



Traffic Crash Data in New Mexico: Common Questions and New Tools for Data-Driven Decisions

NMDOT TRANSPORTATION SUMMIT

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Agenda

Accessing NMDOT Crash Data

Common Questions

- Data Availability
- Crash Coordinate Accuracy
- Top Contributing Factor and Crash Classification

New Tools for Visualizing Crash Data

- Tour the Interactive Crash Map
- Spotlight on Pedestrian and Bicycle Dashboards

Crash Data Collection in New Mexico and the Role of UNM-GPS

NM Department of Transportation (NMDOT) Crash Database

- Crashes reported by law enforcement involving a motor vehicle
- Involves a fatality, injury or >\$500 in damages
- Occurs on public roadways
- Contains over 45,000 crashes per year
- Informs decisions to improve safety for all roadway users

UNM Geospatial and Population Studies (UNM-GPS)

- Contracted by NMDOT Traffic Records Bureau
- Compiles crash reports into a standardized database
- Improves data quality: Geocode, clean, and standardize
- Provides crash database expertise and analyses to NMDOT
- Produces crash statistics; Fulfills approved data requests
- Maintains NMDOT's state crash database (1978-present)
- UNM Data Security & Privacy
 - Access-controlled, firewall-protected, and securely transferred (SFTP)
 - Data request datasets are de-identified

Public Availability of Crash Statistics

Community Statistics

- Localized crash statistics for counties, cities, municipalities, and pueblos.
- On request: any U.S. Census CDP

Statewide Statistics

- [Traffic Crash Annual Report](#)
- [DWI Annual Report](#) (alcohol only)
- Both contain county crash rates

Fatality Statistics, Monthly

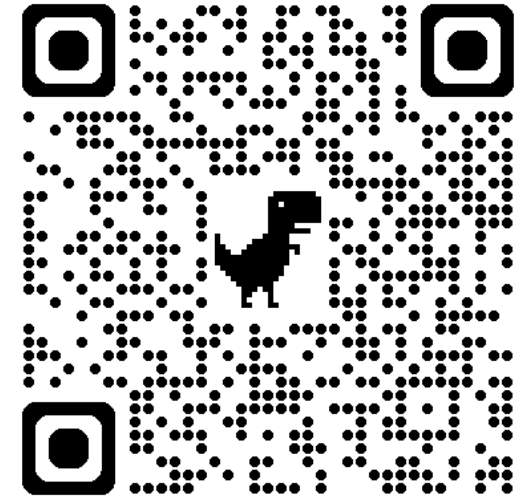
- Very preliminary, esp. alcohol/drug data

Geospatial Analysis

- [Pedestrian/Pedalcycle Crash Dashboards](#)
- [Crash Density Maps](#)

Request Datasets

- End users can request a dataset of crashes in New Mexico or at a specific intersection
- Data available at three levels
 - Crash-level: one row per crash
 - Vehicle/Driver-level: one row per vehicle/driver/non-motorist
 - Person-level: one row per person (passengers, drivers, non-motorists)
- Excludes controlled unclassified information (personal identifiers)
- [Crash data dictionaries](#)



<https://gps.unm.edu/tru>

Frequently Asked Questions

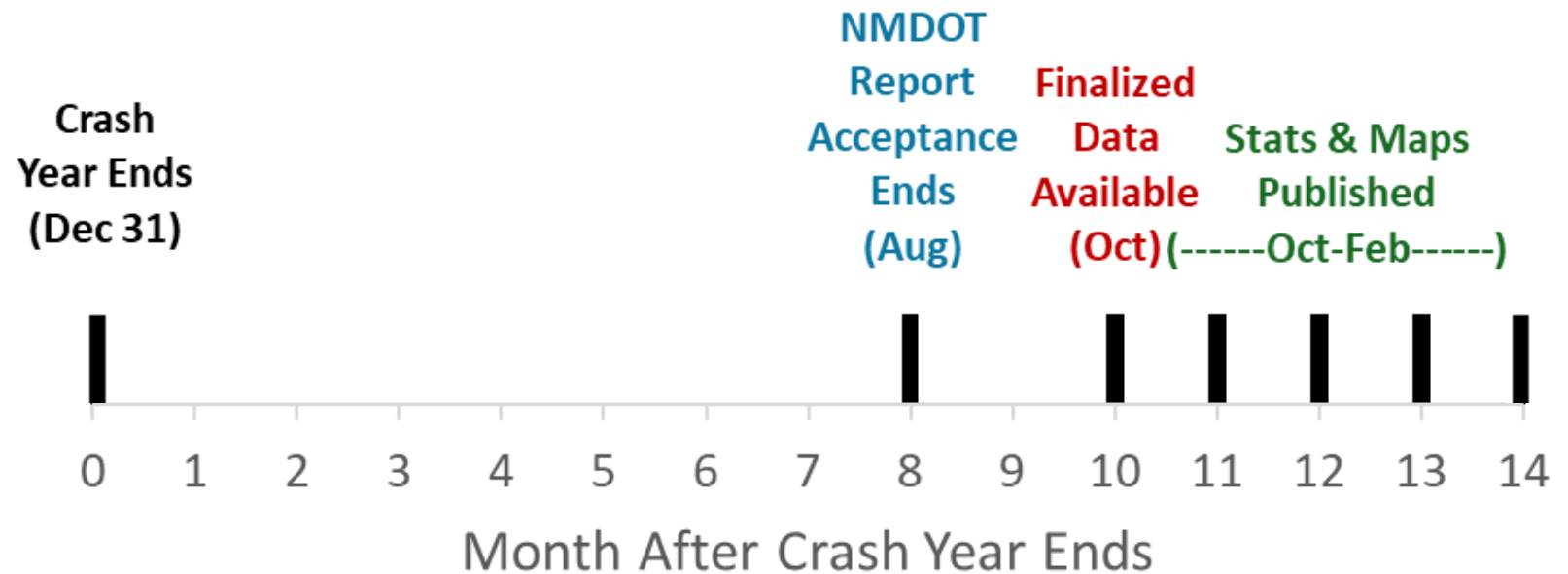
Crash Data Availability Timeline (Crash to Database)

Average Time from Crash to
Database:

TraCS Agencies: 20 days

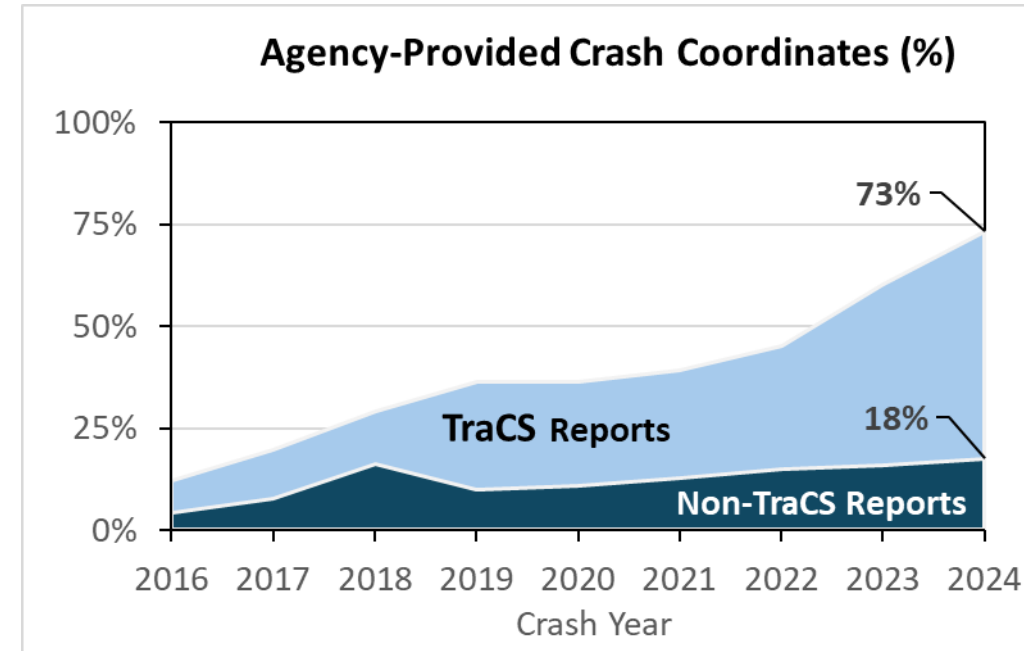
**Non-TraCS Agencies: 128 days
(~4 months)**

Submitting crash reports to NMDOT promptly
helps make data available faster.



Crash Coordinates: Accuracy Depends on Reporting Method

- Why Crash Points Cluster in Intersection Centers
 - No crash coordinates provided by agency
 - UNM-GPS geocodes to nearest intersection, milepost, or center of interchange
 - Ensures location queries capture nearby crashes
- Roll of TraCS Software
 - Officers click crash location on a map
 - Software auto-fills coordinates
- Issue: crash location versus vehicle's final location



2024 Coordinates: 73% of all TraCS reports vs. 18% all non-TraCS

"Top Contributing Factor" retired—why and what replaced it

- Never collected on the crash report
- Top Contributing Factor (TCF) was determined using a pre-set ranking of Apparent Contributing Factors (ACF)
 - Priority 1 = Alcohol/Drug, 2 = Pedestrian Error, 3 = Disregarded Traffic Signal, etc.
- Only one factor is retained per crash
- Highlights one factor, masking others
- Became unreliable after ACF list expanded to 53 (in year 2020)
- Now: request **vehicle-level** ACF data or **new crash-level fields**

APPARENT CONTRIBUTING FACTORS (Check 1 or more for each)								
V1	V2		V1	V2		V1	V2	
		DRIVER			Improper lane change			Defective Tires
		Avoid no contact - other			Improper overtaking			Exhaust System
		Avoid no contact - vehicle			Made improper turn			Inadequate brakes
		Cell phone			No driver error			Lights (head, signal, tail)
		Disregarded traffic signal			Other improper driving			Mirrors
		Driver distracted by texting			Passed stop sign			Other mech. Defect
		Driver distracted by talking on cell phone			Pedestrian error			Suspension
		Driver distracted by talking on hand free device			Speed too fast for conditions			Wheels
		Driver distracted by passenger			Under influence of alcohol			Windows/Windshield
		Driver distracted by other activity			Under influence of drugs or medication			Wipers
		Driver Inattention			ENVIRONMENT			ROADWAY
		Drove left of center			Animal(s) in roadway			Backup - prior crash
		Excessive Speed			Low visibility due to glare			Backup - prior incident
		Failed to yield - Emrgcy Veh(s)			Low visibility due to smoke			Debris
		Failed to yield - Police Veh(s)			Other visual obstruction(s)			Obstruction in road
		Failed to yield right-of-way			Weather conditions			Road defect
		Following too closely			MOTOR VEHICLE			Road surface conditions
		High speed pursuit			Coupling device (hitch, chains)			Traffic Congestion
		Improper backing			Defective Steering			Traffic control not functioning

Crash Classification Retired — Replaced with First Harmful Event

Before

- Crash Classification and Analysis
- Phased out in 2020 to meet federal requirements

CRASH CLASSIFICATION ☐ Overturned ☒ Pedestrian
☒ Rollover ☐ Pedal Cyclist

Tips:

- For Officers: Overturn/Rollover can be found under Non-Collision, instead of “Other”.
- Dataset users: Older, multi-year datasets are available with derived First Harmful Event.

Now

- Replaced by First Harmful Event (FHE) and FHE Analysis
- Nearly all data once in Crash Classification/Analysis is now captured in FHE/FHE Analysis.

First Harmful Event
NON-COLLISION

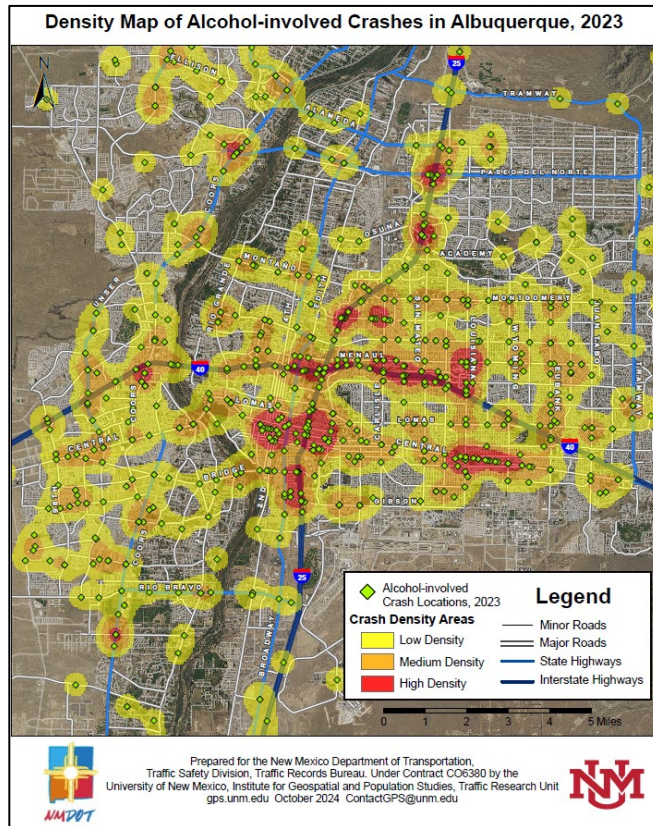
Analysis Code
OVERTURN/ROLLOVER

First Harmful Event
COLLISION W/PERSON

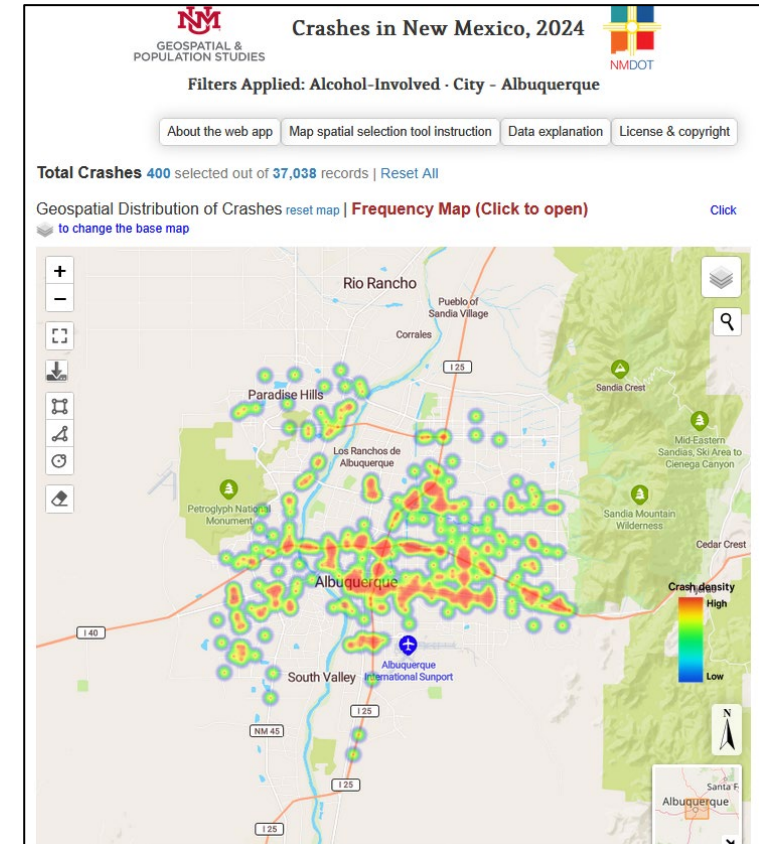
Analysis Code
PEDESTRIAN

New Tools for Data-Driven Decisions

New Interactive Annual Crash Map

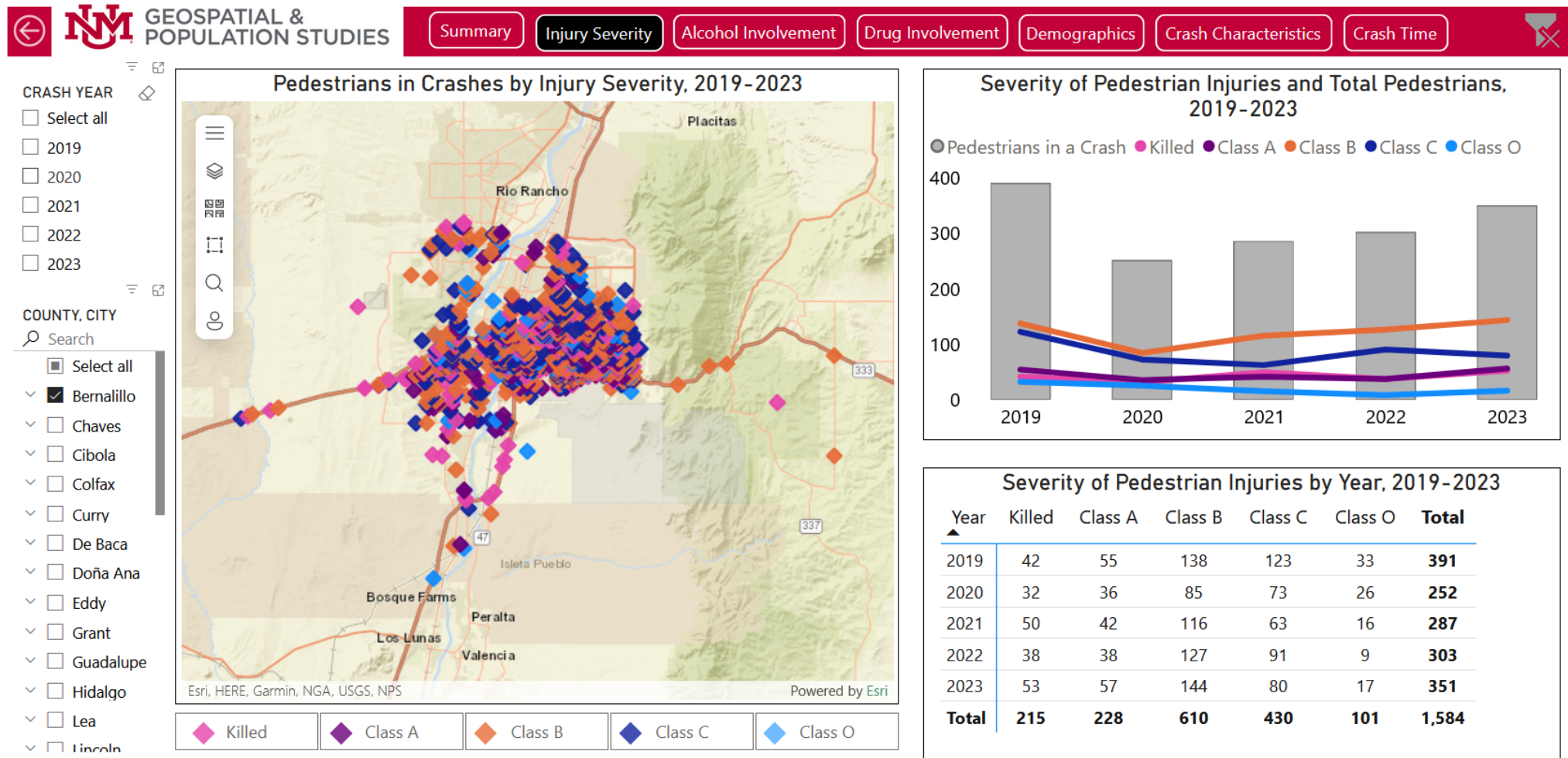


Static Maps



Interactive Maps

Pedestrian and Pedalcycle Crash Data Dashboards



Data Source: NMDOT Traffic Crash Database. For more information about the crash data found here please review the data dictionaries found at: <https://gps.unm.edu/tru/data-dictionaries.html>

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Statistics available at: gps.unm.edu

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