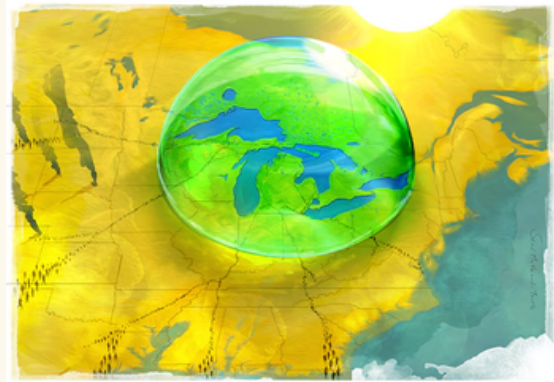


# ASK CLIMATE CHANGE & HEALTH SERIES

## Michigan: A Climate Haven?

### What's inside:

1. What is a climate haven?
2. Michigan's claim to haven-hood
3. Pros and cons of being a climate haven
4. Actions to take
5. Let's talk
6. Recommended Resources

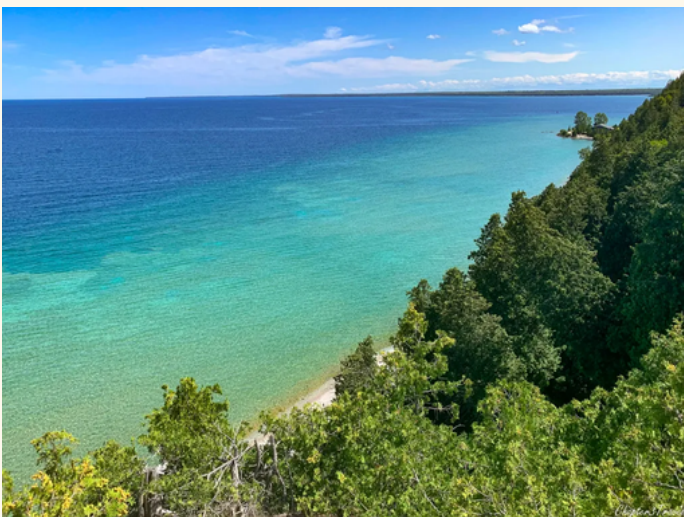


## What is a climate haven?

A climate haven is a region that is projected to avoid the worst impacts from climate change (in other words, a place that has lower risk for things like extreme weather events, extreme heat, and sea-level rise). The key words here, though, are *worst* and *projected*. A climate haven might avoid the *worst* of the impacts, but—as experts continually remind us—there is no hiding from climate change. Every place on earth will face consequences from the warming climate. In fact, many places hailed as climate havens just two or three years ago are now seeing intense impacts from climate change. It's a humbling reminder that, while science can help us *project* how climate change will play out, scientists themselves admit that we really don't know what can happen as we continue to pass tipping points that have never been tested before. We're truly in uncharted territory.

For now though, there seems to be some indication that some places will be more comfortable places to live in the coming decades. So what lands Michigan on the list of climate havens?

## Michigan's claim to climate haven-hood: a critical look



Lake Huron from Mackinac Island. Image: Scott Polley

If you have a sneaking suspicion the Great Lakes have something to do with it, you'd be right. As global fresh water supplies continue to dwindle, these wondrous lakes will become more and more important for sustaining human life. But it's not just about the water; air that passes over the lakes is cooled by the water, and in turn helps keep Michigan cool. This Michigan microclimate is part of what makes our fruit industry so successful, and also contributes to our appeal as a climate haven.

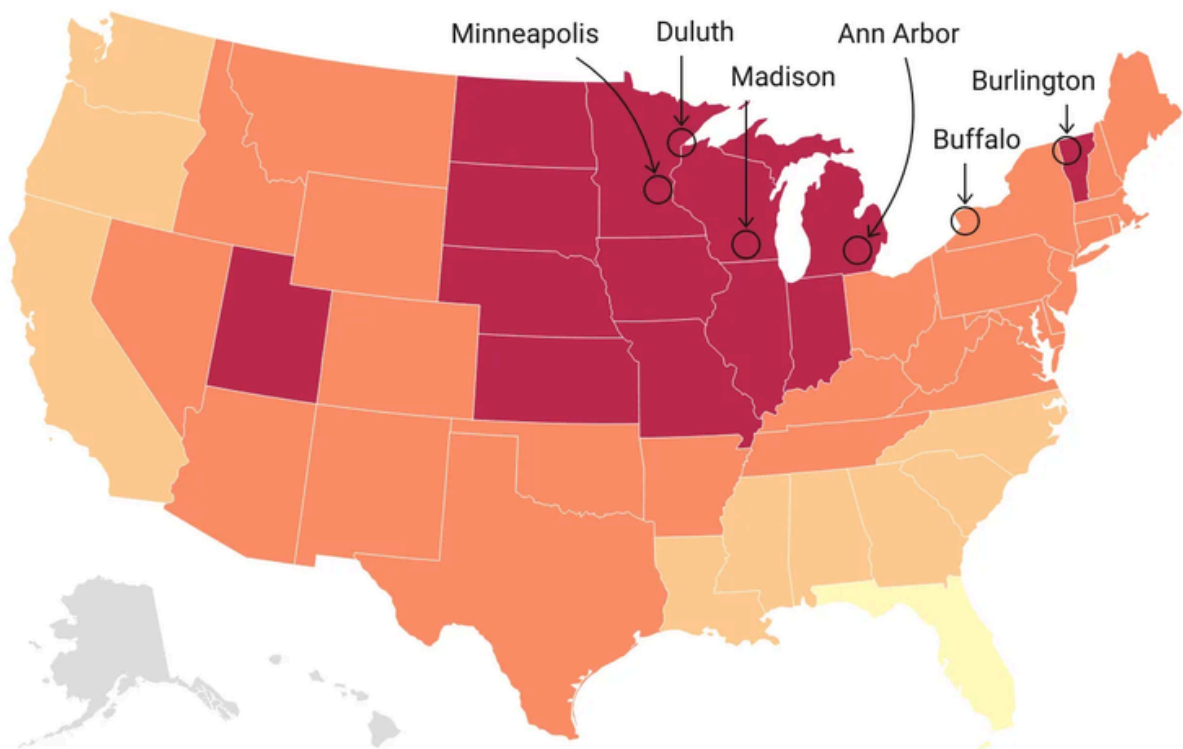
But here's the catch: as we've seen in previous issues, the lakes also make Michigan more vulnerable. As winter ice cover continues to drop and waters continue to warm, they're more susceptible to Harmful Algal Blooms (HABs), which are harmful to humans and animals (both above and below water). Also, our special microclimate functions beautifully in a stable climate, but as global temperatures go up, Michigan is set to be a state with one of the most drastic annual temperature increases in the US. Globally, this pattern is typical of (but not limited to!) more northern areas— we could say they have more to lose in a rapidly warming world, as places that normally see a decent amount of snow and/or ice cover during the year will see more rapid temperature increases as those cold-retaining things become less common. In the US, this pattern crops up in more than one climate haven, as the map below shows:

## Where temperatures are rising fastest

These six "climate havens" are in states with some of the highest projected average annual temperature rises between 1986-2005 and mid-century. Based on medium-high emissions.

Temperature change in degrees Fahrenheit

2° - 2.75°   2.75° - 3.5°   3.5° - 4.25°   4.25° - 5°



Map: The Conversation/CC-BY-ND • Source: Climate Impact Lab • Created with Datawrapper

Michigan is also on the list of climate havens because of its low occurrence of extreme weather events and natural disasters. We're generally out of the paths of hurricanes and we don't see too many wildfires. However, our past issues have featured climate change impacts in Michigan—including Kalamazoo—ranging from increased flooding to poor air quality from wildfire smoke drifting over from Canada and even as far as California. I'm sure many of us in Kalamazoo are second-guessing how safe we are from extreme weather events after the devastating tornadoes that ripped through the county earlier this month. So, while Michigan sees *fewer* of these things than other places, it doesn't mean their frequency and intensity won't continue to increase as the climate warms.

The last thing that makes Michigan a climate haven is that it has the capability to build infrastructure for 'climate migrants,' or people moving to safer, more stable areas to escape the effects of climate change. Let's talk about why this can be good (and bad) for Michigan.

# Pros and cons of being a climate haven

The fact that Michigan stands out as a place that has the space and resources to build infrastructure for more residents could really benefit our state; for one, if new projects were funded to expand and update infrastructure, new residents as well as people already living in Michigan would benefit. For another, newer, bigger infrastructure and more people moving here means a growing economy—a catchphrase we all like to hear. In addition to new residents, it can also mean more tourism, especially as typical vacation destinations—I'm lookin' at you, California—are increasingly way too hot in the summer and sometimes unsafe due to fires and severe weather.

So far, this sounds pretty great for us Michiganders! And in a lot of ways, it is. But have you spotted the potential problems?

First, our current methods of expanding infrastructure are not so climate-friendly. Not only does it take an enormous amount of energy (often powered by fossil fuels), but building materials themselves have high carbon footprints (check out the figure below to see how high!). Unless we prioritize clean energy and cleaner construction materials, our infrastructure boom will end up intensifying climate change.

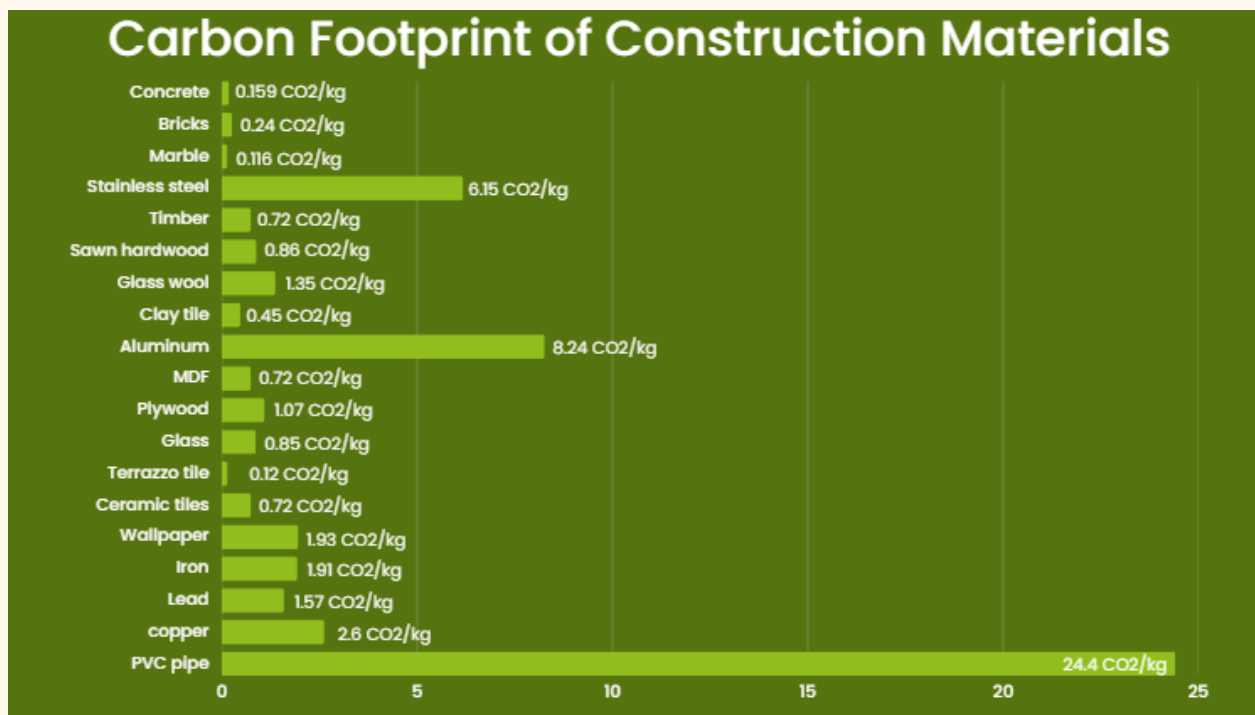


Figure: 8billiontrees.com

Second, an increase in population (especially a relatively sudden one) can put pressure on existing infrastructure, including health- and mental health-related systems. New infrastructure will need to be planned accurately to ensure everyone who makes a home in Michigan has access to the services they need.

In some cases—especially when it comes to resources—what Michigan has can be taken away. For example, water bottling companies (the foremost, perhaps, being Nestlé) keep a constant pressure on the region, aiming to bottle as much water as they can. Luckily, Michigan has been stepping up in recent years and looking to restrict the amount of water removed and commodified in this way. This attitude must prevail going forward (and we must also protect groundwater, our “sixth Great Lake”) if we are to hold on to this rare resource. In addition, as Michigan land and homes become more and more appealing as the climate changes, we need to have protections in place to ensure land grabs by vulture companies are not possible. If

the average person is going to benefit from Michigan's status as a climate haven, large corporations that would swallow up apartment blocks need to be kept in check.

As always with climate change, when it comes to considering the future of a climate haven, the horizon is strewn not only with scientific questions, but with social and political ones too. The concept of the 'climate haven' itself is controversial, since we're not really sure how things are going to play out as the global climate system continues to destabilize. But in the meantime, there are some things we can do.

## Actions to take

Many of the actions we can take to make sure Michigan, climate haven or not, is as climate-resilient as possible in the years to come, can be found in our past issues. Everything from changing the way we eat to talking to our clients about what to do in emergency situations to understanding signs of heat-related illness can make a difference. And the very first step is *learning*. The more we understand about climate change and its health and mental health impacts, the more we can recognize, mitigate, and adapt to these impacts.

Political and social action, particularly as Michigan develops as a climate haven, are also options for action. June's issue will be the last in this series, and will explore climate activism, from private, everyday actions to big campaigns. In the meantime...

**This month, talk to your colleagues about climate havens and past issues:**



Let's talk

- Had they heard this term before?
- What do they think about the pros and cons of Michigan's unofficial status as a climate haven?
- Which of the Climate Change & Health Series issues interested them most?
- Have they incorporated any recommended actions from past issues into their lives or their work?

## Recommended Resources

- [Why 'climate havens' might be closer to home than you'd think](#) - article in Grist
- [Grist](#) - a climate & environment news outlet
- [There's no such thing as a 'climate haven' away from disaster risks as national emergencies multiply](#) - article in Fortune
- [Which cities will still be livable in a world altered by climate change?](#) - article in National Geographic
- [Michigan is a haven from climate change. Officials must prepare.](#) - article in Governing
- [Looking for a US 'climate haven' away from heat and disaster risks? Good luck finding one.](#) - article in Medium
- [Michigan is a climate haven in a warming world. Will everyone move here?](#) - article from the Council of the Great Lakes Region
- [Climate havens like Michigan should start prep now for future migrants](#) - article in MLive