

NATURAL HERITAGE

QUARTERLY

FIRE

NEW RESEARCH
IDENTIFIES PRIORITY
AREAS FOR
PRESCRIBED FIRE

WAYS TO HELP
BIRDS THAT BRAVE
THE WINTER

TIPS FOR
BURNING YOUR
WINTER BRUSH
PILES

BUFFALO COUNTY
WOMAN PROTECTS
NATURAL
LANDMARK

VOLUME 4
WINTER 2016

Calendar

Mar. 2-6

Aldo Leopold Weekend. Events across WI celebrate the conservation giant.

Mar. 9

Wisconsin Breeding Bird Atlas training session, 6:45 p.m. to 8:15 p.m., Schlitz Audubon Nature Center, 1111 E. Brown Deer Rd, Milwaukee.

Mar. 23-25

Landscapes for Butterfly Conservation, 1 p.m., webinar on best management practices for butterflies.

Mar. 25

Deadline for ordering native plants through Friends of the UW-Arboretum for pick up May 5.

Mar. 30 - Apr. 1

Wisconsin Lakes Partnership Convention, Stevens Point.

Apr. 1-2

2016 Citizen-based Monitoring Conference, Stevens Point.

Apr. 1-3

Wisconsin Breeding Bird Atlas Season 2 Kickoff Meeting, Stoney Creek Inn, Rothschild, Wis.

Apr. 5

Wisconsin Breeding Bird Atlas Training session, Riveredge Nature Center, 4458 County Highway Y, Saukville, Wis.

Apr. 10

Wisconsin Breeding Bird Atlas Training session, Beloit, Big Hill Park, Welty Environmental Center, 1201 Big Hill Rd.

Editor's Note

Our winter issue is a good one to read by the fire. Well before our human ancestors started using fire to change their environment, fire played a key role in determining plant adaptations and the distribution of ecosystems worldwide. In this issue, we'll share research suggesting that more Wisconsin landowners may benefit from using prescribed fire. We'll also share tips on how to build a good burn pile to get rid of brush and how prescribed fire has helped a Buffalo County landowner care for her family farm and restore an iconic natural landmark.

This winter issue rounds out our first year of publication. We're celebrating with a new look and a new webpage where you'll find past issues and can subscribe to Natural Heritage Quarterly if you haven't already.

We also invite you to share your feedback and story ideas. We want to make this publication more helpful and enjoyable for you in your efforts to help care for your land and conserve Wisconsin's native plants and animals.

Sincerely,

Lisa Gaumnitz
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Bureau of Natural Heritage Conservation
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The Natural Heritage Quarterly is a publication of the Wisconsin DNR's Bureau of Natural Heritage Conservation.

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Cover photo: prescribed burn conducted by Wisconsin DNR staff at Cherokee Marsh SNA. Photo © Bob Manwell.





Understanding Wisconsin's Fire Landscapes: A Matter of Opportunity

by Jed Meunier

Wisconsin DNR, Bureau of Science Services

Less than one percent of intact prairie remains in Wisconsin, and oak savanna, once the most common plant community in the Midwest, is now one of the rarest on Earth. Many landowners in Wisconsin are aware of the rarity of these landscapes and know they depend on frequent fire to prevent them from being overtaken by woody plants.

Increasingly, however, research we are conducting here in Wisconsin reveals that many more types of landscapes depend on fire as well, and that many of these are badly in need of management through use of fire.

One of the major findings of [Wisconsin's Forest Action Plan](#), a 10-year state strategic planning document, is an increased simplification of forest composition and structure and the loss of natural communities adapted to fire disturbance including oak and pine woodlands, forests and barrens.

Without fire, these woodlands and forests become denser and more shaded, choking out the understory flora that require sunlight getting to the forest floor. This problem is exacerbated by shade tolerant species like maples getting established. Maples cast more shade, making it difficult for ground-layer plants to grow beneath them, and their leaves are less flammable, further limiting ground-layer plants from growing and carrying fire.



Without fire, these dry to dry-mesic woodlands and forests become denser and more shaded, choking out the understory flora that require sunlight getting to the forest floor.



This process is called “mesophication,” and while it occurs more slowly than similar degradation of a prairie in the absence of fire, mesophication is widespread and the resulting loss of native plants and animals can be very difficult to reverse.

Ironically, these changes also may increase fire hazard when fires do occur, particularly in dry barrens and forests where heavier fuels are allowed to persist and build up over time in the absence of regular fires.

A new approach to find where fire is most beneficial and feasible

Recognizing the need to understand where prescribed fire is most beneficial and feasible, the [Tallgrass Prairie and Oak Savanna Fire Science Consortium](#) partnered with the SILVAS lab at UW-Madison, The Nature Conservancy, and Wisconsin DNR to

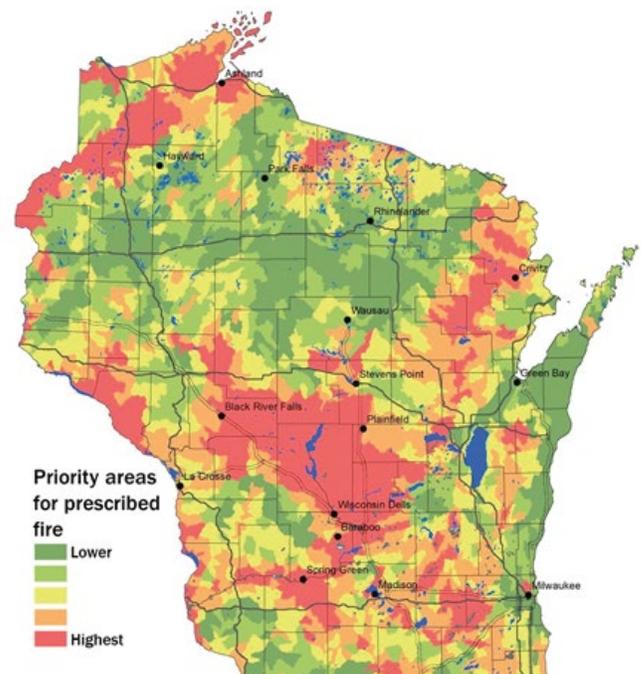
conduct a statewide Fire Needs Assessment. Our goal was to identify priority areas for prescribed fire to maximize the probability of maintaining the full suite of fire dependent communities in Wisconsin. The assessment will be used as a statewide planning tool and a starting point for analyzing which individual properties may benefit from fire management.

To identify priority areas, we looked at which areas presented the greatest opportunities with the least effort, rather than taking the traditional approach of looking only at where fire could best be applied to sustain the rarest of communities. We defined fire dependent communities as those natural communities requiring fire more frequently than every 50 years and included these factors in our assessment:

Benefits: Which landscape types had species of greatest conservation needs and their habitats, as identified through the [State Wildlife Action Plans](#), and which species are the rarest based on [Natural Heritage Inventory](#) data and rankings.

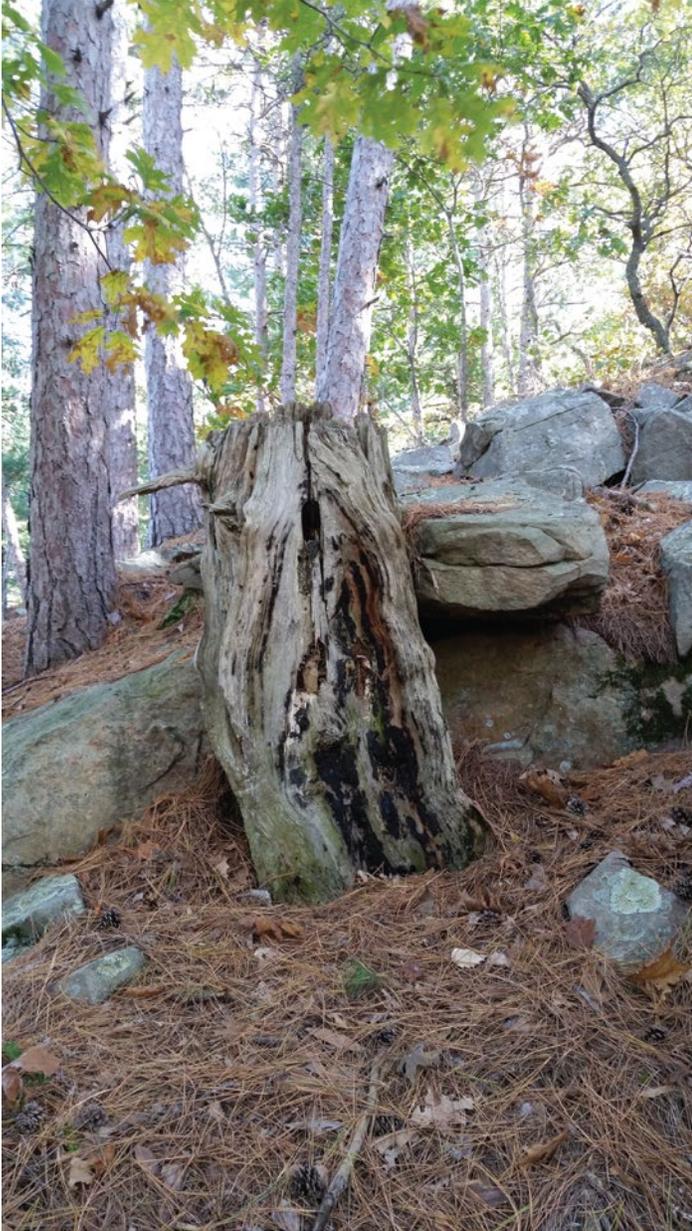
Challenges: Where would using fire be less likely, based on the proximity to homes, other structures and populated areas.

Effort: How much effort would it take to maintain the landscape, based on the number of fire dependent parcels and number of times they need to be burned in 50 years.



Map: Jed Meunier, WI DNR; Data/Analysis: Hmielowski et al. *In Press*

Our research teams combined the indices spatially and ranked them to identify priority areas – those areas where prescribed fire is likely to have the greatest ecological benefits. Including non-ecological data like effort needed to maintain these communities and social challenges to using fire on the landscape helps identify areas where long-term management may be successful.



Old red pine stumps like this one provide evidence that fire was nearly universal in much of Wisconsin. Photo © Jed Meunier.

What do our results mean for you, the landowner?

The resulting map indicates that there is ample need and opportunity to use prescribed fire in fire dependent landscapes in Wisconsin, particularly in the central sands area and in the northeast and northwest barrens. The biggest gains with the least amount of effort can be made in landscapes including pine barrens, oak forest and woodland, herbaceous wetlands, pine forest and pine-oak forest.

The Fire Needs Assessment tells us that there are lots of reasons to be burning in fire dependent communities that have often been overlooked. These are primarily our pine and oak barrens, woodlands, and forests.

In my own fire history research, I regularly encounter red pine forests that burned as often as once every six to 10 years. Many old fire-scarred red pine stumps still persist in our forests even though the forest may not resemble the ones cut 150 years ago. We'll share this and more research about historical fire frequency, timing, and behavior in future issues of the "Natural Heritage Quarterly."

While fire will never be as ubiquitous as it was before European settlement in the mid-1800s, there is no reason to limit its use to only a few systems, and many reasons to expand the use of fire.

Hmielowski, T. L., S. K. Carter, H. Spaul, D. Helmers, V. C. Radeloff, and P. Zedler. Prioritizing restoration efforts at a landscape scale: a case study using prescribed fire in Wisconsin. *Ecological Applications*, in press. □

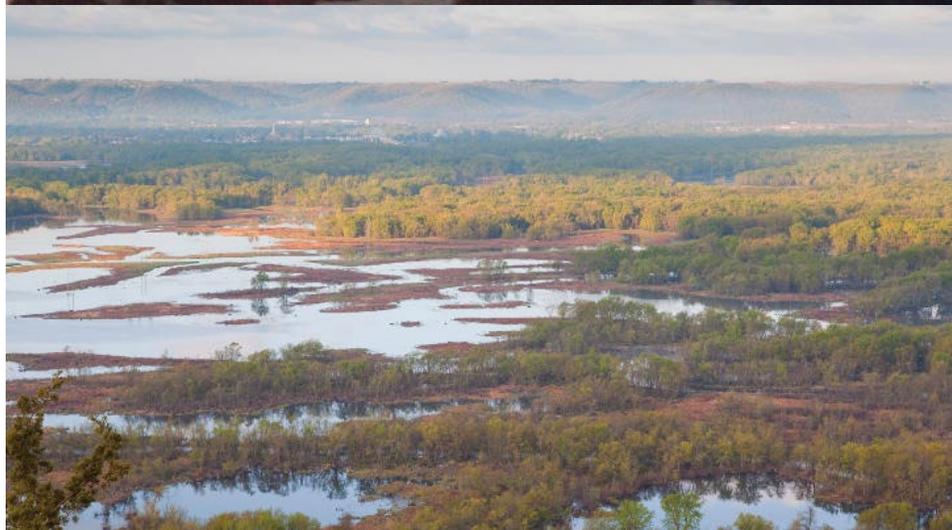
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Sharing our story: Myrna Buri

Caring for a family legacy and saving a community landmark

"To this day, every time I drive or walk up the driveway of my home farm and spot those towering bluffs, I am moved. My Dad dreamed about buying this farm as a 15-year-old in biology class looking out the high school window at these same bluffs. He bought it in 1942."

Photos: (second from top and bottom)
© John Gregor, ColdSnap Photography



When their father passed away in 1997, Myrna Buri and her brother, Marty Castleberg, wanted the farm he had loved so well to remain undeveloped and in the family.

Rising land prices and taxes seemingly put that dream out of reach, however, until Marty started investigating placing a conservation easement on the land. The 177-acre farm includes the spectacular Twin Bluffs rising 600 feet above the town of Nelson on the Mississippi River.

Permanently protecting the land from development would not only allow the siblings to carry on the family legacy, but would preserve an iconic natural landmark for the community and an important ecological treasure: Twin Bluffs are part of “The Seven Sisters,” towering bluffs overlooking the Mississippi River that are home to remnant prairies harboring scores of native plant and animal species.

The siblings entered into a conservation easement with the Wisconsin Farmland Conservancy, now known as the West Wisconsin Land Trust. Money from that arrangement enabled the siblings to buy the land from their parents’ estate in 2000.

Since then, Myrna Buri has been working to restore the remnant prairie on the bluff top. Initial habitat work began when she and husband Dennis Buri and their son Jennings worked with Todd Mau of the Buffalo County Natural Resource Conservation Service to enroll 77 acres of the land in the Conservation Reserve Program. They have enhanced this acreage by seeding it into prairies grass and forbs over the ensuing years. They have also enrolled more than 80 acres of forest in the DNR’s Managed Forest Law program.

With help from government cost-share programs, natural resource professionals and volunteers, they removed sumac and poplar trees, restored oak savanna on 14 acres, removed cedar and ironwood from the area beneath the Twin Bluffs and on the steep slopes. They conduct prescribed fires to help control invasives, *(continued page 6)*



Myrna Buri and Todd Mau talk about prairie restoration to Alma students.

“The oohs and aahs of visitors as they spot the wildlife and look out over the Mississippi backwater channel to the Minnesota bluffs reminds me how lucky I am to have spent my childhood here learning from my father how to care for this land. He believed and declared that this is God’s land and he was in charge to take good care of it.”

In her own words...

“In a way, the project began for me in 1942 when my parents bought this property and we moved there. As a child I had walked the bluffs of the “The Driftless Area” often, reluctantly, as required for chores: gathering cattle to bring down for milking, assisting with harvest and being traumatized by timber rattlesnakes who came down for a visit in the yard.

Only when I returned as an adult did I begin to fully realize my love for those familiar “Twin Bluffs.” Of course the term Driftless Area” was never heard so none of us truly realized the full impact of the amazing family property but we always realized its beauty.”

My memory of the day of the burn, that was visible from the village of Nelson, stands out as it was spectacular – creeping up the edges of the faces and completing its mission as designed. It followed fall prep along the woods with a commendable corroboration of Buffalo County personnel and volunteers. Later into the summer I was granted additional funds to hire professionals to treat woody invasive regrowth. Of course there were some stresses, hurry up and waits and delays of contract, persons or weather conditions; eventually it all worked.

And so the journey began for me in 2000. Buying the property from the estate was an emotional decision, not a practical one financially, therefore, incredible projects like LIP (DNR’s Landowner Incentive Program providing technical and financial assistance) are vital to any restoration work and maintenance I do. The application began by forcing me to delve into research of invasive plant species, plant identification, endangered plants and animals and understanding the “Driftless” phenomenon.

The “Story” of my project is summed up with three words: I am the steward.” – Myrna Buri, November 2015

clear out the brush and improve germination conditions for long-dormant prairie seeds. The Nature Conservancy owns adjacent property that includes a portion of Twin Bluffs; conducting prescribed burns and other land management activities on both properties has enhanced the benefits for wildlife and allowed greater cost efficiency.

Native wildlife have responded to the restoration, with bald eagles, timber rattlesnakes, deer, wild turkeys and various song birds and woodpeckers among the wildlife living there. Peregrine falcons, an endangered species, call Twin Bluffs home too.

Seven years ago, Buri worked with the late Bob Anderson to install a peregrine falcon nesting box on the cliff face. Peregrine falcons are notoriously picky about their nesting sites, and it took several years for the box to get used. In the last two years, however, falcons have produced a total of seven young birds.

"I am really proud of the peregrine falcon success," Buri says. "It just doesn't happen very often."

She also treasures seeing prairie grasses grow up and redden in the fall. "It's just so beautiful. I am glad it's preserved...It didn't seem right to have a beautiful place like this destroyed by building and commotion."

True to her calling as a teacher, Buri has made her family farm a classroom for conservation. She has allowed youth hunts on her land. Local students visit the farm for a conservation day and learn about soils, native plants and animals on the land and to hunt for morel mushrooms.

"It's fun to see them wake up to what's around them...and want to save it too."

A "magic mountain" preserved

Myrna Buri's protection and restoration of the Twin Bluffs in Buffalo County saves these iconic natural landmarks in perpetuity and inspires other landowners in the area, says Darcy Kind, a conservation biologist with the Wisconsin Department of Natural Heritage.

"These bluffs are south and west facing so they are very visible from the Great River Road and the town of Nelson," Kind says. "Many of the bluffs in the surrounding countryside look exactly like hers so people can get an idea of what the restoration process looks like, and many local people remember how open the bluffs used to be."

Buri's conservation easement was the first bluff land protection agreement of its kind to be set in place in Buffalo County. Her commitment to carrying on her parents' stewardship was critical to helping restore a complex site where the steep gradient makes it particularly challenging, says Kind, who provided technical advice to Buri through DNR's Landowner Incentive Program.

"These are really hard to manage sites and it took a lot of work and will continue to take a lot of work to maintain it," Kind says.

She also credits Todd Mau of the Buffalo County Natural Resource Conservation Service for raising awareness among landowners in Buffalo County of habitat management to preserve these valuable bluff lands, and helping them get the work done.

Mau has been a consistent helper, bringing youth groups and other volunteers to get work done, and mowing fields and stepping in on other tasks to help since Dennis Buri died in 2010.

Their collective efforts have preserved a site made famous by Jay Reed, the late, decorated outdoors columnist for the Milwaukee Journal. Reed grew up in Nelson, the town at the foot of the Twin Bluffs, and recalled the specialness of the site in his book "Thor and More." □

*"If you should one day
drive up the Great River
Road and if the spirit
should so move, stop at the
south edge of Nelson. Take
a long, hard look at the
magic mountain. It is a
place where the boy, now a
man, still goes to look for
a little bit of yesterday.
Perhaps, if you listen with
your heart, you'll hear the
wind sigh of eternity. You
may see a golden road paved
with such dreams as never
can be broken. I go there,
you see, because this is my
magic mountain. It is where
my Wisconsin and my insight
into the world begins. It
is the place where, if you
believe in magic, you can
touch the stars." - Jay
Reed, "Thor and More"*

A photograph of a forest with a stream. The stream flows through the center of the frame, surrounded by lush green vegetation and fallen logs. Large, dark tree trunks are prominent in the foreground and background, creating a sense of depth and scale. The lighting is soft, suggesting a dappled sunlight filtering through the canopy.

Consider conservation easements

A conservation easement is a legal agreement between a landowner and a land trust or government agency that permanently limits uses of the land in order to protect its conservation values. Conservation easements can be donated or sold, with qualifying easements claimed as a tax-deductible charitable donation. The easement allows landowners to continue to own and use their land, sell it or pass it on to heirs while binding them and future landowners to protect important natural features of the property. An easement may apply to all or a portion of a property and some need not require public access. Land in conservation easement remains on the local tax rolls. For more information and a listing of local Wisconsin land trusts, visit the website of [Gathering Waters](#), Wisconsin's alliance for land trusts. □

Wintertime help for birds



Photo © Lisa Hodge-Richardson

The majority of Wisconsin's more than 400 bird species migrate here in spring and fall, with many staying to nest, and others stopping over to fuel up before heading to Canada and other points north. Meanwhile our resident species – the birds that live here year round – must navigate through winter months, finding nutritious foods and protective cover to survive the challenging conditions.

Help our year-round residents – favorites like black-capped chickadees, northern cardinals and American goldfinches – during winter and into spring by taking a few simple steps to feed and shelter them and keep them safe.

“The best thing we can do for birds in winter is to make sure they have the native shrubs, fruit trees and conifers that provide cover and food,” says Kim Grveles, a conservation biologist who coordinates the Wisconsin Stopover Initiative.

“Native plants will offer dormant insect prey that birds will glean from crevices in trees and shrubs, and some also furnish berries and fruits. If we supplement these high energy food sources with suet and bird seed, especially black oil sunflower seeds, we can greatly boost birds' survival during winter.”

If your property is short on native trees and shrubs, start planning what you want to plant come spring. Select shrubs and trees dense enough to support nests, but open enough for birds to move freely among the branches.



If your property is short on native trees and shrubs, start planning what you want to plant come spring.



The Wisconsin Stopover Initiative has links to information about specific plants and shrubs that work well in Wisconsin, including a link to [“Beyond the BirdFeeder: Creating a Bird-Friendly Yard with Native Wisconsin Plants.”](#) Mariette Nowak, author of “Birdscaping in the Midwest,” created this

let for The Wisconsin Society for Ornithology. If you prefer a printed copy of this publication or one more geared for land in the Lake Michigan basin, email your mailing address to Lisa.Gaumnitz@Wisconsin.gov and we'll send you a free copy in the mail as long as supplies last.

Try these other bird-friendly steps this winter:

Put out a heated bird bath

Place raised birdbaths near trees or bushes where birds can retire to preen and dry. Raised feeders near bushes provide safety from predators, especially stray cats, preventing them from sneaking up on the birds. Be sure to check water often and clean the basin regularly, but do not use chemicals. A thorough scrubbing should be sufficient.

Take steps to reduce bird collisions with windows

Daniel Klem, professor at Muhlenberg College in Allentown, Pennsylvania, has studied bird/window collisions for years and estimates that between 100 million and one billion birds of at least 225 species are killed by collisions with windows each year in North America alone. "Threshold of pane," in the October 2006 Wisconsin Natural Resources Magazine shares homeowners' stories and steps for keeping birds safe.

Keep birds safe from cats

Keep cats indoors or confined to an enclosure when outdoors to help prevent the estimated two billion birds killed by cats in the U.S. each year, according to the American Bird Conservancy's campaign, "Keeping Cats Indoors."

Build a brush pile

Provide places for birds to shelter and forage by building a brush pile. Learn how in "Rabbitat: Brush Piles for Wildlife," a chapter from DNR's Wildlife and Your Land series.

Try putting freeze dried meal worms in a feeder or dish

Black-capped chickadees particularly like it. Plastic upside-down thistle feeders can be altered to make a dispenser. Enlarge the diameter of each thistle-seed hole to make a 5/16-inch opening for trouble-free removal of worms. The perches located above the holes are easily negotiated by the chickadees, but this arrangement discourages non-native house sparrows, which are not adept at feeding in an upside-down position, from dominating the feeder. As you watch the chickadees poke for worms, you will get a sense of how they glean in tree crevices for insect eggs and dormant larvae. □

Birdathon and raise money for birds

*Landowners can enjoy
birdwatching and put
their passion to work
raising money for their
feathered friends by
participating in The
Great Wisconsin
Birdathon.*

If you're not familiar with the event, it's like a walk-a-thon to raise money for birds. From April 15 through June 15, birders spend any portion of a 24-hour period observing birds and asking for flat donations or pledges per species seen. Donations and pledges are tax deductible and handled simply and securely online or via check.

"Whether you're a backyard birder, a serious bird watcher or you simply love birds, this is the premier way to directly give money to support birds," says Ryan Brady, who leads monitoring for the Wisconsin Bird Conservation Initiative.

"This year, there are more ways than ever to get involved. You can donate directly online to an existing team, bird on your own or start your own team, or join a birding field trip."

The birdathon is a joint effort of the Natural Resources Foundation of Wisconsin and the Wisconsin Bird Conservation Initiative and is a fundraising campaign for the Wisconsin Bird Protection Fund, which assists priority bird monitoring, research and education projects statewide. □



Make sure the birds on your land count

© Brian Collins

A comprehensive 5-year survey is under way to document which birds nest in Wisconsin and how that’s changed over the past 20 years. Reporting sightings of breeding birds on your land can help assure Wisconsin gets a robust picture of its avian resources and trends to help shape bird conservation for the future.

“Anyone can contribute to our bird survey,” says Nick Anich, a DNR conservation biologist who is coordinating the survey. “We’re looking for everything. This is a great chance to make a contribution by having the birds on your land included.”

Known as the Wisconsin Breeding Bird Atlas, the largely volunteer survey is in the second of its five years and aims to document birds statewide and gain an understanding of their distribution and abundance.

“We’re looking to fill in the maps if we can,” Anich says. “If people want to go for a walk on their land and report any birds they can identify, that’s a good way to help us out.”

All sightings are reported through a special Atlas portal to eBird, a web-based tool many birders are already using to report their bird sightings. There’s also the opportunity for landowners who are really interested in birding to commit to covering a 3-mile by 3-mile block of land themselves.

How to get started

A good way to get started contributing to the Atlas – and really just a good way to get into the birding community – is to come to the kickoff event, Anich says. Held April 1-3 at the Stoney Creek Inn in Rothschild, Wis., the event offers people a chance to get hands-on training in using the eBird reporting platform, to learn more about Wisconsin’s birds, and to participate in field trips led by some of the state’s top birders. If you can’t make the kick off event, local training sessions are being scheduled across Wisconsin. Check the Atlas [training events](#) webpage for the latest news. □



Winter tracks offer clues to secretive wildlife on your land

“ While many of Wisconsin’s animals are easily seen and enjoyed, others remain hidden by their reclusive natures. Tracks offer a glimpse into the lives of even the most secretive animals, and winter snow offers tracks in abundance. By learning to identify tracks and understand the tales they tell, you can discover the species, movements, characteristics and behaviors of the animals inhabiting your property,” says Lucas Olson, a DNR conservation biologist.

Although the skill of tracking is as old as time, it’s just as easy to learn and enjoy today. Successful tracking only requires basic knowledge of wildlife habits and habitat, careful observation, good timing, and the right tools. A reliable tracking field guide, a ruler or tape measure, and a pen and notebook to document your findings are all you need to get started. Cameras are also useful to take images of tracks and locations. You can even make a plaster casting kit to preserve the tracks you find forever. Explore your property after a fresh snowfall, and see what you’ve been missing!

Learn more

The DNR’s [“Mammal Tracks on Wisconsin”](#) brochure introduces tracking and casting techniques and Wisconsin’s furbearing mammals including illustrations of their tracks

Hone your tracking skills and help monitor carnivorous mammal populations by participating in [Wisconsin’s Volunteer Carnivore Tracking Program](#). □

Photo © Mick Skwarok



Jared Urban, Wisconsin DNR

Brush up on brush piles before firing them up

*For land managers,
winter time is brush
pile time.*

Snow-covered ground makes it safer to burn invasive honeysuckle and buckthorn and aggressive native plants like cedar that you want to clear out.

“That’s pretty much what we do in winter...burn our brush piles,” says Tom Mitchell of Monroe, who builds and burns brush fires several times a week while caring for natural areas in Green and Rock counties and other sites owned by The Prairie Enthusiasts. “There’s no shortage of brush in Wisconsin, there is a shortage of prairies.”

Chipping cut brush or letting nature take its course are options but here Mitchell offers his burning tips. “A lot of these sound like common sense, but we’ve probably made all of these mistakes once,” says Mitchell, who was recognized in August as the 2015 Volunteer of the Year by Wisconsin’s State Natural Area Program.

Put somebody in charge

Somebody has to oversee the operation and make sure safety is always the top consideration. The overseer needs to make sure the sawyers wielding chainsaws are separated and equipped with the appropriate helmets and chaps, gloves and gear, and that brush haulers keep their distance from the sawyers and pay attention to the fire.



**That’s pretty much what we
do in the winter...burn our
brush piles.**



Think about where to put the brush pile

Don’t place the pile on a steep slope – you want to have it on level ground. It’s safer for people hauling brush to the pile and easier to control the fire. Don’t put the pile underneath a standing dead tree. Place it on snow-covered ground and make it easy to get to from where you do the cutting. You don’t want to have it too far away unless you have some strong haulers to get the cut material to the pile. Sometimes you have to move dead trees around to a good place in order to burn.

Usually we locate a burn pile off the prairie or savanna. Parking lots, weedy spots, 2-tracks and brome fields are good places. Consider building your brush pile over a large tree stump. A hot burn pile will sterilize the soil so be careful that you don't harm your native vegetation.

Check the weather

Make sure you check weather conditions leading up to the burn, and on the day of the burn. If you're building your brush pile a few days in advance of the burn and rain or snow is forecast, consider covering the pile with a tarp to keep it dry.

On the day of the burn, wind conditions are most important. You don't want wind to blow sparks or ashes where you have haulers. High winds are a problem and cedar in particular sends off a lot of sparks. So consider postponing until more favorable conditions.

Consider the critters

If you have an established pile to burn and you see rabbit tracks going into the pile in the snow, consider not burning. It doesn't seem fair to create this wonderful habitat and then burn them out. When this happens, we've opted not to burn. We'll pull the piles apart.

Start small and on the upwind side of the pile

The best advice is start small, make a big fire out of a little fire. If you're starting a pile you want small, dry wood. We have a member who splits wood and keeps us supplied with dry kindling, which we keep under a tarp to use as needed. You are not going to throw down logs or big chunks of wood and get them burning. Look around – if you're working in an area with dead trees, cut one down and the twigs and branches can be used to ignite the larger pieces. Remember your scouting days, how to stack wood in a teepee-shape to start a fire. If you have an established pile and want to get it going, make sure you start on the upwind side and let the wind blow the fire into the rest of the pile. It makes things go much faster. Once it's burning you can use a leaf blower to redirect the fire.

Ignition options

If you're really good, you'll need only one match. Be patient, let the fire get going before you add the bigger branches and logs. Don't smother the fire. Once it is going good you can pile on your bigger stuff.

We start by piling up some dry material and using a drip torch to ignite it. Our mix is 2/3 diesel and 1/3 gasoline. That's a safe way to pour fuel on the fire.

We also have used a picnic propane attached to a tube and a wand. You turn it on and blow fire. It's like a blow torch and very effective.

Fanning the flames

A tool a lot of people are using to get these fires going are leaf blowers. On a calm day, this is what is going to make your fire burn a little faster. A TPE member has created his own, using three lengths of the black plastic tubes with an aluminum extension on the end. That way, he can stand away from the hot fire and yet blow into the pile without melting the plastic tubes. You can also use the blower to clear a pile of fallen snow.

Other tools we use

Generally the other tools you want around are chain saws so you can cut off limbs from trees or loppers to cut off the small stuff to keep feeding the fire. Rakes and 3-tined pitchfork that you can lift burning logs and reposition them on the fire are also important.

We have used a tractor to haul whole trees to a burn pile; lately we have used a skidster with a grapple; years ago I was at a work-day where a fellow had a team of horses to skid pine trees out of the woods to the burn pile.

Clothing

Wear old clothes and avoid wearing fleece synthetics as sparks and burning embers can easily create holes in these materials. Boots with cleats or crampons will help you stay on your feet when there is a layer of ice on the ground. Wear leather gloves and protect your neck. If you're going to be fire tender, you might want to use a fire helmet with a face shield. Wear ear protection if you're working near the saws or blowers.

Wrapping it up

Come back the next day to re-stoke the fire. If you burned out the middle of the pile, push the unburned wood onto the still-hot coals. After the fire is out, we like to remove the ash from the pile, spread it around with a rake or shovel. If you have any seed left over from the previous collecting season, you can re-seed the burned ground with appropriate species. □

Avoiding problems from brush pile scars

The intense, concentrated heat from burning piles is known to significantly alter soil properties like pH and nutrient availability and reduce or eliminate the native seedbank and fungi. Invasive plants often establish readily in these altered microsites. So land managers should promptly remediate brush pile scars by inoculating with "living soil," which can come from unaffected soils nearby, and native seed; this combination has been found to be more effective in revegetating these sites with desirable species than seeding or soil amending alone. – From "Slash pile burning effects on soil biotic and chemical properties and plant establishment: Recommendations for amelioration." Restoration Ecology 12(1): 52-62.

Prescribed burning next steps: get training and a plan

Whether you've decided to do your first prescribed burn, are actively considering doing one, or just want to have another tool in your land management toolbox, getting training is an important next step.

The Wisconsin Prescribed Fire Council lists coming [training opportunities](#) – and there are many planned for coming weeks and months.

“If you're unable to get the training or don't want to, your next step may be hiring a professional contractor or building a relationship with a nonprofit organization that conducts burns, like [The Prairie Enthusiasts](#) or [The Nature Conservancy](#), and may be able to help you on your land,” says Amy Staffen, DNR conservation biologist.

Planning the burn

“The most important component of any successful burn is a good burn plan, and winter is a great time to create or refine your burn plan. Every prescribed burn in Wisconsin should have some type of burn plan. There are many different styles and requirements for burn plans throughout the state, but all good plans have the same elements,” says Alex Wenthe, DNR conservation biologist.

Burn plans should contain basic information like name, address, and burn unit description, but also information on fuel types, ignition plans, contingency plans, weather parameters, safety concerns, and day-of-burn checklists. This information is not hard to get but it takes time to put it all together and produce a plan that is useful on the day of the burn. For more information on how to write a burn plan, including a template to use, please see the [Wisconsin Prescribed Fire Council's Implementation and Standards webpage](#).

A well written burn plan has many benefits. It can identify potential risks and opportunities with enough time to address them. For instance, it may be easier to use a neighbor's field as a firebreak if you have time to ask permission beforehand. A good burn plan will also make the entire crew safer and more prepared on the day of the burn. Not everyone needs a copy, but if you go over the plan before the burn then everyone is on the same page. Most importantly, your plan is your contract. It allows you to acquire permits as well as provide documentation in case of an incident. A burn plan is even admissible in a court of law. So a well written plan that is adhered to is your best defense if any issues arise.

So plan your work and work your plan. There are not many areas where this saying is more relevant than prescribed fire. A well written plan will make you more productive and much safer. Put some time into planning this winter and it will keep you burning for springs to come! □

Cherokee Marsh SNA
Photo © Bob Manwell



What to do if you see a sick bat this winter

As white-nose syndrome invades Wisconsin, landowners may find infected bats. The disease is not a threat to people but is deadly to bats: a fungus grows on hibernating bats, waking them prematurely and causing them to burn crucial fat reserves. Dead bats at summer roost sites or flying out of caves and mines in winter are both signs of white-nose syndrome.

If you see either of these behaviors, please alert the Wisconsin Bat Program by calling the bat call line: 608-266-5216, emailing dnrbats@wisconsin.gov, or [submitting a dead bat report](#) on our website: Please describe in detail what you saw.

If the bat is still alive, **DO NOT** pick it up. Photograph it and note its behavior and alert us through one of the previously noted methods.

If the bat is dead, **USE GLOVES** to double-bag the carcass in plastic bags and place it in a safe, cold place outside or in a freezer. Alert us and we will arrange to collect the bat from you if it is needed for testing. Thank you in advance for watching for usual or atypical behavior of bats this winter. □



Wisconsin DNR Flickr

Landowner Lottery continues to grow

More than 1,100 landowners entered a lottery for a random drawing in January 2016 for a free customized report about their land from DNR's Natural Heritage Conservation program, up from 760 entering the previous lottery. The reports include information from a database of rare plants and animals as well as management recommendations for the property.

One hundred landowners randomly selected in late January to receive the reports have been notified and will also have the option of having a conservation biologist visit their site, says Alex Wenthe, the DNR conservation biologist who coordinates the lottery and is the lead biologist creating the Landowner Conservation Reports.

People who previously entered the lottery but were not selected in 2014 or 2015 got preference points that improved their chances of being selected in 2016. □

2016 results

1,130 landowners entered the lottery

- 50% increase from last year
- 500 landowners in first 24 hours
- Over 750 new applicants who did not register in previous lotteries

Over 100,000 acres enrolled

- Average property size of 50 acres
- Largest properties include 6,000, 2,000 and 1,800 acres

Properties are evenly distributed across the state

- Nearly every county represented
- Marinette, Waupaca and Vilas counties had the most entrants respectively

Support from partner programs

- More than 100 entries listed nongovernmental organizations as "how they heard"

Five ways to help conserve Wisconsin's natural heritage

Private donations provide up to 40 percent of funding for the DNR Natural Heritage Conservation staff who work with you to conserve Wisconsin's wildlife and landscapes. This winter, please consider donating to the Endangered Resources Fund so we can do more good work together.

Every dollar you give directly to the fund is matched dollar for dollar up to \$500,000. Your contribution is tax-deductible and very much appreciated. Here are ways you can donate; some allow you to specify the particular area you want your money to go to.

1

Purchase an Endangered Resources license plate



Your \$25 annual donation will go to pay for NHC work. We've got a great new eagle design and continue to sell the wolf license plate as well.

2

Donate on your tax form

Donate directly on your Wisconsin income tax form. Look for the "donations" area and fill in your dollar amount.

3

Write a check

Write a check payable to the "Endangered Resources Fund" and send to:

Wisconsin DNR
Bureau of Natural Heritage Conservation
P.O. Box 7921
Madison, WI 53707

4

Donate online

Choose from great thank-you gifts, like a year subscription to the Natural Resources Magazine!

5

Donate to the Natural Resources Foundation of Wisconsin

NRF makes grants to NHC, works with donors to establish endowment funds for managing state natural areas, and supports research and monitoring on rare and endangered wildlife in Wisconsin.