greater than 3, less than 7 hours
 Greater than 7, less than 11 hours
 Greater than 11 hours



Freight-focused data hub



Data Issues & Needs

Data Accessibility

- data sensitivity and security
- cost of data procurement
- data storage and data processing

Data Issues & Needs

Data Integrity

- Spatial bias
- Temporal bias
- Data quality

Data Issues & Needs

Data Product Transparency

- Secret recipe
- Unknown data limitations

Solutions

**Transparency &
Collaboration &
Regulatory support**

Solutions

Don't let perfect be the enemy of good!

Questions?



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Assistant Research Scientist



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Three Year Comparison of INRIX Data for Reliable Truck Parking Information Feeds to Truckers (Raw Numbers Averaged by Hour for Each Day, Adjusted for Population, and Percent Full)

Day	12AM	1AM	2AM	3.00	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday	5.00	5.33	7.33	8.33	8.00	8.00	8.33	8.67	9.00	9.33	8.00	8.67	8.67	6.33	7.33	6.67	7.33	9.00	8.33	9.33	8.33	8.33	8.00	10.33
Monday	7.67	7.00	8.00	7.67	9.67	9.33	10.33	11.67	11.33	11.67	9.67	11.00	10.33	8.33	9.00	8.67	14.67	17.67	19.33	19.00	21.67	16.67	10.67	12.00
Tuesday	11.00	10.00	10.33	10.33	11.00	9.00	10.67	10.67	12.67	11.33	12.67	10.00	14.00	16.00	14.33	16.00	19.33	22.33	23.67	29.00	26.33	21.33	14.67	14.67
Wednesday	15.33	11.33	11.33	12.33	12.00	12.00	12.33	14.00	15.67	15.00	13.33	14.00	12.33	8.00	11.00	14.33	16.00	15.67	24.00	27.00	22.00	18.00	14.67	15.33
Thursday	12.67	11.67	13.67	14.00	15.00	14.00	14.67	16.00	15.67	16.67	18.00	18.67	18.00	17.33	13.67	15.67	16.33	16.33	26.33	32.00	34.00	29.00	21.00	19.67
Friday	12.67	10.00	12.33	12.00	11.67	12.33	12.67	11.67	10.67	11.00	15.00	17.33	14.67	16.00	15.33	17.33	15.67	16.33	19.33	24.33	26.67	23.00	17.33	14.33
Saturday	12.33	10.00	9.33	9.33	9.00	9.33	8.67	8.33	8.33	10.00	9.67	11.00	11.00	9.00	7.00	6.67	5.33	7.67	16.67	27.00	20.67	12.33	8.33	6.67

Day	12AM	1AM	2AM	3.00	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday	25.00	26.67	36.67	41.67	40.00	40.00	41.67	43.33	45.00	46.67	40.00	43.33	43.33	31.67	36.67	33.33	36.67	45.00	41.67	46.67	41.67	41.67	40.00	51.67
Monday	38.33	35.00	40.00	38.33	48.33	46.67	51.67	58.33	56.67	58.33	48.33	55.00	51.67	41.67	45.00	43.33	73.33	88.33	96.67	95.00	108.33	83.33	53.33	60.00
Tuesday	55.00	50.00	51.67	51.67	55.00	45.00	53.33	53.33	63.33	56.67	63.33	50.00	70.00	80.00	71.67	80.00	96.67	111.67	118.33	145.00	131.67	106.67	73.33	73.33
Wednesday	76.67	56.67	56.67	61.67	60.00	60.00	61.67	70.00	78.33	75.00	66.67	70.00	61.67	40.00	55.00	71.67	80.00	78.33	120.00	135.00	110.00	90.00	73.33	76.67
Thursday	63.33	58.33	68.33	70.00	75.00	70.00	73.33	80.00	78.33	83.33	90.00	93.33	90.00	86.67	68.33	78.33	81.67	81.67	131.67	160.00	170.00	145.00	105.00	98.33
Friday	63.33	50.00	61.67	60.00	58.33	61.67	63.33	58.33	53.33	55.00	75.00	86.67	73.33	80.00	76.67	86.67	78.33	81.67	96.67	121.67	133.33	115.00	86.67	71.67
Saturday	61.67	50.00	46.67	46.67	45.00	46.67	43.33	41.67	41.67	50.00	48.33	55.00	55.00	45.00	35.00	33.33	26.67	38.33	83.33	135.00	103.33	61.67	41.67	33.33

Day	12AM	1AM	2AM	3.00	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday	19.05	26.98	74.60	98.41	90.48	90.48	98.41	106.35	114.29	122.22	90.48	106.35	106.35	50.79	74.60	58.73	74.60	114.29	98.41	122.22	98.41	98.41	90.48	146.03
Monday	82.54	66.67	90.48	82.54	130.16	122.22	146.03	177.78	169.84	177.78	130.16	161.90	146.03	98.41	114.29	106.35	249.21	320.63	360.32	352.38	415.87	296.83	153.97	185.71
Tuesday	161.90	138.10	146.03	146.03	161.90	114.29	153.97	153.97	201.59	169.84	201.59	138.10	233.33	280.95	241.27	280.95	360.32	431.75	463.49	590.48	526.98	407.94	249.21	249.21
Wednesday	265.08	169.84	169.84	193.65	185.71	185.71	193.65	233.33	273.02	257.14	217.46	233.33	193.65	90.48	161.90	241.27	280.95	273.02	471.43	542.86	423.81	328.57	249.21	265.08
Thursday	201.59	177.78	225.40	233.33	257.14	233.33	249.21	280.95	273.02	296.83	328.57	344.44	328.57	312.70	225.40	273.02	288.89	288.89	526.98	661.90	709.52	590.48	400.00	368.25
Friday	201.59	138.10	193.65	185.71	177.78	193.65	201.59	177.78	153.97	161.90	257.14	312.70	249.21	280.95	265.08	312.70	273.02	288.89	360.32	479.37	534.92	447.62	312.70	241.27
Saturday	193.65	138.10	122.22	122.22	114.29	122.22	106.35	98.41	98.41	138.10	130.16	161.90	161.90	114.29	66.67	58.73	26.98	82.54	296.83	542.86	392.06	193.65	98.41	58.73