

THE MARYLAND DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE ADMINISTRATION
MARYLAND HIGHWAY SAFETY OFFICE (MHSO)

***Traffic Incident Management for
the Baltimore Region (TIMBR) Committee
June 5, 2024***

Rev. June 03, 2024

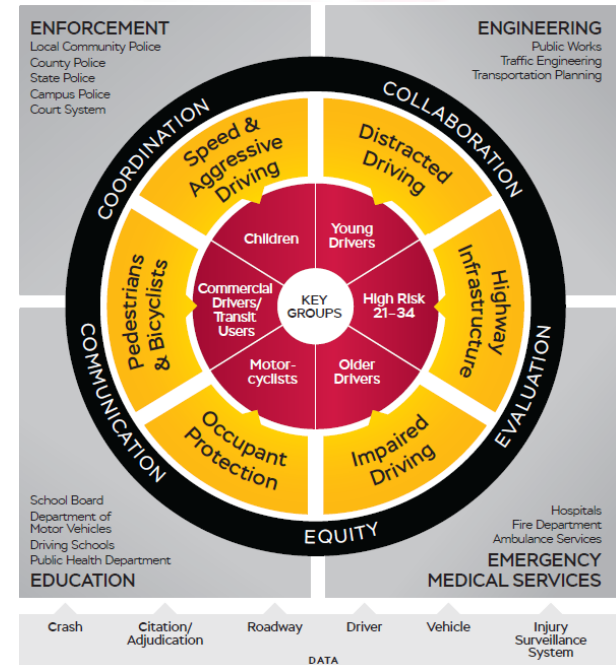


OBJECTIVES

- Describe the MHSO Traffic Records Program.
- Describe some of the latest crash data collection standards.
- Illustrate the Maryland crash data workflow.
- Discuss opportunities for improving crash data collection.
- Demonstrate crash data resources available online.

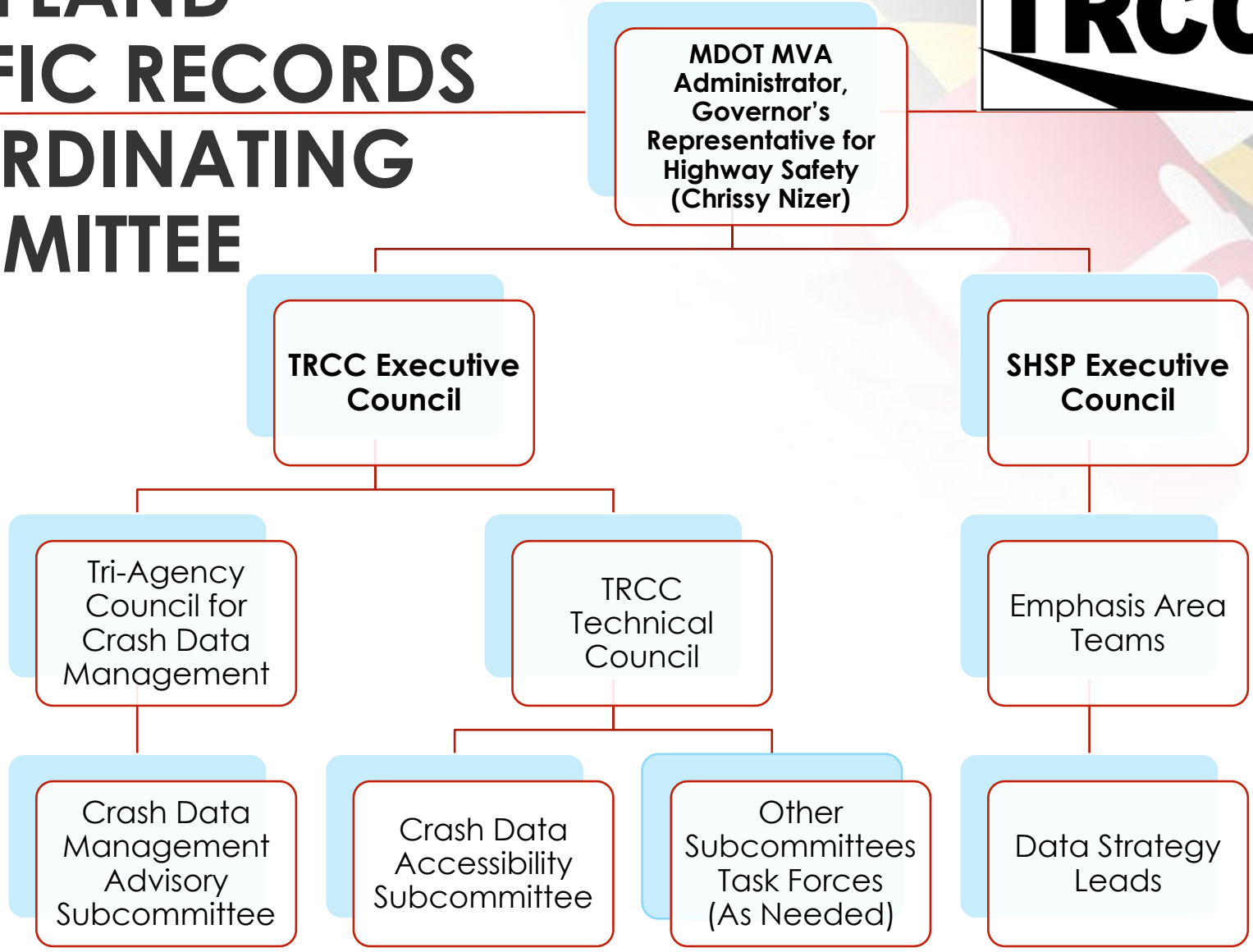
MHSO TRAFFIC RECORDS PROGRAM

- Data system improvements (NHTSA – Federal Funding).
- Traffic Records Coordinating Committee (TRCC).
- Data analysis support.
- Strategic Highway Safety Plan (SHSP) and Local SHSP support.
 - Emphasis Area Teams (EATs): Data Strategies and Action Steps.
- Grantees
 - UMB–National Study Center (NSC)
 - Washington College
 - Crash CORE





MARYLAND TRAFFIC RECORDS COORDINATING COMMITTEE



TRAFFIC RECORDS STRATEGIC PLAN (TRSP)



Data System Icons



crash



driver



vehicle



roadway



citation/
adjudication



injury
surveillance

Attribute Icons



timeliness



accuracy



completeness



uniformity



integration



accessibility

ASSESSMENT/TRSP

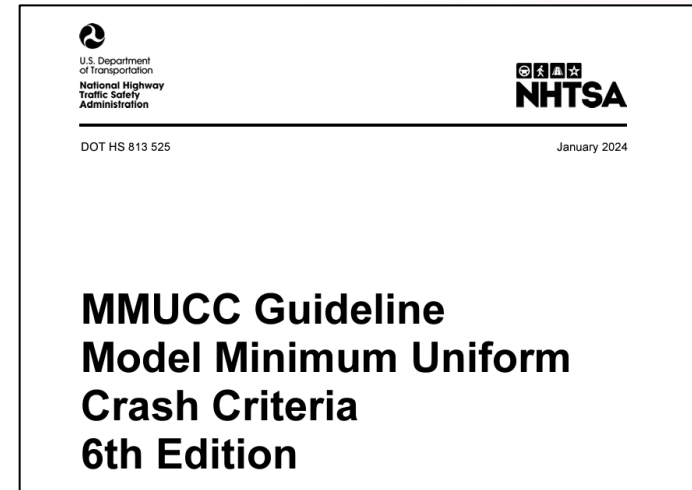
- National Highway Traffic Safety Administration (NHTSA)
 - Section 405(c): State Traffic Safety Information System Improvements.
- Statewide TR Systems Assessment
 - Last Conducted 2019.
 - Upcoming: *June – September 2024.*
- 2025: TRSP Development
 - Concurrent with SHSP > 2026-2030.



SEDC FUNDING



- State Electronic Data Collection (SEDC).
- Awards expected by December 2024; 5-year program (2025-2029).
- Upgrade/improve crash data collection and accessibility (ACRS).
- MMUCC 6 Alignment.
- Integration (e.g., eMEDS, driver records).
- Officer Training.
- Quality Assurance.
- Dashboards.





Crash Report



- Driver & Occupant Characteristics
- Non-Motorist Characteristics
- Time/Day/Month/Year
- Location
- Vehicle Characteristics
- Event Characteristics
- Environment
- Contributing Factors

Vehicle Information **Crash Details**

SCAN Tag # State Type VIN
Year Make Model Expiration Year

Insurance Information
Company Name Policy Number **Vehicle Unknown**

SCAN **Registered Owner**
 Same As Vehicle Driver
Name
Address
City
Home Phone () -

Vehicle Status

Special Function	Left
Towed Vehicle	
Emergency Motor Vehicle Use	

ACRS 2.0 (JANUARY 2024)

New Interface

Automated Crash Reporting System

On Road

Crash County: AnneArundel
Main Route: MD295
Main Road: BALTIMORE WASHINGTON PKWY (SBL)

Distance To Reference Point

Automated Crash Reporting System

Report Type

Collision Type

Report Number: MSP0511000K
Local Code: []

Case Number: []
Crash Date: 10 / 99 / 2023 99:99

Crash Conditions

- Weather Condition
- Light Condition
- Contributing Circumstances

Event Information

- First Harmful Event
- First Harmful Event Location
- Second Harmful Event
- School Bus Related

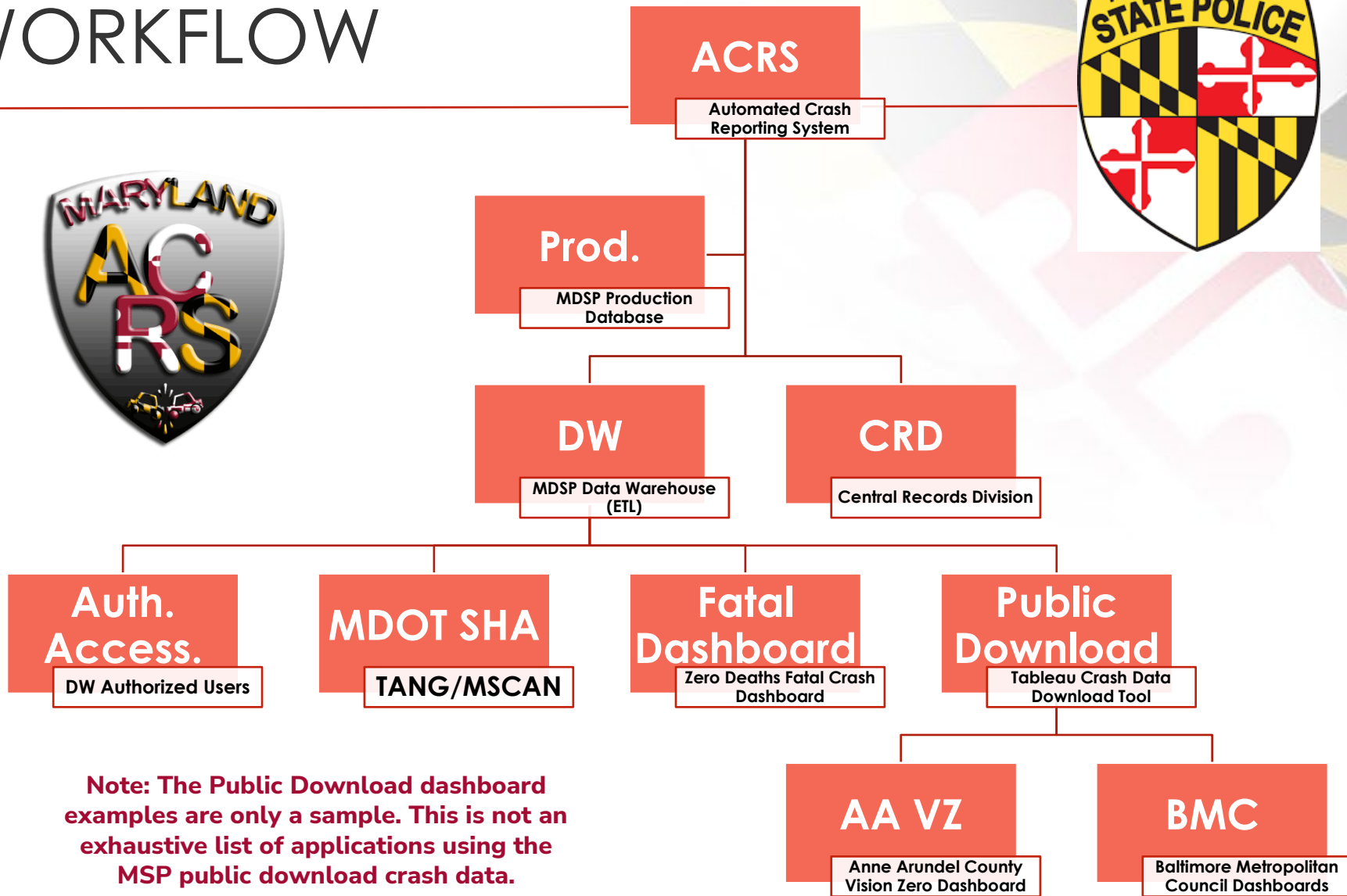
Work Zone

- Work Zone Related

Government Property

- Government Property Damaged?

CRASH DATA WORKFLOW



Note: The Public Download dashboard examples are only a sample. This is not an exhaustive list of applications using the MSP public download crash data.



MDSP CRASH DATA DOWNLOAD

<https://mdsp.maryland.gov/Pages/Dashboards/DashboardHome.aspx>

Crash Data Dashboard - 2024-Present

Improved crash dashboard developed for individuals to analyze crashes. Approved crash reports from all agencies are included in this dashboard. The data format and collection changed in 2024 to align with national standards for data collection. This dashboard is updated regularly and can be used to download crash data beginning with the 2024 calendar year.

Crash Data Download Tool - 2019-2023

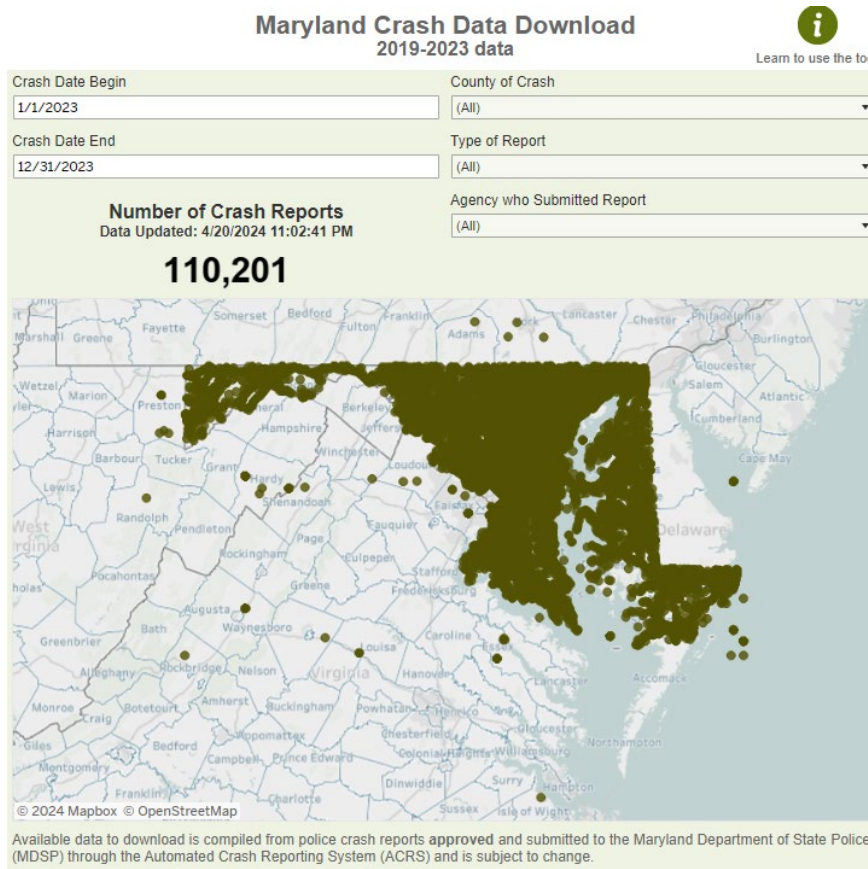
Maryland law enforcement agencies report crash data to the Department of State Police through the Automated Crash Reporting System (ACRS). Approved crash report data can be downloaded after selecting some criteria to filter the data. The crash data is updated regularly and contains 2019 through 2023 approved crash data for any reportable crash in the state. Data collection methods changed in 2024.

Maryland Fatal Crash Dashboard

Maryland law enforcement agencies report crash data to the Department of State Police through the Automated Crash Reporting System (ACRS). MDSP works closely with other traffic safety agencies to reduce the number of fatal and serious injury crashes in Maryland. Maryland Highway Safety Office (MHSO) and the MDSP collaborated on

MDSP CRASH DATA DOWNLOAD

<https://mdsp.maryland.gov/Pages/Dashboards/CrashDataDownload.aspx>

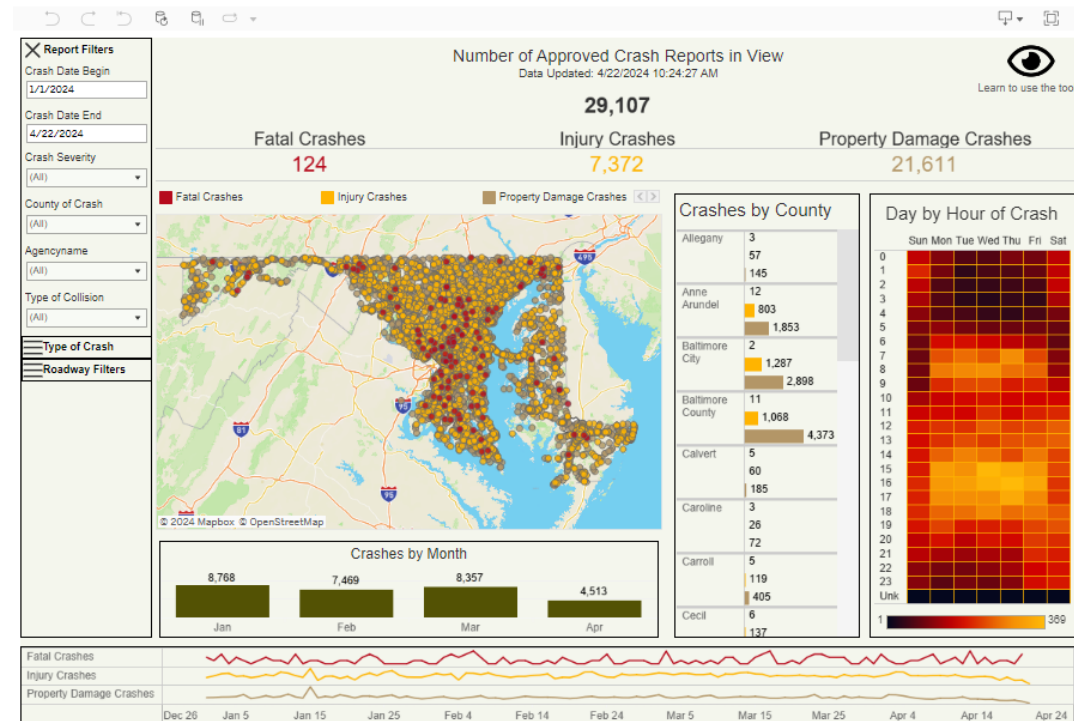


- ACRS 1.0
- Years available:
 - 2019 – 2023
- Data subject to, *and will,* change.
 - Officer report updates; record updates.
 - Updated every morning.
 - Only approved reports.

MDSP CRASH DATA DOWNLOAD

<https://mdsp.maryland.gov/Pages/Dashboards/CrashDataDashboard.aspx>

Crash data collection was updated on January 1, 2024. This dashboard enables users to explore crash data from 2024 through the present. Users can also download the raw data to perform additional analysis. A video is included with a walkthrough.



- ACRS 2.0
- Years available:
 - 2024-to-date
- Data subject to, *and will, change.*
- Video tutorial.

Available data to download is compiled from police crash reports approved and submitted to the Maryland Department of State Police (MDSP) through the Automated Crash Reporting System (ACRS) and is subject to change.

FATAL CRASH DASHBOARD

<https://zerodeathsmd.gov/resources/crashdata/crashdashboard/>

- Launched April 12, 2023
 - *Maryland Highway Safety Summit.*
- **Relaunched** March 13, 2024 > ACRS 2.0.
- Source: MDSP Data Warehouse (ACRS).
- Platform: Tableau.
- Updated every morning.
- Years available: 2016 to current.
- Includes **open reports/ open investigations.**
- No personally identifiable information (PII).

Data Last Updated: 4/15/2024 4:14:23 AM



FATAL CRASH DASHBOARD

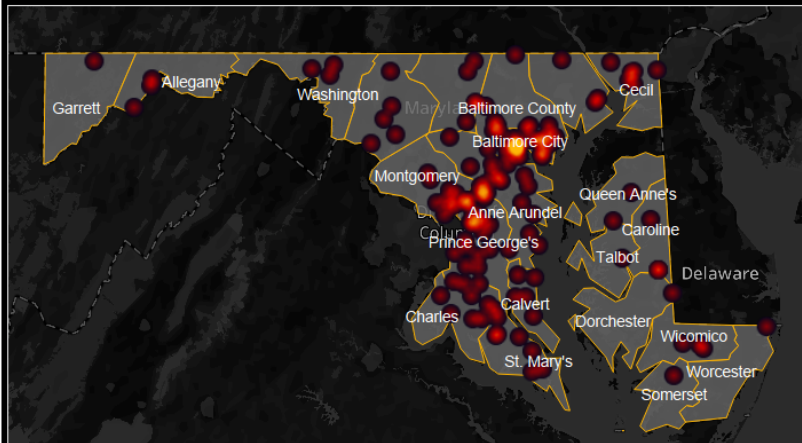
Year of Crash: 2024 | Month of Crash: (All) | Jurisdiction: Statewide

Statewide Fatal Crash Data

Data presented in this dashboard is subject to change.

Fatalities	Young Drivers	Mature Drivers	Pedestrians	Motorcyclists	Bicyclists
137	7	10	38	13	2
Speed Related	Aggressive Driving	Distracted Driving	Impairment	Unrestrained Occupants	
26	13	5	26	24	

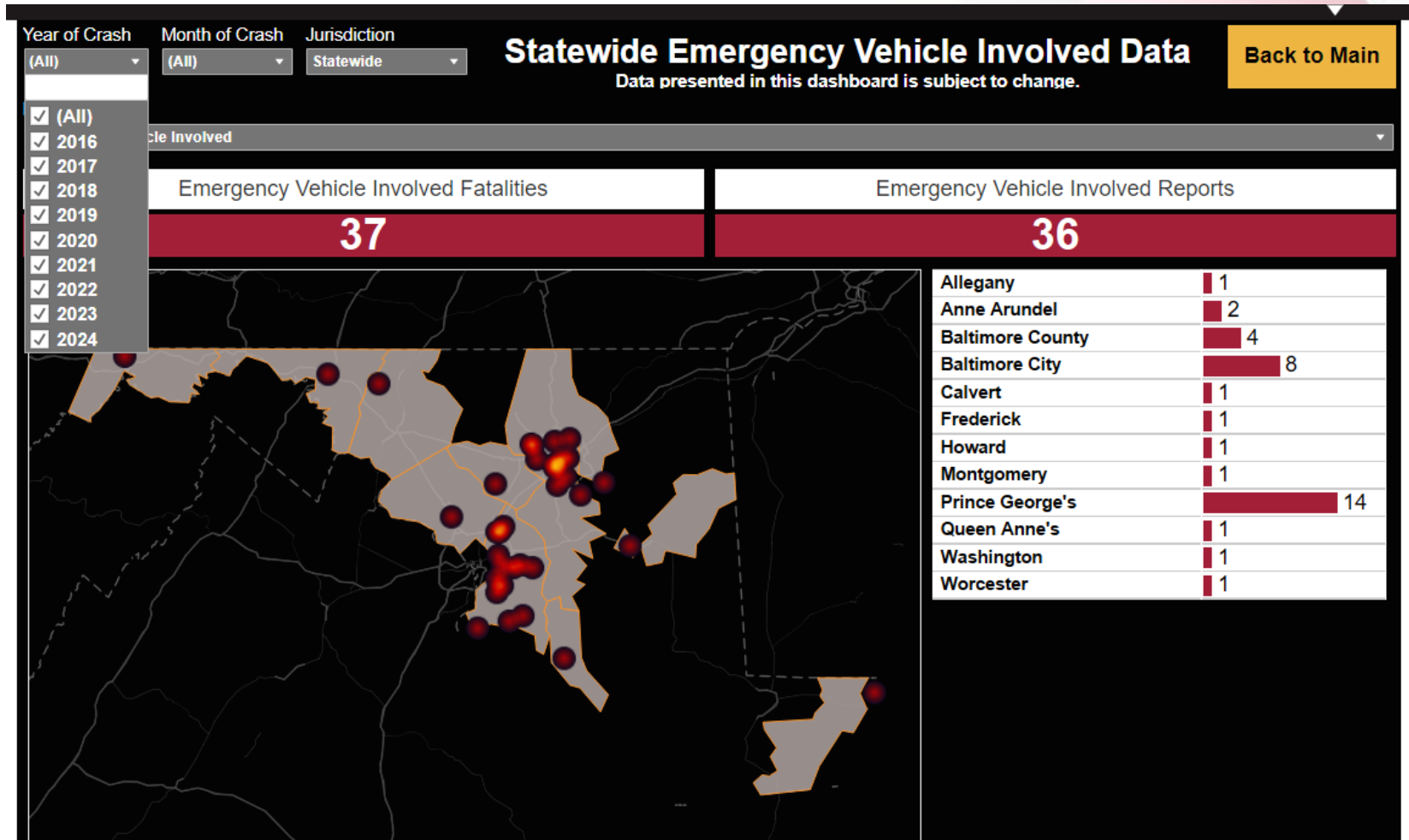
[Emphasis Areas](#) | [Interest Areas](#) | [Year-to-Date](#) | [Occupants](#) | [Non-Motorists](#) | [Vehicles](#) | [Roadway](#)



Jurisdiction Fatal Crashes

Allegany	3
Anne Arundel	11
Baltimore County	19
Baltimore City	12
Calvert	5
Caroline	3
Carroll	5
Cecil	6
Charles	9
Dorchester	1
Frederick	5
Garrett	1
Harford	3
Howard	6
Montgomery	9
Prince George's	22

FATAL CRASH INTEREST AREAS





FATAL CRASH DASHBOARD

Definitions

FAQs

Demo Video

HOME / RESOURCES / CRASH DATA

CRASH DATA DASHBOARD

Maryland takes a data-driven approach to reach our goal of zero roadway fatalities and serious injuries.

EXPLORE THIS SECTION

[Dashboard Data Definitions](#)

[Dashboard FAQ](#)

[Dashboard Demo Video](#)

EMERGENCY VEHICLE INVOLVED

Definitions: <https://zerodeathsmd.gov/resources/crashdata/crashdashboard/dashboard-data-definitions/>

- **Emergency Vehicle Involved** – A fatal injury motor vehicle crash where the *Emergency Motor Vehicle Use* field indicated 'Yes' which indicates operation of any motor vehicle that is legally authorized by a government authority to respond to emergencies with or without the use of emergency warning equipment, such as police vehicle, fire truck, or ambulance while actually engaged in such response. 'Yes' is selected only if the motor vehicle involved in the crash was on an emergency response, regardless of whether the emergency warning equipment was in use.

Note: This will not match previous MHSO reporting where the *Vehicle Body Type* field indicated: 'Ambulance-Emergency,' 'Ambulance-Non-Emergency,' 'Fire Vehicle-Emergency,' 'Fire Vehicle-Non-Emergency,' 'Police Vehicle-Emergency,' or 'Police Vehicle-Non-Emergency.'

- **Highway–Rail Crossing** (Related) – A fatal injury motor vehicle crash where the first *Sequence of Events* indicates 'Struck Railway Vehicle.'

Note: This will not match previous MHSO reporting (Train Involved) where the *Most*

INCIDENT RESPONDER TYPE (NEW)

MMUCC 5

S2 Incident Responder?

01 No

Yes, Type of Incident Responder

01 EMS

02 Fire

03 Police

04 Tow Operator

05 Transportation (*i.e. maintenance workers, safety service patrol operators, etc.*)

98 Other

99 Unknown

ACRS 2024

- EMS
- Fire
- Police
- Tow Operator
- Transportation
- Other

ACRS 2.0 INCIDENT RESPONDERS

- Preliminary analysis indicates these attributes are not being reported correctly.

Crash Severity Descr	Reportnumber	Type NM Descr	IncidentR	InjuryStatus NM De	Location NM Description
Fatal Crashes	MSP7395003V	Pedestrian	Police	Fatal Injury	Travel Lane – Other Location
Fatal Crashes	MSP626300LG	Pedestrian	EMS	Fatal Injury	Travel Lane – Other Location
Fatal Crashes	MSP7453003Q	Pedestrian	EMS	Fatal Injury	Unknown
Fatal Crashes	MSP684600TB	Pedestrian	Police	Fatal Injury	Travel Lane – Other Location
Injury Crashes	ADK8930017	Pedestrian	Police	Possible Injury	Unknown
Injury Crashes	DA42450032	Pedestrian	EMS	Possible Injury	Driveway Access
Injury Crashes	CA7740004M	Pedestrian	Police	Possible Injury	Travel Lane – Other Location
Injury Crashes	ADG648005R	Pedestrian	EMS	Possible Injury	Shoulder/Roadside
Injury Crashes	ADK867001T	Scooter (electric)	EMS	Possible Injury	Travel Lane – Other Location
Injury Crashes	ADJ875005M	Cyclist (Electric)	Police	Possible Injury	Travel Lane – Other Location
Injury Crashes	GC93670017	Pedestrian	EMS	Possible Injury	Intersection – Other
Injury Crashes	ADK877000Y	Pedestrian	EMS	Possible Injury	Intersection – Marked Crosswalk
Injury Crashes	ADI289006M	Pedestrian	EMS	Possible Injury	Intersection – Marked Crosswalk
Fatal Crashes	MSP7571002R	Pedestrian	Tow Operat	Possible Injury	Shoulder/Roadside

Data derived from MDSP Crash Data Dashboard, May 29, 2024.
<https://mdsp.maryland.gov/Pages/Dashboards/CrashDataDashboard.aspx>

SECONDARY CRASHES ACRS 1.0



DELTA PLUS NEWS BULLETIN

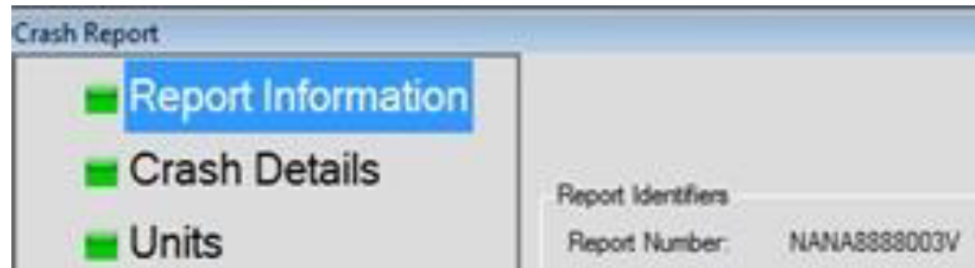
April 2017



The ACRS Exchange Form

In an upcoming release, you will notice that the Exchange Form will be changing its appearance. Although the new form has the appearance of an ACRS report, it is still the Exchange Form to be used in the field. Once the form is completed, it can be printed out just like the current Exchange Forms are now.

The biggest change is the layout of the form. The new exchange form will have the same look and feel as ACRS.



Crash Report	
<input checked="" type="checkbox"/> Report Information	
<input checked="" type="checkbox"/> Crash Details	
<input checked="" type="checkbox"/> Units	
Report Identifiers	
Report Number:	NANA8888003V

SECONDARY CRASHES ACRS 1.0

New Roadway Circumstances

There will be new selections for roadway contributing circumstances. The additional selections are to assist in identifying crashes that are involved due to a previous incident which caused a backup on the roadway. The new selections will be:

- 76 - Backup Due to Prior Crash
- 77 - Backup Due to Prior Non-Recurring Incident
- 78 - Backup Due to Regular Congestion
- 79 - Toll Booth/Plaza Related

For questions on this bulletin, please email msh.etix@maryland.gov.

SECONDARY CRASHES ACRS 1.0

Contrib. Circumstance - Road			
N/A (00)	WET (61)	ICY OR SNOW-COVERED (62)	DEBRIS OR OBSTRUCTION (63)
RUTS, HOLES, BUMPS (64)	ROAD UNDER CONSTRUCTION/MA INTENANCE (65)	TRAFFIC CONTROL DEVICE INOPERATIVE (66)	SHOULDERS LOW, SOFT, HIGH (67)
PHYSICAL OBSTRUCTION(S) (69.88)	WORN, TRAVEL-POLISHED SURFACE (71.88)	NON-HIGHWAY WORK (72.88)	BACKUP DUE TO PRIOR CRASH (76)
BACKUP DUE TO PRIOR NON-RECURRING INCIDENT (77)	BACKUP DUE TO REGULAR CONGESTION (78)	TOLL BOOTH/PLAZA RELATED (79)	OTHER ROAD (83.88)

SECONDARY CRASHES ACRS1.0

**BACKUP DUE TO
PRIOR
NON-RECURRING
INCIDENT
(77)**

**BACKUP DUE TO
REGULAR
CONGESTION
(78)**

**TOLL BOOTH/PLAZA
RELATED
(79)**

**BACKUP DUE TO
PRIOR CRASH
(76)**

SECONDARY CRASHES PROFILE

Category	2017	2018	2019	2020	2021	2022	2023
Fatal Crashes		2	1	1	6		2
Total of All Fatalities		2	1	1	6		2
Injury Crashes	240	645	747	343	486	478	537
Total Number Injured	345	930	1,096	518	746	735	795
No Injuries Reported	487	1,593	1,881	924	1,404	1,407	1,637
Total Crashes	727	2,240	2,629	1,268	1,896	1,885	2,176

- 76 - Backup Due to Prior Crash
- 77 - Backup Due to Prior Non-Recurring Incident
- 78 - Backup Due to Regular Congestion
- 79 - Toll Booth/Plaza Related

MMUCC 5

ACRS 2.0 2024
crash data:

Secondary
Crash New
Definition: **TBD.**



C14. Contributing Circumstances – Roadway Environment

Definition Apparent environmental or roadway conditions which may have contributed to a crash.

Attribute Values:

- 00 None
- 01 Animal(s)
- 02 Debris
- 03 Glare
- 04 Non-Highway Work
- 05 Obstructed Crosswalks
- 06 Obstruction in Roadway
- 07 Prior Crash
- 08 Prior Non-Recurring Incident
- 09 Regular Congestion
- 10 Related to a Bus Stop
- 11 Road Surface Condition (wet, icy, snow, slush, etc.)
- 12 Ruts, Holes, Bumps
- 13 Shoulders (none, low, soft, high)
- 14 Toll Booth/Plaza Related
- 15 Traffic Control Device
- 16 Traffic Incident
- 17 Visual Obstruction(s)
- 18 Weather Conditions
- 19 Work Zone (construction/maintenance/utility)
- 20 Worn, Travel-Polished Surface

MMUCC 6: SECONDARY



Sub 1 – Yes/No
Crash-to-crash,
otherwise, use “Related
Factors”

Sub 2 – Primary Crash
Report Number

A large blue rectangular graphic with the text "Secondary Crash" in white. In the top right corner, there is a small video inset showing a man wearing a headset, with the name "Grady Carrick" written below it.

Secondary
Crash

Talking Tim Webinar Series: <https://www.transportationops.org/ondemand-learning/talking-tim-february-2024>

MOVE OVER CRASH DEFINITION

- No standard definition for a 'move over-related crash.'
- MHSO has developed a query to approximate (some of) the circumstances of such an incident:
 - *any vehicle on the shoulder (lane field)*
 - *first or second harmful event equal to a parked vehicle*
- There are no attributes for a vehicle to indicate whether warning signals were in use.
- A previous query, before the October 2022 law expansion, included only emergency response vehicles.

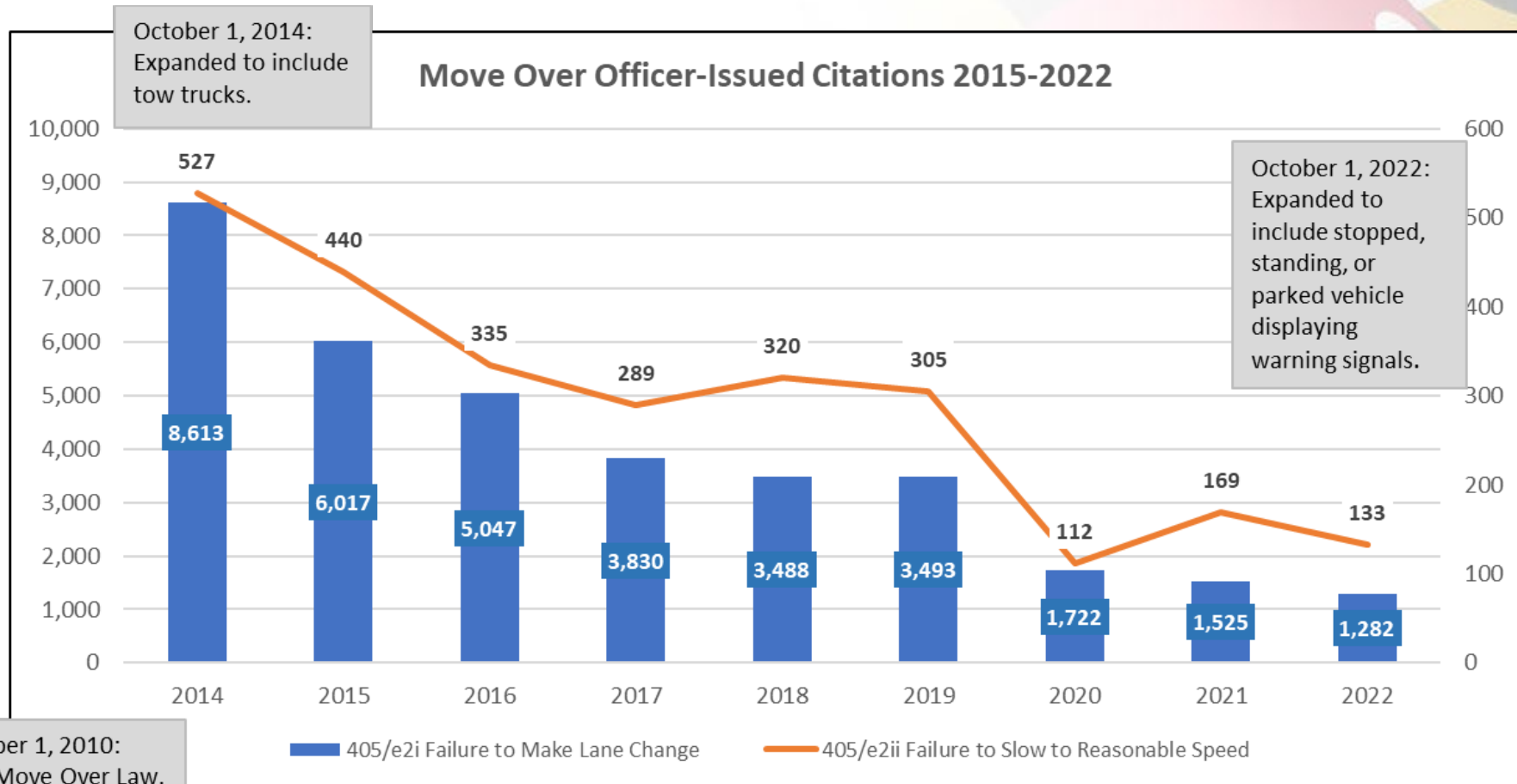


MOVE OVER CRASH SUMMARY

Category	2014	2015	2016	2017	2018	2019	2020	2021
Fatal Crashes			4	4	6	1		4
Total of All Fatalities			4	4	6	1		4
Injury Crashes	49	66	71	86	74	82	89	81
Total Number Injured	70	91	97	111	91	109	108	112
Property Damage Only Crashes	176	958	1,004	552	507	535	475	528
Total Crashes	225	1,024	1,079	642	587	618	564	613

- *any vehicle on the shoulder (lane field) **and***
- *first or second harmful event equal to a parked vehicle*

MOVE OVER TRAFFIC VIOLATIONS



MOVE OVER TRAFFIC VIOLATIONS

A separate query of the ETIX data system shows that despite the declines in traffic violations issued to drivers for these offenses, officers were consistently issuing **warnings**.

Year	Citations (e2i) Move Over	Citations (e2ii) Slow Down	Total Citations	Warnings (e2i) Move Over	Warnings (e2ii) Slow Down	Total Warnings
2020	1191	35	1226	4154	116	4270
2021	840	46	886	3902	128	4030
2022	772	37	809	4265	141	4406
Totals	2,803	118	2,921	12,321	385	12,706

Note: Totals for citations will not match the above table due to different sources – Maryland Judiciary vs. MDSP ETIX – and the inclusion of paper citations in Judiciary data.

MMUCC 6 MOVE OVER

Related Factors – Driver Level



GROUP 3 – MOVE OVER RELATED

- Attempted to Move Over or Slow Down as Required by Move Over Law
- Failed to Move Over or Slow Down as Required by Move Over Law



Talking Tim Webinar Series: <https://www.transportationops.org/ondemand-learning/talking-tim-february-2024>

A LOOK AHEAD

- Secure SEDC Funding.
- Hire consultants and direct state resources.
- TRCC guidance and outreach.
- Stakeholder/Focus Groups, e.g.,
 - MMUCC 6 and Short Form,
 - Defining Incident Management-Related Crashes.



RAVEN (2016-2024)



RAVEN Webmap



Make Requests



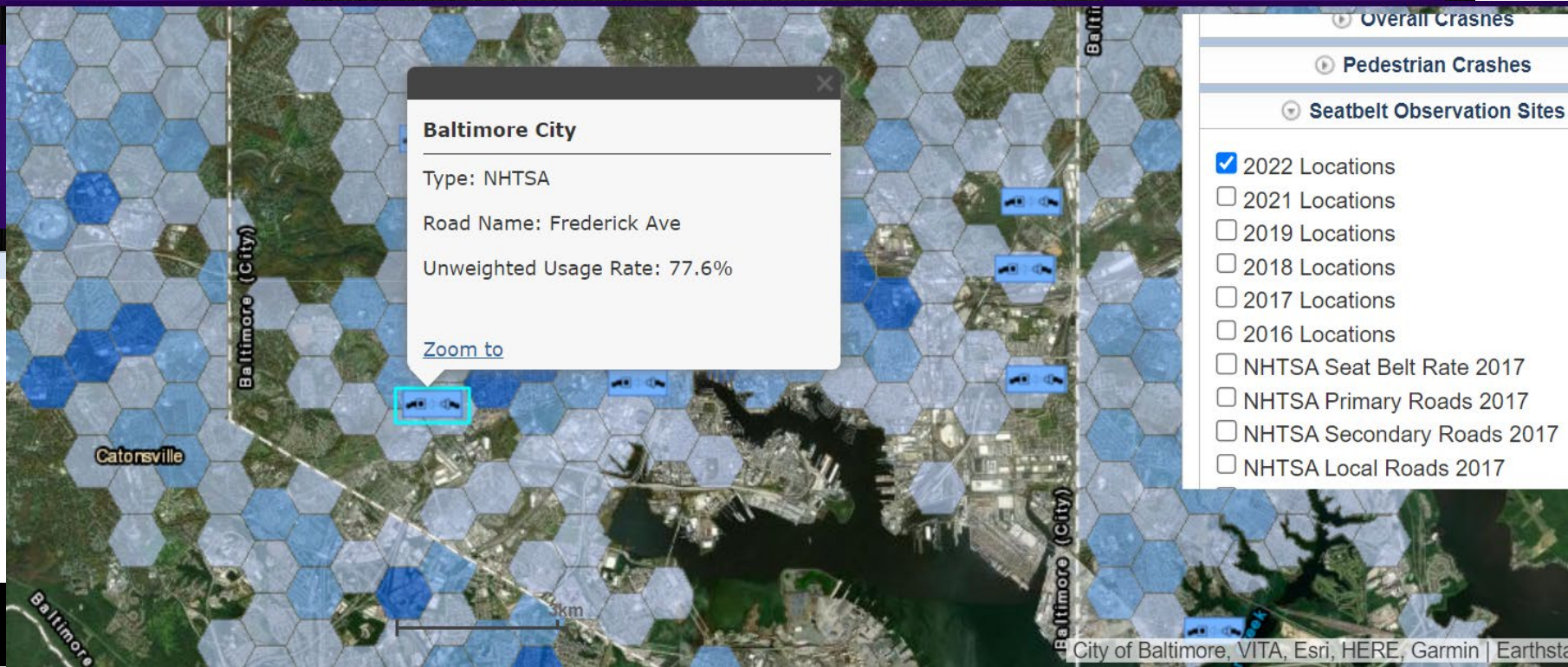
Training Sessions

RAVEN

RISK ANALYSIS OF VEHICLE ENVIRONMENTAL NETWORK



Contact Us





RAVEN 2.0

RAVEN

Risk Analysis of Vehicle Environment Network

16,990

Crashes in 2024 so far



About



Analysis

40

Fatal crashes in 2024 so far



Overall



Young Drivers



Mature Drivers



Pedestrians



Motorcyclists



Bicyclists



Speeding



Distracted



Impaired



Unrestrained

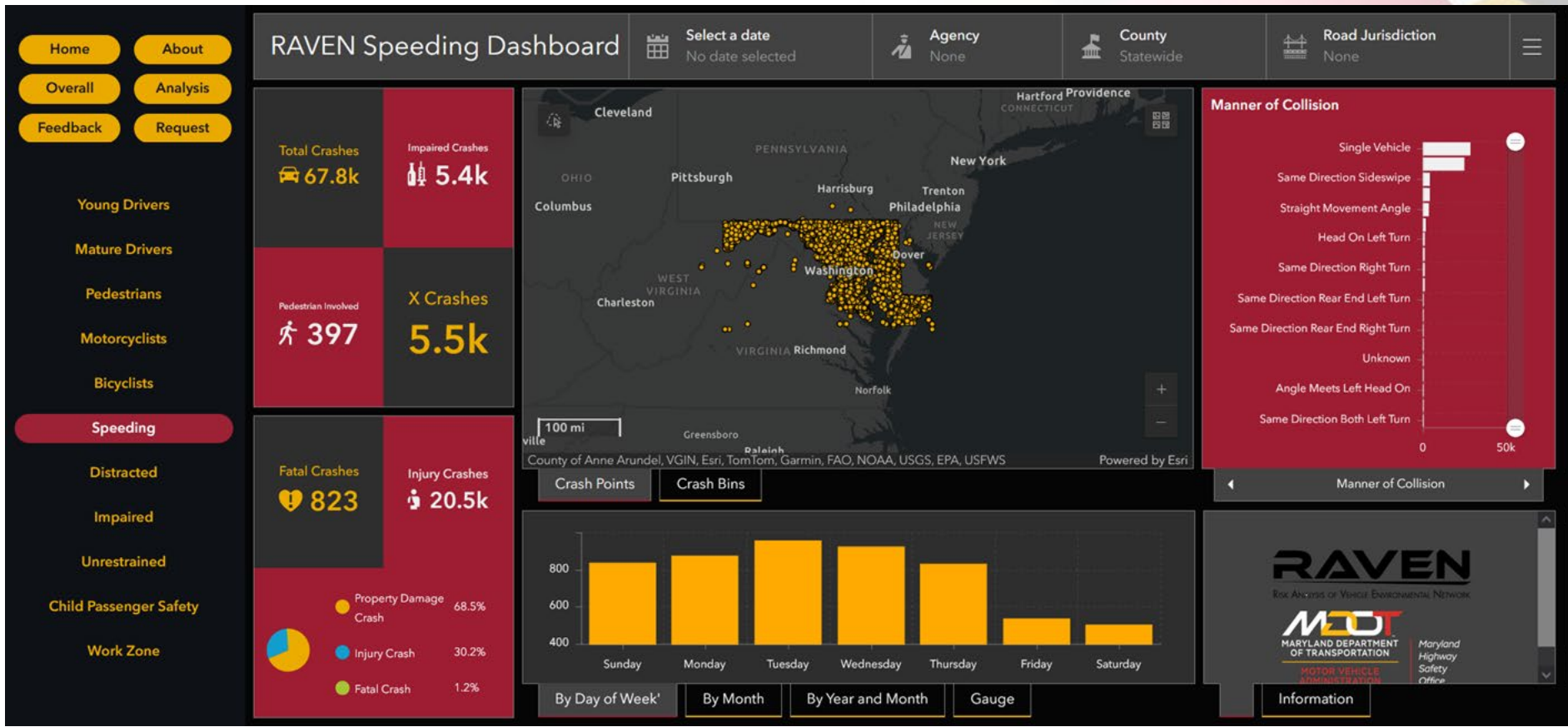


Child Passenger
Safety



Work Zone

RAVEN 2.0



**ZERO DEATHS
MARYLAND**

RAVEN 2.0 FOCUS GROUPS

<https://survey123.arcgis.com/share/6e895a75a513494092e0357c9180082c>

The screenshot displays the RAVEN 2.0 web application interface. On the left, a navigation menu includes buttons for Home, About, Overall, Analysis, Feedback, and Request, along with a list of driver categories: Young Drivers, Mature Drivers, Pedestrians, Motorcyclists, Bicyclists, Speeding, Distracted, and Impaired. The main area features a map of Greenbelt, MD, with a popup window for a specific crash event (BW0130003C). The popup displays the following data:

OBJECTID	248984
Reportnumber	BW0130003C
AgencyCode	Greenbelt Police
CountyOfCrash	Prince George's
Reporttype	Injury Crash
UseData	True
Crashdate	3/2/2020, 7:00 PM

On the right side of the interface, there is a filter panel with a search bar and several filter options:

- Overturn
- Parked Vehicle
- Pedestrian
- Spilled Cargo
- Thrown or Falling Object
- Units Separated
- Unknown

Below the filter options, there are dropdown menus for "2 Selected", "Filter by junction: 0 Selected", and "Filter by lighting: 0 Selected". The bottom of the interface shows logos for MDT (Maryland Department of Transportation), Maryland Highway Safety Office, and Washington College Geographic Information Systems, along with a scale bar and map data attribution.

Questions?

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