

Climate Change and the Great Lakes Region

CLIMATE CHANGE IS IMPACTING THE GREAT LAKES AND OUR COMMUNITIES. THE GOOD NEWS IS THAT FEDERAL INVESTMENTS TO RESTORE THE GREAT LAKES CAN HELP COMMUNITIES PREPARE FOR, AND ADAPT TO, CLIMATE CHANGE. THESE INVESTMENTS ARE GOOD FOR THE LAKES AND OUR COMMUNITIES.

More than 30 million people rely on the Great Lakes for drinking water. The lakes support a \$7 Billion fishery and support a robust manufacturing, tourism, agriculture, real estate, and outdoor recreation markets. The lakes support countless species of fish and other wildlife. But people and wildlife are increasingly at risk from a changing climate that is exacerbating many of the threats to the Great Lakes and our drinking water, from sewage overflows to toxic pollution to the loss of habitat. These effects will only worsen as the variability of the climate increases. Investments to restore the Great Lakes can help lessen the impacts from a warming climate.

There are two ways to confront the climate crisis. First, governments, businesses, and individuals can act to reduce climate pollution. This strategy, known as mitigation, is a long-term strategy to eventually halt carbon pollution and avoid the worst impacts to our environment, economy, and communities. Second, we can support actions to help communities prepare for, and adapt to, the changes that are already occurring. This strategy, known as adaptation, provides tools and strategies to restore the natural landscape to buffer communities from the impacts and damage from the climate change that is already occurring.

Restoring and protecting the Great Lakes and the interconnected series of wetlands, tributaries, and habitat around them helps communities become more resilient to climate impacts.

Impacts of Climate Change on the Great Lakes Region

Climate change is causing more extreme weather, with increased rain in the spring, and dryer, hotter summers and winters. These changes are exacerbating existing threats to the Great Lakes, such as runoff pollution and sewage overflows—and they are impacting people, wildlife, and the economy.

SEVERE STORMS EXACERBATE RUNOFF, THREATEN DRINKING WATER

- More severe storms due to climate change are leading to more runoff in city streets, more sewage overflows, and more untreated sewage dumped into the Great Lakes and their tributaries.
- These storms are also causing more farm runoff, where animal waste and fertilizers flow off of farm fields and into local waters, increasing the size and scope of harmful algal blooms that pollute drinking water, foul beaches, and contribute to fish and bird mortality.
- Flooding that occurs where there is toxic waste can spread those contaminants, threatening the health of people and communities.

FLOODING THREATENS NEIGHBORHOODS

- Increased intensity of storm are overwhelming our water infrastructure, leading to more flooding, which threatens homes and businesses.

WARMING WATERS PUT FISH AND WILDLIFE AT RISK

- Warming waters are leading to more and larger biological dead zones—areas in the lakes that are devoid of oxygen and cannot support aquatic life. This is harming the ability of the Great Lakes food web to provide for the fish, wildlife, and people that depend on them.

FLUCTUATING LAKE LEVELS, RISING LAKE TEMPERATURES LEAD TO HABITAT LOSS

- Over the past decade, lake levels have seen significant variability going from record lows to record highs in a matter of years.
- Highly variable lake levels place communities and coastal habitats at risk. As water levels surge higher, communities and habitats are impacted by flooding and erosion. As water levels decline, large wetlands become small wetlands and small wetlands become dry land, losing their natural cleaning, water storage, and flood and erosion mitigating features.
- Due to warmer surface water temperatures and decreased ice cover, shallow-water habitats are becoming more suitable for invasive species.

SEVERE WEATHER HURTS THE ECONOMY

- Flooding is damaging homes, businesses, and property, resulting in growing costs for local residents, businesses, cities and utilities.
- Warming and extreme weather events from climate change is causing significant reductions in yields of some crops, increasing hardships for farmers.
- Shorter winters and decreased ice cover is harming recreation and tourism that are a major source of economic vitality for the region. The summer season is also being affected through beach and shoreline contamination.

The impacts of the climate crisis on the Great Lakes are expansive and will continue to worsen, unless action is taken. Fortunately, there are manageable solutions to help communities adapt to climate change, as the nation tries to secure long-term policies that curtail climate pollution.

Solutions

Investments to restore and protect the Great Lakes can also help communities confront the climate crisis. Restoring coastal habitat, wetlands, and floodplains throughout the region allow the natural landscape to absorb storm water, reduce flooding and filter pollutants, while also sequestering carbon pollution. These efforts to restore the Great Lakes ecosystem also improve the ability of our communities to withstand some of the changes from a warming climate—often referred to as climate resiliency. Importantly, these investments also create good-paying, local jobs. As the federal government continues to address the serious threats to the Great Lakes and its many communities, it will be important to ensure that federal funding decisions prioritize actions that also address climate impacts. Further, it will be important to prioritize investments in communities that have been harmed the most by pollution and climate change. EPA data shows that low-income and minority communities are disproportionately impacted by water and air pollution, as well as flooding and dangerous heat waves—known as the heat island effect—caused by a warming climate.

The Healing Our Waters-Great Lakes Coalition applauded the passage of the Inflation Reduction Act in August of 2022, securing a historic \$370 billion in investments to tackle climate change. Though taking a critical step to confront the climate crisis, the Coalition recognizes the need for further support for federal investments to restore the Great Lakes and confront the climate crisis. The Coalition urges Congress to continue funding for key programs and provide sufficient base funding for agencies to implement the Biden Administration's climate goals. This funding will restore the Great Lakes, protect public health, help communities prepare for and adapt to climate change, and facilitate community engagement across federal agencies so that local voices can be taken into account when decisions are made.



Since 2004, the Healing Our Waters-Great Lakes Coalition has been harnessing the collective power of more than 185 groups representing millions of people, whose common goal is to restore and protect the Great Lakes. Learn more at HealthyLakes.org or follow us on Twitter, Facebook, Bluesky, Mastodon, and Threads [@HealthyLakes](https://twitter.com/HealthyLakes).

CONTACT US. WE'RE HERE TO HELP.

LAURA RUBIN
Director
(734) 887-7106
RubinL@nwf.org

CHAD LORD
Policy Director
(202) 454-3385
CLord@npca.org

ALEXIS LOPEZ-CEPERO
Senior Program Manager
(202) 454-3382
ALopez-Cepero@npca.org

CELIA HAVEN
Field Director
(734) 887-7123
HavenC@nwf.org

JORDAN LUBETKIN
Communications Director
(734) 887-7109
Lubetkin@nwf.org

LINDSEY BACIGAL
Senior Communications
Coordinator
(734) 887-7113
BacigalL@nwf.org

SOPHEE LANGERMAN
Equity and Justice
Partnerships Coordinator
(734) 887-7103
LangermanS@nwf.org