

HOTSPOT ANALYSES

2018-2019 PEDESTRIAN CRASHES

INTRODUCTION

In 2019, there were 236 pedestrians fatally injured in motor vehicle traffic crashes in the state of Georgia – a 22 percent increase from 194 pedestrian fatalities in 2015 to 236 in 2019 (Crash Outcomes Data Evaluation System, 2021 [\[1\]](#)). In 2019, 57 out of 159 Georgia counties experienced at least one pedestrian traffic fatality, and pedestrian crashes are more frequent in the urban areas than rural areas. The counties that experienced a higher number of pedestrian fatalities in 2019 include: Fulton (34 pedestrian fatalities), Dekalb (28), Clayton (20), Cobb (20), Gwinnett (15), and Bibb (11).

PURPOSE

The purpose of this document is to take a deeper look into these counties and identify specific locations¹ (sites, corridors, or zones) where pedestrian crashes, serious injuries, and fatalities occur. Readers of this document are encouraged to implement programmatic and engineering countermeasures to address these specific crashes; however, it is also important to note the limitations of this analysis that can impact the effectiveness of these intended or ongoing initiatives.

METHODOLOGY AND LIMITATIONS

While there are other methods used to conduct pedestrian crash hotspot analyses (e.g., the benefit-cost approach used by the Georgia Department of Transportation), this is a crude estimate that simply looks at the clusters of serious and fatal injury pedestrian crashes (3 or more crashes within a 0.5-mile radius). Additionally, this analysis looks at the spatial distribution of all pedestrian crashes using a hexagonal grid to identify hotspots. Some of the limitations to this methodology are listed in the text box.

LIMITATIONS

- Clusters of crashes can be scattered widely within each county's border.
- The data used was two-years old at the time of analysis.
- At times, hotspot analysis can be less effective when countermeasures can be expanded across a greater area or number of sites (that may have fewer pedestrian fatalities).

RESULTS

The table below shows sites, corridors, or zones that were identified as hotspots for pedestrian crashes and pedestrian serious injuries and fatalities.

COUNTY	CRASH TYPE	LOCATION DESCRIPTION
BIBB	All pedestrian crashes	1. Surrounding area near Mercer University
	Serious injury and fatal pedestrian crashes	2. State Route 41 Pio Nono Ave (between Sherry Dr/W Grenade Ter and Montpelier Ave) 3. Gray Hwy (between Hall St and Williams St SE) 4. Mercer University Dr (between W Highland Dr and Atwood Dr)

¹ **Sites** are spot locations including individual intersections and non-intersections. **Corridors** are roadway sections of 0.5 to 5 miles in length. **Zones** are target areas that can range from a single neighborhood or business to an entire jurisdiction. (Ragland, 2011)

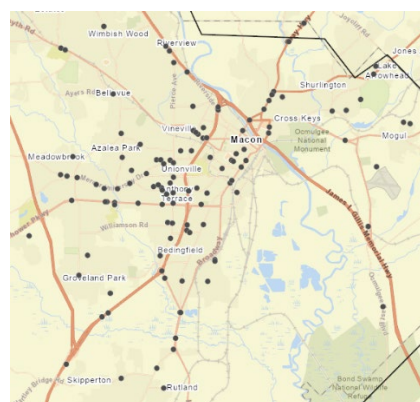
COUNTY	CRASH TYPE	LOCATION DESCRIPTION
CLAYTON	All pedestrian crashes	<ol style="list-style-type: none"> 1. Riverdale Rd, 2. Highway 85 3. Upper Riverdale Rd SW
	Serious injury and fatal pedestrian crashes	<ol style="list-style-type: none"> 4. Tara Blvd (between Flint River Rd and Spur 138 SE) 5. Tara Blv (near old Dixie Rd and Upper Riverdale Rd) 6. Mt Zion Blvd (at Mt Zion Rd and near Mt Zion Pkwy) 7. Highway 85 (between Camp St/King Rd and Adams Dr)
COBB	All pedestrian crashes	<ol style="list-style-type: none"> 1. area surrounding the northwestern half of Dobbins Air Reserve Base
	Serious injury and fatal pedestrian crashes	<ol style="list-style-type: none"> 2. Cobb Pkwy SE (at Freys Gin Rd / White Ave SE intersection and between Trade Center Pkwy SE) 3. N Cobb Pkwy NE (between Canton Rd Conn NE and Bell Ferry Rd) 4. I-75
DEKALB	All pedestrian crashes	<ol style="list-style-type: none"> 1. Flat Shoals Rd btw (I-285 & Ralph David Abernathy Frwy) is
	Serious injury and fatal pedestrian crashes	<ol style="list-style-type: none"> 2. Flat Shoals Rd btw (I-285 & Ralph David Abernathy Frwy) 3. Buford Hwy & N. Druid Hills 4. Buford Hwy near NE Plaza 5. Purple Heart Hwy (I-20 near Miller Rd) 6. Glenwood Rd near I-285
FULTON	All pedestrian crashes	<ol style="list-style-type: none"> 1. Fulton Industrial Blvd
	Serious injury and fatal pedestrian crashes	<ol style="list-style-type: none"> 2. Fulton Industrial Blvd (between Great Southwest Pkwy SW and Martin Luther King Jr Dr SW) 3. Old National Hwy (between I-85 and Old Bill Cook Rd) 4. Main St (between Legion Way and E Point – near MARTA East Point Station) 5. Ralph David Abernathy Fwy East Expy (also I-75 and Memorial Dr. SW)
GWINNETT	All pedestrian crashes	<ol style="list-style-type: none"> 1. S. Norcross Tucker Rd & Jimmy Carter area 2. Duluth Hwy near Gwinnett Medical Center
	Serious injury and fatal pedestrian crashes	<ol style="list-style-type: none"> 3. Jimmy Carter Blvd NW (near S. Norcross Tucker Rd and at McDonough Dr) 4. E Crogan St SE (between W Pike St and Scenic Hwy SW) 5. Duluth Hwy NW & Riverside Pkwy NW

References

- Crash Outcomes Data Evaluation System. (2021, April). Pedestrians and Bicyclists: 2019 data. (Georgia Traffic Safety Facts). Atlanta, GA: Governor's Office of Highway Safety.
- Ragland, D., Grembek, O., & Orrick, P. (2011). Strategies for Reducing Pedestrian and Bicyclist Injury at the Corridor Level (Publication No. UCB-ITS-PRR-XXXX-XX). Sacramento, CA: California Department of Transportation Division of Research and Innovation.

BIBB COUNTY

FIGURE 1: 2018-2019 Pedestrian Crash Locations



COUNTYWIDE
FIGURE 1

WITHIN THE
IDENTIFIED
HOT SPOTS

Pedestrian Crashes

Serious Injuries

Fatalities (FARS)

Pedestrian Crashes

FIGURE 2A

Serious Injuries

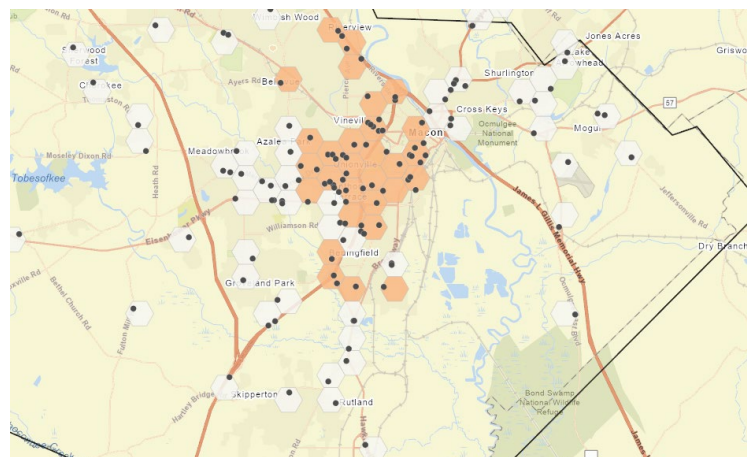
FIGURE 2B

Fatalities (FARS)

FIGURE 2B

	2018	2019	TOTAL
Pedestrian Crashes	86	62	148
Serious Injuries	11	7	18
Fatalities (FARS)	13	11	24
Pedestrian Crashes	24	37	61
FIGURE 2A	(28%)	(60%)	(41%)
Serious Injuries	3	3	6
FIGURE 2B	(27%)	(43%)	(33%)
Fatalities (FARS)	3	4	7
FIGURE 2B	(23%)	(36%)	(29%)

FIGURE 2A & 2B: 2018-2019 Pedestrian Crash Hot Spot Analysis

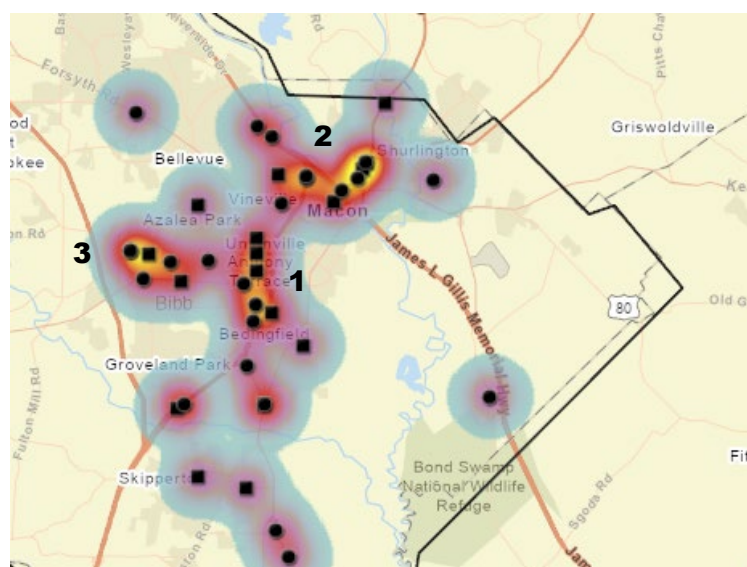


ALL Pedestrian Crashes Hot Spot Analysis

- Hot Spot with 99% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 90% Confidence
- Not Significant
- Cold Spot with 90% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 99% Confidence

This hot spot map identifies statistically significant spatial clustering of all pedestrian crashes using hot spots (red) and cold spots (blue).

The area **surrounding Mercer University** is a hotspot for 2018-2019 pedestrian crashes in Bibb County.



Serious Injury & Fatal Pedestrian Crashes Hot Spot Analysis

- High
- Low
- Serious Injury
- Fatal Injury

This hot spot map identifies the hot spots (yellow/red) of serious injury and fatal pedestrian crashes where 3 or more crashes occurred within 0.5 mile of each other.

The locations with hottest serious injury or fatal pedestrian crashes are:

- State Route 41 Pio Nono Ave** (between Sherry Dr/W Grenade Ter and Montpelier Ave/)
- Gray Hwy** (between Hall St and Williams St SE)
- Mercer University Dr** (between W Highland Dr and Atwood Dr)

CLAYTON COUNTY

FIGURE 1: 2018-2019 Pedestrian Crash Locations

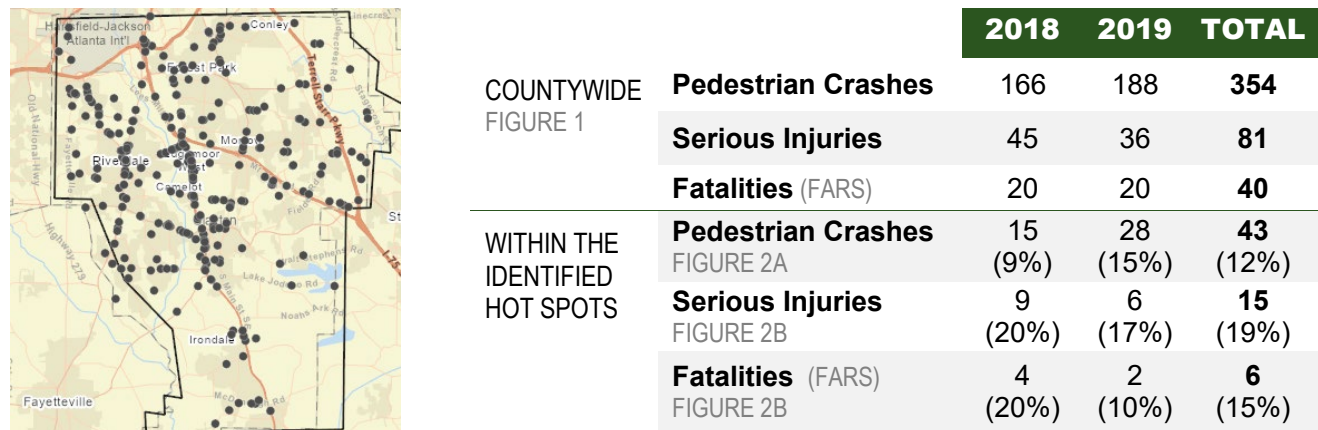
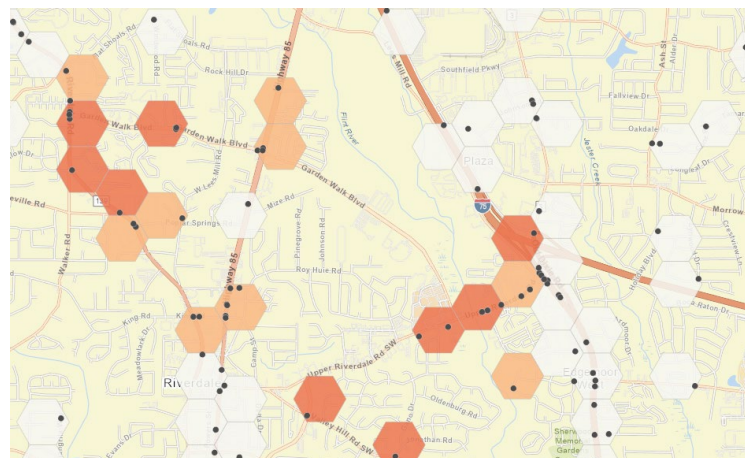


FIGURE 2A & 2B: 2018-2019 Pedestrian Crash Hot Spot Analysis

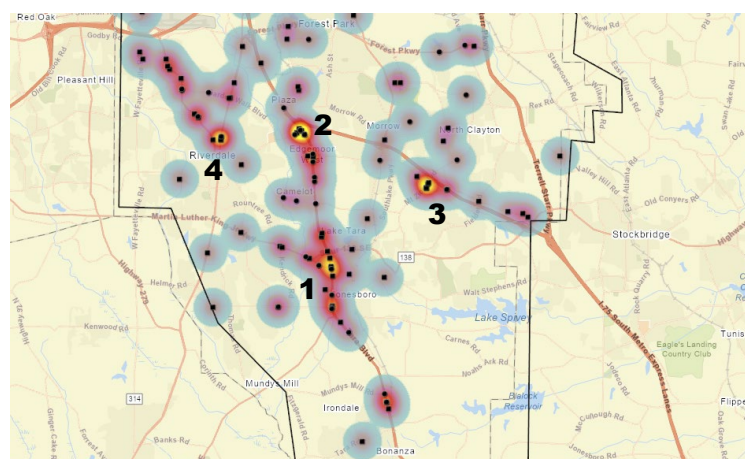


ALL Pedestrian Crashes Hot Spot Analysis

- Hot Spot with 99% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 90% Confidence
- Not Significant
- Cold Spot with 90% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 99% Confidence

This hot spot map identifies statistically significant spatial clustering of all pedestrian crashes using hot spots (red) and cold spots (blue).

Riverdale Rd, Highway 85, and Upper Riverdale Rd SW are hotspots for 2018-2019 pedestrian crashes in Clayton County.



Serious Injury & Fatal Pedestrian Crashes Hot Spot Analysis

This hot spot map identifies the hot spots (yellow/red) of serious injury and fatal pedestrian crashes where 3 or more crashes occurred within 0.5 mile of each other.

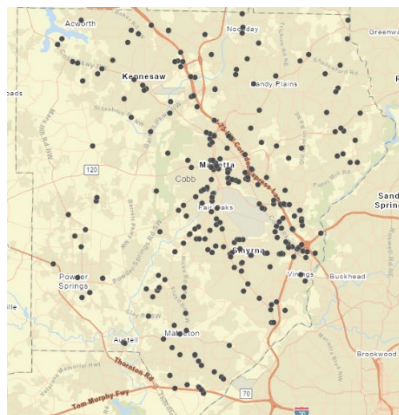
- High
- Low
- Serious Injury
- Fatal Injury

The locations with hottest serious injury or fatal pedestrian crashes are:

1. **Tara Blvd** (between Flint River Rd and Spur 138 SE)
2. **Tara Blvd** (near old Dixie Rd and Upper Riverdale Rd)
3. **Mt Zion Blvd** (at Mt Zion Rd and near Mt Zion Pkwy)
4. **Highway 85** (between Camp St/King Rd and Adams Dr)

COBB COUNTY

FIGURE 1: 2018-2019 Pedestrian Crash Locations



COUNTYWIDE
FIGURE 1

WITHIN THE
IDENTIFIED
HOT SPOTS

Pedestrian Crashes

Serious Injuries

Fatalities (FARS)

Pedestrian Crashes

FIGURE 2A

Serious Injuries

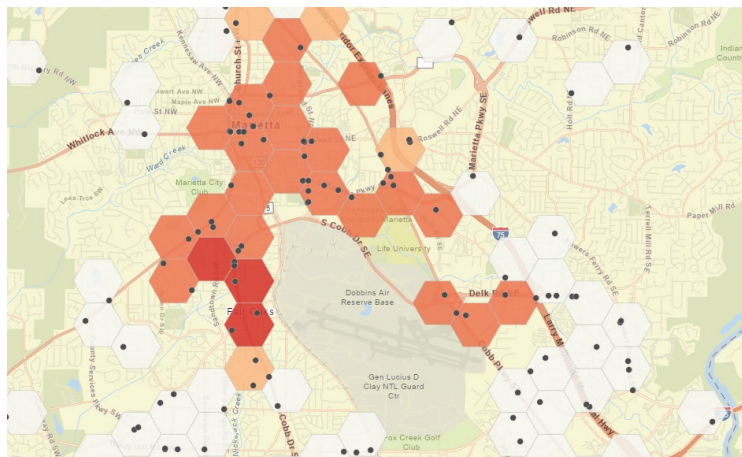
FIGURE 2B

Fatalities (FARS)

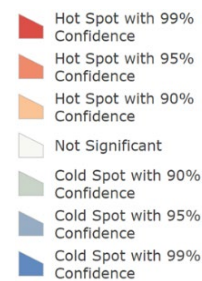
FIGURE 2B

	2018	2019	TOTAL
Pedestrian Crashes	208	216	424
Serious Injuries	25	24	49
Fatalities (FARS)	10	22	31
Pedestrian Crashes	26	36	62
FIGURE 2A	(13%)	(17%)	(15%)
Serious Injuries	4	1	5
FIGURE 2B	(16%)	(4%)	(10%)
Fatalities (FARS)	1	2	3
FIGURE 2B	(10%)	(9%)	(10%)

FIGURE 2A & 2B: 2018-2019 Pedestrian Crash Hot Spot Analysis

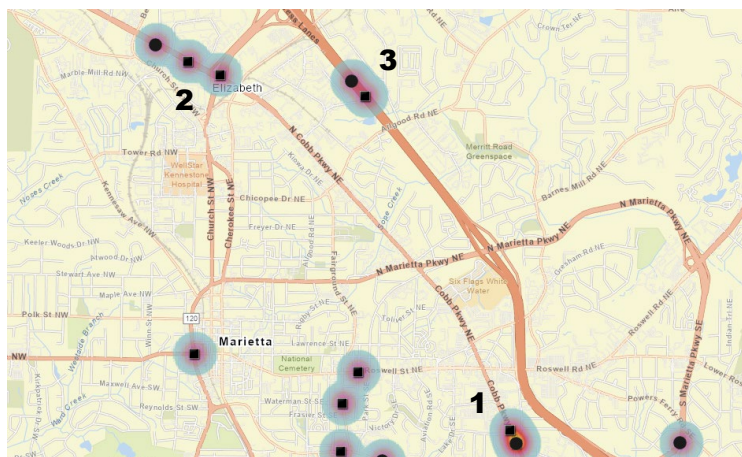


ALL Pedestrian Crashes Hot Spot Analysis

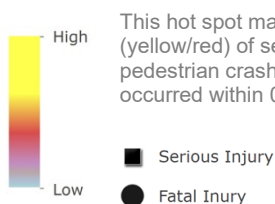


This hot spot map identifies statistically significant spatial clustering of all pedestrian crashes using hot spots (red) and cold spots (blue).

The area surrounding the northwestern half of Dobbins Air Reserve Base is a hotspot for 2018-2019 pedestrian crashes in Cobb County.



Serious Injury & Fatal Pedestrian Crashes Hot Spot Analysis



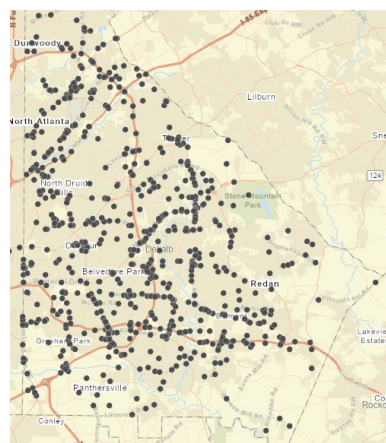
This hot spot map identifies the hot spots (yellow/red) of serious injury and fatal pedestrian crashes where 3 or more crashes occurred within 0.5 miles of each other.

The locations with hottest serious injury or fatal pedestrian crashes are:

1. **Cobb Pkwy SE** (at Freys Gin Rd / White Ave SE intersection and between Trade Center Pkwy SE)
2. **N Cobb Pkwy NE** (between Canton Rd Conn NE and Bell Ferry Rd)
3. **I-75**

DEKALB COUNTY

FIGURE 1: 2018-2019 Pedestrian Crash Locations



COUNTYWIDE
FIGURE 1

WITHIN THE
IDENTIFIED
HOT SPOTS

Pedestrian Crashes

Serious Injuries

Fatalities (FARS)

Pedestrian Crashes

FIGURE 2A

Serious Injuries

FIGURE 2B

Fatalities (FARS)

FIGURE 2B

2018 2019 TOTAL

502 448 950

55 60 115

31 28 59

47 45 92

(9%) (10%) (10%)

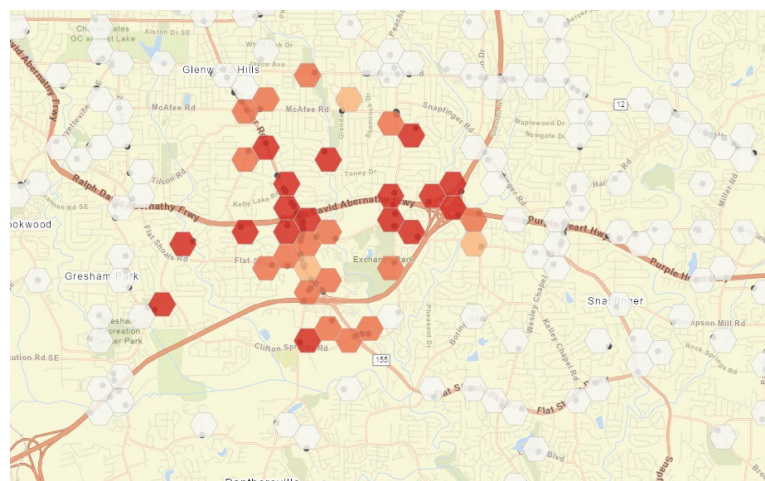
13 8 21

(24%) (13%) (18%)

4 3 7

(13%) (11%) (12%)

FIGURE 2A & 2B: 2018-2019 Pedestrian Crash Hot Spot Analysis

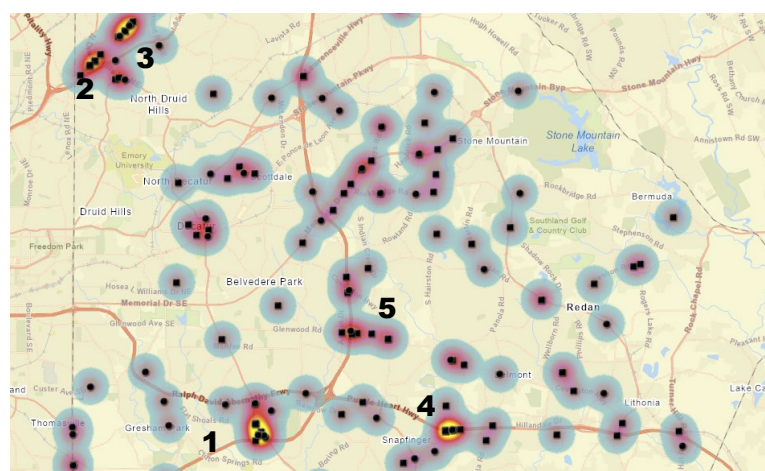


ALL Pedestrian Crashes Hot Spot Analysis

- Hot Spot with 99% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 90% Confidence
- Not Significant
- Cold Spot with 90% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 99% Confidence

This hot spot map identifies statistically significant spatial clustering of all pedestrian crashes using hot spots (red) and cold spots (blue).

Flat Shoals Rd btw (I-285 & Ralph David Abernathy Frwy) is a hotspot for 2018-2019 pedestrian crashes in DeKalb County.



Serious Injury & Fatal Pedestrian Crashes Hot Spot Analysis

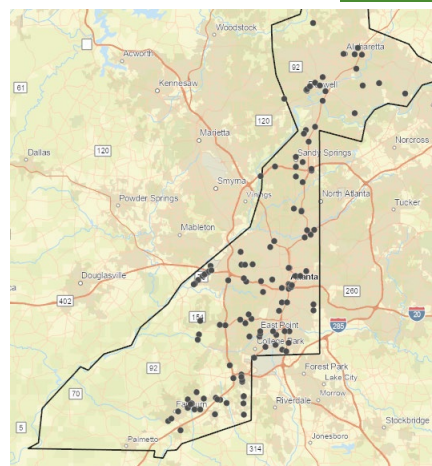
- High
- This hot spot map identifies the hot spots (yellow/red) of serious injury and fatal pedestrian crashes where 3 or more crashes occurred within 0.5 miles of each other.
- Low
- Serious Injury
- Fatal Injury

The locations with hottest serious injury or fatal pedestrian crashes are:

- Flat Shoals Rd** btw (I-285 & Ralph David Abernathy Frwy)
- Buford Hwy & N. Druid Hills**
- Buford Hwy** near NE Plaza
- Purple Heart Hwy** (I-20 near Miller Rd)
- Glenwood Rd** near I-285

FULTON COUNTY

FIGURE 1: **2018-2019 Serious & Fatal Pedestrian Crash Locations**



COUNTYWIDE
FIGURE 1

WITHIN THE
IDENTIFIED
HOT SPOTS

**Pedestrian
Crashes**

Serious Injuries

Fatalities (FARS)

**Pedestrian Serious
& Fatal Crashes**
FIGURE 2A

Serious Injuries

FIGURE 2B

Fatalities (FARS)

FIGURE 2B

2018 2019 TOTAL

712 787 1,499

34 38 72

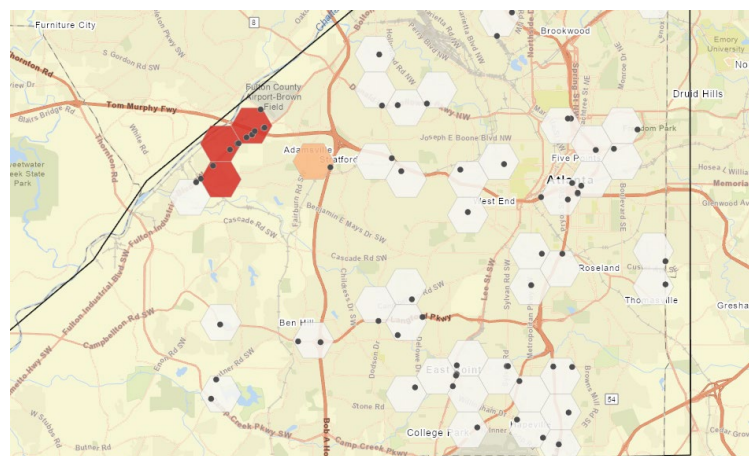
36 34 70

7 6 13
(10%) (8%) (9%)
7 out of 70 6 out of 72 13 out of 142

6 6 12
(18%) (16%) (17%)

7 4 11
(19%) (12%) (16%)

FIGURE 2A & 2B: **2018-2019 Pedestrian Serious & Fatal Crash Hot Spot Analysis**

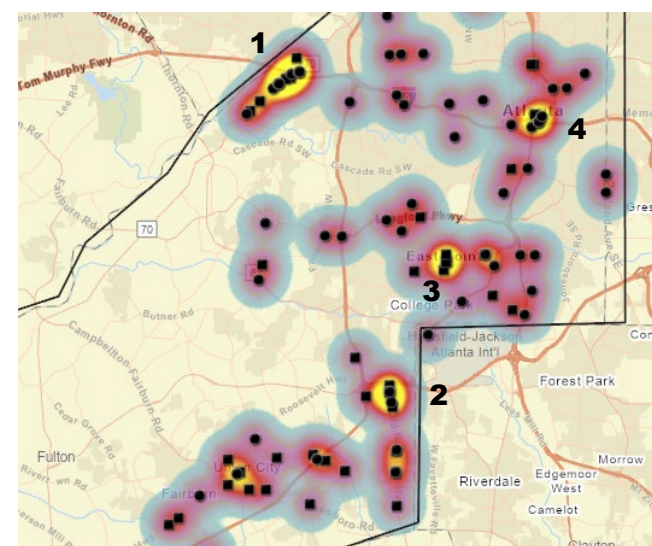


**Serious Injury & Fatal Pedestrian Crashes
Hot Spot Analysis [AREAS AROUND CRASHES]**

- Hot Spot with 99% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 90% Confidence
- Not Significant
- Cold Spot with 90% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 99% Confidence

This hot spot map identifies statistically significant spatial clustering of **serious and fatal injury pedestrian crashes** using hot spots (red) and cold spots (blue). *Only serious and fatal injuries were included in this analysis due to the high frequency of pedestrian crashes in Fulton County.*

Fulton Industrial Blvd is a hotspot area for serious injury and fatal pedestrian crashes in Fulton County.



**Serious Injury & Fatal Pedestrian Crashes
Hot Spot Analysis [CLUSTERS OF CRASHES]**

- High
- Low
- Serious Injury
- Fatal Injury

This hot spot map identifies the hot spots (yellow/red) of serious injury and fatal pedestrian crashes where 3 or more crashes occurred within **0.5 mile** of each other.

The locations with hottest serious injury or fatal pedestrian crashes are:

1. **Fulton Industrial Blvd** (between Great Southwest Pkwy SW and Martin Luther King Jr Dr SW)
2. **Old National Hwy** (between I-85 and Old Bill Cook Rd)
3. **Main St** (between Legion Way and E Point – near MARTA East Point Station)
4. **Ralph David Abernathy Fwy East Expy** (also I-75 and Memorial Dr. SW)

GWINNETT COUNTY

FIGURE 1: 2018-2019 Pedestrian Crash Locations

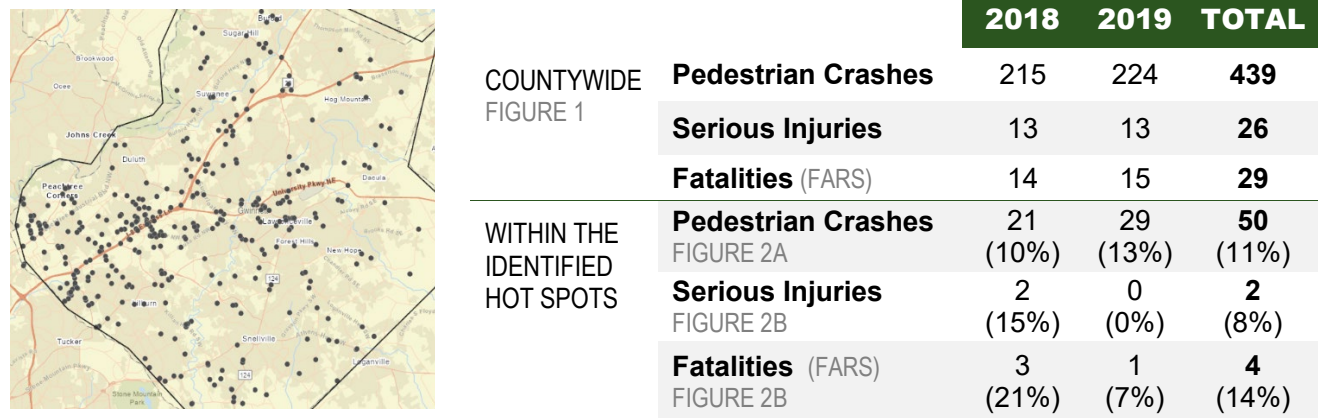
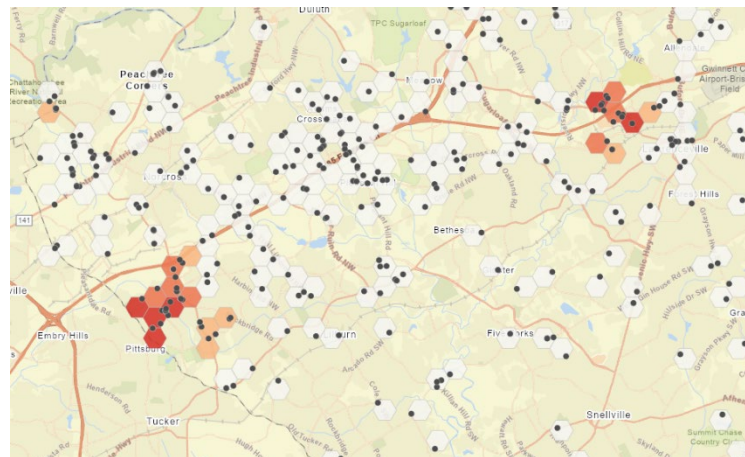
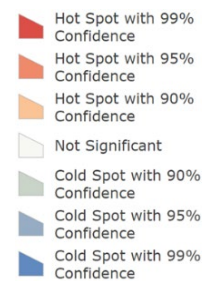


FIGURE 2A & 2B: 2018-2019 Pedestrian Crash Hot Spot Analysis

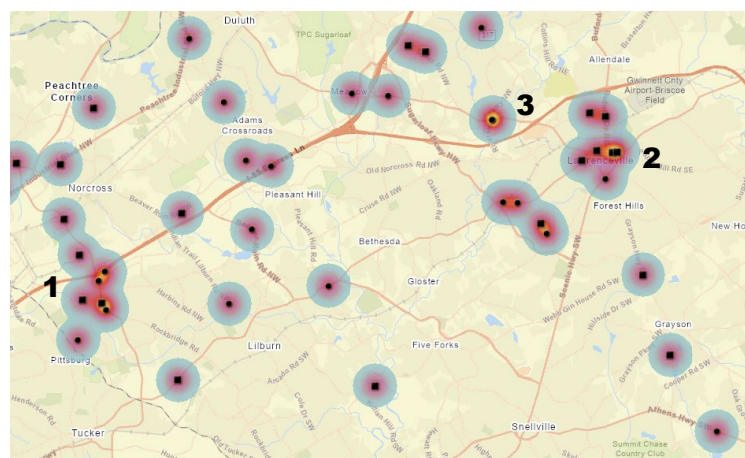


ALL Pedestrian Crashes Hot Spot Analysis



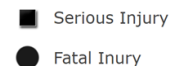
This hot spot map identifies statistically significant spatial clustering of all pedestrian crashes using hot spots (red) and cold spots (blue).

S. Norcross Tucker Rd & Jimmy Carter area, and Duluth Hwy near Gwinnett Medical Center are hotspots for 2018-2019 pedestrian crashes in Gwinnett County.



Serious Injury & Fatal Pedestrian Crashes Hot Spot Analysis

This hot spot map identifies the hot spots (yellow/red) of serious injury and fatal pedestrian crashes where 3 or more crashes occurred within **1.0 mile** of each other. *Note that this cluster criteria are different than for other counties due to the roadway systems in Gwinnett county.*



The locations with hottest serious injury or fatal pedestrian crashes are:

- Jimmy Carter Blvd NW** (near S. Norcross Tucker Rd and at McDonough Dr)
- E Crogan St SE** (between W Pike St and Scenic Hwy SW)
- Duluth Hwy NW & Riverside Pkwy NW**