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Identifying Environmentally Burdened Neighborhoods in Minneapolis Through a Cumulative Approach

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IDENTIFYING ENVIRONMENTALLY BURDENED NEIGHBORHOODS IN MINNEAPOLIS THROUGH A CUMULATIVE APPROACH

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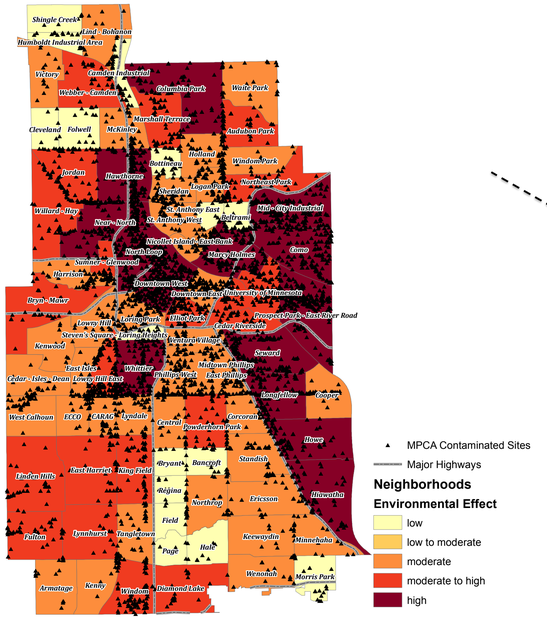
CSB|SJU ENVIRONMENTAL STUDIES

COLLEGE OF Saint Benedict

Saint John's UNIVERSITY

ENVIRONMENTAL EFFECTS 1-10

- Metropolitan Council Environmental Services Industrial Discharge Permits
- Major Highway 150 Meter Buffer Zone
- Environmental Protection Agency Toxic Releases Inventory Sites
- Minnesota Pollution Control Agency Total
- "What's In my Neighborhood" Contaminated Sites



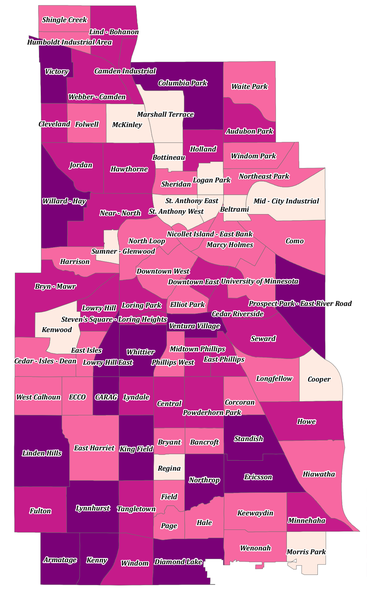
INTRODUCTION AND METHODS

Environmental Problems are not confined to political boundaries and tend to impact population beyond their sources, yet some communities are more impacted than others. This GIS project calculates a Cumulative Impact(CI) Score of environmental hazards for each neighborhood in Minneapolis based on the following four measures: environmental effects, public health effects, socioeconomic factors, and sensitive population. The higher the CI score, the more environmentally burdened a neighborhood is. The scope of this GIS project is limited, methodology simplified, and it is the hope of many environmental organizations in Minnesota that Minnesota Pollution Control Agency will take the lead to develop a scientific and comprehensive mapping tool for twin cities and beyond. An effective mapping tool for Minnesota will not only help policy makers attend to the needs of the most impacted but also help community members become more educated, informed and empowered to better their living environments.

SENSITIVE POPULATION + SOCIO-ECONOMIC FACTORS X PUBLIC HEALTH EFFECTS + ENVIRONMENTAL EFFECTS

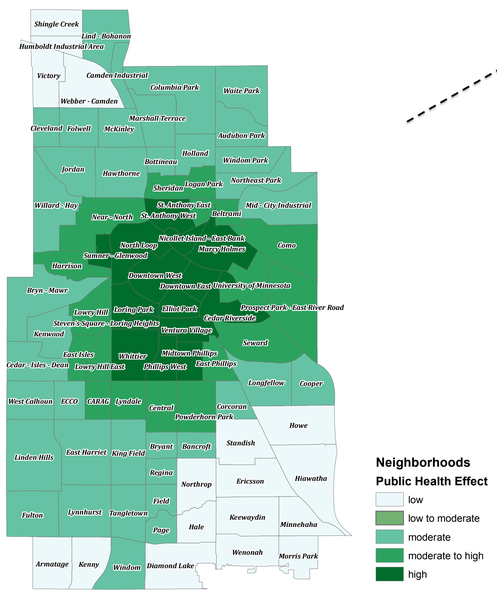
SENSITIVE POPULATIONS 1-5

- Children Under 5
- Elderly Over 65
- Female of Reproductive Age 18-39



PUBLIC HEALTH EFFECTS 1-5

- EPA National-Scale Air Toxics Assessment
- Total Neurological Risk Index
- Total Cancer Risk Index
- Total Respiratory Risk Index



CUMULATIVE SCORES CONVERTED TO A 1-10 SCALE

SOCIOECONOMIC FACTORS 1-5

- Population over 25 with Less than a High School Degree
- Families in Poverty
- Average Travel Time to Work