

## Background

Chicago has areas with high rates of poverty, racial minorities, and negative health outcomes [4]. The neighborhoods in Chicago predominantly occupied by Latinx and Black populations have the highest exposure to toxic air pollution [1]. There are negative health outcomes in these communities [2].

Over 90% of sites where hazardous industries have operated over the past century have been hidden by risky land usage [2]. We investigated where this hidden hazards were in relation to living spaces.

## Discussion

We found that the highest industry concentrations were in zip codes 60632 and 60612. Fabricated Metals and Industrial Machinery were the most common industries. These Industrial sites were often adjacent to family homes and concentrated in neighborhoods predominantly populated by minorities with low socioeconomic status (SES).

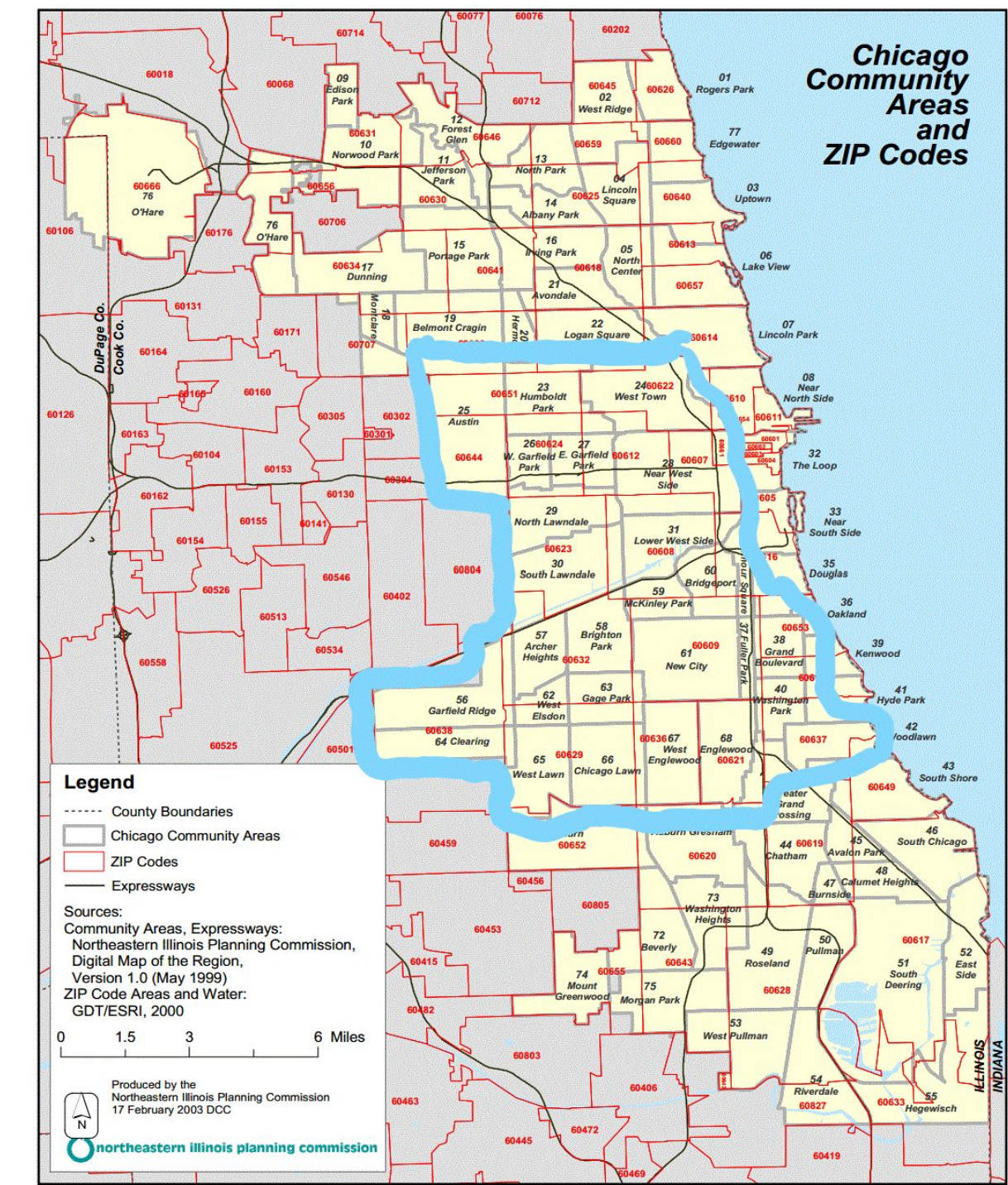


Figure 2. Outline includes the 26 Community Areas examined in this study.

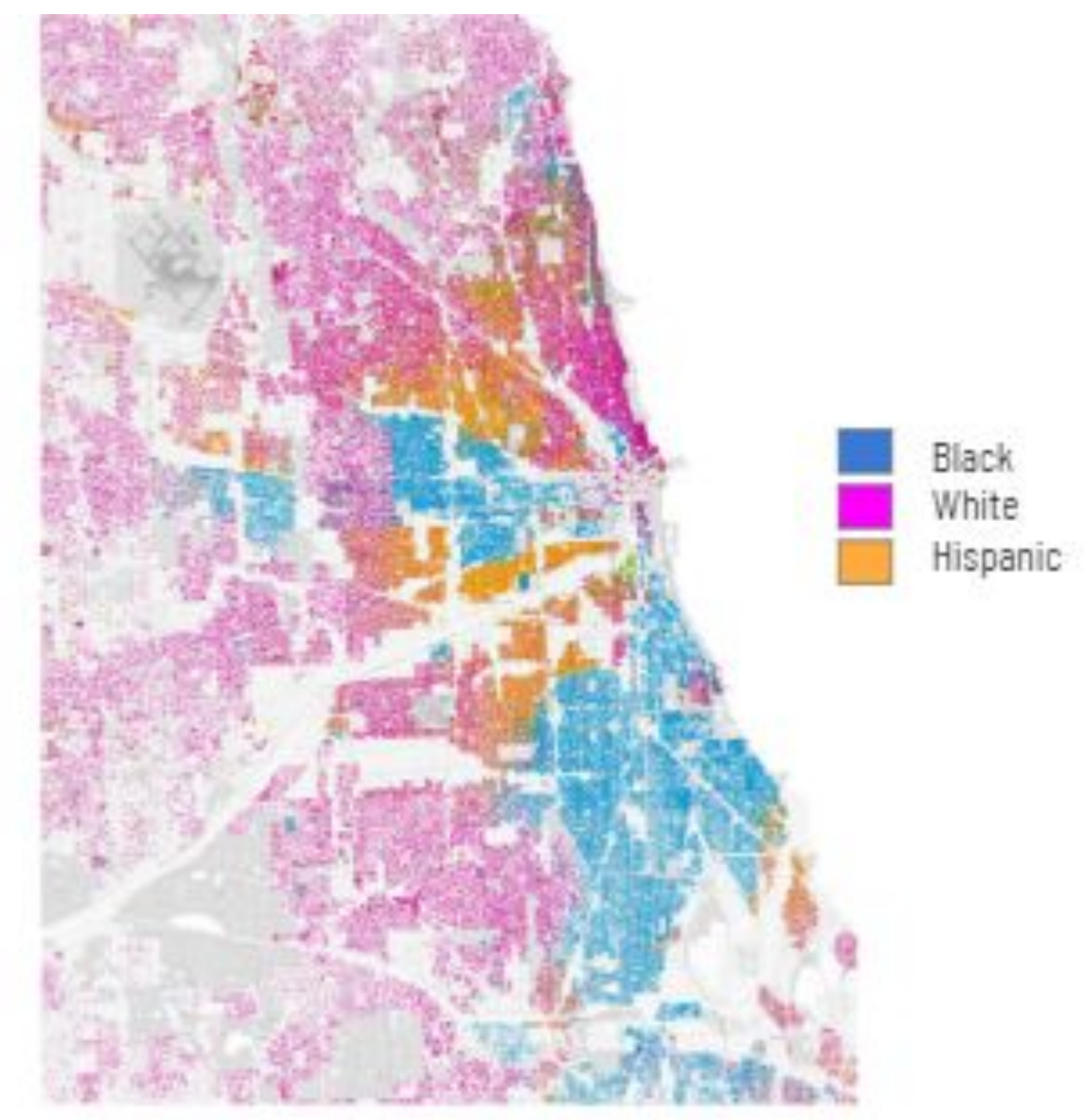


Figure 1. Taxonomy of Transitions developed by Bill Rankin in Chicago, Illinois in the year of 2000 [3.]

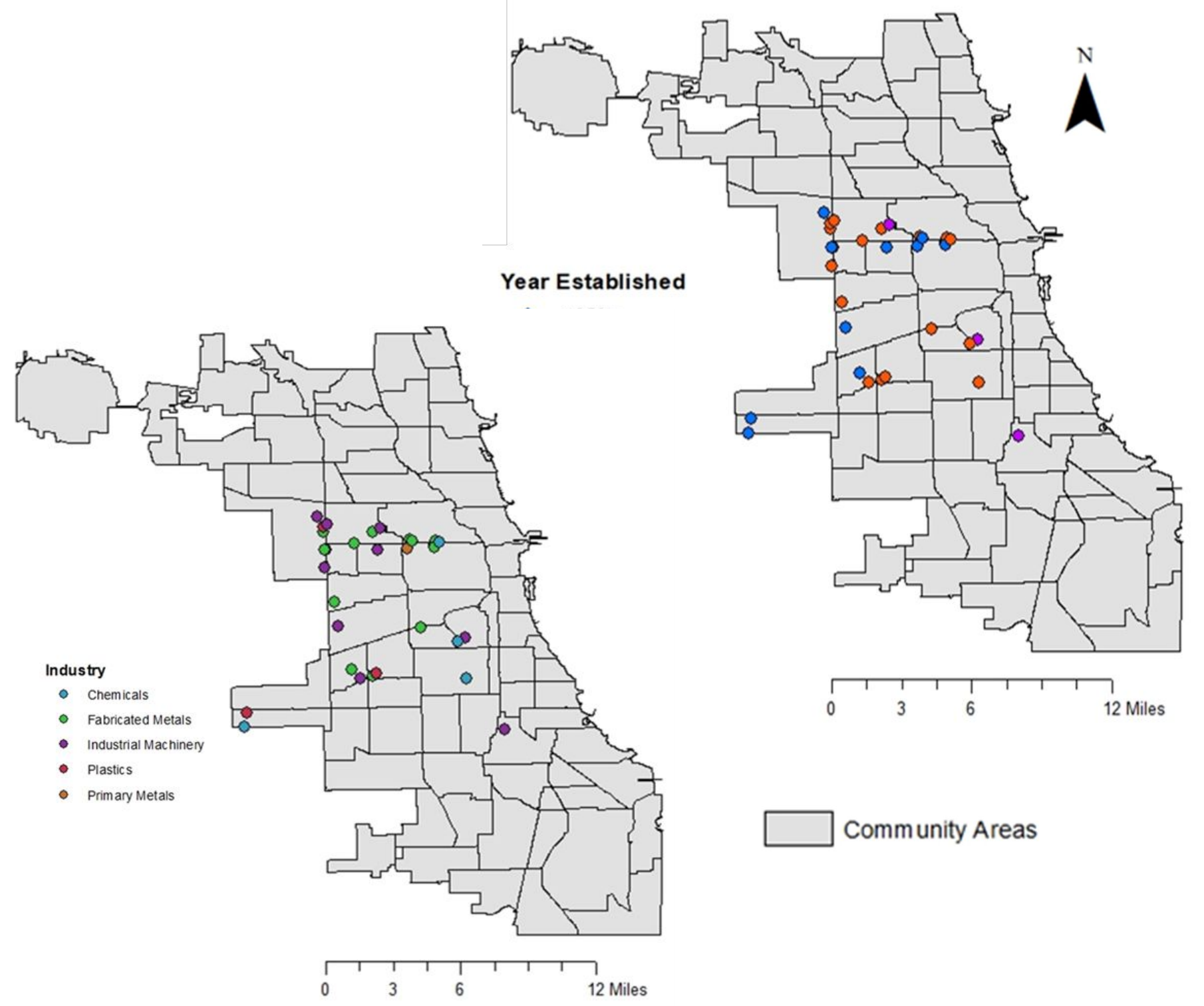


Figure 3. Maps of city of Chicago showing the location of industries and year established within the 26 zip codes.



Figure 4. This is a steel manufacturing company in Archer Heights Neighborhood located in Chicago that uses heavy metals such as zinc.



Figure 5. Residential area located directly across the street from the steel manufacturing company in Archer Heights.

## References

1. Chase, B. (2018, November 25). In Chicago, pollution hits west side, south side the hardest, study finds. *Chicago Sun Times*. Retrieved from <https://chicago.suntimes.com/business/chicago-pollution-health-hazard-west-south-side-study-finds/>
2. Frickel, S., Elliott, J., & MOLOTCH, H. (2018). *Sites Unseen: Uncovering Hidden Hazards in American Cities* (pp. 1-146). New York: Russell Sage Foundation. Retrieved from <http://www.jstor.org/stable/10.7758/9781610448734.13>
3. Rankin, B. (n.d.). radicalcartography. Retrieved from <https://www.radicalcartography.net/index.html?chicagodots>
4. Sampson, R. (2003). The Neighborhood Context of Well-Being. *Perspectives in Biology and Medicine*, 46(3), S53-S64.

## Process

Using the methodology outlined in the book *Sites Unseen and Uncovering Hidden Hazards in American cities* by Frickel and Elliott, we investigated environmental injustice in the city of Chicago. Seven industries harmful to human health were identified based upon prior research. We studied approximately 26 Chicago neighborhoods that were predominantly minoritized and poor communities.

Through public health data collection from the 2012-2015 American Community Survey., we found high rates of various negative health outcomes, high unemployment rates, and many families living below the poverty level in these areas.

We ordered Chicago manufacturing directories through the University of Minnesota interlibrary loan and began to build a database from 1950-2019.

We were limited by time constraints in data collection. Therefore, we rebuilt database for years 1955-1970 using the ReferenceUSA database. Standard Industry Codes based on the top seven industrial hazards were used to identify sites. Information was analyzed in Microsoft Excel.