

30X30 ACTIVIST TOOLKIT

A Guide for Protecting
Missouri's Natural Spaces



SIERRA CLUB
MISSOURI CHAPTER

Table of Contents

3 What is 30X30?

5 Conservation
Committee

6 Public Lands

8 Get Outside!

9 Get Social!

10 Make your
Voice Heard!

12 Government
Agencies

13 Community
Meetings

14 Advocacy
in Action!

15 Easements and
Land Trusts

17 Beyond 30X30!

18 Community
Advocacy

20 Factory Farms/
CAFOS

21 Legal Support

23 Water Quality

24 Permaculture

25 Resources for
Landowners

27 In your
Backyard!

28 Native and
Invasive Species

30! Become a
Sierra Club Member!

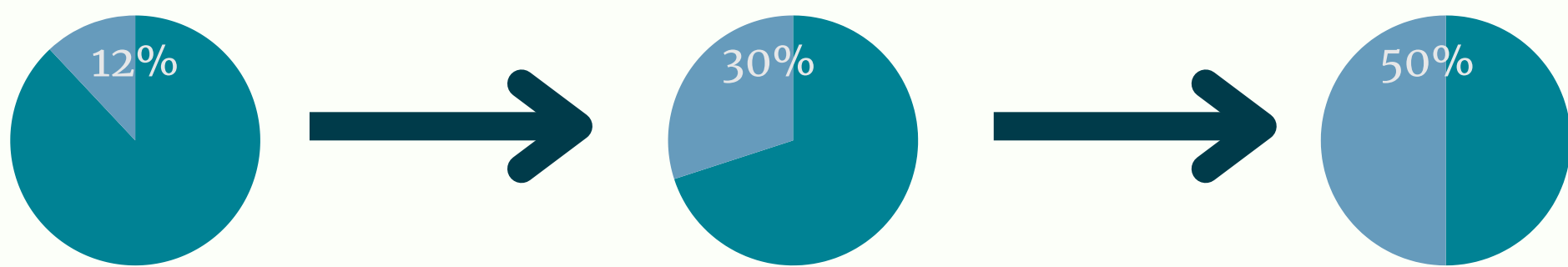


SIERRA CLUB
MISSOURI CHAPTER

What is 30X30

A Commitment to Conserve 30% of Nature by the year 2030.

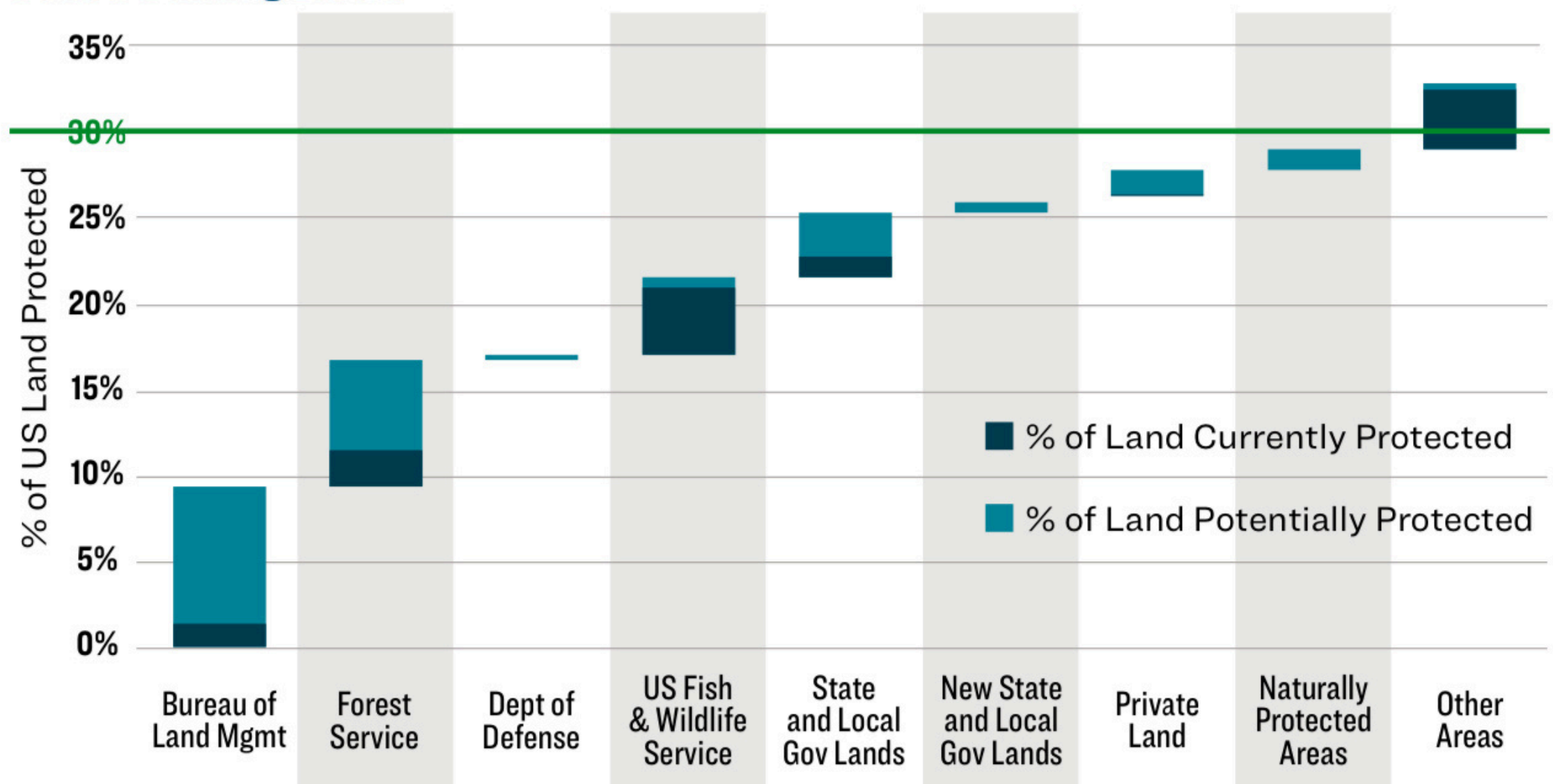
With only 12% of US lands currently protected, reaching this goal means more neighborhood green space, more wilderness, and everything in between.



To halt mass extinction of endangered species and the devastation of ecologically important natural systems, it's crucial that we preserve our wild lands and waters. 30x30 is a global movement aimed at preserving 30% of lands and water in the U.S. by 2030, with the broader goal of protecting "half Earth", or 50% of lands and water by 2050.

It's an ambitious goal, but one that's achievable if we all work together. We are setting our sights on protecting and restoring large, intact landscapes like National Parks, oceans and wildlife corridors, implementing land conservation strategies that contribute to climate solutions, supporting the conservation and stewardship vision and priorities of Tribal Nations, and conserving more open lands and parks near communities of color and economically disadvantaged communities.

30x30 Building Blocks





There is still hope, but we must act now, and we must be bold. We know that to combat the climate crisis, we have to quickly decarbonize our economy and draw down significant amounts of carbon pollution from the atmosphere. Public lands can sequester carbon and increase ecosystem and community resilience to the impacts of climate change.

With smart land conservation and management practices, we could offset 21 percent of US greenhouse gas emissions and preserve much-needed habitat for increasingly imperiled wildlife.

Protecting wild places will keep mining, drilling and logging from adding new pollution into the air and will suck existing climate pollution out of the air. It will provide protection from extreme weather, homes for wildlife, and opportunities for people to enjoy the outdoors together.

We need to act quickly before remaining wild places are lost.

It is our responsibility to step in and contribute to the climate solution, and ensure the survival of our lands, threatened species and communities. We need to preserve Nature so that Nature can preserve us – as, truly, it is our support system. Protecting 30 percent of US lands and waters by 2030 will require immense political will, creative advocacy strategies, aggressive policy-making, and an energized grassroots movement. Conserving more of our public lands and managing them to sustain wildlife and natural systems is our best chance to avoid the worst impacts of climate change and ensure that we leave a livable world for future generations.

Missouri Sierra Club's conservation team is working toward a just, equitable, and sustainable future where all people benefit from a healthy thriving planet and a direct connection to nature.

A future where all people breathe fresh air, drink clean water, and regularly spend time outdoors. A future where public health professionals prescribe time in nature to improve health and wellness, and where children are encouraged to explore, play, and learn outdoors.

In this future, people will find community, peace, and internal strength through a connection to nature. Along the way, a new generation of leaders will be inspired to protect and restore our lands, waters, wildlife, and communities.

Join our Conservation Committee!



PUBLIC LANDS

Missouri's federally protected lands include the first national park designated to protect a river system- the Ozark National Scenic Riverways- as well as one of the first rivers protected by the Wild and Scenic Rivers Act: the Eleven Point River. From county and state parks to the Mark Twain National Forest, Missouri's public lands protect natural treasures such as caves, springs, wetlands, wildlife habitats, and valuable natural resources. These spaces are not only crucial to the survival of a multitude of species, they are crucial to our own survival as well.



Flourishing natural areas and parks are indispensable to people's health, prosperity, cultural traditions, and enjoyment. They also play a critical role in combating the climate and extinction crises. With a million acres of nature being lost to development in the US each year, and one million species at risk of extinction worldwide, it is clear that we need to do more to combat these unprecedented threats, including moving beyond historic conservation models to a more inclusive approach.

ADVOCATING FOR LAND CONSERVATION MAKES "CENTS"

Public funding for land conservation brings an impressive return on investment. Our natural resources provide ecosystem services like clean air and water, food security, flood control, medicine, carbon storage, outdoor recreation, public health, educational opportunities and more.



According to the Bureau of Economic Analysis, outdoor recreation activities contribute a total of \$778 billion annually to the economy while supporting 5.2 million American jobs.

They also help to grow our economy. For every dollar Missouri spends to operate state parks, the state's economy sees a return of \$26.

MAKE THE LEAP FROM ENJOYING NATURE TO PROTECTING IT!



Get outdoors. Fall in love with the places we are protecting. Make new friends. Get connected. Explore our public lands.

Sierra Club's mission is to "explore, enjoy and protect nature" and there are endless ways you can achieve this by getting involved with your local group for events, outings and volunteer opportunities.



Be sure to check out Meetup for local Sierra Club events and volunteer opportunities:

- [White River Group](#)
(SW MO & Ozarks)
- [Kansas City Area](#)
- [Mid-Missouri Group](#)
- [Eastern Missouri Group](#)
(St. Louis Region)

The only way to truly value nature is to build a deep connection with it.

Join our [Annual Trail Restoration Work Week](#) which happens in some of Missouri's best wild areas, including Bee Bluff and Roger Pryor Backcountry!



LET'S GET SOCIAL!



Social Media Platforms such as [Facebook](#), [Instagram](#) and [Twitter](#) are a great way to find and share information about protecting our public lands and fighting for 30X30!

These days, social media is essential to engagement — both to tell the importance of the 30X30 mission and to build relationships with others that could join in and help to get Missouri and the US to 30% by 2030. Social media has moved us from traditional one-way modes of communication from the past to an instant, interactive mode of conversation for the future. Social media helps amplify our advocacy efforts by reaching more people, in more places, faster than ever before. Post your nature and activism photos or videos to Facebook, Instagram and Twitter. Tag everyone in the pictures and our Missouri Sierra Club accounts so we can help spread your message! Connect with your local Sierra Club group to amplify campaigns in your city!

Be sure to follow Sierra Club's Social Media Pages!
Like, Share and Spread the Word!

Sample Social Media Posts:

I'm joining activists across the country in an ambitious effort to protect 30% of public lands, waters and forests in the United States to fight the climate crisis. Are you in? #30x30

To protect wildlife and the places they thrive, we need to protect 30% of lands by 2030. Learn more about the initiative to fight the climate crisis and preserve our natural environment. #30X30

Scientists tell us public lands are KEY to fighting the climate crisis, and we need to protect 30% of lands and waters by 2030. Join us! #30x30





MAKE YOUR VOICE HEARD

Letters to the Editor are a great way to make your voice heard, spread awareness and encourage action. Follow these tips for writing a compelling letter for the 30X30 initiative.

Be timely and concise. Your letter will have a greater impact, and chance of getting published if it is in response to a current issue or responding to an article within a few days of publication. Focus on one or two main points and keep it no longer than 250 words.

Use a direct subject line and don't include an attachment. Sample subject line: ATTN: News Editor - Letter to Editor. If you are emailing your letter, it is best to include the text of your letter in the body of your email. Most newspaper's email systems strip out attachments.

Don't forget to send a copy of your letter to Missouri Sierra Club. It's your voice that helps our mission succeed and we want to hear it!

Be original and accurate. Say something new or different that will catch a busy editor and reader's eye. Inform yourself about the issues and the details. Avoid exaggeration, overstatement and name calling.

Follow each paper's submission guidelines carefully. Most papers print their requirements on their website. Letters should include your full name, home address, e-mail address, and telephone number(s).



LETTERS TO THE EDITOR

You can use the tips above and the templates provided below to personalize and send to your local newspapers and publications. Make sure to include your personal story and local connection to the issue. Don't simply cut and paste from these samples. Many papers won't print letters if they suspect they are part of a letter campaign.

Public lands—spaces that protect the health of people, wildlife, and the planet—are disappearing. Every year in the United States, we lose a million acres of nature to development. With the existential threat of climate change and one million species at risk of extinction around the world, we need decisive action now. Scientists tell us that in order to combat extinction and climate change, we need to protect 30% of the US's lands and waters by 2030. The benefits of protecting public land are expansive. These lands can play a key role in combating climate change; in fact, forests in the US already store the equivalent of seven times our country's annual emissions. By combating climate change and preserving habitats, protecting these lands helps ensure the survival of threatened species. Missouri has the opportunity to set an example for the rest of the country. Our statewide resources and agencies can designate wildlife corridors, create and expand state and local parks, and implement open space programs to protect our vital resources. The health of our community, wildlife, and planet are at stake. By contacting our state and federal agencies, and talking to people in our community, we can protect 30% of U.S. land by 2030.

In the March 30 publication, "Learning More About Community Parks" the *St. Louis Post-Dispatch* gave some great examples of the benefits of green space in our community. Conserving public lands is more crucial than ever as our world collectively faces an intertwined climate and extinction crisis. The well being of our communities and the survival of countless plant and animal species depends on the preservation of healthy, natural areas. We have to take steps now to protect public lands, restore wildlife corridors, support environmental conservation and stewardship by Tribal Nations, and ensure that we achieve 30 percent land and water conservation by 2030.

Scientists say protecting 30% of natural areas in the United States by 2030 is an absolute must if we are to prevent the mass extinction looming at our doorstep. It's undoubtedly a serious undertaking; but it's also an indisputable necessity. I encourage everyone reading this to consider the benefits natural spaces have on our communities and the wildlife around us, to imagine the implications of their loss, and to take the resulting frustration and motivation from this exercise straight to your legislators' desks—both local and national. Make calls, join organizations, write letters, and share your public lands stories to urge decision makers to protect healthy communities and our environment.

GOVERNMENT AGENCIES

Protecting 30 percent of US lands and waters by 2030 will require immense political will, creative advocacy strategies, aggressive policy-making, and an energized grassroots movement. But the policies that need to be implemented are neither complicated nor entirely new. State and local governments could protect 50 percent more land than they currently do. There are many agencies from the federal, state and local levels that we can utilize to make change.

State and local agencies can take strong action including:

- Implementing state-funded open space programs.
- Managing state lands to offset climate pollution.
- Designation of wildlife corridors that safeguard lands within them.
- Creation and expansion of state and local parks.

THE ENVIRONMENTAL PROTECTION AGENCY (EPA)

is an independent executive agency of the United States federal government tasked with environmental protection matters.

MISSOURI DEPT. OF AGRICULTURE

is responsible for serving, promoting, and protecting the agricultural producers, processors, and consumers of Missouri's food, fuel, and fiber products.

MISSOURI DEPT. OF HEALTH AND SENIOR SERVICES

is responsible for managing and promoting all public health programs to improve life and wellness for Missourians.

MISSOURI DEPT. OF CONSERVATION (MDC)

is vested with control, management, restoration, conservation, and regulation of fish, forest, and wildlife resources of the state and owns and oversees hatcheries, sanctuaries, refuges, and reservations, and enforces the state wildlife code.

MISSOURI DEPT. OF NATURAL RESOURCES (DNR)

protects our air, land, water, and mineral resources; preserves our unique natural and historic places; and provides recreational and learning opportunities; while promoting the environmentally sound and energy-efficient operations of businesses, communities, agriculture, and industry for the benefit of all Missourians.

MISSOURI PUBLIC SERVICE COMMISSION

regulates investor-owned telephone, electric, natural gas, steam, water, and sewer utilities in the state of Missouri. Manufacturers and retail dealers who sell new and used manufactured homes and modular units are also regulated by the commission.

UNITED STATES ARMY CORPS OF ENGINEERS

manages one of the largest federal environmental missions: restoring degraded ecosystems; constructing sustainable facilities; regulating waterways; managing natural resources; and cleaning up contaminated sites from past military activities.



HOW TO PLAN AND RUN AN EFFECTIVE COMMUNITY MEETING

Are there harmful environmental practices occurring in your community or neighborhood? Not sure how to confront the issue? The good news is that you are not alone. This page includes resources for how to connect with your community and organize around a shared goal. Advocating as a community is a more effective way of protecting our local lands and waters.

Know Your Why. Develop and set a clear goal and agenda for the meeting and communicate this widely. Meetings have three primary purposes: communicating, administering, and deciding. The only good reason to have meetings is to accomplish something together that you can't do better alone.

Decide who will lead the meeting and designate a planning committee that includes members of the community who would be helpful in the planning process. Community leaders are useful during mobilization. Participants should reflect the community and various constituencies, such as family caregivers, business owners, Tribal Nations healers, or teachers. Attempt to capture as much of the community's diversity as possible, including men, women and marginalized members.

Find a location that is accessible and safe. Send out invites and make sure to get yeses back. Don't forget to send reminders a few days before the meeting. Include the agenda with the invite so participants know the purpose of the meeting and can use meeting time to ask questions, make decisions, etc. Assign someone to take notes, [see an example of notes/minutes here](#). Plan to keep the discussion to an hour at most, but don't forget the importance of informal time before and after the meeting for people to talk and socialize.

During the meeting, stay present and on topic. Be open and create a safe, anti-oppressive space. Define unfamiliar terms and acronyms. Use open-ended questions as much as possible to bring out the views of participants and encourage everyone to get involved. After the meeting, use the information and feedback gathered to help know what worked and what didn't. Be sure to follow up with the people who attended. Thank them for coming and be sure to follow up on any commitments that they made.



Make it Fun!
Hold your meeting at an interesting place or try to involve food and/or activities when possible.



CASE STUDY: COMMUNITY ADVOCACY PROTECTS MORE THAN 7,000 ACRES OF PUBLIC LANDS IN 2022

In 2016, former Governor Jay Nixon purchased four properties throughout Missouri with the intention of turning them into state parks. When the next Governor took office, political opponents threatened to sell of these parks to private interests and eliminate the potential future nature areas open to all. The Missouri Sierra Club was quick to act.

Thirty Sierra Club members attend an in-district meeting in October 2019 with Senator Eslinger, petitioning her to protect our new parks.



We organized to support these parks.

Over 100 Sierra Club members attended our Lobby Days in Jefferson City to support our parks.

In each legislative attempt to sell Eleven Point State Park, we collectively made hundreds of phone calls to state representatives. Seventy Sierra Club members attended five meetings with local legislators encouraging their commitment to defending the state parks within their district.



We sent more than 2,000 emails to MO Department of Natural Resources (DNR) for the protection of our new public lands, and united 12 organizations to sign onto a petition in support of the parks. We continued to make phone calls to Missouri State Parks and DNR to begin the process of opening the parks to the public.

We wrote letters to the editor, putting public pressure on the DNR to protect and open the parks.

The tide was turned. Beginning with Bryant Creek State Park, we successfully shifted the narrative to one of public lands protection. The DNR announced the beginning of the process to open the park. We turned out sixty Sierra Club members to the public meetings, supporting minimally invasive development and natural resource restoration.

We partnered with MO State Parks staff to host 2 public scoping hikes at Bryant Creek State Park to learn more about the natural ecosystem. These attendees became part of the public input process advocating for the land to remain wild.

In 2022, Bryant Creek State Park opened to the public, and the protection of Eleven Point State Park was announced. In the year of Missouri Sierra Club's 50th Anniversary, we celebrated the monumental win of more than 7,000 acres of newly protected wild and scenic treasured public lands!



CONSERVATION EASEMENTS AND MISSOURI LAND TRUSTS

Research shows that we're losing habitat for threatened and endangered species twice as fast on unprotected private lands as we are on public lands. The Center for American Progress found that 75% of natural areas lost to development in the United States between 2001 and 2017 were on private lands— including farms, ranches and forests. A mere 3% of protected areas in the country are on private lands, despite the fact that 60% of all land in the country is privately owned. Land trusts and conservation easements allow private landowners to put their lands into permanent protection and add to the 30x30 goal – [Center for Biological Diversity](#).

Using private land to boost protected areas can also make nature more accessible and widen the geographic scope of where conservation happens. "Private land is often closer to communities than federal wilderness, national forests or even state lands," found a [report by the Center for Western Priorities](#). "For example, many city parks are protected by conservation easements. Additional benefits can include improved health, access to locally produced food, and opportunities for environmental education." Any efforts to improve conservation goals also need to be centered in equity.

"Native Americans and other peoples of color have been largely excluded from US conservation policy, and many of them, living in cities, view public lands as remote and unwelcoming," wrote Middleton and Brashares. "A successful 30 by 30 strategy must encompass needs as diverse as tribal priorities and urban green spaces in historically excluded communities." But if done well, a [30x30 conservation goal](#) can help both diverse human communities and ecosystems.

"With a new sense of urgency, the land trust community will do its part together with farmers, ranchers, forest landowners, fishermen, tribes, states, territories, local officials and landowners across the country to help make the 30x30 goal a reality." – The Land Trust Alliance



For Missouri landowners interested in environmental and habitat conservation, there are programs available for cost-sharing on private lands, legal support and advice, and selling protected land.

For Landowners - Missouri Land Trust Coalition:

This includes tools and options for landowners such as conservation easements, donating land, and conservation practices; as well as financial and tax implications for land protection and tips for choosing a land trust.

Resources for Acquiring a Conservation Easement from Missouri Land Trust Coalition– including links to and resources from partnering land trust organizations in Missouri:

Seed St. Louis, Great Rivers Greenway, Greenbelt Land Trust of Mid-Missouri, Heartland Conservation Alliance, James River Basin Partnership, Kansas Land Trust, LAD Foundation, Land Learning Foundation, Magnificent Missouri, Open Space Council, Ozark Greenways, Platte Land Trust.



Conservation Easement Resources:

A Conservation Easement is a voluntary legal agreement between a landowner and a land trust or government agency that permanently limits the uses of land in order to protect its conservation values. It is one of the most effective tools available for the permanent conservation of private lands resulting in millions of protected acres across the United States. Landowners continue to own and manage their land, and retain the right to sell the land or pass it on to future generations. Voluntary conservation agreements, or easements, were recognized by Congress in the 1970s to reward landowners who permanently protect their land from development.



Land Trusts and Conservation Easements FAQ
From Missouri and Arkansas-based Ozark Land Trust.

The Nature Conservancy works in the private sector to establish local groups that can protect land, establish conservation easements and a conservation buyer program.

BEYOND 30X30



Looking for more ideas on how you can protect Missouri's ecosystem in addition to joining the fight to conserve 30% of public lands by 2030?

From backyards and community gardens to large farms, there is so much you can do in your own spaces to protect wildlife, air and water quality.



COMMUNITY ADVOCACY

Communities can integrate conservation at large and small scales, and your advocacy can be the catalyst needed to initiate these projects.

You can learn more and take a stand for a number of issues that you're passionate about:

- Participating in public input processes on our state and national parks and forests.
- Joining our trail restoration and service projects on public lands throughout the state of Missouri.
- Advocating for native plants in your local parks or around businesses. [St. Louis Wild Ones](#) provides grants for partnering schools, nature centers, houses of worship, government-owned facilities, and other non-profit places of learning for landscaping projects incorporating native plants in an educational setting.
- Implementing standards for green and bird-safe buildings.
- Supporting bees and pollinators in Kansas City by [volunteering with MO Hives](#), who is working to transform vacant lots to safe, sustainable environments for bees to live, feed and grow. By transforming vacant lots in the inner city, MO Hives is promoting both thriving bee farms (apiaries) and thriving communities.
- Taking on state-wide issues, including protecting communities from the impacts of Concentrated Animal Feeding Operations (CAFOs).
- Conducting a Big River community cleanup: For a stream cleanup of epic proportions, visit the [Missouri River Relief's Manual](#) for planning and conducting a community river cleanup.

Check out some [great examples of Community Conservation](#) in Springfield and Kansas City!



ENVIRONMENTAL THREATS TO YOUR LAND AND COMMUNITY



Monitor Water Quality in Your Area:

Through different monitoring procedures, it is possible to detect many kinds of water quality impairments and identify probable causes so that steps can be taken to alleviate or correct the issue. Protecting and ensuring the health of our streams and watersheds is everyone's responsibility. By monitoring water quality, citizens can take an active role in protecting water resources. To begin water quality monitoring in your area, [visit MO Stream Teams resources](#) – and [learn how to get certified to monitor water quality](#).

Advocate for Dark Skies:

The [Missouri Chapter of the International Dark Sky Association](#) organizes to raise awareness about light pollution, promote quality outdoor lighting, protect our natural environment and beautiful night sky, and educate the public on how reducing light pollution can lower energy costs.

Put a Stop to Illegal Dumping:

Illegal dumping of trash is a problem that harms Missourians in both urban and rural communities. It can harm wildlife, contaminate soil and water, increase risks to human health from insects and rodents, spread diseases, and increase risks of floods and fires.

Make sure to report illegal dumping when you see it.

[From anywhere in Missouri, you can learn how to report to the Department of Natural Resources here.](#)

Report in your local area: [St. Louis](#). - [Kansas City](#) - [Springfield](#)

Fighting Development in Biodiverse Landscapes:

Team up with your local Sierra Club group or [join our state wide Conservation Committee!](#) We work together to stop unwarranted development on fragile, biodiverse areas. We recently successfully prevented a silica sand mine from impacting Hawn State Park.

FACTORY FARMS / CONCENTRATED ANIMAL FEEDING OPERATIONS

If there is an industrial livestock operation that has moved in or is considering moving in near to you, there are many reasons to be concerned, including hazardous odors and groundwater, stream and river contamination.

Robert S. Lawrence, MD John Hopkins Bloomberg School of Public Health testified before the Congressional hearing on environmental and health impacts of CAFOs. He concluded, “The public health threat of CAFOs reflects the multiple exposure routes through air, water and soil of harmful gases, pollutants such as sulfur dioxide and nitrates, and pathogenic microorganisms.” Lawrence asserts the threats are real and urgent and additional protections are needed.

If a factory farm is moving in near you, the best place to learn how to protect yourself, your family and land and water around you is by [contacting the Socially Responsible Agriculture Project here](#). Or you can call at 503-362-8303 (toll free: 844-367-7727).

[The Rap Sheet on Smithfield’s Industrial Hog Facilities in Missouri – Socially Responsible Agriculture Project](#).

You can also connect with others confronting the negative effects of Concentrated Animal Feeding Operations by [joining the Missouri Coalition for the Environment's CAFO Action Network here](#).

For more than 20 years, Socially Responsible Agriculture Project (SRAP) has served as a mobilizing force to help communities protect themselves from the damages caused by industrial livestock operations and to advocate for a food system built on regenerative practices, justice, democracy, and resilience. Our team includes technical experts, independent family farmers, and rural residents who have faced the threats of factory farms in their communities. When asked for help, SRAP offers free support, providing communities with the knowledge and skills to protect their right to clean water, air, and soil and to a healthy, just, and vibrant future.
[Learn more at www.sraproject.org](http://www.sraproject.org).

LEGAL SUPPORT AND ADVICE

A great resource for many situations is the [Great Rivers Environmental Law Center \(GRELC\)](#).



If someone is infringing on your property rights in an environmentally destructive way, GRELC may be able to help. They generally cannot investigate the neighbors - you must. However, if you suspect a certain company, they can run record checks on that company.



Because of the [Federal Freedom of Information Act \(FOIA\)](#) and the [Missouri Sunshine Law](#) you should have access to most government documents if you ask for them. FOIA addresses federal agencies and a Sunshine Request applies to state or local issues.

[Here is a good guide to how to file a FOIA request.](#)

[Here is how to file a Sunshine Request.](#)

Make sure to contact relevant regulatory agencies first and document your calls to the agencies and the issue you are facing as thoroughly as you can.

CONNECTIVITY OF CONSERVATION EFFORTS ACROSS THE MIDWEST



Midwest Landscape Initiative is an organization that helps identify shared conservation and management priorities that require the development of scalable collaborative solutions on public and private lands to achieve healthy, functioning ecosystems. They have been doing some fantastic mapping to identify species of greatest conservation need and to connect key habitats.

Check out Missouri Department of Conservation's Comprehensive Conservation Strategy document to see how the statewide integration of Missouri's State Forest Action Plan, State Wildlife Action Plan, watershed priorities, public and private land conservation opportunities, community conservation strategy, and many other conservation challenges and opportunities are being put together into a unified framework.

A Utility Company is Cutting Down Trees on Your Property?

Unfortunately, rules in Missouri give broad, but not unlimited, power to utility companies.

Discover the rules governing what a Utility can and cannot do in trimming or removing your trees.

PROTECTING WATER QUALITY ON YOUR PROPERTY

The Missouri Stream Team hosts a wealth of water quality resources for landowners, including: streamside landowner tips, waste tire disposal guide, streambank stabilization, and Missouri Streams fact sheets.

Nine Network's Water Matters Videos provide helpful information on the following:

- Healthy Trees, Healthy Water: Trees retain and absorb water and their roots stabilize soil, preventing ground pollutants from running off into rivers and streams.
- Reducing Fertilizer Use on your lawn: test your soil, use organic fertilizer (if using any at all) and never fertilize just before a major rain.
- Reducing Stormwater Runoff and Rainscaping Tips.
- Farmland Conservation: Cattle can trample tree growth, increase sediment washout, and erode streambanks, and their waste can spread bacteria in streams and rivers. Install alternative watering systems for cattle and fence them away from river and forest areas for cleaner water and healthier natural habitats.
- Rain Gardens: can improve water quality by allowing rainwater and stormwater runoff to absorb into the ground instead of storm drains. Deep rooted native plants can hold and tolerate the water.





HOW TO IMPLEMENT PERMACULTURE ON YOUR PROPERTY – REGARDLESS OF HOW MUCH LAND YOU OWN

Permaculture is an approach to designing relationships as ecosystems by prioritizing the wisdom of natural processes and recreating communities that restore our relationship to the earth and with each other. Its ethics and principles outline ways to mimic values and patterns observed in the natural world such as mutuality, reciprocity, and interdependence.

The three goals of permaculture are:

1. Care for and feed humans.
2. Care for and regenerate the soil/earth.
3. Care for the future.

What makes permaculture different from sustainability is that it's not simply about maintaining (and responsibly using) the resources we extract. Rather, permaculture promotes ways of interacting with ecosystems that regenerate the earth where our connection to her is broken. Permaculture fosters ecosystem enrichment for a more nurturing future.



*“The soil is the great connector of lives,
the source and destination of all. It is the healer and
restorer and resurrector, by which disease passes into
health, age into youth, death into life. Without proper
care for it we can have no community, because without
proper care for it we can have no life.”*

— Wendell Berry, *The Unsettling of America:
Culture and Agriculture*



AGRICULTURE AND WORKING LANDS: RESOURCES TO HELP LANDOWNERS

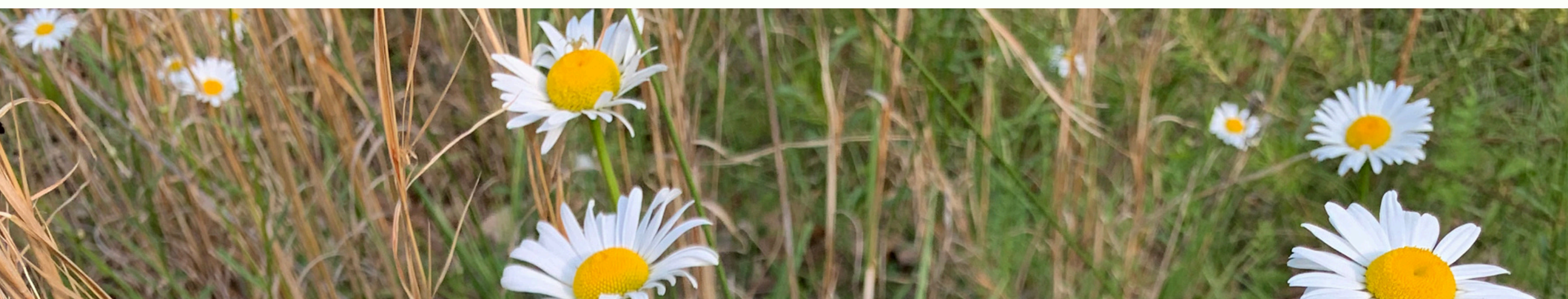
There are a plethora of practices farmers and landowners can employ on working lands to improve ecological health and wildlife habitat, including:

- Plant native grassland crop field borders, and native forages for livestock grazing. Consider converting fescue to native prairie grasses.
- Use Diverse grazing systems that incorporate both cool-season and warm-season grasses can benefit both livestock and wildlife.
- Implement rotational grazing for livestock to improve soil, plant and animal health.
- Learn about the Missouri Department of Conservation's programs to assist farmers and ranchers to manage their pasture to benefit both livestock and wildlife. Information is available at the MDC website and from your local conservation agent.
- Eliminate fall tillage, instead opt for using cover crops in the fall and winter to suppress weed growth and rotations between annual and perennial crops. Tilling causes soil disturbance, which over time can be bad for soil health. Permaculture-style agriculture offers a number of alternatives to “traditional” tilling or herbicide methods.
- Utilize cover crops to nourish and add nutrients to your soil, control weeds, prevent topsoil erosion, serve as mulch, attract beneficial insects and pollinators to your garden, and add beauty.
- Visit the Xerces Society Pollinator Resource Center for region-specific information on protecting pollinators on yards and gardens, farmlands, rangelands, roadsides and rights-of-way, cities and towns, and natural lands.
- View the Conservation Program resources as outlined in the 2018 Farm Bill, including land retirement, working lands programs, easement programs, conservation partnerships, watershed and flood prevention operations.
- Check out tools and options for landowners from the Missouri Land Trust Coalition: including information on conservation easements, donating lands, and conservation practices; as well as financial and tax implications for land protection and tips for choosing a land trust.
- Participate in a Prairie restoration on your property. Less than 1/2 of 1% of Missouri’s native prairies remain. See MDC Prairie Restoration Assistance under cost-sharing programs.



COST-SHARING PROGRAMS ON PRIVATE LANDS

- Missouri Department of Conservation [Resources and Cost-Sharing Programs for Landowners](#), including: Habitat Improvements to Spur Wildlife Activity and Enhance Property Value, Landowner Workshops, Agriculture and Grassland Management, Fire Management Tools and Responsible Construction Resources.
- [USDA Farm Service Agency Conservation Programs](#): USDA oversees a number of voluntary conservation-related programs. These programs work to address a large number of farming and ranching-related conservation issues including:
 - Drinking water protection
 - Reducing soil erosion
 - Wildlife habitat preservation
 - Preservation and restoration of forests and wetlands
 - Aiding farmers whose farms are damaged by natural disasters
- USDA Conservation Reserve Program: [The Conservation Reserve Program \(CRP\)](#) pays a yearly rental payment in exchange for farmers removing environmentally sensitive land from agricultural production and planting species that will improve environmental quality.
- [MO Department of Natural Resources Soil and Water Conservation Cost Sharing Programs](#) are designed to help landowners install soil conservation practices to improve water quality and reduce sedimentation in rivers and streams. Conservation practices can save you time and money and increase your farm's production while protecting the overall natural environment of the state.
- [Missouri Department of Natural Resources Financial Assistance Opportunities](#) range from preserving the past by rehabilitating a historic building through brownfield grants to fostering long-term future growth and sustainability by constructing new sewer and water systems using the State Revolving Fund. These opportunities for financial assistance are in the form of tax credits and exemptions, loans and grants and are available to private individuals, communities, organizations and companies.



SUSTAINABLE BACKYARDS: WHAT YOU CAN DO


What can you do to support the local ecosystem on your property?

From flower boxes, green roofs, rooftop gardens, community gardens, and sidewalk planters, get connected with local resources and tips on building a sustainable and eco-friendly green space in – you guessed it – your own backyard.

Set up your outdoor space, whatever the size, with an eco-friendly mindset and you'll not only help the Earth, but also save money, use fewer chemicals, and create less waste.

Adding backyard greenspace that incorporates native species of plants supports the major migratory bird pathway across the state.

Get inspired and showcase your own native garden with the [St. Louis Open Yards Native Planting Collective](#) which hosts a search engine of naturescapes that can be visited across the St. Louis region. The open dates reflect when each individual yard is best experienced.



Activism and advocacy doesn't just mean being at a protest or leading a rally. You can be an everyday activist making choices daily to help protect the planet, people and places that you love!

NATIVE AND INVASIVE SPECIES



Whether you have a balcony garden, a small urban lot, a 4-acre parcel or a sprawling ranch, you can include native plants in your landscape. There are many reasons to embrace the use of Missouri's wonderful native plants. They create beauty and interest with an abundance of flowers and fruits, and they provide food and cover for butterflies, birds and other wildlife.

Find plants native to your specific area with the [Grow Native Plant Database](#).

Non-native and invasive species are covering most of our natural areas in the region.

Learn how to control invasive plants with resources from the [Missouri Invasive Plant Council](#).

Native plants are adapted to our soils and climate and require little or no irrigation and seldom require fertilizer or pesticides.

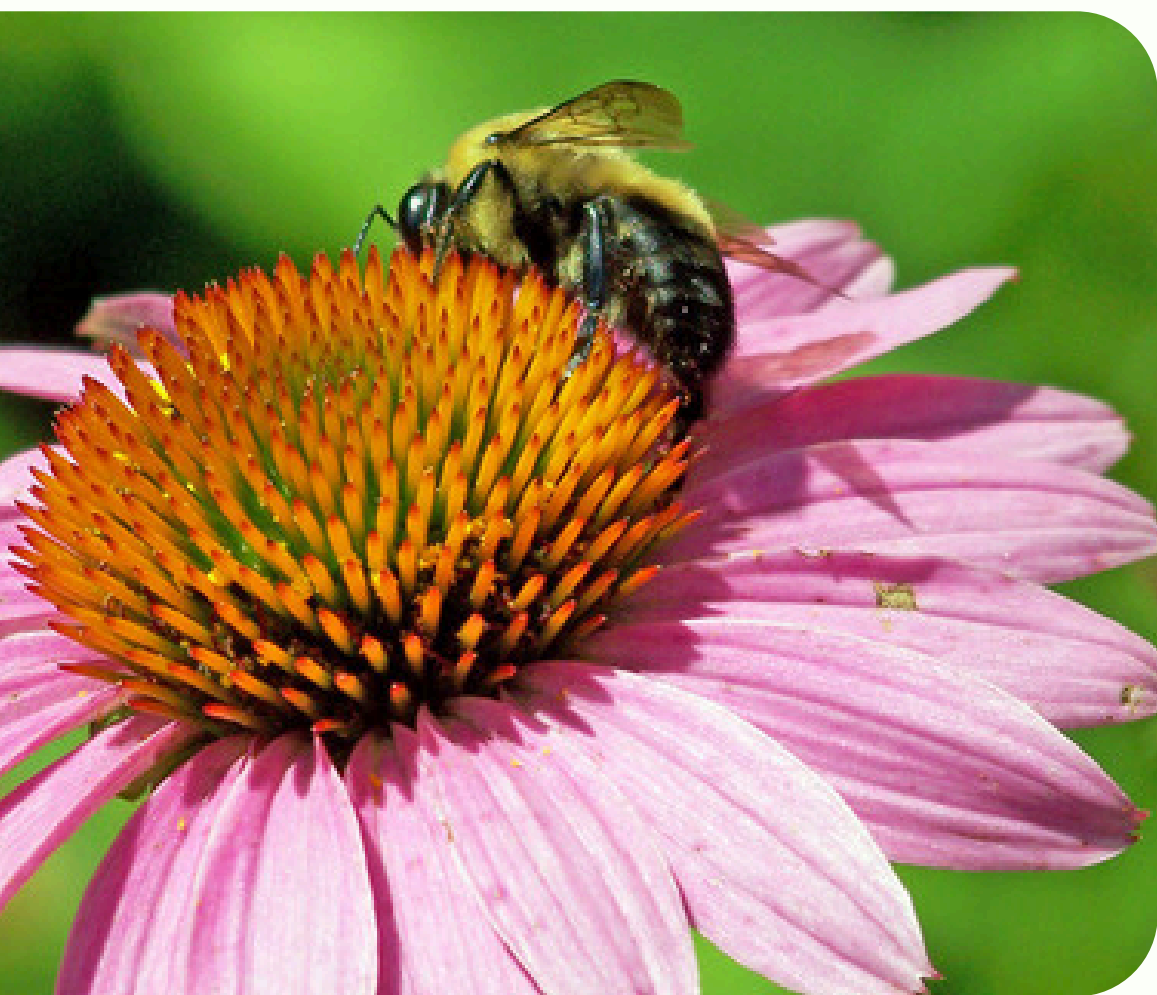
The Missouri Prairie Foundation promotes the use of native plants in the lower Midwest through its 22-year-old [Grow Native!](#) program which organizes many native plant sales.

The quantity of native plants and animals replaced by competition with non-native species is greater than that lost from all other causes except direct development in our terrestrial habitats and water pollution in our aquatic habitats.

Check out some tips for [Managing Invasive Species in Your Community](#) from the Missouri Department of Conservation.

SUPPORTING BIRDS AND OTHER POLLINATORS

Missouri hosts a huge variety of pollinator species (ants, bees, beetles, butterflies, flies, hummingbirds, moths and wasps) that are both native to the state and represent an incredibly important resource for both native and introduced plants, including most Missouri crops.



Some tips and templates for [building an eco-friendly environment in your backyard](#) from the Missouri Department of Conservation:

- Plant Buffalo Grass or a prairie meadow.
- Reduce mowing: let your grass stand at least 3 inches before you cut it.
- Improve water quality with a rain garden– read more about the benefits of rain gardens from [Metropolitan St. Louis Sewer District \(MSD\) Project Clear](#).

Find tips on climate resilient landscaping and garden designs to promote environmentally sound gardening practices at [Webinars from Wild Ones](#).

[Seven Ways to Make Your Home More Bird Friendly](#) from the Audubon Society.



The Missouri Prairie Foundation offers many educational resources and programming to help people learn about and experience prairies, including publication of the [Missouri Prairie Journal](#) since 1979; guided prairie hikes; extensive online resources, and frequent [webinars and master classes](#). The Missouri Prairie Foundation supports research projects and implements [plant and animal surveys on its properties](#).



The [Missouri Chapter](#) carries out Sierra Club's mission to explore, enjoy, and protect the planet on behalf of our 28,000+ members and supporters statewide. We build long-term power by addressing the climate crisis to achieve 100% clean energy for all. We push for vastly increased protections of public green spaces, waters, and wildlife. And, we partner with impacted communities to ensure all Missourians benefit from clean air, fresh water, a stable climate, and a direct connection to nature. We are your friends and neighbors working together to defend everyone's right to a healthy world.

[BECOME A MEMBER
OF THE SIERRA CLUB](#)

[DONATE TO THE
MISSOURI CHAPTER](#)



**SIERRA
CLUB**

MISSOURI CHAPTER

Special thanks to everyone who helped bring this toolkit to life!

Spring 2023. Missouri Chapter of the Sierra Club.

Marisa Frazier, Conservation Program Coordinator