# Field Notes from VICLISATION For Members of The Nature Conservancy in Michigan Field Notes Fall 2022 Newsletter





CLIMATE

## Your Voice Matters

The Nature Conservancy (TNC) has set ambitious global goals:

- · 3 billion metric tons in annual greenhouse gas reductions:
- 650 million hectares of land conserved;
- 1 million kilometers of rivers conserved;
- 30 million hectares of lakes and wetlands conserved, and more.

And all by 2030.

To put this in perspective, imagine taking 650 million cars off the road every year, protecting land twice the size of India and conserving enough river length alone to encircle the world 25 times.

Our work in Michigan is set to contribute in a big way, from research and practices that will help restore more resilient forests, to partnerships that engage businesses in climate-smart decision-making.

But we need your help. There's no way to reach these ambitious goals without bold, collective action. That means bringing together diverse voices of conservation—farming and fishing communities, Indigenous leadership, private and public landowners and many more. It means people like you and me speaking up for naturebecause conservation and the sustainable use of natural resources is critical to us all, and to future generations.

Your support gives TNC the strength to advocate for bold action when we're at the table with decision makers-like we are right now. Next month, leaders and climate change activists from around the world will gather at the annual United Nations Climate Change Conference (COP27) in Egypt. There, TNC will join in conversations about how to address the climate emergency-how far we've come, and where we need to go from here, using the power of nature and the strength of policy and markets.

We can't all be present at COP27, but we all have something to contribute to the conversation. There are many ways you can help out, from simply talking with friends and family about climate change (nature.org/talkclimate), to contacting your local and state representatives to encourage them to act for healthy, resilient lands and waters (nature.org/actioncenter).

Nature is an issue that unites us all-it crosses all boundaries and backgrounds. We need your voice, because united, our voices are powerful. Together, we can work toward a resilient future for all.

Yours in Conservation,

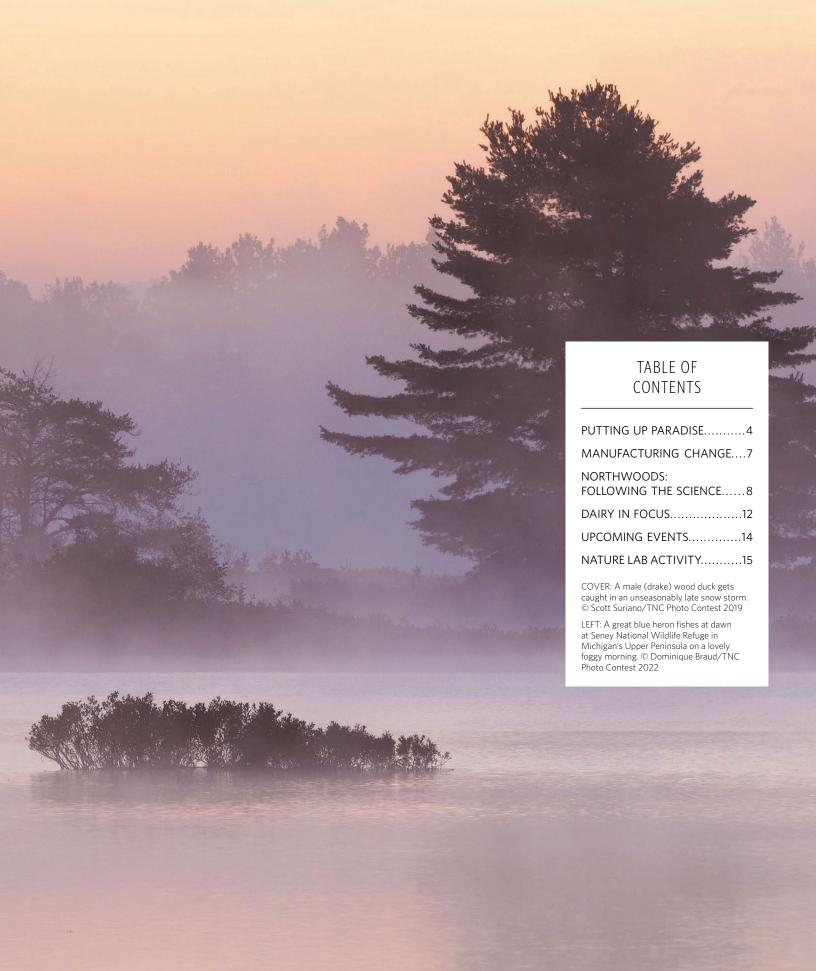
Sele Taylor

Helen Taylor State Director



Helen Taylor







THE PARKING LOT AT SACRED HEART CHURCH is no longer just a parking lot. It's now an example of how a community can enrich the places where people live and work by incorporating nature—in this case, gardens that provide both beauty and vital stormwater management.

This summer, TNC and Sacred Heart Church celebrated the completion of a three-year parking lot retrofit project that replaced pavement with pollinatorfriendly plants, made possible by the generosity of numerous donors, including a leadership gift from the Ralph C. Wilson, Jr. Foundation and additional support from the DTE Energy Foundation. TNC made sure the new gardens successfully weathered several growing seasons before handing over the duties of caring for them to the church's Garden Club, led by congregant Alexander Taylor.

"Something that really sets this project apart is how incredibly involved the parishioners have been throughout this project, from the very beginning," says Candace Calloway, TNC's former Healthy Cities Program Associate. "And we're still being approached by more people interested in learning about and stewarding the project. It's great to know that the project will be in the capable hands of the Garden Club in the years to come."





At the ribbon-cutting ceremony in June, project supporters and participants gathered under blue skies and sunshine to hear remarks from Father Norman P. Thomas of Sacred Heart Church, who blessed the new gardens. TNC's Valerie Strassberg, Director of Urban Water Infrastructure, and TNC board chair James M. Nicholson, also spoke.

The Conservancy also distributed native plants to attendees to plant in their own gardens, courtesy of Wildtype Native Plant Nursery in Mason—one small way to help spread the word about

"There's just such a strong sense of 'we're in this together; we're making something happen, together." the power of nature in the urban landscape.

"There's a real sense of purpose at Sacred Heart Church about engaging the community in volunteer stewardship around this project, including getting people from outside the

church inspired about green stormwater management and native plant gardens," says Candace. "It's about inviting people to be part of a conversation."

That conversation is continuing in nearby areas like the neighborhood of Marygrove, where residents planted native

gardens after participating in native plant training workshops that TNC sponsored at Sacred Heart Church.

That conversation is also happening among developers looking at green stormwater infrastructure as a potential answer to Detroit's stormwater management requirements.

"Even though TNC's formal role in this project is over, it's still our go-to example of the potential of green stormwater infrastructure, especially for developers involved in the expansion of the Greater Eastern Market neighborhood," Candace says. "There are huge social and community benefits that come out of projects likes this, and we want them to see that first-hand."

It's a ripple effect: Rooted in community, the impact of the Sacred Heart Church project draws strength from the people who make it happen, and the people they share it with. The garden is flourishing because of their efforts, as new plants, birds and insects make their way onto the scene.

"The community really rallied around the project," says Candace. "There's just such a strong sense of 'we're in this together; we're making something happen, together.' The event was such a nice way to honor the project and the people who were there to support it."

ALL PHOTOS: Community members gathered at the Sacred Heart Church ribbon-cutting ceremony in June. © Jason Whalen/Fauna Creative









#### PARTNERING FOR RESILIENCE

Green stormwater infrastructure, like the project at Sacred Heart Church, can help communities prepare for and adapt to the increased intensity of rain and storm events due to climate change.

Resilience starts at home, which is why TNC is also working with 48207-11 Grassroots Detroiters, to help homeowners in the Greater Eastern Market neighborhood complete home repairs and clean-energy updates that make their properties more resilient to climate change impacts. We'll be starting with at least 14 owner-occupied homes this year.



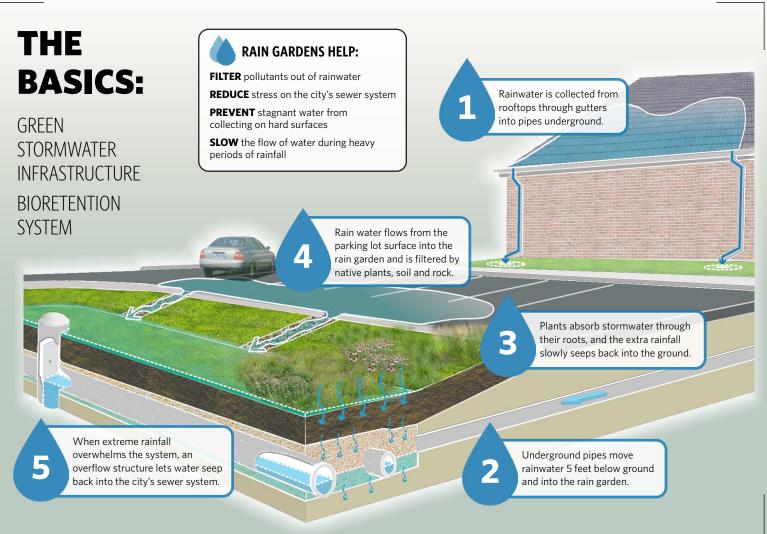
#### **A UNIQUE DEMONSTRATION PROJECT**

Nature-based green stormwater infrastructure, like the installation at Sacred Heart Church, helps communities reduce local flooding, protect clean water and mitigate urban heat. This project manages up to 3.5 million gallons of runoff a year in a cost-effective manner, making it one of the largest green stormwater infrastructure improvements by a faith-based institution in the city of Detroit. Completed at no cost to the parish, it also enabled the church to cut its drainage charge in half through Detroit's Green Credit program.



**CONCRETE CHANGE:** Watch this video to hear the full story of the Sacred Heart Church project: bit.ly/detroitshc







# Manufacturing Change

THE MICHIGAN MANUFACTURERS ASSOCIATION (MMA) AND TNC have joined forces to advance the conversation around improving energy efficiency, reducing carbon emissions and adopting renewable energy technologies within Michigan's manufacturing sector.

This partnership kicked off with a four-part series of webinars featuring sustainability experts and industry representatives who are leading the way toward making their enterprises cleaner and greener. The series focused on providing manufacturers—particularly small and mid-sized businesses without dedicated sustainability teams on staff—with practical insights into voluntary actions they can take to lower their industrial emissions, while staying competitive and attracting and retaining talented workers.

MMA has over 1,700 member companies, which enabled the webinar series to reach manufacturers in every corner of the state. According to Caroline Liethen, MMA's director of environmental and regulatory policy, "Sustainability is fast becoming a priority for Michigan manufacturers of all sizes."

The first two webinars provided attendees with a high-level overview of relevant trends in the sector as well as recent policy changes aimed at accelerating energy efficiency and carbon reduction strategies, while the second two webinars featured examples of steps Michigan manufacturing companies have taken to become more sustainable.

"There are tremendous opportunities across the sustainability landscape for manufacturers who are interested in saving money, attracting talent, growing their business and helping their community," says Madhu Anderson, Director of Government Relations for TNC. "We're proud we were able to partner with the

### Sustainable Manufacturing

December 15, 2021
11:00 a.m.

The Nature Conservancy

Association

Michigan Manufacturers Association to share some of the sustainability success stories businesses have already achieved, and their efforts to manage the impacts of a changing climate."

Both TNC and MMA hope to continue this innovative partnership with future joint events. The State of Michigan's new plan, MI Healthy Climate Plan, released in April 2022, emphasizes the urgency of "greatly accelerating" the decarbonization of Michigan's economy—and puts pressure on manufacturers to act now.

By sharing innovative strategies and promoting dialogue, we hope to help give Michigan businesses the tools and encouragement they need to become cleaner and greener, and lead the way for the low-carbon technologies of tomorrow.

TOP: Ambassador Bridge in Detroit, with a refinery plant in the background. © Michael D-L Jordan/dlp; ABOVE: Image from the live MMA webinar on sustainable manufacturing.



point for nature. TNC's grounding in rigorous science and research informs our conservation-from idea to impact-in all areas of our work, including the priority geography of the Great Lakes Northwoods.

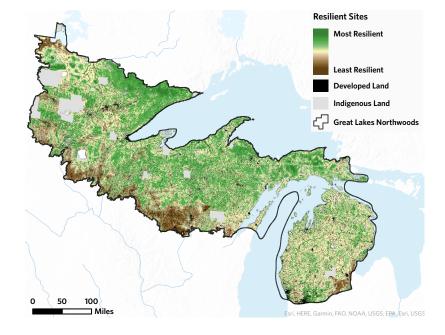
The Northwoods, a lushly forested region covering northern Michigan, Wisconsin and Minnesota, is vital to the health and future of the Great Lakes region. These expansive forests moderate regional climate, store carbon, filter the headwaters of the Great Lakes, provide wildlife habitat and support timber, recreation and tourism.

One of the largest unbroken swaths of hardwood forest remaining in North America, the Northwoods include some of the most climate-resilient sites in the country, as identified in TNC's landmark Resilient Connected Network project. These are places that will be important for biodiversity in a changing climate, due to their unique topographies, geologies and local connectedness.

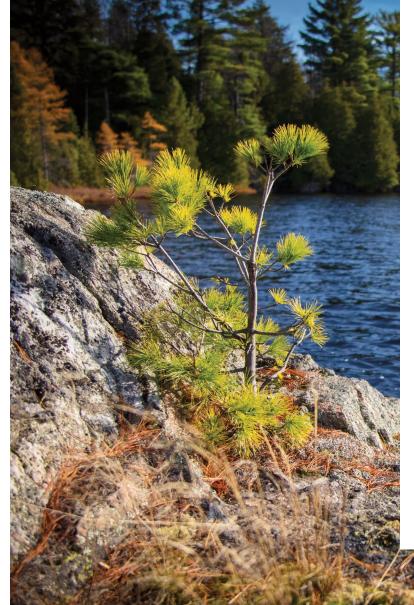
"Understanding the science behind the Northwoodsthe climate and use trends that are shaping them, as well as the factors that help them thrive—is key to developing forest restoration projects that have tangible, lasting results," says Dr. Doug Pearsall, TNC's Senior Conservation Scientist.

Every day, TNC staff are working on projects that advance the scientific conversation for the Northwoods. Read on for a few examples!

ABOVE: View from the top of Brockway Mountain in the Keweenaw Peninsula, a key area for conservation in the Northwoods region. © TNC



ABOVE (map): TNC's Resilient Connected Network project engaged more than more than 150 scientists from agencies, academia and NGOs across the country in a 10-year mapping effort. Learn more at nature.org/naturalhighways. © Stephanie Kyriakakis/TNC



#### PATTERNS OF REGENERATION

How can we prioritize forest management efforts to have the greatest impact on diversity and resilience? This is the question that Dr. Catherine Henry set out to answer as TNC's current Essel and Menakka Bailey Conservation Fellow. A recent doctoral graduate from Michigan State University, Catherine used U.S.



Catherine Henry Conservation Fellow

Forest Service data to analyze patterns of tree regeneration—the emergence of small seedlings and saplings that will eventually become the new forest canopy—in the Northwoods.

Although some factors influencing species richness cannot be changed, like water availability and average temperature, Catherine's research highlighted other factors that can be influenced by forest management. For example, her results show that timber harvests have the potential to promote tree diversity, by increasing light availability and allowing species with a variety of light preferences to thrive.

One common theme in her findings was that certain important species aren't regenerating as much as they used to, which suggests that forest composition is going to shift in the future. "The long-term data support what managers and scientists have been concerned about for decades—declining regeneration of key species, like sugar maple in northern hardwood forests or northern white cedar in cedar stands," Catherine says. "However, the data also highlight opportunities to adapt management approaches to improve forest resilience."

LEFT: A sapling at Wilderness Lakes Reserve. © Dietrich Ludwig; BOTTOM LEFT: Gaps in the tree canopy. © Rebekah Wuchner/TNC; BOTTOM RIGHT: A patch of sunlight illuminating ferns on the forest floor. © Jason Whalen/Fauna Creative





#### **TWO HEARTED RIVER FOREST RESERVE:** 15+ YEARS OF RESULTS

TNC acquired the nearly 24,000-acre Two Hearted River Forest Reserve in 2005 as part of the "Big U.P. Deal." Since then, TNC has managed the reserve to



Alex Verdeja-Perez Conservation Fellow

restore the tree age, size and species diversity that it had historically. In a fellowship role generously sponsored by the DTE Energy Foundation, TNC Conservation Fellow Alex Verdeja-Perez recently completed a comprehensive review of more than a decade and a half of monitoring data and activities on the reserve.

"It's been great to have the chance to work on projects like this as a fellow with The Nature Conservancy," Alex says. "It gives me the opportunity to provide the science, with hard data to back it, that can truly make an impact in how natural resources are managed."

Alex's analysis measures our restoration progress in the Two Hearted River Forest Reserve to date, including:

- · Improved groundcover and tree species diversity;
- · Increased water quality and river connectivity;
- · Contributions to local economies, through hiring local forestry workers and providing recreational opportunities for hiking, hunting and fishing; and
- · Compliance with Michigan's Commercial Forest Act and Forest Stewardship Council Certification standards. Learn more at mi.gov/commercialforest.

We are increasing our focus on carbon sequestration outcomes as well as strategic outreach and collaboration. By sharing lessons learned from the reserve, TNC aims to establish it as an education and research center for ecologically based land management.

In addition to conducting our own research, TNC also opens our preserves and reserves to partners for their research projects. Since 2003, we have hosted 41 partners conducting research at 19 preserves across both the Lower and Upper Peninsulas

ABOVE: Two Hearted River in autumn. © Drew Kelly; RIGHT: A forester measures the circumference of a tree at the Two Hearted River Forest Reserve. © Drew Kelly







# Dairy in Focus

ADDRESSING OUR PLANET'S CLIMATE CRISIS will require numerous solutions that reduce greenhouse gas emissions. The agricultural sector, which accounts for about 10% of U.S. emissions, will have an important role to play in these solutions.

The dairy industry's Net Zero Initiative is on the leading edge of a movement to make climate-smart practices more accessible and affordable to farmers. In support of this goal, TNC has partnered with the Innovation Center for U.S. Dairy and the Institute for Feed Education and Research to pilot a new "Feed in Focus" program for dairy farmers. This three-year effort explores the use of feed management strategies that can reduce methane emissions in dairy cattle (which account for 25% of the dairy sector's greenhouse gas emissions) as well as the use of feed production strategies that have climate, soil health and water quality benefits.

Michigan is one of two geographies selected for this program. "Michigan is a great place to pilot this program—we are sixth in the nation in milk production, with an estimated dairy herd of about 450,000 cows," says Joel Leland, TNC's Saginaw Bay Conservation Associate and project lead. "Many of those dairy operations are right here in the Saginaw Bay watershed, where we've been working with farmers to increase soil health and reduce nutrient runoff for over a decade."

Currently in its first year in Michigan, Feed in Focus connects dairy farmers with the data, tools, financial incentives, technical support and processes they need to make the switch to new practices. Depending on the needs of their operations, they have the option of adopting feed crop production processes such as reduced tillage and cover crops, dietary interventions such as alternative feed rations and additives that help soothe the cows' digestive process to reduce methane emissions, or both.

"We work with dairy farmers to implement new practices with environmental benefits, backed by proven research," says Joel. "This will help produce a sustainable product for the supply chain, while lowering input costs and improving each farm's ability to scale."

TNC and our partners, including the Michigan Milk Producers Association, will work with up to 10 dairy farms in this first year—coordinating demonstrations of emerging technologies, and engaging farmers, farm advisors, industry representatives and others. Some of the innovative aspects of this program include its individualized approach that meets farmers where they are, its use of financial incentives



and its integrated focus on the entire dairy supply chain, including milk suppliers and buyers as well as farmers.

Ultimately, the goal is to create a blueprint of best agronomic and farm management practices, supported by digital tools that can be replicated and scaled on U.S. dairy farms of all sizes—improving productivity while reducing environmental impact.

"Many dairy farmers recognize the importance of sustaining the land, keeping livestock healthy and ensuring future generations can thrive," says Joel. "To achieve these goals, we all need to work together to reimagine the systems we rely on for food—from the ground up."

Though initial projects are only being piloted in Michigan and Wisconsin, our vision is to see new industry partners adopting the program framework and making it available to a wider geography, possibly even inspiring similar programs in other agricultural sectors.

ABOVE: The Saginaw Bay Watershed is a key geography for TNC's agricultural program in Michigan. © Jason Whalen/Fauna Creative





ABOVE and BELOW: Donors to the Dairy Feed in Focus project include Rotary District 6310, which has more than half of its 32 clubs located in the Saginaw Bay watershed. They have joined together to help TNC provide incentives to farmers, in support of the Rotary Club's global priority of protecting the environment. © Anne Trahan





#### **UPCOMING EVENTS**

Join us at one of our fun and informative fall events! Register online at nature.org/mievents. Don't miss an event notice; subscribe online at nature.org/naturenews to receive special invitations and timely alerts.

#### **VOLUNTEER AT IVES ROAD FEN PRESERVE | TECUMSEH**

Saturdays, September through October, 9am-12pm ET

Join a dedicated group of friendly nature enthusiasts as you help with invasive species removal, trail maintenance and more among the peaceful backdrop of the River Raisin and floodplain forest.

#### FIELD TRIP AT PAW PAW PRAIRIE FEN PRESERVE | MATTAWAN

Saturday, October 22, 10am-12pm ET

While there are several types of fens, prairie fens are particularly unique, providing habitat for rare wetland and prairie plants. Explore the landscape on this guided hike—with donuts! The sway of grasses, soaring raptors and sweet autumn air create an idyllic setting to spend your morning.

#### **INTERNATIONAL SPOTLIGHT: KEEPING GRASSLANDS HEALTHY IN NORTHERN TANZANIA**

Wednesday, October 26, 12-1pm ET | Zoom webinar

Between the world-renowned Mount Kilimanjaro and Serengeti national parks, life really boils down to one thing: grass. Keeping livestock is a lifestyle for the pastoralists here, and ensuring enough quality grass in dry and wet seasons is getting harder in the face of climate change. Learn how TNC and partners support communities to manage their lands for themselves and their livestock while protecting the region's iconic wildlife.

#### **CONSERVATION CAFE: THE GREAT NORTHWOODS**

Tuesday, November 1, 12-1pm ET | Ann Arbor City Club, Ann Arbor; or Friday, November 4, 12-1pm ET | Frederik Meijer Gardens, Grand Rapids

Our Lunch and Learn series returns! The Northwoods is a landscape of towering pines, ancient volcanic rock, lush wetlands and glacial lakes spanning 64 million acres. Learn how TNC in Michigan, Minnesota and Wisconsin collaborate with local communities to conserve these iconic forests and the way of life they uphold.

#### JOIN THE #OPTOUTSIDE MOVEMENT

Friday, November 25

As an alternative to shopping on Black Friday, we invite you to spend the day outside enjoying nature while cleaning up along the way. Pick your favorite TNC preserve, local park or neighborhood and see how much trash you can collect! Share your findings and photos on social media using #TNCOptOutside. To find a preserve near you, visit nature.org/miexplore.

ABOVE: Paw Paw Prairie Fen Preserve. © Jason Whalen/Big Foot Media

#### **AUDIO TOURS - NOW IN SPANISH!**

Take a virtual field trip with TNC

For an outdoor experience enhanced with stories, historical perspective, fun facts and natural sounds, take an audio tour of a TNC preserve today—on location, or from the comfort of home! Visit **nature.org/miexplore** to find all of that and more with GPS-based audio tours for these TNC preserves across Michigan:

Carl A. Gerstacker Nature Preserve at **Dudley Bay** | Mackinac County

> **Echo Lake Nature Preserve** Marquette County

Helmut & Candis Stern Preserve at Mt. **Baldy** | Keweenaw County **NEW** Spanish audio available!

Mary Macdonald Preserve at **Horseshoe Harbor** | Keweenaw County **NEW** Spanish audio available!

McMahon Lake Preserve | Luce County **NEW** Spanish audio available!

Nan Weston Nature Preserve at Sharon Hollow | Washtenaw County

Ross Coastal Plain Marsh Preserve Van Buren County

Users can download the free TravelStorys app to a device from the App Store (iPhone) or Google Play (Android) to access a tour on site.

ABOVE: The TravelStorys app can enhance your trail experience. © Cameron Karsten Photography



#### CLIMATE HEROES! THE POWER OF TREES

(Grade levels: 3-8) Made possible with support from Carrier. Adapted for print. Find the full guidance at **nature.org/naturelab**.

Trees provide so many benefits to our everyday lives. They keep the air clean and help us stay healthy. Trees are also an important natural solution in our fight against climate change because of their ability to soak up climate-altering carbon from the atmosphere—as much as 48 pounds of carbon a year, each. So, the more forests the better!

In this Nature Lab, learn more about the power of trees and how you can help protect them.

#### WATCH

First, take a virtual field trip with TNC, from Louisville, Kentucky, to St. Vincent and the Grenadines in the Caribbean. Find out why trees are our climate heroes, how we can harness their superpowers and how we can get involved in our communities to protect and restore the health of trees: <a href="mailto:youtu.be/ilXeGlybjJQ">youtu.be/ilXeGlybjJQ</a>.

#### **INVESTIGATE**

It's your turn! Use the suggested links and activities to answer the following questions.

#### 1 | Why do we need trees?

What trees do you see in your community? **Paint or draw a picture** of some of the trees you see and the benefits they provide to people and wildlife. Or make a list!

#### 2 | How do trees help?

Use the **Tree Benefit Calculator** (<u>arborday.org/calculator</u>) to investigate some of the ways the trees in your neighborhood contribute to a healthy community!

#### 3 | What threats do trees face?

Watch "Insects, Disease, Drought, and Fire" (<a href="youtu.be/e\_cOMAioE54">you see signs of any of these threats to trees in your own neighborhood? Use SelecTree (<a href="selectree">selecTree</a> (<a href="selectree">selectree</a>. <a href="calpoly.edu">calpoly.edu</a>) to identify potential threats the species in your area might face.

#### 4 | How can I help protect trees in my community?

**Create a map** of your neighborhood. Survey the trees in your neighborhood and note their location and type on your map. (Tip: try assigning each species a number and using that number to identify tree locations). Are there places that would benefit from more trees, or different species? Are there threats that you could help reduce? Use your map to help you brainstorm **actions** you could take to support healthy trees.



#### **GO BEYOND**

Plant a tree! Watch this video (<u>vimeo</u>. <u>com/78368570</u>) to learn what factors need to be considered when planting or adopting a tree in an urban community.

#### **ADDITIONAL RESOURCES**

- Healthy Trees, Healthy Cities Initiative: healthytreeshealthycitiesapp.org
   Training videos and more
- Leafsnap: leafsnap.com
   A tool for identifying tree species based on their leaves



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# Give the Gift of a Lifetime

To make a gift of any kind to The Nature Conservancy is an act of generosity. To make a long-term gift—one derived from the work of a lifetime—is to make a commitment beyond measure.



To learn more about The Legacy Club, or if you are a Legacy Club member and have a question, please contact Paul Beczkiewicz at (517) 316-2269 or pbeczkiewicz@tnc.org

Or visit us online at nature.org/legacyclub.

The Legacy Club is a group of TNC supporters who have made a lasting commitment to conservation by making a life-income gift with TNC or by naming TNC as a beneficiary in their estate plans. The Legacy Club is a way for us to recognize this profound contribution to The Nature Conservancy's future.

#### Create Your Conservation Legacy

For more than half a century, thousands of bequests and planned gifts have provided vital support for the lands and waters you care about. Today you can help continue this tradition by making a lasting commitment to the Conservancy. When you join The Legacy Club, you help ensure that the conservation work we pioneer today will continue long into the future.

#### Legacy Club Benefits

- Nature Conservancy magazine, our award-winning quarterly publication;
- The semi-annual newsletter, Legacy;
- TNC's annual report;
- Trip invitations offering participants a unique and up-close look at our work;
- Invitations to special events; and
- Exclusive discounts and offers.

#### How to Join The Legacy Club

Membership is voluntary and without obligation. You can become a member of The Legacy Club by naming the Conservancy in your will or estate plan or by making a life-income gift or donating real estate to fund your gift.





