Prairie Corridor on Haines Branch

2019 Annual Report on Project Progress and Accomplishments

Prepared by the City of Lincoln Parks and Recreation Department

January 2020

Introduction:

This report provides a summary of project progress and accomplishments as described in the Interlocal Cooperation Agreement between the City and the Lower Platte South NRD. The period of this report covers the City's fiscal year beginning September 1 of 2018 and ending August 31 of 2019. Because the Interlocal Agreement was signed in December of 2017, the partial fiscal year extending from that date through August 31 of 2018 is also included in this first report.

This report is organized according to the three pillars of the Prairie Corridor Project: 1) Education/ Outreach and Research, 2) Conservation and Habitat Restoration and 3) Trail and Economic Development. The report also includes activities undertaken by the City as part of its responsibility as lead agency for implementation and coordination.

Education, Outreach and Research

Media

The project website (prairiecorridor.org) was updated and enhanced. Through volunteer and student collaboration, substantial work was completed toward the development of a Prairie Corridor Story Map using ArcGIS software which is anticipated to be completed in the first part of 2020. The Story Map will incorporate immersive stories by combining text, interactive maps, and other multimedia content and will be available as a link from the website. This effort is being augmented by graduate student work in UNL's College of Agricultural Sciences and Natural Resources in collaboration with the Platte Basin Timelapse project, to use digital multimedia to document prairie research and biodiversity in the Prairie Corridor.

Social media is playing a larger part in Prairie Corridor outreach efforts, with regular postings on Facebook and Twitter. Relationships with partner social media accounts have been built in order to tag one another's posts and increase reach.

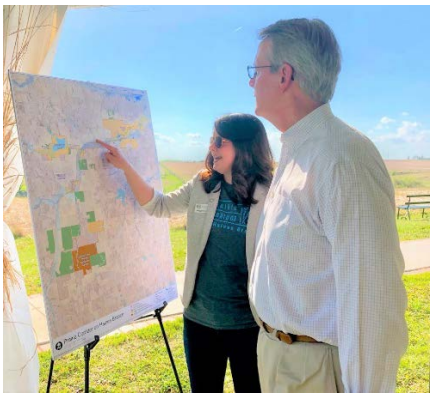
A video was produced as part of the fundraising campaign which is posted on the website and has been used for outreach, events and donor meetings. Drone footage has also been collected by Parks and Recreation staff as well as the Platte Basin Timelapse project for sharing via social media and the website.

Events, Festivals and Tours

- May 10 and 14, 2018: Bus tours of Prairie Corridor for elected officials from Lincoln, Lancaster County and the Village of Denton, advisory boards for the primary partners, and the Prairie Corridor Cabinet were held. In total, 57 guests enjoyed a guided tour of the Prairie Corridor with stops at Denton Prairie and at Spring Creek Prairie Audubon Center.
- June 9, 2018: Denton Prairie Festival held at Denton Prairie. The Festival included interactive booths with representatives from Save Our Monarchs, Pioneers Park Nature Center, Spring Creek Prairie Audubon Center, Nebraska Game and Parks Commission, UNL School of Natural Resources, and the Lower Platte South NRD. A one-mile "Monarch Mile Fun Run" was held with the help of Fleet Feet. Prizes were given for dressing as your favorite pollinator.

Denton Prairie Festival, June 2018

- June 20, 2018: Pollinators on the Plaza event at Union Plaza with information and activities for children.
- July 28, 2018: LES Sustainability Festival held in West Haymarket in conjunction with the Farmers Market. Information and promotional items for the project were provided.
- August 26, 2018: Prairie Corridor bus tour for Rotary Club #14 sponsored by the club.
- September 28, 2018: Fall Fest at Spring Creek Prairie Audubon Center, including a booth with Prairie Corridor maps, information and video display.
- April 22, 2019: Prairie Corridor bus tour sponsored by another private club.
- May 14, 2019: Prairie Corridor Celebration sponsored by the Lincoln Parks Foundation to increase public awareness of the Prairie Corridor on Haines Branch and to celebrate the accomplishments to date. Nearly 300 people of all ages attended the event, which was held on the Martin Prairie near Pioneers Park Nature Center. Activities included exploring the Nature Center prairie and facilities, Prairie Corridor trail tours via Pedicab and BikeLNK bikes, educational activities for kids and adults, and food vendors and drinks.



Prairie Corridor Celebration, May 2019

- June 19, 2019: Pollinators on the Plaza event at Union Plaza with Prairie Corridor information and activities for children.
- July 13, 2019: More than 40 volunteers came out to a community science "Bio-Blitz" event on Denton Prairie, an intense period of biological surveying to record all living species in the area. The event was coordinated by Spring Creek Prairie Audubon Center with assistance from the Nebraska Game and Parks Commission, UNL School of Natural Resources, Nebraska Master Naturalists, The Xerces Society and Pioneers Park Nature Center. There were 267 documented sightings covering 154 species.

Denton Prairie Bio-Blitz, July 2019

- July 27, 2019: LES Sustainability Fair held in West Haymarket in conjunction with the Farmers Market. Information and promotional items for the project were provided.

T-shirts with the project logo were available for sale at various events and provided as prizes, and were stocked for sale in the gift shops at the Pioneers Park Nature Center and at Spring Creek Prairie Audubon Center.

Coordination with the Village of Denton continues to be an important part of the project. Denton has been a partner on events held at Denton Prairie and Village representatives have collaborated on solutions for the trail and trailhead in Denton, mowing trails through the prairie, coordinating for prescribed burns, and land owner outreach. Economic development for the Village of Denton continues to be a major goal for the project.

Denton Prairie Signage and Mowed Trails, October 2018

Research

Research is being conducted on 24 research plots at Bobcat Prairie. The research is evaluating and contrasting approaches used by grassland conservation programs on working lands with high diversity local ecotype prairie restorations. (Examples of grassland conservation programs include the Conservation Reserve Program (CRP) and other programs of the Natural Resource Conservation Service (NRCS)). The research is evaluating the success of these two methods for adding native species to existing low-diversity and non-native grasslands. Data collection began in May 2019. The study employs three different treatments and three different management practices; one third of the plots serve as a control. Treatments being compared include:

- Site preparation (herbicide only versus disking plus herbicide)
- Seed mix (clean, tested seed versus wild unprocessed seed)
- Seeding (drilled seed from Prairie Legacy Inc. versus broadcast seed from Prairie Plains Resource Institute)

In May 2019, four UNL undergraduate interns began work for the Prairie Corridor, supported by NET funds and matched by UNL scholarship funds (Cabela's endowment). The goal was to have a group of students to assist UNL faculty on projects and to form a team that can assist partners with various management and outreach needs. Students' majors included Entomology, Environmental Restoration Science, Environmental Studies, and Fisheries & Wildlife. Ethan Freese, a student in the College of Agricultural Sciences and Natural Resources Masters of Applied Science graduate program, coordinated the intern work during the summer. Ethan is also working with Platte Basin Timelapse to document research and biodiversity in Prairie

Corridor using multimedia. Some Prairie Corridor projects that interns assisted with in May-June 2019 included:

- Monarch and regal fritillary surveys for the Nebraska Game and Parks Commission
- Musk thistle removal in various Prairie Corridor properties
- Prescribed burns at Bobcat Prairie and Nine-Mile Prairie
- Presentations to children at Wilderness Nature Camp
- Tree removal at Spring Creek Prairie Audubon Center
- Prairie Corridor Celebration event
- Denton Prairie Bioblitz

UNL Intern Hunter Brophy Removing Musk Thistles, June 2019

The Project also includes woodland and stream surveys and assessments. Riparian woodlands play key role for wildlife habitat and stream ecology. In many areas, Prairie Corridor woodlands are surprisingly similar to estimated pre-settlement composition, though Burr Oaks and elms have decreased in abundance while walnut, hackberry, honey locust and mulberry have increased. Prairie Corridor woodlands showed fewer problems with invasive trees and understory species than anticipated.

Stream monitoring and assessment at multiple sites in the Prairie Corridor coordinated by Dr. Steve Thomas was completed in 2018. Analyses to date suggest that land use significantly impacts water quality, and monitoring results will provide baseline data to examine whether prairie restoration will have a positive impact. Preliminary results from stream survey and assessment are expected in the fall of 2019.

In 2018, the wild bee team completed research to examine the species and distribution of wild bees in the Prairie Corridor and which plant species they use. As part of a graduate thesis, an extension bulletin entitled "A Descriptive Study of Wild Bees and Angiosperms in a Tallgrass Prairie Corridor of Southeastern Nebraska" was created and made available on UNL's Digital Commons website at digitalcommons.unl.edu.

Conservation and Habitat Restoration

See attached map for reference.

Samani Property

A 144-acre conservation easement acquired by the NRD in December 2012, with an additional 20-acre easement acquired by the NRD in September 2016.

The easement allows the owner to continue farming until 2023, at which time the farmed areas may be restored to tallgrass prairie. The easement also includes public access for a future trail and trailhead accessible from SW 98th Street.

During the period of this report, the owner placed the two properties which are included within the easement area, along with two additional parcels to the east, up for sale. The partners appraised the four properties and made an offer, but the offer was not accepted. Discussions with the owner indicate there may be interest in expansion of the conservation easement area to the east in the future.

Denton Prairie

54 acres acquired by the City of Lincoln in May 2013.

During the period of this report, Denton Prairie has entered the maintenance phase and typical maintenance practices have included invasive weed control removal of woody invasives, haying, and prescribed fire. Denton Prairie has been a popular location for various events and festivals because of the ease of access from Denton. The City maintains mowed trails in the prairie for public use and enjoyment. Ownership of Denton Prairie is anticipated to be transferred to the NRD in the future.

Two Creeks Prairie

Originally a 100-acre conservation easement acquired by the NRD in 2014, with fee simple acquisition of the property by the City of Lincoln in 2017.

Prior to the reporting period, the Prairie Plains Resources Institute (PPRI) seeded 31 acres of cropland in the south part of the property in February 2017 to a high diversity, primarily mesic, tallgrass prairie mix. These areas have had some issues with non-native thistles which are being controlled by hand and with spot spraying.

In March of 2018 approximately 11 acres on the southwest corner were seeded by PPRI to a high diversity, primarily mesic, tallgrass prairie mix. In the northeast corner of the property, approximately 13 acres are currently in non-native pasture. Spraying of Plateau and Round-up has been used to reduce the cool season grasses in preparation for a reseeding.

Ownership of Two Creeks Prairie is anticipated to be transferred to the NRD in the future.

Stiefel/Johnson Trailhead

12.7 acre donation to the NRD in 2019, upon completion of a trailhead parking area.

This property is bottom land at the confluence of the Haines Branch stream and Holmes Creek. Prior to the period of this report, the Stiefel/Johnson Trailhead was seeded to a high-diversity, local-ecotype tallgrass prairie mix (March 2017). It is currently in the early establishment phase. In the spring of 2018 a limestone trailhead was constructed, taking access from SW 84th Street. This trailhead is designed for vehicles, buses and trucks with trailers. This will accommodate the use of this site for hiking/running, bicycles, and equestrians in the future. Concrete was added for ADA parking stalls and to provide a pad for a future portable toilet. A dedication ceremony was held July 25th of 2019 to formally dedicate the trailhead and to transfer the property to the

NRD. Native trees (black walnut, Burr Oak, hackberry) were planted in the area of the trailhead to provide shade for people as they prepare for a trek.

Stiefel/Johnson Trailhead Dedication, July 2019

Hunter Property

5 acres acquired by the NRD in May 2018.

This 5-acre property is adjacent to the Stiefel/Johnson Trailhead, and for naming purposes will be considered to be part of the trailhead property moving forward (it is also referenced together with the trailhead on the map attached to this report). This property was acquired with assistance from the Lincoln Parks Foundation, which purchased and subdivided a 20-acre lot to make the 5-acre parcel needed for the project available to the NRD. The land provides a key connection for the future trail connection to Conestoga Lake.

Bobcat Prairie

134 acres acquired by the City of Lincoln in December 2013, with an additional 163 acres immediately adjacent (to the north) acquired by the City in September 2017, for a total of 297 acres.

The southern parcel (2013) is primarily riparian and pasture with a good deal of woody encroachment in the west end, about 35 acres of virgin prairie in the center, and approximately 75 acres of recently released CRP on the east. Woody removal has been started in the east end. The virgin prairie area was mostly burned in 2018, with a small portion hayed due to concerns regarding the fuel load. The east end of the CRP area was burned in October, and about 20 acres were hayed. About 30 acres of the CRP area were drilled with a forb mix from Prairie Legacy in April of 2019 to diversify the grasses. Work to improve access from SW 70th was completed by a contractor in the summer of 2019.

The northern parcel (2017) is a combination of wooded riparian area, hay meadows, and old CRP fields. There are two ponds on the east end of the property and an unnamed sand-bottomed creek runs through the west end. There are unique perched wetlands leading down to this creek. In 2017 a small area of cropland on the northwest corner was planted to soybeans in preparation for a late winter 2018 seeding by PPRI. The eastern half of the property was

contracted to cattle grazing, with the contractor removing trees and spraying over the 2019 growing season in preparation for inter-seeding to diversify the prairie.

Additionally, about 25 acres in the central part of the northern parcel is part of a long-term prairie restoration experiment being conducted by the University of Nebraska-Lincoln School of Natural Resources discussed on Page 5. This research is comparing establishment methods and maintenance practices to assess effectiveness for restoration of prairie. A gravel parking area was constructed on the east end of the property in August of 2019 and is suitable for vehicles, busses, and maintenance equipment access. Members of the Prairie Corridor Technical Team and other partners meet at Bobcat Prairie in August 2019 to provide feedback on research, prairie management and habitat development.

Bobcat Prairie is anticipated to be transferred to the NRD in the future.

Prairie Corridor Technical Team and project partners at Bobcat Prairie, August 2019

Honvlez Conservation Easement

139-acre conservation easement purchased by the NRD in 2017.

The area of the conservation easement includes wooded riparian corridor along Spring Creek, pasture, cropland, and Conservation Reserve Program (CRP) grasslands. The conditions of the conservation easement specified that the owner was allowed to continue farming the cropland throughout his lifetime. Unfortunately, the owner passed away in 2018. During the reporting period, the NRD worked with the heir to the estate to have the cropland planted to soybeans for the 2019 growing season in preparation for seeding to a high diversity, local ecotype tallgrass prairie mix. The NRD and heir have also discussed a potential future sale of the land to the NRD.

Cochran Conservation Easement

135-acre conservation easement purchased by NRD in 2019.

This conservation area appears to be a slightly degraded but untilled tallgrass prairie remnant with approximately 120 acres of virgin prairie outside of the wooded drainage areas. There are some terraces that were constructed in the southwest portion of the property, but aerial photos dating back to the 1940s show no evidence of crops on this property. There is some cedar encroachment surrounding the farmstead which sits outside the easement on the west central

edge. The easement is fairly standard with the potential for a future trail connection if approved by the owners.

Trail and Economic Development

Several trail related projects have been undertaken over the past two years. Two properties, the Stiefel/Johnson Trailhead and Bobcat Prairie, have new parking areas. The Stiefel/Johnson trailhead construction was a condition of the donation of that property to the NRD. The trailhead was designed to accommodate personal vehicles, buses and horse trailers. There is not yet a trail connection from the parking lot on the Stiefel/Johnson Trailhead property. The parking area at Bobcat Prairie was constructed allow personal vehicles, buses and maintenance vehicles to access the two Bobcat Prairie properties. The limestone trail is not planned to access Bobcat Prairie, however, public access is allowed and mowed trails are planned to encourage hiking.

Prairie Corridor Trail at Pioneers Park Nature Center, September 2018

Planning is ongoing for a bridge and railroad undercrossing on the Stiefel/Johnson Trailhead and Two Creeks Prairie properties. These two structures will connect the two properties and provide for a future connection to Conestoga Lake.

Planning for future trail work has been completed at Spring Creek Prairie Audubon Center (SCPAC). This is a joint project which includes the southern terminus of the Prairie Corridor trail, improvements to the parking and loading area at the trailhead, concrete trail access to the SCPAC Education Center, and ADA upgrades to the existing SCPAC limestone trails. This project is planned for 2019 construction.

In addition, conceptual plans for trail at the Samani conservation easement and a railroad undercrossing on the Denton Prairie have been completed.

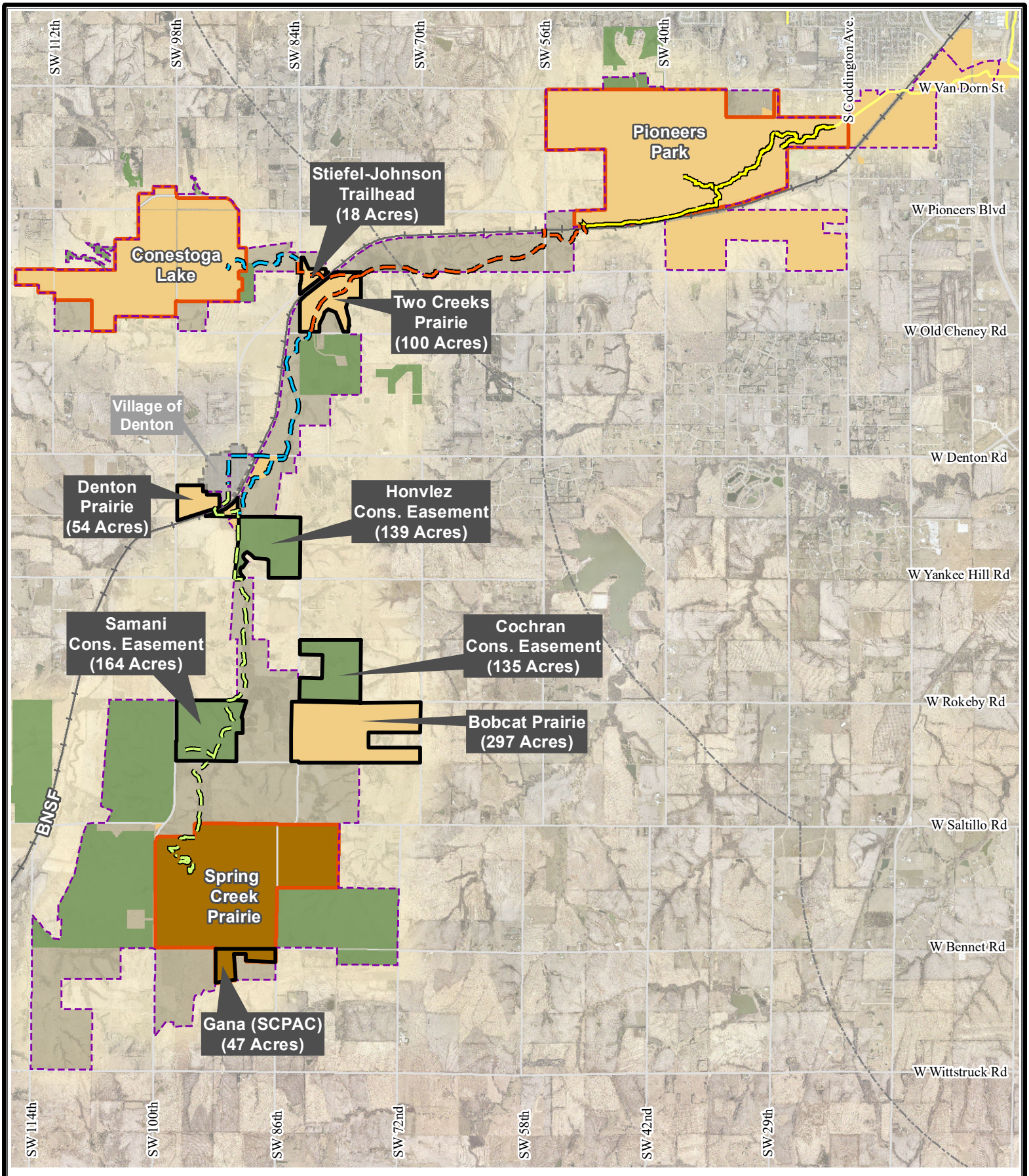
Implementation and Coordination

Implementation and Coordination activities over the reporting period included collaboration with the many partners in the Project. The Lincoln Parks and Recreation Department, the Lower Platte South Natural Resources District, and Spring Creek Prairie Audubon Center have served as the primary project partners for project implementation, working with about 30 others. During the reporting period, meetings between the three partners were held approximately once per quarter. During these meetings, the partners shared recent activities and the group discussed cooperation opportunities presented on different properties. Topics included organization of public events, coordination of maintenance activities such as prescribed burns and fencing projects, websites and social media posts, landowner outreach activities, trail projects, and planning for Technical Committee meetings.

The Parks and Recreation Department also coordinated closely with the Lincoln Parks Foundation, which played a key supporting role in project implementation, serving as the lead for private fund development, assisting with community engagement, and providing support for land transactions on an as-needed basis to further the goals of the Conservation element of the project. This coordination included work with the Prairie Corridor Cabinet, a group of nineteen community leaders convened by the Foundation to assist in fundraising, community engagement, and other aspects of the project. The Cabinet first met in November of 2017 and met twice in 2018. Several Cabinet members also participated in the work of a more focused Prairie Corridor Steering Committee initiated in the summer of 2018 to spearhead fundraising for the project. This work culminated in the award of a 3-year, 900,000 grant from the Nebraska Environmental Trust announced in April of 2019, with more than $1.3 million in matching funds from grants and private donations during the reporting period.

Lincoln Parks and Recreation also coordinated outreach with approximately 75 individuals who have expressed interest in serving in a resource capacity to provide assistance in various aspects of the project, including education and outreach, natural resources, trails, land and easements, and economic opportunity. During the reporting period, this primarily included assistance with public events and habitat development activities.

Pioneers Park Nature Center, September 2018



Prairie Corridor on Haines Branch: Protected Properties

0 0.25 0.5 1 1.5 2 Miles

- Priority Area
- Destination Areas
- 3-mile Jurisdiction
- Public/Conservation Ownership
- Conservation Easement
- BNSF RR
- Existing PC Trail Segments
- Future PC Trail Segments