

# MiEJScreen

## FACTSHEET

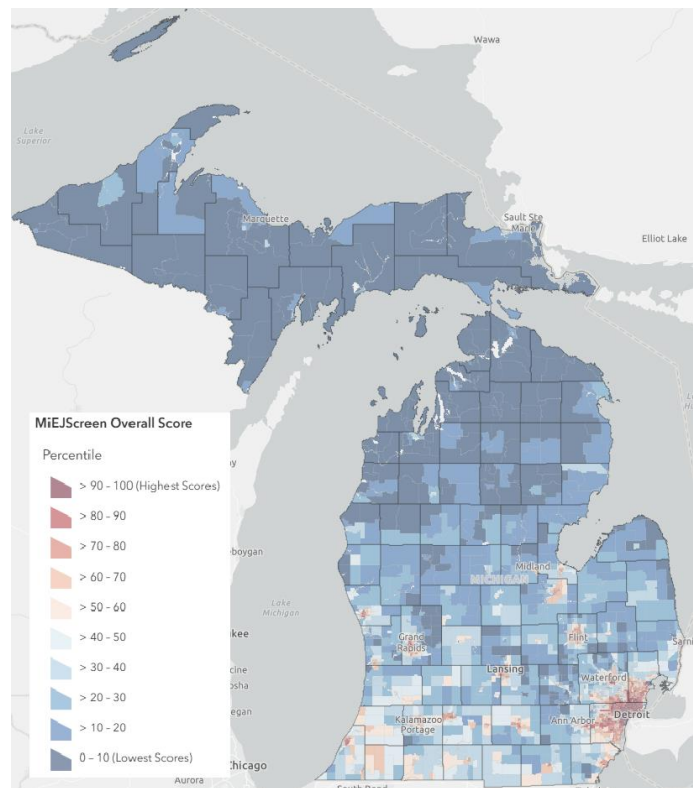
### INTRODUCTION

The state of Michigan defines environmental justice (EJ) as “the **equitable treatment and meaningful involvement** of all people, regardless of race, color, national origin, ability, or income and is critical to the development and application of laws, regulations, and policies that affect the environment, as well as the places people live, work, play, worship, and learn.”

The Michigan Department of Environment, Great Lakes, and Energy’s (EGLE) Office of the Environmental Justice Public Advocate, in cooperation with the Interagency Environmental Justice Response Team Data and Research Workgroup, has developed MiEJScreen, an interactive mapping tool, in response to the dedicated advocacy of community members and the 2018 recommendations from the Michigan Environmental Justice Workgroup. Best practices of EJ screening tools around the nation were used to create this resource.

### WHAT IS MI EJ SCREEN?

MiEJScreen is an interactive mapping tool that identifies Michigan communities that may be disproportionately impacted by environmental hazards. The map allows users to explore the environmental, health, and socioeconomic conditions within a specific community, region, or across the entire state. These data sets can be viewed individually or combined into a final MiEJScreen score that allows users to understand how communities experience environmental justice impacts relative to others. These results are depicted in the form of maps so that different communities can be compared to one another. A census tract with a high score is one that experiences higher pollution burden and vulnerability than census tracts with low scores. MiEJScreen ranks census tracts based on data that are available from state and federal government sources.

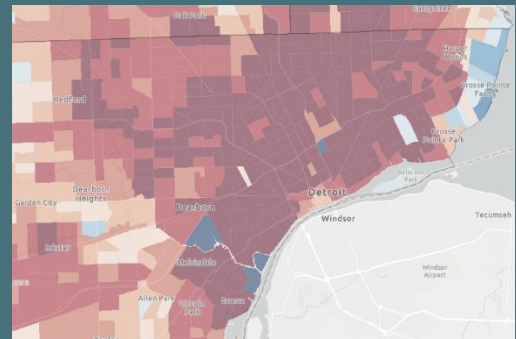


## The MiEJScreen Model

- Includes 26 statewide indicators as contributors to cumulative impacts representing environmental conditions and factors that affect people’s vulnerability to environmental pollution.
- Is closely modeled after CalEnviroScreen 3.0, a place-based model that provides information for the entire state on a geographic basis (census tract level).
- Calculates a final MiEJScreen score for a given census tract relative to the other tracts in the state by multiplying the environmental conditions and population characteristics components together.
- Provides a score that measures the relative environmental risk factors in communities. This map does not model overall burden on communities, nor does it reflect actual number of individuals affected by environmental risk factors.

## The Census Tract Level

Census tracts from the US Census Bureau (2010 census) are used to represent the locations of communities across Michigan. The average size of a census tract is approximately 4,000 people and represents a relatively fine scale of analysis. Below are the results by census tract in the Detroit area.



## Uses of MiEJScreen

- Examine and map cumulative factors to identify communities that may be disproportionately impacted by environmental hazards.
- Assist EGLE and other state departments with decisions, such as prioritizing resources, identifying areas for additional outreach, guide policy decisions, and prioritize programs.
- Inform future planning to improve the environment and quality of life for all residents and visitors of Michigan.
- Provide a resource for various stakeholders.

## REPRESENTING MICHIGAN COMMUNITIES

Environmental indicators typically are direct or proxy estimates of risk, pollution levels, or potential exposure (e.g., due to nearby facilities). Health and socioeconomic indicators are often used as proxies for a population’s vulnerability or susceptibility to pollution. The screening tool is a useful first step in understanding or highlighting locations that require further review. It is important to understand that screening tools do not provide a complete assessment of risk and have significant limitations.

## THE MIEJSCREEN SCORE

### Environmental Indicators:

- Environmental Exposures: Sources, concentrations, and releases of pollutants as a measure of potential pollution exposure.
- Environmental Effects: Adverse environmental factors that may contribute to poor environmental quality even when exposure is unknown or uncertain.

### Population Characteristics

- Sensitive Populations: Human populations that experience increased susceptibility to environmental health risk factors such as pollution due to biological factors.
- Socioeconomic Factors: Community characteristics that increase susceptibility to environmental health risk factors such as pollution.

| Categories | Environmental Exposure  | Environmental Effects   | Sensitive Populations  | Socioeconomic Factors  |
|------------|---|---|--|--|
| Indicators | NATA Air Toxics Cancer Risk<br>NATA Respiratory Hazard Index<br>NATA Diesel Particulate Matter<br>Particulate Matter (PM <sub>2.5</sub> )<br>Ozone<br>Traffic Density           | Proximity to Cleanup Sites<br>Proximity to Hazardous Waste Facilities<br>Impaired Water Bodies<br>Proximity to Solid waste Sites and Facilities<br>Lead Paint Indicator<br>Proximity to RMP Sites<br>Wastewater Discharge Indicator | Asthma<br>Cardiovascular Disease<br>Low Birth Weight Infants<br>Blood Lead Level<br>Life Expectancy  | Low Income Population<br>Black, Indigenous, People of Color Population<br>Educational Attainment<br>Linguistic Isolation<br>Population Under Age 5<br>Population Over Age 64<br>Unemployment<br>Housing Burden |
| Sub Scores | <b>Environmental Conditions</b><br>(Average percentile of Environmental Exposure indicators + 0.5 x average percentile of Environmental Effects indicators)<br><hr/> <b>1.5</b> |   | <b>Population Characteristics</b><br>(Average percentile of Sensitive Population indicators + average percentile of Socioeconomic Factor indicators)<br><hr/> <b>2</b> |  |
| Score      | Final Composite Score = Environmental Conditions score x Population Characteristics score<br><b>MiEJScreen Score</b>  |   |  |  |

## MORE INFORMATION

Visit the Office of Environmental Justice Public Advocate website at [Michigan.gov/EnvironmentalJustice](https://Michigan.gov/EnvironmentalJustice) for the MiEJScreen technical report, user guide, and more.

Please email EGLE at [EGLE-EnvironmentalJustice@Michigan.gov](mailto:EGLE-EnvironmentalJustice@Michigan.gov) with any questions, issues and/or feedback.

EGLE promotes the equitable treatment and meaningful involvement of Michigan's residents regarding the development, implementation, and enforcement of laws, regulations, and policies. Equitable treatment means that no group of people bears a disproportionate share of the negative consequences resulting from governmental, industrial, or commercial operations and policies. Meaningful involvement means all people have an opportunity to participate in decisions that affect their environment and/or health.

EGLE does not discriminate on the basis of race, sex, religion, age, national origin, color, marital status, disability, political beliefs, height, weight, genetic information, or sexual orientation in the administration of any of its programs or activities, and prohibits intimidation and retaliation, as required by applicable laws and regulations.

To request this material in an alternative format, contact [EGLE-Accessibility@Michigan.gov](mailto:EGLE-Accessibility@Michigan.gov) or call 800-662-9278.