



# Prairie Wind

Friends of Neal Smith National Wildlife Refuge  
PO Box 114, Prairie City, IA 50228 • [www.tallgrass.org](http://www.tallgrass.org) • [buffalo@tallgrass.org](mailto:buffalo@tallgrass.org)

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SPRING 2023

## 2022 Snake Monitoring

By Nick Hall-Skank, refuge intern



Fox snake by Kelly Jacobs

For my intern research project, I decided to expand upon a snake monitoring project conducted by another intern in 2018. Historically, as many as fifteen species of snake may have occurred in the area that is now Neal Smith National Wildlife Refuge. During the 2018 monitoring season, only four species of snake were detected – western fox snake (*Pantherophis vulpinus*), brown snake (*Storeia dekayi*), plains garter snake (*Thamnophis radix*) and common garter snake (*Thamnophis sirtalis*). By continuing the monitoring program in 2022, I hoped gather a more complete picture of which snakes occur on the refuge and which habitats they utilize.

To accomplish this, twelve plywood boards were placed in strategic locations across the refuge to serve as an attractive form of artificial cover. Once the boards were in place, all I had to do was come by once a week, lift up the board, and identify any snakes hiding underneath. Monitoring took every week from late May through October. Whenever possible, boards were checked shortly after sunrise, when the snakes were most likely to be warming up in a sheltered area rather than out hunting.

In 2018, four boards each were placed in North Middle Prairie and Thorn Valley Savanna. In addition to reusing these eight boards for the 2022 monitoring season, I placed an additional four boards in the sedge meadow north of Thorn Valley. Given that a significant number of our native snakes are wetland specialists, I hoped that these new boards would reveal some additional species living here at Neal Smith.

Over the course of the season, we found snakes on 32 separate occasions. Of that total, there were thirteen brown snakes, twelve plains garter snakes, two common garter snakes, and five garter snakes that escaped before being identified to the species level. Although they were never found under the boards, incidental sightings of fox snakes occurred throughout the season, especially along the Tallgrass Trail.

Although we could not confirm the presence of any additional snake species at Neal Smith, the project did reveal some interesting insights. For example, there were no snakes found under the boards placed in the savanna during the 2018 season, so I didn't expect to find many there this year. But by the end of the season, we had found 25 snakes in the savanna out of a total of 32. Imagine my surprise!

Although this study was too small to draw any significant conclusion about population size or distribution, we were able to confirm the presence of brown snakes and plains garter snakes in all three major habitat types on the refuge, as well as confirm the presence of common garter snakes in the savanna. My hope is that future interns will be able to continue this project, giving us a more complete understanding of the lives of these special creatures here at Neal Smith NWR. Finally, I would like to thank my fellow interns and the staff at Neal Smith for their help with this project. I like to think that the snakes are also thankful for everyone who has worked to make Neal Smith NWR a haven for wildlife.

## Manager's Corner

By Scott Gilje

Another spring is right around the corner and the staff are busy preparing for another busy field season. With the warmer weather approaching, we are preparing for another round of seasonal hires and a slough of interns to start in May. Getting them started is the easy part, what most people don't see is the countless hours doing interviews, background checks, and the actual onboarding process. My hats off to Nancy and Karen for all the hard work that goes into hiring the best and brightest to carry on the hard work that is conservation.

Neal Smith NWR has seen a lot of changes the last 10+ years, but the biggest change is the number of permanent staff. As many of you know, we had to cut our visitor center hours from seven days a week down to three. With a full time staff of only 4 (soon to be three), we had to make some serious decisions on refuge management and where to put our limited resources. Managing the landscape is the refuge's bread and butter and it's what we do best, so that's where we will be focusing much of our resources this year. It is our hope to complete more prescribed fires this spring and fall, attack the ever-growing tree problem, conduct the best research possible, and partner with other agencies to keep the needle of conservation moving forward.

The refuge system has seen major ups and downs over my 28 years with the Service, but it seems like the last few years have been a major uphill battle. There is light at the end of the tunnel if you look hard enough. We will get through these hard times – limited staff, reduced budgets, increased workloads and look back at these past few years as building blocks to make the Service a stronger organization.

I hope that everyone has a wonderful spring! Please drive safely as we will see an increase of farm equipment on the roads with spring planting right around the corner.



*The Boss*  
By Ron Maggard

## What's happening this Spring?

### Second Saturday Stewardship

Saturday, April 8

Saturday, May 13

Saturday, June 10

Join us for our monthly stewardship project from 9:00 a.m. to 12:00 p.m. to learn about tallgrass prairie reconstruction and performing a seasonal task each month to help bring back the prairie. Children under the age of 18 must be accompanied by an adult. Sturdy shoes and long pants are recommended.

### Earth Day - Saturday, April 22

This event will begin at 9:00 a.m. at the Savanna Trail with a **Spring Ephemeral guided walk**. From 11:00 a.m. to 3:00 p.m. enjoy displays in the Visitor Center and a variety of activities, including crafts, and games, for all ages. Food trucks will be onsite from 11:00 a.m. to 3:00 p.m.

In addition, there will be a special program by **Iowa Public Radio** at 1:00 p.m. with featured speaker, Dr. James Pease, Iowa State Associate Professor Emeritus of Natural Resource Ecology and Management. Seating is limited for this program, so **registration is required** by calling 515-994-3400.

### World Migratory Bird Day - Saturday, May 6

Celebrate Migratory Bird Day on Saturday, May 6, from 9:00 a.m. to 2:00 p.m. Join us at 8:00 a.m. for a guided **Bird Watching Walk** and another Walk at the Savanna Trail at 10:00 a.m. At 9:00 a.m. there will be a **bird photography program**



by photographer, Greg Punelli. A **Nature Tots** program will be held from 10:30 to 11:30 a.m. for children ages 3-5 accompanied by an adult. There will be displays from SOAR (raptor display) and Iowa Bird Rehabilitation. Enjoy crafts and games in the Visitor Center. **Please pre-register for the walks and the photography program by calling 515-994-3400**

**Nature Store Volunteer Recruitment Event** - Saturday, May 20 from 10:00 a.m. to 12:00 p.m. Attend this event to learn about volunteering in the nature store and staffing the front desk.

**Guided Bird Watching Walk** - Saturday, May 27 from 8:30 a.m. to 10:30 a.m.



*Listen to Their Song*  
By Linda Steffen



# 2023 Photography Contest

Presented by  
Friends of Neal Smith National Wildlife Refuge



Have you taken some great photos when visiting the Refuge? To celebrate the Neal Smith National Wildlife Refuge & the beauty of nature, we invite all photographers to enter the 2023 Photography Contest.

All photos must have been taken at Neal Smith National Wildlife Refuge

## CATEGORIES

Bison  
Plants

Elk  
Landscapes

Birds

Other Wildlife  
People Enjoying the Refuge

**All entries must be received by October 1, 2023**

Email entries and Entry form to: [friendsnsnr@gmail.com](mailto:friendsnsnr@gmail.com)

Subject Line: 2023 Photo Contest Adult or 2023 Photo Contest Youth

- Photographs may be color or monochrome
- No signature or writing on the front of the image allowed
- No more than 5 total entries per person and no more than 2 entries for any one category
- Signed entry/permission form must be TOTALLY completed for each photo or photo will not be considered
- Entry form/permission form at: [www.tallgrass.org](http://www.tallgrass.org)
- Please submit the highest resolution possible (digital image used for promotional items & other media)
- When saving each photo, photo's name must include: Category, Title, your Last Name  
(example: Bison New Calf Jones)

Photos will be judged in October, winners will be notified by Nov. 1, 2023.

A reception for all participating photographers will be held November 18, in the Ding Darling Gallery at the Refuge

Winning entries will be on display in the Gallery -November & December of 2023.

## Prizes to be awarded:

### Gift Certificate to the Prairie Point Nature Store

Best in Show: Adult \$100 gift certificate/Youth (18 or under) \$100 gift certificate

First place-each category:

Adult: \$50 gift certificate / Youth: \$25 gift certificate



## Concert on the Prairie is Back!

By Sydney Algreen-Hunter, Friends board

Save the Date - Friday, June 9, 2023

The Friends annual outdoor Concert on the Prairie is back in 2023 - this time with a new twist! Bring your own lawn chairs or blanket and enjoy a more relaxed food atmosphere while listening to Jonny Lipford, an award winning artist specializing in Native American flutes. Along with the music, there will be guided walks, pie, provided by a Des Moines based home bakery, Pie Bird Pie, and more, all amidst the beautiful prairie landscape. Tickets will go on sale this spring. Follow us on social media to catch the latest details!

## Do You Know a Graduating High School Senior That Loves Nature and Will Be Going to College to Study Environmental Science or Conservation?

That student may be eligible for the Friends of Neal Smith National Wildlife Refuge (NSNWR) Scholarship. The Friends of NSNWR encourage students to consider a career in environmental science or conservation by annually granting a scholarship to a graduating senior. The graduate must be pursuing a degree in natural resources conservation or management, wildlife management, wildlife biology, botany, forestry, fisheries sciences, environmental science, sustainability, or a related field. The scholarship is \$1000 per year for up to four years of postsecondary education for an associate or bachelor's degree.

Students graduating from these area high schools are eligible for the scholarship:

- Bondurant-Farrar
- Colfax-Mingo
- Newton
- PCM (Prairie City Monroe)
- Pella
- Pella Christian
- Southeast Polk

The scholarship application is posted on the Friends website at [www.tallgrass.org](http://www.tallgrass.org). Scholarship applications must be received by April 21, 2023 to be considered.

## Penny Press Machine is a Popular Attraction in the Prairie Point Nature Store

By Sharon Tinker, Friends Board

The penny press machine near the entrance to the Prairie Point Nature Store excites many Neal Smith Natural Wildlife Refuge visitors. It creates an elongated souvenir coin by rolling a penny through a hand cranked machine with two die rollers with a reverse-engraved image cut into one of the steel rollers. Over 20 tons of pressure are used to squeeze out the elongated coin. It is generally accepted that the first penny press machine was used at the Chicago World's Fair in 1892 to 1893.



People often ask if destroying coins issued by the U.S. government is legal. One penny press machine manufacturer answers the question; pressing pennies is legal in the U.S., as long as you are not fraudulently trying to spend the coins, according to United States Code Title 18 Chapter 17 Section 331.

Two quarters are needed for the Penny Pincher™ machine in the Prairie Point Nature Store to press a custom design into a penny. The four designs available are bison, elk, oak tree, and coneflower. The Nature Store also sells collector albums called passports to organize, display, and store souvenir pressed pennies. Passports are popular with collectors who use the penny press machines found at many destinations.

The penny press machine in the Prairie Point Nature Store produces \$700 to \$850 in revenue each year when the Visitor Center is open daily. Income from the penny press machine and all Prairie Point Nature Store sales go to the Friends of Neal Smith National Wildlife Refuge. The Friends support the refuge by funding refuge intern stipends and training, seed, tool, and equipment purchases, and volunteer recognition and lunches. The penny press machine accomplishes two objectives: creating a souvenir of a visit to the Neal Smith National Wildlife Refuge and raising money for the Friends to support the refuge.



Clockwise from top: Penny Press Machine; Collectors' Album for pennies; items to hold pennies. Item pictured above are available for purchase.

## Iowa DNR Uses Automated Radio Telemetry to Track Bird Migrations

By Anna Buckardt Thomas, Iowa DNR Avian Ecologist

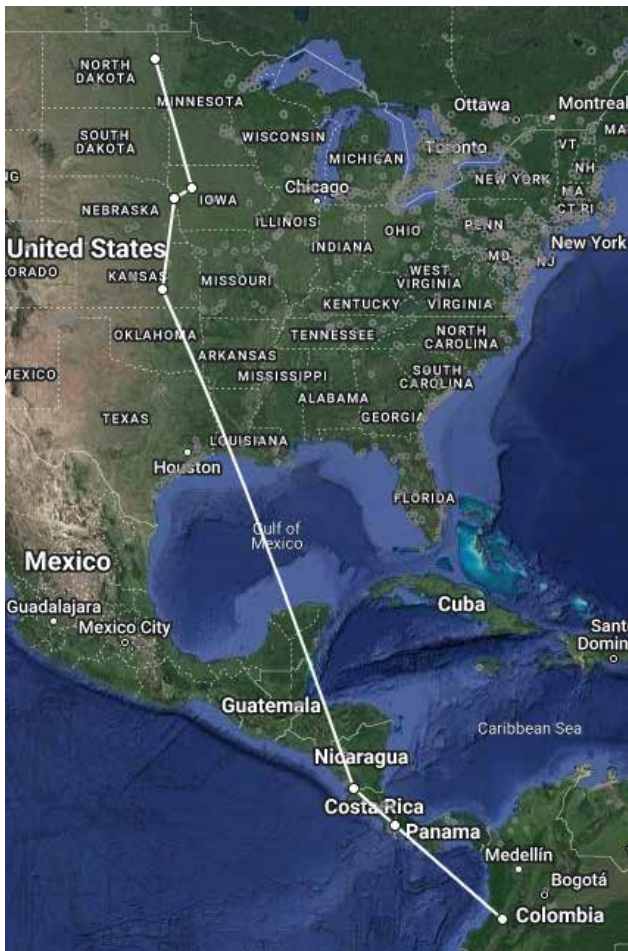
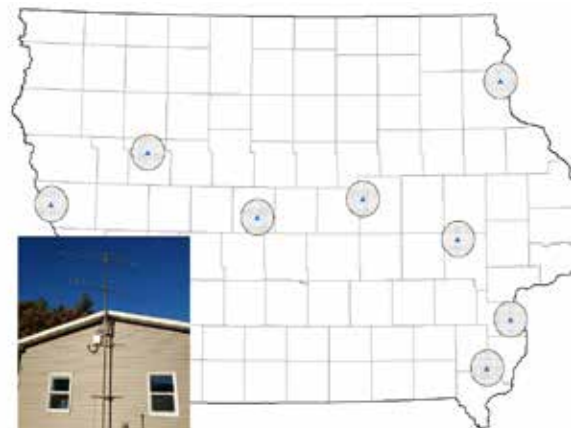


Figure 1. A screenshot of the spring migration of a Lesser Yellowlegs in April and May 2022. This bird was tagged in Colombia on April 19, 2022. On May 4, it crossed Costa Rica in 4 hours and 40 minutes. On May 7, it was later detected in Kansas, then twice in western Iowa, at times flying over 80 mph. The bird was detected at a station in eastern North Dakota on May 16. Visit <https://motus.org/data/track?tagDeploymentId=38367> to view an interactive map of this bird's journey.

Common Nighthawk (n=1), Eastern Whip-poor-will (n=1), Golden-winged Warbler (n=1), Least Sandpiper (n=1), Lesser yellowlegs (n=6), Rusty Blackbird (n=1), Semipalmated Plover (n=3), Short-billed Dowitcher (n=1), Sora (n=6), Stilt Sandpiper (n=1), Swainson's Thrush (n=3), Virginia Rail (n=6), White-throated Sparrow (n=6). The receiver stations we installed will be permanent fixtures over the next 10 years, always ready to detect tagged wildlife in Iowa.

To date, Iowa DNR has installed eight Motus receiver stations (Figure 2), with one more slated for installation next spring. Conservation partners have also started installing stations, with three additional stations in the state so far. These stations lay the groundwork for future DNR and partner research on the movements and migrations of Iowa's birds, bats, and possibly even insects. We are committed to working with partner groups to expand the network of receivers and anticipate installations of additional stations across Iowa in the years to come. We are thrilled to be contributing to this hemisphere-wide effort to better understand migration and fill important gaps in our understanding of the full-annual-cycles of migratory wildlife and will use this collective knowledge to improve our conservation efforts here in Iowa.

Figure 2: Iowa DNR's Motus wildlife telemetry receiver stations as of November 2022. The patterned circle represents the 15km detection distance of each antenna. Inset: A Motus wildlife telemetry receiver station operated by Iowa DNR at Pikes Peak State Park.



As a wildlife biologist, I don't often use vocabulary like coaxial cable, megahertz, and lightning arrestor, but Motus changed that. Over the last two years I've become well-versed in the lingo and installation of radio communication systems, all in the name of bird conservation! As part of a collaborative effort across the Midwest, I worked with Iowa DNR staff to install automated radio telemetry receiver stations as part of the Motus Wildlife Tracking System (<https://motus.org>). The project was made possible by a U.S. Fish and Wildlife Service Competitive State Wildlife Grant that provided funds for 50 new telemetry receiver stations in the Midwest and 11 more in Mexico, Costa Rica, and Colombia.

The Motus system relies on a large collaboration of independent researchers to track wildlife movements using radio telemetry. Across the Western Hemisphere, radio receiver stations and tagging efforts on the Motus system operate on two specific frequencies (166.38MHz or 434MHz). The radio transmitters placed on wildlife are micro-coded so thousands of unique individuals can be identified while only having to listen for one or two frequencies. This makes it possible to set up a system of automated radio receiver stations that are always ready to detect tagged wildlife. When a bird, bat, insect, or other critter tagged on a Motus frequency comes close enough to a receiver station (within 9 miles for our stations), it is recorded and identified and the data is automatically uploaded to the Motus website. All the data from animals tagged and detected on the system goes into a centralized database, allowing researchers to collaboratively track large-scale movements of individual wildlife. So, for example, a Lesser Yellowlegs tagged by researchers in Colombia in April could later be detected by receiver stations in Costa Rica, Kansas, western Iowa, and eastern North Dakota in May; which is exactly what happened in spring of 2022 (Figure 1)! Multiple detections of individuals across time can be combined, point by point, to learn about the paths, timing, and speed of small animal movements, and the system can also be used to learn about localized habitat use.

Receiver stations in Iowa are dual-listening and can detect tags on either of the Motus frequencies. The first Iowa DNR station was installed in August 2021, and the most recent station was installed in September 2022, thus we've been able to capture a partial fall migration in 2021 and full spring and fall migration periods in 2022. So far, Iowa receiver stations have detected 50 individual birds from 16 species; American Kestrel (n=1), American Redstart (n=1), Black Tern (n=2),

## Ding Darling Art Gallery

By Joan Van Gorp, Friends board

Visit the Gallery in March and April, not only to see some beautiful art prints and photographs but also to purchase your favorite one for yourself or as a gift. On display are many pieces of art and photographs that have been donated to the Friends. A big “thank you” to all the generous donors! All proceeds will directly fund refuge projects.

Beginning May 6 thru June 30, Nancy Carlson Expressions will have an exhibit “An Artist’s Garden”. An avid gardener, Nancy draws inspiration for her art from her own yard and others discovered on walks or trips to various Iowa locations. A degree in Graphic Design from Iowa State developed a path to a 30-year career in advertising sales. A donation from a friend of old wooden windows started her obsession with using acrylic paint on glass. Armed with a black paint pen Nancy creates one of a kind botanical art that looks like stained glass upon first glance. She is excited to be asked to display her art in the J.N. “Ding” Darling Art Gallery and looks forward to your comments and inquiries.



### Time to renew your Friends Membership?

Our Friends members are our greatest asset in providing funding for the refuge and the many events and programs offered to the public. We value each and every donation no matter the amount. If you haven’t renewed your membership, an easy way is online through our secure website. This takes just a couple minutes and is so vital for the Friends to continue our goals to promote awareness, support, education and appreciation for the natural ecosystems of the Neal Smith National Wildlife Refuge. Can we count on your donation? Go to [www.tallgrass.org](http://www.tallgrass.org) / Click on “Get Involved” / “Become a Member”

### You Can Make a Difference!

The power of a Friends group is its members. Please support this all volunteer, non-profit organization with your tax-deductible gift and be a part of the learning, growing and discovery happening at the Neal Smith National Wildlife Refuge every day. Thank you!

\_\_\_ \$25 -- Big Bluestem Friend

\_\_\_ \$50 -- Bison Buddy

\_\_\_ \$100 -- Savanna Saver

\_\_\_ \$250 -- Prairie Patron

\_\_\_ Other -- \$ \_\_\_\_\_

*Be sure to find out if your company will match contributions.*

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City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Date \_\_\_\_\_

E-mail \_\_\_\_\_

You may make your donation online and choose to make that gift recur monthly, quarterly or annually. Or you may make a one-time gift!

Please make checks payable to Friends of Neal Smith NWR, PO Box 114, Prairie City, IA 50228

## Increased National Wildlife Refuge System Funding Needed to Protect Neal Smith NWR

By Sharon Tinker, Board Member

Chronic underfunding of the National Wildlife Refuge System (NWRS) by the U.S. Congress has led to severe understaffing at refuges throughout the system. Reduced staffing has resulted in degradation of ecosystem habitat and infrastructure and reduced educational outreach. No refuge is fully staffed and more than half of wildlife refuges have no staff onsite resulting in refuges being closed to the public and unmanaged. At the same time the National Wildlife Refuge System has grown with 14 new refuge units added since 2010, new programs like the Urban Wildlife Conservation Program launched in 2012, and a 34% increase in visitors since 2010.

Funding dropped from \$503M in Fiscal Year 2010 to \$502M in FY2021. Maintaining FY2010 funding levels would have required \$598M in FY2021 to offset inflation and associated staff salary increases. Approved funding for FY2022 was only \$519M. More information about the impact of the shrinking National Wildlife Refuge System budget can be found on the National Wildlife Refuge Association's website at [www.refugeassociation.org/the-refuge-staffing-crisis](http://www.refugeassociation.org/the-refuge-staffing-crisis)

The impact of reduced funding has been dramatic at the Neal Smith National Wildlife Refuge (NSNWR). Permanent U.S. Fish and Wildlife Service (USFWS) staff at NSNWR have dropped from twelve staff members in 2015 to four staff today, a two-thirds reduction. The following staff members and their positions were eliminated or not backfilled when staff were transferred or retired in the last several years:

- Megan Wandag, Volunteer Coordinator, transfer in 2015
- Jim Krizman, Fire Suppression Specialist, transfer in 2016
- Brian Boot, Maintenance Mechanic, retirement in 2016
- Richard Hager, Wildlife Refuge Operations Specialist, retirement in 2018
- Cheryl Groom, Deputy Refuge Manager, transfer in 2019
- Doreen Van Ryswyk, Administrative Assistant, retirement in 2020
- Patrick Bryant, Visitor Services Specialist, transfer in 2022
- Carla Dykstra, Administrative Officer, retirement in 2022

Remaining staff today are:

- Scott Gilje, Refuge Manager
- Karen Viste-Sparkman, Refuge Biologist
- Nancy Corona, Visitor Services Manager
- Steve DeBruin, Maintenance Specialist

The smaller staff has reduced the number of interns and volunteers that can be trained and supervised, magnifying the impact of staff reductions. This has resulted in fewer controlled burns and chemical treatments to manage invasive species and increase prairie diversity, reduced Visitor Center hours, less support for school field trips, and loss of scheduled programming, including Nature Tots, naturalist programs, and photo hikes. Even when the Friends can fund intern stipends and infrastructure improvement projects, the Refuge staff does not have the time needed to supervise and train the interns or support the projects.

Consider writing a letter, sending an e-mail, or phoning our Iowa legislators at the addresses below to encourage their support of the National Wildlife Refuge System by increasing funding for operations and maintenance. Including your personal experiences and the benefits you receive from NSNWR make your communication more impactful. Thank you for your ongoing support of our local refuge.

Senator Charles Grassley  
email: [grassley.senate.gov/contact](mailto:grassley.senate.gov/contact)  
135 Hart Senate Office Building  
Washington, D.C. 20510  
Phone: (202) 224-3744  
Fax: (202) 224-6020

721 Federal Building  
210 Walnut Street  
Des Moines IA 50309  
Ph: (515) 288-1145  
Fax: (515) 288-5097

Senator Join Ernst  
email: [ernst.senate.gov/contact](mailto:ernst.senate.gov/contact)  
730 Hart Senate Office Building  
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Ph: (202) 224-3254  
Fax: (202) 224-9369

733 Federal Building  
210 Walnut Street  
Des Moines, IA 50309  
Ph: (515) 284-4574  
FAX: (515) 284-4937

The Neal Smith National Wildlife Refuge is located in Iowa's former 2<sup>nd</sup>/now 1<sup>st</sup> Congressional District. The U.S. Representative for this congressional district is:

Representative Mariannette Miller-Meeks  
email: [millermeeks.house.gov/contact](mailto:millermeeks.house.gov/contact)  
Phone: (202) 225-6576  
1716 Longworth House Office Building  
Washington, D.C. 20515

103 East Third Street  
Rooms 201A & 201B  
Ottumwa, Iowa 52501  
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## Address Service Requested

### President's Message

By Joan Van Gorp

Now that spring is here, we can feel the possibilities inherent in the turning of the season. Nothing matches the rising energy of spring, both in nature and within us. Spring is a season when everything comes back to life. When you visit the Refuge, you will see this in the spring ephemerals along the Savanna and Basswood Trails, the many birds found all over the refuge and new bison calves, which everyone delights in seeing.

Events and programs are being scheduled, though they may look different and there might not be as many, due to the limited refuge staff. Right now, the Friends and dedicated volunteers are doing the planning of events like Earth Day, Migratory Bird Day and Bison Day. Without this, the events could not be held at all.

We do need help, both in the planning and the staffing of the events. Would you be able to help even with ONE event? Volunteering at the refuge is a fun and rewarding activity and we can use your help no matter your age, interests, or talents.

The situation at our refuge, and really at the majority of refuges, is for lack of a better word "dire". Be sure to read the article in the newsletter about the budget challenges to the Refuge System. Also, I encourage you to go to the National Wildlife Refuge Association's website for more information and consider becoming a member of the NWRA. Your contribution will directly support critical efforts to restore the Refuges across the country.

The NWRA, CORFA (Coalition of Refuge Friends and Advocates) and Friends organizations are working together to raise awareness of this issue and more tools are being developed to help us all effectively advocate for the refuge we love. As we get additional resources, we will pass them on to you.

If you have any questions about volunteering or how you can be an advocate for the refuge, please contact me. I will be glad to talk to you at any time. (Ph: 515-994-2918)

### Prairie Wind

is published by

**Friends of  
Neal Smith National Wildlife Refuge**

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*Prairie Wind* is a newsletter about the activities of Friends of Neal Smith National Wildlife Refuge and the Refuge.