

Washtenaw County Crash Data Archive
Quarter One Report, Fiscal Year 2014
 July 1, 2013 through September 30, 2013

September 23, 2013

This document summarizes the major work tasks and data collection efforts of the Washtenaw Area Transportation Study (WATS) as part of the Washtenaw County Crash Data Archive project pursuant to the contract between WATS and Toyota. Major work tasks for this quarter of the project include the following items:

- Data Collection
- Image editing and diagramming
- Data Delivery
- Data Review

Data Collection (July-August)

WATS' primary work task during Quarter One was collecting crash data. In the two months of active collection, WATS visited 128 crashes. Table 1 below shows total crashes by type that WATS received and investigated between July and August. September is not included, because no crash data was collected as WATS staff completed project data products. Map 1, attached at the end of this report, maps these crashes by type. WATS investigators collected 294 videos and 282 images to document these crash sites.

Table 1: Data Collected July-August 2013

	Lane				
	Departure/ Head On	Intersection	Pedestrian/ Bicycle	Rear End	Combined
All Crashes from UMTRI	204	175	29	405	813
Crashes Toyota requested removed	99	78	5	405	587
Total Crashes of Interest	105	97	24	0	226
<i>Visited Crash Sites</i>	<i>64</i>	<i>46</i>	<i>18</i>	<i>0</i>	<i>128</i>

Between July and mid-August, WATS received data for approximately 813 crashes in Washtenaw County. WATS removed 587 crashes that did not meet Toyota's standards for investigation. Sample justifications include crashes that deviate from the crash types set by Toyota, freight crashes, locations investigators could not find, and rear end crashes. In addition, to prevent visits to crashes where weather eroded away site evidence, WATS removed crashes more than 90 days old. Table 2 shows the crashes that WATS removed from the UMTRI datasets and justifications for removal.

Table 2: Crash Elimination and Justification, July-August 2013

	Could Not Find Crash	Unclear Crash Events	90 Day Window Expired	Highway Crash	Wrong Crash Type	Rear End Crash	Total
Lane Departure	13	5	1	61	19		99
Nonmotorized		1			4		5
Intersection		3	1	3	71		78
Rear End						405	405
Total	13	9	2	64	94	405	587

Image Editing and Diagramming (July-September)

For all crashes visited in FY 2014 Quarter One, WATS investigators completed all 128 crash diagrams and edits to all 282 images

Data Delivery (August-September)

From June-August, WATS delayed uploads of data to accommodate the addition of curve radius data to its datasets. Those edits are complete, and data from May-August 2013 will be uploaded by the end of September.

Data Review (July-September)

In Quarter One, Toyota requested two changes to the crash data:

- Reviewing Crash Angle Confidence Level
- Editing Datasets to Include Curve Radius for Lane Departure Crashes

In August and September, WATS began implementing this process, and reviewed all project data collected between October 2011 and August 2013. Toyota accommodated this process by sending images and diagrams that WATS previously purged from its servers. WATS also corrected other errors noticed while reviewing the data, including location data errors, angle data missing in the tables but present in the diagrams, and missing file links.

Final Observations

Toyota requested that WATS include collected data totals and final observations as part of this last quarterly report. Between October 2011 and August 2013, WATS researchers visited 1491 crashes in Washtenaw County. In total, WATS collected data for:

- 744 Lane Departure Crashes
- 211 Nonmotorized crashes
- 501 Intersection crashes
- 35 Rear End Crashes

Researchers collected more than 6,500 videos and images to document these crashes.

Crash Type Observations

Toyota also requested that WATS include observations of trends regarding the major crash types. These observations are subjective, based on the informal observations of WATS staff.

Lane Departure Crashes

Lane Departure crashes most often occurred while approaching and exiting curves. Crashes where vehicles entered the curve often involved distracted or drunk drivers who left the roadway without a specific control loss incident. Crashes that occurred as vehicles left the curve often involved a control loss incident, such as avoiding a collision or weather related control loss. Lane departure crashes were much more frequent in the winter months due to road conditions.

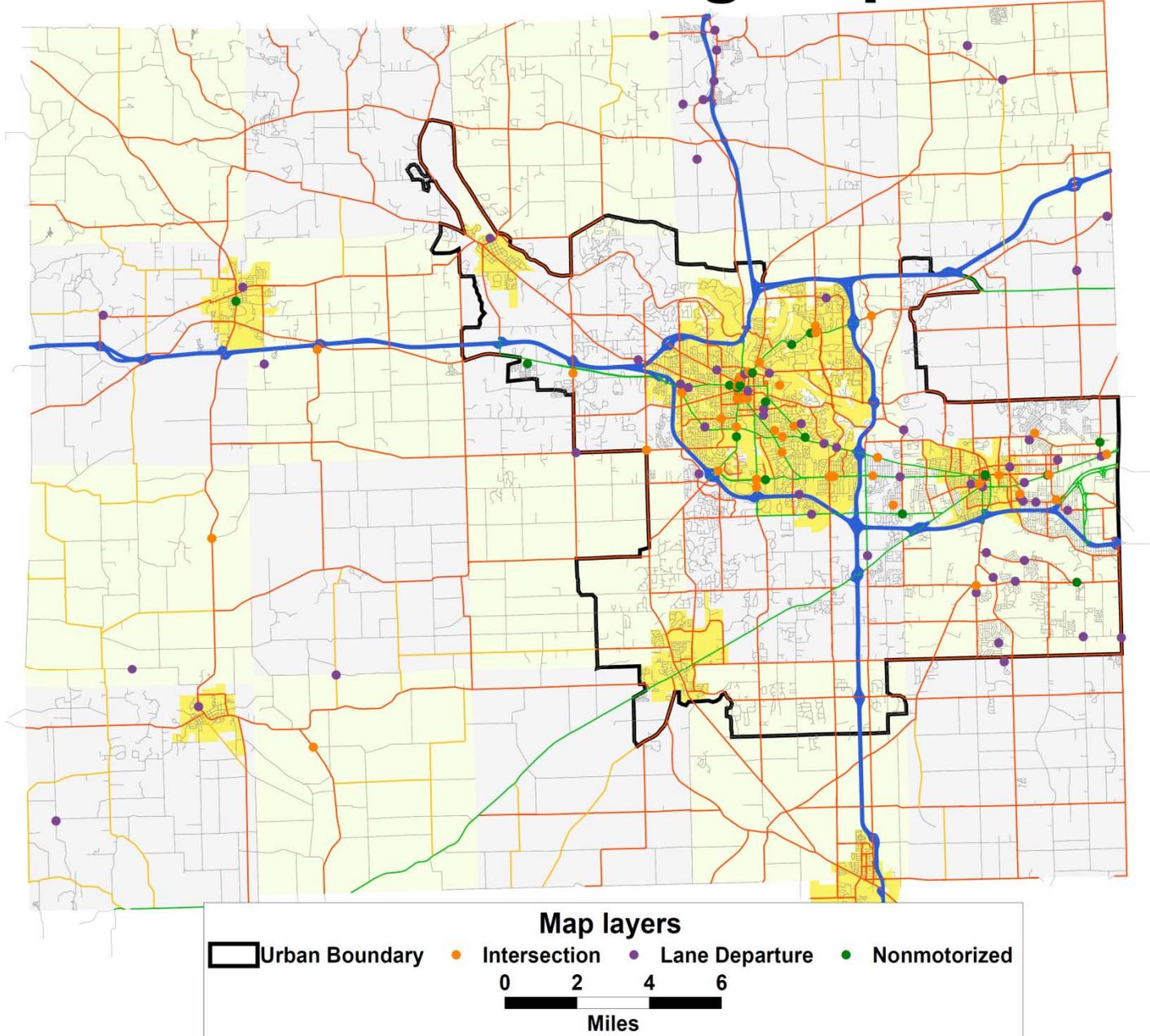
Nonmotorized

The majority of nonmotorized crashes seemed to involve vehicles striking pedestrians/bicyclists as the vehicle turned. The drivers of these vehicles appear to fail to notice the pedestrians as they judged oncoming vehicular traffic. In addition, the majority of bicyclist crashes seemed to occur when the bicyclist was on the sidewalk, rather than in the street. Nonmotorized crashes in rural areas appear to occur most frequently at night, when drivers are unable to see a pedestrian or bicyclist in or alongside the road. Nonmotorized crashes were most frequent in the summer and fall months, peaking in the fall with students returning to school.

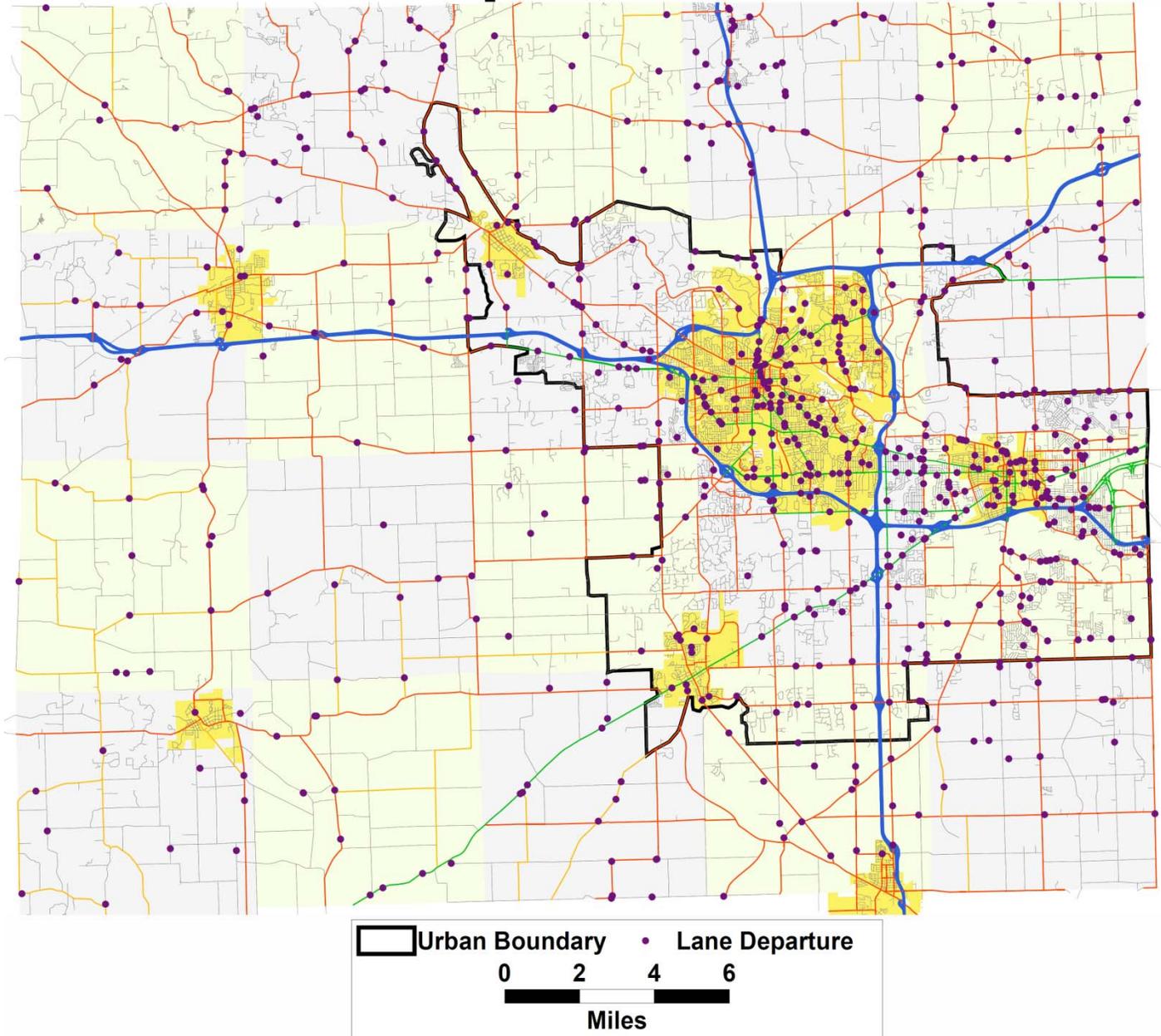
Intersection Crashes

Intersection crashes have the least discernible contributing factors of all the crash types. Most crashes involve one driver who is apparently distracted, though the actual cause of that distraction is rarely explained in the police report, unless alcohol was a factor. However, intersection crashes do seem to be somewhat common in the evening at flashing red signals. This may be due to drivers failing to take proper precautions at night, mistakenly assuming that there is no cross traffic, or that cross traffic is required to stop. Intersection crashes were most frequent in the winter, but do not suddenly peak like lane departure crashes, as they are somewhat frequent year round.

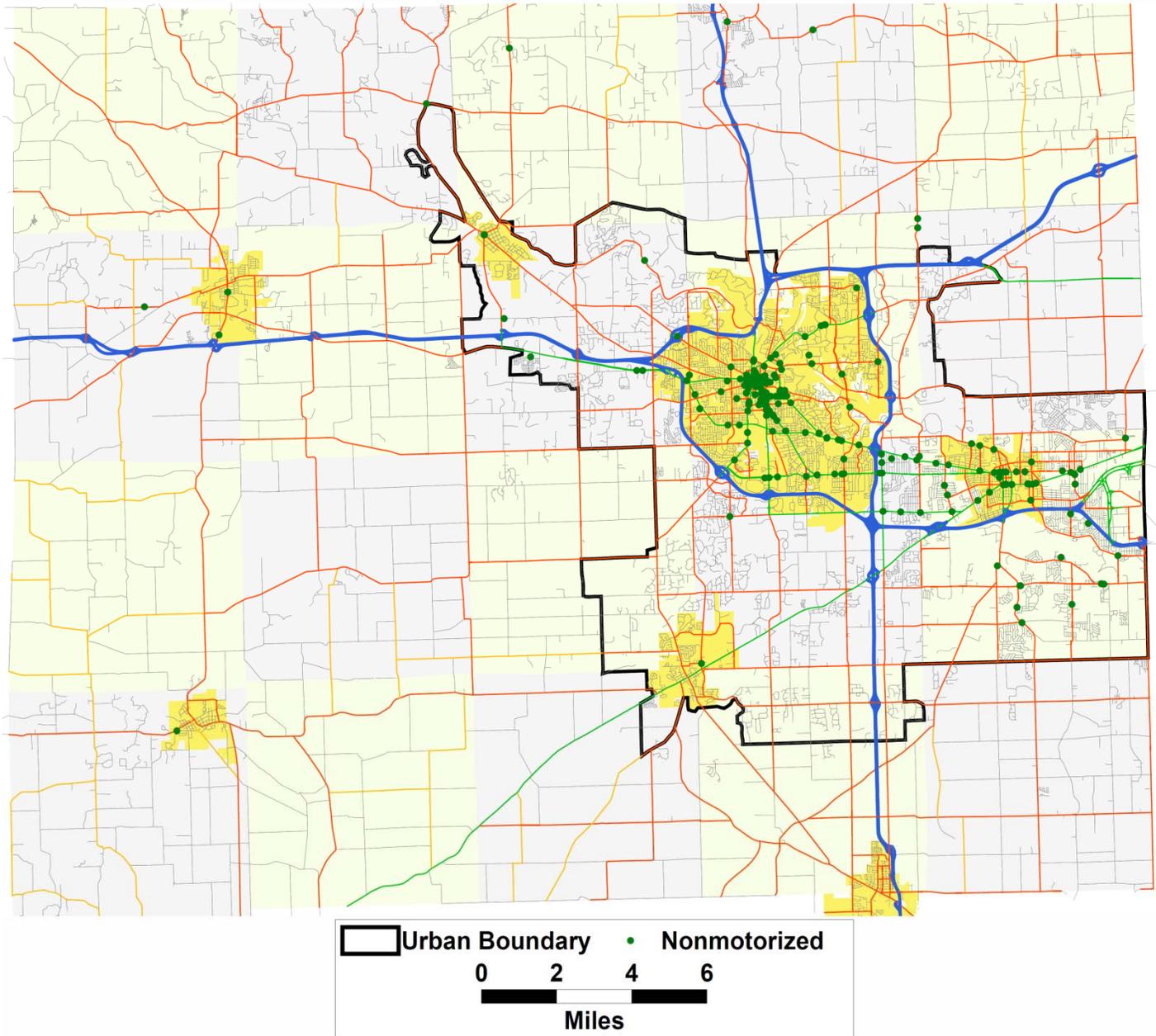
Data Collected Aug-Sep 2013



All Lane Departure Crashes



All Nonmotorized Crashes



All Intersection/Rear End Crashes

