Crash data availability and best practices across the United States

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Why do we need non-fatal crash data?

"In [mid-sized city], there are about 5 fatal bicycle crashes a year. It's not enough to tell us where our problem spots are and where we need to make infrastructure changes. The difference between an injury and a fatality is often a matter of a few feet, vehicle size, or how someone was hit."

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Research methods

- Search of all state websites for data availability
- Selected interviews with professionals responsible for safety data
  - Mainly State DOTs, university researchers, a few advocates who use data

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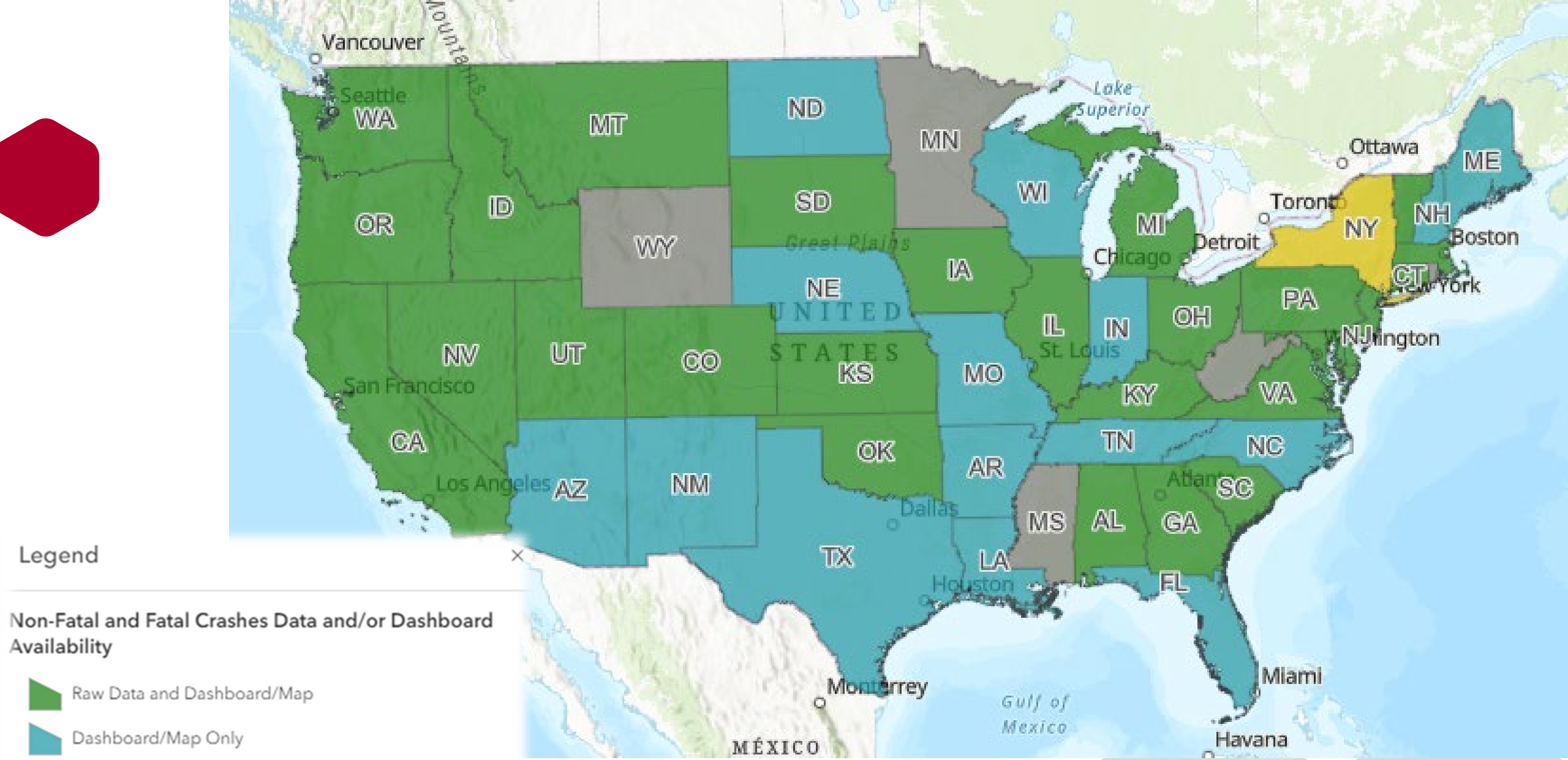

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To share or not to share?

“We’ve had people use our data to make wild [false] claims.”

“If you are worried about data being misused, the best thing is to release it.”

“[Most] people wouldn’t know what to do with the data if they had access to it.”

“It allows [advocacy] groups to really have a voice. That data is indisputable.”

“We have chosen not to have it available publicly. It’s such a large database, we don’t want it misinterpreted.”

“The data belongs to the tax-payers. We didn’t see a reason not to put it out.”

School zones and children's safety

- 42 states have public facing data dashboards – but a small subset have usable information for school zone safety!
- How can schools, municipalities, parents, and children make informed decisions about school zone safety?

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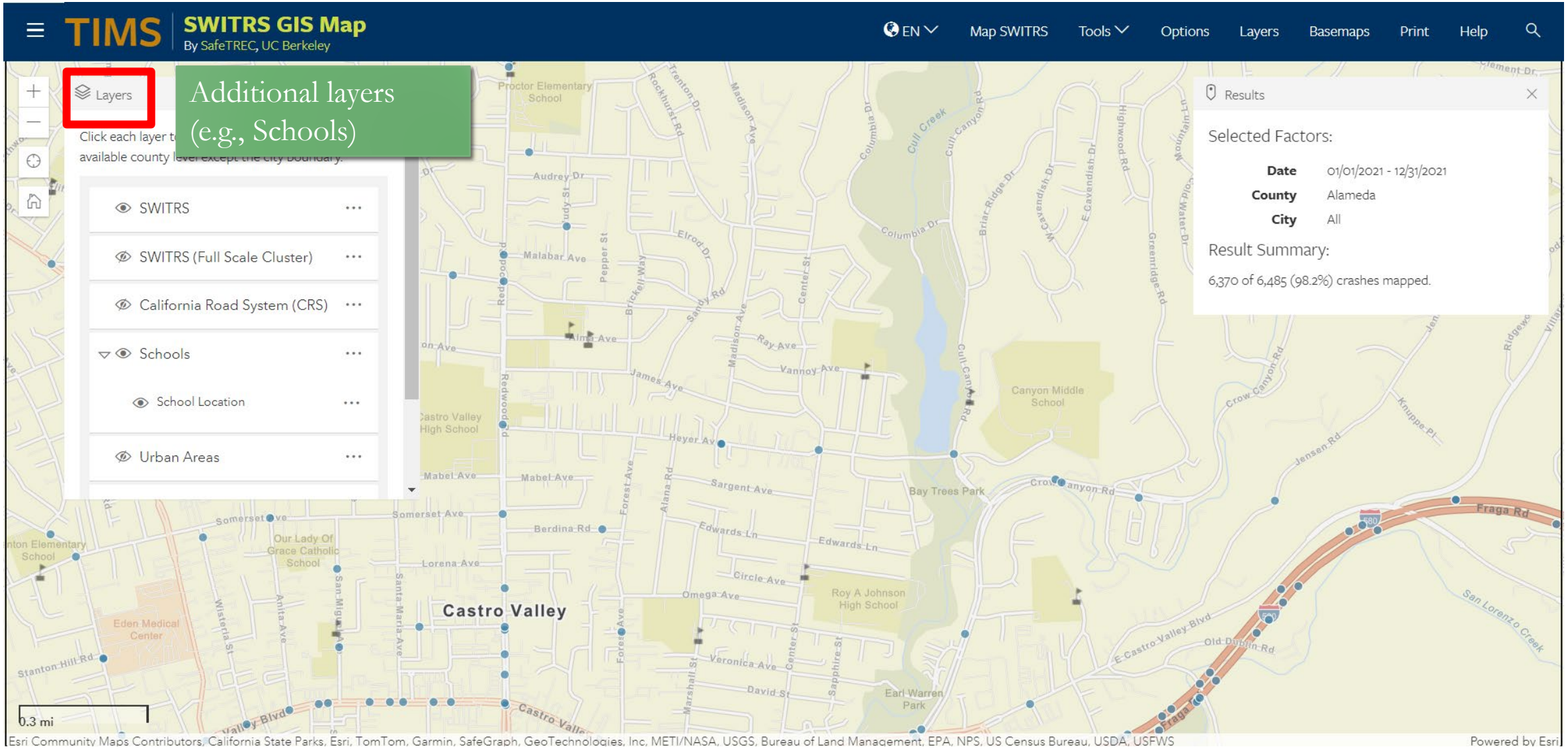

TIMS
SWITRS GIS Map
By SafeTREC, UC Berkeley
EN
Map SWITRS
Tools
Options
Layers
Basemaps
Print
Help
Layers
Additional layers (e.g., Schools)
SWITRS
SWITRS (Full Scale Cluster)
California Road System (CRS)
Schools
School Location
Urban Areas
Results
Selected Factors:
Date 01/01/2021 - 12/31/2021
County Alameda
City All
Result Summary:
6,370 of 6,485 (98.2%) crashes mapped.
Castro Valley
0.3 mi
Esri Community Maps Contributors, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS
Powered by Esri

CT CRASH - Crashes Related to School Bus

CTDOT | CTSRC

Welcome | Summary | Pedestrian | Fatal | Fixed Objects | Intersections | FMCSA | Motorcycle | Non-Motorists | Wrong Way | Bicycle | Young Driver (15-25) | Teen Driver (15-19) | ATV | **School Bus** | 65+ Drivers and Peds | 65+ Driver

Total Crashes

8,519

involving a School Bus

Work Zone Related: **112**

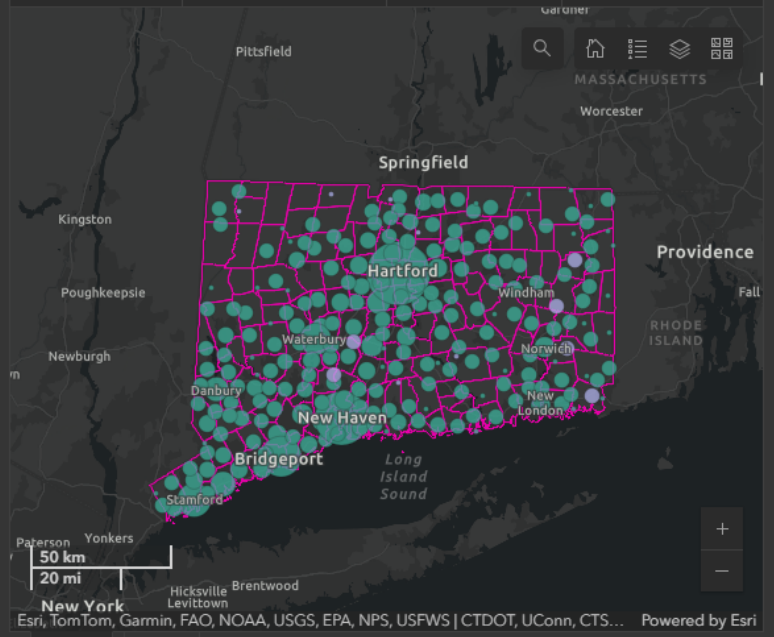
Intersection Related: **3.6k**

Click on the arrow to the left to access the side panel and select filters.

Fatal Injury Crashes: 0.1% — **11** of 8,519

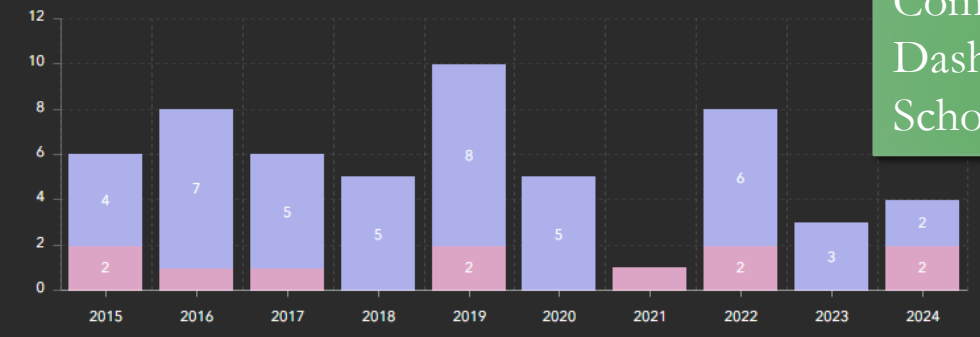
Suspected Serious Injury Crashes: 0.5% — **45** of 8,519

Start Date: 1/2/2015 End Date: 8/27/2024



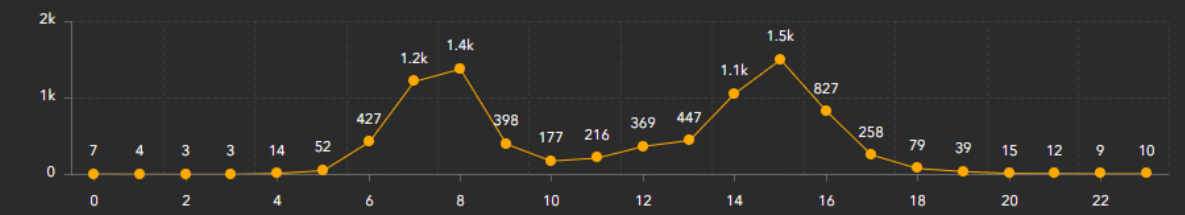
Map | Info

Fatal and Suspected Serious Injury Crashes by Year



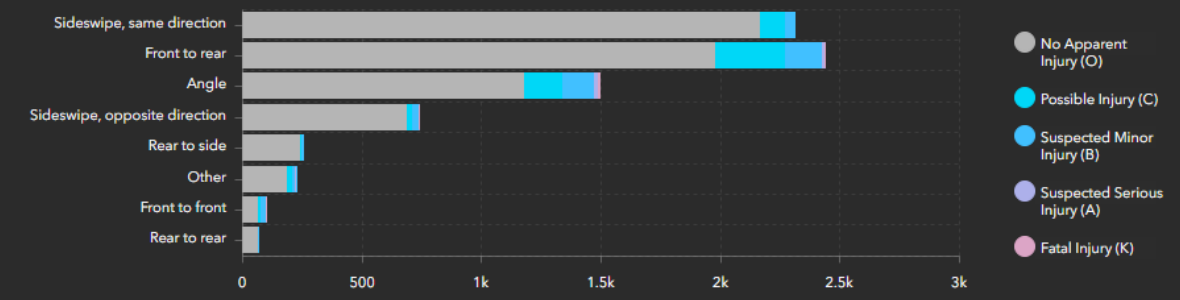
Comprehensive Dashboard: School Bus Tab

Total Crashes by Hour of the Day



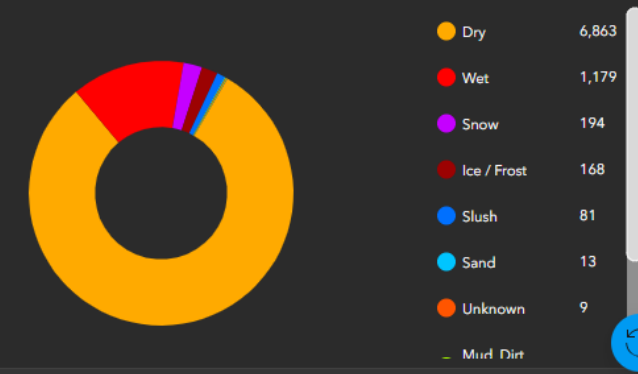
By Hour of the Day | By Day of the Week | By Month of the Year

Most Severe Injury by Manner of Collision



Severity by Manner of Collision | Severity by Route Class

Roadway Surface Condition



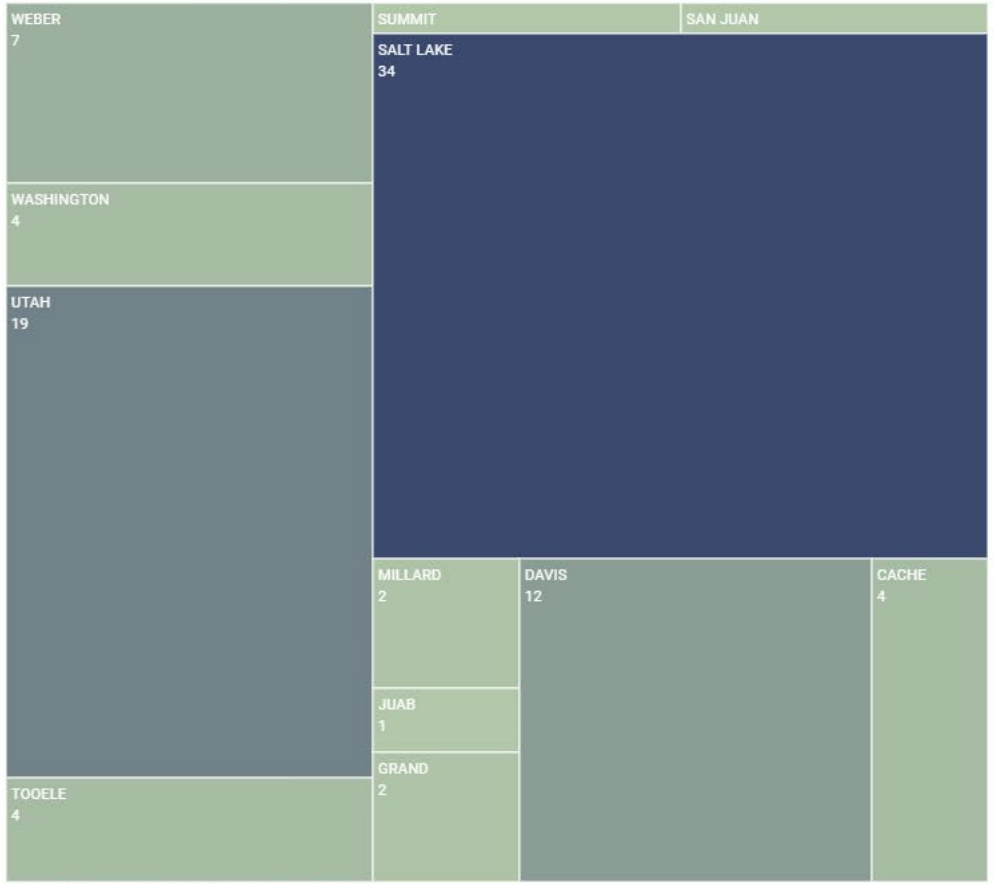
Pedestrian Age Filter

Downloadable

Crash Date & Time (Year) = 2023 | Pedestrian Age Groups-Array = Age: 12 and Under | Add Filter

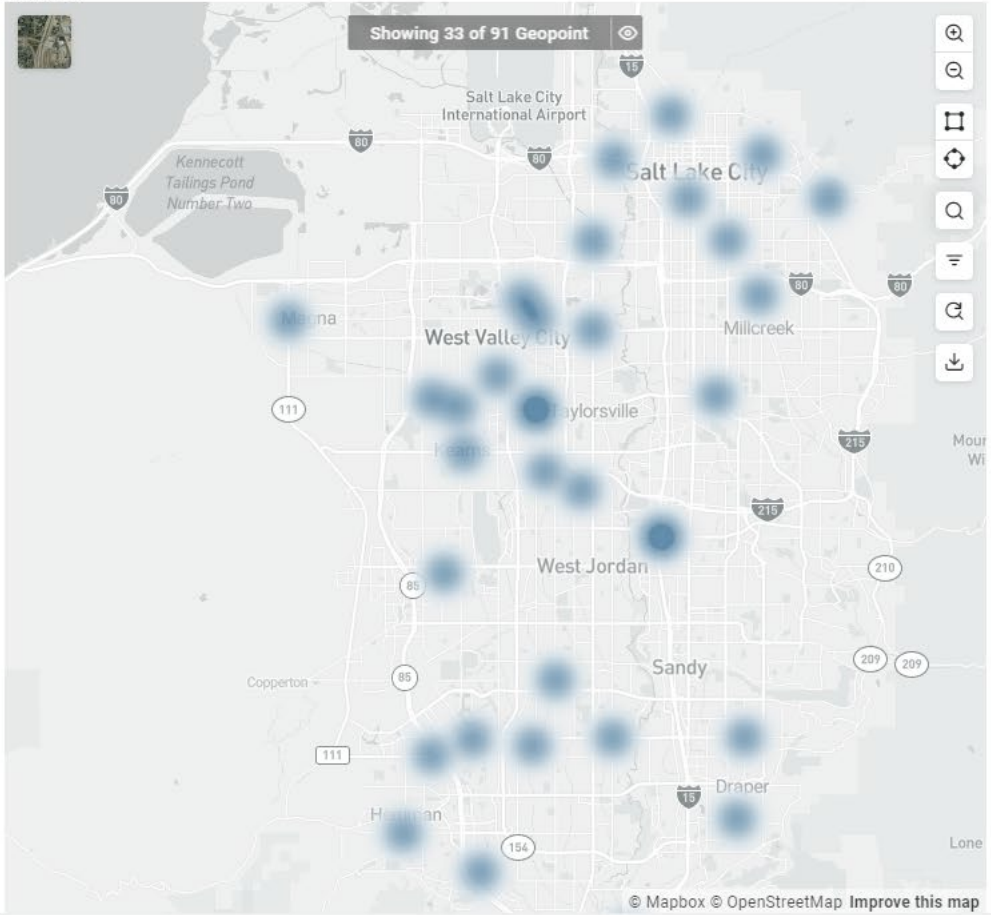
Where?

Crashes by County



This chart shows the # of Total Crashes by County.

Red = Fatal Injury, Red Orange = Suspected Serious Injury, Yellow Orange = Suspected Minor Injury, Yellow = Possible Injury, Blue= No injury/PDO



Crashes by City

Filters

Crash Date & Time: All Time

Measure: Records Row Count

County (geo)

Select...

City (geo)

Select...

KABCO Crash Severity

Select...

Year*

Select...

Crash Attributes

Select...

What is available in NJ?

- Statewide data download: https://www.nj.gov/transportation/refdata/accident/rawdata01-current.shtm
- CHOP (Statewide) https://njsho.chop.edu/data/data-dashboard
- DVRPC Dashboard https://www.dvrpc.org/webmaps/crash-data/
- Hudson Co (With statewide characteristics) https://crashes.hudcostreets.org/
- Also, Numetric and Safety Voyager but permission is required.

2001 to Current Crash Tables

Crash records can be retrieved for any of the five tables listed in the drop down menu under “Table” which are:

- Crash Table
- Driver Table
- Vehicle Table
- Occupant Table
- Pedestrian Table

Each table captured different information for the same “Crash” which is reflected in the name (Crash, Driver, Vehicle, Occupant and Pedestrian).

If necessary these tables can be linked by the first four fields (Year, County Code, Municipality Code, and Department Case Number).

The tables are available for the entire State of New Jersey and for any of its 21 counties from year 2001 to the most recent year available.

The data within the tables is in a file and displayed in comma delimited format. This format can be imported into various programs such as databases and spreadsheets.

The files are zipped in .TXT format files. A zip utility program is necessary to unzip and view the report files.

The order of the fields are described in the Master File Layout.

Year	County	Table
Select One	Select One	Select One

New Jersey Pedestrians Involved in Crashes

Demographic and equity data by county

NJ-SHO
New Jersey Safety & Health Outcomes Center for Integrated Data

Atlantic County 2019 Pedestrians in All Crashes

This report focuses on New Jersey pedestrians involved in crashes – who they are, where they live, and their demographic characteristics. Explore crash rates by equity measures based on the county in which the pedestrians live, as well as demographic trends over time. Learn more at https://njsho.chop.edu/

Choose Selections to Customize Report

Crash Category: All Crashes

County of Residence: Atlantic

Comparison of Crash Rates and Equity Measures

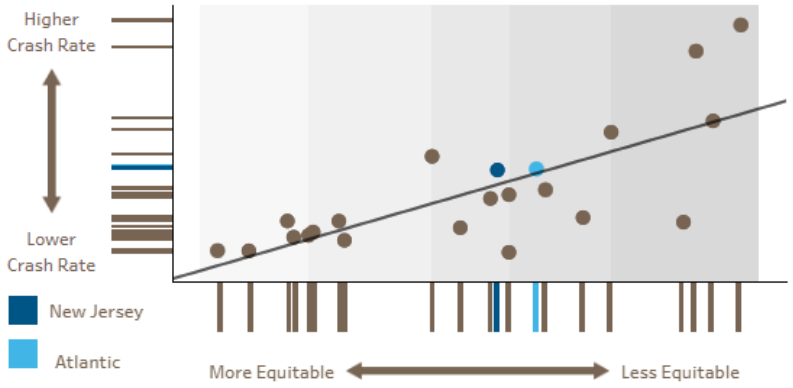
This graph shows the relationship between crash rates and equity measures using a circle for each county. Counties with higher crash rates (circles closer to the top; rankings closer to 1) tend to also have greater inequity or more risk of poor health outcomes among residents (circles closer to the right; rankings closer to 1).

Equity Measure: Community Resilience Estimates

Year(s): 2019 — 2019

The Community Resilience Estimates (CRE) measure the level of a neighborhood's risk to the impacts of disasters, as determined by the U.S. Census Bureau (2019).

	New Jersey	Atlantic County
Rate per 100,000 Residents (Ranking)	49.2	49.7 (6 of 21)
Equity Measure (Ranking)	20.8	22.0 (8 of 21)



Trend Among Demographic Groups - 2010 to 2019

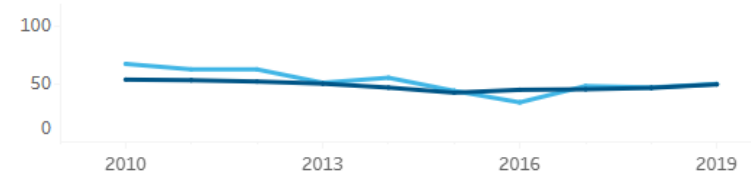
The graphs below compare annual crash rates for residents of New Jersey, by county and by demographic groups. All rates are calculated as the number of pedestrians in crashes per 100,000 residents.

Demographic Category: Race and Ethnicity

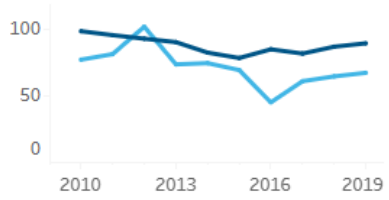
New Jersey | Atlantic

Pedestrians in All Crashes, 2010 to 2019

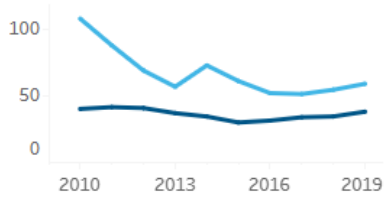
Overall



Hispanic



Asian



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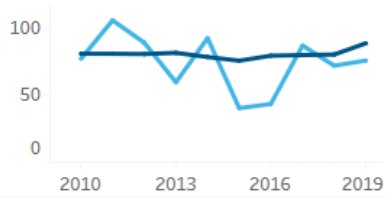

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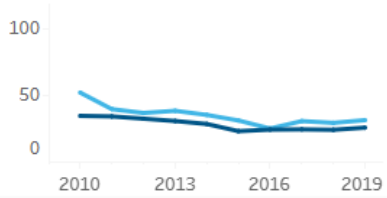


Crash Statistics

FOR THE DVRPC REGION

print statistics

This tool's default setting is limited to five years of killed and severe injury crashes (abbreviated as "KSI") for 2017 to 2021. Five years of data is typically used by local, state, and federal partners in safety analyses.

The following charts and map are showing results for **All** crash types from **2017** to **2021** in **the DVRPC region**. You can adjust the range and severity type using the forms below:

Select Date Range:

From: 2017 To: 2021 update

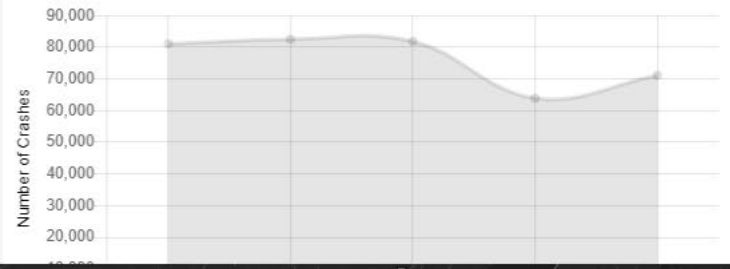
Select Severity Type:

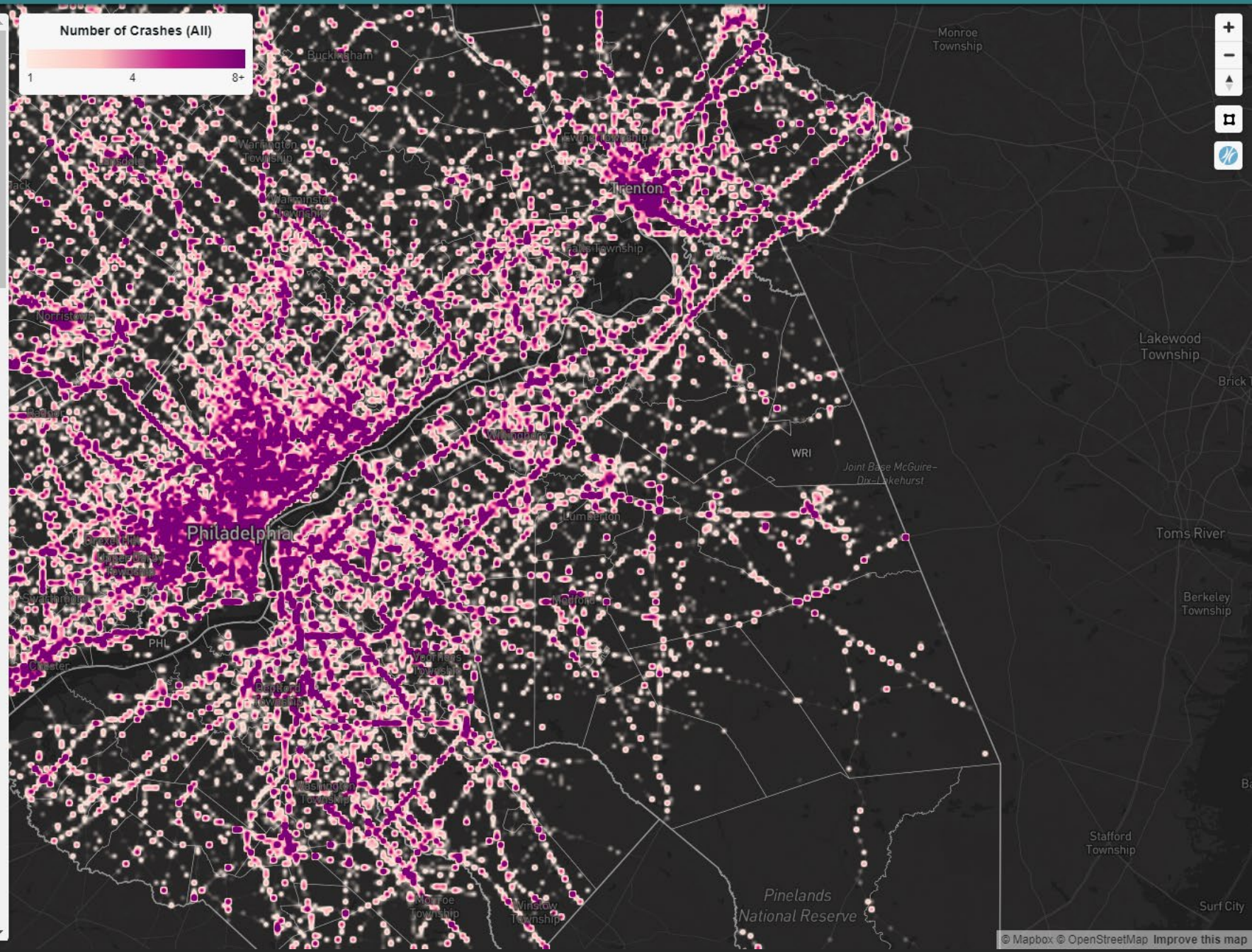
KSI ○ All ● update

Totals

Crashes	380,403
Fatalities	2,167
Suspected Serious Injuries	7,830
Pedestrians Involved	12,606
Bicyclists Involved	3,681

Crashes Over Time





NJ Traffic Crash Data

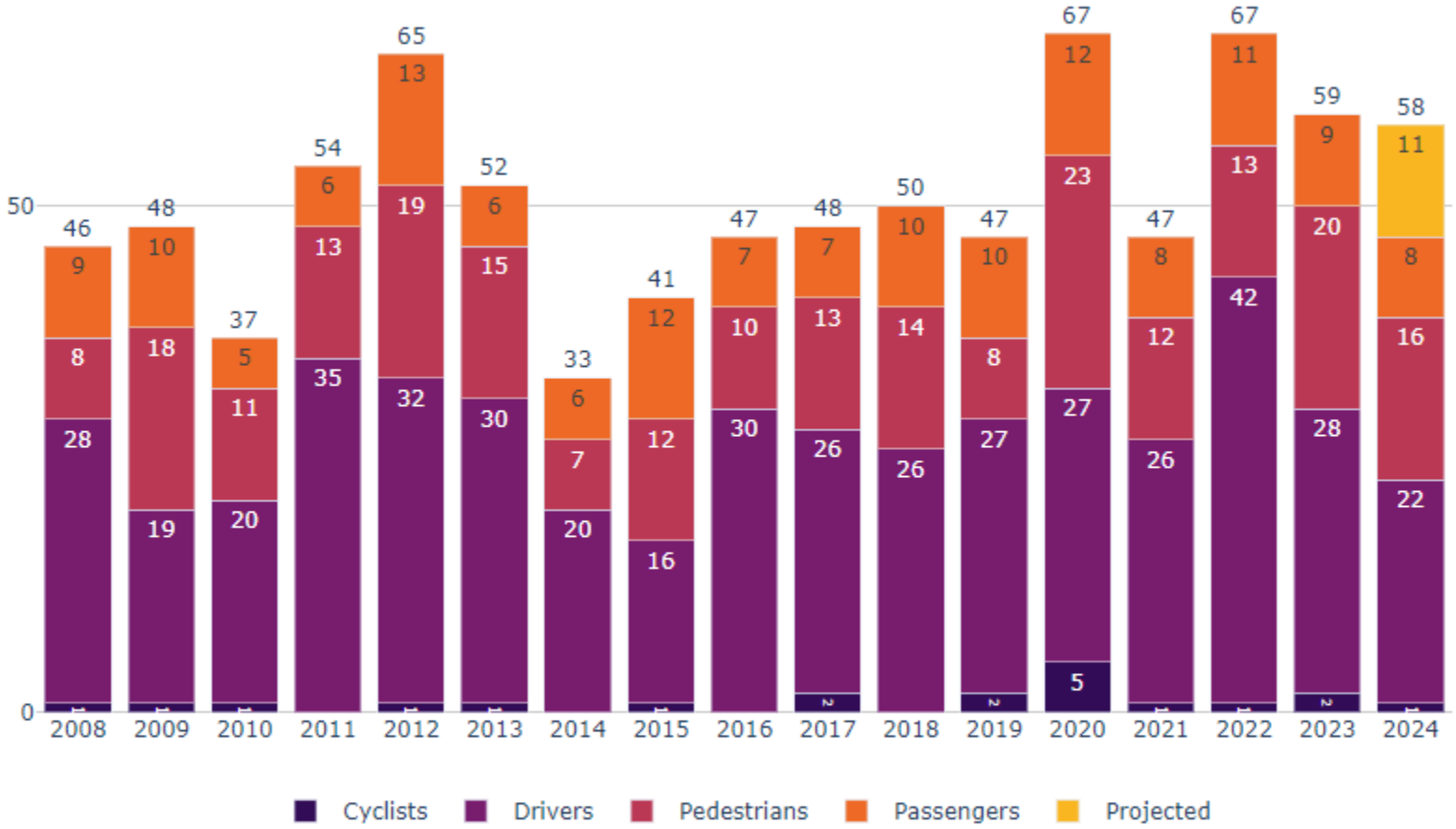
The first 6 plots below come from NJ State Police fatal crash data (2008-present). It's generally current to the previous day.

Below that are plots of NJ DOT raw crash data, which includes 6MM property-damage, injury, and fatal crashes from 2001-2021. It's a richer dataset, but less up to date.

Work in progress map of NJDOT data: 5 years (2017-2021) of fatal and injury crashes in Hudson County:

Full screen map here

Car Crash Deaths: Middlesex County



Click/Double-click the legend labels to toggle or solo each type.

As of Sep 24, Middlesex County has 47 reported deaths in 2024, and is on pace for 58. More Middlesex County data.

Source: NJ State Police

https://crashes.hudcostreets.org/c/middlesex/

Middlesex County

Tue Aug 6 4:31PM	East Brunswick		County 617
Sun Jul 28 8:13PM	Edison		State Highway 1
Thu Jul 25 2:00AM	East Brunswick		State Highway 18

1-10 of 799 | Page: 1 Page size: 10

Source: NJ State Police

Fatal / Injury crash details

2001-2021

Date/Time	Municipality	Casualties	Road	Cross Street	MP
12/31/21 10:10PM	Woodbridge		NJ 184	KING GEORGE RD	0.22
12/31/21 7:56PM	Plainsboro		MIDDLESEX COUNTY 615	GEORGE DAVISON RD / JOHN WHITE RD	1.22
12/31/21 5:38PM	Edison		MIDDLESEX COUNTY 602 I	RAHWAY RD	2.66
12/31/21 5:15PM	Edison		NJ 27	FREDERIC ST	23.86
12/31/21 3:50PM	Piscataway		MIDDLESEX COUNTY 622		5.22
12/31/21 2:55PM	Carteret		MIDDLESEX COUNTY 602 II	MINUE ST / POST BLVD	1.05
12/31/21 2:51PM	Woodbridge		GARDEN STATE PARKWAY		129.11
12/31/21 12:32PM	Sayreville		MIDDLESEX COUNTY 673	OAKWOOD DR	0.46
12/31/21 9:31AM	New Brunswick		LANDING LANE	GEORGE ST	
12/30/21 9:53PM	Woodbridge		NJ 440		1.80

136,304 total | Page size: 10 On or before: 12/31/21

https://crashes.hudcostreets.org/c/middlesex/new-brunswick/

New Brunswick

9,131 total | Page size: 10 | On or before: 12/31/21

Source: NJ DOT

Annual stats

2001-2021

Year	Total crashes	Deaths	Serious Injuries	Minor Injuries	Other Reported Injuries
2001	2,819	0	6	137	847
2002	2,816	4	13	110	908
2003	2,460	4	7	109	794
2004	2,472	0	18	82	722
2005	2,495	2	13	95	676
2006	2,609	1	11	108	713
2007	2,555	7	3	81	652
2008	2,429	2	8	75	581
2009	2,079	1	3	74	490
2010	653	1	3	11	99
2011	1,205	0	5	53	277
2012	1,841	5	1	95	431
2013	1,735	4	5	69	349
2014	1,795	0	6	62	379
2015	1,738	0	4	56	414
2016	1,960	2	5	94	424
2017	1,835	0	5	77	420
2018	2,251	2	6	112	497
2019	1,802	3	10	114	380
2020	844	8	14	95	148
2021	1,115	1	9	101	162
2001–2021	**41,508**	**47**	**155**	**1,810**	**10,363**

Opportunities

Accessibility + Uniformity:

- Data downloads with geographic coordinates and statewide dashboard.

Timeliness:

- Fatal data is current, but non-fatal data is up to 3 years behind.

Accurate + Complete:

- Electronic records and QA/QC.

Integration:

- CHOP leads the nation in medical/crash data integration, but the dashboard interface is aggregated at the county level. None of the other dashboards integrate any other dataset such as school-zone/safety data, transit data, etc.