

## Overview

- **Purpose:** To provide usable climate information to inform Detroiters Working for Environmental Justice's (DWEJ) Detroit Climate Action Plan.
- **Partners:** Detroiters Working for Environmental Justice (DWEJ), Detroit Climate Action Collaborative (DCAC)
- **People:** Citizens of Detroit, MI
- **Impact:** The Detroit Climate Action Plan was published in 2017, incorporating much of the data and information that GLISA and DWEJ developed together. As a result of the plan, the Detroit City Council unanimously passed a greenhouse gas ordinance in 2019, which aimed to cut emissions from City government sources 30% by 2025 and 100% by 2050.

The City of Detroit, MI, is facing a variety of present and future climate change concerns, including intense heat waves, flooding, water contamination, and infrastructure damage. These impacts are exacerbated by existing socioeconomic stressors, such as Detroit's shrinking economy and population, pollution, and inequities. The Great Lakes Integrated Sciences and Assessments (GLISA) has worked with Detroit Climate Action Collaborative (DCAC), an initiative of Detroiters Working for Environmental Justice (DWEJ), since 2013 to jointly develop customized, local climate information to inform the group's climate action planning for the City. This data was used to inform Detroit's first-ever Climate Action Plan, released in the Fall of 2017. DWEJ's goal for the Detroit Climate Action Plan was to stimulate public and political support for climate action. The plan outlines specific ideas and attainable goals benefiting more than 672,000 residents of Detroit and 300,000 businesses in Metro Detroit.

GLISA's work was a continuation of a long-standing relationship with DWEJ to inform its plan. For several years prior to the plan's release, GLISA worked with DWEJ to identify custom climate thresholds critical to Detroit. GLISA updated its city-specific Historical Climatology with information for days over 100°F, deaths due to heat-related events, and future projections maps based on high and low emissions scenarios for temperatures greater than 90°F and 95°F. These thresholds were identified by the stakeholders as specific areas of concern in Detroit. GLISA provided DCAC with a [summary](#) (and a [one-page executive summary](#)) of climate change impacts Detroit is likely to face, including: increases in average temperatures and total precipitation, more frequent and intense heat waves increasing the risk of heat-related illness, stronger and more severe storms, and cascading impacts from flooding leading to water contamination and infrastructure damage. GLISA Climatologist Omar Gates - a Detroit native - was invited to present at a press conference to announce the plan's release. In his remarks, Gates drew attention to the potential impacts of



Former Director of Policy for Detroiters Working for Environmental Justice Kimberly Hill-Knott, GLISA climatologist Omar Gates, and others announce the Detroit Climate Action Plan to the public.

warmer temperatures on vulnerable populations, such as youth and the elderly, and increased precipitation on the daily functions of the city. Highlighting the importance of the data within the plan, Gates said: “Having accurate climate information that explains these changes and impacts is critical for effective planning, building climate resilience, and increasing the future sustainability of the city.” The process of creating the plan is outlined in Diane Cheklich’s mini documentary from 2017, titled *From the Bottom Up: Climate Action in Detroit*.

The plan itself presents a concise hierarchy of information, including photos and graphs. The plan explains how DWEJ is proud to have created one of the few sustainability plans in the country that was written largely by residents instead of being given to them by the government. It discusses the science of climate change and why Detroit needs a climate action plan through summaries of the research and information provided by GLISA and its colleagues at the University of Michigan’s School for Environment and Sustainability (SEAS) and Taubman College of Architecture & Urban Planning. The plan explains the problems, solutions, and goals for the five major areas of action: 1) solid waste; 2) public health; 3) businesses and institutions; 4) parks, public spaces, and water infrastructure; and, 5) homes and neighborhoods. Within these areas, the plan contains over 100 discrete action steps.

DWEJ commissioned a [financial study](#) after the publication of the plan to examine the potential economic impact that the action steps could create. The 2018 report suggested that investing in infrastructure is one way to reimagine how Detroit plans and funds government activity. A major policy victory occurred in July 2019, when Detroit City Council unanimously passed a greenhouse gas ordinance, which aimed to cut emissions from City government sources 30% by 2025 and 100% by 2050. The City also launched a Sustainability Office in 2017 and published its own Sustainability Action Agenda in 2019.

*“We’re using this information to develop a more targeted approach in our recommendations. For instance, when considering green infrastructure or energy usage reduction projects, we’re incorporating information from the climatology report, developed by GLISA, in addition to our maps that show the areas of greatest climate vulnerability. So instead of planting trees everywhere for aesthetic purposes, we’re looking at the areas that are most prone to climate threats.”*

*-Kimberly Hill Knott, former Director of Policy for DWEJ*

## About GLISA Advancing Climate Knowledge for Adaptation and Resilience with Great Lakes Communities

Established in 2010, GLISA is a collaboration between the University of Michigan and Michigan State University, supported by the National Oceanic and Atmospheric Administration (NOAA). As one of 11 NOAA Regional Integrated Sciences and Assessments (RISA) teams, GLISA works at the boundary between climate science and decision-makers, striving to enhance Great Lakes communities’ capacity to understand, plan for, and respond to climate impacts now and in the future. Our team of social and physical scientists collaborates to:

- Develop usable climate information tailored to stakeholder needs;
- Develop, implement, and evaluate resources and tools to apply climate information to decision-making;
- Facilitate collaborative activities, education, and training and support stakeholder networks; and,
- Investigate emerging climate issues and synthesize findings for practitioners.



### Great Lakes Integrated Sciences + Assessments (GLISA)

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Example of GLISA’s boundary chain model of stakeholder engagement for the Great Lakes Climate Adaptation Network (GLCAN). Climate information is tailored and moves through different boundary organizations (links in the chain) to connect science to users. Adapted from Lemos et al. 2014.