



# The Nature of Illinois

SPRING 2019

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## Conserving Climate-Resilient Landscapes

Here's our challenge: 2016 was the hottest year ever recorded, and the five warmest years in the global record have all come in the 2010s. A changing climate not only means different temperatures, but different weather patterns, which influence the plants that grow in local habitats, such as Illinois prairies and oak savannas. This, in turn, impacts the creatures who rely on them for survival, from monarch butterflies to migratory birds.



How can we help wildlife adapt to these changes? A study published in 2018 by The Nature Conservancy helps address this question. It identifies a series of landscapes across Illinois that are predicted to best help plants and wildlife withstand the impacts of climate change and ensure nature's survival.

As floods, droughts and other climate impacts threaten to destabilize natural areas across the United States and around the world, scientists believe these resilient landscapes have the best chance to serve as habitat for a wide variety of plants and animals, while also providing drinking water, fertile soil and other important natural services upon which people rely.

"This science gives us new insight to places that are key to helping nature and its diversity to survive," says Jeff Walk, director of

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# Celebrating New Team Members, New Roles

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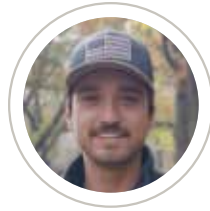


The Nature Conservancy is a private, nonprofit 501(c)(3) international membership organization. Its mission is to conserve the lands and waters on which all life depends.

The Nature Conservancy meets all of the Standards for Charity Accountability established by the BBB Wise Giving Alliance. The BBB Wise Giving Alliance is a national charity watchdog affiliated with the Better Business Bureau.



In recent months, we have been thrilled to welcome new faces to the Illinois chapter, as well as celebrate several staff promotions! In October of 2018, **Grace Wong** joined the team as the donor stewardship and engagement manager. In her new role, Grace will help to create an excellent experience for our members and donors through special events, customized communications and other engagement and outreach programs.

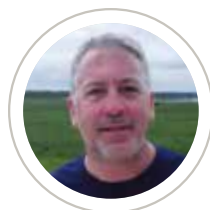


We also celebrated a new addition to the Southern Illinois Strike Team, which collaborates with conservation partners across Southern Illinois to fight invasive species and increase the use of prescribed fire.

**Jaime Hernandez-Cauthen** is using his extensive forestry experience as he and the team members collaborate with state and federal agencies, nonprofit groups and universities to protect one of the state's richest and most biologically diverse natural areas.



We are excited to announce that **Dr. Maria Lemke** has been promoted to the role of director of conservation science for the chapter. Maria joined TNC as our aquatic ecologist in 2002. In her new role, Maria will establish conservation priorities for the state and integrate scientific work in Illinois with the Midwest Division, North American Region and Global Science initiatives, as well as serve as the primary science contact to government agencies, other conservation organizations, foundations and the academic community.



**Tharran Hobson** has accepted a promotion to the position of Southern Illinois program director. Tharran has worked for TNC for more than 20 years in the Illinois River program at Emiquon and Spunky Bottoms in the Illinois River Valley. In his new role, he will focus on new opportunities for the Southern Illinois program, including expanding the Strike Team to become a multistate effort and working on the long-standing watershed issues facing the Cache River.



**Forrest Cortes** was promoted and will now serve as the director of community engagement for the Chicago urban program. He joined TNC just over three years ago in a new position of community stewardship program manager, a joint role that helped the chapter forge a partnership with the Chicago Park District. As director of community engagement, Forrest will focus on growing organizational partnerships, community programming and volunteer opportunities in the Chicago region.

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**32.1**  
trees preserved  
for the future



**30,896.7 gal.**  
waterborne waste  
not produced



**3,160.9 lbs.**  
solid waste not  
generated



**10,385.4 lbs.**  
net greenhouse  
gases prevented

COVER: Garden of the Gods in Shawnee National Forest. © Charles Larry; Bell Smith Springs in Shawnee National Forest. © Charles Larry

THIS PAGE: Grace Wong. © Joe Mazza; Photo courtesy of Jaime Hernandez-Cauthen; Maria Lemke. © Mark Godfrey/TNC; Photo courtesy of Tharran Hobson; Photo courtesy of Forrest Cortes





# Midwest Climate and Energy Policy Advisor Joins TNC



The Midwest—and Illinois in particular—is uniquely positioned to impact TNC’s global focus on battling climate change. To that end, Anna Dirkswager recently joined the team as the new Midwest climate and energy policy advisor.

This new role includes research and policy analysis, as well as an integration of TNC’s regional climate work into the conservation efforts of staff and volunteers. Also, in the five-state region Anna will serve—Michigan, Indiana, Ohio, Illinois and Wisconsin—she will work to identify opportunities and develop strategies to garner support for climate policy.

“I’ve spent the better part of the past 11 years building unique and atypical coalitions in order to move the needle on climate and energy issues,” she says. “I was drawn to TNC for its ability to be an amazing convener and create durable and long-lasting results.”

Anna most recently served as program manager for the Great Plains Institute for Sustainable Development, where she oversaw advancement of industrial energy efficiency across the Midwest and served as co-lead on biomass and carbon capture storage advancements.

“I look forward to continuing the work of building relationships across the Midwest,” she adds. “There have been a lot of changes on the political scene, especially in this region. However, I have seen successes when there are diverse voices at the table—utilities, oil and gas representatives, state and local leadership and environmentalists. We may have different missions, but we share similar goals for the communities in which we serve and live.”

In Illinois, there is a groundswell of activity around addressing the issue of climate change at the state and local level. Governor-elect J.B. Pritzker has noted that “we must invest in infrastructure...and identify opportunities to invest in a clean energy economy.” To that end, the Illinois chapter has joined the Chicago Community Climate Forum and the Clean Jobs Coalition and supported the Future Energy Jobs Act, which helped Illinois become a job hub, with one-third of all new clean energy jobs in the Midwest. The chapter also hosted more than 100 farmers at a climate risk management session in the summer of 2018, as well as a business summit in which several large Chicago-based companies discussed the impacts of climate on business and supply chains.

Though TNC has been involved in climate issues for many years, there is more and more evidence that now is the time to increase our efforts, as violent storms, heat waves, droughts and floods cause harm to both people and nature. Since 2015, TNC has worked closely with multiple partners to identify and engage a cross-section of constituencies to create coalitions for durable action on climate policy in the United States. After initial pilot work, TNC then rolled out a larger 50-state climate plan with a focus on renewable energy and sustainable, low-carbon land use.

“We need to make a great deal more progress on climate, and fast, so that’s why numerous agencies like TNC are dedicating time and resources to this issue, including hiring smart strategists like Anna,” says State Director Michelle Carr. “Many of the best opportunities to make progress are at local, state and regional levels. The Midwest is a key region of the country because of our energy use, our sources of energy, our political influence and the importance of our region to the economy.”



conservation for the Illinois chapter. “By keeping these special landscapes strong, for example by restoring connections between natural areas and managing invasive species, they will continue to support a diversity of plants and wildlife as our climate changes.”

Some of the most resilient places identified in Illinois include Shawnee National Forest, where TNC’s Southern Illinois Strike team is working with the U.S. Forest Service and private landowners to restore forest health, and the confluence of the Mississippi and Illinois Rivers. As expected, the Mississippi and Illinois Rivers stand out as key corridors for species movements through the heavily altered Midwestern landscape. These strongholds and others will serve as breeding grounds and seed banks for many plants and wildlife that otherwise may be unable to find habitat due to climate change.

“We’ve always known that these were special places,” Jeff says. “Now the science and research tell us these lands will play a critical role in keeping nature strong and healthy in the face of climate change.”



The study, conducted over three years, analyzed 336 million acres of land encompassing all of Iowa, Michigan, Minnesota and Wisconsin; much of Illinois, Indiana and Ohio; and parts of North Dakota, South Dakota, Nebraska, Kansas and Missouri. Parts of two Canadian provinces, Ontario and Manitoba, were also included in the analysis. TNC has already completed its analysis of the Eastern United States and the Pacific Northwest and has plans to complete a “wall-to-wall” map for the contiguous United States within a few years.

Scientists used computerized geographic information systems to analyze 30-meter plots, areas about twice the size of a small city lot. Natural areas that have diverse topographies, geologies and elevation ranges, and that are well connected to other natural areas, offer the greatest potential for supporting a variety of plants and animals. The study also looked at the “permeability of landscapes”—whether roads, dams, development or other fragmenting features have created barriers that prevent plants and animals from moving into other natural areas. Together, the collection of diverse environmental settings and the opportunity for local movement of plant and animal species define a landscape’s resilience—the ability of nature to persist and bounce back in the face of a changing climate. Yet the reality is that many species are highly vulnerable to climate change and have little ability to adapt or relocate.

“We need to act now to protect these areas that both help vulnerable species hang on and help adaptable species move to places where they can thrive. At the same time, we need to focus on clean energy and emissions reductions to keep climate change impacts from worsening,” Jeff says. “By approaching climate change with both mitigation and adaptation strategies, we can work toward best possible outcomes for people and nature.”

# SAVING ENERGY AT EMIQUON

Since it was opened in early 2018, the Illinois Rivers Program Office, which was generously funded by the Tellabs Foundation, and its green features have greatly reduced the chapter's carbon footprint. Here's a look at all that went into the new headquarters building, and how much energy we're saving for both people and nature!

**88**

Number of solar panels



Amount **spent on electricity**  
since March 2018

**3**

Number of geothermal wells,  
each extending nearly 500 feet



**86**

Number of LED lights



**1,000**

gallons of stormwater storage the  
rain water collection tank holds



**1 ton**

amount of invasive plants burned  
for heat weekly from December  
2018 through February 2019

**16,811**

pounds of recycled steel  
construction materials used to  
finish the building

**34.05**

megawatt hours:  
amount of energy generated since  
the building was completed

**52,766**

pounds of CO<sub>2</sub> not emitted into  
the atmosphere since the building  
was completed



# Conservation News in Brief

## Mapping a Greenprint of Chicago



Across the city of Chicago, numerous communities are threatened with urban flooding, excessive heat and poor air quality, which will only increase as the climate changes. TNC scientists have used a technique called “urban greenprinting” to identify where nature can help address these challenges. The greenprint analyzes numerous layers of data to show which Chicago and Cook County neighborhoods are most at risk for these challenges, such as concentrations of children, older citizens and other factors that show priority places in which to focus conservation efforts. Several partners supplied key data layers for this work, including the Chicago Metropolitan Agency for Planning and the Morton Arboretum. The map is being utilized by multiple stakeholders in Chicago to help neighborhood groups and people understand the risks they face and how natural infrastructure can play a key role in solving them. The process is one that is being used by other TNC programs across the country for cities facing similar issues.

## Illinois Leads Prescribed Fire Efforts

For thousands of years, fire has been present on the land. Some fires were caused by lightning strikes, while others were started by Native Americans who burned the land for a range of benefits, including stimulating plants that were harvested for food and medicine. These fires have shaped the landscape of the Midwest’s prairies, wetlands and woodlands. Our natural areas still need those fires to maintain their health. Illinois staff members Bill Kleiman and Rob Littiken were recognized by TNC leadership for their work to help bring more prescribed fire to the Prairie State. Bill and Rob are leaders of the Illinois Prescribed Fire Council, which has created a first-of-its-kind map that shows where agencies and nonprofits in Illinois are conducting fires.

“The map of fires accomplished shows us as one fire community working together to



keep our natural areas healthy,” Bill says.

In addition, TNC’s LANDFIRE Program was named an “Environmental Dream Team” by the U.S. Department of the Interior (DOI). The LANDFIRE Program, which is led by the DOI and the USDA Forest Service, in collaboration with TNC, includes Sarah Hagen, spatial ecologist for the Illinois chapter. Team members research and provide data that focus on prescribed fire management, which is then used by the U.S. Forest Service,



the Bureau of Land Management and numerous other agencies each year. The DOI presented the LANDFIRE Program with its 2017 Environmental Dream Team award to recognize the team members as “environmental champions and agents of change who work across organizational boundaries to enhance environmental stewardship, create efficiencies, improve communication, avoid or address conflict at the lowest levels, or reduce environmental review times.”

Goldfinch at Loyola Park. © Emanuel Love; Photo courtesy of Bill Kleiman; Rob Littiken. © Fanny Tricone

# Meet the NatureNet Grantee: Vidya Venkataramanan

TNC established the NatureNet Science Fellows Program in partnership with a rotating set of the world's leading universities. Fellows and grantees work with a Conservancy mentor and a hosting senior scholar (or scholars) to develop a research program focused on conservation. We sat down with Vidya Venkataramanan, who is currently a postdoctoral fellow in water research and anthropology at Northwestern University, to learn about her NatureNet project that focuses on people, stormwater flooding and the impacts of climate change in the city of Chicago.

## What is the focus of your NatureNet research?

Across Chicago and its suburbs, residents are impacted by extreme storm events that can flood streets, roads, businesses and basements—and these effects will only increase as the climate changes. The idea behind my research is to understand the community dimensions of urban flooding, and how green infrastructure such as rain barrels and green roofs can provide benefits to people beyond flood management. We want to better comprehend how these solutions can help with everything from physical and mental health to an increased connection to and appreciation of nature. I will be working in the Southside neighborhood of Chatham and the city of Markham, where TNC's Indian Boundary Prairies (IBP) are located, to meet with community members affected by urban flooding and conduct my research.



## There is other stormwater and climate change research happening at IBP and other sites around Chicagoland. How does your community research tie in with all of that?

That's correct: several other Northwestern researchers, along with researchers from the University of Illinois and Argonne National Laboratory, are combining natural science, social science, data science and engineering to more accurately predict extreme weather such as heat waves and flooding. They are also focused on assessing vulnerabilities within neighborhoods and cities to propose sustainable, adaptive infrastructure changes—that's where the research overlaps. Hydrological research has already been going on at IBP for a few years as well. I, along with the other researchers, will work hand-in-hand with Debra Williams, the community outreach coordinator at IBP, to understand the experiences of the people who live near these prairies, as well as their concerns and priorities and how those fit in with

the conservation work TNC and others are doing. One of our goals is to figure out how best to communicate the hydrological data to area residents based on our social research.

## How do you see this research impacting both people and nature in Chicago?

What I am hoping is that we can really unpack people's experiences with flooding and nature in both Chatham and Markham and design evidence-based interventions that not only manage stormwater flooding, but provide tangible benefits to human health and well-being in a way that is meaningful to the communities. I'm also hoping that my research helps TNC and others design appropriate outreach activities that increase residents' appreciation and stewardship for nature, thereby benefiting conservation work.




## How does this work resonate with you on a personal level?

I'm actually new to the field of conservation—I come from a public health background. I grew up internationally in mega-cities with little green space, but I've really started to connect more with nature in the past 10 years and greatly value urban conservation. As a person of color, I also feel like there are voices missing from this conversation. I'm dedicated to making sure that more diverse perspectives are heard and understood, and more importantly, that this information is used to design appropriate outreach programs. I hope for people from different communities to be represented and connected to our natural world.

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## Save the Date!

### Morning Bird & Nature Walk October 4, 2019

Join Jeff Walk, director of conservation, to start your day with a bird and plant appreciation walk through Chicago's Lurie Garden. Space is limited and pre-registration is required.

**For more information, visit [lurigarden.org/events](http://lurigarden.org/events).**

