USE OF FORCE

Evaluating Police Activity in Communities of Color

By Samantha Kearney

Justice in Policing: are we there yet?

- Communities are concerned that police forces do not protect all community members equally. The Black Lives Matter movement, and many other movements that came before it, have spoken out about how communities and people of color are targets of police brutality.

- This study maps data from the Milwaukee Police Department (MPD) to show where each use of force incident occurred in the first three quarters of 2020.

- When the maps of MPD use of force are compared to demographic maps, it becomes evident that MPD's use of force does tend to occur in communities of color more often than in majority white neighborhoods.

- This information may interest community groups, MPD, and city leaders.

Data Sources

■ MPD publishes many datasets on the Milwaukee Data Portal.

■ Use of force data for the first three quarters of 2020 was available.

■ MPD's relational tables are provided separately, so that the instances of the use of force are in one table, the latitude & longitude of each case is in a second table, and since these two tables share no common columns, a third table is needed in order to link all this information.

■ Each quarter's data is in a separate table. Sometimes the types of information in each table, the name of columns in these tables, and the format of columns in these tables changes from quarter to quarter.

■ 15 tables needed to be carefully reformatted and combined in order to bring necessary information together. Finding and cleaning the data took a lot of effort

Data Limitations

■ The data MPD provided did not include a column that described which census tract / aldermanic district / other area it occurred within. Similarly, I was unable to find demographic information about the target of each use of force.

■ I was unable to find a python/Folium tool that would allow me to dissolve points into polygons, or otherwise merge a points layer (use of force) with a demographics layer (stored in polygons for a choropleth map). There are ways to combine this data in QGIS and ArcGIS Pro- but the point of this capstone project is to use python).

■ Without a way to directly link instances of force to an area's (or individual's) demographics, statistical analysis was beyond my grasp. However, spatial analysis was still available.

1 point : 1 use of force

Some points are so close to or directly on top of other points that some information is obscured. Darker shadows do indicate more incidents of force in a single place.
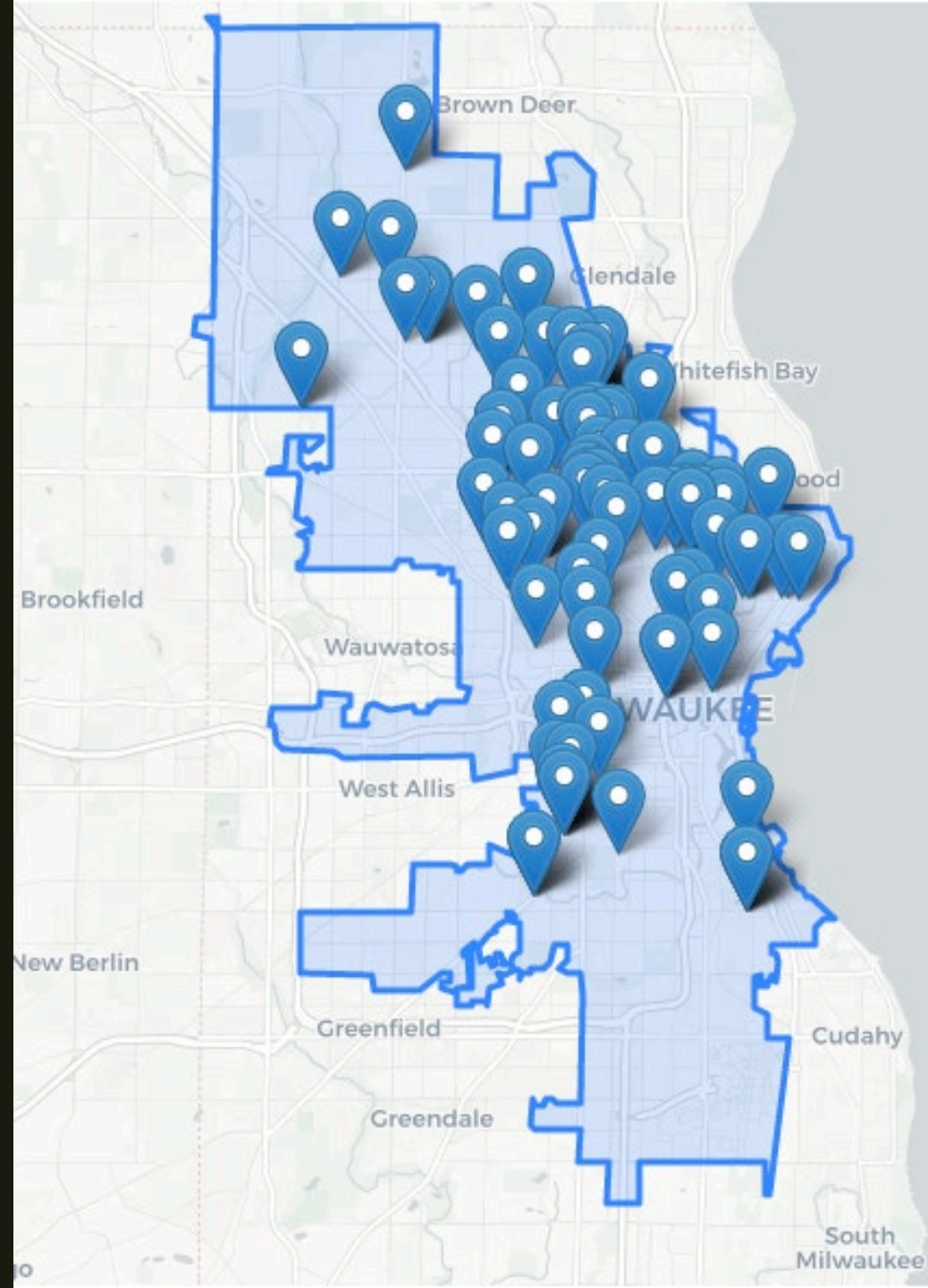
Use of Force Hotspots

Using python and folium to transform each record of a use of force into a hotspot calculation provides greater insight into where these incidents occurred most often in the first three quarters of 2020.
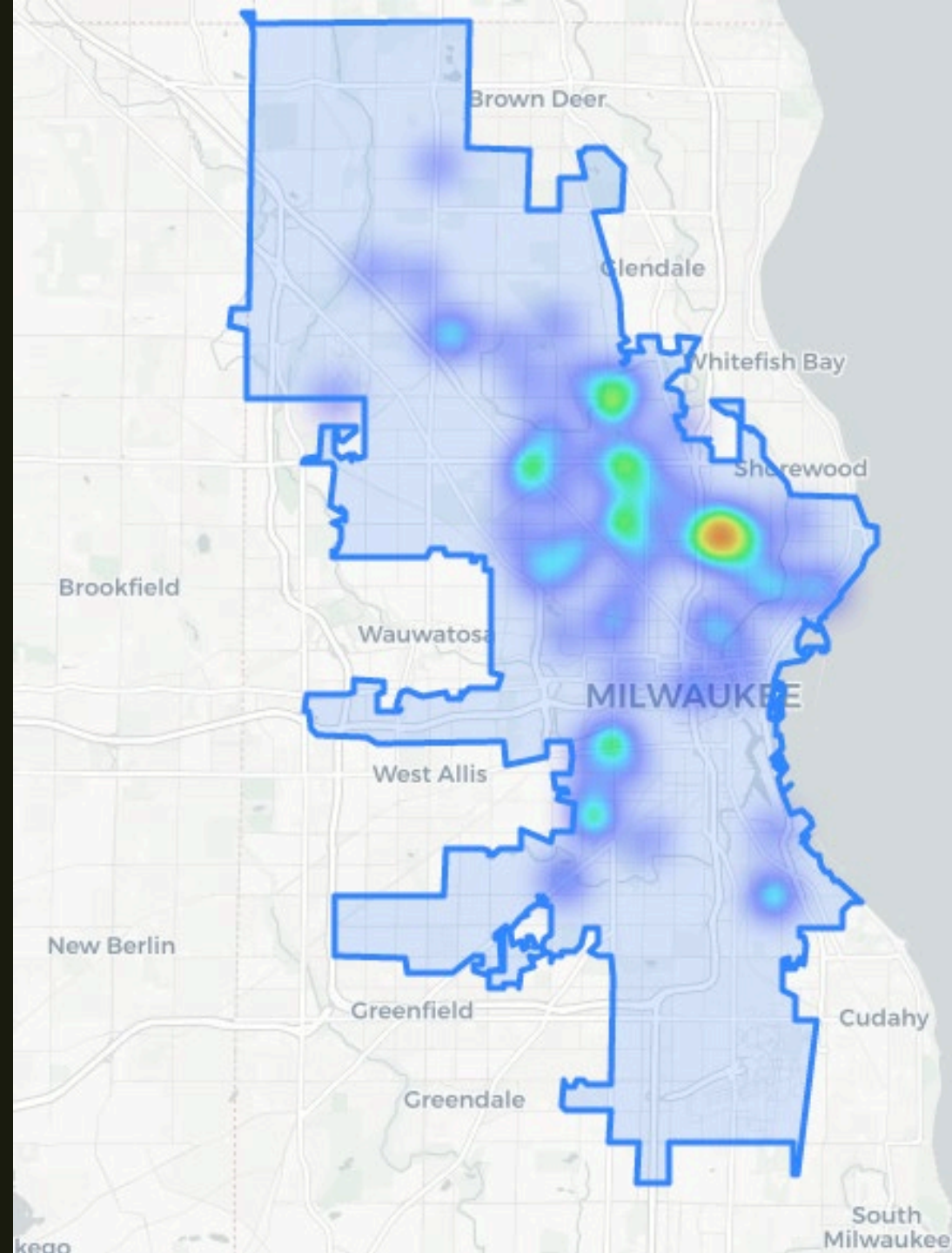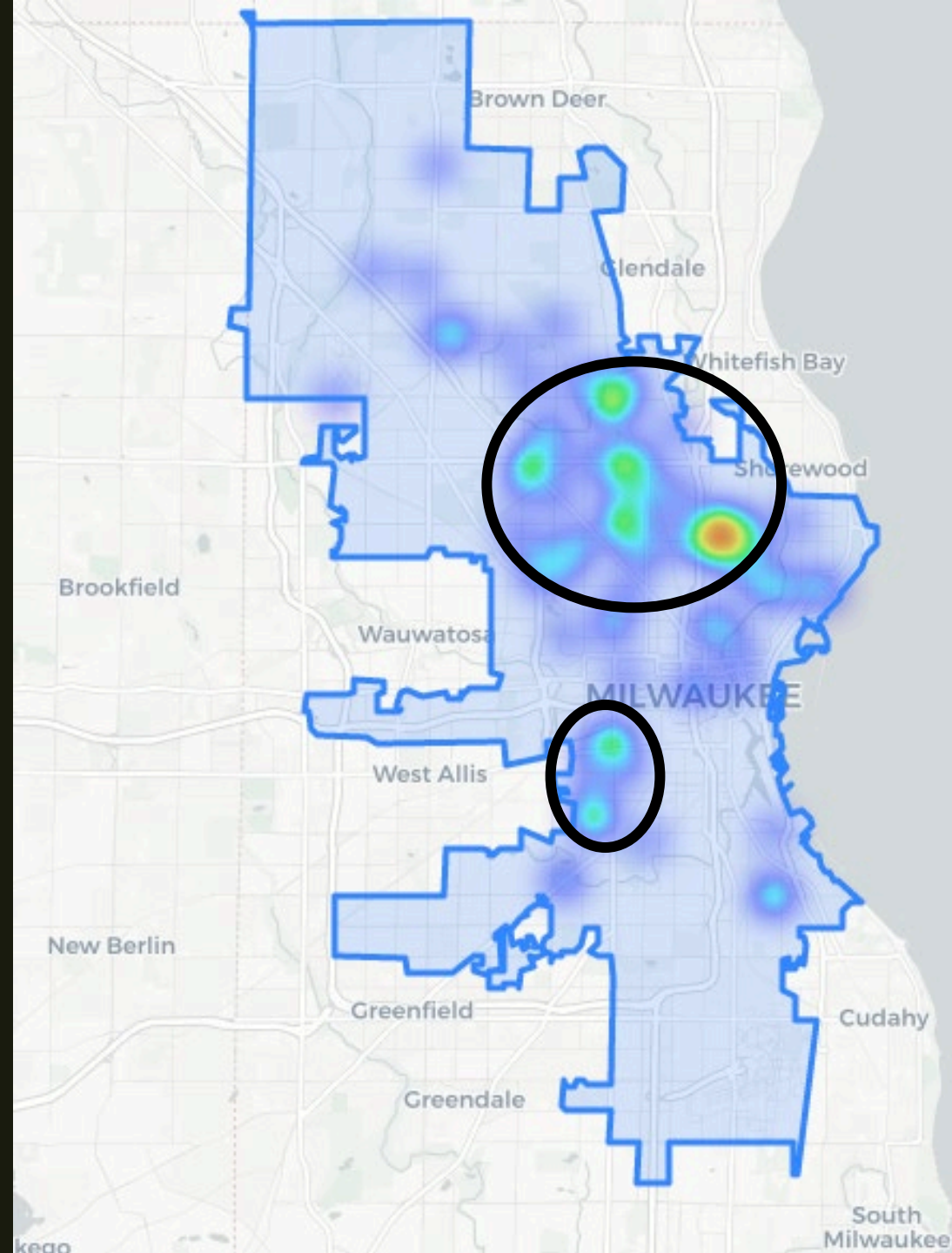
Use of Force Hotspots: Two Top Spots

Incidents are clustered on Milwaukee's near north side, and to a lesser extent on the south/central west side of the city.

There are other neighborhoods where incidents occurred, but lets focus on the largest two clusters.
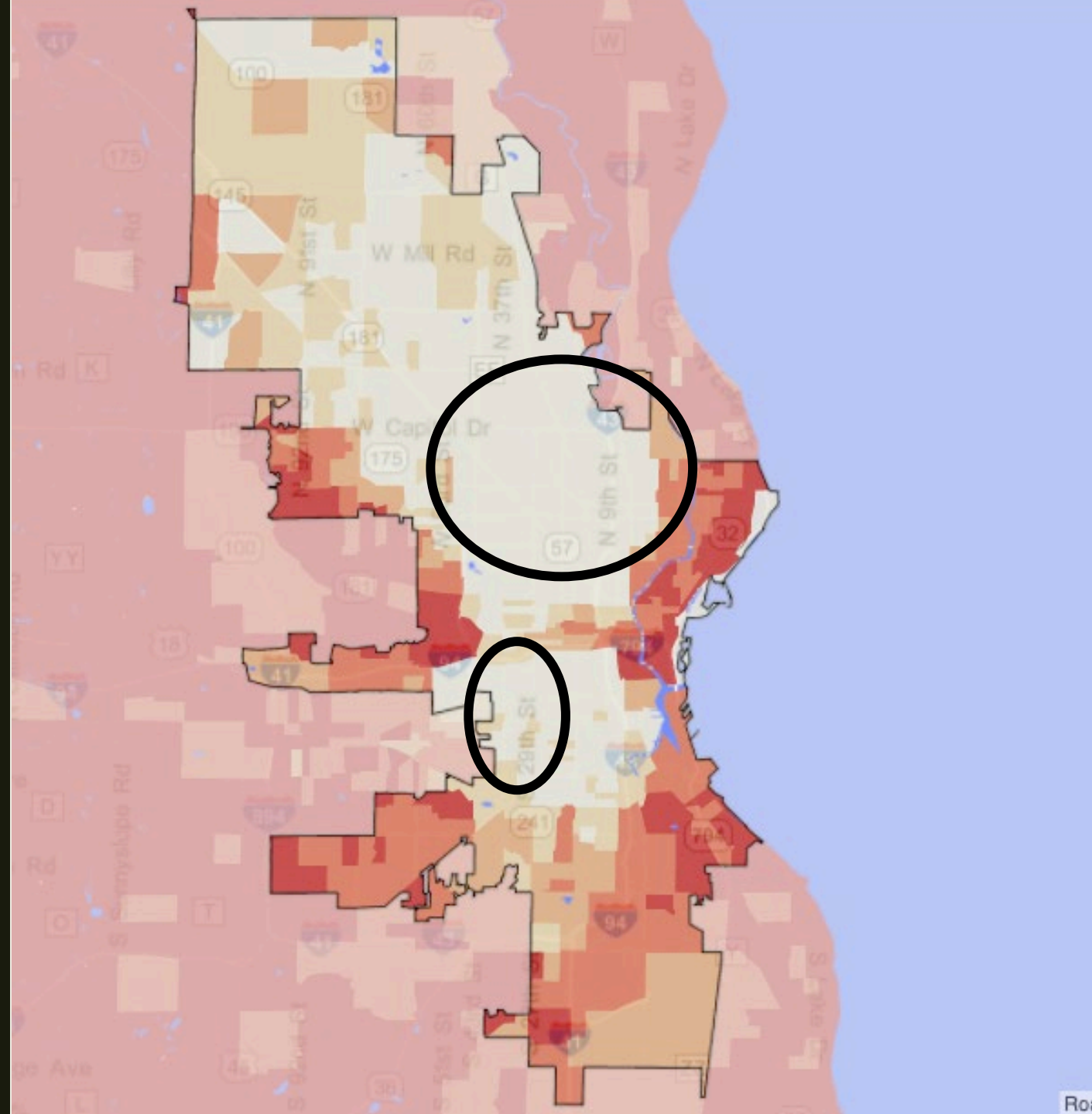
Use of Force Hotspots & Demographics

The outlined areas, where the two largest clusters of MPD's use of force occurred, are both in communities of color.

These choropleth maps, from Statistical Atlas show the density of white, Black, and Hispanic residents in Milwaukee.

In this map:
red = high density of white residents,
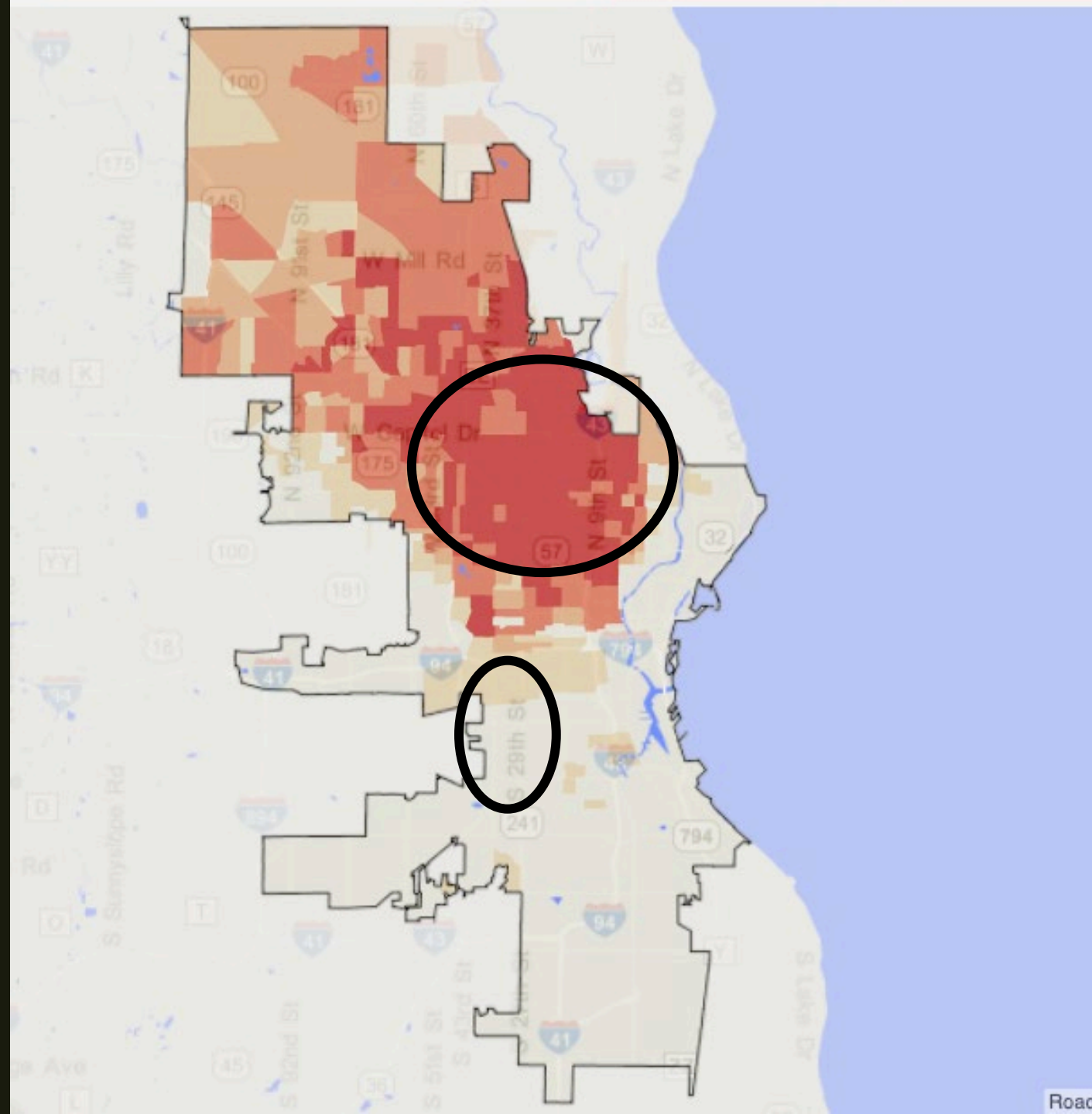yellow = low density of white residents.

Use of Force Hotspots & Demographics

The outlined areas, where the two largest clusters of MPD's use of force occurred, are both in communities of color.

These choropleth maps, from Statistical Atlas show the density of white, Black, and Hispanic residents in Milwaukee.

In this map:
red = high density of Black residents,
yellow = low density of Black residents.

Use of Force Hotspots & Demographics

The outlined areas, where the two largest clusters of MPD's use of force occurred, are both in communities of color.

These choropleth maps, from Statistical Atlas show the density of white, Black, and Hispanic residents in Milwaukee.

In this map:
red = high density of Hispanic residents,
yellow = low density of Hispanic residents.
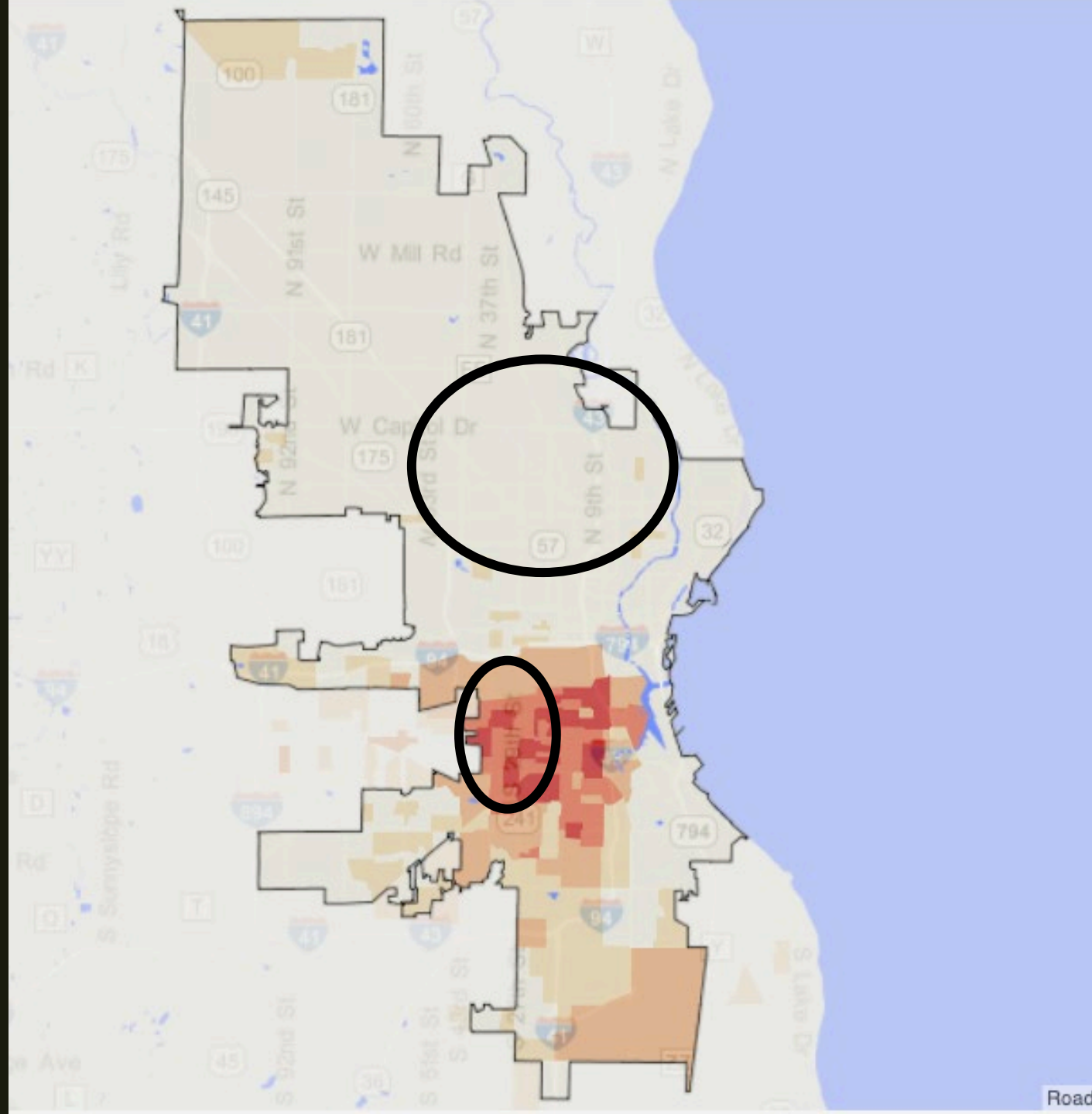
Conclusion

- MPD's use of force does happen more often in communities of color than in other parts of Milwaukee.

- Statistical analysis of uses of force and demographics may be possible if other tools like ArcGIS Pro or QGIS could be used to connect census data with MPD's data. In the future, if demographic information could be provided by MPD about the subjects of their use of force, that would also open more avenues to better understand MPD's use of force.