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Research Education

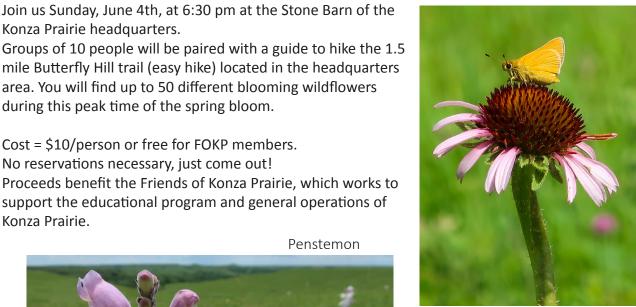
JUNE 4th FOKP Wildflower Walk

during this peak time of the spring bloom.

Cost = \$10/person or free for FOKP members.No reservations necessary, just come out!

Konza Prairie headquarters.

Konza Prairie.



Prairie coneflower



i s o n \mathbf{m}





Prairie rose



Penstemon

Catclaw sensitive briar



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photos by Jill Haukos



FOKP President Brian McCornack

As we continue to work towards bringing awareness to the Konza Prairie Biological Station, the Konza Environmental Education Program, and related research and teaching programs, we must also recognize the importance of growing our community and

inviting others to join us in our events! That's why we are encouraging each of you to attend our sponsored events and invite others in your network to attend as well.

The concept of "each one, bring one" is a powerful way to spread awareness and connect with like-minded individuals who share our passion for the prairie. As a Friends of Konza Prairie member, you can enjoy numerous benefits, including exclusive events and educational opportunities.

With the Wildflower Walk approaching, we encourage you to bring a friend! By joining us and attending these events, you contribute to a more extensive network of individuals dedicated to preserving the environment and promoting sustainable practices. And by inviting others to join us, you are helping us to grow our community and spread our message even further, preserving the prairie and promoting ecological research. Thank you for your continued support of Friends of Konza Prairie! And I hope to see you (and a friend!) at one of our upcoming events.



Assistant Environmental Educator



Welcome to Josey Reyes, our new Assistant Environmental Educator! Josey hails from Carbondale, CO, and is a lifelong mountain dweller who has been living on the prairie for five years. She says she loves the wide-open spaces and the huge horizons. She started with KEEP at the beginning of February and has jumped in with enthusiasm and skill. Her husband, Connor, is the new Assistant Site Manager of KPBS and is working with Patrick O'Neal. When you see her, please welcome her to Konza Prairie!

Prairie Week! Elementary and Middle School Curricula are Ready to Go



It's done – the Prairie Week curriculum is up and available for anyone to use – it may be found on the Konza Environmental Education Program website (https://keep.konza.k-state.edu). There are 2 versions: elementary and middle school; a high school version will be forthcoming.

It's a simple concept...get information to the teachers so they may prepare their students for a visit to Konza Prairie, or any prairie for that matter.

The topic of "The Prairie" is too big to contain in one presentation. It's too complex and nuanced. It needs a full week, with a different topic each day. By the end of the week the student has a much better understanding of what makes a prairie tick. These kids are ready to come out and see the real thing.

Or, alternatively, we can bring the prairie to the classroom. Not every teacher wants to deal with the hassle of a field trip but they need to cover "science" in their classrooms to fulfill the Next Generation Science Standards (NGSS). We've got their backs! The Prairie Week curriculum covers many/most of the life science standards for the elementary and middle school level. Each day's material is aligned with the NGSS with a list of the standards that are covered provided in the accompanying Teacher's Guide.

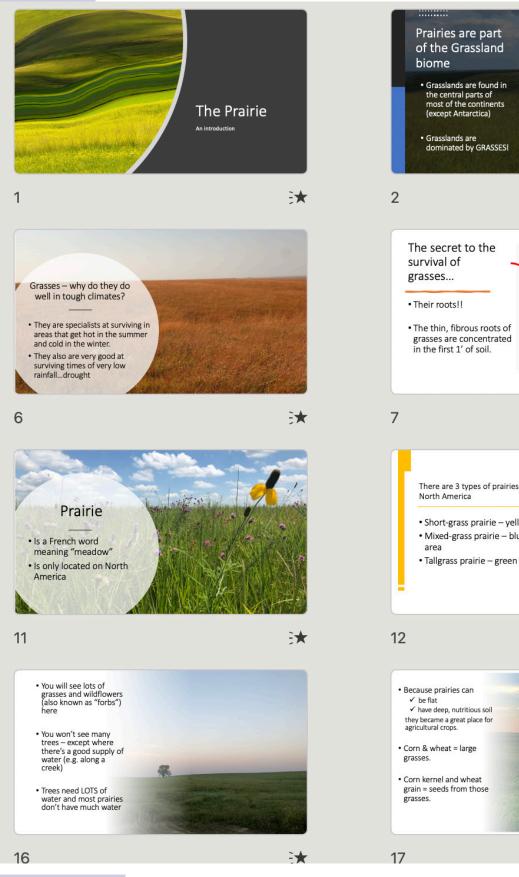
Konza Prairie data sets are included in the material. Students learn how to read the data, make graphs, and determine what the trends are indicating. They learn the connection between precipitation and grass growth, the connection between grass growth and bison weight, and ultimately, the connection between precipitation and bison weight.

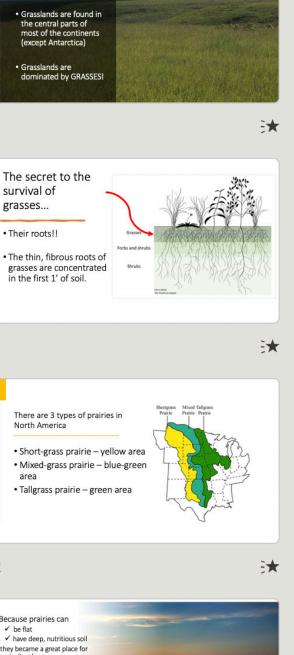
The material is engaging and compelling with the grassland brought to life in the classroom. Drone footage carries the students over the Konza bison herd as they lie down in the midsummer sun, then lifts them up into the smoke rising over a late winter prairie fire.

Teachers can download the PowerPoints and use the notes provided to walk their students through the prairie ecosystem. It's not a passive process, students are pulled into the grassland and tasked with making predictions and observations. Concepts are reinforced and used as scaffolding for new material. It all comes together at the end.

Please share this with a teacher you know. The more we understand and share about our ecosystem, the better.

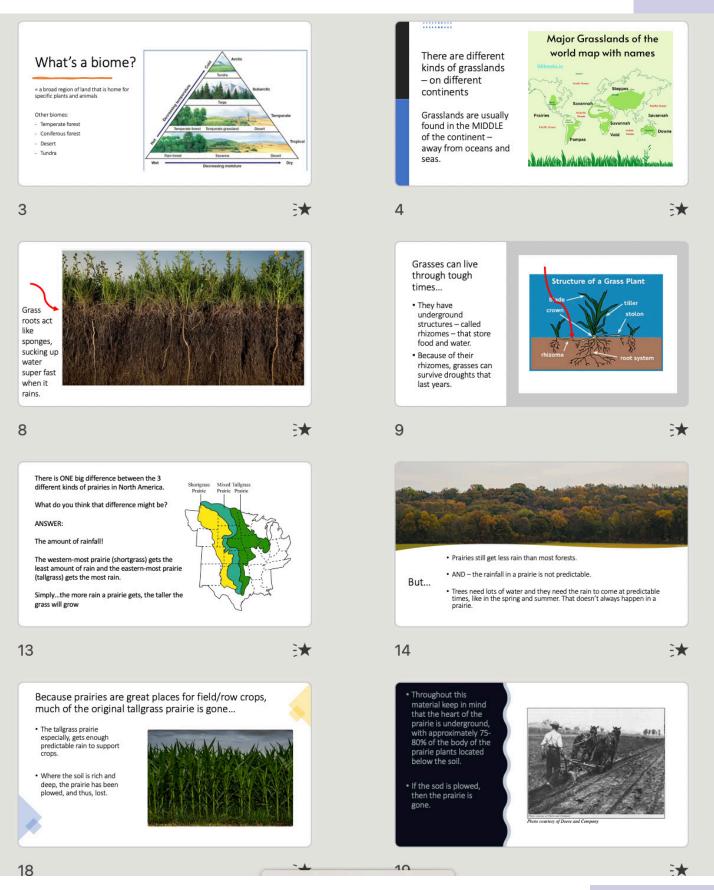
Prairie Week Curriculum Sample





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Prairie Week Curriculum Sample



Prairie Week Curriculum Sample



Congratulations and thank you to the following people who earned awards at the January 28th Docent Awards and Recognition event at Konza:





Docent of the Year Dave Hodgson

Docent Trainee of the Year Bharat Ratra



2022 Konza Prairie Teacher of the Year Julie Schwarting High School Science Teacher, Lawrence Free State School



2022 New Docents

(L to R - experienced docents in parentheses): Patrick Russell, (Ken Stafford), Bharat Ratra, Carmel Powers, (Dave Hodgson), Mark Gray, Jeff Elliott, (Tawnie Larson), Susan Noblett, Sandy Richards, Amy Meng, and (Jeanette Bosch)

2022 Quality Docents (did at least 3 activities & 3 continuing ed events) – Jeanette Bosch, Mary Breneman, Buz Bruzina, Jim Copeland, Miriam Edelman, Jeff Elliott, Don Garwood, Joe Gelroth, Chod Hedinger, Dave Hodgson, Mike Jones, Susan Kamphaus, Jim Koelliker, Retta Kramer, Tawnie Larson, Donna McCallum, Susan Noblett, Dick Oberst, Terry Olson, Jeff Petersen, Bharat Ratra, Sandy Richard, Jen Spearie, Jacque Staats, Ken Stafford, ML Stahl, Jeff Watson, Patti Watson, and Sue Ann Wright.



Quality Docents present at Award ceremony: Seated (L to R): Miriam Edelman, Susan Kamphaus, Sue Ann Wright, Terry Olson, Mary Breneman, Jeanette Bosch, and Carmel Powers. Standing (L to R): Jill Haukos, Jeff Petersen, Ken Stafford, Dick Oberst, Don Garwood, Jacque Staats, Jim Koelliker, Jim

Standing (L to R): Jill Haukos, Jeff Petersen, Ken Stafford, Dick Oberst, Don Garwood, Jacque Staats, Jim Koelliker, Ji Copeland, Buz Bruzina, Earl Allen, and Chod Hedinger

Research: The Heart of the Konza

Joshua Ajowele

I am a PhD student at the University of North Carolina at Greensboro (UNCG) and I am working with Dr. Kevin Wilcox. I started my PhD journey at the University of Wyoming with Dr. Wilcox before we both moved to UNCG. Our lab thinks a lot about how different drivers like global change and disturbance shape grassland communities and in turn impact ecosystem functions, and how we can predict future responses.

I am from Nigeria. I grew up in Lagos, southwest Nigeria. The community I grew up in was less developed than it is now. There were seasonal floods and freshwater swamps around my home. My family and I would sit together at night, and I recall listening to the croaking of frogs and chirping of crickets permeating the peaceful night as though they needed to pass on to us some mysteries. Surely, they must have been! This orchestra was often interrupted with the clap of hands to fend off the ever-pesky mosquitoes—not fun. The moon, stars and fireflies provided enough cinema lighting since constant electric power supply was a mirage. I did enjoy those nights!

I would attribute my early learning about plants to my mother. She grew vegetables and staple crops. We ate a lot of it and sold some to neighbors. She taught me how to break seed dormancy in *Corchorus olitorius* (Jute mallow). One of the plant groups that has a special place in my heart is bryophytes. Bup introduced me to this group, and we went on field trips collecting bryophytes in Nigeria. He discovered a secondarily aquatic moss for the first time in Nigeria.

There are combinations of experiences that spurred my interest in grassland ecology. I obtained my undergraduate degree in Nigeria where I studied Botany, and I had the opportunity to go on field trips with my undergraduate advisor, Prof Olubukunola Oyesiku (Bup). This prompted my interest in field botany and ecology. I went on to pursue a Master's degree in the UK in Plant Diversity. I got deeper into grasslands and vegetation classification. While I was in the UK, I saw an advert for a PhD with the opportunity to do field work on Konza Prairie, I jumped at the opportunity and here I am!

Fire and grazing have been integral to the maintenance of the tallgrass prairie ecosystem. While fire provides high quality forage for bison and cattle and reduces woody encroachment, grazing tends to increase plant species diversity and acceler-

ate nutrient cycling. My research focuses on how the fire and grazing interaction in the context of patch burn grazing management creates landscape heterogeneity and impacts multiple ecosystem functions and services and the stability of these ecosystem functions. With increasing global change events, the stability of these ecosystem functions is vital in maintaining this beloved tallgrass prairie ecosystem.

One of my favorite things about Konza is being out there in the open prairie identifying plants and watching as the landscape changes color due to wildflowers blooming at different times throughout the season, from the pinkish purple of *Vernonia* to the golden yellow of *Solidago*. It is really difficult for me to pick my least favorite thing about Konza off the top of my head. I will go with ticks.

I am yet to settle on every detail of my dream job. However, it would be a job that affords me the opportunity to be in the field, carry out research to address problems, form partnerships and network with land managers, ranchers, conservation organizations and the broader scientific community.

Outside of research and teaching, I enjoy playing soccer and sports in general. Although I don't admit it, I think I enjoy cooking, especially if I am cooking for other people. I picked up country swing dancing from Wyoming!





Graduate Student

Graduate Student



Sarah Herzog

I am originally from southeast Idaho (Pocatello). I then attended the University of Idaho in northern Idaho, followed by a Master's in South Dakota.

I grew up with a family that loved doing things outside. My dad paid his way through college by guiding white water rafting trips down the Salmon River, one of the longest undammed rivers and in one of the largest protected wilderness areas in the continental U.S. Every summer our family would take a 6-day trip down the Salmon starting when I was four years old. Being surrounded by true wilderness and people that loved being in it was absolutely one of the main reasons why I became interested in ecology and conservation. I firmly believe everyone should have access to wilderness, whether untamed mountainous rivers or undulating untilled prairies.

In addition to my parents and friends that went rafting with us, I owe a great debt to my grandmothers for inspiring my love of living things. I was fortunate enough to spend a considerable amount of time with my grandmothers when I was little, and our activities would often consist of looking for bugs outside or poking pond scum to see the little critters living in the water. It is through their connections that I started working at the Ray J. Davis Herbarium in high school, which led to me becoming an assistant curator at the Stillinger Herbarium at University of Idaho. This set me on the track toward going to graduate school and my love of plants.

My faculty advistor at K-State is Dr. Allison Louthan. My work focuses on how 'rarity' (a combination of traits such as range size, habitat specificity, and population density) can impact native plant species' ability to shift their range. As climate change continues to increase in severity, we expect species (both plant and animal) are going to have to move to higher elevations and/or latitudes to maintain their preferred climates. The rarest of species – those with a small range, specific habitat requirements, and small populations – could very likely be at a disadvantage. If this is true, this is a critical consideration when it comes to the long-term conservation and management of native species in years to come. Do we need to consider manually moving rarer species to a more hospitable climate if they cannot make it on their own?



I love being able to work with people that have a passion for grasslands. Being able to take a drive around the bison loop to look at what's blooming and growing is always a hoot. People get excited about finding the first flowers of spring or a clutch of frog eggs in a flooded bison wallow.

My least favorite thing is ticks. Coming from the desert of southern Idaho, I don't really appreciate the number of ticks that are able to thrive here.

My dream job would be working in a herbarium (dried and pressed plant collections). I love the quiet solitude of herbaria. Having the chance to hold plants collected 100+ years ago and being a part of making collections that will survive another 100 years feels like a privilege. Natural history collections like herbaria are a vital resource for researchers now and in the future. They hold answers to questions we don't even know to ask yet.

When I'm not researching native plants, I'm growing tropical house plants (my personal favorites are African violets and their relatives – Gesneriaceae) or gardening. I've somehow made plants a personality trait. My partner and I also have a few different species of dart frogs and other amphibians. When I'm not cooing over a cute flower blooming in the house, I'm cooing over a frog doing something silly.



What is your background? Where did you grow up?

I was born in Junction City but my folks quickly moved to eastern Miami County, near Paola, where I grew up on a small hobby farm.

What was your major at K-State, and when did you graduate?

I began school at KSU in 1999, graduating with a wildlife biology degree in 2002. I pushed through my undergraduate degree pretty quickly because my fiancé and I wanted to hike a long-distance hiking trail and I assumed I'd be back in graduate school for several more years afterward. My year-long break turned into 21 and counting.

How did you get involved working at Konza?

After graduating, Christy and I spent five months hiking in the Sierras and Cascades before beginning the hunt for natural resources jobs. The next five years

we bounced around between seasonal research and outdoor education jobs before returning to Kansas after our kids came along. I actually interviewed with Valerie Wright for a position that never materialized with the EE program in 2006. I started docent training and was close at hand when a research assistant position opened in 2007.

What do you see as your greatest challenges as Project/Site Manager?

Konza is a big place with a lot going on. Even before I took on a management position I joked that I really had several part time jobs. One day I'm the IT guy, the next a soils technician, a firefighter, a mechanic, an invasive species specialist... I enjoy the diversity of work and learning new things but yes, it is a challenge some days.

What are you proudest of during your time working at Konza?

Clarence Swallow was the manager of the Ag Farm at K-State for many decades and I got to know him well in his retirement years. He always said his number one priority was to help researchers be successful. That perspective has become mine as well. I'm honored when visiting researchers leave and comment on how great a place this was to come and do their work. The facilities, the research platform, and the people here make that true and I'm proud to be part of this team.

What has been your most significant achievement at Konza?

There have been several large infrastructure projects that I've made significant contributions to, such as the bison fence and coral, but I think the positive relationships built with students, visitors, and researchers do just as much to further Konza's mission.

What has been your worst experience at Konza?

In 2015 I began coordinating the prescribed fire program. We had a nice hot and dry south wind day early in March. K20A was still heavily wooded and I wanted to use the opportunity to hit it with a good burn, even though the watershed to the north hadn't been burned yet. All went well, but while returning to HQ an ember crossed the fire line and started a fire headed toward neighbors to the north. Calling the neighbors, and requesting Riley County Rural Fire to assist in protecting houses was a humbling experience. All turned out well, and the neighbors were very gracious, but that day definitely ranks near the worst experience I've had.

What does your family think about moving out to Konza?

It wasn't an easy decision for the family, but they are excited. We've been very blessed to be next door for the last 13 years, but the opportunity to continue the renovations on the staff house and make it our home won out. Christy jokes she'll never see me once we move because I'll have a shop close at hand to work in. Isaac loves working here so will be even more eager to get his school work done so he can escape up the hill. Sam thinks the reservoir's days as a swimming pool are going to return in full swing. I think it will be a good fit for us all.

What are some of your hobbies or interests you enjoy in your spare time?

Long foot or water paths are a passion and we've been blessed to steal away for multiple several-week adventures backpacking or canoeing since starting work at Konza. Hopefully once working on the house and the jumble of moving are behind us we'll get back to our Sunday afternoon hike, bike, or float tradition as well.

Where do you see yourself in 10 years?

In 10 years I see my self at Konza. Another 10 years after that: Konza. I'm sure at some point a future director will have to kick me out, but it's hard to imagine wanting to be anywhere else.

What is the best part about working at Konza?

Even after 16 years, I find myself looking out over the prairie from the top of the Kings Creek drainage and being thankful to be a steward of this place. History, people, inspiring natural beauty: this place is a complete package.

What is the worst part about working at Konza?

Really, who ends on a negative note! But the little things, and little critters, shouldn't be glossed over. It's not all sunshine and rainbows, in the mix there are TICKS. Tiny ones, fat ones, green ones, and flat ones. They don't love me as much as some others but there are days when you are flicking them off by the dozen that you question your career choices.

In Memoriam - Bob Davis



KEEP docent Bob Davis passed away March 9, 2023, at the age of 82. Bob, a graduate of the Docent Class of 2002, also was a Master Docent (being active for 5 or more years). He spent many years leading school groups on guided hikes and tours. Bob, along with his wife Jan, was also an active and current member of the Friends of Konza Prairie.

The KPBS Staff:

Director John Blair, Ph.D. Assistant Director Eva Horne, Ph.D. Administrative Asst. Barb Van Slyke KPBS Project/Site Manager Patrick O'Neal Director of Education Jill Haukos Environmental Educator Josey Reyes

The Friends of Konza Prairie (FOKP) promote the interests of Konza Prairie Biological Station as they pertain to its mission of Research, Education and Conservation. Membership in FOKP is open to all individuals, groups and businesses that share an interest in the common goal of supporting the Konza Prairie Biological Station.

For FOKP membership and general information, call 785-587-0441, or visit the Konza Environmental Education Program (KEEP) website at: <u>http://keep.konza.ksu.edu</u>

The FOKP Executive Board:

President Brian McCornack (3-yr term expiring Dec. 2025) President-elect Susan Adams (3-yr term expiring Dec. 2024) Treasurer Noah Busch (3-yr term expiring Dec. 2023) Secretary Open Historian Joe Gelroth

The FOKP board members:

Heather Culwell	(3-yr term expiring Dec. 2025)
Nellie Hill	(3-yr term expiring Dec. 2025)
Retta Kramer	(3-yr term expiring Dec. 2023)
Marcia Rozell	(3-yr term expiring Dec. 2025)
Mollie Wold	(3-yr term expiring Dec. 2023)
Jerrod Westfahl	(3-yr term expiring Dec. 2023)
Kelly Yarbrough	(3-yr term expiring Dec. 2023)

Ex-officio and Honorary members

The Nature Conservancy- Rob Manes KPBS Director- John Blair Director of Education- Jill Haukos KSU Foundation- Trevor Jueneman Historian- Joe Gelroth Honorary Board Members- Stormy Kennedy and Valerie Wright Friends of Konza Prairie Kansas State University Division of Biology, 116 Ackert Hall Manhattan, KS 66506-4901 785-587-0441 #308



MISSION

Konza Prairie Biological Station (KPBS) is a native tallgrass prairie preserve owned by The Nature Conservancy and Kansas State University and operated as a research station by the Division of Biology. The Friends of Konza Prairie (FOKP) promotes the interests of KPBS as they pertain to its mission of research, education and conservation.

New and Renewing FOKP Members

Student Palmer Bowles Kaleb Roberts

Little Bluestem—Individual

Annie Baker Mary P. Barkley Valerie Bashaw Martha Blackman Amy Breesman Dennis (Buz) Bruzina Larry Campbell Bert & Kelly Coleman Deirdre Hoff Jan Johnson Roger Kinderknecht Ron Klataske Ryan Klataske , Bob Lewis Claudia Luthi Susan Mason Danton McDiffett Stephen N. Paige Dwight Platt Cynthia Rhodes & Brian Martin Mary Alice & Norm Schlesener

Little Bluestem—Family

Richard & Sylvia Beeman George & Molly Belin Peggy Coleman Dan Francke & Karen Wells Don & Karen Garwood Lisa J. Grossman Richard L. Hartman Dave & Jill Haukos Mark & Terry Healy Chod & Sari Hedinger Jim, Mary & Mike Higgins Carol Kennedy Bruce & Brigitte Kidder Donna & Nick Krueger Terri & Mike McQueen Barbara Peck Paul Post & Kay Kelly Ruth & Glenn Rodden Brad & Susie Shaw Jim & Stacey Warner Brad & Carol Williamson Kelly Yarbrough & Jeff Sackrider

Big Bluestem Karen Barker

Linda Bennett Tom & Jody Boeding Jan Butin Mike & Dru Clarke James & Christine Curtis Bob & Jan Davis Jerry Dees & Deborah Murray Dan & Latane Donelin Hank & Fileen Frnst Bill & Ann Feverharm Marguerite & Neal Fleming Linda & Larry French Curt Gergely Scott & Donna Goltry Patrick & Susan Gormely Mike & Toni Haddock Garv & Carolyn Haden Laurie Hanson & Kim Dayton Terry & Paula Harbert Kathleen Hoss-Cruz Tom Hulbert & Nancy Scheer Julia Jilek Ray & Susan Kamphaus Kail & Becky Katzenmeier Aubrev Krug Phillip Marzluf & Anne Longmuir Joe Mocnik & Mirta Lenart-Mocnik Paul & Nancy Ohlenbusch , Patricia Payne DMV Charles & Ann Pearce David & Sandy Procter David & Judy Regehr Dick & Martha Seaton Phyllis & Warren Slocombe Betty CS Sterling Joan Strickler Jeff & Patti Watson Larry & Ruth Williams Valerie Wright

Flint Hills

Kary Bloom Alice Boyle Lyle & Chris Butler Preston & Diana Chapel Walter Dodds & Dolly Gudder Joan & Joe Haefele Dustin & Hallie Hatfield Michael W. & Linda D. Jones Megan Kennelly & Kris Silver Jim Koelliker John Laffoon Brian & Heather McCornack Janeen McNeil Jan & Gerad Middendorf Pat & Mary Pat Petrie Amy Rose Kay Russell Alan & Joan Smith Michael Stubbs Marilyn Tilghman David Wheaton

Prairie Chicken

Mary Cottom Charlie & Pat Grimwood Mark Hulbert & Merideth Tomlinson Steve Hulbert Family Phil Jeffries Gregory Kennedy & Marguerite Quirey John & Ingelin Leslie John MicCormick Rod Noble John Michael Purdon Family Keith & Sue Ann Wright

Bison

James & Susan Copeland Shelly & Darren Gunderson Ginny & Jeff Petersen Francis Russell Holly Serk & Thomas Einck Ken & Kris Stafford

Tall Grass

Mike & Connie Butler Allan Foster & Mary Galligan Jacque Staats & Dick Oberst

Community Memberships

Josseline Alba Raven Allen Jonathan Anderson Tommy Anderson April Arnold Patricia Baker H Batchelor Kristin Berg Stanley Bergkamp Amber Best Emily Bishop Lynda Bishop Elijah Blackman Britney Bloom Chelsey Boss , Dennis Bowie Evelyn Bowman Tina Brandt Michael Brent Christina Briggs Matthew Burany Aracely Campos-Torres Adulsak Chanyakorn Daniel Chavez Andrew Singh Chebii Karl Childs Brittany Clark Monte Clarke Chelsea Claussen Taina Concepcion Marcus Cooper Ashlee Corona Jerome Cottner Fred Craig Julieta Daracan Paula Davis Sherryl Determann Sarah Devader Patricia Dolatta Shannon Dutro Becky Dwerlkotte Jennifer Edwards John Eichem Rodney Eklund David Enns Danny Entrikin Tamara Estrella Rodriguez Sharon Evans Michael Fascell Theodore Fav Rebecca Frakes Donald Fraleigh Clyde Francis Robert Fry

Dennis Galaway Corev Gambrell , Juan Garcia Lakesha Gill Paul Gleue Freddy Gonzalez Sequeira Tyrone Goodman Ocean Grimes Jonathan Grogg Samuel Guevara Bautista Jefferey Harms , Gerald Hartman Chase Hearn Mark Hegeman Bradley Hemel Denise Henry Duranda Hogar Christopher Holbert Anthony Hunter Jaylen Jackson Michael Jackson Fastyn Jamis , Debra Johnson Casey Jones Joyce Jones Matthew Kilgore Ricky King Brandon Kling David Koone Jessica Lake Clifton Lang Loretta Lemaster Patricia Lister Graig Lorentzson Russell Lovell Paul Lucas Tremia Lyles , Raeann Magill Bradley Malia Willie Matheny Lori Mcallister Cory McEntire Diane Mcfarland Janice Mckinzie Declan McMillen Jennifer Miller

Curtis Minick

Nicole Mora Roger Morris Faith Nelson Vu Truc Ngo Bruce Otter David Paczkowski Baruch Palacios Kristin Ramsev Christopher Rayl Crystal Richardson Catherine Ricke Barbara Roberts Esther Robledo James Sanders Esmond Sanford Jacob Schmidt April Schrag Carston Schuckman Alvssa Scott Mark Semon McKenzie Shoff Kenneth Sloan Mikaela Smith Amber Sowel Kyle Spurlock Evan Stewart Ashley Stout Ashley Tena Brandon Thimmesch Bonnie Thompson Adam Thomsen Nathanial Trudell Marcus Tuggle Guadalupe Vasquez Candelaria Viera Brett Waggoner Michael Walls Tyisha Webster . Sydney Wekamp Sierra Whitted Javdon Wilev , Alex Williams James Williams Mikala Williams Richard Williams Shawn Williams Angel Yescas-Meza