Air Pollution Hot Spots in Michigan

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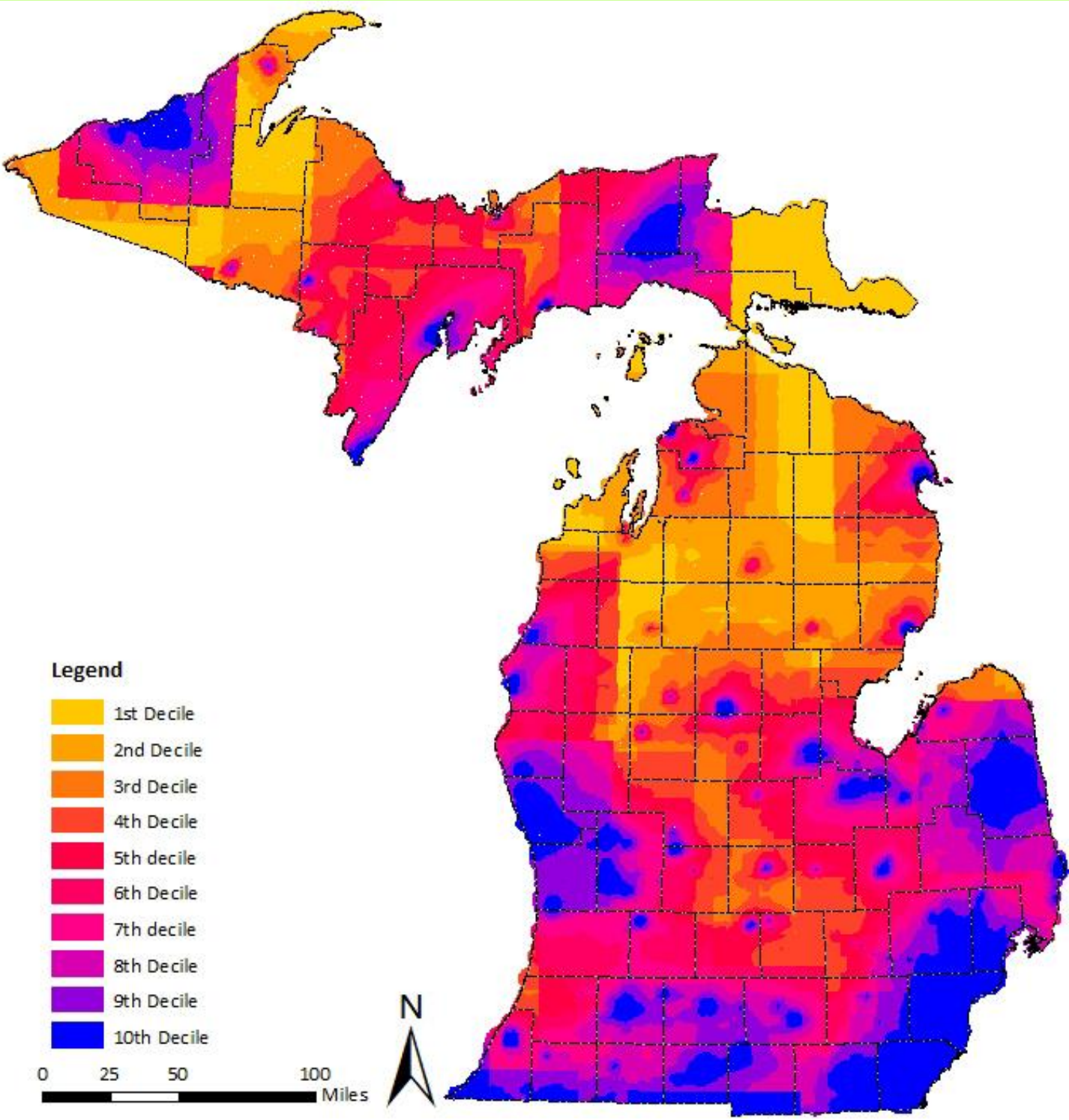
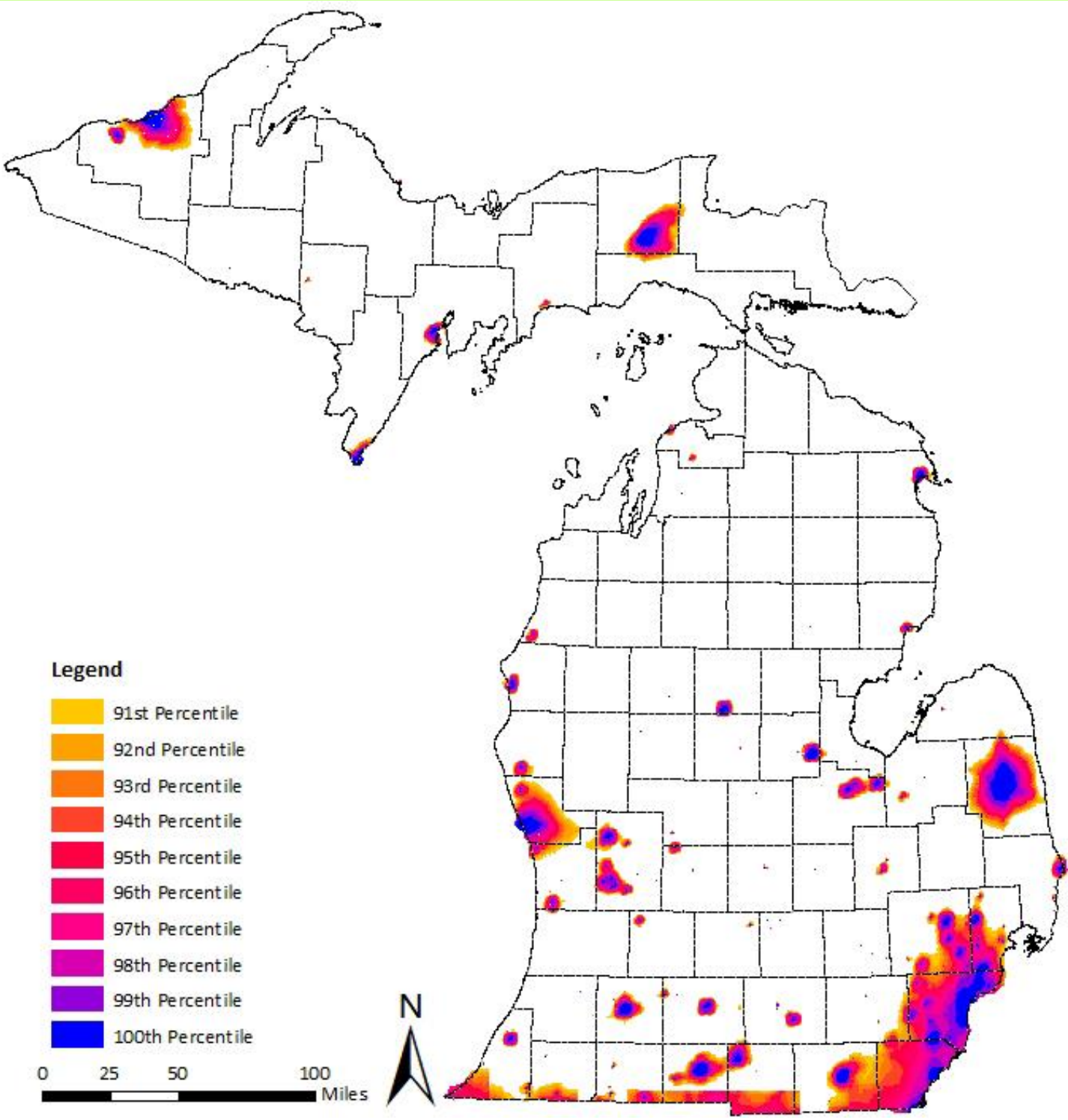
Data compiled from public sources by
Dr. Mohai and Dr. Kweon through a grant from
The Kresge Foundation

Total Air Toxic Concentration Contours from Industrial Sources In Michigan (2006 RSEI-GM)



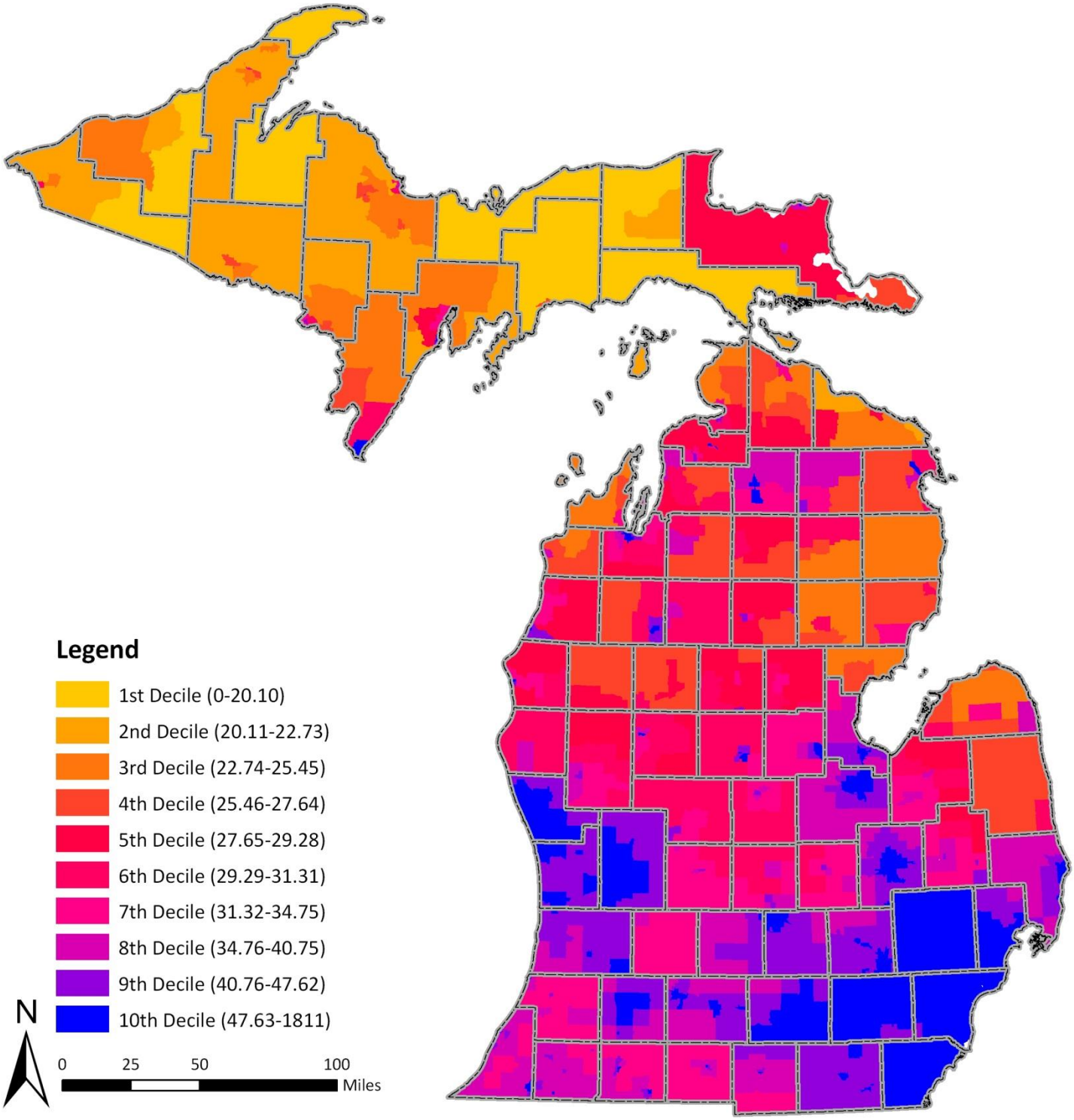
Contours based on accumulated area of 1 km by 1 km grid cells in ascending order of total toxic concentration from US EPA 2006 Risk Screening Environmental Indicators Geographic Microdata (RSEI-GM)

Total Air Toxic Concentration Contours from Industrial Sources In Michigan (2006 RSEI-GM and Top 10 Percentile)



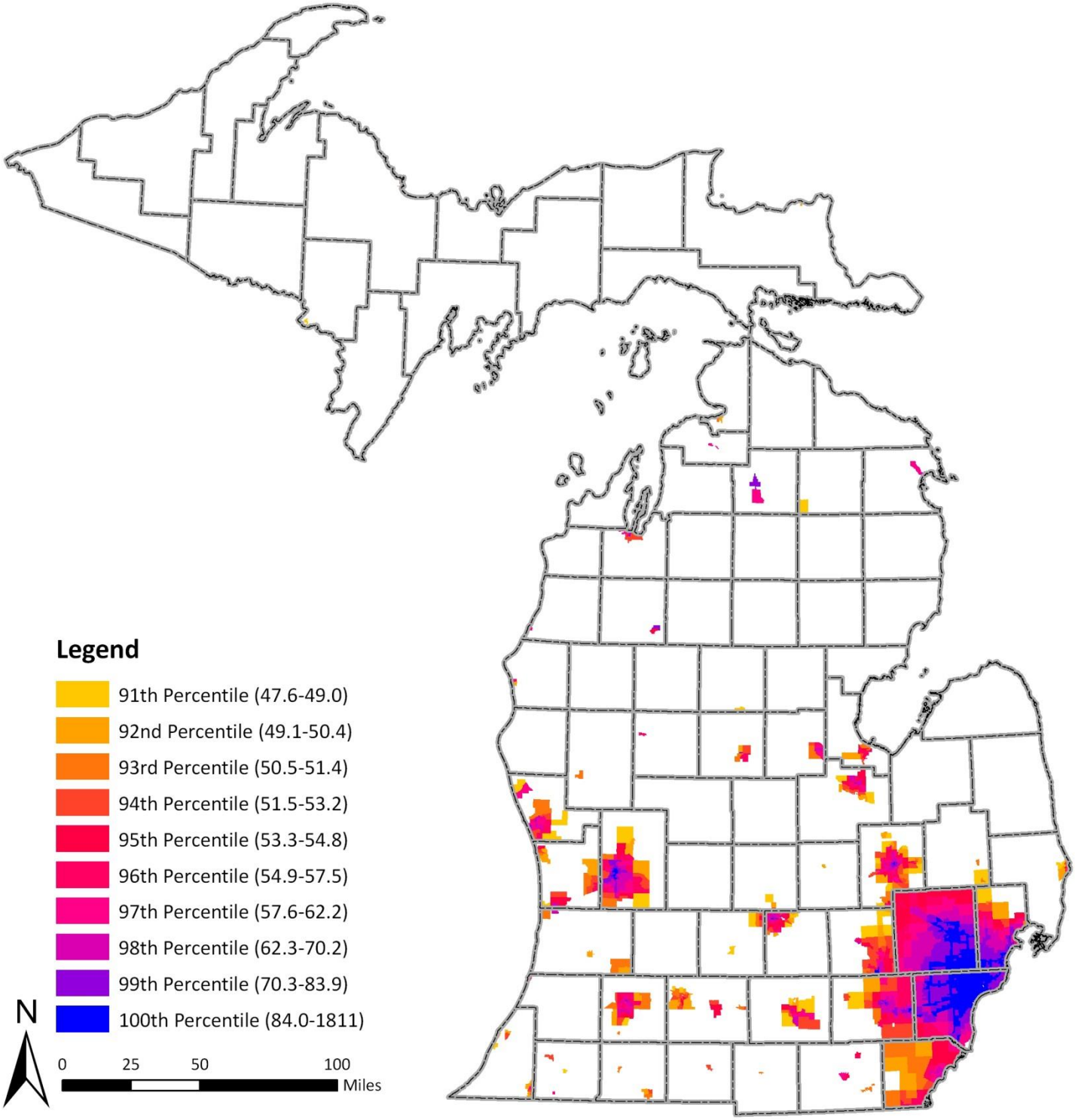
Contours based on accumulated area of 1 km by 1 km grid cells in ascending order of total toxic concentration from 2006 Risk Screening Environmental Indicator

Cancer Risk Contours from All Air Pollution Sources In Michigan (2005 National Air Toxics Assessment)



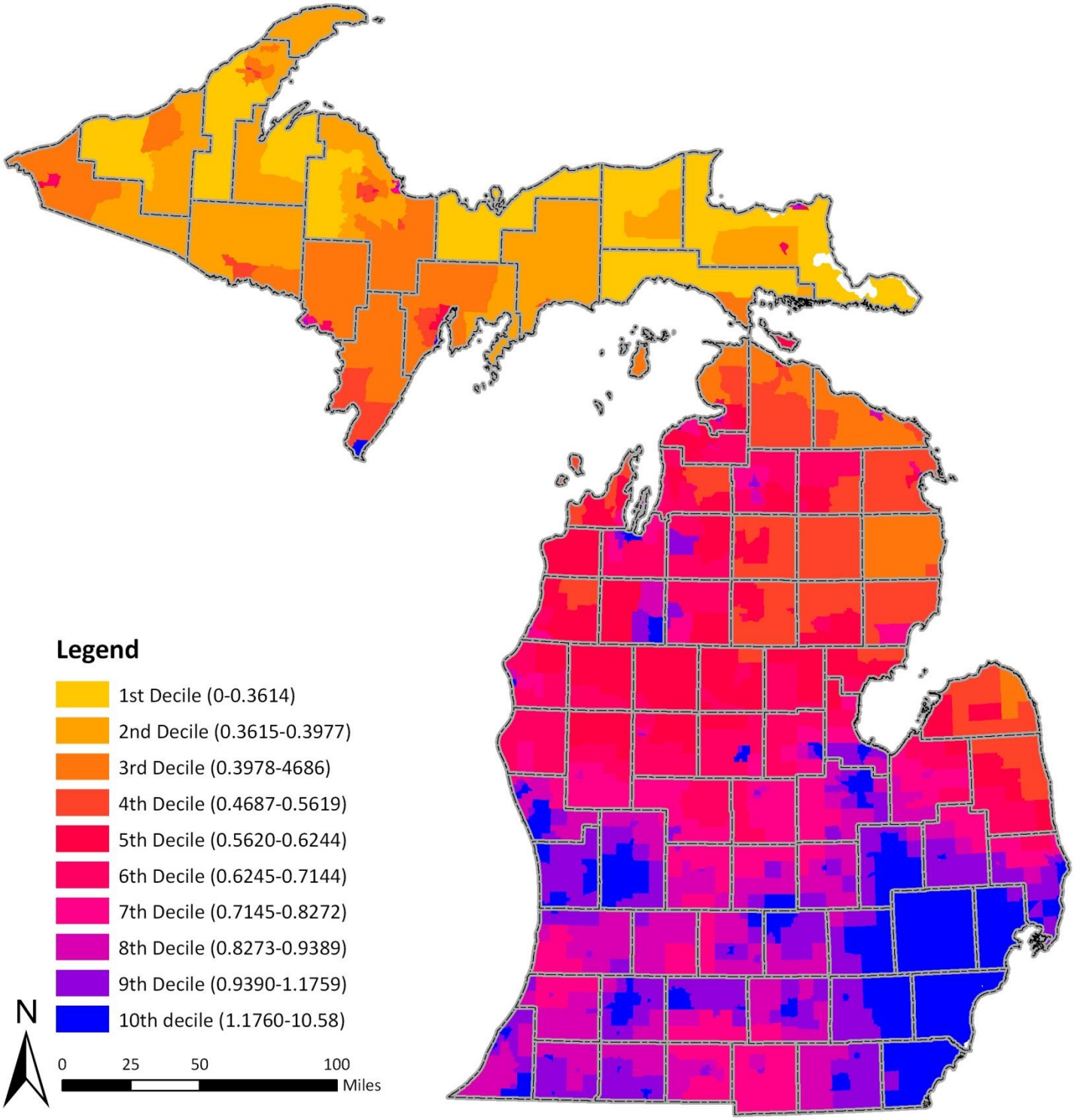
Contours based on accumulated area (in square kilometers) of census tracts in ascending order of cancer risk estimates from US EPA 2005 NATA

Cancer Risk Contours from All Air Pollution Sources In Michigan (2005 NATA and Top 10 Percentile)



Contours based on accumulated area (in square kilometers) of census tracts in ascending order of cancer risk estimates from 2005 NATA

Respiratory Risk Contours from All Air Pollution Sources In Michigan (2005 National Air Toxics Assessment)



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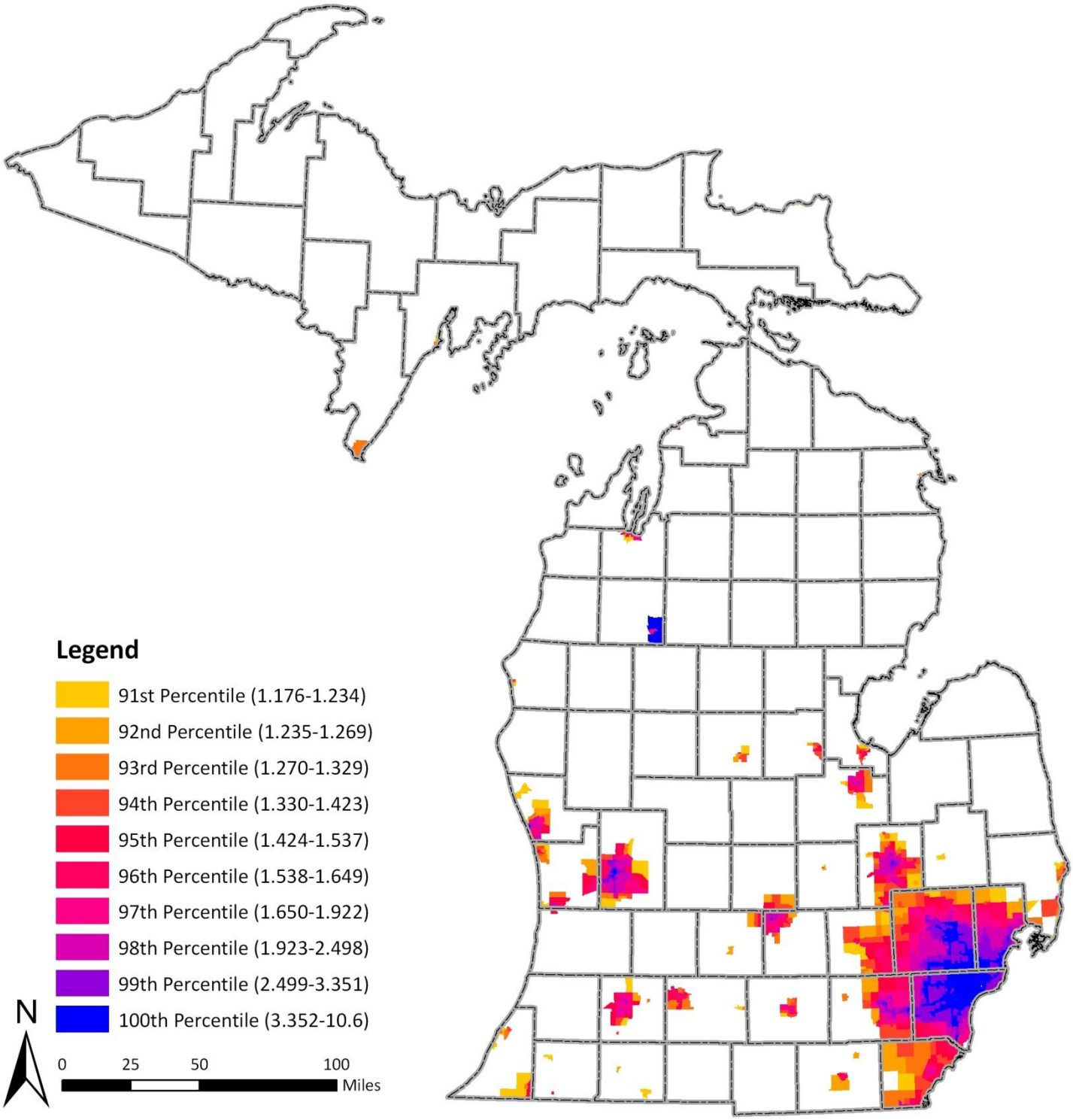
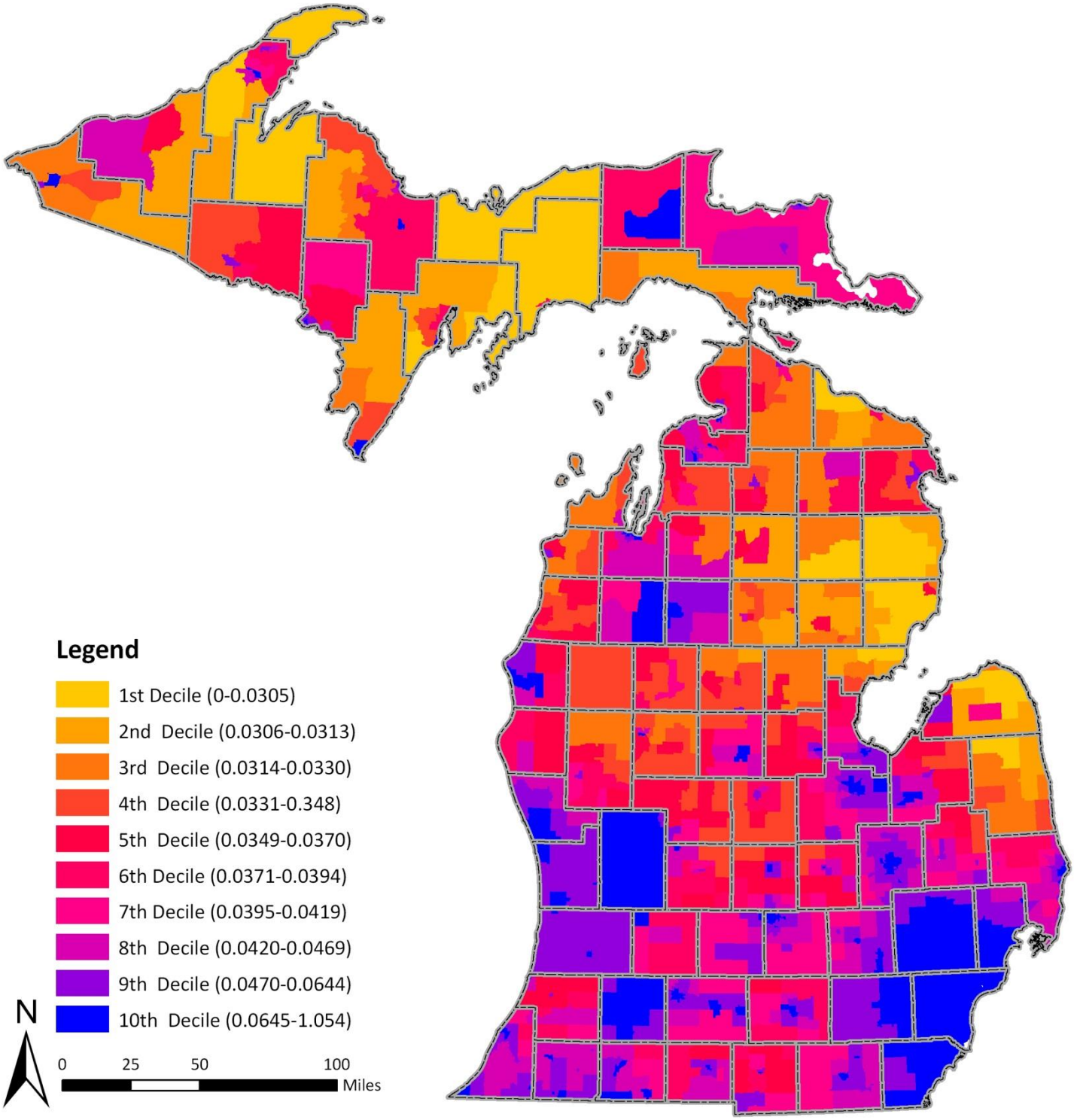
Respiratory Risk Contours from All Air Pollution Sources In Michigan (2005 NATA and Top 10 Percentile)



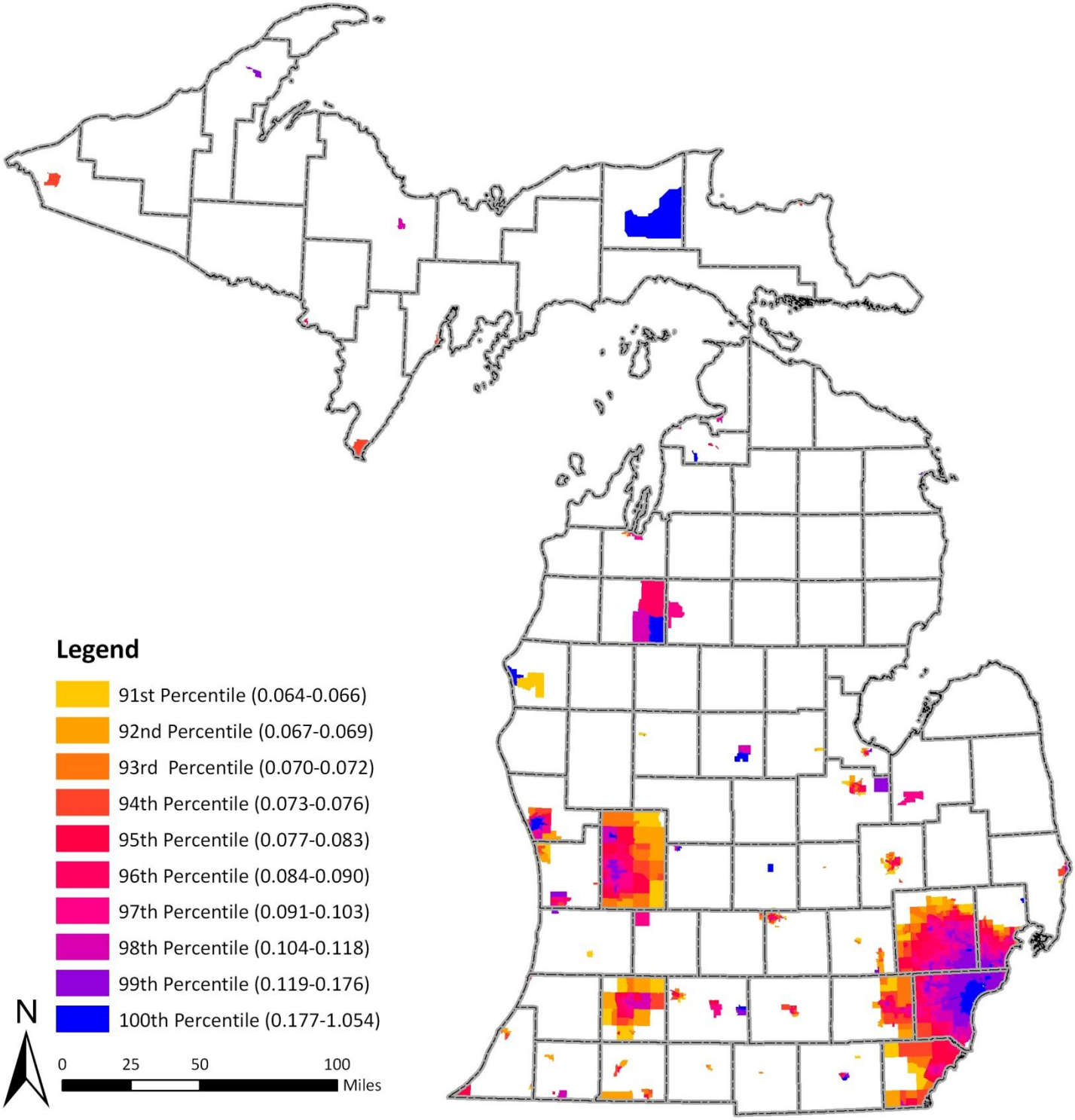
Contours based on accumulated area (in square kilometers) of census tracts in ascending order of respiratory risk estimates from 2005 NATA

Neurological Risk Contours from All Air Pollution Sources In Michigan (2005 National Air Toxics Assessment)



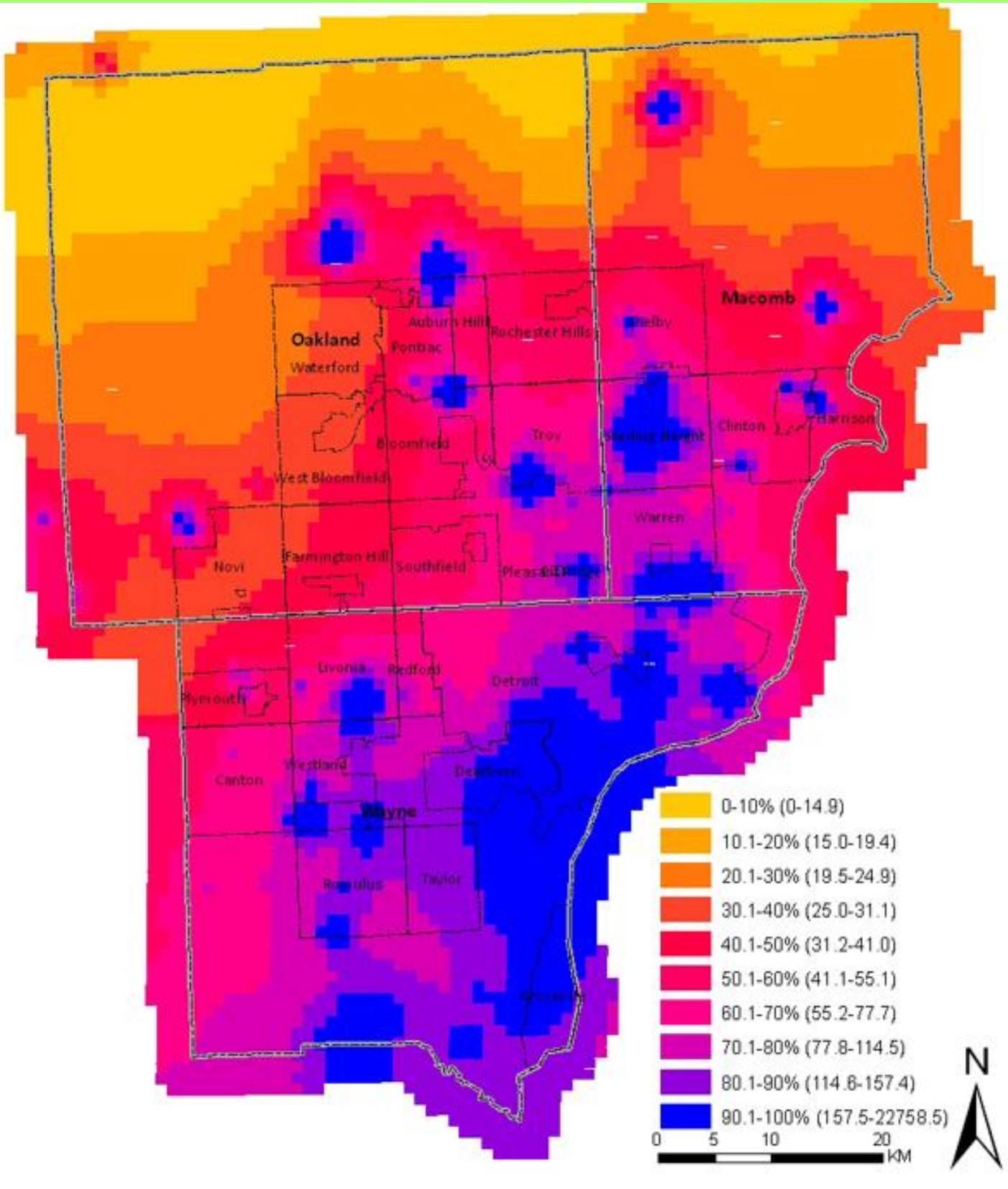
Contours based on accumulated area (in square kilometers) of census tracts in ascending order of neurological risk estimates from 2005 NATA

Neurological Risk Contours from All Air Pollution Sources In Michigan (2005 NATA and Top 10 Percentile)

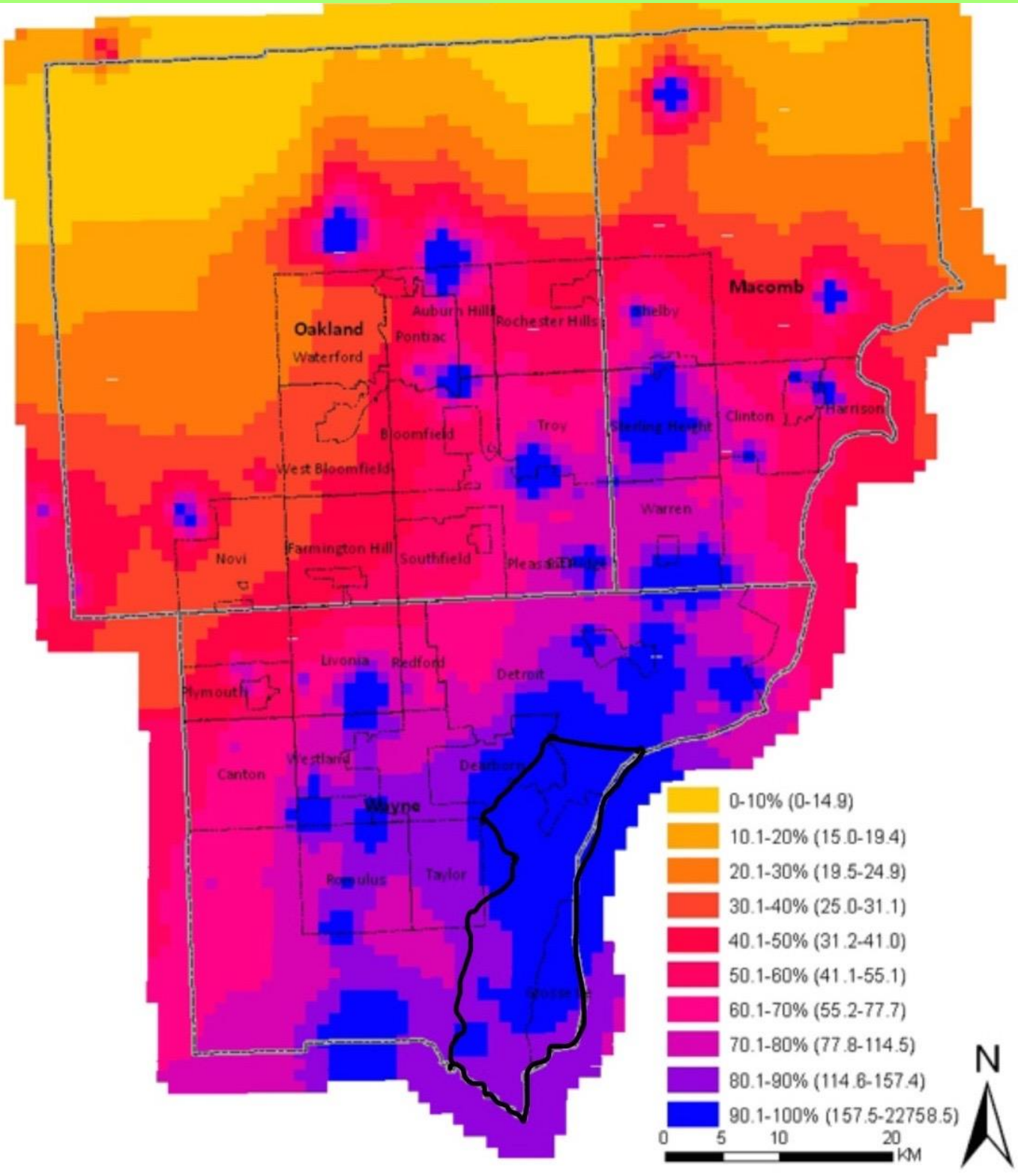


Contours based on accumulated area (in square kilometers) of census tracts in ascending order of neurological risk estimates from 2005 NATA

Total Air Toxic Concentrations from Industrial Sources in Detroit Metro Area (2006 RSEI-GM)



SO_2 Non-Attainment Area and Total Air Toxic Concentrations from Industrial Sources in Detroit Metro Area (2006 RSEI-GM)



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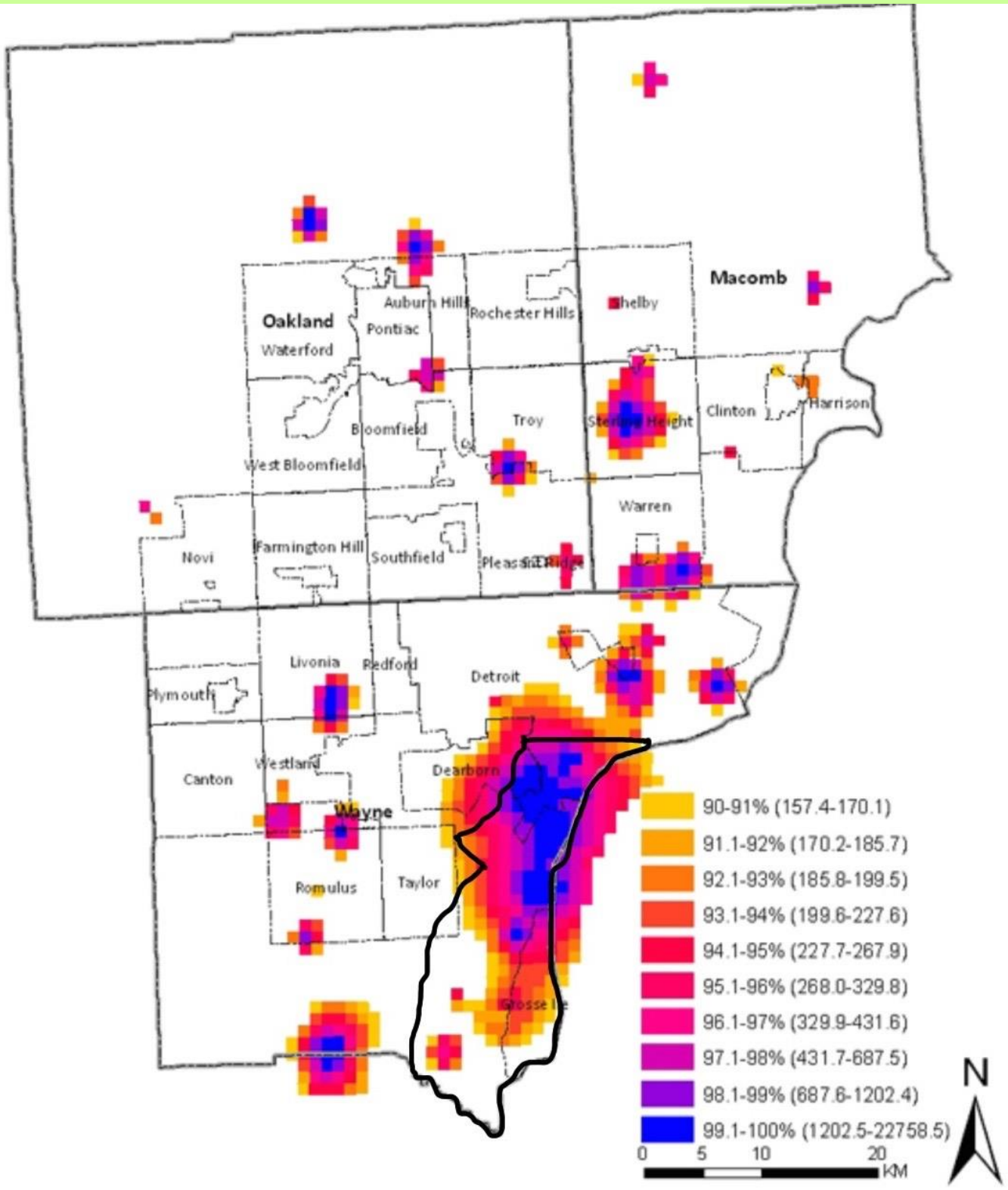
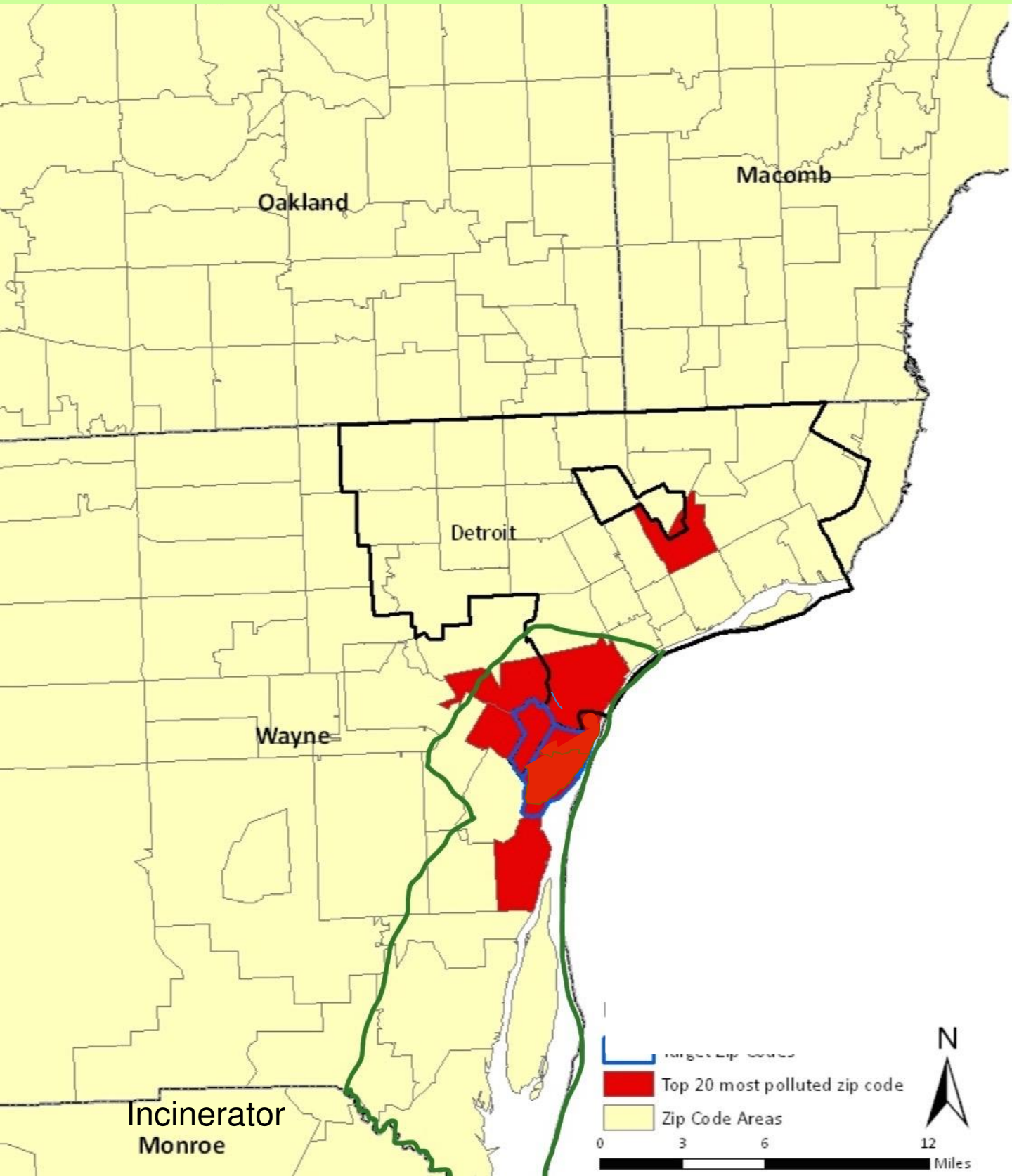
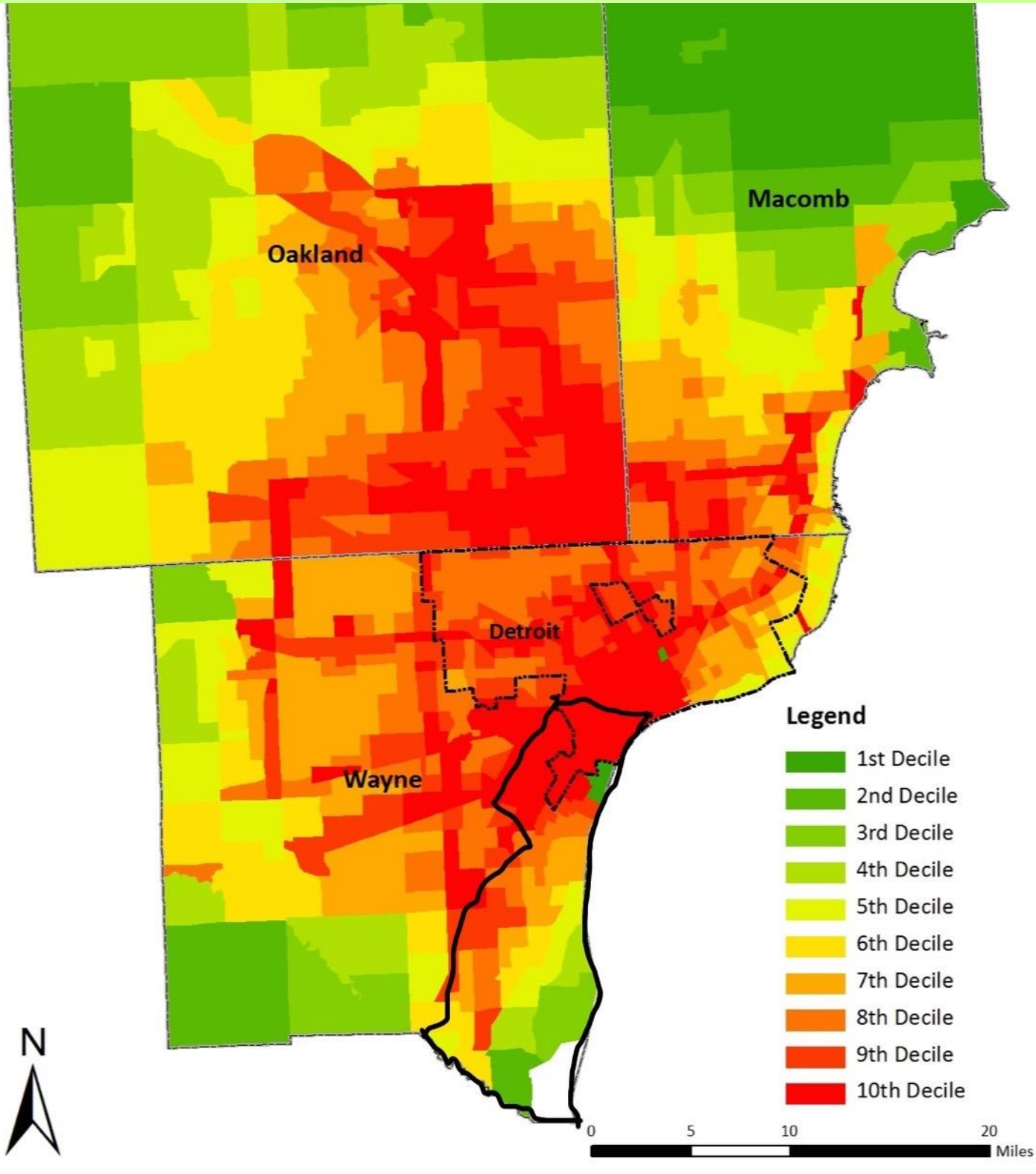


SO_2 Non-Attainment Area and Location of 48217 and 8 Most Polluted Zip Codes in Detroit Metro Area from Industrial Sources



SO_2 Non-attainment Area And Cancer Risk Contours From All Air Pollution Sources In Detroit Metro Area (2005 National Air Toxics Assessment)



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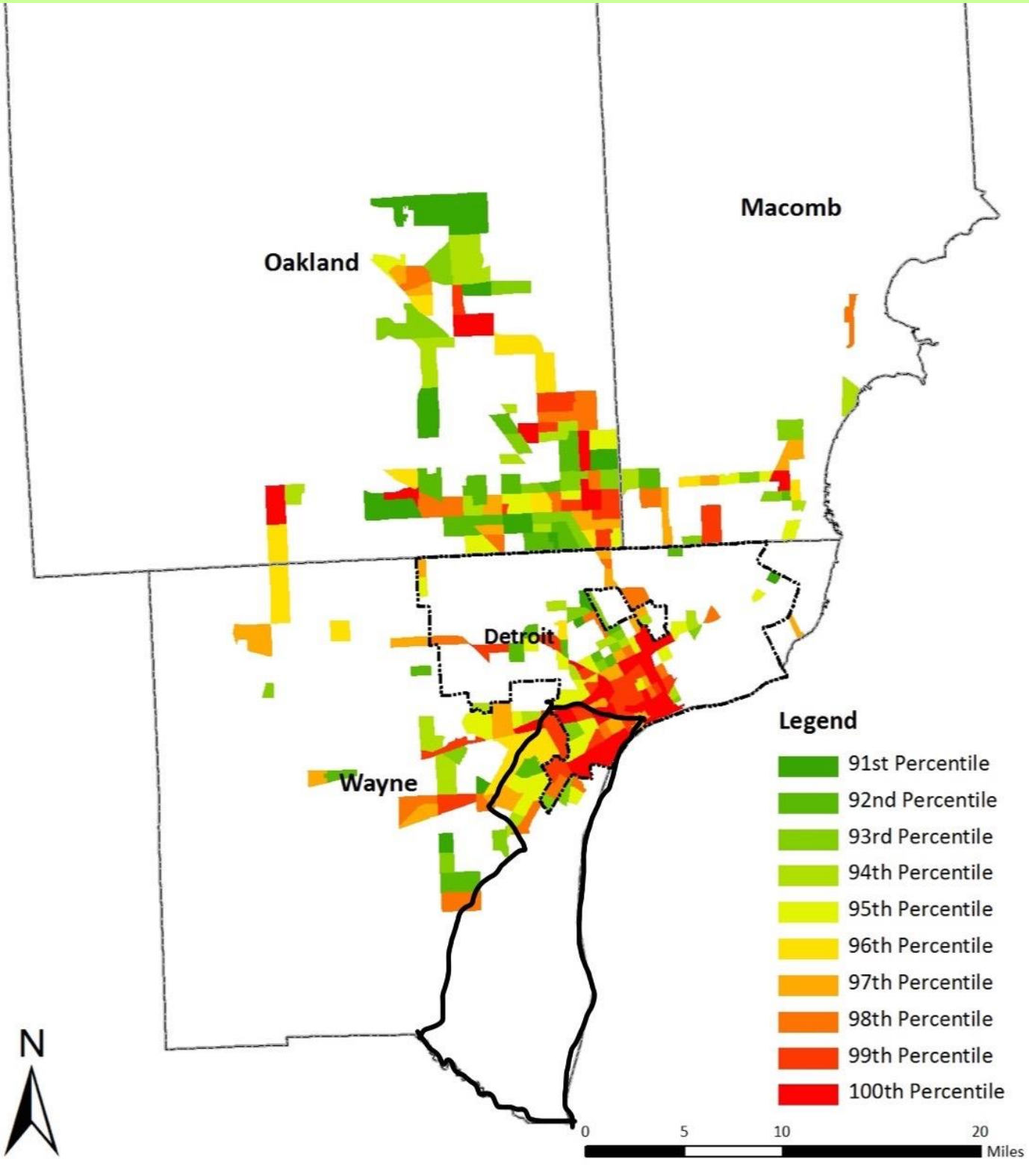
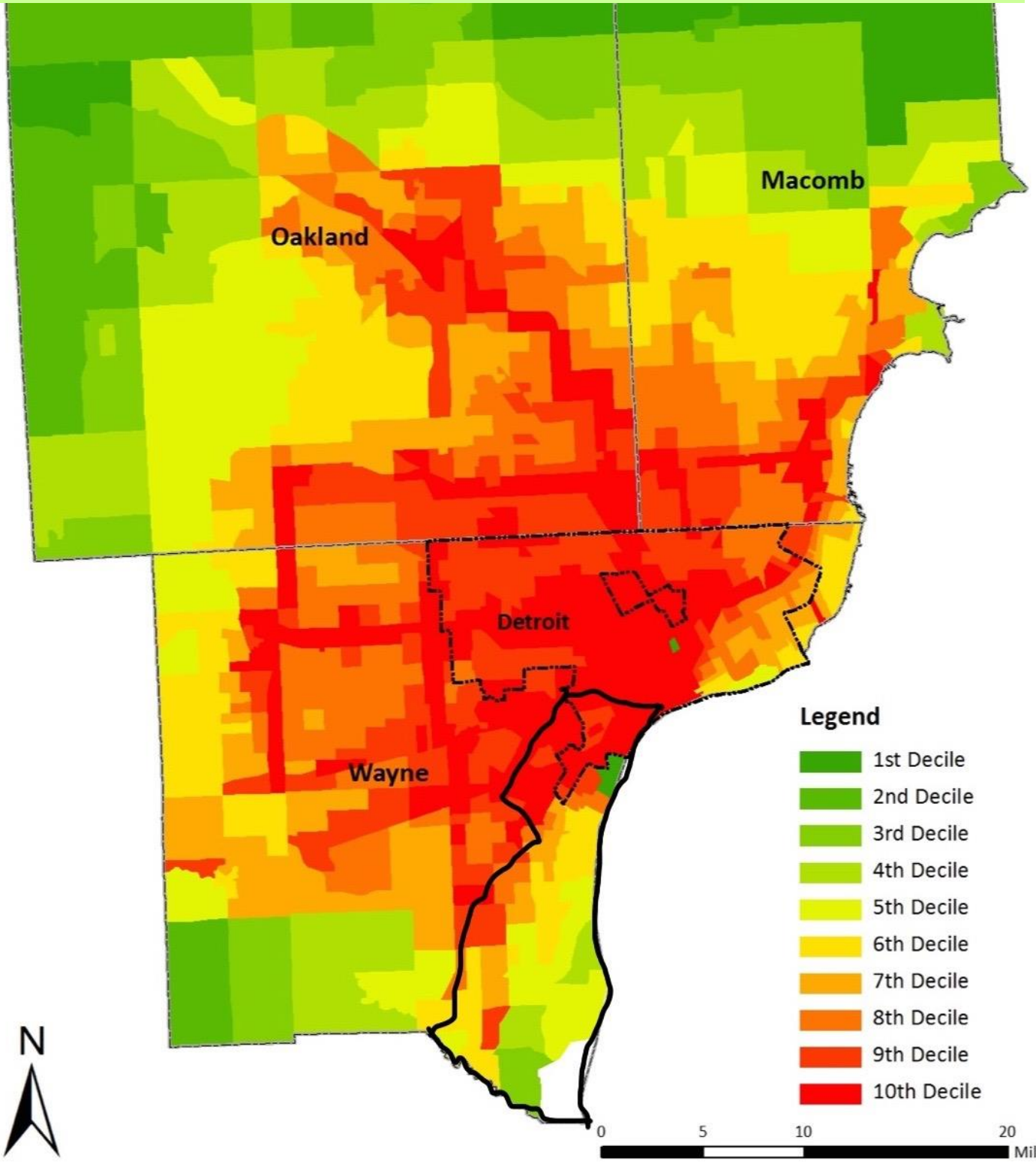


SO_2 Non-Attainment Area and Respiratory Risk Contours from All Air Pollution Sources In Detroit Metro Area (2005 National Air Toxics Assessment)



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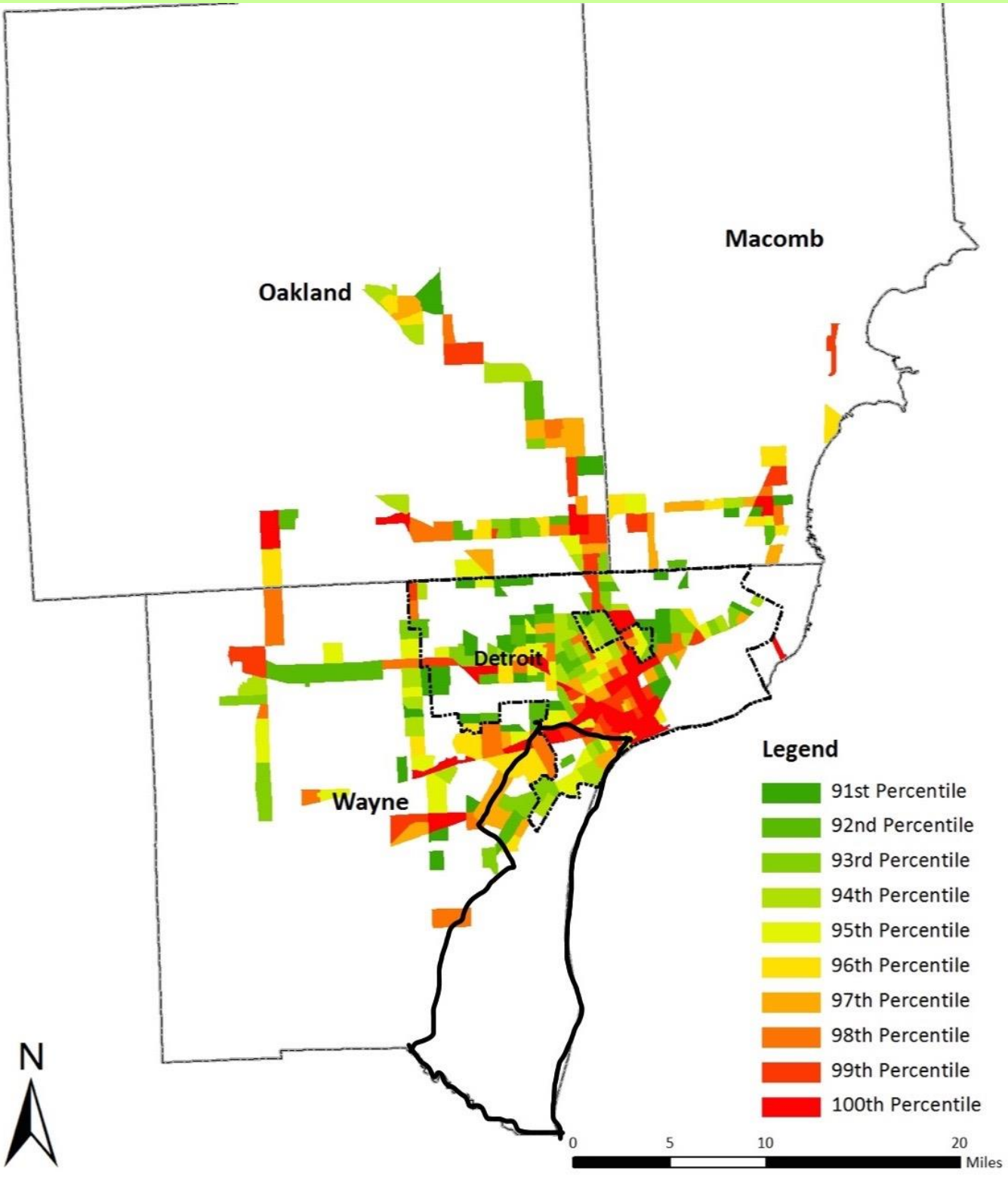

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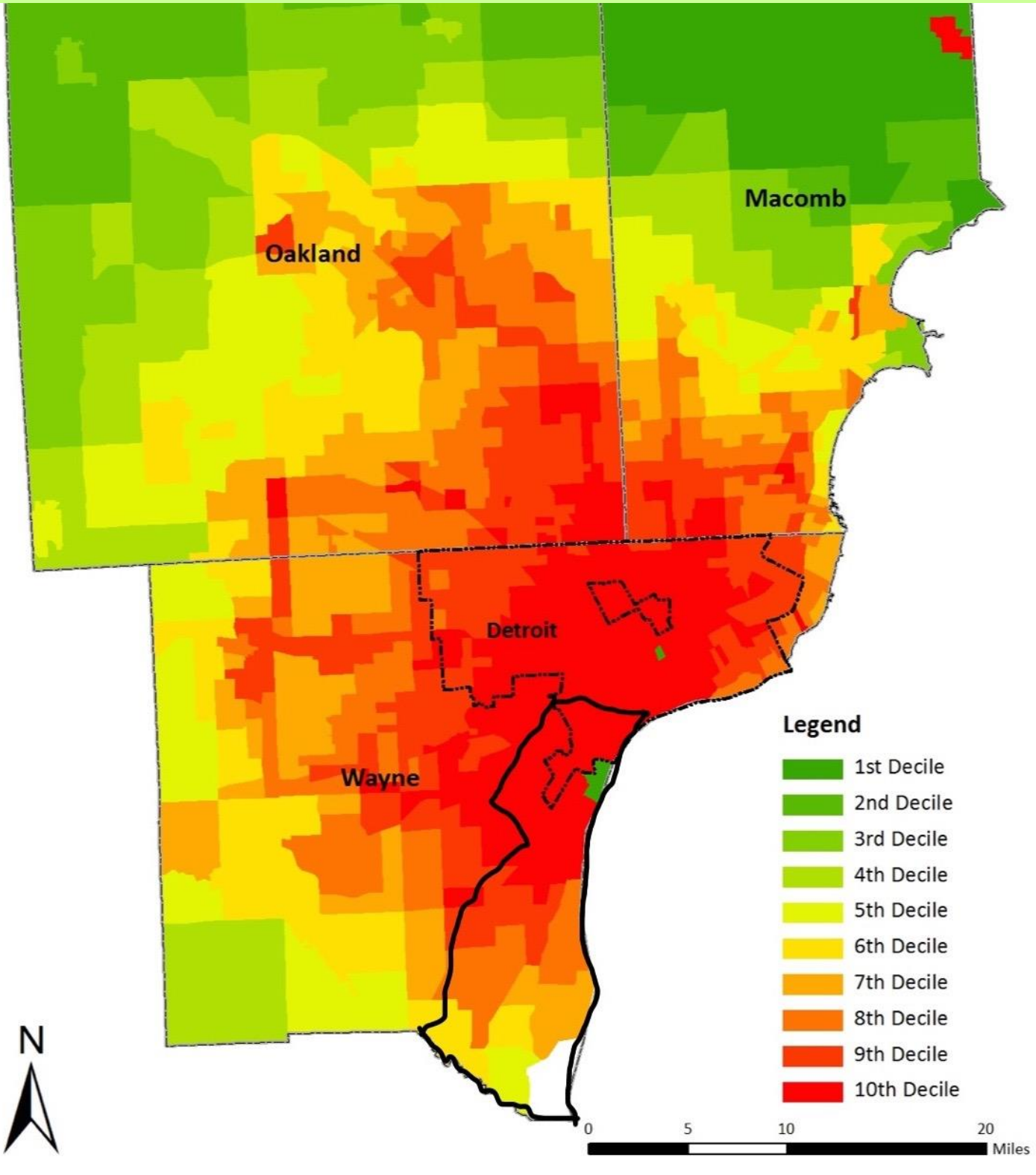

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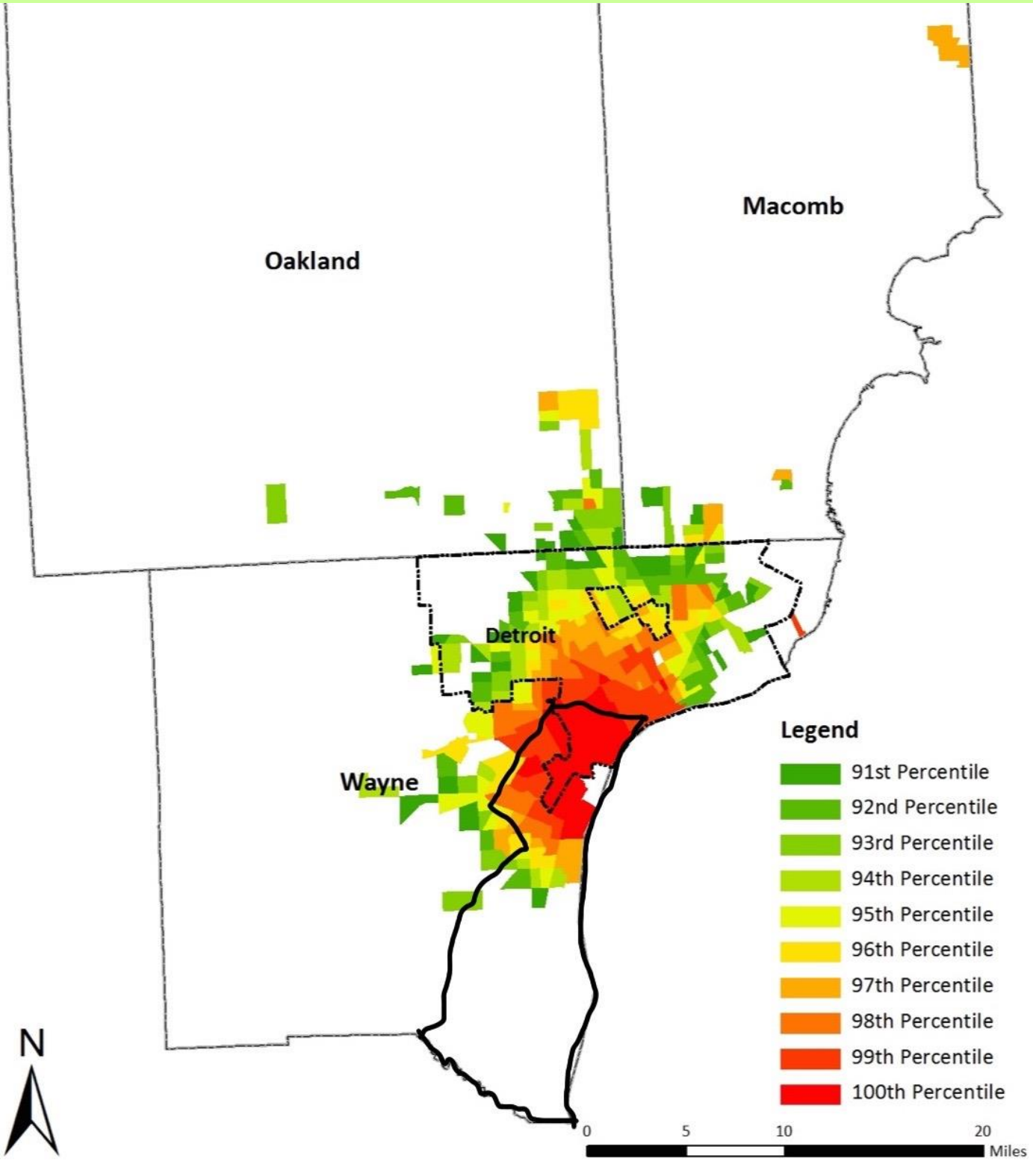
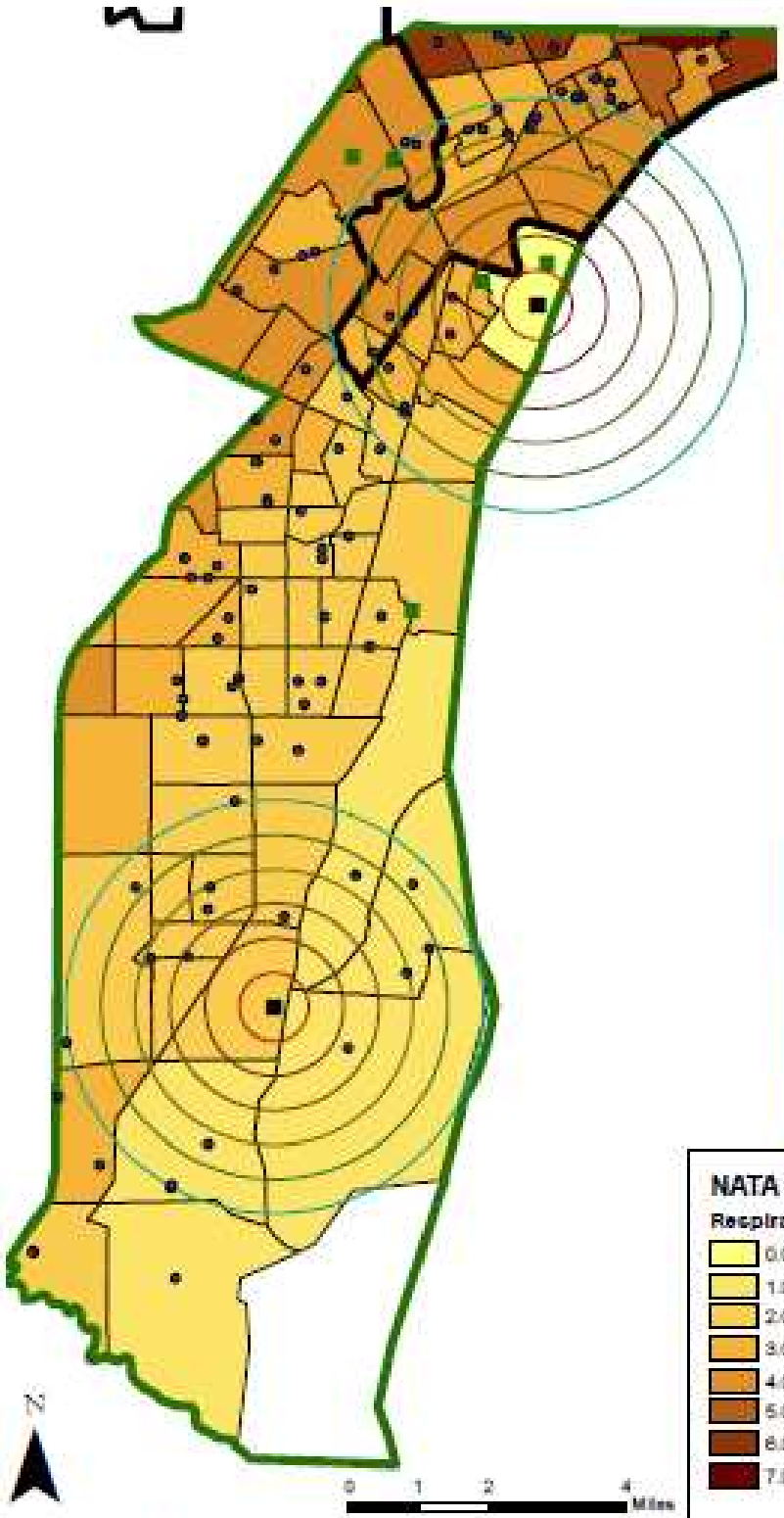
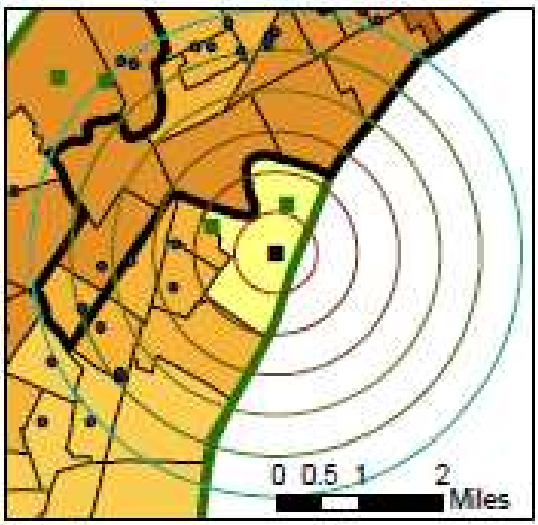
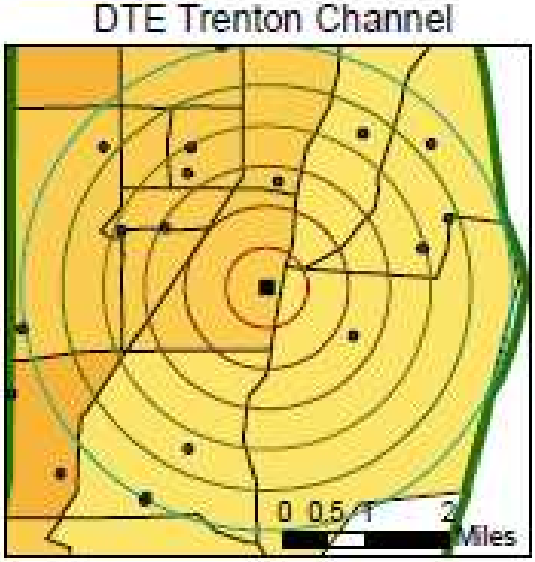
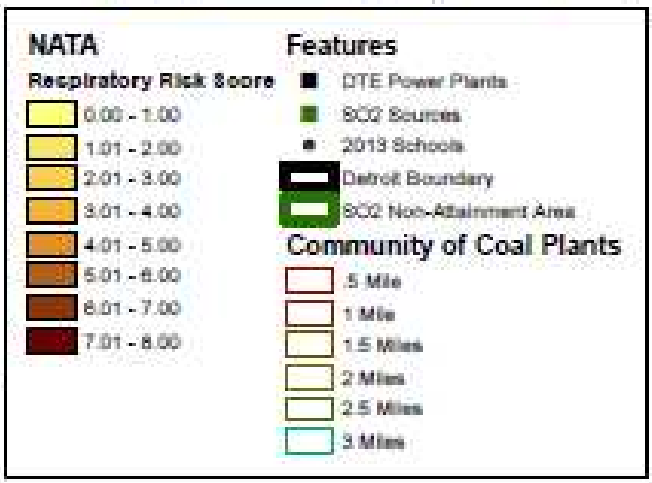


Respiratory Risk and 92 Schools in SO_2 Non-Attainment Area









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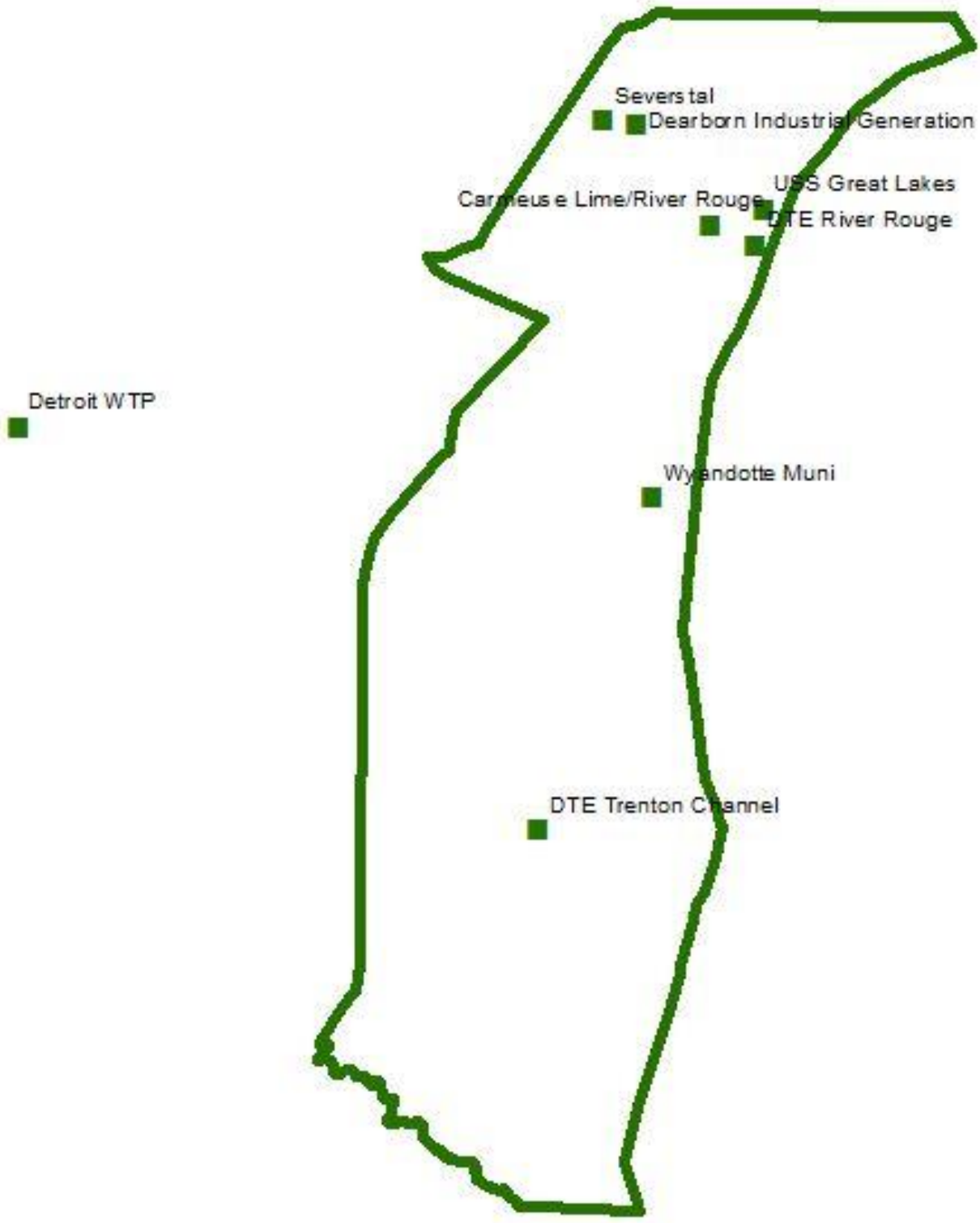
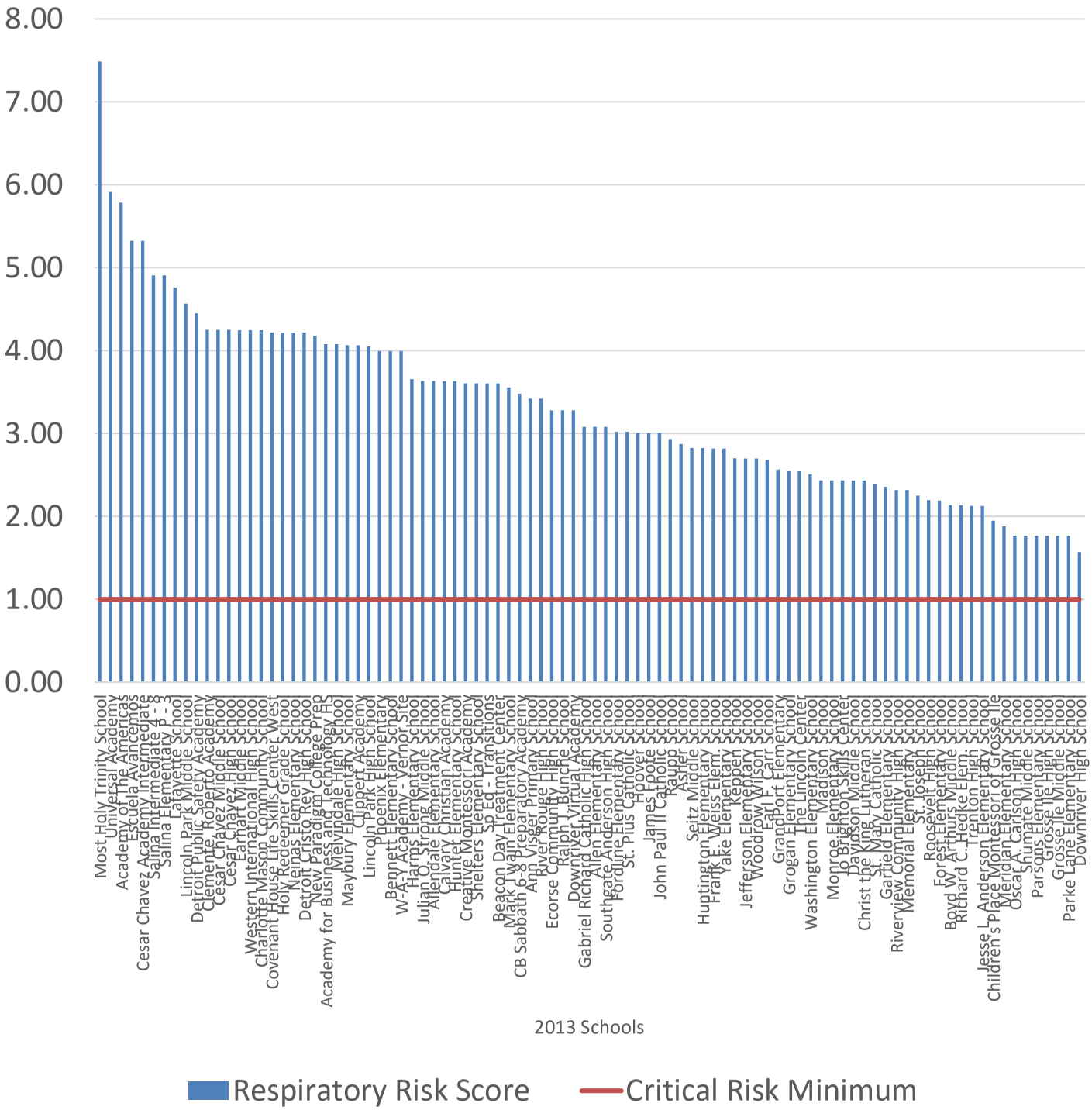
Sources: U.S. EPA; State of Michigan Educational Entity Master
Layout: Ember McCoy, Mohai Research Lab, University of Michigan
Date: December 3, 2015

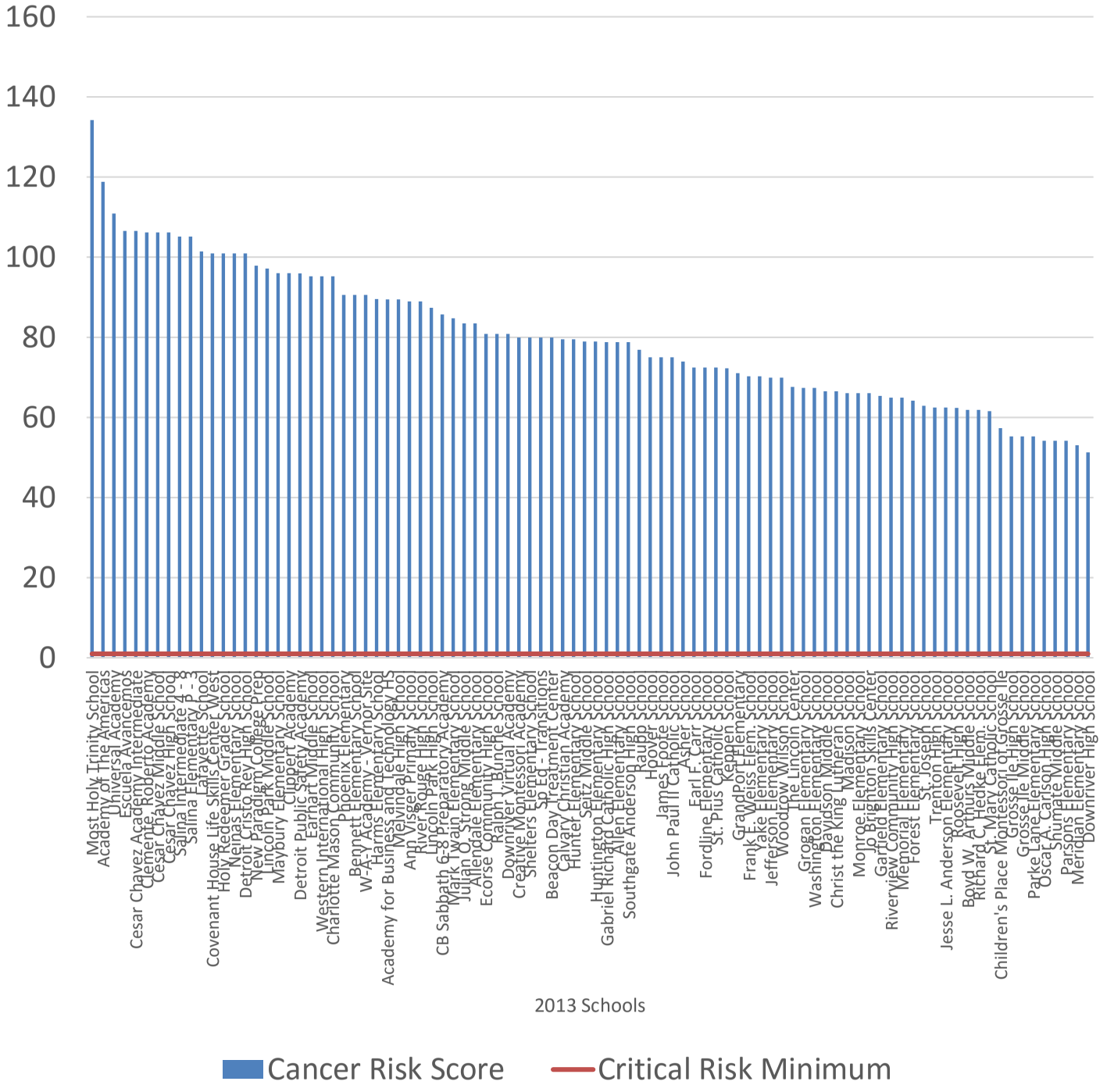
SO2 Sources


Severstal
Dearborn Industrial Generation
USS Great Lakes
Carmeuse Lime/River Rouge
DTE River Rouge
Detroit WTP
Wyandotte Muni
DTE Trenton Channel

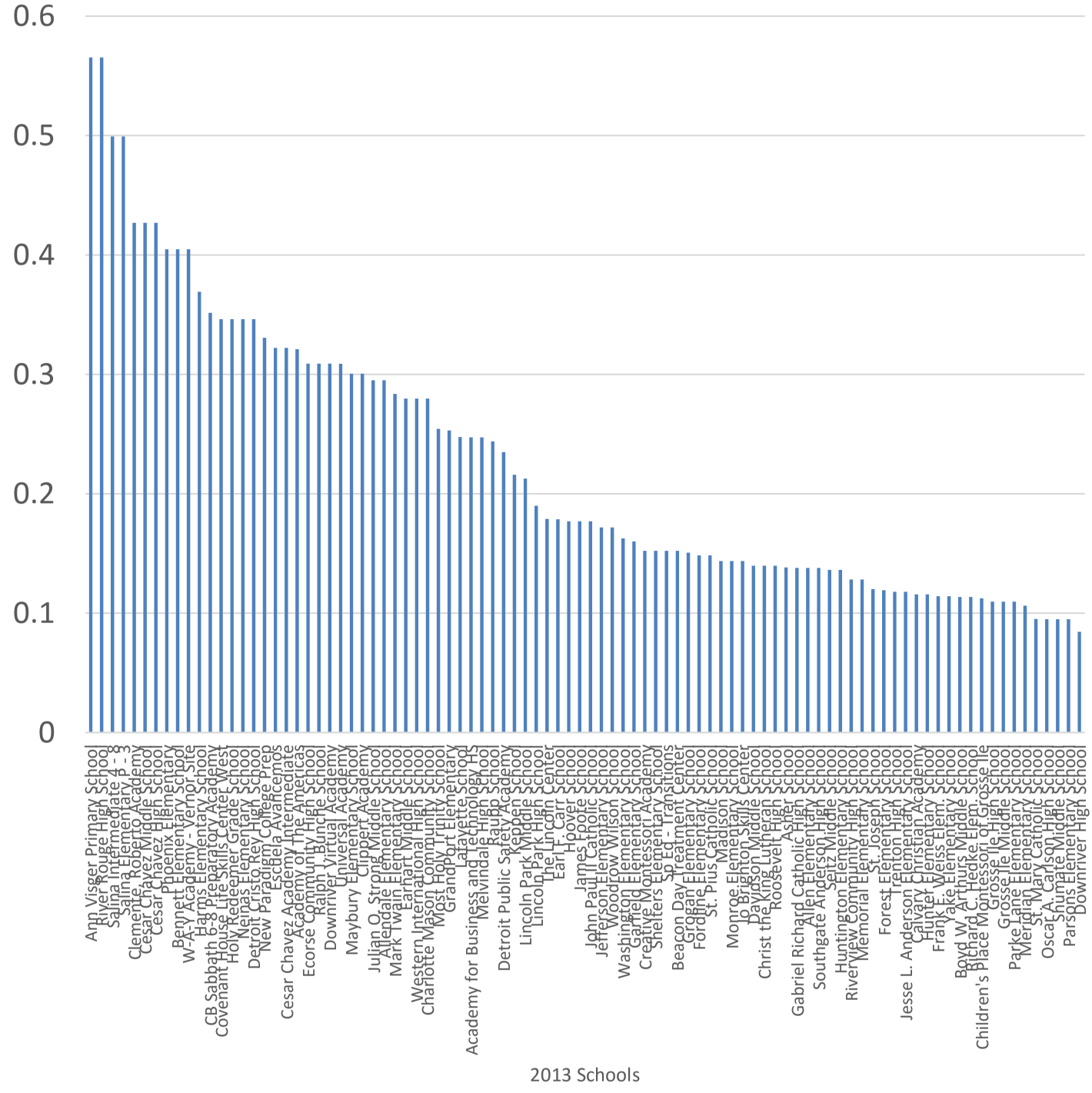
NATA 2005 Respiratory Risk Ratios at Location of 92 Schools in SO2 Non-Attainment Area



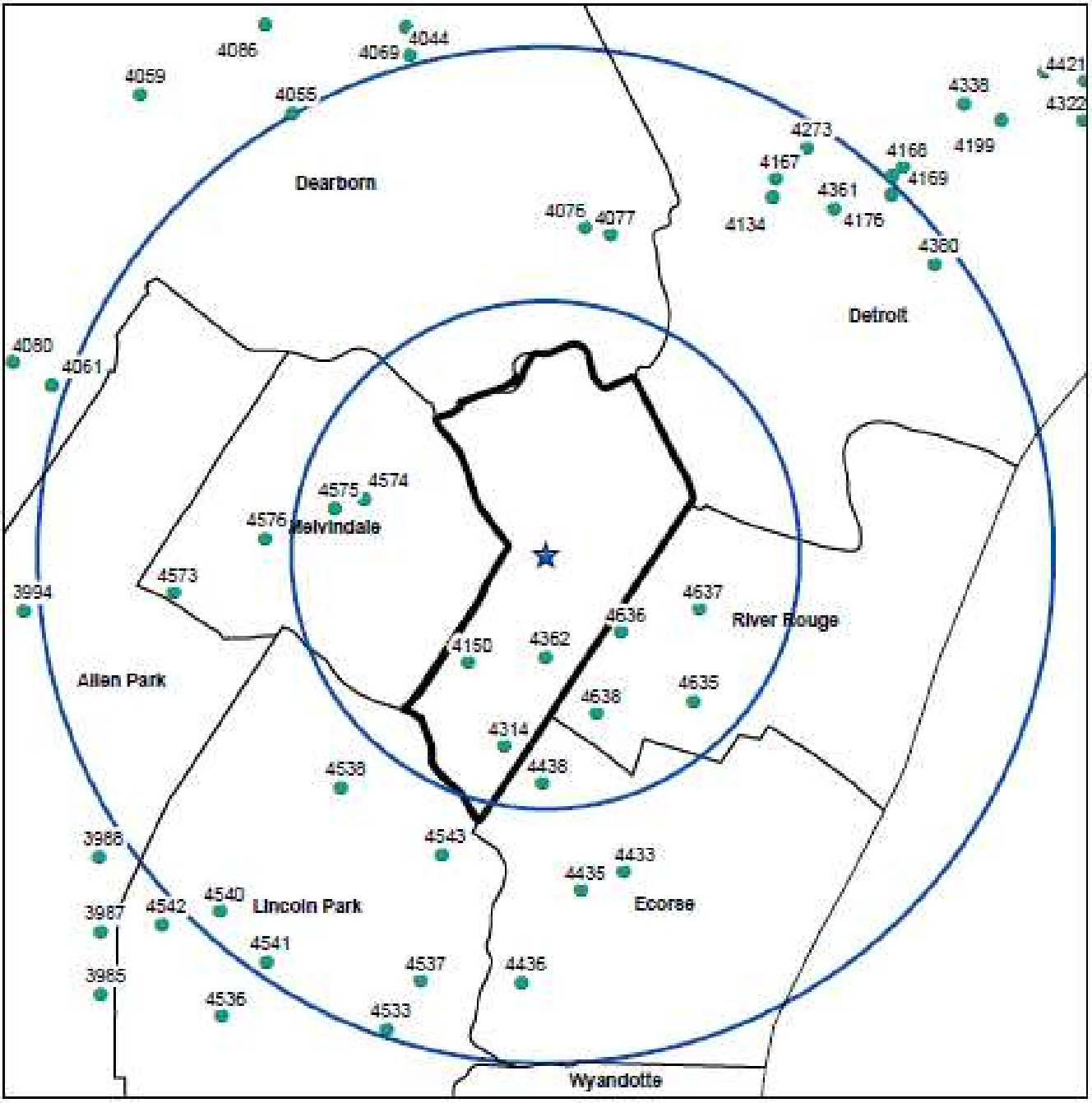
NATA 2005 Cancer Risk Scores at Location of 92 Schools in S02 Non-Attainment Area



NATA 2005 Neurological Risk Scores at Location of 92 Schools in S02 Non-Attainment Area



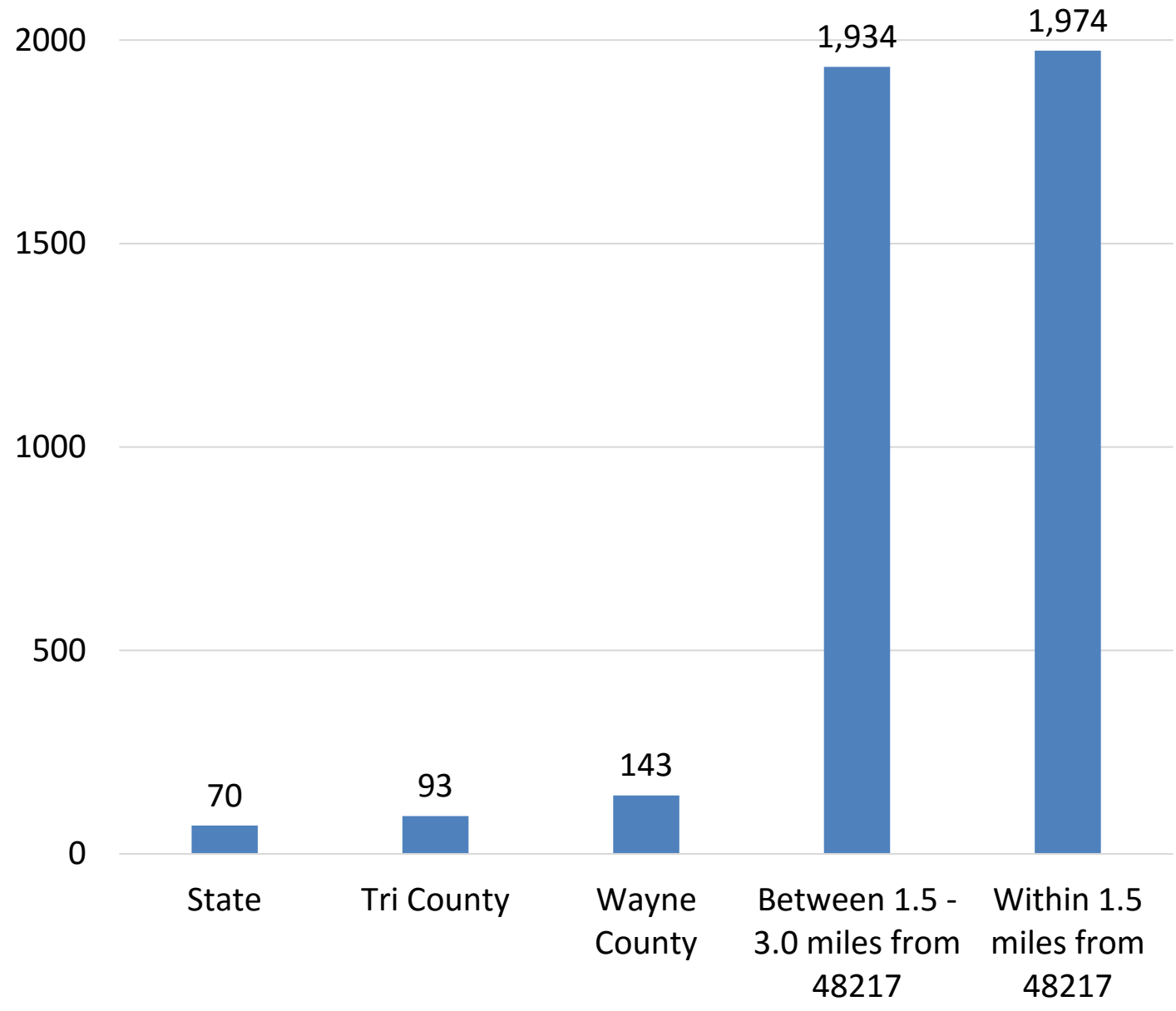
Schools within 1.5 miles and 3.0 miles of Center of 48217 Zip Code



Rings represent distance from 48217 centroid
at 1.5 miles and 3 miles

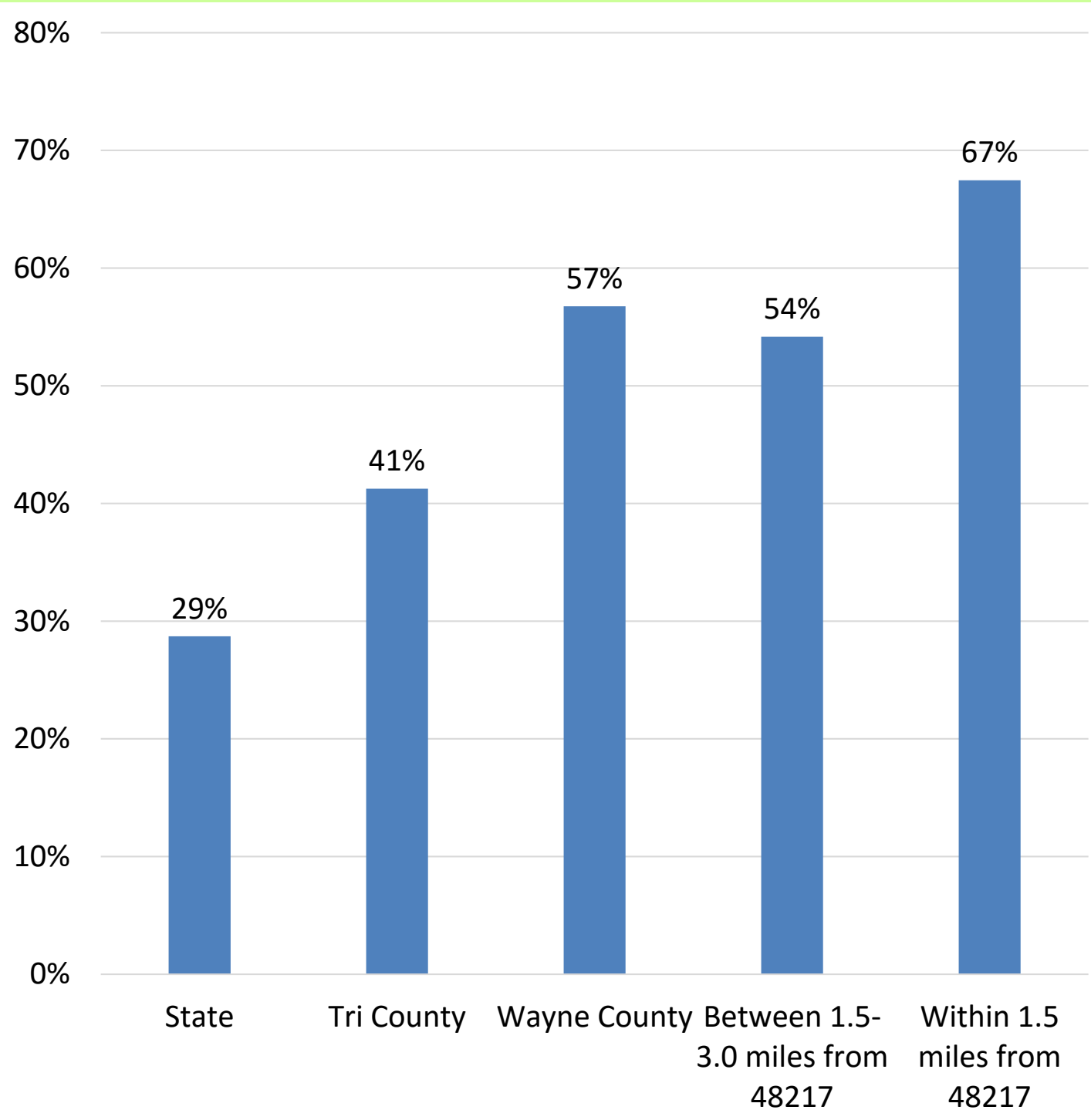
Ten schools within 1.5 miles and
20 schools between 1.5 and 3.0 miles

Median Total Air Toxic Concentrations within Two Kilometers of Schools in Michigan and Vicinity of 48217 Zip Code



*Based on 2006 RSEI-GM and 2007 school data reported in Mohai, Kweon, Lee, and Ard (*Health Affairs* 2011)

Percent of Student Body Who Are Racial or Ethnic Minority



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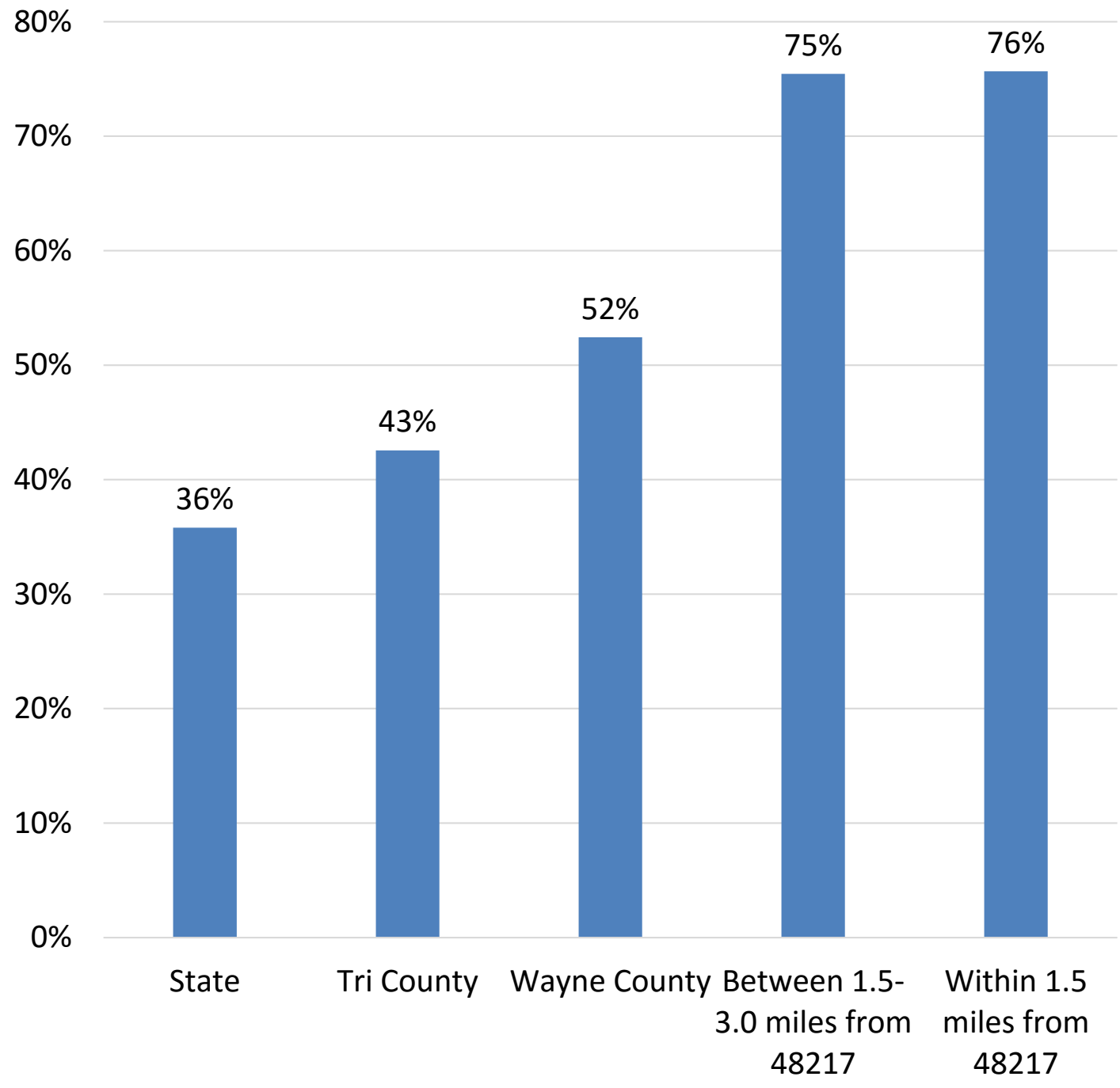
Percent of Student Body Who Are Eligible for Free & Reduced Lunch



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