

APPENDIX E: Biological Resources



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Mountain-Prairie Region
Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, Kansas 66502

IN REPLY REFER TO:
FWS/R6/

September 7, 2022

Chris Eichman
Kansas Department of Transportation

RE: KDOT KA-6535-01, Sedgwick/Butler Counties

FWS Tracking # 2022-0082662

Dear Mr. Eichman:

This is in response to your email requesting comment on a determination of effect on the northern long-eared bat (*Myotis septentrionalis*), Topeka shiner *Notropis topeka*, and peppered chub (*Macrhybopsis tetranema*) from the construction of Kansas Department of Transportation's Project No. KA-6535-01. This project is a "design build" that will increase the current capacity of US-54 (East Kellogg Avenue). The final plans and construction details will be developed by the approved contractor. The project is located on US-54 starting west of the I-35/127th Street East interchange, extending east to 0.5 miles east of South Prairie Creek Road, in Sedgwick and Butler Counties, Kansas.

Pursuant to Section 7(a) (2) of the ESA, the Kansas Department of Transportation (KDOT) (authorized by the Federal Highways Administration) has determined the proposed project may affect, but is not likely to adversely affect, the federally listed threatened northern long-eared bat. Given the project description, and lack of hibernacula/maternity roost location data in the project area, we concur with this determination. In addition, KDOT has determined the proposed project will have no effect on the Topeka shiner or peppered chub, we agree with this determination.

On July 5, 2022, the U.S. District Court of the Northern District Court of California (the Court) vacated the 2019 regulations implementing section 7 of the Endangered Species Act (ESA). As a result of the Court's vacatur order, the 2019 regulations are no longer in effect, and the Service has relied upon the pre-2019 regulations in issuing our written concurrence on the action agency's "may affect, not-likely-to-adversely-affect" determination. However, because of the possibility the Court's vacatur could be stayed pending appeal or, ultimately, overturned on appeal, we considered whether our substantive analyses and conclusions would have been different if the 2019 regulations were applied in this informal consultation. Our analysis included the prior definitions of "effects of the action." We considered all the consequences of the action that would not have occurred, but for the action, and are reasonably certain to occur when determining the "effects of the action." We then considered whether any "effects of the action" that overlap with applicable ranges of listed species would be wholly beneficial, insignificant, or discountable to the species. As a result, we determined the analysis and conclusions would have been the same, irrespective of which regulations applied.

No further coordination with the Service is required pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) for this project. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. Until the ongoing project is complete, we recommend that you contact this office every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project is current.

Thank you for this opportunity to comment this proposed project. If we can be of any further assistance, please contact Ms. Michele McNulty, of this office, at michele_mcnulty@fws.gov.

Sincerely,

Michele McNulty

For

Jason Luginbill
Field Supervisor

cc: KDWP, Pratt, KS (Ecological Services)

TOPIC: US 54/East Kellogg Expansion – Protected Species Technical Memo

AUTHOR: Bailey Timm

DATE: 30-JUNE-2022

1.0 INTRODUCTION

This review was conducted to determine the potential for the proposed Project to impact federally listed species under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) and protected by the Endangered Species Act (ESA), Migratory Bird Treaty Act of 1918 (MBTA), and Bald and Golden Eagle Protection Act (BGEPA); and state-listed species under the jurisdiction of the Kansas Department of Wildlife and Parks (KDWP) and protected by the Kansas Nongame and Endangered Species Conservation Act. The habitat assessment was conducted to determine the potential presence of protected species habitat within the NEPA Clearance Boundary and a 100-foot-wide construction buffer (Survey Area). The Survey Area included in this report and displayed on the accompanying figures encompasses approximately 706.3 acres.

2.0 Methods

Viable background information for the Survey Area was reviewed prior to conducting a site visit. Using NWI maps, Natural Resources Conservation Service (NRCS) data, and historical imagery, the environmental scientists determined areas of hydrological and biological significance prior to the habitat assessment field survey. The USFWS Information, Planning, and Conservation System (IPaC) was accessed to identify federally protected species that may occur within the Survey Area that are protected under ESA (<https://ecos.fws.gov/ipac/>). The KDWP website was consulted to determine any state-listed species with known critical habitat in Butler & Sedgewick Counties (<https://ksoutdoors.com/Services/Threatened-and-Endangered-Wildlife/List-of-all-Kansas-Counties>). Copies of the USFWS and KDWP lists are provided in Appendix B.

Available data sources were used to determine areas of hydrological and biological significance prior to completing the habitat assessment field survey. During the field survey data was collected regarding nest sites of migratory birds, raptors, and colonial nesting waterbirds protected under the MBTA; and stick nests that could be used by the bald eagle (*Haliaeetus leucocephalus*), protected by the BGEPA, with reported sightings in the project area.

3.0 Existing Data Review

Based on the available information from the USFWS and KDWP, 13 species are known or likely to occur within Butler and Sedgewick Counties. A total of 6 species have state-designated critical habitat in either Sedgewick or Butler Counties. Of these, 5 are aquatic species that occur in specific rivers, such as the Arkansas River and Ninnescah River, or are known from specific drainages, such as South Fork Cottonwood River and Mercer Creek. None of these streams and drainages are crossed by Project.

Federal and State Listed Species Butler & Sedgwick County, KS			
Common Name	Status		Critical Habitat
	USFWS	KDWPT	
Mammals			
Eastern spotted skunk	-	Threatened	Yes - Spotted Skunks seem to prefer forest edges and upland prairie grasslands, especially where rock outcrops and shrub clumps are present. Woody fencerows, odd areas, and abandoned farm buildings are also important habitat for Spotted Skunks. All suitable habitats within the Cowskin Creek and Big Slough drainage basins located in Sedgwick and Sumner counties.
Northern long-eared bat (NLEB)	Threatened	-	No
Birds			
Interior least tern	Endangered*	Endangered	No
Piping plover	Threatened*	Threatened	No
Snowy plover	-	Threatened	No
Whooping crane	Endangered	Endangered	No
Fishes			
Arkansas River shiner*	Threatened	Endangered	The main stem South Fork Ninnescah River and main stem Ninnescah from the Pratt County Lake in Sec. 7, T28S, R12W, Pratt County to the Ninnescah-Arkansas confluence in Sec. 25, T31S, R2E, Sumner County. Sedgwick and Sumner Counties – The main stem Arkansas River from the U.S. Highway 281 crossing Sec. 33, T19S, R13W, Barton County to the Kansas-Oklahoma border in Sec. 18, T35S, R5E, Cowley County.
Peppered chub	Endangered	Endangered	the main stem Ninnescah River from its origin in Sec. 36, T28S, R4W, Sedgwick County to its confluence with the Arkansas River in Sec. 25, T31S, R2E, Sumner County.
Plains minnow	-	Threatened	The Arkansas River. Sedgwick and Sumner Counties – The Ninnescah River downstream of the North and South Fork confluence.

Federal and State Listed Species Butler & Sedgwick County, KS			
Silver chub	-	Endangered	<p>Arkansas River from the point it enters Sedgwick County (Sec. 6-T25S-R3W) to the Oklahoma border (Sec. 18-T35S-R05E).</p> <p>South Fork Ninnescah River from point it enters Kingman County (Sec. 30-T27SR10W) to the confluence with the North Fork Ninnescah River in Sedgwick County (Sec. 36-T28S-R4W)</p> <p>Ninnescah River from the confluence of the South Fork Ninnescah and North Fork Ninnescah rivers in Sedgwick County (Sec. 36-T28S-R4W) to its confluence with the Arkansas River in Sumner County (Sec 25-T31S-R2E)</p>
Topeka shiner	Endangered	Threatened	<p>South Fork Cottonwood River and its tributaries in Butler County from the Butler/Chase County line (Sec. 4, T23S, R8E) upstream to its headwaters (Sec. 21, T23S, R8E).</p> <p>Mercer Creek and its tributaries in Chase County from where it enters the South Fork Cottonwood River (Sec. 8, T22S, R8E) upstream to the Chase/Butler County line (Sec. 31, T22S, R8E).</p>
Invertebrates			
American burying beetle	Threatened	Endangered	No
Sharp hornsnail	-	Threatened	No

Note: *species not federally listed in IPaC for Sedgwick County, KS, but federally listed by KDWPT.

4.0 Habitat Assessment Field Survey Results

The project occurs in a developed area along US 54/East Kellogg includes residential neighborhoods, retail businesses, and public transportation corridors. The habitat assessment field survey focused on potential northern long-eared bat, (NLEB, *Myotis septentrionalis*) roosting habitat and avian nesting sites in forested riparian areas and areas with sufficient water resources and food sources to support wildlife species. Due to limited landowner access, some areas were only scanned from public roadways where line of sight was poor to moderate.

Northern Long-eared Bat Habitat

Habitat suitable for the NLEB consists of interior forested areas that have adequate canopy closure for both foraging and roosting habitat (Lausen 2009). NLEBs are typically found roosting singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags, or dead trees (USFWS 2014). One tree species that can provide consistent shelter during spring/summer roosting is the shagbark hickory (*Carya*

ovata). *C. ovata* and other trees with loose or “plate-like” bark are preferred summer roosts, for northern long-eared bats (NRCS Pennsylvania 2022).

The USFWS IPaC data did not identify any known NLEB critical habitat, caves, or potential roost trees within the area. No shagbark hickory groves nor any standing trees that would provide adequate roosting shelter for NLEB. One potential roost tree (RT-01) was identified on the south side of four-mile creek (Table 1). This tree possessed hollows and some sloughing bark that could accommodate NLEB roosting. However, the lack of other suitable trees in the area may diminish the significance of this finding. While the forest resources present are concentrated around water bodies, these areas are limited by regular anthropogenic disturbance in the form of urban development and agriculture. Additionally, regional weather conditions may have impacted the discovery of other potential roost trees. On April 30, 2022, a tornado event (F-5) occurred in the Wichita/Andover area and many fallen or dead hanging trees were displaced. While surveying, high-water marks were noted on the trunks of trees along four-mile creek and the adjacent tributaries, indicating recent flooding. While this weather event may not have significantly altered any existing NLEB habitat, the potential roost tree findings may have been limited by this fact.

Table 1: US 54/East Kellogg Survey Area Potential Roost Tree Data Points

Potential Roost Tree	Coordinates	Map Page	Photograph (Appendix C)
RT-01	97.158754° W 37.681479° N	Figure A-3 Page 7 of 24	5

Eastern Spotted Skunk

The KDWP data indicated that the eastern spotted skunk (*Spilogale putorius*) is a state-listed species with state-designated critical habitat in Sedgewick County. According to KDWP, suitable habitat for the eastern spotted skunk includes riparian corridors where woody shrubs and woodland edges are present and upland prairie grasslands, especially where rock outcrops and shrub clumps are present. However, state-designated critical habitat for the eastern spotted skunk in Sedgewick County includes all suitable habitat located within the Cowskin Creek and Big Slough’s drainage basins (KS Parks, 2022). Neither of these drainage basins are crossed by the Project or possess a direct hydrologic connection to Four-mile Creek or Republican Creek that occur in the Survey Area.

Avian Species Habitat

Two active red-tailed hawk (RTHA, *Buteo jamaicensis*) nests were identified during the survey (Table 2). At least one adult RTHA was observed in the vicinity of each nest and/or displayed territorial behavior in the form of alarm calling and circling during observation (N-01 & N-02). N-01 was identified along a tree line adjacent to ephemeral stream S-D-2. N-02 was spotted along a windbreak south of stream S-D-4, bordering an agricultural field. One additional RTHA nest, N-03, was identified on the south side of the transmission line right-of-way that runs east-west within the proposed US 54/E. Kellogg Corridor. The nest was identified from a distance using binoculars and one adult RTHA was observed flying in the vicinity. Due to the position of the nest, no additional

RTHA's were observed on the nest during observations and nest activity status was not determined. The foliage of the tree made it difficult to scan trees for stick nests and the results of the survey may not wholly represent the concentration of raptors or colonial nesting waterbirds in the Survey Area. Some residential areas surrounding private ponds were not able to be thoroughly examined for avian nesting habitat or species due to limited visibility from public roadways. Therefore, the wooded areas around these private or community owned water bodies may contain additional potential avian nesting sites that were not accessible during the habitat assessment field survey.

Table 2: US 54/East Kellogg Survey Area Stick Nest Data Points

Nest Number	Coordinates	Species	Activity Status	Map Page (Appendix A)	Photograph (Appendix C)
N-01	97.1753607°W 37.6825244°N	Red-tailed hawk	Active	Figure A-3 Page 5 of 24	1 and 2
N-02	97.1802748°W 37.6809986°N	Red-tailed hawk	Active	Figure A-3 Page 4 of 24	3 and 4
N-03	97.1781149°W 37.6808537°N	Red-tailed hawk	Unknown	Figure A-3 Page 4 of 24	None

No other RTHA stick nest, bald eagle stick nest, migratory bird nest, or colonial nesting waterbird sites were identified during the habitat assessment field survey. Based on the lack of observations made in the residential communities and high level of anthropogenic activity in the area, the presence of additional avian nesting sites is unlikely. However, additional observation may be necessary to confirm no active stick nests are present in areas where landowner access was not available, or observations were obscured by foliage.

5.0 Conclusions

Based on habitat assessment field survey results, the portion of US 54/East Kellogg that occurs within the Survey Area possess minimal habitat that is suitable for the NLEB. The waterways regularly experience flooding, and the adjacent woodland cover contains a moderately diverse deciduous community. Within these limited woodland habitats there were few trees that contained snags, cracks, crevices, and hollows to offer roosting habitat for the NLEB. It is possible that the surrounding residential areas contained in the Survey Area could support some suitable roost trees; however, the confined forested space in tandem with the suburban development and human disturbances would decrease the overall suitability of the habitat. Additionally, the suburban area within the Survey Area provides suitable habitat for other more prevalent and opportunistic species (e.g., fox, coyote, raccoon, opossum, and feral dogs and cats) that are more tolerant of human activity. These generalist species that are tolerant of human activity likely outcompete other terrestrial species that rely

on specific resources in habitats with minimal human activity (e.g., eastern spotted skunk and American burying beetle).

The water resources present within the Survey Area do not indicate long-term suitability for colonial nesting waterbirds. Most colonial nesting waterbirds are confined to only a few small areas while breeding, and thus whole populations are vulnerable to single disturbances (USDOI 1976). With the likelihood of frequent human disturbance and the habitual nature of seasonal breeding habits for colonial waterbirds, it is unlikely that this suburban area with limited natural resources would be selected for seasonal or long-term nesting.

None of the state-designated critical habitat identified on the KDWP lists for the Arkansas river shiner (*Notropis girardi*), peppered chub (*Macrhybopsis tetranema*), plains minnow (*Hybognathus placitus*), silver chub (*Macrhybopsis storeriana*), and Topeka shiner (*Notropis topeka*), would be impacted by the Project. The streams and waterbodies within the Survey Area do not have a direct connection with streams that have been designated by the State of Kansas as critical habitat. Appropriate Best Management Practices (BMPs) would be implemented during construction to prevent impacts to downstream habitats by stormwater runoff from the Project during construction.

The results of the habitat assessment field survey indicate that the Project is likely to have no effect on protected species due to the lack of suitable habitat and proximity to residential neighborhoods, retail businesses, and public transportation corridors. If any additional information is needed regarding the habitat assessment field survey for this Project, please contact Bailey Timm at btimm@burnsmcd.com

Sincerely,

A handwritten signature in dark ink, appearing to read "Bailey Timm", written over a horizontal line.

Bailey Timm
Environmental Scientist

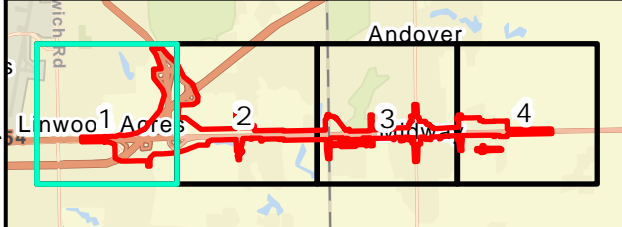
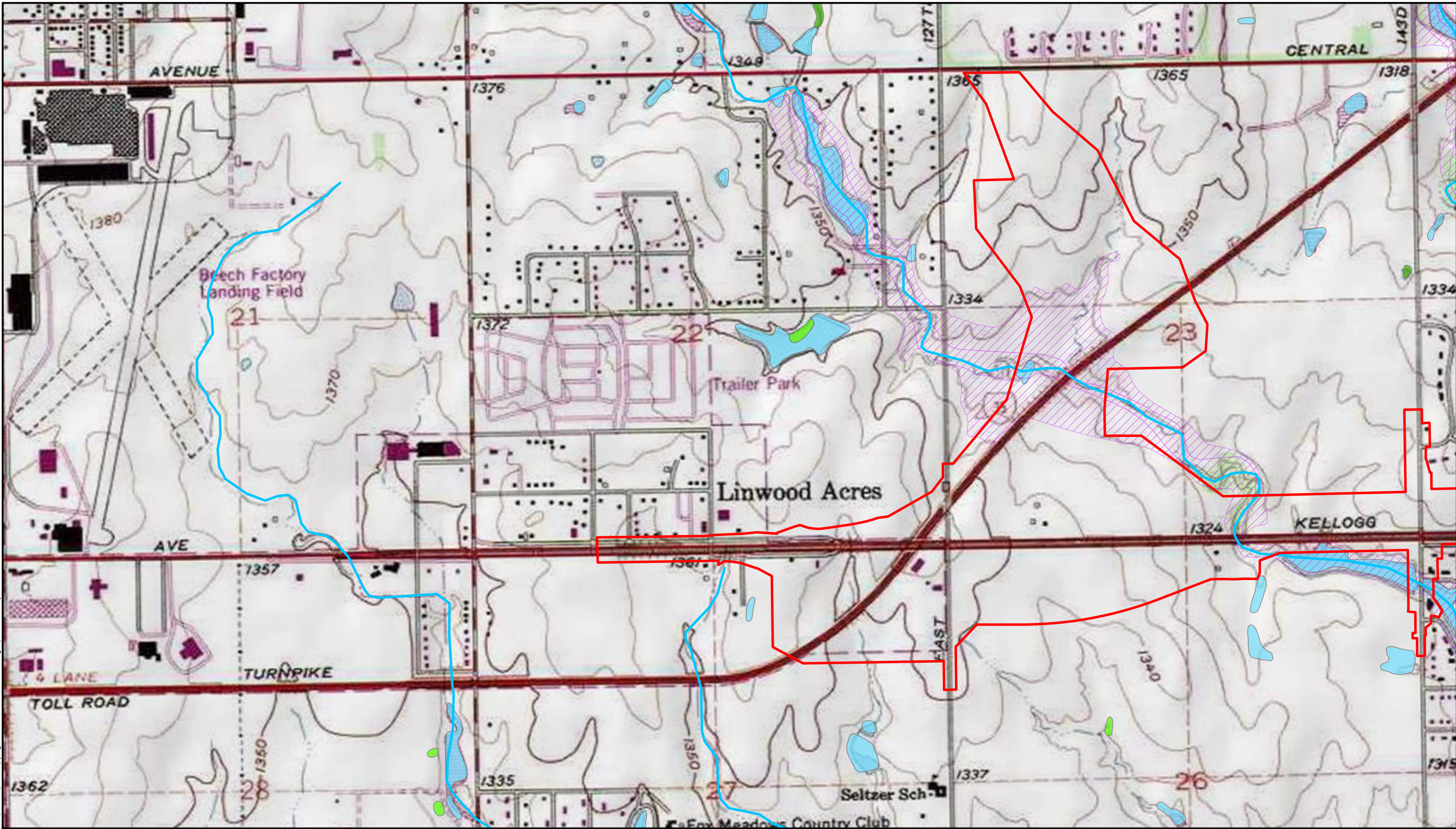
Attachments:

Appendix A -	Figures
Appendix B -	USFWS and KDWP Protected Species Lists
Appendix C -	Photographs

Sources

- US Fish and Wildlife Service (USFWS). 2018. 2018 Range-Wide Indiana Bat Summer Survey Guidelines (May 2018). USFWS Endangered Species Program: Midwest Region. Available online: <https://www.fws.gov/midwest/endangered/mammals/inba/surveys/pdf/2018RangewideIBatSurveyGuidelines.pdf>
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- USDOI, NPS. (1976, May). GUIDELINES FOR PROTECTION AND MANAGEMENT OF COLONIALY NESTING WATERBIRDS. <http://npshistory.com/publications/wildlife/colonially-nesting-waterbirds.pdf>

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|---------------------|-------------|
| Survey Area | NWI Wetland |
| NHD Stream | PEM |
| 100-Year Floodplain | PFO |
| | PUB |

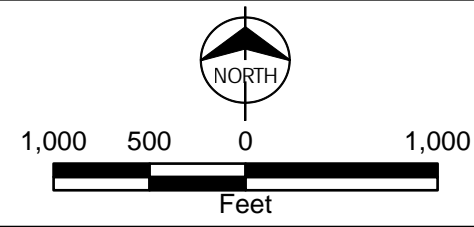
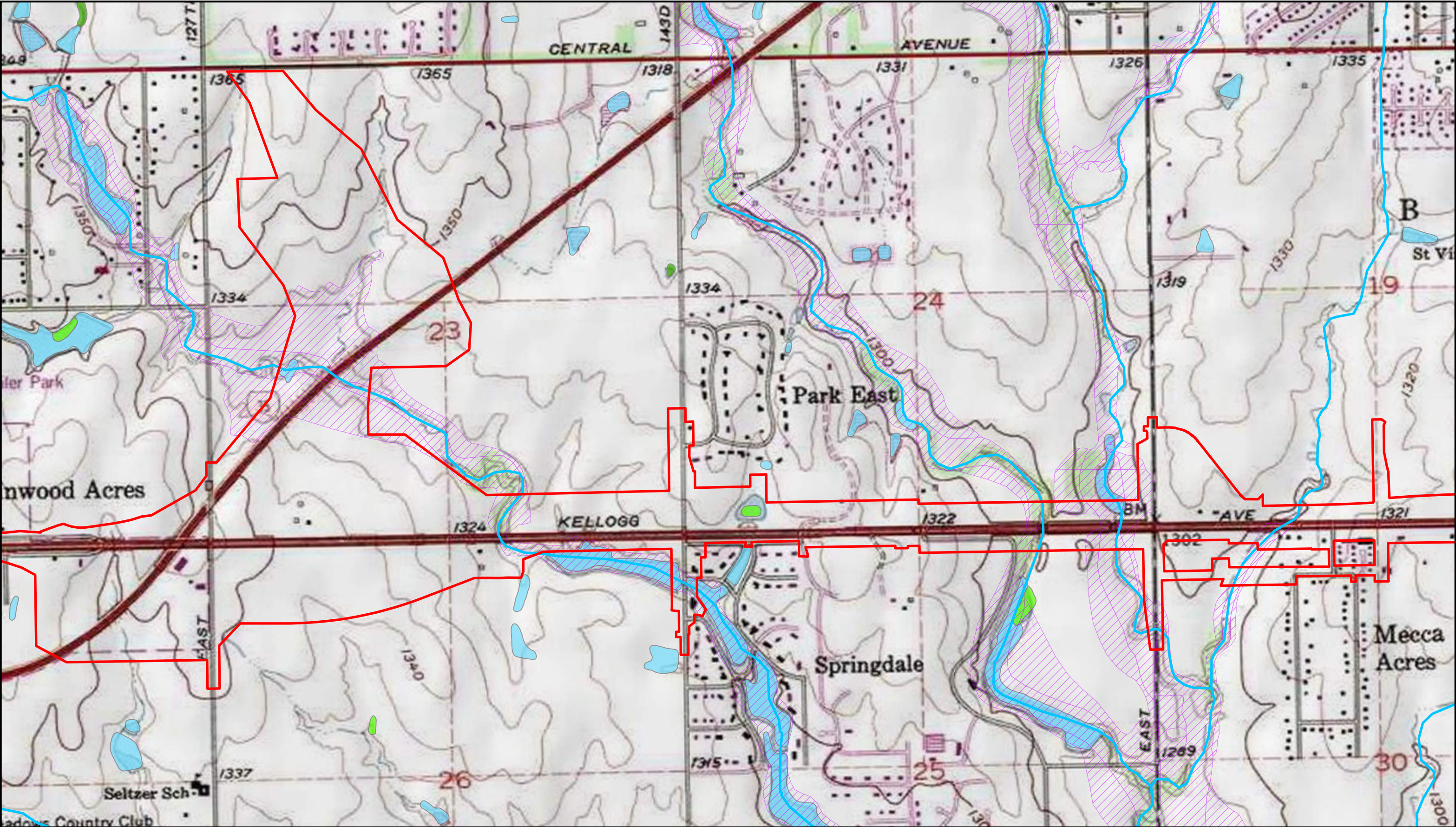
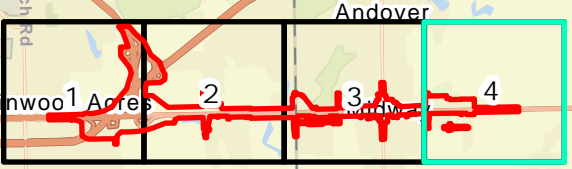
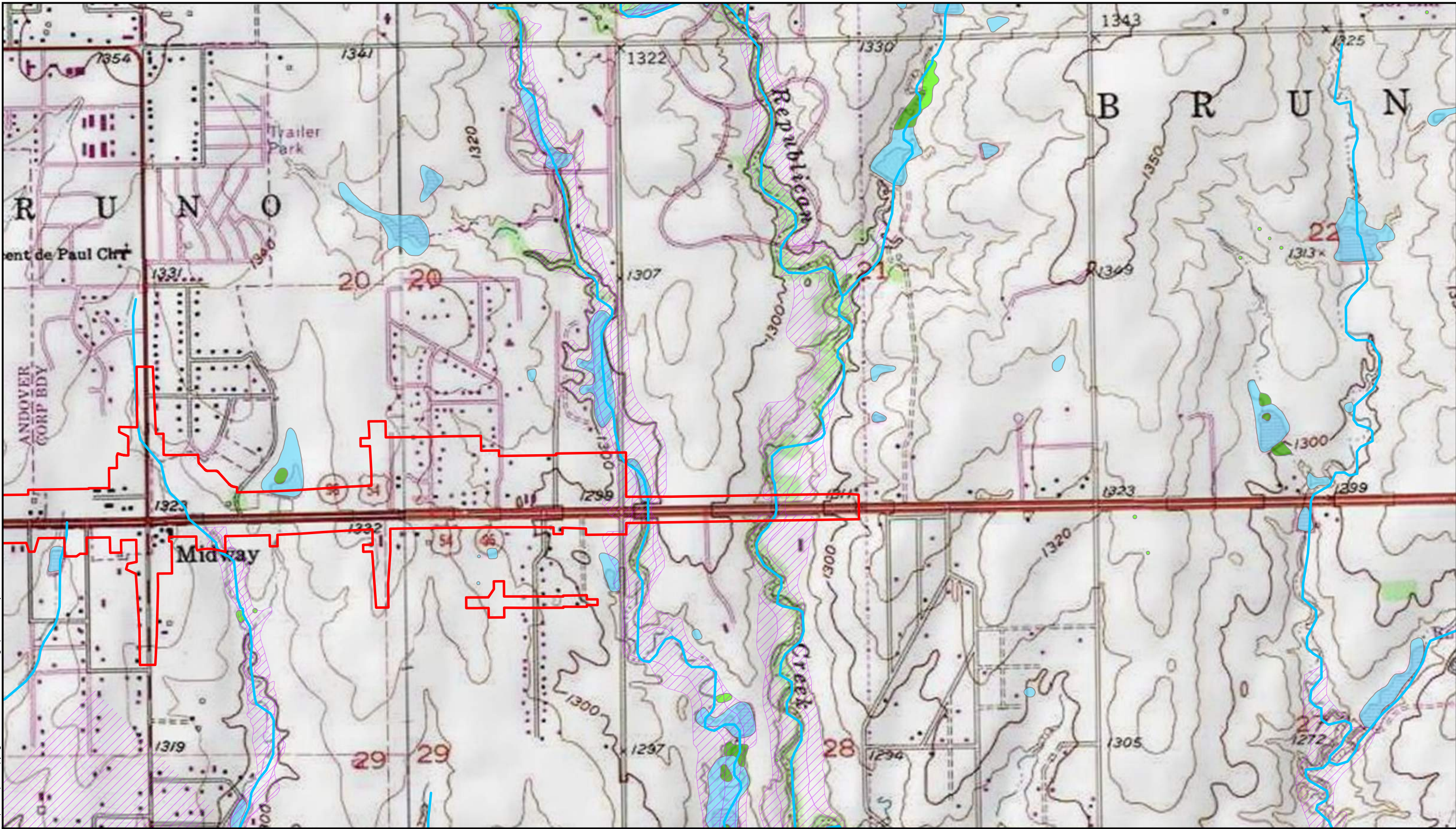


Figure A-1
Topographic Map
US/E. Kellogg Corridor Improvements
Kansas Department of
Transportation (KDOT)
Sedgwick and Butler County
Page 1 of 4

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| Survey Area | NWI Wetland |
| NHD Stream | PEM |
| 100-Year Floodplain | PFO |
| | PUB |

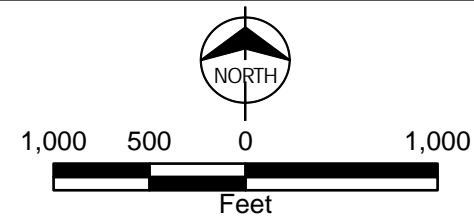
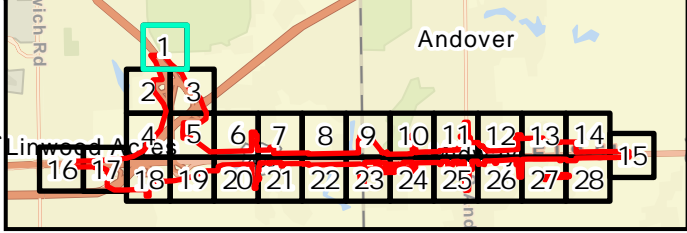



Figure A-1
Topographic Map
US/E. Kellogg Corridor Improvements
Kansas Department of
Transportation (KDOT)
Sedgwick and Butler County
Page 4 of 4

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 Survey Area

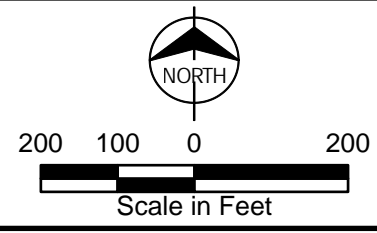
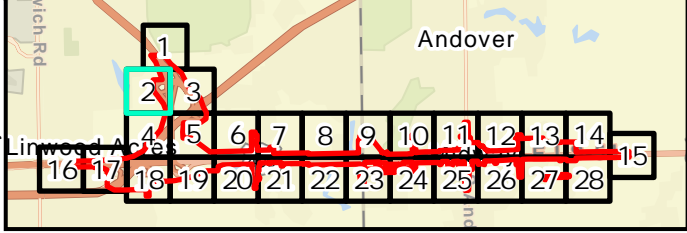


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
Kansas Department of Transportation
(KDOT)
Sedgwick and Butler County
Page 1 of 28

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- Survey Area
- ▲ Photo Point (PP)
- Streams (S)
- Ephemeral

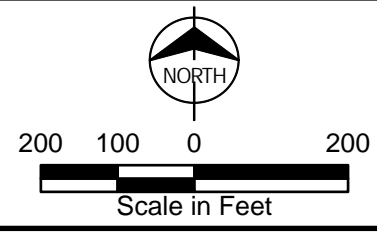
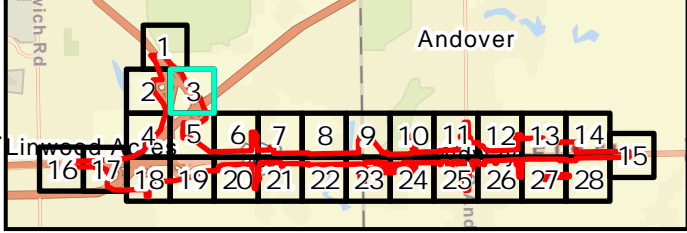
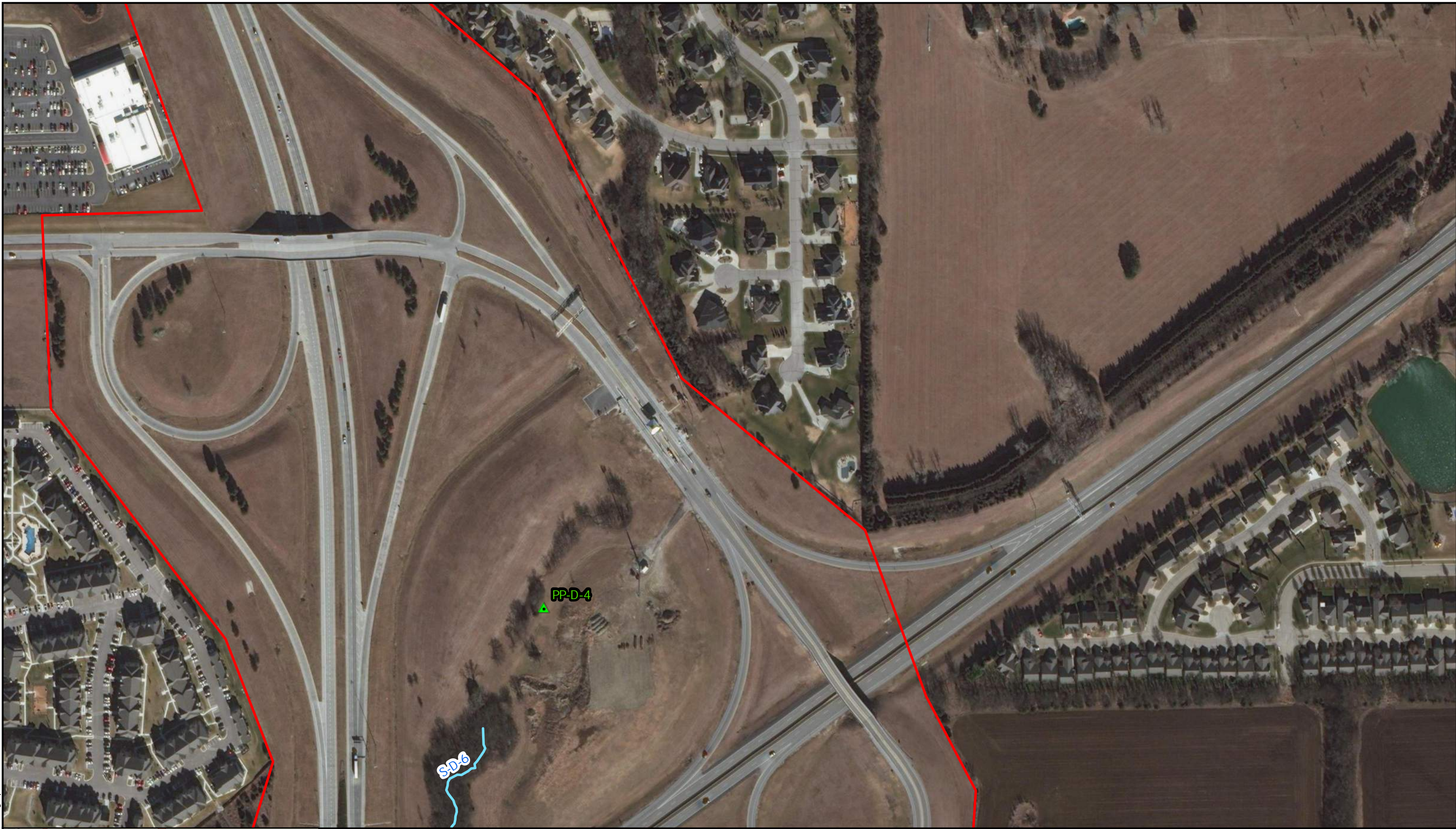


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
Kansas Department of Transportation (KDOT)
Sedgwick and Butler County
Page 2 of 28

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- Survey Area
- ▲ Photo Point (PP)
- Streams (S)
- Ephemeral

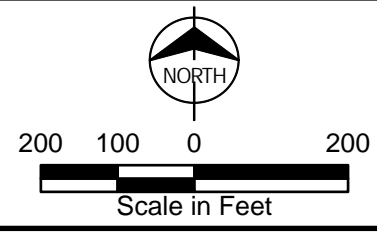
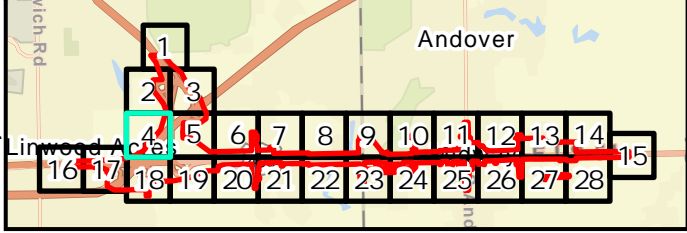


Figure A-2
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US 54/E. Kellogg Corridor Improvements
Kansas Department of Transportation (KDOT)
Sedgwick and Butler County
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| Survey Area | Photo Point (PP) | Streams (S) |
| Sample Plot (SP) | | Ephemeral |
| | | Intermittent |

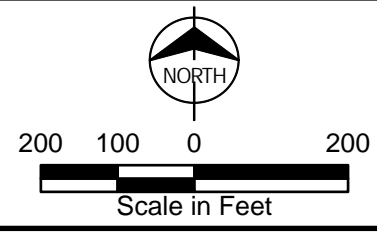
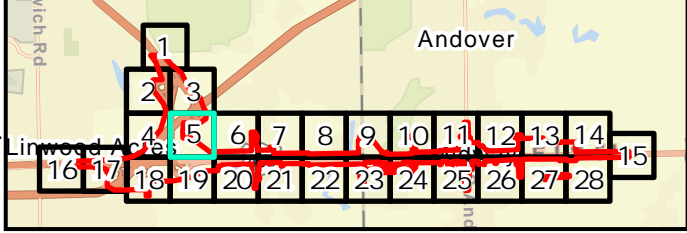
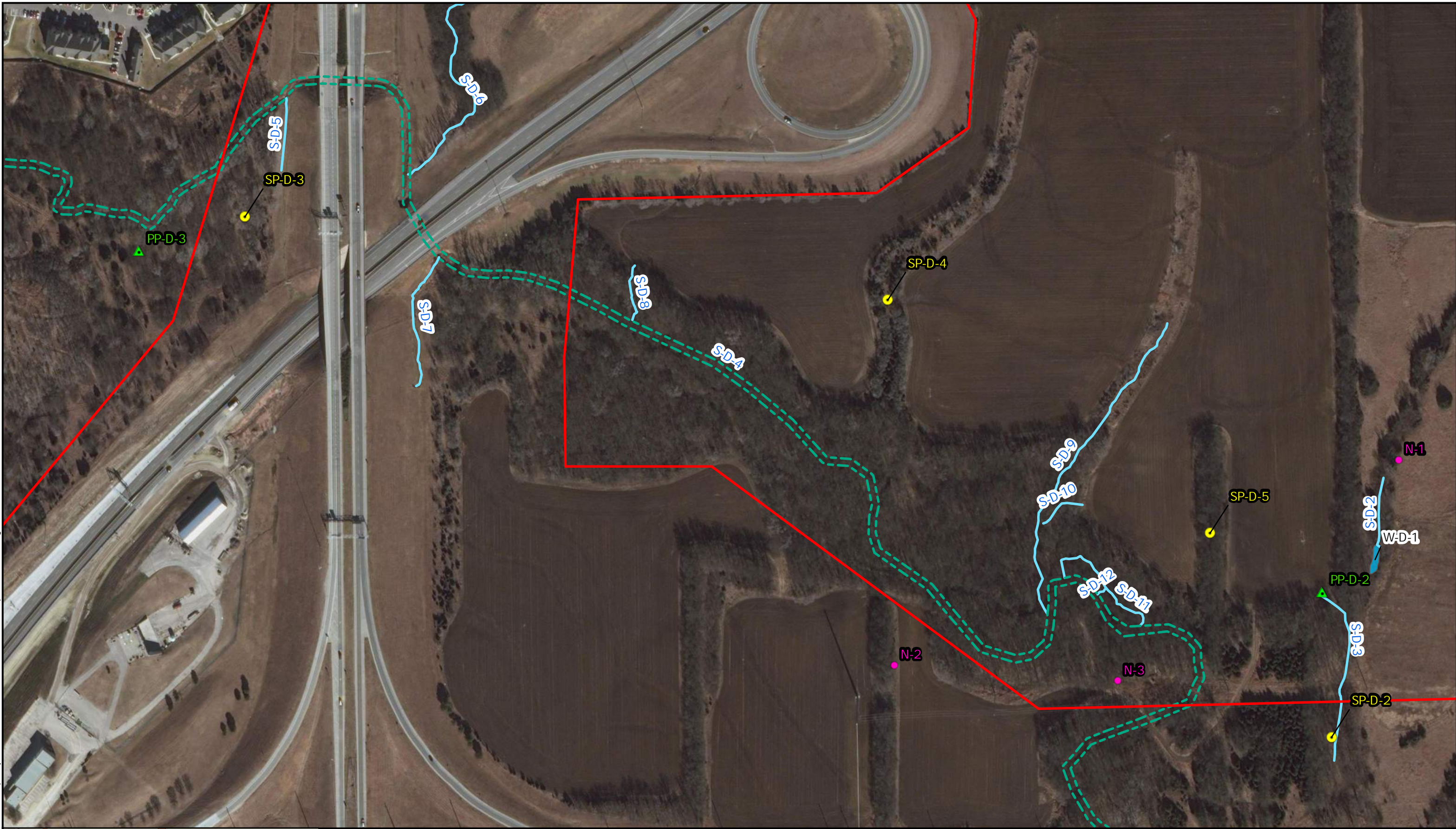


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
Kansas Department of Transportation (KDOT)
Sedgwick and Butler County
Page 4 of 28

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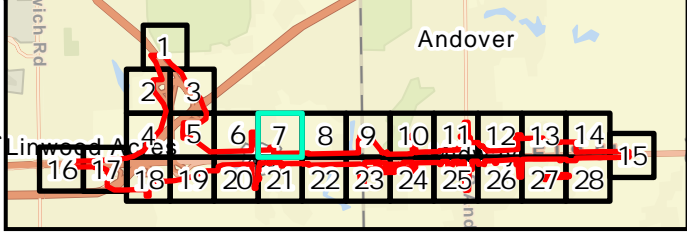
Survey Area	Streams (S) Ephemeral	Wetlands (W) PUB
Sample Plot (SP)	Intermittent	
Photo Point (PP)		
Stick Nest (N)		

200 100 0 100 200
Scale in Feet



Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
Kansas Department of Transportation
(KDOT)
Sedgwick and Butler County
Page 5 of 28

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Service Layer Credits: World Street Map: City of Wichita, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, USDA



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|------------------|-------------|--------------|
| Survey Area | Streams (S) | Wetlands (W) |
| Sample Plot (SP) | Perennial | PUB |

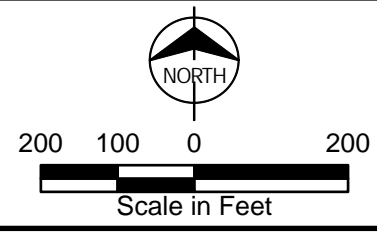
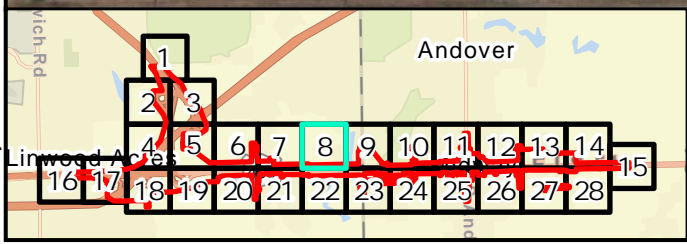
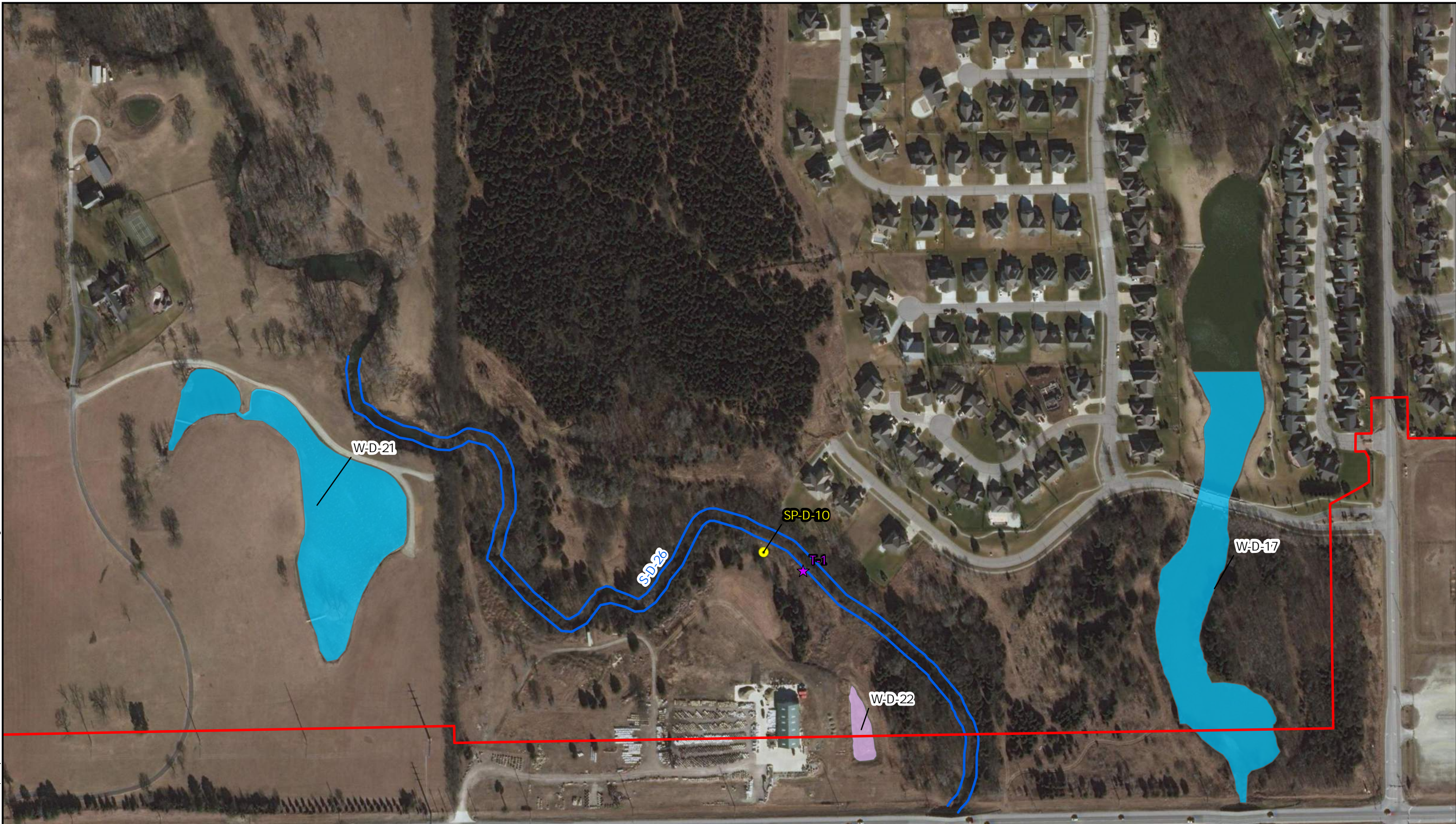


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Sedgwick and Butler County
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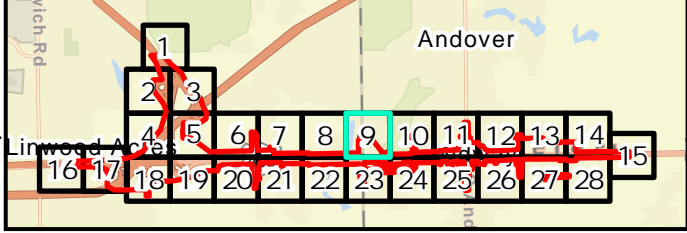
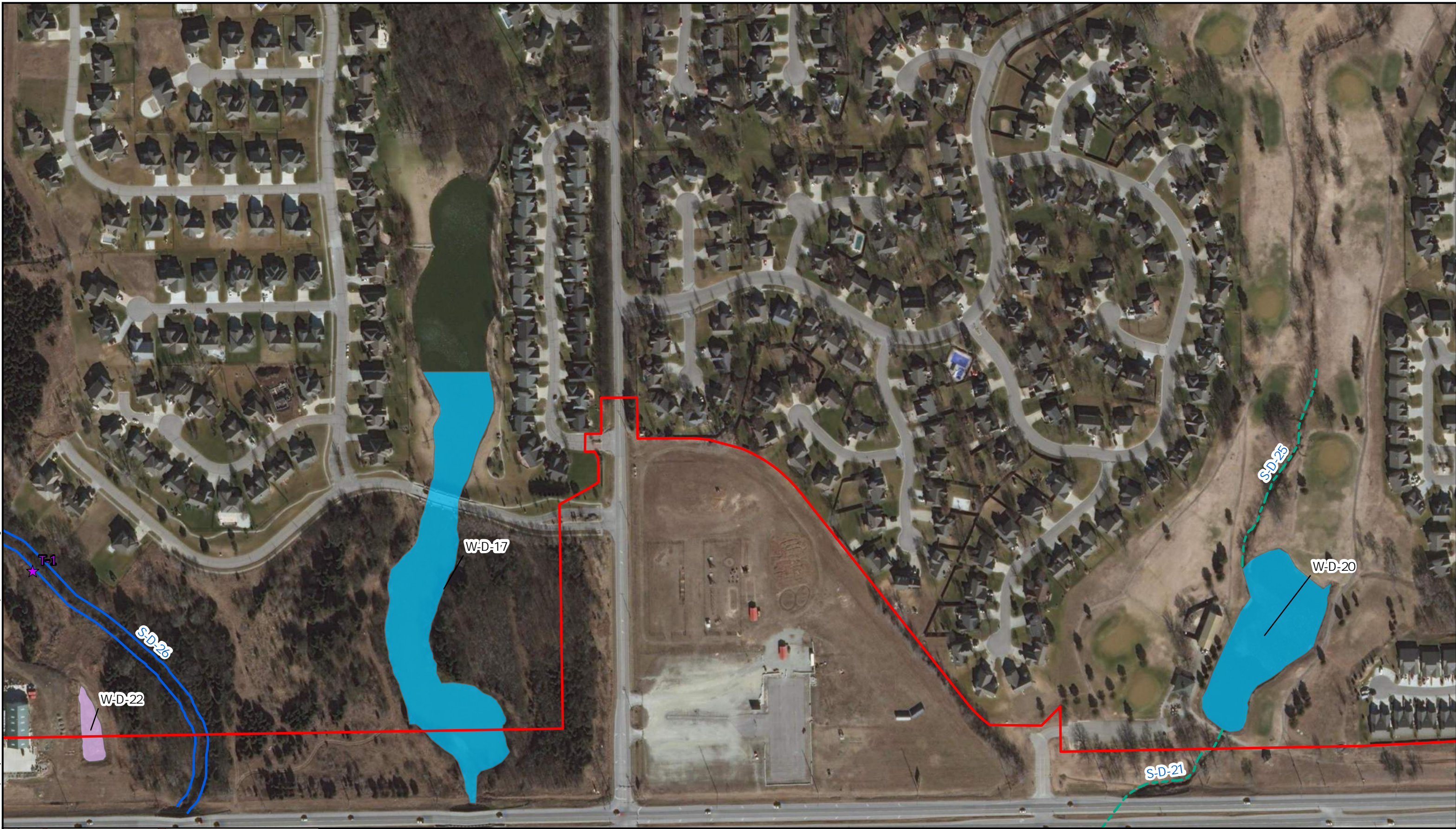


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Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
Kansas Department of Transportation (KDOT)
Sedgwick and Butler County
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Survey Area

★

Potential Roost Tree (T)

Streams (S)

Intermittent

—

Perennial

Wetlands (W)

PAB

PUB

200

100

0

200

NORTH

Scale in Feet

EAST
KELLOGG

Figure A-2

Mapped Habitat

US 54/E. Kellogg Corridor Improvements

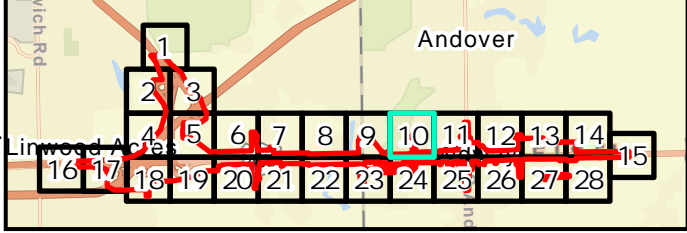
Kansas Department of Transportation (KDOT)

Sedgwick and Butler County

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Survey Area Streams (S) Wetlands (W)
Intermittent PUB

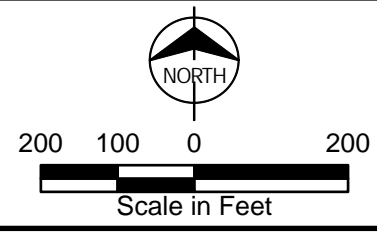
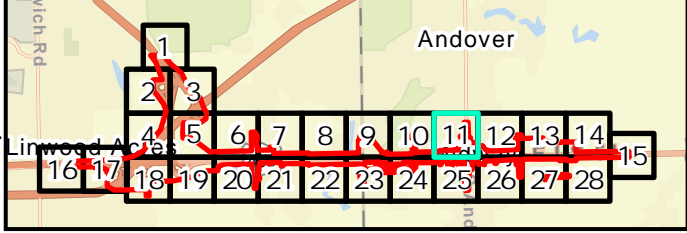


Figure A-2
Mapped Habitat
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Survey Area Streams (S) Wetlands (W)
Intermittent PUB

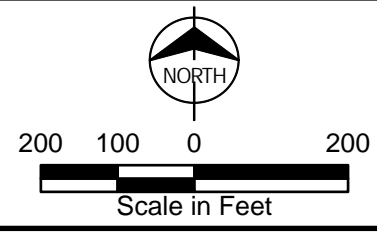


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Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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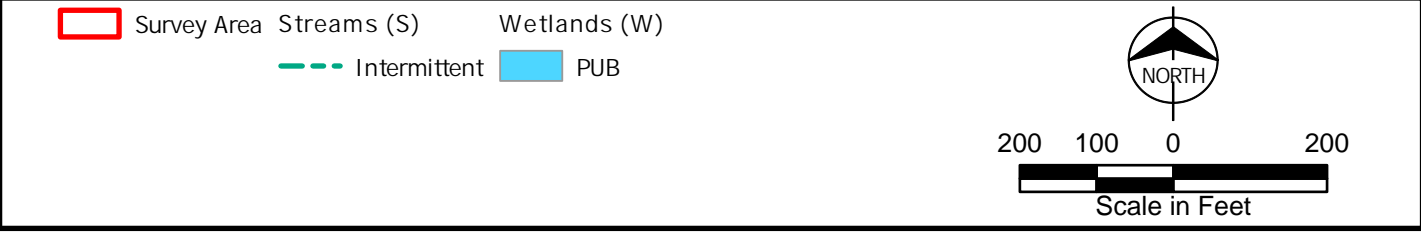
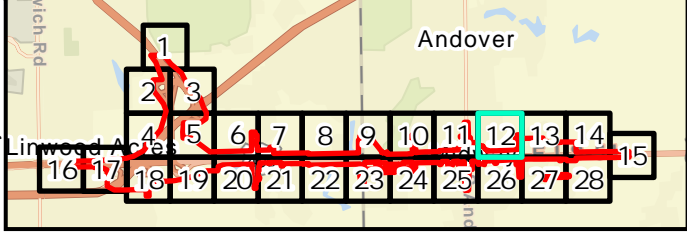


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Mapped Habitat
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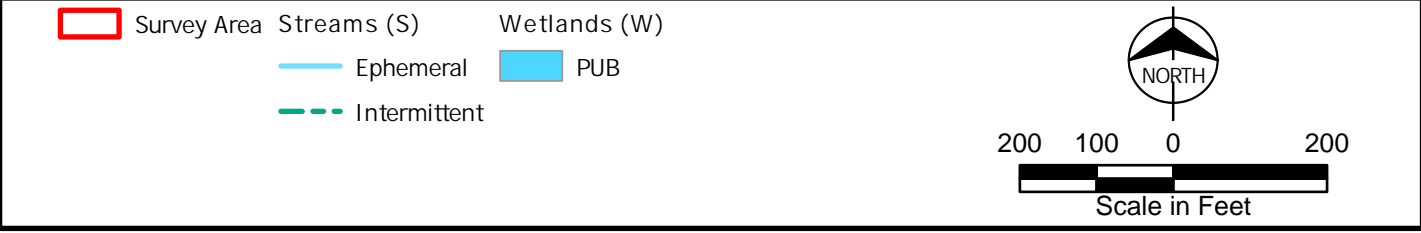
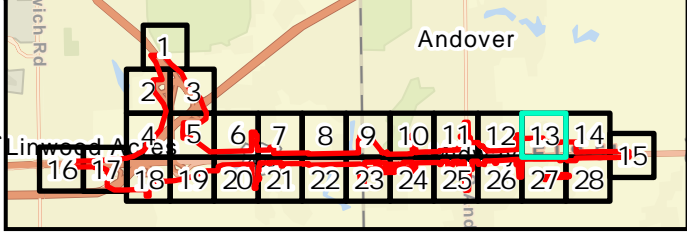
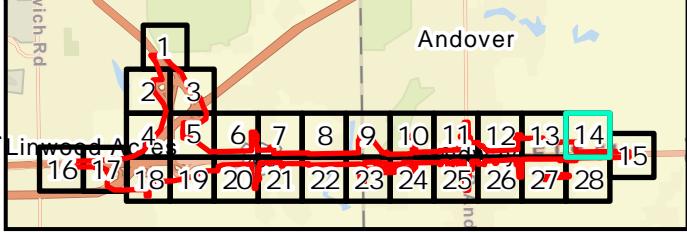


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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Survey Area Streams (S) Wetlands (W)
Ephemeral PUB
Intermittent

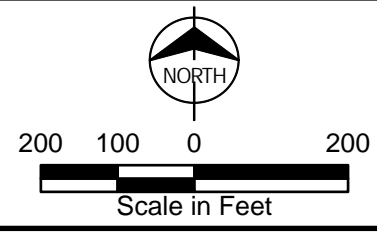
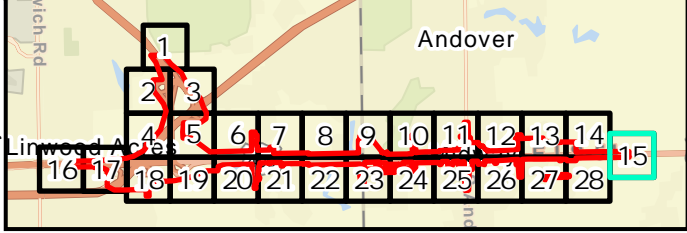
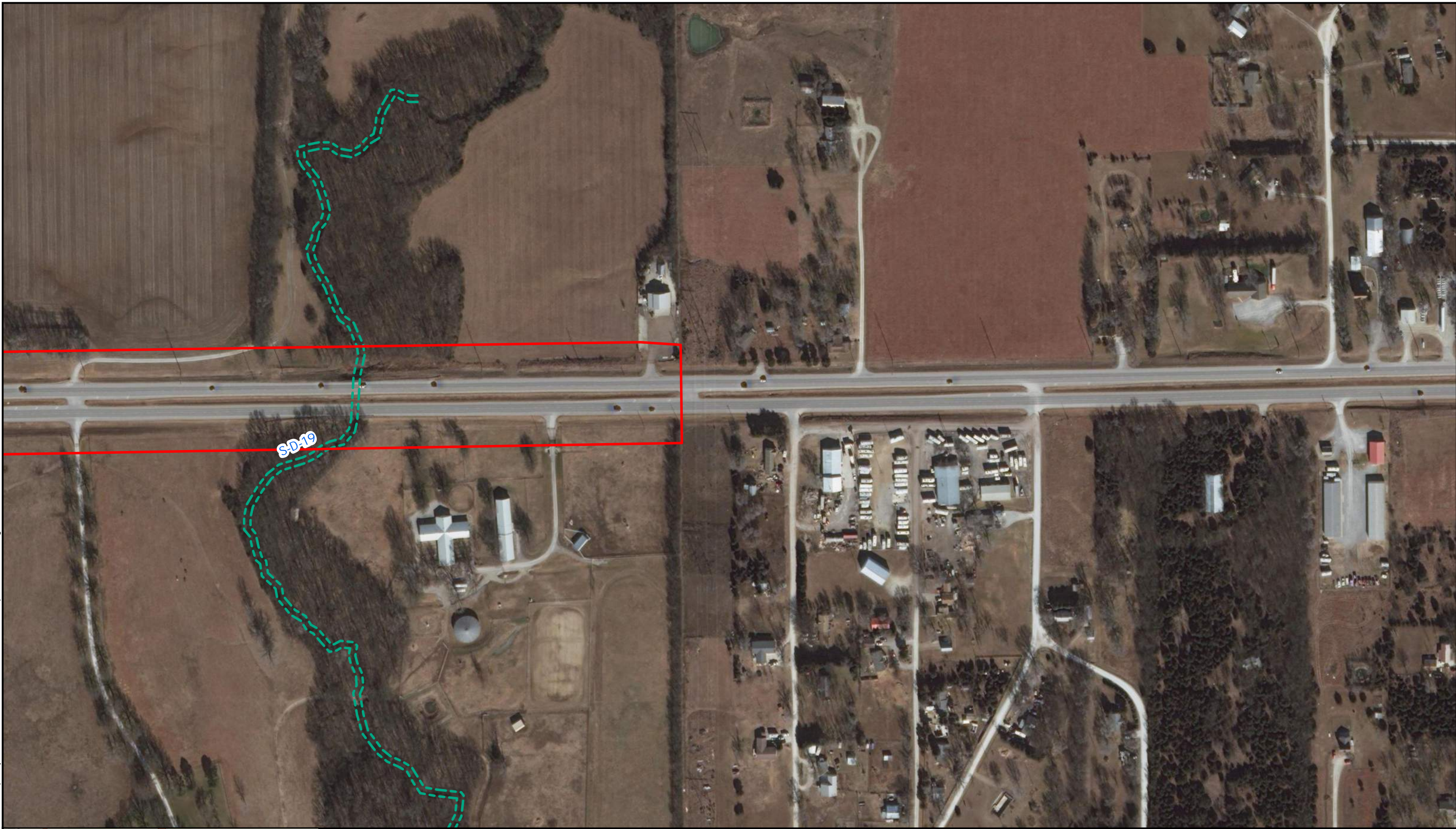




Figure A-2
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 Survey Area
 Streams (S)
Intermittent

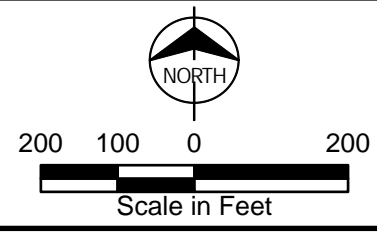
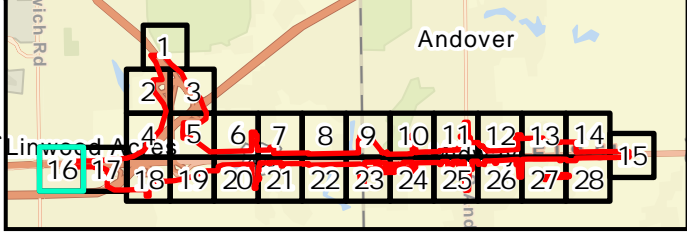



Figure A-2
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 Survey Area

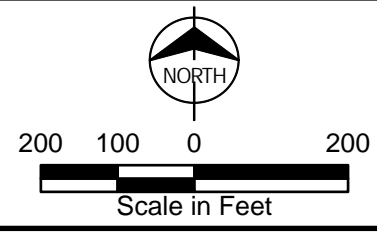
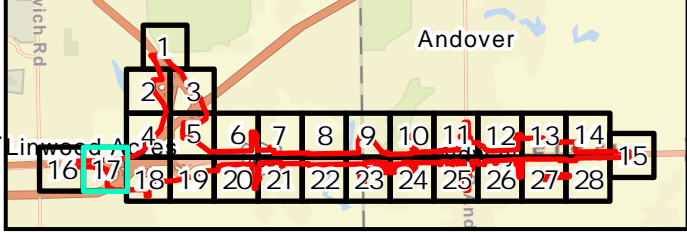


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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Survey Area Streams (S)
Ephemeral

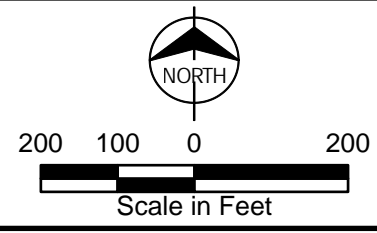
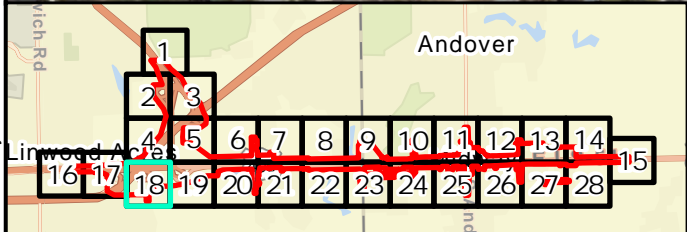
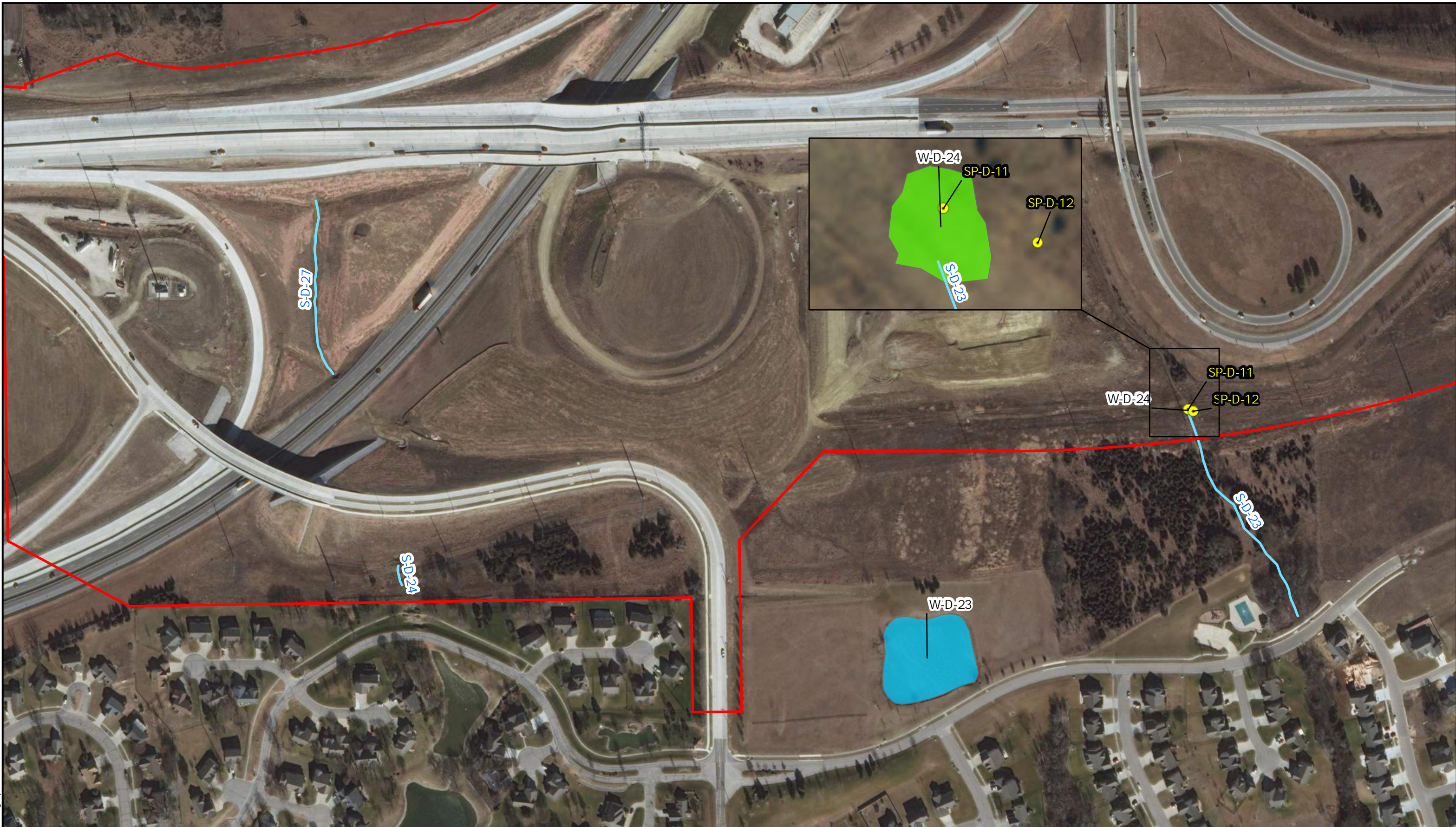


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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Service Layer Credits: World Imagery, Maxar, Microsoft



- | | | |
|------------------|-------------|--------------|
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| Sample Plot (SP) | Ephemeral | PEM |
| | | PUB |

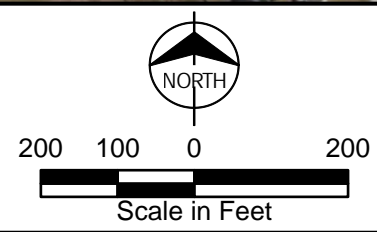
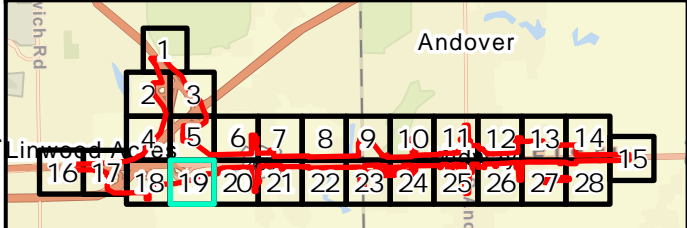
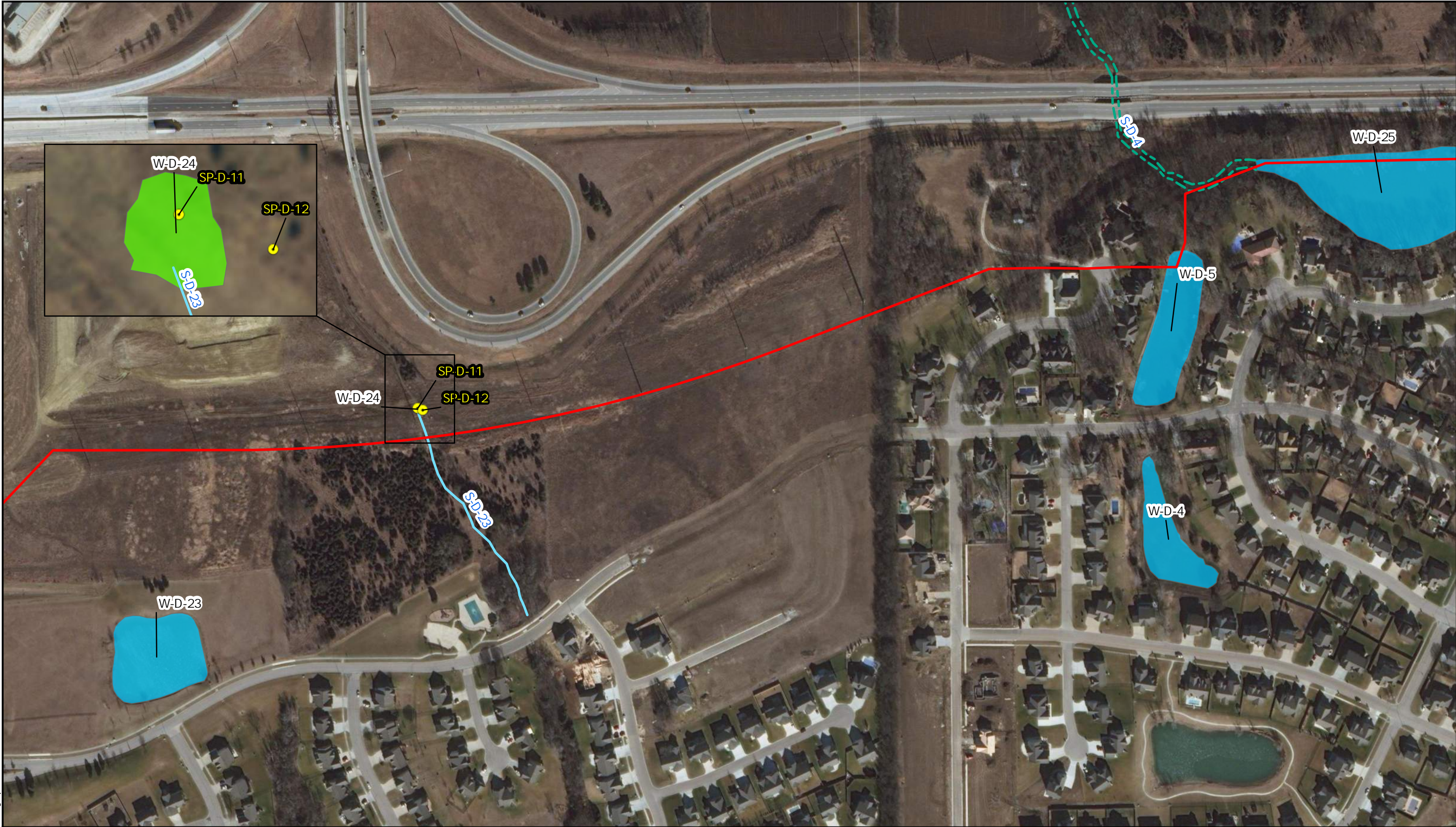


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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Service Layer Credits: World Imagery: Maxar, Microsoft



- | | | |
|------------------|--------------|--------------|
| Survey Area | Streams (S) | Wetlands (W) |
| Sample Plot (SP) | Ephemeral | PEM |
| | Intermittent | PUB |

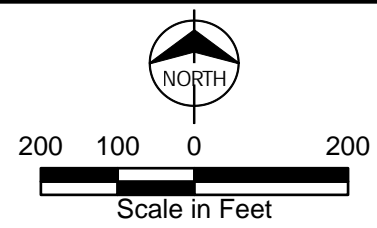
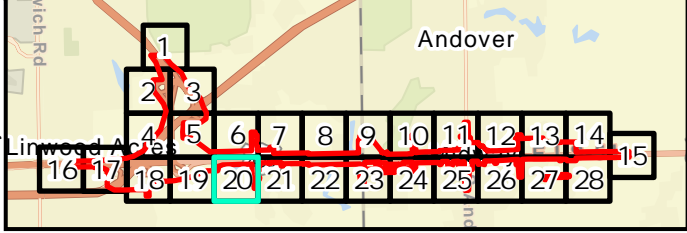
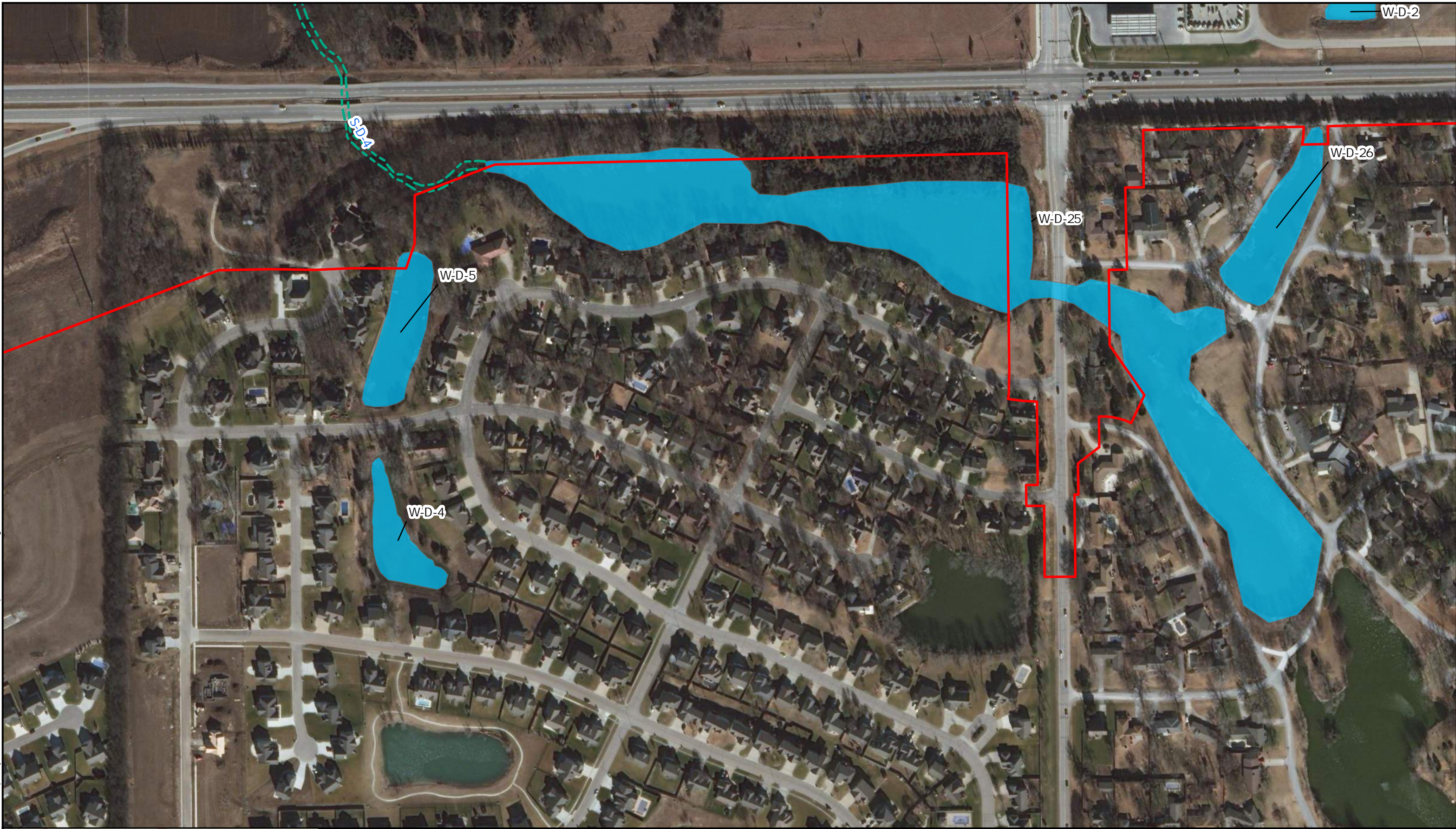


Figure A-2
Mapped Habitat
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Survey Area

Streams (S)

Wetlands (W)

Intermittent

PUB

NORTH

200

100

0

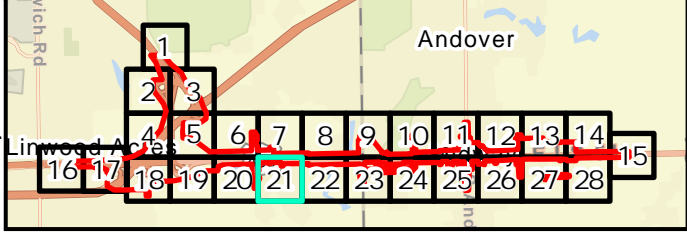
200

Scale in Feet



Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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Survey Area Wetlands (W)
PUB

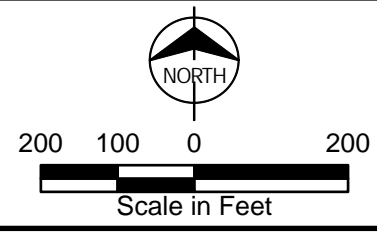
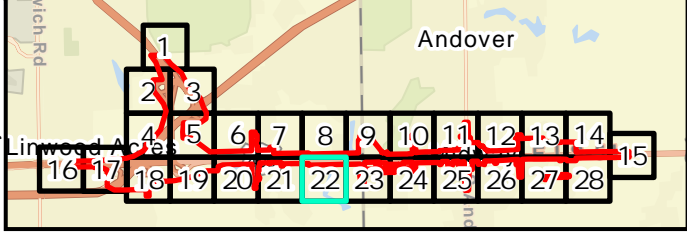
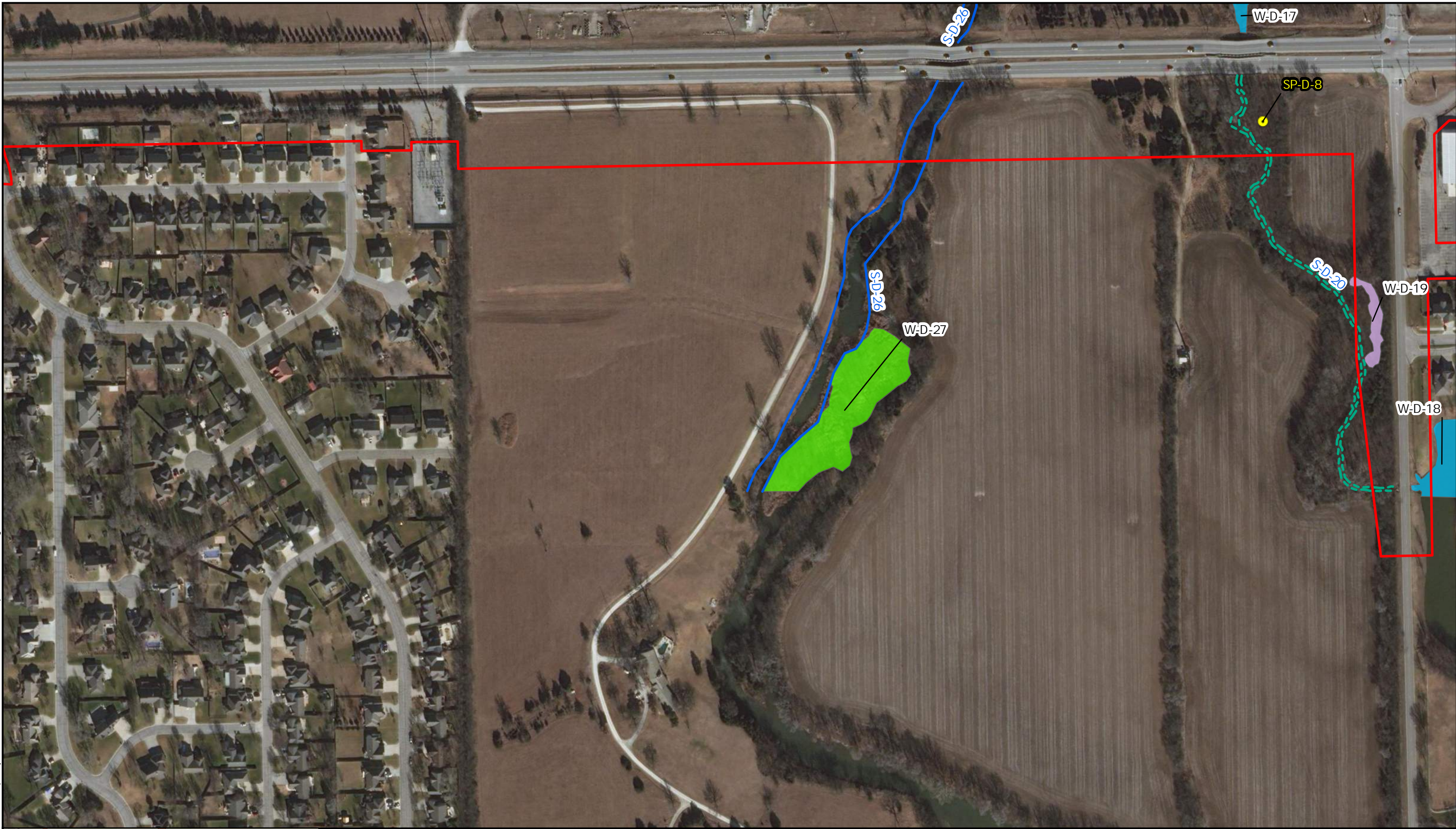


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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Survey Area	Streams (S)	Wetlands (W)
Sample Plot (SP)	Intermittent	PAB
	Perennial	PEM
		PUB

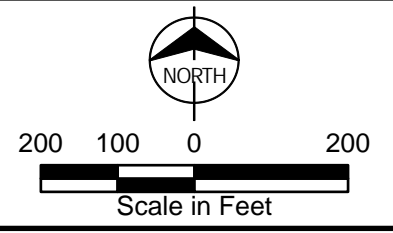
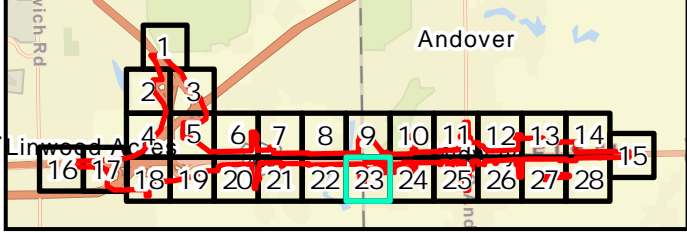
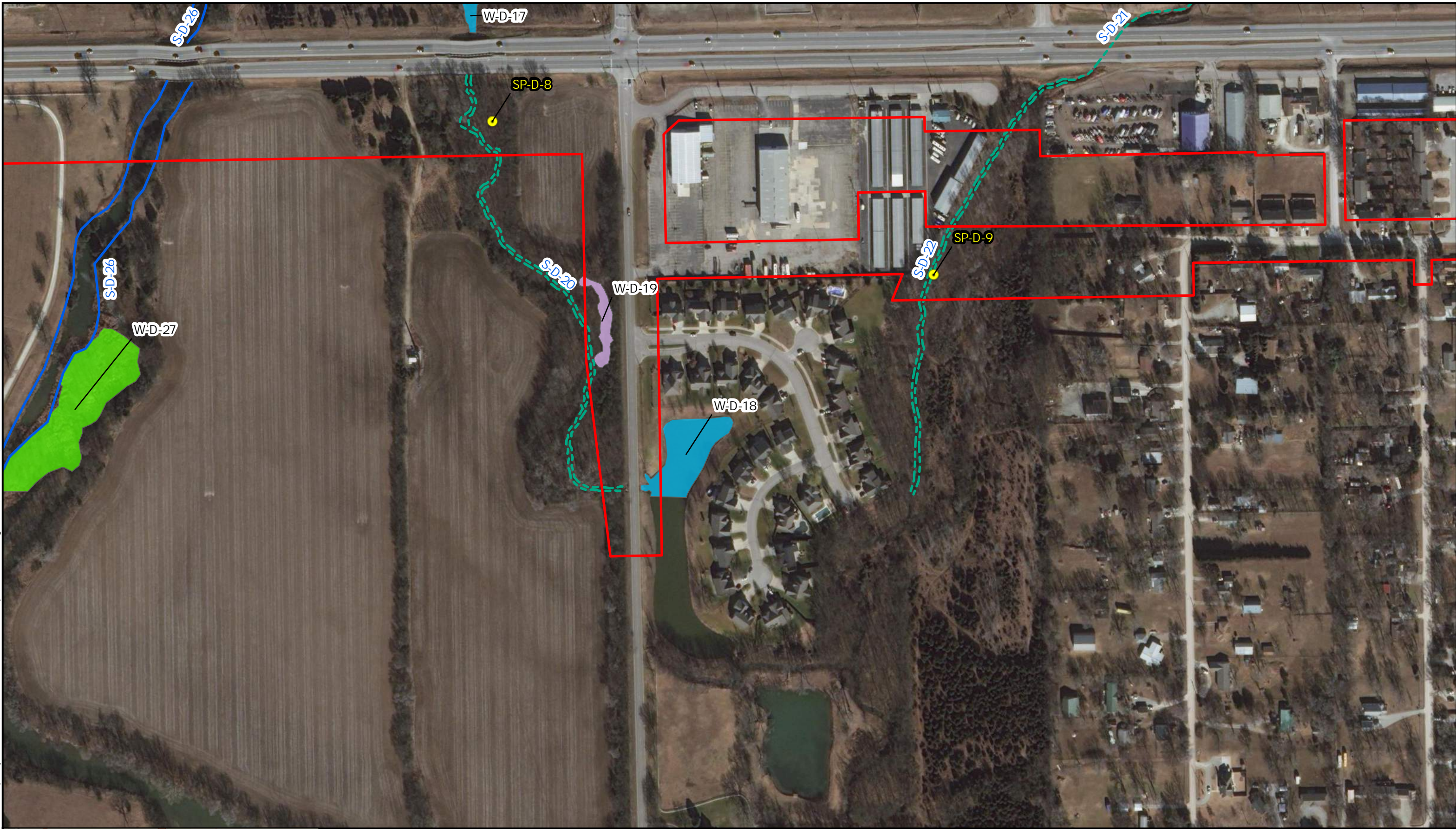


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
Kansas Department of Transportation
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|--|---|--|
| <div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div> | <div>Streams (S)</div> <div><div></div> Intermittent</div> <div><div></div> Perennial</div> | <div>Wetlands (W)</div> <div><div></div> PAB</div> <div><div></div> PEM</div> <div><div></div> PUB</div> |
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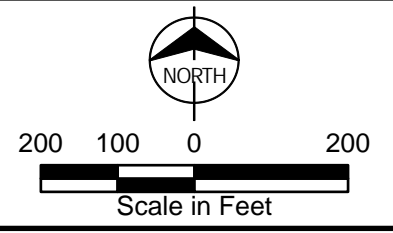
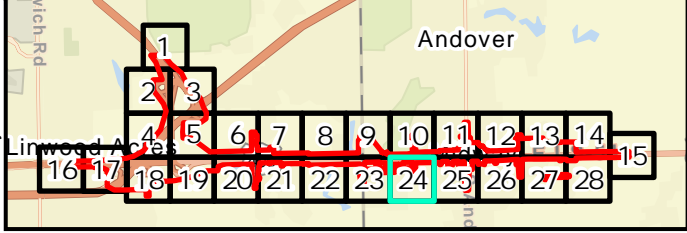
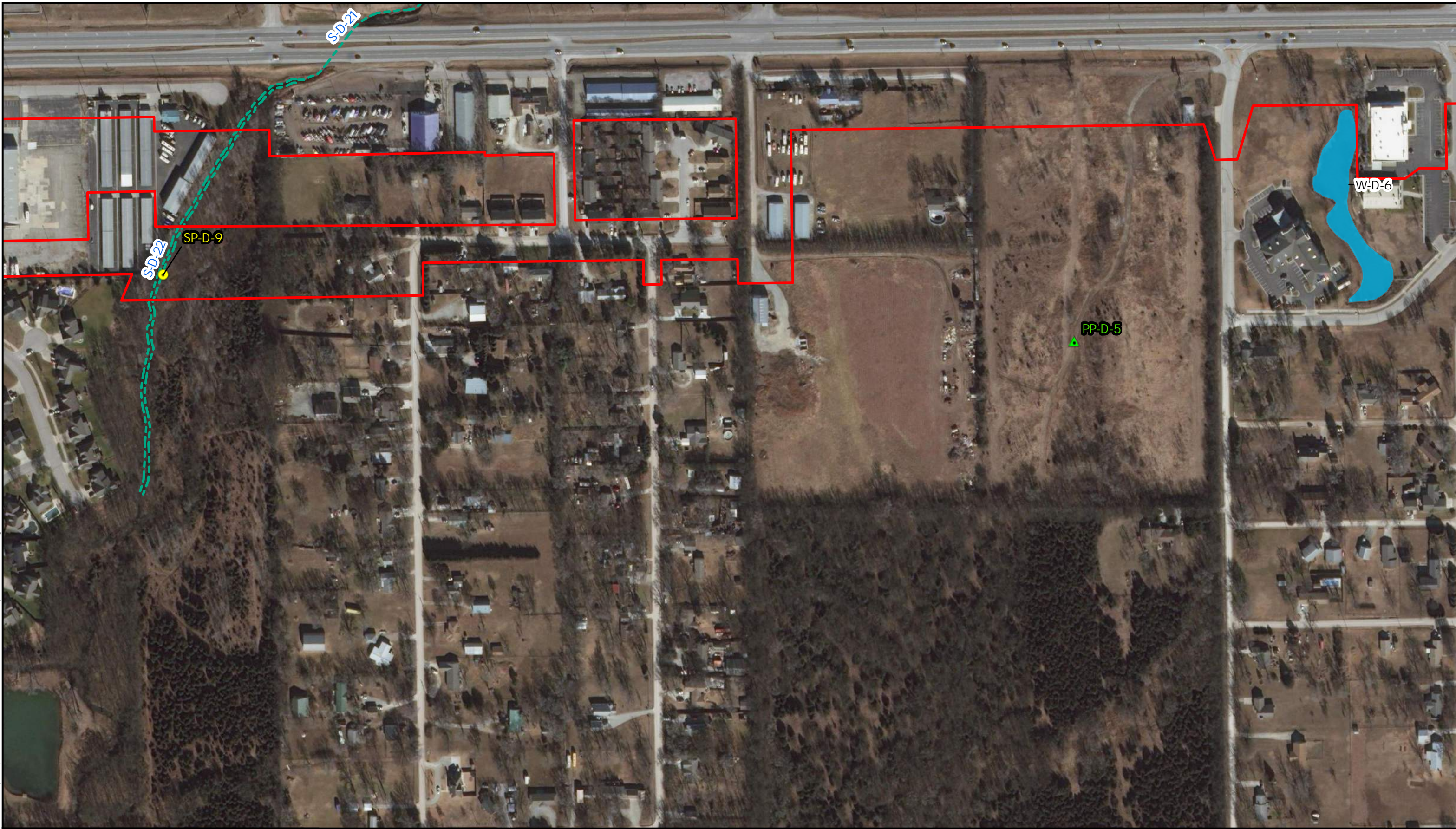


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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|---|-------------------------------------|-------------------------------------|
| <div><div></div> Survey Area</div> | <div><div></div> Streams (S)</div> | <div><div></div> Wetlands (W)</div> |
| <div><div></div> Sample Plot (SP)</div> | <div><div></div> Intermittent</div> | <div><div></div> PUB</div> |
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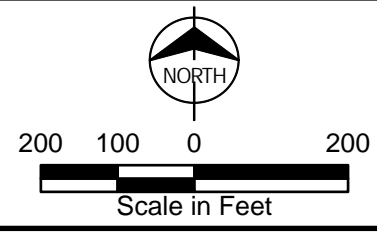
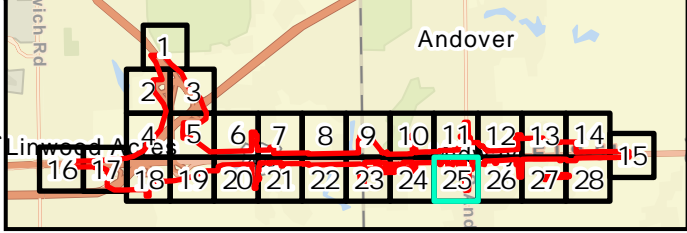
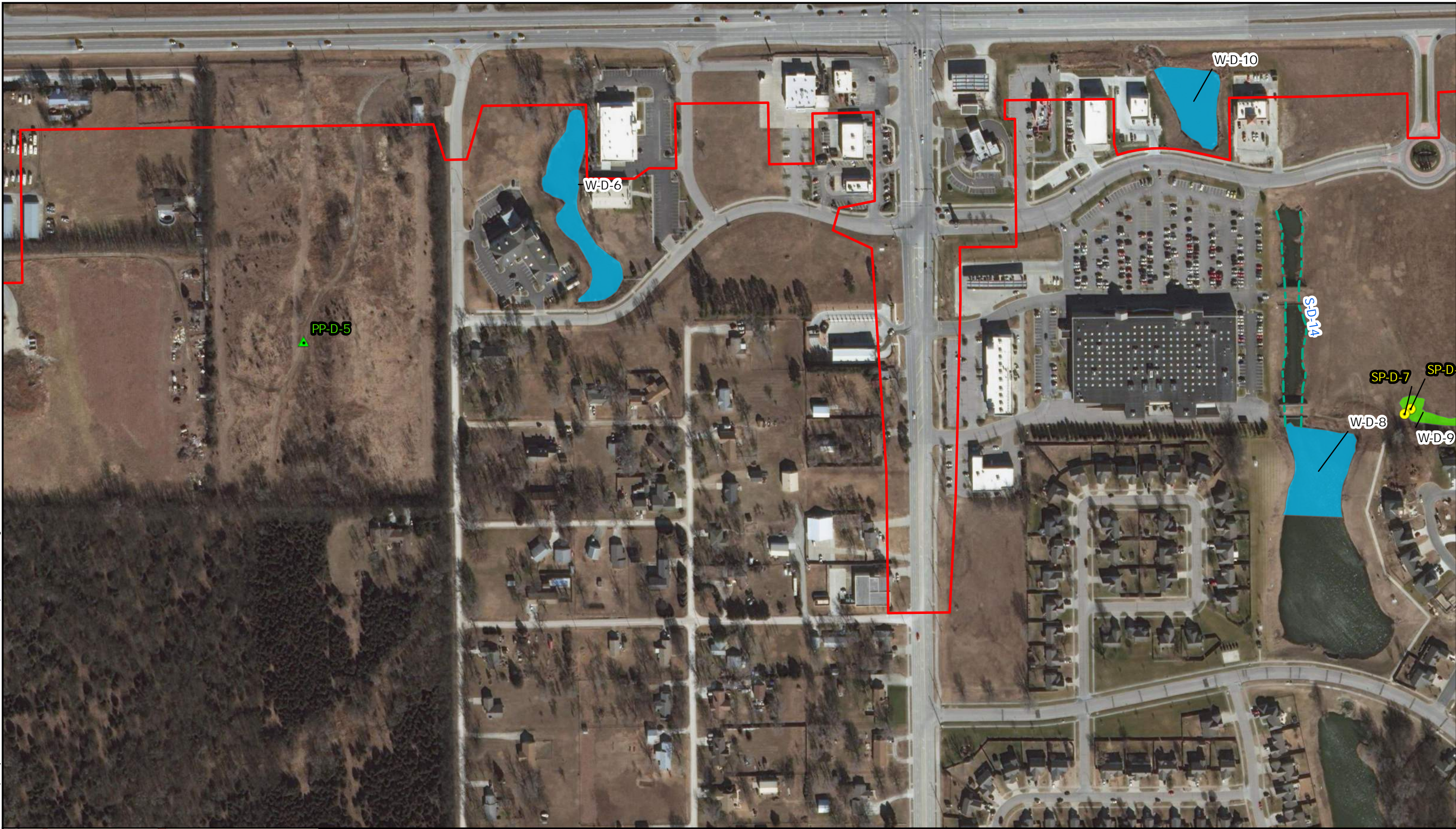


Figure A-2
Mapped Habitat
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- | | | |
|------------------|--------------|--------------|
| Survey Area | Streams (S) | Wetlands (W) |
| Sample Plot (SP) | Intermittent | PEMPS |
| Photo Point (PP) | | PUB |

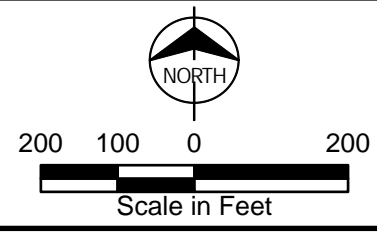


Figure A-2
Mapped Habitat
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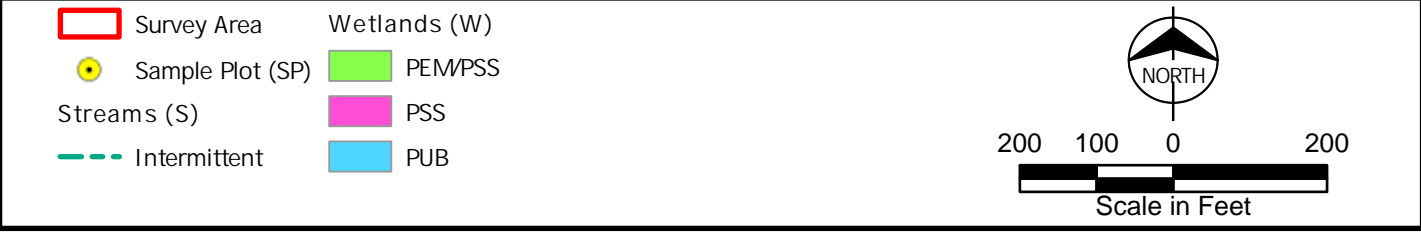
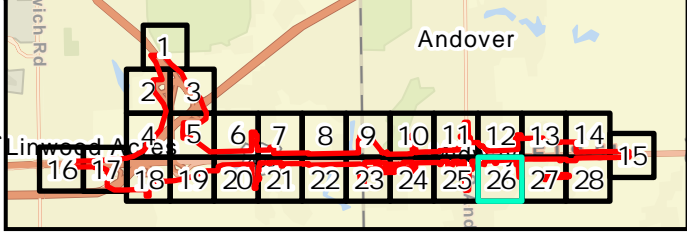


Figure A-2
Mapped Habitat
US 54/E. Kellogg Corridor Improvements
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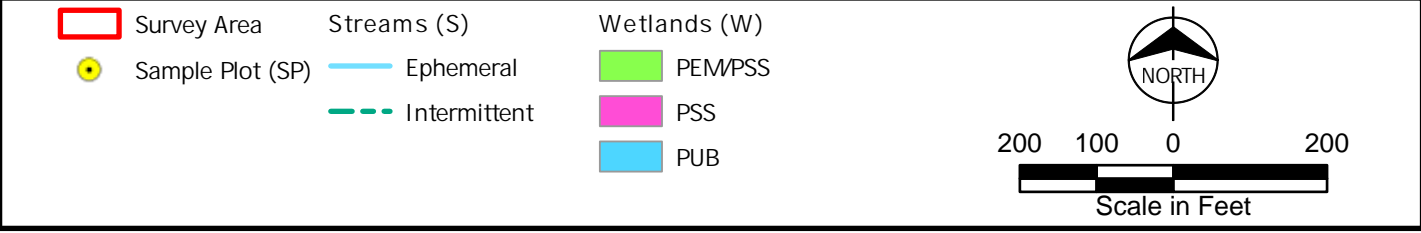
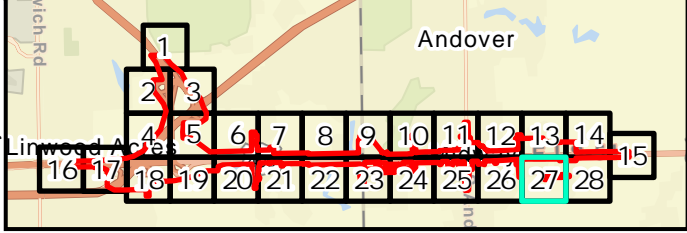
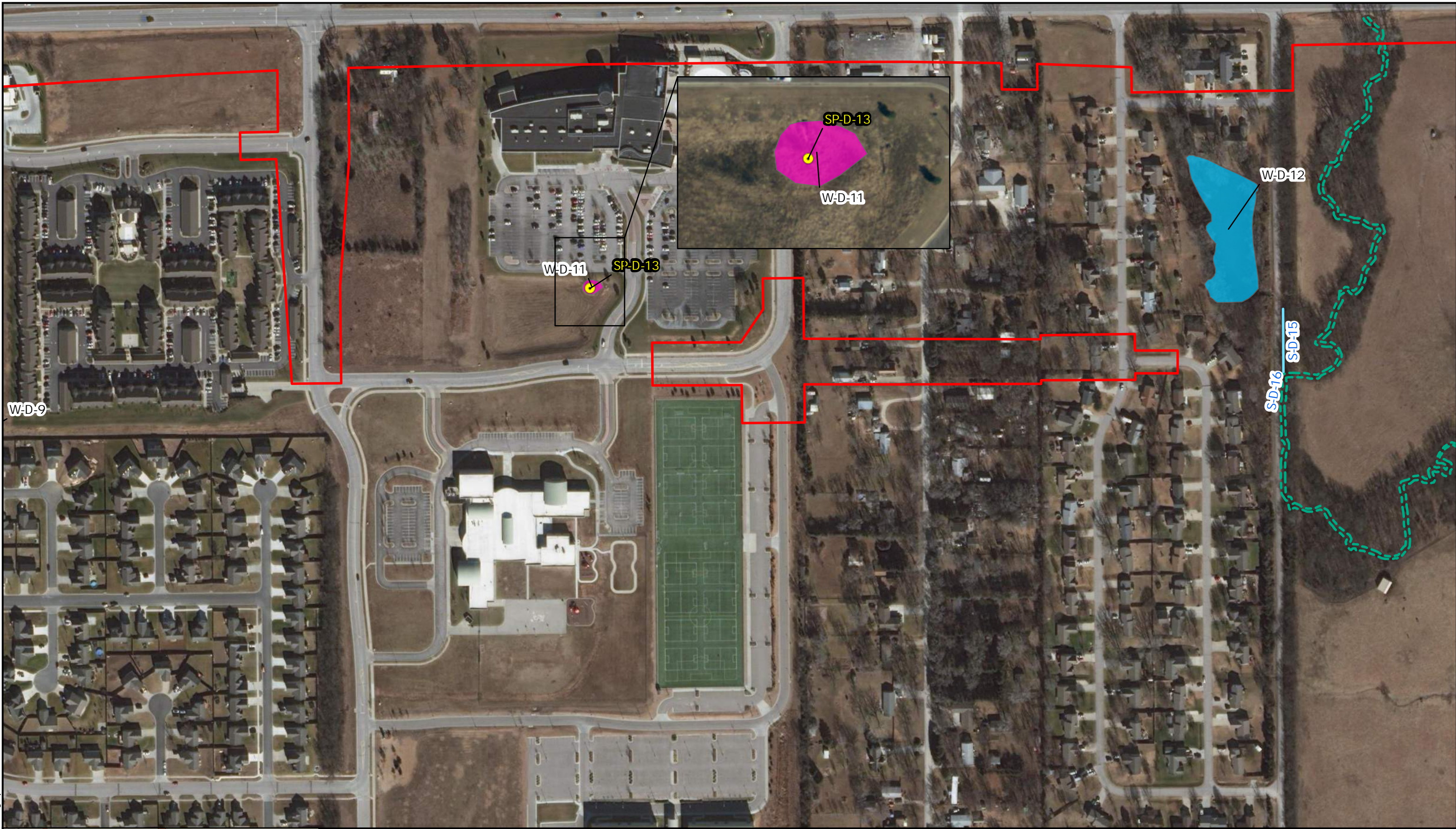
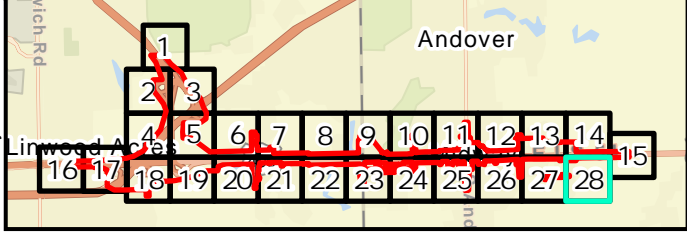
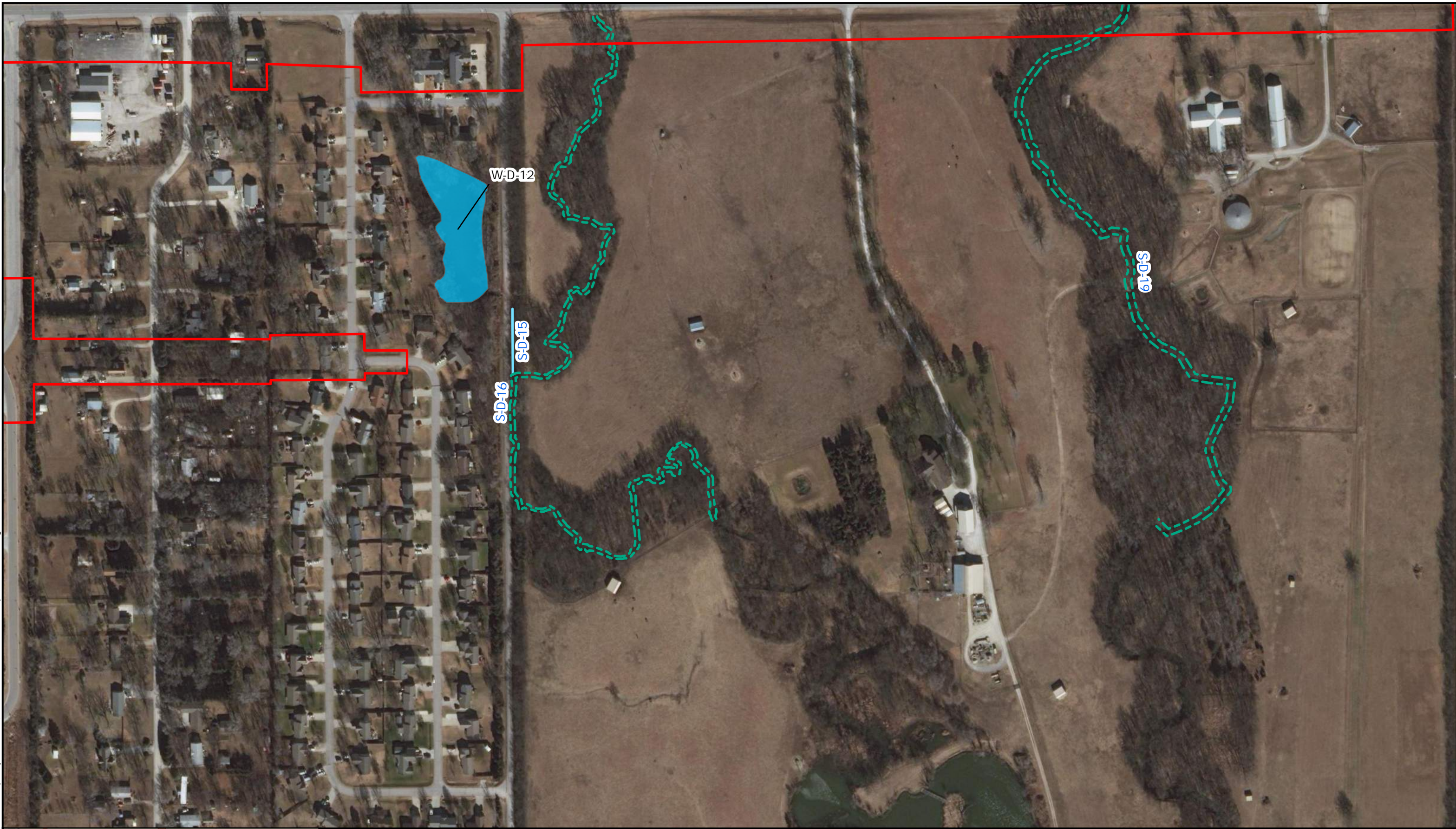






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- | | | |
|---|---|--------------|
|  Survey Area | Streams (S) | Wetlands (W) |
|  Ephemeral |  PUB | |
|  Intermittent | | |

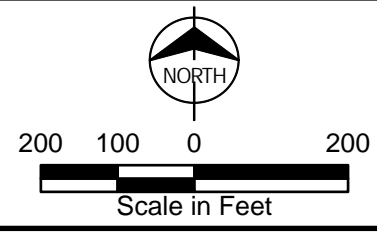


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Appendix B -USFWS and KDWP Protected Species Lists

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Butler and Sedgwick counties, Kansas



Local office

Kansas Ecological Services Field Office

☎ (785) 539-3474

📠 (785) 539-8567

2609 Anderson Avenue
Manhattan, KS 66502-2801

<https://fws.gov/office/kansas-ecological-services>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Fishes

NAME	STATUS
Peppered Chub <i>Macrhybopsis tetranema</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/532	Endangered
Topeka Shiner <i>Notropis topeka</i> (=tristis) There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/4122	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
American Golden-plover <i>Pluvialis dominica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Jul 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Hudsonian Godwit <i>Limosa haemastica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere

Red-headed Woodpecker *Melanerpes erythrocephalus*

Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

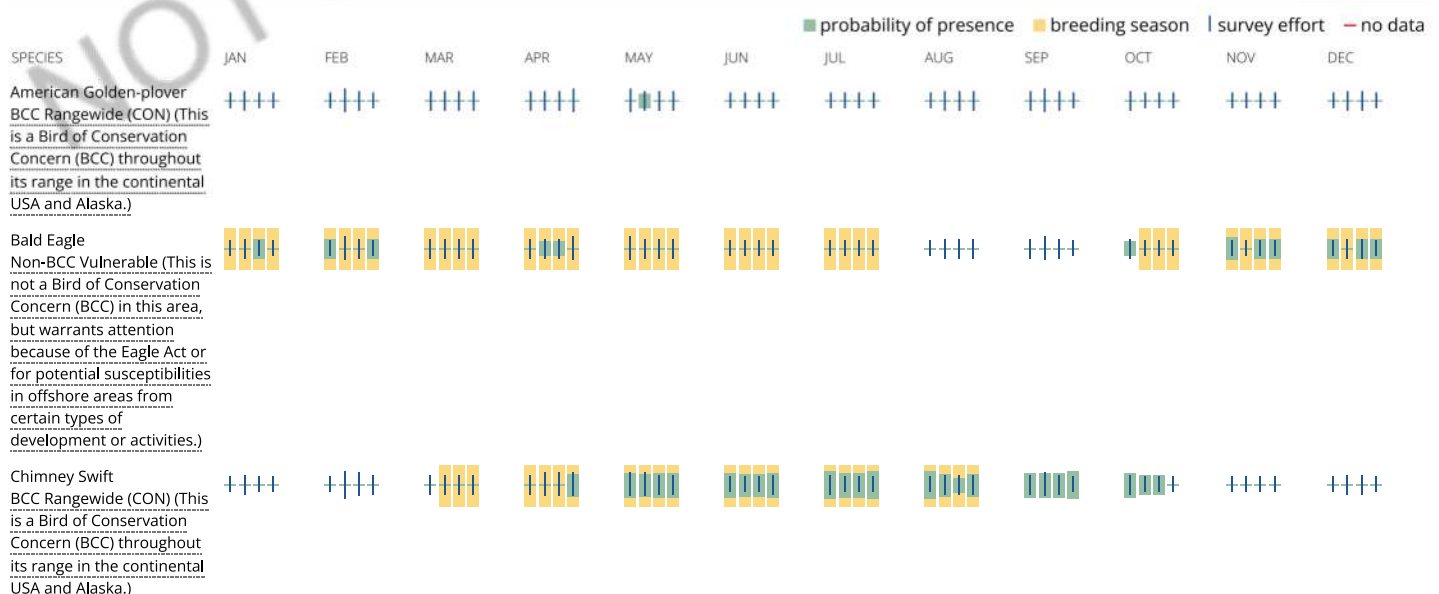
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Hudsonian Godwit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Lesser Yellowlegs BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Red-headed Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern \(BCC\)](#) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the [John H. Chafee Coastal Barrier Resources System](#) (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local [Ecological Services Field Office](#) or visit the [CBRA Consultations website](#). The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the [official CBRS maps](#). The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



Sedgwick County

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Threatened and Endangered (T&E) Species

Critical Habitat Designated

ARKANSAS RIVER SHINER *Notropis girardi*

State: Endangered Federal: Threatened Critical Habitat: Yes

SILVER CHUB *Macrhybopsis storeriana*

State: Endangered Federal: N/A Critical Habitat: Yes

EASTERN SPOTTED SKUNK *Spilogale putorius*

State: Threatened Federal: N/A Critical Habitat: Yes

PEPPERED CHUB *Macrhybopsis tetranema*

State: Endangered Federal: N/A Critical Habitat: Yes

PLAINS MINNOW *Hybognathus placitus*

State: Threatened Federal: N/A Critical Habitat: Yes

No Critical Habitat Designated

WHOOPIING CRANE *Grus americana*

State: Endangered Federal: Endangered Critical Habitat: No

LEAST TERN *Sterna antillarum*

State: Endangered Federal: Endangered Critical Habitat: No

PIPING PLOVER *Charadrius melodus*

State: Threatened Federal: Threatened Critical Habitat: No

SNOWY PLOVER *Charadrius alexandrinus*

State: Threatened Federal: N/A Critical Habitat: No

Species In Need of Conservation (SINC)

ARKANSAS DARTER *Etheostoma cragini*

State: SINC Federal: Candidate Critical Habitat: Yes

River Shiner *Notropis blennioides*

State: SINC Federal: N/A Critical Habitat: No

Western Hognose Snake *Heterodon nasicus*

State: SINC Federal: N/A Critical Habitat: No

Alligator Snapping Turtle *Macrochelys temminckii*

State: SINC Federal: N/A Critical Habitat: No

Black Tern *Chlidonias niger*

State: SINC Federal: N/A Critical Habitat: No

Short-eared Owl *Asio flammeus*

State: SINC Federal: N/A Critical Habitat: No

Chihuahuan Raven *Corvus cryptoleucus*

State: SINC Federal: N/A Critical Habitat: No

Ferruginous Hawk *Buteo regalis*

State: SINC Federal: N/A Critical Habitat: No

Golden Eagle *Aquila chrysaetos*

State: SINC Federal: N/A Critical Habitat: No

Southern Flying Squirrel *Glaucomys volans*

State: SINC Federal: N/A Critical Habitat: No

Eastern Hognose Snake *Heterodon platirhinos*

State: SINC Federal: N/A Critical Habitat: No

Black Rail *Laterallus jamaicensis*

State: SINC Federal: N/A Critical Habitat: No

Bobolink *Dolichonyx oryzivorus*

State: SINC Federal: N/A Critical Habitat: No

Henslow's Sparrow *Ammodramus henslowii*

State: SINC Federal: N/A Critical Habitat: No

Long-billed Curlew *Numenius americanus*

State: SINC Federal: N/A Critical Habitat: No

Mountain Plover *Charadrius montanus*

State: SINC Federal: N/A Critical Habitat: No

Yellow-throated Warbler *Setophaga dominica*

State: SINC Federal: N/A Critical Habitat: No

Cerulean Warbler *Setophaga cerulea*

State: SINC Federal: N/A Critical Habitat: No

Eastern Whip-poor-will *Antrostomas vociferus*

State: SINC Federal: N/A Critical Habitat: No



Butler County

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Threatened and Endangered (T&E) Species

Critical Habitat Designated

TOPEKA SHINER *Notropis topeka*

State: Threatened Federal: Endangered Critical Habitat: Yes

No Critical Habitat Designated

SHARP HORNSNAIL *Pleurocera acuta*

State: Threatened Federal: N/A Critical Habitat: No

WHOOPIING CRANE *Grus americana*

State: Endangered Federal: Endangered Critical Habitat: No

LEAST TERN *Sterna antillarum*

State: Endangered Federal: Endangered Critical Habitat: No

PIPING PLOVER *Charadrius melodus*

State: Threatened Federal: Threatened Critical Habitat: No

SNOWY PLOVER *Charadrius alexandrinus*

State: Threatened Federal: N/A Critical Habitat: No

EASTERN SPOTTED SKUNK *Spilogale putorius*

State: Threatened Federal: N/A Critical Habitat: No

AMERICAN BURYING BEETLE *Nicrophorus americanus*

State: Endangered Federal: Endangered Critical Habitat: No

Species In Need of Conservation (SINC)

There are no SINC species with critical habitat in Butler county

Southern Bog Lemming *Synaptomys cooperi*

State: SINC Federal: N/A Critical Habitat: No

Spotted Sucker *Minytrema melanops*

State: SINC Federal: N/A Critical Habitat: No

Black Tern *Chlidonias niger*

State: SINC Federal: N/A Critical Habitat: No

Short-eared Owl *Asio flammeus*

State: SINC Federal: N/A Critical Habitat: No

Ferruginous Hawk *Buteo regalis*

State: SINC Federal: N/A Critical Habitat: No

Golden Eagle *Aquila chrysaetos*

State: SINC Federal: N/A Critical Habitat: No

Cardinal Shiner *Luxilus cardinalis*

State: SINC Federal: N/A Critical Habitat: No

Creeper Mussel *Strophitus undulatus*

State: SINC Federal: N/A Critical Habitat: No

Bobolink *Dolichonyx oryzivorus*

State: SINC Federal: N/A Critical Habitat: No

Henslow's Sparrow *Ammodramus henslowii*

State: SINC Federal: N/A Critical Habitat: No

Mountain Plover *Charadrius montanus*

State: SINC Federal: N/A Critical Habitat: No

Yellow-throated Warbler *Setophaga dominica*

State: SINC Federal: N/A Critical Habitat: No

Eastern Whip-poor-will *Antrostomas vociferus*

State: SINC Federal: N/A Critical Habitat: No



Photo 1: Facing west, view of the eastern cottonwood (*P. deltoides*) where nest (N) N-01 was identified.



Photo 2: Facing northwest, view of red-tailed hawk (*Buteo jamaicensis*) nest N-01.

Kansas Department of
Transportation
US 54/E. Kellogg Corridor
Improvements



Ground Photographs
May 31-June 1, 2022
Sedgwick and Butler County, KS



Photograph 3: View of tree line where red-tailed hawk nest N-02 was identified. One juvenile RTHA was seen on nest throughout observation.



Photograph 4: Red-tailed hawk nest N-02 positioned along windbreak bordering agricultural field south of stream S-D-4.

Kansas Department of
Transportation
US 54/E. Kellogg Corridor
Improvements



Ground Photographs
May 31-June 1, 2022
Sedgwick and Butler County, KS



Photograph 5: View of potential roost tree PRT-01. The tree is hollow and possess some cracks and crevices that could provide roosting habitat for the NLEB.



Photograph 6: View of agricultural field north of the US 54/E. Kellogg Corridor along S-D-4.

Kansas Department of
Transportation
US 54/E. Kellogg Corridor
Improvements



Ground Photographs
May 31-June 1, 2022
Sedgwick and Butler County, KS



Photograph 7: View of upland SP-D-7 adjacent to PEM/PSS W-D-9, facing northeast. In the background of the photograph, housing developments can be seen near identified hydrologic resources.



Photograph 8: View of SP-D-14 in PSS W-D-11, facing north. Behind W-D-11 is the local YMCA in Andover, Kansas, where construction is underway following a recent tornado on April 30, 2022.

Kansas Department of
Transportation
US 54/E. Kellogg Corridor
Improvements



Ground Photographs
May 31-June 1, 2022
Sedgwick and Butler County, KS



Photograph 9: View of PUB W-D-2, facing north. The water resources identified in the Project Survey Area have limited hydrological connections with larger streams in the area, minimizing potential risk of impacting listed aquatic species documented in neighboring watersheds.



Photograph 10: View of PUB W-D-4, facing north. W-D-4 was one of the residential ponds with limited public access that included large deciduous trees capable of supporting raptor nests.

Kansas Department of
Transportation
US 54/E. Kellogg Corridor
Improvements



Ground Photographs
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Photograph 11: View of intermittent S-D-14, facing north.



Photograph 12: View of intermittent S-D-13, facing north. S-D-13 is positioned in the middle of a large development project north of the US 54/E. Kellogg Corridor.

Kansas Department of
Transportation
US 54/E. Kellogg Corridor
Improvements



Ground Photographs
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Sedgwick and Butler County, KS