



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Prioritizing People as We Protect the Environment

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Why Wetlands Matter

- Over 50 percent of wetlands lost in the state overall, with some areas and communities having lost 99% of their wetlands.
- The areas of Michigan with the highest development pressures on wetlands are also the areas of the state with the most cumulative loss of wetlands and highest social justice issues, climate change impacts, and other environmental problems like major flooding issues, urban heat impacts, and lack of open space

Why Prioritize People

- Protecting the Environment Requires Protection of People and public health
 - Wetlands are critical to the survival of people and play a role in quality of life
 - The connection between equity, cumulative impacts and environmental justice provides a basis of responsibly moving forward
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The Executive Order


- Governor Whitmer created the Office of the Environmental Justice Public Advocate and the role of Environmental Justice Public Advocate in Executive Order 2019-06
- Office of the EJPA was created as a Type I agency housed within EGLE's Executive Office.
- As a Type I agency, the office has a direct line to governor's office
- Interagency Environmental Justice Response Team was established.

Michigan and EJ

- The Interagency Environmental Justice Response Team began meeting monthly in July 2019.
 - Work Groups of the Response Team have been meeting since last fall.
 - Michigan Advisory Council for Environmental Justice (MAC EJ) has been meeting since February 2020.
 - Engagement with communities throughout the state to address equitable application of environmental laws and regulations is underway.
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Michigan Advisory Council on Environmental Justice





What is Environmental Justice?

Environmental Justice is 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.



What do we mean by “equitable treatment”

No group of people bears a disproportionate share of the negative consequences resulting from governmental, industrial or commercial operations and policies

All people benefit from the application of laws and regulations

Eliminating barriers such as poverty and lack of access, as well as repairing systemic injustices

What do we mean by “meaningful involvement”

People have an opportunity to participate in decisions that affect their environment and/or health

Decision makers seek out and facilitate the involvement of those potentially affected

People’s concerns are considered in decision-making processes

People can influence state agency decisions

Equity and Environmental Justice

- Diversity vs. **Inclusion**
 - Diversity simply points to difference
 - **Inclusion** describes the need to incorporate these differences on a shared platform where they are accepted and valued
- Equality vs. **Equity**
 - Equality reflects treating everything the same
 - **Equity** takes into consideration how the past has shaped the present and assesses social advantage/disadvantage. It reflects providing what is needed versus equal amounts.

Disparate Impact Factors



Proximity and Exposure



Unique Exposure Pathways



Physical Infrastructure



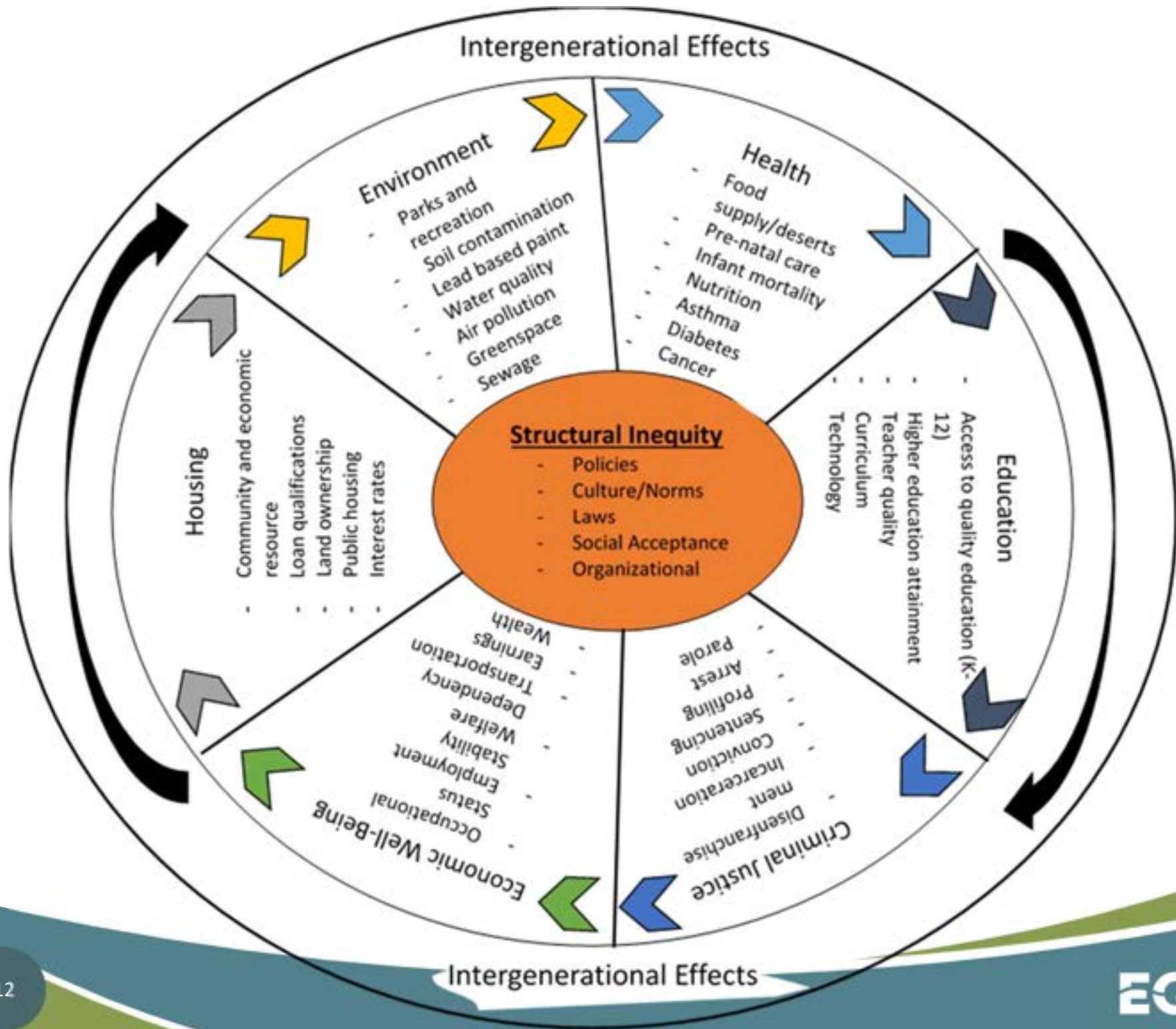
Cumulative Impacts



Public Participation



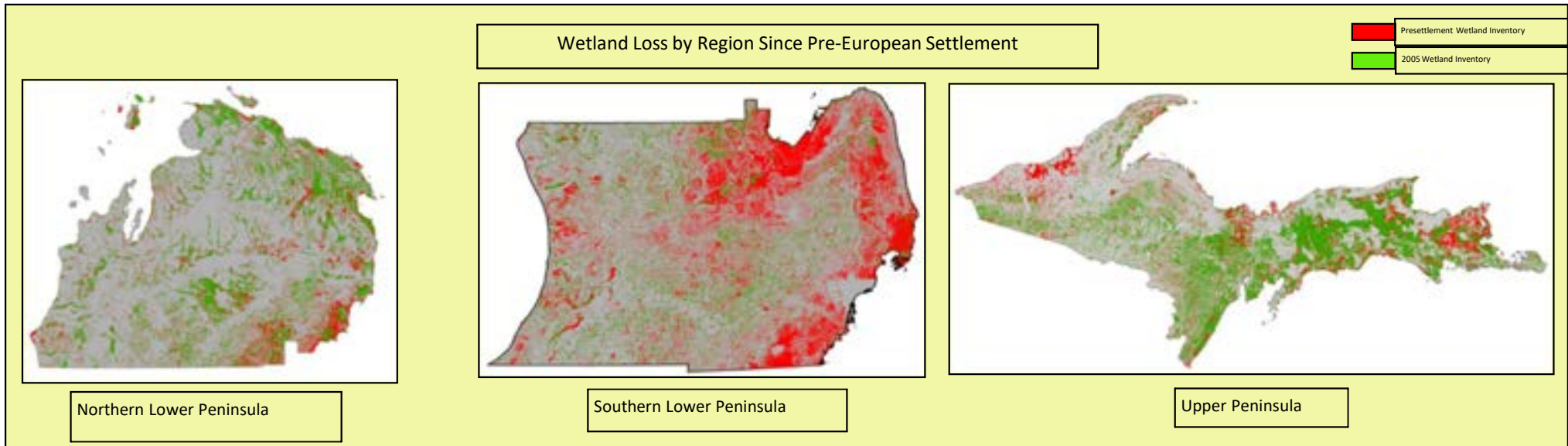
Vulnerable Populations



Wetlands and Cumulative Impact

- Understanding the connections between cumulative impacts and protecting people is critical.
- Working with people and providing meaningful engagement and equitable access is critical.
- Using tools, knowledge and action to protect wetlands is an important action now.

Loss of functions and values may have far reaching impacts



Cumulative Impacts: Historic cumulative loss of wetlands, lakes, and streams within a watershed contribute to loss of flood storage, water quality and pollution treatment, streamflow maintenance, sediment retention, fish and wildlife habitat, shoreline stabilization, etc.



USEPA Perspective



“The combined, incremental effects of human activity, referred to as cumulative impacts, pose a serious threat to the environment. While they may be insignificant by themselves, cumulative impacts accumulate over time, from one or more sources, and can result in the degradation of important resources.”

Impacts of Climate Change

- The effects of climate change in Michigan are likely to result in more severe storm events, flashier streams, exacerbated flooding problems after storm events, increased fragmentation of fish and wildlife habitat, and more.
- Watersheds that have lost significant wetlands, lakes, and stream functions are not well suited to adapt to these changes, and protection and restoration of these functions are recommended as some primary climate change adaptation priorities.



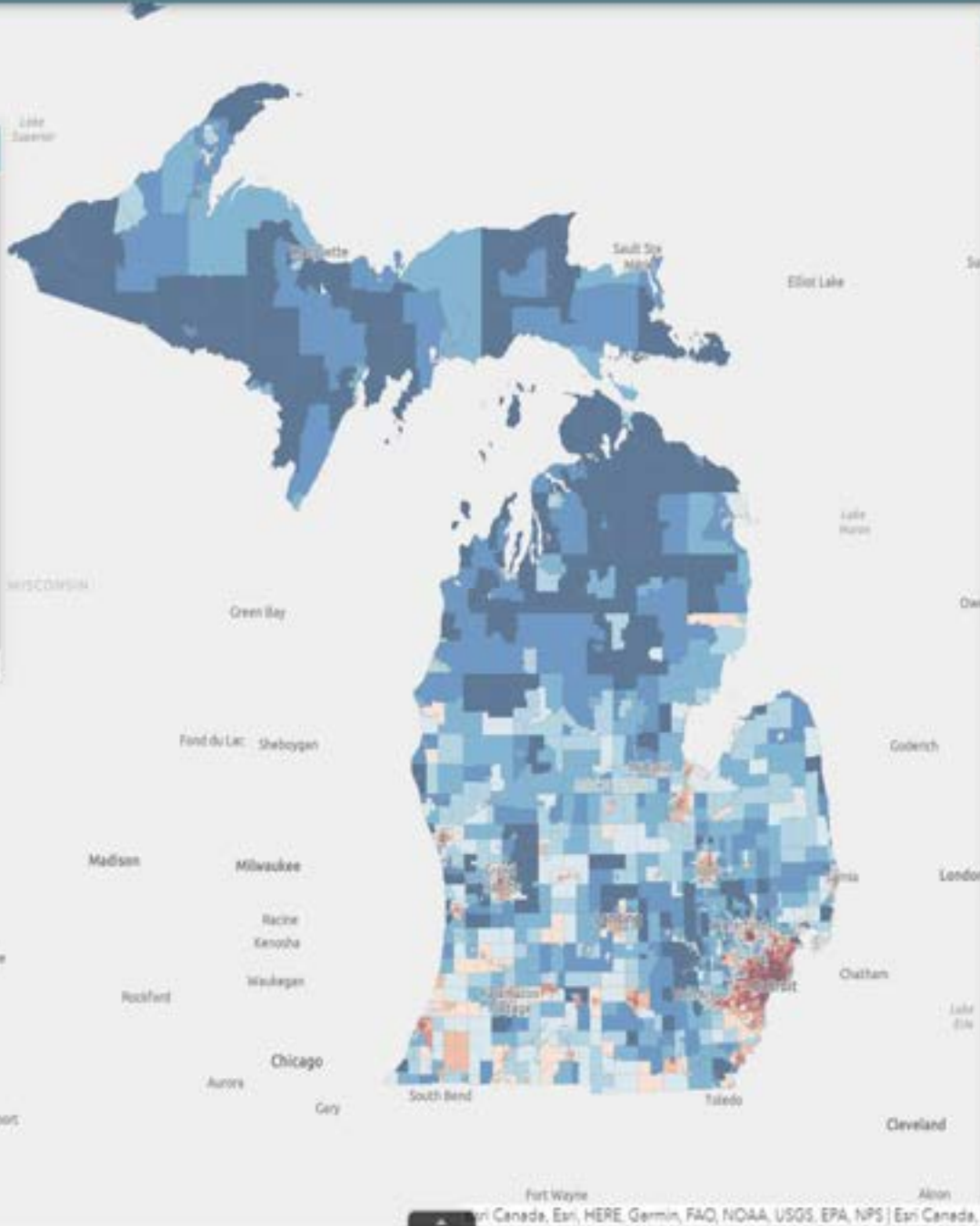
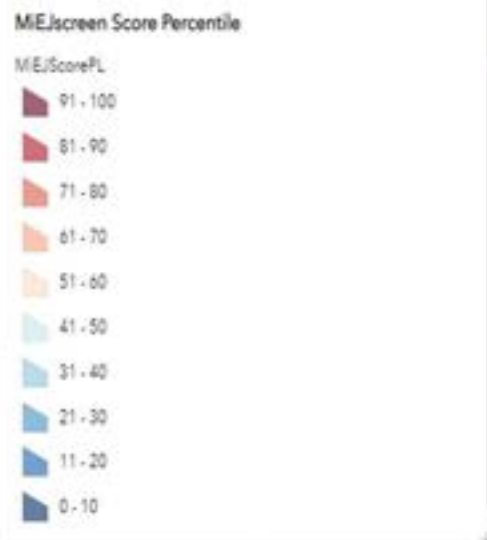
Loss of functions and values may have far reaching impacts

Environmental Justice: Environmental Justice communities may be disproportionately impacted by environmental hazards, including higher pollution burden and vulnerability. This can exacerbate the cumulative impacts of wetland, lake, and stream, losses within these communities.



Esri World Geocoder

Legend



Layer List

- Layers**
- MiJScreen Score Percentile
 - Environmental Conditions Percentile
 - Population Characteristics Score Percentile
 - 1) Environmental Conditions: Exposure
 - a) NATA Air Toxics Cancer Risks
 - b) NATA Respiratory Hazard Index
 - c) NATA Diesel Particulate Matter
 - d) Particulate Matter 2.5 (PM2.5)
 - e) Ozone
 - f) Traffic Proximity and Volume
 - 2) Environmental Conditions: Environmental Effects
 - a) Cleanup Sites Proximity
 - b) Treatment and Disposal Facilities Proximity
 - c) Impaired Waters
 - d) Solid Waste Proximity
 - e) Lead Paint Indicator
 - f) RMP Proximity
 - g) Wastewater Discharge Indicator
 - 3) Population Characteristics: Sensitive Populations
 - a) Asthma Emergency Room Discharges



MiEJScreen – Purpose

Develop a Michigan specific mapping tool

Assess cumulative factors (environmental, socioeconomic, health) that communities in Michigan may face

Help inform decisions, allocate resources, and address community specific issues/concerns

Able to be used by multiple stakeholders

Methodology

Based on California's CalEnviroScreen

Spatial analysis of relative burdens in Michigan communities at the census tract level

Uses both national and statewide indicators

Uses percentiles to assign scores for each indicator

Uses a scoring system in which the percentiles are averaged for the set of indicators in each of the four components

Combines the component scores to produce cumulative score for a given place relative to other places in the state

Context Layers

Michigan PFAS Sites

Ozone/SO2 Non-Attainment Areas

Schools, hospitals, places of worship

Roads and railroads

Boundaries (zip code, cities, counties, tribal areas, etc.)

Redlining maps

Sites reporting to EPA

Impaired water boundaries

Population density

Public housing

Prisons

EJ Grants



USEPA

“Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of cumulative impact analysis.”



What We Can Do

- Take Action to Protect the Wetlands
- Take Action to Protect People
- Look at Locations for Development that Minimize Impact on People and the Planet
- Learn More about Communities and Wetlands
- Assess Cumulative Impacts
- Work Collaboratively With People to Engage Them in Wetlands Related Work



Questions?

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