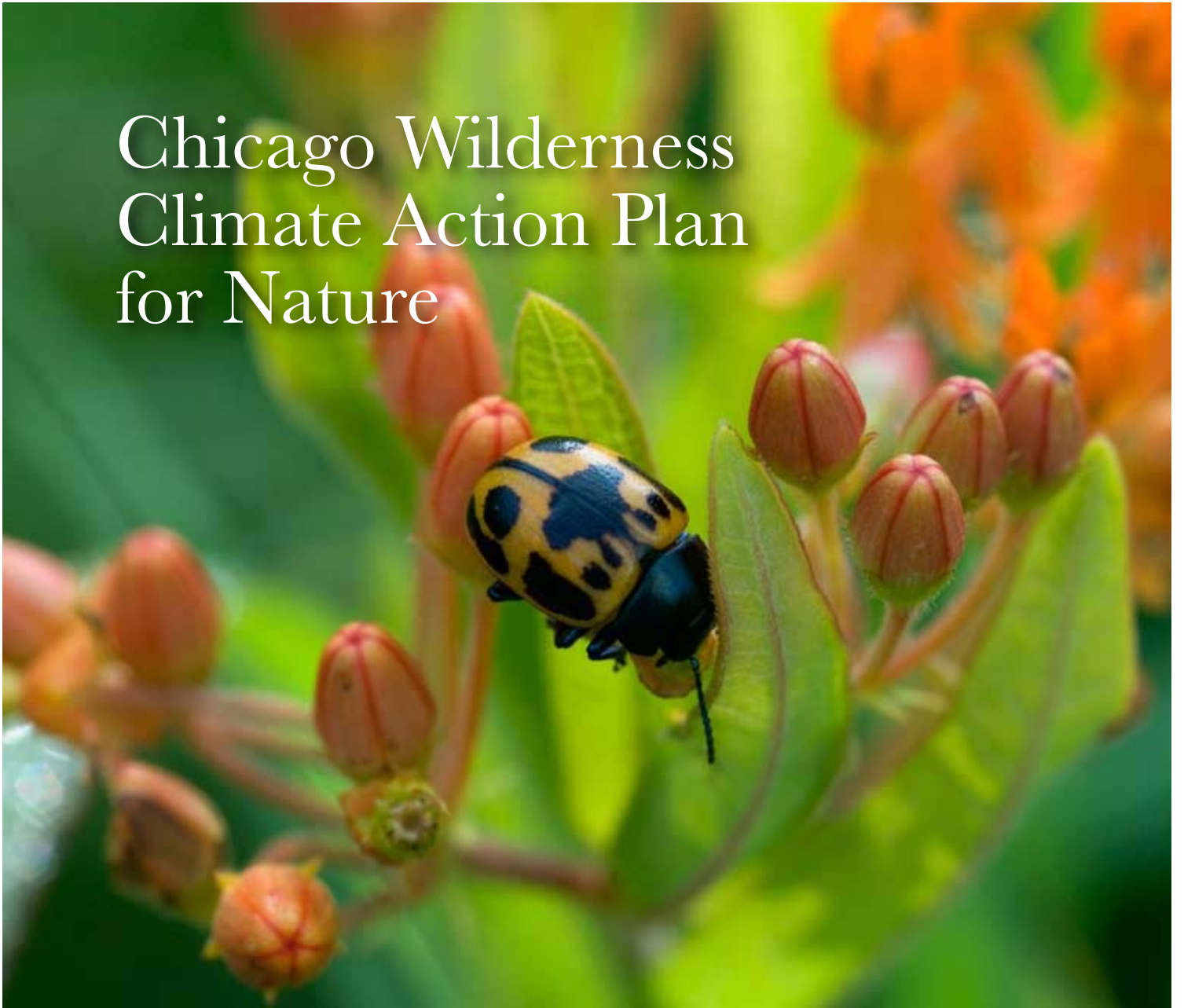


Chicago Wilderness Climate Action Plan for Nature



Chicago
Wilderness

Combating Climate Change with Natural Open Space

Land conservation is a key strategy of the Chicago Wilderness alliance. The value of protected open space for recreation and wildlife conservation is well established. But protecting natural areas also provides benefits to humans that are sometimes harder to see. One of those benefits is that it sequesters carbon that would have been released into the atmosphere as carbon dioxide, the most common of the greenhouse gases that cause global climate change. By preventing the destruction of native habitats, our preliminary calculations¹ indicate that land protection in the Chicago Wilderness region has prevented the release of 53 million tons of carbon dioxide into the atmosphere. The amount of carbon stored on these lands is equivalent to emissions from:

- 5 million cars for a year *or*
- 120 billion miles driven *or*
- electricity from 7.1 million households for a year *or*
- a coal-fired power plant operating for 6 years, 7 months.



Chicago Wilderness applies the best science to restore and manage the region's natural areas, while engaging thousands of volunteers as stewards of the landscape. © Clayton Wooldridge



Gardening with native plants provides habitat for native birds and butterflies. Monarch larvae feed on milkweed. © Dick Todd

¹ Precise carbon estimates for most Chicago Wilderness habitats are lacking in the scientific literature, so regional data were used to calculate this figure. Further research is needed to calculate standing carbon pools more precisely for the regional protected area system. Advancing the science of carbon sequestration in Chicago Wilderness is a strategy of the Climate Action Plan for Nature.



Climate Action for Humans



Nature offers many benefits, including opportunities for outdoor recreation, learning and discovery.
© Lake County Forest Preserves

Residents of the Chicago Wilderness region are fortunate to have access to more than 370,000 acres of open space and natural areas that have been preserved as part of our growing metropolis. These natural areas offer many benefits, including opportunities for outdoor recreation, learning and discovery, and spiritual renewal. Healthy ecosystems also provide clean air and water, reduce pollution, help control flooding, and provide habitat for native wildlife.

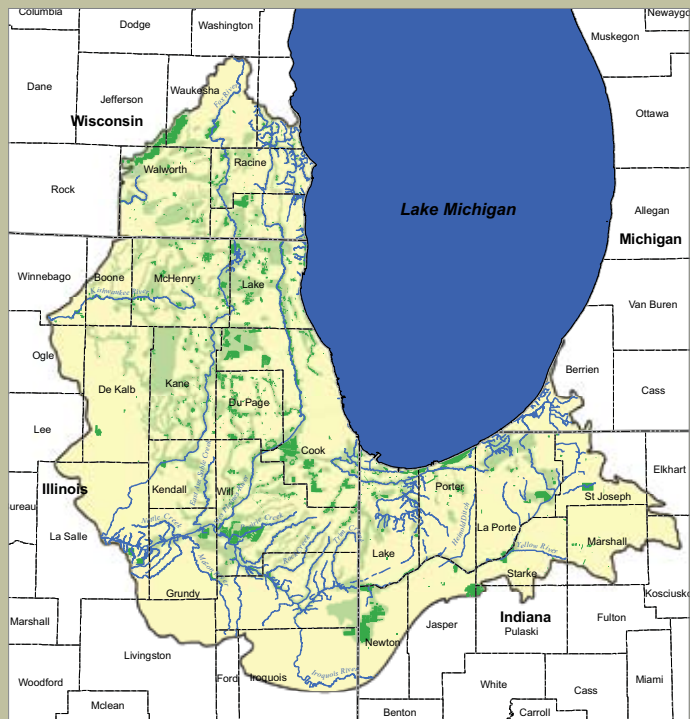
But the land, water and wildlife that provide us with so much face serious threats. The health of our natural areas is in decline due to invasive species, uncontrolled development, and pollution. Climate change is intensifying the impacts of these threats and adding further stress to local ecosystems.

To improve the health of regional natural areas and make them more resilient to changes in our climate, Chicago Wilderness has created the Climate Action Plan for Nature. The actions outlined here were identified with the understanding that protecting our natural areas is imperative to protecting our quality of life in the face of climate change.

The Chicago Wilderness Alliance

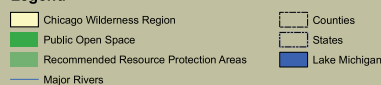
Chicago Wilderness is a regional alliance connecting people and nature. More than 250 organizations work together to restore our natural areas and improve the quality of life for all who live here by protecting the lands and waters on which we all depend. Chicago Wilderness' four key initiatives include: restoring the health of local nature, promoting a green infrastructure, combating climate change, and leaving no child inside. They reflect Chicago Wilderness' commitment to using science and emerging knowledge, as well as a collaborative approach to conservation, to benefit all of the region's residents.

Chicago Wilderness addresses conservation challenges at a regional scale to implement positive change for the people and nature within this region.



The Chicago Wilderness Region

Legend



and Nature

Threats from a Changing Climate

Scientists have been studying climate change for decades and have thoroughly documented the significant increase of greenhouse gases in the atmosphere over the last century. Current atmospheric concentrations of carbon dioxide, the most prominent greenhouse gas, are at levels unprecedented during the last 800,000 years of Earth's history. As carbon dioxide levels increase, so do global temperatures.

In 2008, Chicago Wilderness issued the paper, "*Climate Change and Regional Biodiversity*," an assessment of scientific studies that project profound local impacts due to climate change, including:

- loss of suitable habitat for some species and increases in habitat for others;
- shifting of mobile species as temperatures increase and the local extinction of less mobile species with limited migration corridors;
- increased threats from invasive plant and animal species, as well as diseases and pathogens;
- declining water levels in Lake Michigan and the regional groundwater system; and
- changes in the timing of natural events such as when flowers bloom, birds migrate, and trees lose their leaves.



Kudzu is an aggressive invasive weed known as the green plague in the southern U.S., where it is nearly impossible to eradicate. Kudzu survival is limited by winter cold, but between 1971 and 2006 kudzu has moved north in Illinois from the far southern counties to Peoria. Warming temperatures will allow it to threaten additional land in northern Illinois.

© Katie Ashdown/Flickr via a Creative Commons license

These impacts to our natural areas affect our quality of life by limiting the benefits that we receive from healthy forests, prairies and wetlands. Millions of dollars in ecosystem benefits are lost every year to poorly planned growth. These losses are expected to increase as climate change continues.

Strong actions are needed to reduce emissions and ensure that the most devastating of projected changes do not occur.

Some changes, however, are unavoidable due to the elevated greenhouse gas concentrations already in the atmosphere. Action must be taken now to adapt to the impacts of inevitable climatic changes that will occur in the coming decades.

A Response to Climate Change

The Climate Action Plan for Nature addresses the significant role of, and threats to, regional natural area conservation in the face of climate change and complements other local climate-related planning documents.

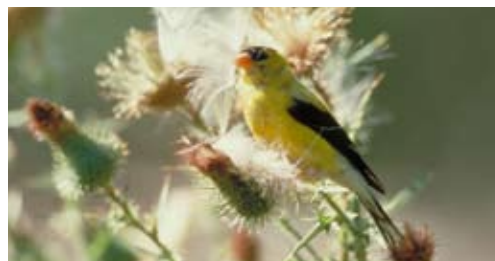
The three main strategies of the Climate Action Plan for Nature help the Chicago Wilderness alliance to: (1) mitigate the future impacts of climate change; (2) adapt to those that are inevitable; and (3) engage the Chicago Wilderness community in action. This means marshalling the alliance's vast network of conservation practitioners and closely integrating Chicago Wilderness' other strategic initiatives to create local solutions that have global impact.

The Chicago Wilderness Climate Action Plan for Nature identifies high priority actions in the following areas:

1. Mitigating the Threat of Climate Change: Actions to Reduce Greenhouse Gases in the Atmosphere

Mitigation strategies decrease the impact of climate change by reducing levels of greenhouse gases in the atmosphere. Chicago Wilderness promotes the invaluable role that our natural areas play in sequestering carbon and mitigating the impact of climate change. The primary mitigation actions are to:

- create recognition that local land conservation and ecosystem restoration efforts have value in mitigating climate change, and quantify that value;
- conduct a CO₂ inventory and reduce the carbon footprint of member organizations in the Chicago Wilderness network;
- help Chicago Wilderness conservationists take advantage of new finance opportunities related to the carbon market; and
- advance climate science to increase the efficacy of mitigation strategies in the Chicago Wilderness region.

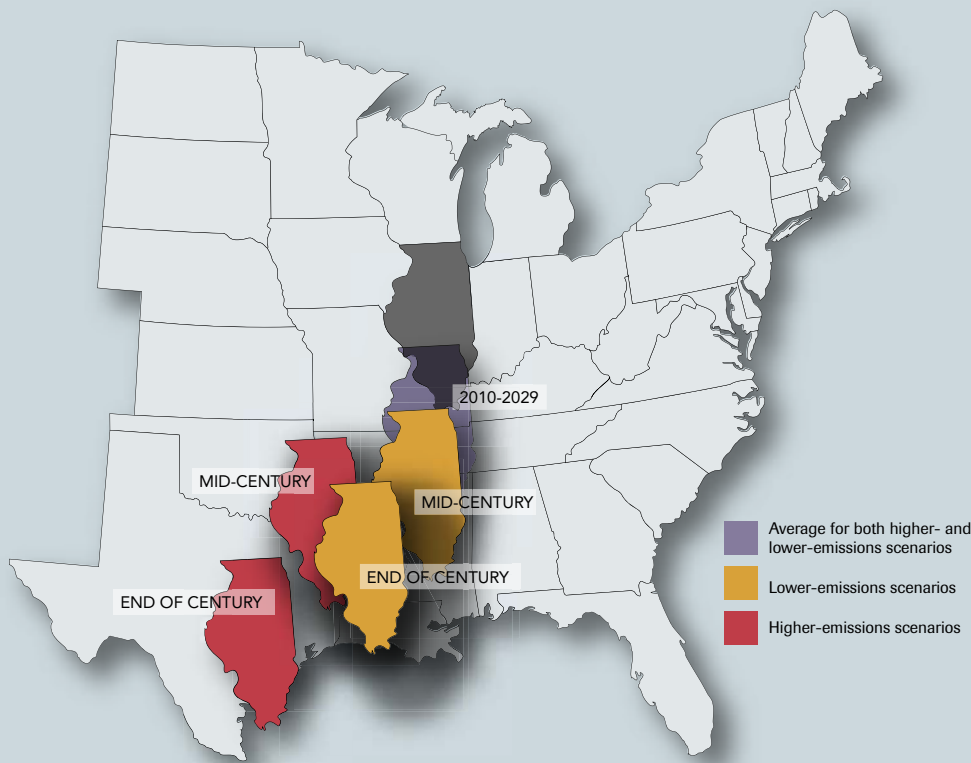


As many as 44 species of birds that currently breed in Illinois may no longer breed in the state by the end of the century, including the American goldfinch. © Mike Green

Integrated Approach

The Chicago Wilderness Climate Action Plan for Nature establishes a framework to help conservationists mitigate future effects and anticipate inevitable impacts of climate change. As a society, it is not only imperative that we respond to climate change in ways that will benefit human communities, but that we also do so in a way that does not compromise the health of our natural areas. This Plan is the first to address issues of biodiversity conservation and climate change in the Chicago region. Together with the strong climate action currently being undertaken by regional municipalities and institutions, the Climate Action Plan for Nature creates a regional approach that integrates humans and nature. The actions outlined in this Plan will ensure our natural areas continue to provide invaluable benefits to society in the face of climate change.

For more information, visit www.chicagowilderness.org.



Shown here are the projected summer climate changes over this century for Illinois relative to existing average summer temperature and precipitation found throughout the United States. For the higher-emissions case, the Chicago Wilderness region would have a summer climate more like eastern Texas by the end of the century. © Don Wuebbles and Katharine Hayhoe, reprinted with permission from *The Illinois Steward* magazine

2. Adapting to a Rapidly Changing Climate: Actions to Prepare for Change and Promote Ecosystem-based Approaches

Adaptation actions are vital in making our natural areas resilient in the face of inevitable climate change impacts that will compound current threats. Most of today's conservation efforts inherently help mitigate climate change and improve the health of our natural areas. However, the success of all our past investments depends on our ability to recognize and adapt to changing circumstances. The adaptation actions outlined in the Plan encourage modifying existing approaches to consider climate-induced challenges and include:

- assess the vulnerability of priority Chicago Wilderness terrestrial and aquatic conservation targets to climate change;
- promote and maintain larger landscapes for biodiversity resiliency with connectivity of green space;
- integrate stormwater management policy with information on how climate change is expected to impact the region; and
- develop monitoring programs to evaluate adaptation strategies.

3. Creating a Climate for Change: Actions to Involve Chicago Wilderness Members

A common language is needed among Chicago Wilderness conservation practitioners that communicates the impacts and necessary actions needed to mitigate and adapt to climate change. To do this, the Chicago Wilderness Climate Change Task Force will:

- establish a Climate Clinic program to engage conservation practitioners in learning, thinking critically and applying knowledge of climate science to natural area conservation;
- build on existing climate change education programs and tools for educators; and
- use outcomes from mitigation actions to inform key decision makers of the role land conservation plays in climate change action.



FRONT COVER: Swamp Milkweed Leaf Beetles look like overgrown ladybugs. The colors, similar to a Monarch butterfly, warn potential predators of their toxicity. © Carol Freeman
BACK COVER: Culver's root (*Veronicastrum virginicum*) is easily identified by its whorls of toothed leaves and its candelabra-like spikes of flowers. © Carol Freeman

Produced by The Nature Conservancy and Chicago Wilderness

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