2017 MICHIGAN RESULTS REPORT CONSERVATION



## HOW WE WORK IN MICHIGAN

#### LAND PROTECTED BY THE NATURE CONSERVANCY

- Conservancy-owned preserves
- Conservation easements
- Land protected and transferred to a Conservancy partner
- Land protected with Conservancy assistance

#### HEALTHY WATERS







COASTS

COASTS

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Grand Rapids

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## THE YEAR IN REVIEW

In 2017, I made a concerted effort to experience nature every single day of the year. From a four-hour birding outing at our Erie Marsh Preserve in the spring, to a stroll along the Grand River on my lunch hour at work, my daily experiences with nature reminded me how our everyday choices shape the world we live in and the world we will leave behind for future generations.

For more than 65 years, The Nature Conservancy has protected the world's greatest places and its precious biodiversity. Now we are learning, through a growing body of scientific evidence, that people and nature share many of the same challenges and that investments in nature are essential for creating economic opportunities and solving development challenges. By solving the top threats to nature, we can also improve the lives of people. Driven by our science-based history, the Conservancy has developed a plan to put us on a sustainable path.

#### Our strategy is to:

- 1. **PROTECT** We develop ideas and prove them out on the ground to protect the world's great places.
- **2. TRANSFORM** We incorporate those same ideas into business practices and governing policies to transform how nature is used to conserve many places.
- **3. INSPIRE** We share successes and good ideas to inspire others to act, generating impacts well beyond our direct influence.

Here in Michigan, the Conservancy is working to inform the daily decisions that shape our world. In this 2017 Conservation Report, I am excited to share some of our stories. For example, in the Saginaw Bay watershed, we enrolled nearly 40,000 acres into the Regional Conservation Partnership Program (RCPP), keeping 2,500 tons of soil on the fields and out of the waterways. Our work in that area has been held up as a model for other RCPP projects across the country. Beyond our shores, we helped launch the first African Great Lakes Summit to increase coordination and strengthen policy in that region.

Central to these achievements are the many partners and supporters who work with us daily to make these projects a reality. To all of you, we say thank you. With your support we look forward to another successful year of "Big Wins". Some of these for 2018 are:

- Collaborate with our agricultural partners on innovative work to optimize water storage and sediment reduction by exploring the use of drain assessments based on performance instead of usage.
- Complete a \$1 million carbon deal with the Conservancy's Working Woodlands Program (see page five) that will generate revenue to reinvest back into the health of our northern forests.
- Work with the historic Eastern Market in Detroit to implement a suite of green infrastructure projects. In 2018, we will break ground on our first project, installing rain gardens and bioswales in a parking lot for Detroit's Sacred Heart Church.

With our history of strong science and on-the-ground experience, our invaluable partnerships and dedication to conservation for both people and nature, we promise to work every day for the future of our world.



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PATRICK DORAN, Ph.D

Associate State Director

## **RESILIEN'I FORESTS**

Michigan's forests clean the air we breathe, shelter migratory birds and power local economies. In 2017, The Nature Conservancy employed multiple forest management efforts with various partners to highlight how sustainable forest management is a win for both ecology and the local economy.

#### FROM THE FOREST TO THE FLOOR: TWO HEARTED RIVER FOREST RESERVE TIMBER USED IN 2017 NCAA SPORT COURTS

Timber sustainably harvested from thirty-five acres of the Conservancy's Two Hearted River Forest Reserve in the Upper Peninsula of Michigan was made into floors for the nation's top college men's and women's basketball championship games in March 2017. This harvest was part of a long-term effort to restore a healthy and resilient forest. The project highlighted to millions of viewers that buying and using products made from sustainably managed forests helps landowners, including The Nature Conservancy, care for and restore forests. See more about this project at **nature.org/foresttofloor.** 

#### CONNECTING FOREST OWNERS FOR CONSERVATION SUCCESS

Two years in the making, the Conservancy completed a first-of-its-kind, landscape-scale stewardship plan for 1.9 million acres of Michigan's eastern Upper Peninsula. The plan describes unique characteristics of the landscape and is designed to inspire people to become more active stewards of their land. For example, the plan highlights the story of Ruth Dake, a forest owner in Newberry, who maintains her forested land through the use of management plans completed by professional foresters. This was one of nine developed for multiple Michigan areas through a grant project funded by the U.S. Forest Service and administered by the Michigan Department of Natural Resources. Learn more about the Conservancy's Landscape Stewardship Plan and read individual stories of conservation success in the eastern U.P. at nature. org/landscapestories, or visit StewardshipStories.org to view a story map of all nine plans.

#### CONSERVANCY ESTABLISHES SECOND WORKING FOREST RESERVE

In August 2017, The Nature Conservancy protected over 6,000 acres in the heart of Michigan's Upper Peninsula. Located in the Michigamme Highlands, this new reserve is a perfect example of the region's vast and wild landscapes, complete with spectacular forests and interspersed with 1,000 acres of high-quality wetlands and 26 glacial lakes. The forest reserve, named Wilderness Lakes Reserve, will be enrolled in Michigan's Commercial Forest Act, assuring public access and ensuring that forestry practices employed on the land are carried out in an ecologically sustainable way.

The Conservancy will manage this property as its second working forest reserve in Michigan, and will enroll it as part of the North America Working Woodlands Program (see facing page). This will be the first Working Woodlands project enrolled in the California Air Resources Board Compliance Offset Program, through which The Nature Conservancy has committed to increasing the new reserve's carbon storage above an agreed-upon level for 100 years. Carbon stored within the new reserve will be sold as offset credits, providing an additional revenue stream for ongoing forest restoration and management.



#### WORKING WOODLANDS GOOD FORESTRY EQUALS GOOD BUSINESS

Working Woodlands is a forest conservation program that aims to protect critical forests while improving private forest management, providing revenue for forest landowners and fighting climate change. To learn more, visit **nature.org/workingwoodlands** 





#### CONSERVATION EASEMENTS

Paying landowners for conservation agreements to protect the natural benefits a forest provides.

#### CERTIFICATION

The Nature Conservancy enrolls the property in a certification program and develops a management plan for harvesting timber.

## HEALTHY WATERS

#### AIS SURVEILLANCE FRAMEWORK CREATED FOR GREAT LAKES

Searching for aquatic invasive species (AIS) in a system as huge as the Great Lakes is like searching for a needle in a haystack. To make the search more effective, Conservancy staff have drafted an Interstate Great Lakes Surveillance Framework to facilitate a coordinated, region-wide early detection and rapid response program for AIS. This framework uses maps to guide surveillance efforts across the region, helps coordinate AIS surveillance efforts among stakeholders and ensures surveillance is conducted at the highestrisk sites. Additionally, the framework identifies invasive species most likely to arrive next in the Great Lakes, and these predictions help indicate where and how to detect new species early and coordinate an effective response. The U.S. Fish and Wildlife Service and the U.S. Environmental Protection Agency initiated the creation of this report and the Conservancy was honored to be asked to guide the process. It now lies

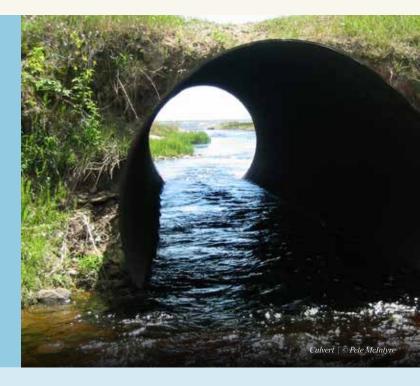
#### MAKING DATA "WERK" FOR GREAT LAKES FISH

In 2017, the Conservancy completed a series of original maps that identify priority habitat for more than 40 Great Lakes fish species. These data are now integrated into Fishwerks, a powerful online decision tool for aquatic connectivity restoration, developed by the University of Wisconsin. Fishwerks considers benefits and costs to inform decisions about where barrier and dam removals or modifications should occur across the Great Lakes basin. In Saginaw Bay, we used these maps to identify priority tributaries for migratory fish and to identify barrier alterations that would result in maximum connectivity and benefits for fish, while minimizing costs. The Great Lakes basin is home to thousands of rivers and lakes, as well as vast stores of precious groundwater. To restore the health of these Great Lakes waters, the Conservancy is working to control aquatic invasive species and stop new invasions; collaborating with the agricultural community to implement sustainable farming practices that protect water quality; reconnecting rivers and streams for the health of migratory fish; and restoring habitat to help native fisheries rebound.

with each state in the basin to implement the plan, protecting our waters from aquatic invasive species.

#### MONITORING SPAWNING HABITAT FOR NATIVE FISH

"Where are the fish?" This is a question people have been asking for generations! The Nature Conservancy is mapping both historic and current spawning and nursery habitat across all Great Lakes for several key species of Great Lakes fish, including lake whitefish, lake trout and lake herring. The differences between historic and current habitat will help the Conservancy and its partners understand the factors that are limiting populations of these fish species. The results will then be used to inform monitoring, habitat protection and restoration efforts to help these species recover. We are conducting these analyses with partners that include: the National Oceanic and Atmospheric Administration (NOAA), the U.S. Geological Survey, and the Little Traverse Bay Band of Odawa Indians.



#### **BUILDING TRUST IN SAGINAW BAY**

In the Saginaw Bay watershed, we are exploring different ways of reaching out to the agricultural community to strengthen our partnerships and, as a result, our impact. The Conservancy collaborated with Purdue University to evaluate the effectiveness of agricultural conservation programs in the watershed. The Purdue research team surveyed farmers, crop advisors and staff from the Natural Resources Conservation Service (NRCS) and Conservation Districts about farming practices, water



#### MAPPING GREEN INFRASTRUCTURE IN DETROIT

In 2014, the City of Detroit and interested stakeholders identified the need for an online information repository to track green stormwater infrastructure (GSI)-related activities across the city. To address this need, The Nature Conservancy, with partners The Greening of Detroit and Issue Media Group, successfully mapped green infrastructure and developed a website to communicate its value. In 2017, the project team began a second phase of the project, focusing on the creation of a central resource website and map of existing GSI installations in Detroit.

The finished website will be owned and maintained by the Detroit Water and Sewerage Department (DWSD) and will be designed to support three user groups: City of Detroit property owners; practitioners interested in GSI in Detroit; and individuals and organizations engaged in community development. It will include interactive tools to help identify where GSI projects are currently located within the city and where they may be best placed in the future, as well as an information repository for those seeking to implement GSI practices of their own. This resource will help DWSD, other City departments and organizations across Detroit to understand, plan and coordinate GSI projects by providing an up-to-date and comprehensive view of the state of GSI in Detroit. quality and recreational use of the Bay. These interviews confirmed the value of partnering with crop advisors and agribusinesses on sustainable farming practices.

In addition, the results helped us formulate and explore new ways of partnering with the agricultural community. For example, we launched a series of "Lunch and Learn" meetings to connect NRCS staff with farmers and local crop advisors, as well as a Farmer Advisory Group to help guide future work in the region.

#### SAGINAW BAY PAY-FOR-PERFORMANCE PROGRAM PRODUCES RESULTS

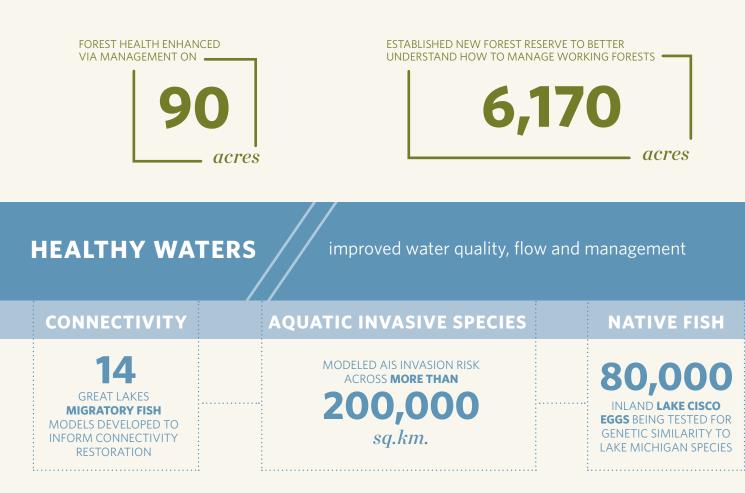
Historically, conservation programs have typically compensated farmers based on the number of acres enrolled. But what if farmers were paid for the impact of those practices regardless of acreage? The Conservancy and its partners are successfully implementing a Pay-for-Performance (PfP) Project on farms across the Saginaw Bay watershed. Through PfP, participants receive annual payments based on the sediment and nutrient load reductions they achieve by implementing soil conservation practices. In 2017, the Conservancy enrolled 13 land owners, who implemented 32 different conservation projects across 2,440 acres. In total, their efforts kept 465 tons of sediment and 1,047 pounds of phosphorus on the land and out of local waterways.



## **CONSERVATION IMPACT**

#### **RESILIENT FORESTS**

#### sustainable management of Michigan's forests



**THRIVING COASTS** 

healthy coastal systems free from invasive species

#### MORE THAN



CONSERVATION PLAN CREATED FOR



INCORPORATING NATURAL AND HUMAN VALUES



\*\*FOR FULL LIST VISIT NATURE.ORG/MICHIGANSCIENCE

## SCIENCE

#### **CONSERVANCY JOINS COOPERATIVE INSTITUTE OF GREAT LAKES** RESEARCH

This year, the Conservancy became a partner in the newly-formed Great Lakes research consortium known as the Cooperative Institute for Great Lakes Research (CIGLR). Jointly sponsored by the National Oceanic and Atmospheric Administration (NOAA) and the University of Michigan, CIGLR works to increase communication among research teams around the Great Lakes, helping them establish shared research priorities, collaborate more effectively and pool resources. Goals include creating impactful partnerships, more interdisciplinary research, a greater focus on collaborative design and quicker transitions from research to application. The Conservancy is contributing staff and resources that will infuse CIGLR's projects with real-world applications and provide mentoring opportunities for University students.



#### PEER-REVIEWED SCIENCE

In the past 12 months, Conservancy science staff in Michigan have published 16 papers in peer-reviewed journals. Science, the driving force behind all the Conservancy's work, provides the evidence base for identifying challenges, developing sound

strategies, defining clear outcomes and guiding conservation actions. For more information about Michigan's science team and their published work, visit **nature.org/michiganscience.** 

#### **CONSERVANCY ANNOUNCES CREATION OF AFRICAN GREAT LAKES FUND**





The Nature Conservancy's ability to maintain a healthy, functional ecosystem depends not only on what we do, but also on the decisions of others. Creating outcome-based state and federal policies that incentivize measurable environmental improvement is the core of the Conservancy's policy approach.

#### MICHIGAN TRUSTEES GO TO WASHINGTON

One day each year, The Nature Conservancy sends our most passionate and active volunteers—our trustees to Capitol Hill to discuss pressing conservation issues with their state representatives and senators. This year, Michigan Chapter trustees Terry Barclay, Tom Cook and Mary Draves (pictured below), met with legislators on topics such as climate change, public lands ownership, continued Great Lakes Restoration Initiative funding, the Farm Bill and wildfire legislation. We are immensely grateful to our trustees who work so tirelessly on behalf of conservation.



#### 21ST CENTURY INFRASTRUCTURE COMMISSION

In 2016, State Director Helen Taylor was appointed by Governor Snyder to serve on the 21st Century Infrastructure Commission, charged with identifying strategies to modernize Michigan's transportation, water and sewer, energy and communications infrastructure over the next 30-50 years. The Commission produced a set of key recommendations that prioritizes the health and safety of Michigan's residents, supports future economic growth and protects our environment, including the Great Lakes. Following from these recommendations, two regional infrastructure asset management pilot projects were initiated in 2017 to assess the coordination of infrastructure development and maintenance activities of multiple communities.

#### BLUE ACCOUNTING DEBUTS AT LEADERSHIP SUMMIT

The Great Lakes Commission (GLC) and The Nature Conservancy launched a new website for the Blue Accounting initiative at the 2017 Leadership Summit of the Great Lakes and St. Lawrence Governors and Premiers in Detroit.

The new website provides reliable, timely and easily understandable information to help Great Lakes leaders assess how their investments and actions are affecting the condition of our economy and natural resources in the Great Lakes region. Currently, this is needed as hundreds of different groups – across eight states and two provinces – invest billions of dollars into protecting and restoring the Great Lakes. Blue Accounting brings together data and information from across the basin to help decision makers understand how these investments add up to progress. Visit **blueaccounting.org** for more information.

#### **LEGISLATORS IN THE FIELD**

In August, Representative John Moolenaar visited the former Germania Town and Country Club property. The Nature Conservancy purchased the property in 2014, with support from Dow Chemical Company, and transferred it to the Shiawassee National Wildlife Refuge (SNWR). In May, Senator Debbie Stabenow and staff from the Senate Agriculture Committee visited Bay Cityarea farmers, crop advisors, local agency representatives and Conservancy staff to learn about successes and challenges in implementing conservation practices under several different incentive programs. The stop was part of the Senator's fact-finding tour in preparation for the drafting of a new federal Farm Bill in 2018.





The Nature Conservancy has a long history of restoration; working on the ground to improve habitat for both plants and animals. We use a variety of techniques to do this, including planting efforts and controlled burns.

#### **BIG WINS FOR PROTECTION** WILDERNESS LAKES RESERVE

In 2017, the Conservancy acquired and protected more than 6,000 acres, now known as the Wilderness Lakes Reserve, in the Michigamme Highlands region of the Upper Peninsula. This project, years in the making, protects vast, wild forests and rare geological features, all while serving to increase carbon storage and generate revenue for conservation (see page four).

#### NORTH POINT PENINSULA

In a state rich with beautiful coastlines, North Point Peninsula near Alpena rises to the top of the list, sitting at the heart of the Thunder Bay National Marine Sanctuary, surrounded by more than 200 shipwrecks.

The Nature Conservancy is leading an effort to protect four miles of coastal shoreline, wetlands and 1,400 acres of pristine forest and meadows at North Point to create a legacy for future generations. Together, with our partners, we will make the property a living classroom for education and research as well as conservation.

#### NATIVE PRAIRIE RETURNS TO GRAND RIVER FEN

Following an expansion at Grand River Fen Preserve, no time was wasted in restoring 25 acres of converted farmland to native prairie. Staff and volunteers, including Michigan Board of Trustees chair Pete Walters, planted more than 100 different native species of flowers, grasses and plants which were already flourishing by year's end.

#### FIRE FOR HEALTHY ECOSYSTEMS

Specially trained staff, including colleagues from Ohio, conducted controlled burns on 90 acres at Ives Road Fen Preserve and Fay Lake last spring. Controlled burns are an efficient and effective tool for killing invasives, such as glossy buckthorn, and promoting regeneration of native species and healthy habitat for animals such as the endangered eastern massasauga rattlesnake.

#### **IT TAKES A VILLAGE**

Transferring properties to local organizations serves many purposes. It builds partnerships with and increases the capacity of local organizations, but most importantly it ensures the efficient management and use of the land in the future. In 2017, the Conservancy transferred over 800 acres to partners across the state.

- The 574-acre Kenneth R. Luneack Preserve in Oscoda County, in the Conservancy's possession since 2012, has been transferred to Headwaters Land Conservancy.
- In the Michigamme Highlands Conservation Area, 240 acres of our Mulligan Creek Highlands Reserve were transferred to the Yellow Dog Watershed Preserve.
- The Conservancy also completed a large land swap with the Michigan Department of Natural Resources (DNR). Most of the property received was added to the Conservancy's Two Hearted River Forest Reserve; with 120 acres to the Little Two Hearted Preserve and 40 acres to Swamp Lakes Preserve. This swap allows for more streamlined and efficient land management because the affected properties now geographically align with other properties owned by the DNR and the Conservancy.



#### PARTNERSHIPS IN RESTORATION A FOREST MANAGEMENT SUCCESS STORY

In 2017, **265 acres** of red pine were harvested from the Ottawa National Forest. The Nature Conservancy managed the harvest as part of a Stewardship Agreement with the U.S. Forest Service. The timber sale will fund several projects. The flagship project will be a massive tree-planting effort at two sites, totaling **1,200 acres** and more than **360,000 trees**, all along riparian corridors. Some local trail maintenance projects will also be completed as a result of the stewardship agreement.



The Nature Conservancy is helping the **Ottawa National Forest** accomplish riparian planting at a scale that would not have been possible otherwise.

> VICTORIA HAHKA U.S. FOREST SERVICE

## **STAFF CONTRIBUTIONS**



#### **SHARING OUR SCIENCE**

**EMILY CLEGG**, Land Protection Associate, gathered information on the Conservancy's forest stewardship agreements (see page 13) nationwide and quantified the conservation actions being completed through those agreements.

Emily is leading the way for the Conservancy through her expertise in creating stewardship agreements and by sharing best practices with other Conservancy chapters interested in doing this kind of work.



**MARY FALES**, the Program Director for Saginaw Bay, joined colleagues from across the country in completing the Science Impact Project, a Nature Conservancy fellowship program designed to help science staff develop valuable communication and leadership skills and effectively share scientific information.

For this project, Mary shared the innovative efforts she is leading in conducting a social evaluation of the agricultural community in Saginaw Bay with Purdue University.

### CELEBRATING A LEGACY OF CONSERVATION

The Nature Conservancy proudly celebrates the career and contributions of long-time Director of Upper Peninsula Protection Jeff Knoop. Jeff retired at the end of 2017 after 34 years with The Nature Conservancy, leaving a legacy of critical conservation work, including such noted accomplishments as his instrumental role in the "Big U.P. Deal" in 2005, the state's largest-ever land protection project. Before joining the Michigan Chapter, Jeff served in many roles with the Ohio Chapter. Over the course of his career, he has facilitated the protection of more than 345,000 acres of land.



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Coasts are where people like to live, where industries do business and where tourists come to relax. They also provide critical habitat for fish, birds and plants. The Conservancy is restoring coastal areas by reducing the impacts of invasive species on our wetlands and dunes; protecting and restoring coastline habitat; and increasing the impact and capacity of our partners in coastal management.

#### A VISION FOR COASTAL CONSERVATION

The Conservancy has completed a unique mapping process for coastal areas, identifying where nature and human needs intersect and giving us a tool to help achieve the goal of restoring 60,000 acres of wetlands in the Great Lakes region. Scientists compiled data not only on natural coastal features, but also beaches, hunting and fishing grounds, birding hot spots and trails. This tool is now being used, along with two others, by the Great Lakes Coastal Conservation Working Group in conjunction with the Blue Accounting initiative (see page 11). To learn more, visit **blueaccounting/issues/coastal-wetlands.** 

#### PHRAGMITES STUDY LINKS PROPERTY VALUES TO COASTAL INVASIVE SPECIES MANAGEMENT

The Conservancy strives to find market-based solutions to conservation challenges. In 2017, we worked with Grand



Valley State University to publish a study on the economic impacts of non-native Phragmites, an invasive wetland plant. The study, published in the *Journal of Ocean and Coastal Economics*, provides evidence that non-native Phragmites has a significant negative impact on coastal property values. These types of studies are important in helping us ask the right questions that get us closer to identifying possible solutions.

#### NEXT GROUNDBREAKING STEP AT ERIE MARSH PRESERVE

Located at the western edge of Lake Erie near the Michigan/Ohio border, Erie Marsh contains 11% of the remaining coastal wetlands in southeast Michigan, supporting many animals and plants that would otherwise be hard-pressed to find suitable habitat. The Conservancy's work here is increasing the number and diversity of waterfowl and fish to levels that have not been seen for decades. In 2011, The Nature Conservancy began a large-scale, restoration project to reconnect 946 acres of the preserve to Lake Erie, improve wetland quality and control invasive plants such as Phragmites. In 2017, the second phase of restoration work began on over 200 acres of wetlands. Once completed, this part of the project will allow us to improve the quality of these wetlands, providing habitat for even more fish and birds.



#### STATE DIRECTOR

HELEN TAYLOR

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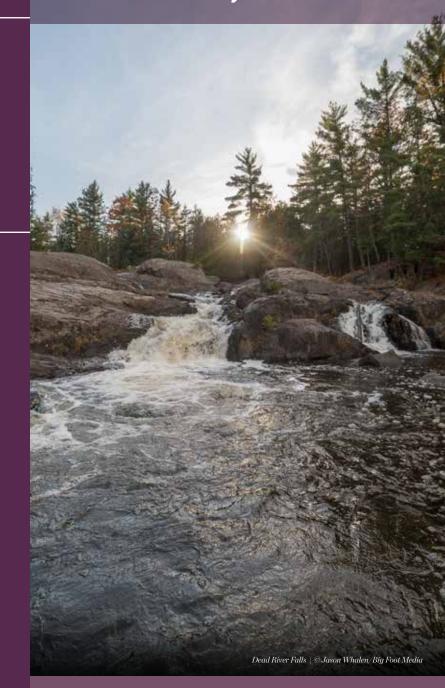
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