

APPENDIX C

Biological Resources

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8191 Birchwood Court, Suite L
Johnston, IA 50131
(515) 254-1642

foth.com

August 7, 2024

Mr. Kraig McPeck
U.S. Fish & Wildlife Service
1511 – 47th Avenue
Moline, IL 61265

RE: Biological Resources Habitat Assessment for the Runway Program, Sioux Gateway Airport, 2403 Aviation Boulevard, Sioux City, Iowa, USACE Project No. CEMVR-RD-2024-0547

Dear Mr. McPeck:

Foth Infrastructure & Environment, LLC (Foth) is pleased to submit the Biological Resources Habitat Assessment for RS&H on behalf of the City of Sioux City (Airport Sponsor). The Project Study Area covers approximately 710 acres and is in Sections 23, 25, 26, 31, 35, and 36, Township 88 North, Range 48 West, Sioux City, Woodbury County, Iowa as depicted on Figure 1 in Attachment 1. Attachment 1 shows Aerial photographs of the Project Study Area on Figure 2A, Figure 2B, and Figure 3.

1. Introduction

The purpose of this Biological Resources Habitat Assessment is to evaluate whether the Project Study Area contains suitable habitat for the federally listed Threatened and Endangered (T&E) species identified on Table 2-1 and to assess the potential for adverse effects from the project.

2. Agency Consultation

Foth initiated the Section 7 review process by defining the project within the U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database. Attachment 2 contains a copy of the USFWS response. According to the IPaC consultation, the species shown in Table 2-1 below may exist in Woodbury County, Iowa, where the Project Study Area is located.

Table 2-1 – Federally Listed T&E Species

Group	Name	Status	Habitat
Mammals	Northern long-eared bat (<i>Myotis septentrionalis</i>)	Endangered	Underneath bark, in cavities, or in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, like caves and mines (USFWS, 2024a)
Mammals	Tricolored bat (<i>Perimyotis subflavus</i>)	Proposed Endangered	During the spring, summer, and fall, they are found in forested habitats where they roost in trees, primarily among leaves (USFWS, 2024a)
Insect	Monarch butterfly (<i>Danaus plexippus</i>)	Candidate	Open fields and meadows with milkweed (USFWS, 2022)
Fish	Pallid sturgeon (<i>Scaphirhynchus albus</i>)	Endangered	Large rivers with sandy and fine bottom materials, and availability of gravel substrates for spawning seasons (USFWS, 2024b)
Birds	Piping plover (<i>Charadrius melodus</i>)	Threatened	In the Northern Great Plains, piping plovers nest on the unvegetated shorelines of alkaline lakes, reservoirs, or river sandbars (USFWS, 2024c)

(USFWS IPaC, 2024)

As part of the Biological Resources Habitat Assessment, Foth requested a review of endangered species from the Iowa Department of Natural Resources (IDNR). In an email dated May 7, 2024, the IDNR indicated that they had no records of rare species or significant natural communities in the project area (IDNR Identification Number 2024-0824). Attachment 2 contains a copy of the IDNR email response.

3. Map Observation

Foth reviewed map and aerial photograph resources to evaluate potential habitat features in the vicinity of the Project Study Area. Attachment 1 shows the 2022 and 1930s aerial photographs of the Project Study Area in Figures 2A, 2B, and 3. Additional historic aerials were reviewed but have not been included in this report (Iowa State University, 2023) (Google Earth, 2023). Attachment 3 contains historic aerial photographs of the project area.

The Project Study Area is currently comprised of an airport runway, taxiways, airport access roads, and buildings interspersed with areas of mowed grass and tilled farm ground. The Missouri River is located along the northwestern border of the Project Study Area; the area adjacent to the river within the Project Study Area is primarily agricultural land with a narrow

wooded riparian corridor. The only trees within the Project Study Area are directly adjacent to the river. The properties south of the Project Study Area are primarily agricultural or vacant/open herbaceous land. There is a wooded area west-southwest of the Project Study Area that continues along the bank of the Missouri River. The properties within five miles north and east of the Project Study Area are primarily commercial and residential. The land west of the Missouri River is commercial, residential, or agricultural.

Foth reviewed the 1930s aerial photograph, Figure 3 in Attachment 1, to identify if current wooded areas in the immediate project vicinity were present approximately 90 years ago. If wooded areas evident in the 1930s aerial are still present within the Project Study Areas, those areas would be more likely to contain dead or dying trees with potential roosting cavities or exfoliating bark. The 1930s aerial shows a narrow, wooded area in the northwestern portion of the Project Study Area, which continues along the Missouri River. In the 1930s, the Missouri River encroached on the Project Study Area. During the 1950s and 1960s, construction of the airport runway resulted in all trees shown on the 1930s aerial within the Project Study Area being removed to accommodate the runway. Based on map observations, the wooded riparian corridor that currently exists within the Project Study Area was not present in the 1930s. Based on an aerial review of additional imagery, the wooded riparian corridor along the Missouri River did not become established until after the 1980s.

4. Field Observations and Determination of Effect

On May 8, 2024, Morgan Langer and Hallie Maudlin of Foth evaluated the Project Study Area for habitat of the biological resources listed in Section 2. Attachment 4 shows photographs taken during the site visit and Figure 2B depicts the photo locations. The following sections summarize the field observations and Foth's opinion on the potential effect to each species.

4.1 T&E Bat Species

According to the Range-Wide Indiana Bat & Northern Long-Eared Bat Summer Survey Guidelines (USFWS, 2024a), suitable summer habitat for the northern long-eared bat and tricolored bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields, and pastures.

Suitable habitat for the northern long-eared bat includes forests and woodlots containing potential roosts (i.e., live trees and/or snags greater than or equal to 3 inches diameter breast height that have exfoliating bark, cracks, crevices, and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. The northern long-eared bat prefers intact mixed-type forests with small gaps (i.e., forest trails, small roads, or forest-covered creeks) in forest with sparse or medium vegetation for foraging and commuting rather than fragmented habitat or areas that have been clear cut.

Suitable habitat for the tricolored bat includes forests and woodlots containing trees with potential roost substrate (i.e., live, and dead leaf clusters, Spanish moss, and beard lichen), as well as linear features such as fencerows, riparian forests, and other wooded corridors. Tricolored bats will roost in a variety of tree species, especially oaks and often select roosts in tall, large diameter trees, but will roost in smaller diameter trees when potential roost substrate

is present (e.g., 4-inch diameter breast height). Tricolored bats prefer foraging along forested edges of larger forest openings, along edges of riparian areas, and over water and avoid foraging in dense, unbroken forests, and narrow road cuts through forests. Tricolored bats may roost and forage in forested areas near anthropogenic structures and buildings (e.g., suburban neighborhoods, parks, etc.). However, unsuitable habitats in highly developed urbanized areas (e.g., parking lots, industrial buildings, shopping centers) are generally devoid of native vegetation (including isolated trees surrounded by expansive anthropogenic development).

Based on field and map observations, the only trees within the Project Study Area are along Missouri River riparian corridor, which did not become established until after the 1980s. During the site visit, the riparian corridor contained very thick scrub/shrub vegetation consisting of green ash and box elder with eastern cottonwood trees. The sparse mature trees are mainly green ash, and black willow, with snags and sloughing or peeling bark on at least one black willow tree. The riparian corridor contained several large piles of historically cleared trees with no bark. The overall suitability of the Project Study Area for T&E bat species habitat is low.

Tree removal is not proposed as part of the Proposed Action and therefore, there would be no effect to the northern long-eared bat or tricolored bat.

4.2 T&E Bird Species

Nesting habitat for the northern great plains piping plover includes unvegetated shorelines of alkaline lakes, reservoirs, or river sandbars (USFWS, 2024c). The Project Study Area did not appear to contain habitat suitable for the piping plover. There were no unvegetated shorelines or sandbars within the Project Study Area. The ditches that provide a connection from the Project Study Area to the river were all observed to be dry and thickly vegetated. Therefore, the Proposed Action would have no effect on the piping plover.

The USFWS IPaC evaluation stated that bald eagles are likely present in the Project Study Area. Although no longer listed as a T&E species, the Bald and Golden Eagle Protection Act still protects bald eagles. Bald eagles frequently use the Missouri River and its riparian corridor as foraging and nesting habitat. However, no bald eagles or eagle nests were observed within the Project Study Area nor were any mature trees within the Project Study Area of a size likely to be chosen for nest-building.

The Migratory Bird Treaty Act protects a list of more than one thousand bird species through federal law. Migratory birds may be present in the Project Study Area during construction; however, there is suitable habitat outside of the Project Study Area; therefore, the effects to migratory birds would be minimal.

4.3 T&E Fish Species

Habitat for the pallid sturgeon includes large rivers with sandy and fine bottom materials, and availability of gravel substrates for spawning seasons (USFWS, 2024b). Since its listing in 1990, pallid sturgeon have been documented between Gavins Point Dam in South Dakota to St. Louis, Missouri. Pallid sturgeon primarily utilize main channels, secondary channels, and channel border habitats throughout their range. Juvenile and adult pallid sturgeon are rarely observed in

habitats lacking flowing water separated from the main channel (i.e., backwaters, ditches, and sloughs).

Pallid sturgeon have historically been documented within the reach of the Missouri River adjacent to the Project Study Area; however, the river and its shoreline are not included in the Project Study Area. Within the Project Study Area, there are two ditches that have a direct connection to the river, as depicted on Figure 2A. Due to the flat topography of the area, these ditches were dug in upland areas to provide a path for stormwater to flow to the Missouri River, including a large ditch along the northeastern border of the Project Study Area, which connects to the Missouri River. Figure 2A identifies this ditch as Ditch D-1. If pallid sturgeon habitat was to exist within the Project Study Area, it would be in Ditch D-1, which is the largest ditch observed within the Project Study Area. The table below notes the history of Ditch D-1.

Table 4-1 – Ditch D-1 Historical Summary

Year	Aerial Photograph Observations
1930s-2004	No ditch or drainage features are apparent
2005	Construction in progress on drainage ditch
2006	Construction completed on drainage ditch, ditch is dry
2007	Ditch is dry
2008	Ditch is dry
2009	Ditch is dry except for a small segment directly adjacent to the river
2010	Water backs up from the river into a portion of the Project Study Area.
2011	Water backs up from the river into the Project Study Area
2013	Ditch is dry
2014	Ditch is dry
2015	Ditch is dry
2017	Ditch is dry
2019	Water backs up from the river into the Project Study Area
2021	Ditch is dry
2023	Ditch is dry

Source: Foth, 2024.

The Missouri River sustained three devastating floods within 30 years: 1993, 2011 and 2019 (Google, 2024). 2010 also recorded above-normal precipitation and flooding. The flooding events in 2011 and 2019 and the high rainfall events in 2010 correspond with flooding of the ditch depicted on the historic aerials. According to Rich Johnson, a consultant who has worked for the Airport Sponsor for 18 years, Ditch D-1 only contains water when the levels in the Missouri River are at flood stage and water within the ditch is generally a result of backup from the river rather than flow from upland areas. During the site visit, the bottom of the ditch was dry and completely vegetated despite precipitation being two to three times greater than the

normal range in the 7 and 30-days prior to the site visit. There was no evidence of drainage patterns that would indicate frequent or sustained flow within the ditch.

Due to the infrequency of water in the ditch, it is unsuitable habitat for the pallid sturgeon. Any construction activities that would occur within Ditch D-1 would not occur when water is present, further minimizing the potential for impact to the pallid sturgeon. Therefore, the Proposed Action would have no effect on the pallid sturgeon.

4.4 Monarch Butterfly

The USFWS IPaC evaluation identified the monarch butterfly as a candidate species for the Project Study Area. Section 7 of the Endangered Species Act does not require consultation with USFWS for candidate species, like the monarch butterfly.

There were no observations of suitable habitat for the monarch butterfly in the Project Study Area. Regular mowing and maintenance of the vegetated areas occurs within the Project Study Area. The monarch butterfly could find suitable habitat in the farmland within the Project Study Area when the fallow farmland or alfalfa is in bloom. There were no observations of milkweed within the Project Study Area. Keeping vegetation and alfalfa fields mowed during the growing season prior to construction activities would help to minimize potential adverse effects to the monarch butterfly.

5. Summary and Recommendations

The Proposed Action would have no effect on the federally listed northern long-eared bat, tricolored bat, piping plover, and pallid sturgeon, or candidate species, monarch butterfly.

6. General Comments

Foth conducted the Biological Resources Habitat Assessment based on USFWS criteria and habitat data described in this report. The USFWS guidance helped with identifying potential northern long-eared bat and tricolored bat; however, this guidance alone may not satisfy requirements by all agencies for a Biological Resources Habitat Assessment. Foth did not attempt to identify every tree or plant species within the Project Study Area. Readers of this evaluation should recognize the limitations of this Biological Resources Habitat Assessment. This report has been prepared in accordance with accepted scientific and engineering evaluation practices. This report is for the exclusive use of the client for the Habitat Assessment for the Runway Program, Sioux Gateway Airport. Foth does not intend to or make warranties, either expressed or implied, in this evaluation.

7. References

Google. (2024, May 30). Retrieved from https://www.google.com/search?q=historic+years+of+missouri+river+flooding+at+sioux+city&sca_esv=627549cd271c49f4&source=hp&ei=P49YZrzWN_vAp84P6-O6qAk&iflsig=AL9hbdgAAAAZlidT027jHBXTlwqw_vZVdmJgWclr3If&ved=0ahUKEwj8i8T-zLWGAxV74MkDHeuxDpUQ4dUDCA8&uact=5&o

Google Earth. (2023). 2023 and Historic Aerials.

Iowa State University. (2023). *Iowa State University Geographic Information Systems Support & Research Facility*. Retrieved from GISU: <http://ortho.gis.iastate.edu/>
Nature Works. (2021). *Monarch Butterfly - Danaus plexippus*. Retrieved from <http://www.nhptv.org/natureworks/monarch.htm#:~:text=In%20the%20spring%20and%20summer,high%20altitudes%20in%20central%20Mexico.>
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USFWS. (2024a, March). *Range-Wide Indiana Bat Summer Survey Guidelines*. Retrieved from <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>
USFWS. (2024b). *Endangered Species Pallid Sturgeon (Scaphirhynchus albus)*. Retrieved from <https://ecos.fws.gov/ecp/species/7162>
USFWS. (2024c, June 10). *Endangered Species - Piping Plover*. Retrieved from <https://www.fws.gov/species/piping-plover-charadrius-melodus>
USFWS IPaC. (2024, May 30). *Information for Planning and Consultation*. Retrieved from <https://ipac.ecosphere.fws.gov/>

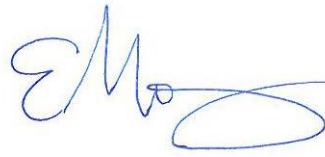
If you have any questions concerning this letter, please contact Eva at 515-251-2524 or by e-mail at eva.moritz@foth.com.

Sincerely,

Foth Infrastructure & Environment, LLC



Hallie Maudlin
Project Environmental Scientist



Eva Moritz, PE
Lead Environmental Engineer
Licensed in IA, NE & SD

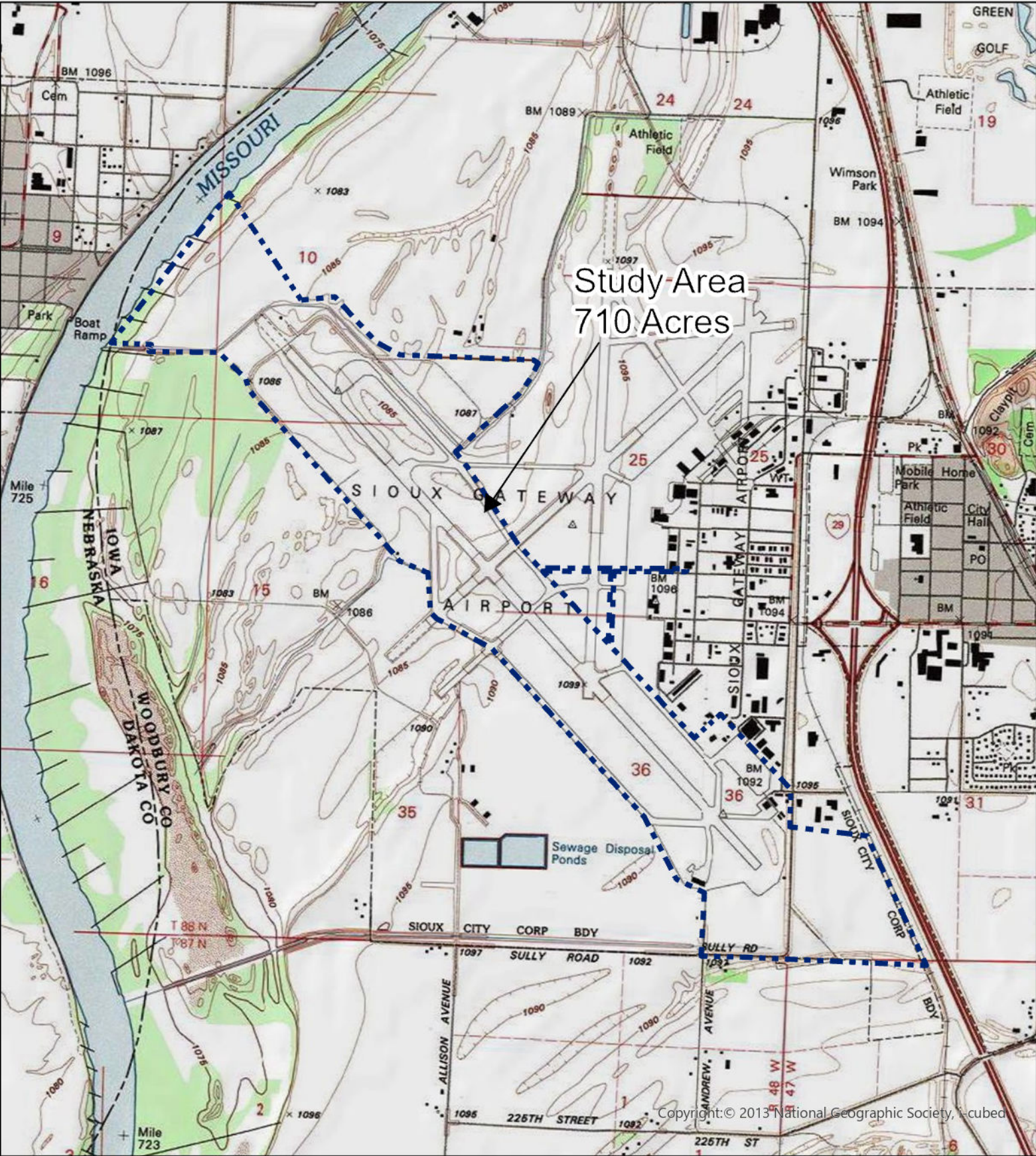
cc: Ms. Julie Barrow, RS&H
Mr. Mike Collett, Sioux Gateway Airport

Enclosures

Attachment A

Figures

Figure 1
Topographic Map



Sources: ESRI, 2023; Foth, 2024

Legend

 PROJECT STUDY AREA

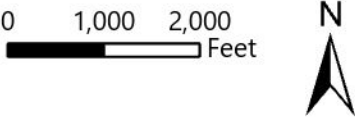


Figure 2A
2022 Aerial Mapping



Sources: ESRI, 2023; Foth, 2024

Legend

PROJECT STUDY AREA

Drainage Ditch

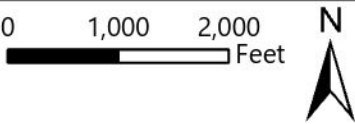


Figure 2B
Photo Location Map



Sources: ESRI, 2023; Foth, 2024

Legend

 PROJECT STUDY AREA

 PHOTO POINT

0 1,000 2,000 Feet

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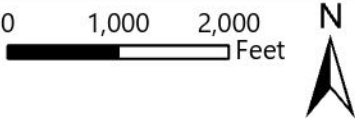
Figure 3
1930s Aerial Mapping



Sources: ESRI, 2023; Foth, 2024

Legend

 PROJECT STUDY AREA



Attachment B
Project Correspondence



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Illinois-Iowa Ecological Services Field Office
Illinois & Iowa Ecological Services Field Office
1511 47th Ave
Moline, IL 61265-7022
Phone: (309) 757-5800 Fax: (309) 757-5807

In Reply Refer To:
Project Code: 2024-0097106
Project Name: 23S049 Sioux Gateway Airport

05/30/2024 14:40:44 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat, if present, within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) **the accuracy of this species list should be verified after 90 days**. This verification can be completed formally or informally. You may verify the list by visiting the ECOSPHERE Information for Planning and Consultation (IPaC) website <https://ipac.ecosphere.fws.gov> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list.

Section 7 Consultation

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the U.S. Fish and Wildlife Service (Service) if they determine their project "may affect" listed species or designated critical habitat. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action may affect endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service to make "no effect" determinations. If you determine that your proposed action will have no effect on threatened or endangered species or their respective designated critical habitat, you do not need to seek concurrence with the Service.

Note: For some species or projects, IPaC will present you with *Determination Keys*. You may be able to use one or

more Determination Keys to conclude consultation on your action.

Technical Assistance for Listed Species

1. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain information on the species life history, species status, current range, and other documents by selecting the species from the thumbnails or list view and visiting the species profile page.

No Effect Determinations for Listed Species

1. If there are *no* species or designated critical habitats on the Endangered Species portion of the species list: conclude "no species and no critical habitat present" and document your finding in your project records. No consultation under ESA section 7(a)(2) is required if the action would result in no effects to listed species or critical habitat. Maintain a copy of this letter and IPaC official species list for your records.
2. If any species or designated critical habitat are listed as potentially present in the **action area** of the proposed project the project proponents are responsible for determining if the proposed action will have "no effect" on any federally listed species or critical habitat. No effect, with respect to species, means that no individuals of a species will be exposed to any consequence of a federal action or that they will not respond to such exposure.
3. If the species habitat is not present within the action area or current data (surveys) for the species in the action area are negative: conclude "no species habitat or species present" and document your finding in your project records. For example, if the project area is located entirely within a "developed area" (an area that is already graveled/paved or supports structures and the only vegetation is limited to frequently mowed grass or conventional landscaping, is located within an existing maintained facility yard, or is in cultivated cropland conclude no species habitat present. Be careful when assessing actions that affect: 1) rights-of-ways that contains natural or semi-natural vegetation despite periodic mowing or other management; structures that have been known to support listed species (example: bridges), and 2) surface water or groundwater. Several species inhabit rights-of-ways, and you should carefully consider effects to surface water or groundwater, which often extend outside of a project's immediate footprint.
4. Adequacy of Information & Surveys - Agencies may base their determinations on the best evidence that is available or can be developed during consultation. Agencies must give the benefit of any doubt to the species when there are any inadequacies in the information. Inadequacies may include uncertainty in any step of the analysis. To provide adequate information on which to base a determination, it may be appropriate to conduct surveys to determine whether listed species or their habitats are present in the action area. Please contact our office for more information or see the survey guidelines that the Service has made available in IPaC.

May Effect Determinations for Listed Species

1. If the species habitat is present within the action area and survey data is unavailable or inconclusive: assume the species is present or plan and implement surveys and interpret results in coordination with our office. If assuming species present or surveys for the species are positive continue with the may affect determination process. May affect, with respect to a species, is the appropriate conclusion when a species might be exposed to a consequence of a federal action and could respond to that exposure. For critical habitat, 'may affect' is the appropriate conclusion if the action area overlaps with mapped areas of critical habitat and an essential physical or biological feature may be exposed to a consequence of a federal action and could change in response to that exposure.
2. Identify stressors or effects to the species and to the essential physical and biological features of critical habitat that overlaps with the action area. Consider all consequences of the action and assess the potential for each life stage of the species that occurs in the action area to be exposed to the stressors. Deconstruct the action into its component parts to be sure that you do not miss any part of the action that could cause effects to the species or physical and biological features of critical habitat. Stressors that affect species' resources may have consequences even if the species is not present when the project is implemented.
3. If no listed or proposed species will be exposed to stressors caused by the action, a 'no effect' determination may be appropriate – be sure to separately assess effects to critical habitat, if any overlaps with the action

area. If you determined that the proposed action or other activities that are caused by the proposed action may affect a species or critical habitat, the next step is to describe the manner in which they will respond or be altered. Specifically, to assess whether the species/critical habitat is "not likely to be adversely affected" or "likely to be adversely affected."

4. Determine how the habitat or the resource will respond to the proposed action (for example, changes in habitat quality, quantity, availability, or distribution), and assess how the species is expected to respond to the effects to its habitat or other resources. Critical habitat analyses focus on how the proposed action will affect the physical and biological features of the critical habitat in the action area. If there will be only beneficial effects or the effects of the action are expected to be insignificant or discountable, conclude "may affect, not likely to adversely affect" and submit your finding and supporting rationale to our office and request concurrence.
5. If you cannot conclude that the effects of the action will be wholly beneficial, insignificant, or discountable, check IPaC for species-specific Section 7 guidance and conservation measures to determine whether there are any measures that may be implemented to avoid or minimize the negative effects. If you modify your proposed action to include conservation measures, assess how inclusion of those measures will likely change the effects of the action. If you cannot conclude that the effects of the action will be wholly beneficial, insignificant, or discountable, contact our office for assistance.
6. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

For additional information on completing Section 7 Consultation including a Glossary of Terms used in the Section 7 Process, information requirements for completing Section 7, and example letters visit the Midwest Region Section 7 Consultations website at: <https://www.fws.gov/office/midwest-region-headquarters/midwest-section-7-technical-assistance>.

You may find more specific information on completing Section 7 on communication towers and transmission lines on the following websites:

- Incidental Take Beneficial Practices: Power Lines - <https://www.fws.gov/story/incidental-take-beneficial-practices-power-lines>
- Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning. - <https://www.fws.gov/media/recommended-best-practices-communication-tower-design-siting-construction-operation>

Tricolored Bat Update

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat (*Perimyotis subflavus*) as endangered under the Endangered Species Act (ESA). The Service has up to 12-months from the date the proposal published to make a final determination, either to list the tricolored bat under the Act or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the rangewide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across North America. Because tricolored bat populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as human disturbance and habitat loss. Species proposed for listing are not afforded protection under the ESA; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and "take" will apply. Therefore, if your future or existing project has the potential to adversely affect tricolored bats after the potential new listing goes into effect, we recommend that the effects of the project on tricolored bat and their habitat be analyzed to determine whether authorization under ESA section 7 or 10 is necessary. Projects with an existing section 7 biological opinion may require

reinitiation of consultation, and projects with an existing section 10 incidental take permit may require an amendment to provide uninterrupted authorization for covered activities. Contact our office for assistance.

Other Trust Resources and Activities

Bald and Golden Eagles

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act, as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, please contact our office for further coordination. For more information on permits and other eagle information visit our website <https://www.fws.gov/library/collections/bald-and-golden-eagle-management>. We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Illinois-Iowa Ecological Services Field Office

Illinois & Iowa Ecological Services Field Office

1511 47th Ave

Moline, IL 61265-7022

(309) 757-5800

PROJECT SUMMARY

Project Code: 2024-0097106

Project Name: 23S049 Sioux Gateway Airport

Project Type: Airport - Maintenance/Modification

Project Description: runway improvements and expansion at the Sioux Gateway Airport

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.401666649999996,-96.38811919070753,14z>



Counties: Woodbury County, Iowa

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [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.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened

FISHES

NAME	STATUS
Pallid Sturgeon <i>Scaphirhynchus albus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7162	Endangered

INSECTS

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

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

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

NAME	BREEDING SEASON
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 Aug 31

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 ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

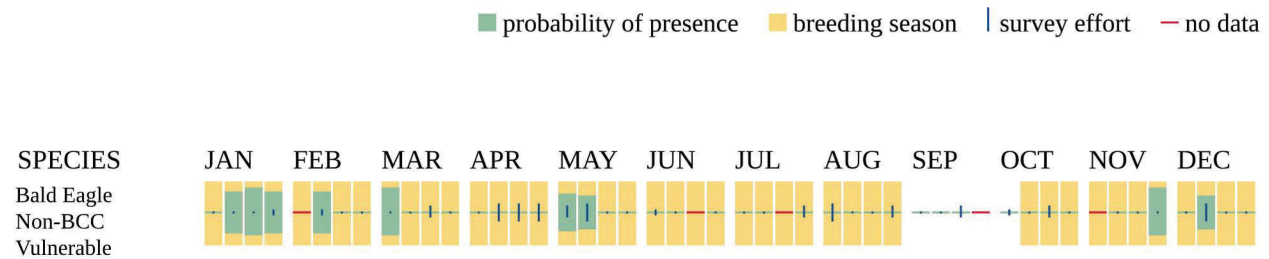
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

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



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

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 habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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

NAME	BREEDING SEASON
American Golden-plover <i>Pluvialis dominica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10561	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 Aug 31
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 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. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Grasshopper Sparrow <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Hudsonian Godwit <i>Limosa haemastica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9482	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
Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prairie Loggerhead Shrike <i>Lanius ludovicianus excubitorides</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8833	Breeds Feb 1 to Jul 31

NAME	BREEDING SEASON
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Semipalmated Sandpiper <i>Calidris pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9603	Breeds elsewhere
Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Upland Sandpiper <i>Bartramia longicauda</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9294	Breeds May 1 to Aug 31

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 "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

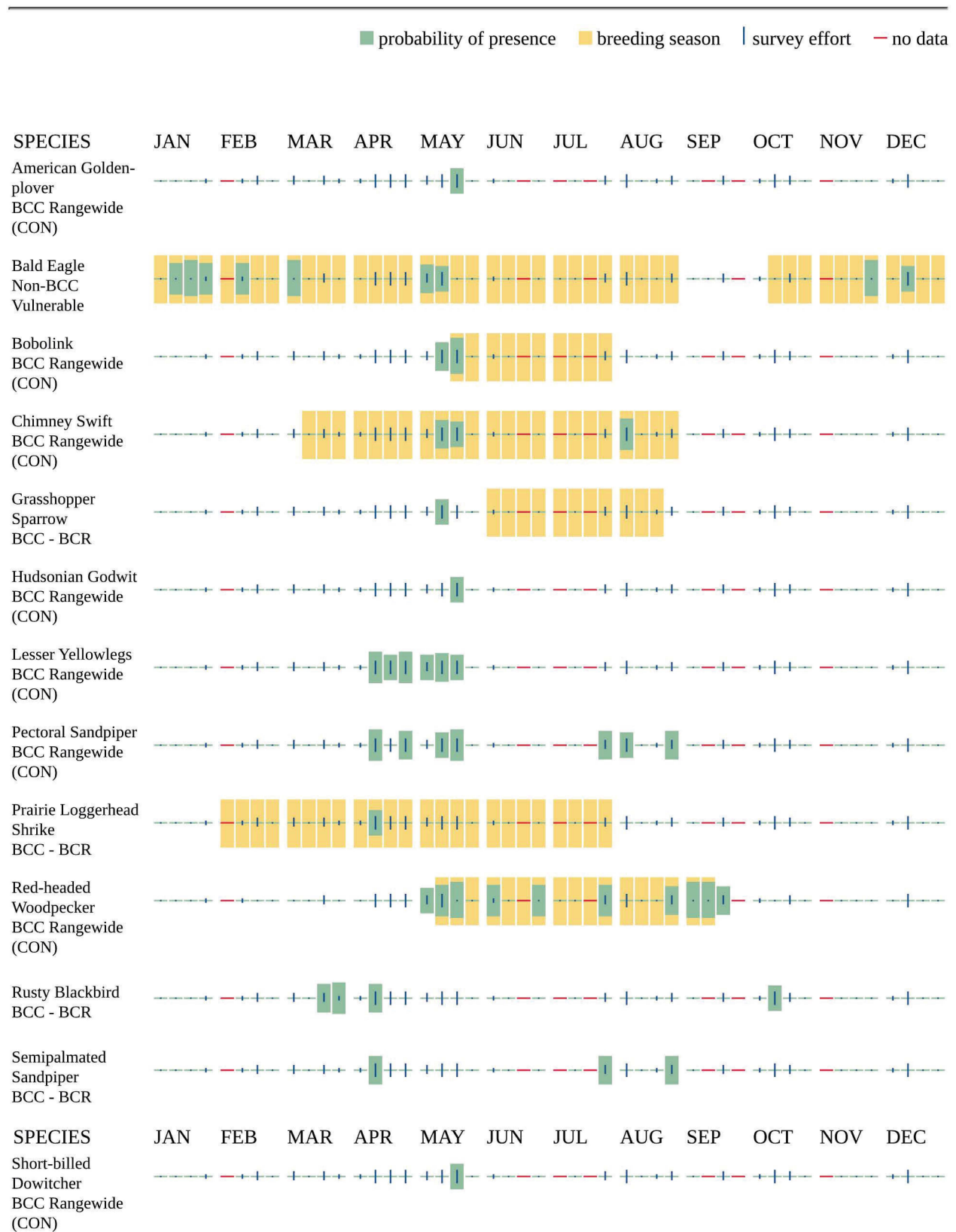
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

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



Upland Sandpiper
BCC - BCR



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- 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>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

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](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A
- PSS1A
- PFO1C

RIVERINE

- R2USC
- R4SBC

FRESHWATER POND

- PUBFx

FRESHWATER EMERGENT WETLAND

- PEM1C

IPAC USER CONTACT INFORMATION

Agency: Foth Infrastructure & Environment, LLC

Name: Elyse Kalber

Address: 8191 Birchwood Ct

City: Johnston

State: IA

Zip: 50131

Email: elyse.kalber@foth.com

Phone: 5156356428

From: casey.laskowski@dnr.iowa.gov <casey.laskowski@dnr.iowa.gov>
Sent: Tuesday, May 7, 2024 10:19 AM
To: Mike Collett <mcollett@sioux-city.org>
Subject: 2024-0824 Environmental Review Request - Runway Program Improvements

CAUTION: This email originated from **OUTSIDE** of the organization. Please verify the sender and use caution if the message contains any attachments, links, or requests for information as this person may NOT be who they claim. **If you are asked for your username and password, please call WCICC and DO NOT ENTER any data.**

42.4009/-96.3861; Woodbury County
Sec. 23/T88N/R48W

Thank you for inviting the Department to comment on the impact of this project. The Department has searched for records of rare species and significant natural communities in the project area and found no site-specific records that would be impacted by this project. However, these records and data are not the result of thorough field surveys. If listed species or rare communities are found during the planning or construction phases, additional studies and/or mitigation may be required.

This email is a record of review for protected species, rare natural communities, state lands and waters in the project area, including review by personnel representing state parks, preserves, recreation areas, fisheries and wildlife but does not include comment from the Environmental Services Division of this Department. This email does not constitute a permit. Other permits may be required from the Department or other state or federal agencies before work begins on this project.

If you have questions about this letter or require further information, please contact me at (515) 330-6432.

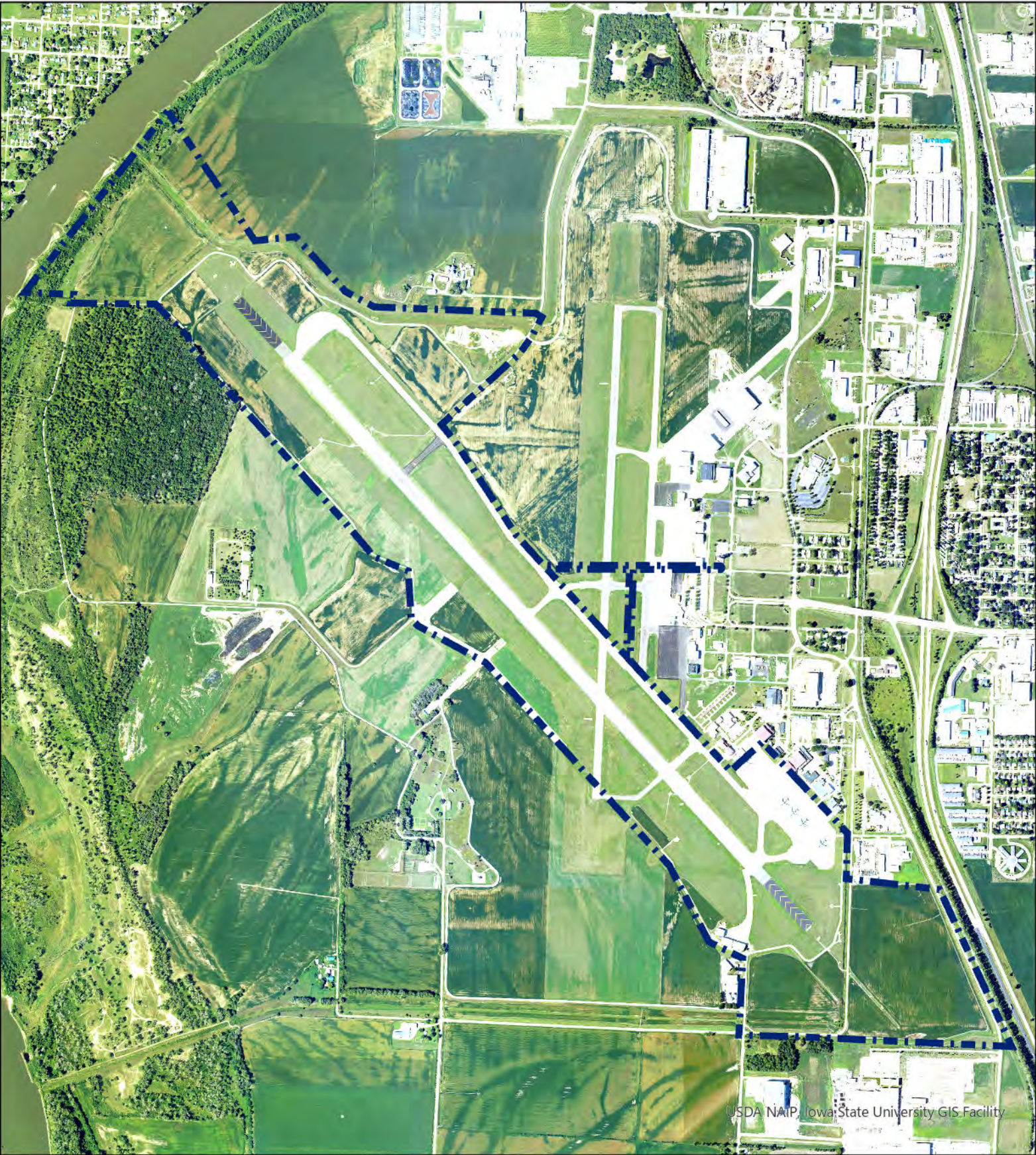
Sincerely,

Casey Laskowski | Environmental Specialist
Iowa Department of Natural Resources
P 515-330-6432 | F 515-725-8202 | 502 E. 9th St., Des Moines, IA 50319
www.iowadnr.gov



Attachment C
Aerial Photographs

Figure A1
2023 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

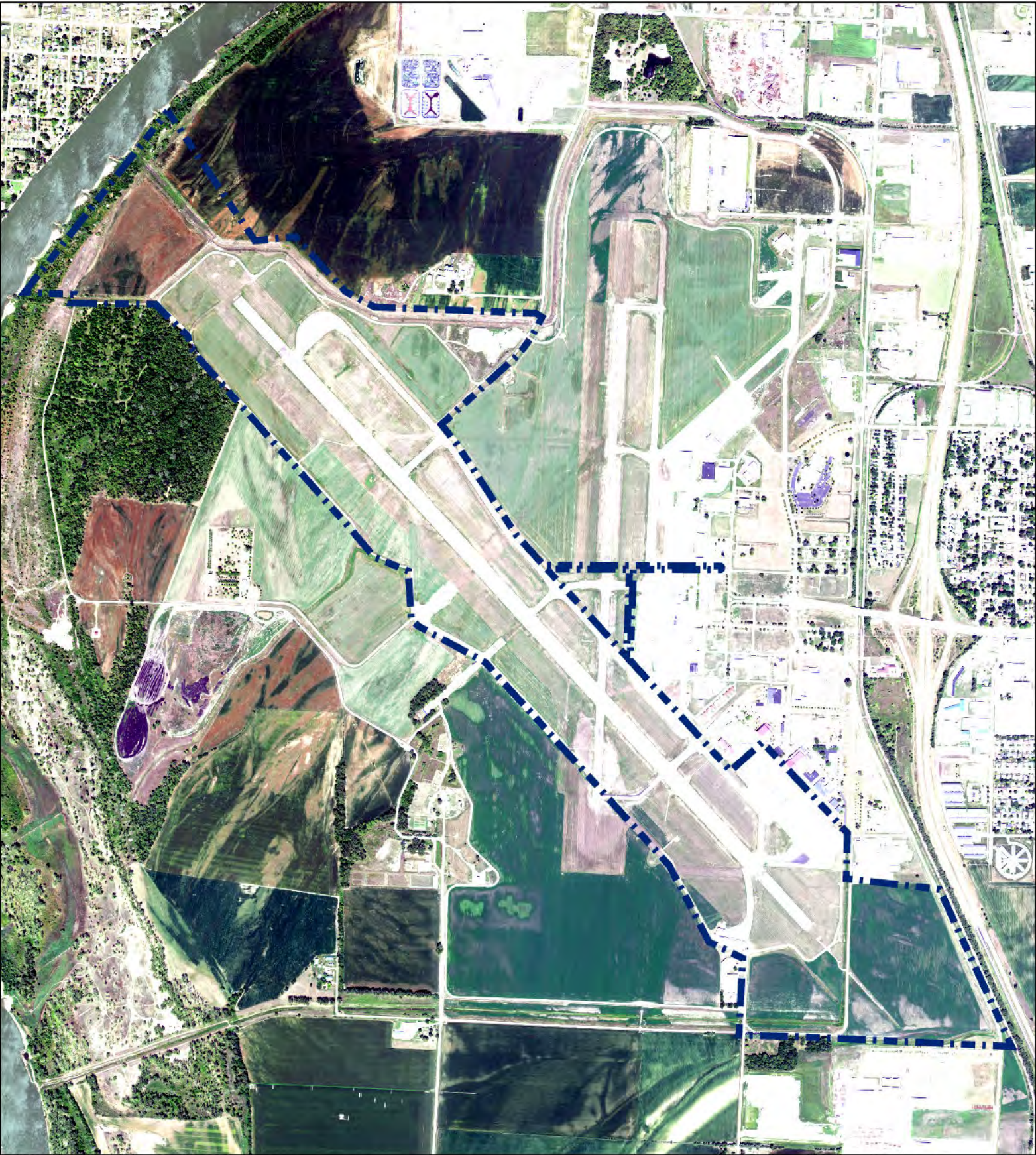
Legend

 Project Study Area

0 1,500 3,000 Feet



Figure A2
2021 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

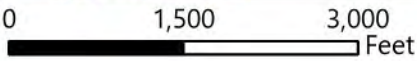
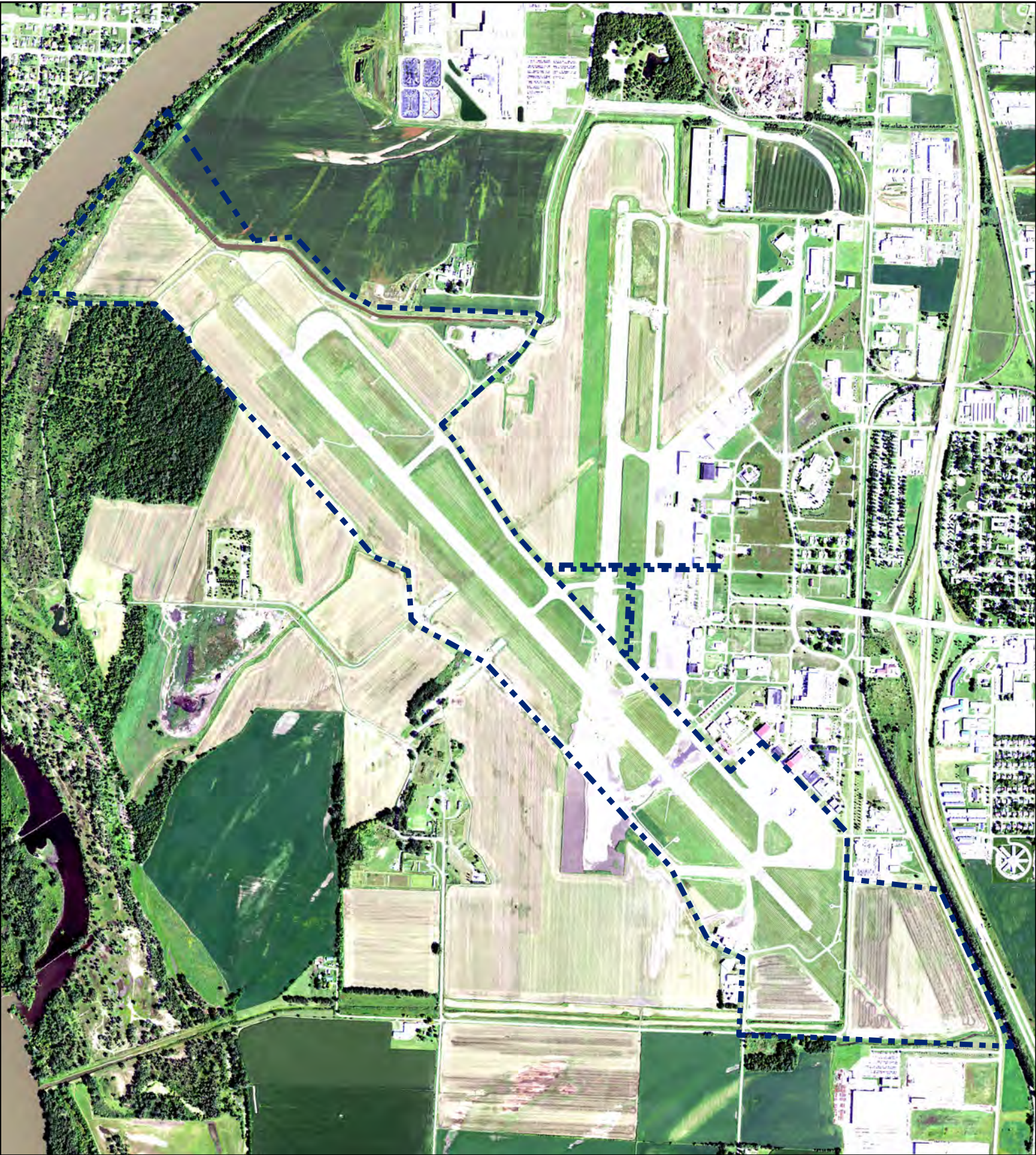


Figure A3
2019 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

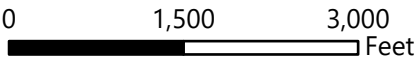
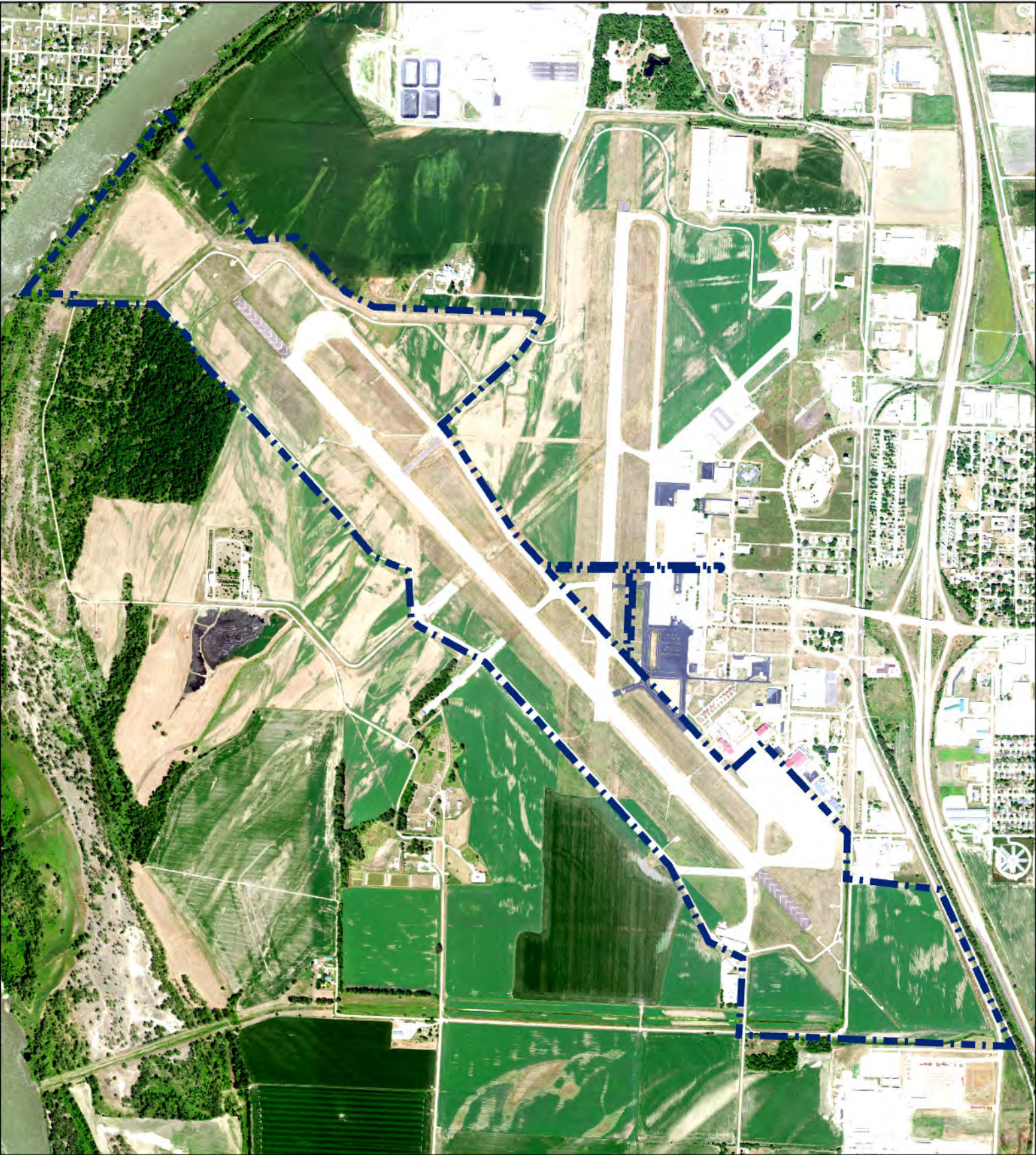


Figure A4
2017 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

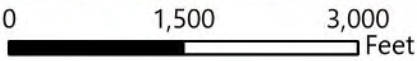
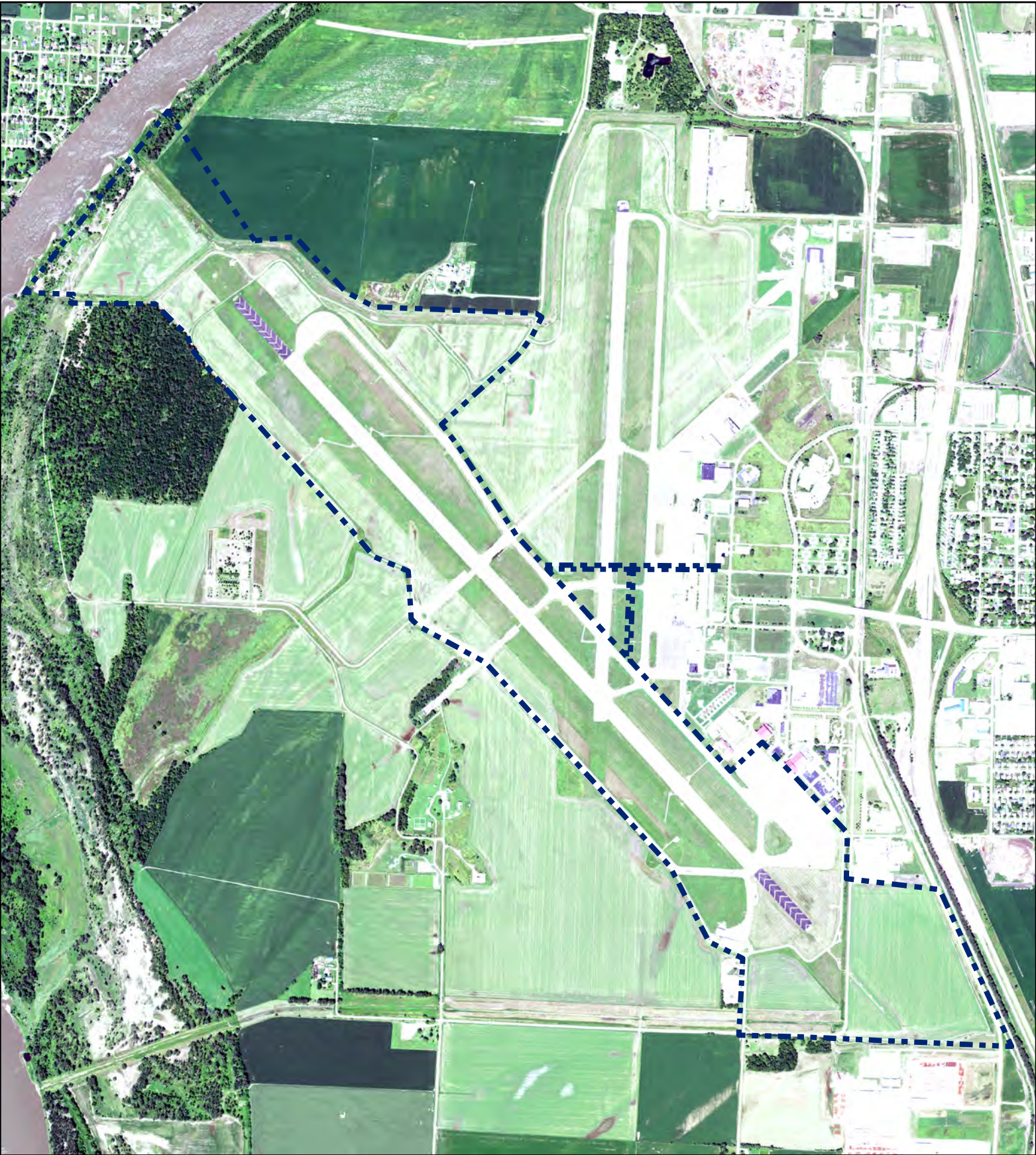


Figure A5
2015 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

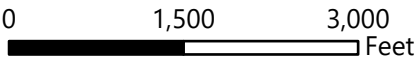
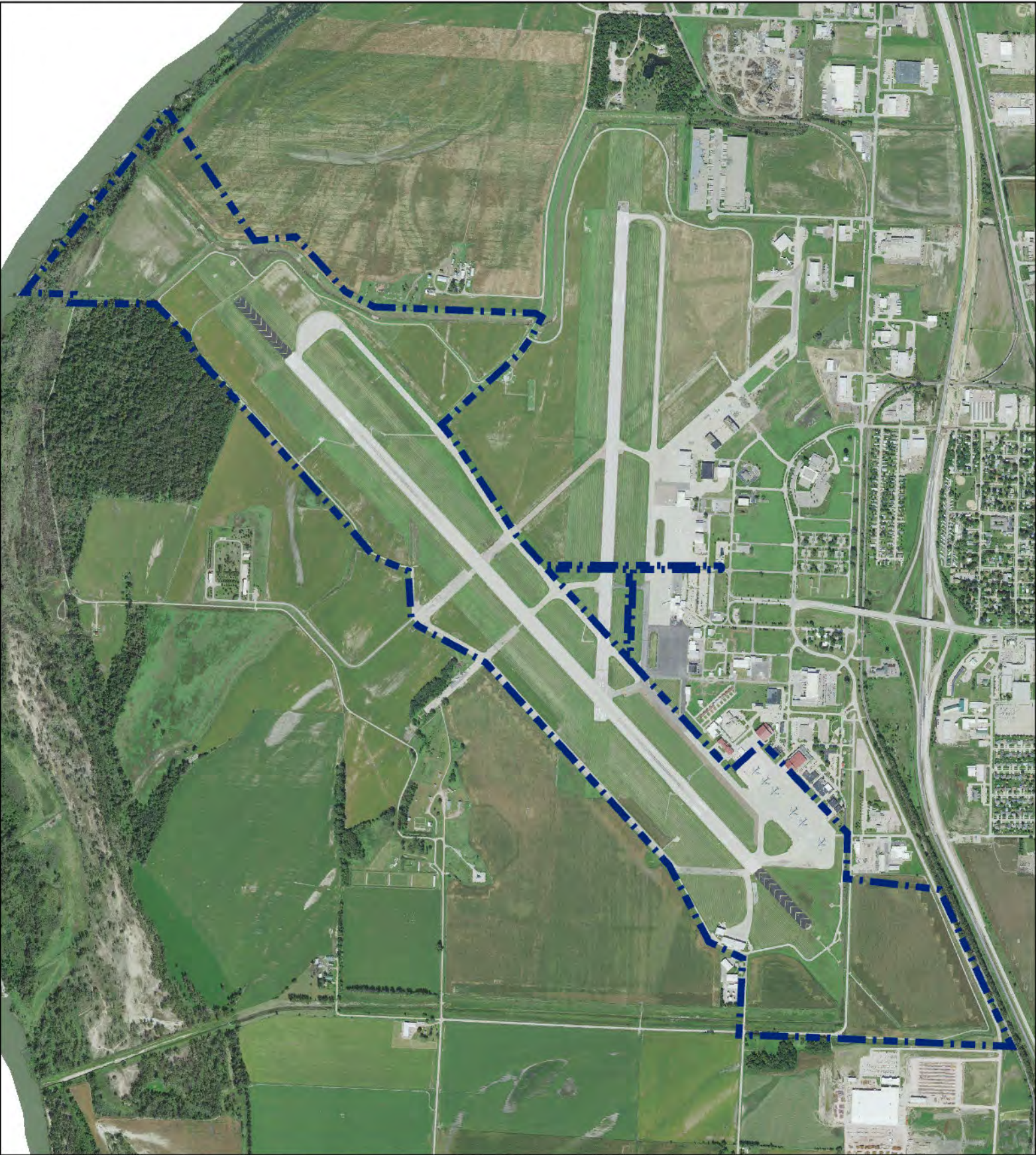


Figure A6
2014 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

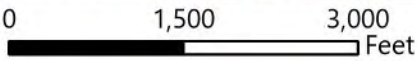


Figure A7
2013 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

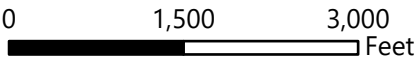


Figure A8
2011 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

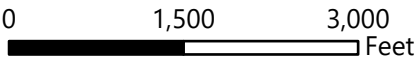


Figure A9
2010 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

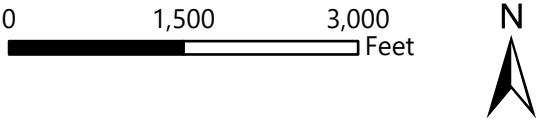


Figure A10
2009 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

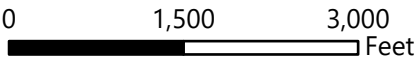


Figure A11
2008 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

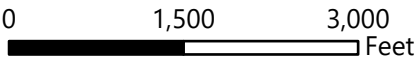


Figure A12
2007 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

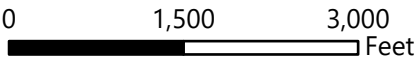


Figure A13
2006 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

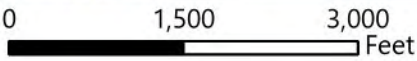


Figure A14
2005 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

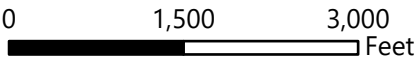
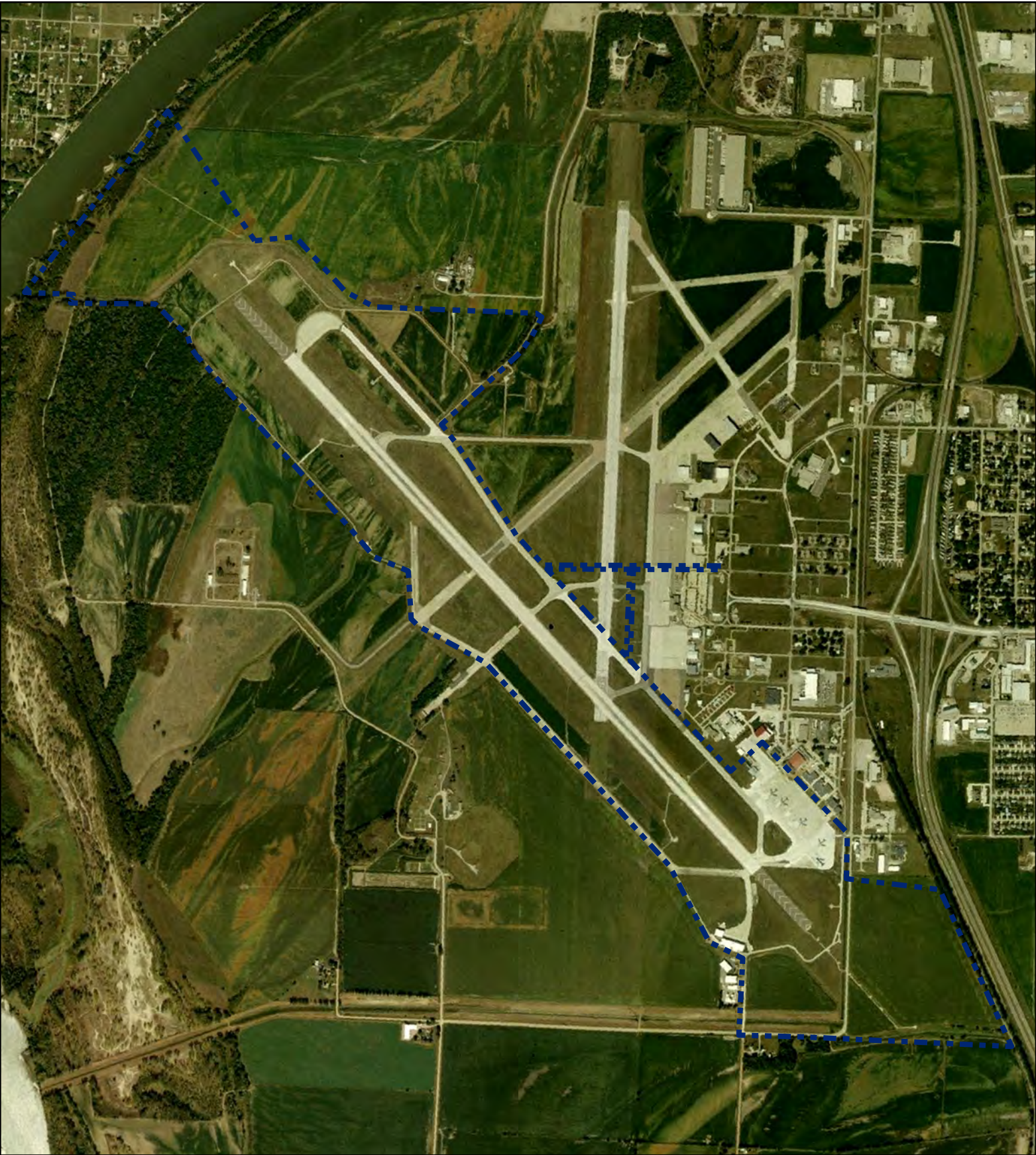


Figure A15
2004 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

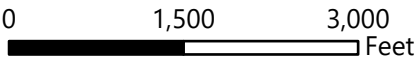
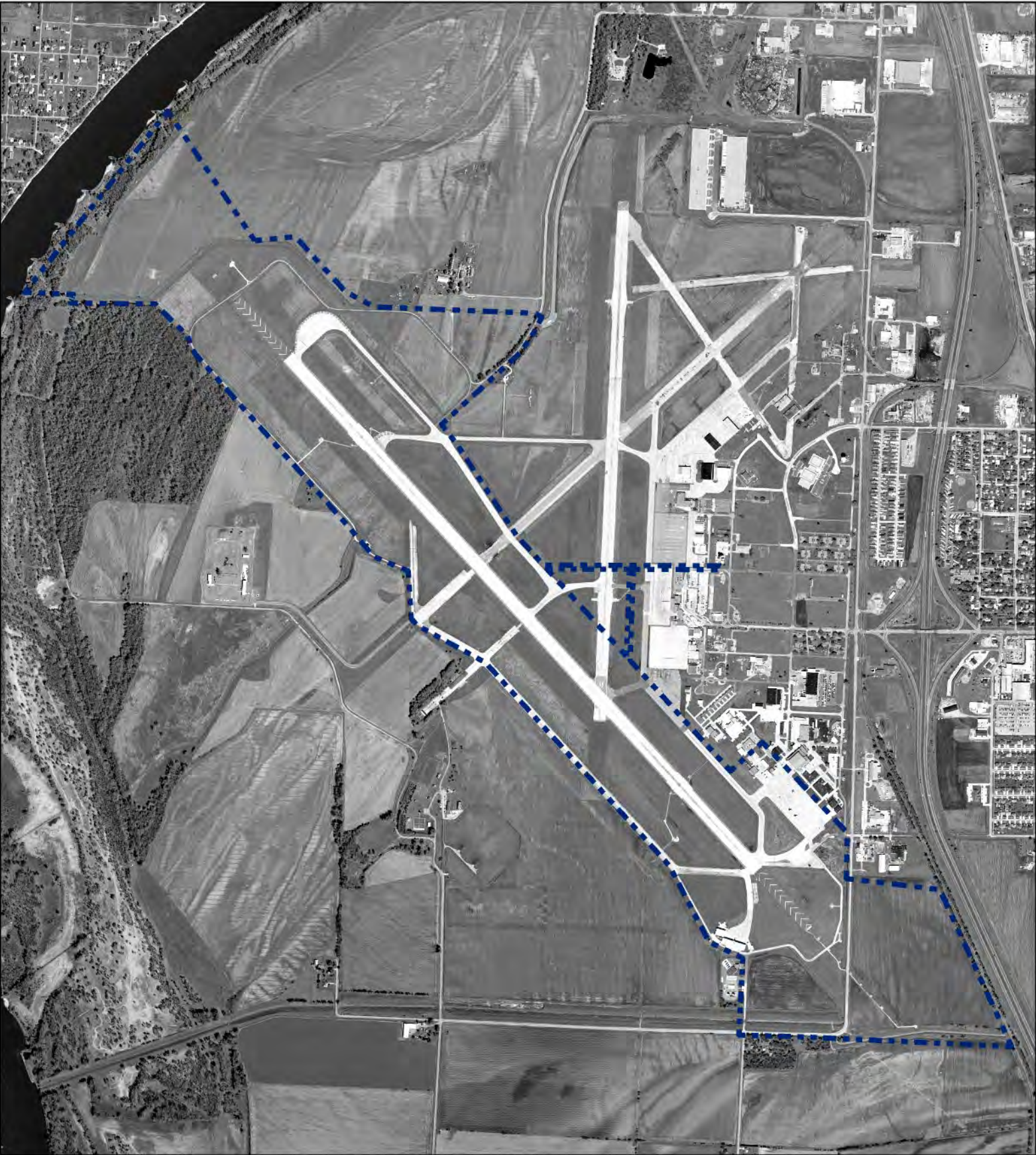


Figure A16
2002 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

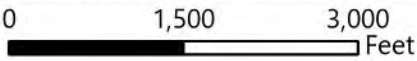


Figure A17
1990s Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area

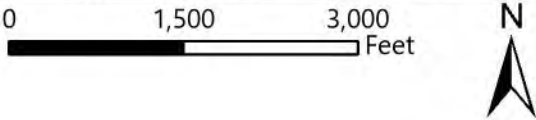
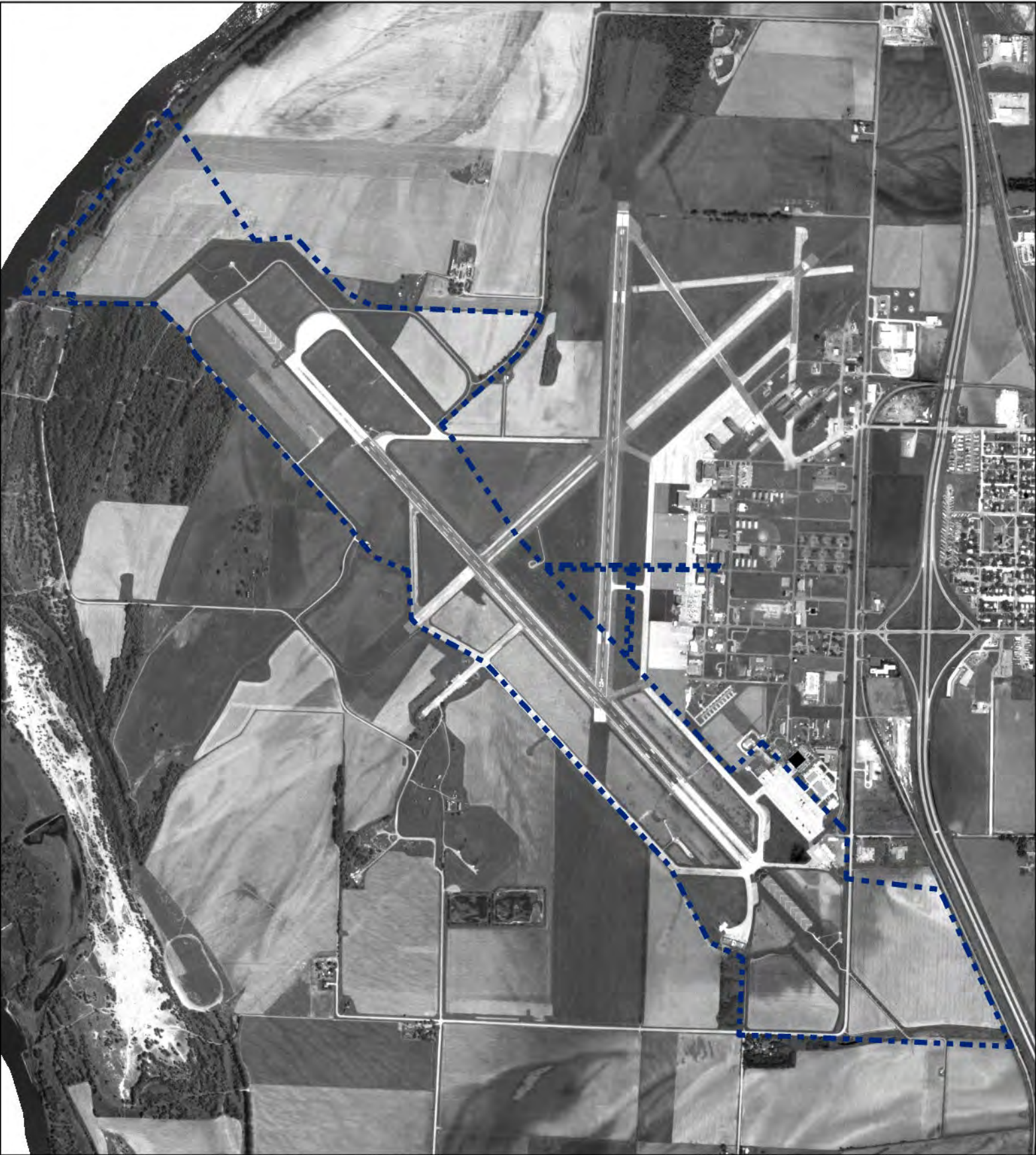


Figure A18
1980s Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

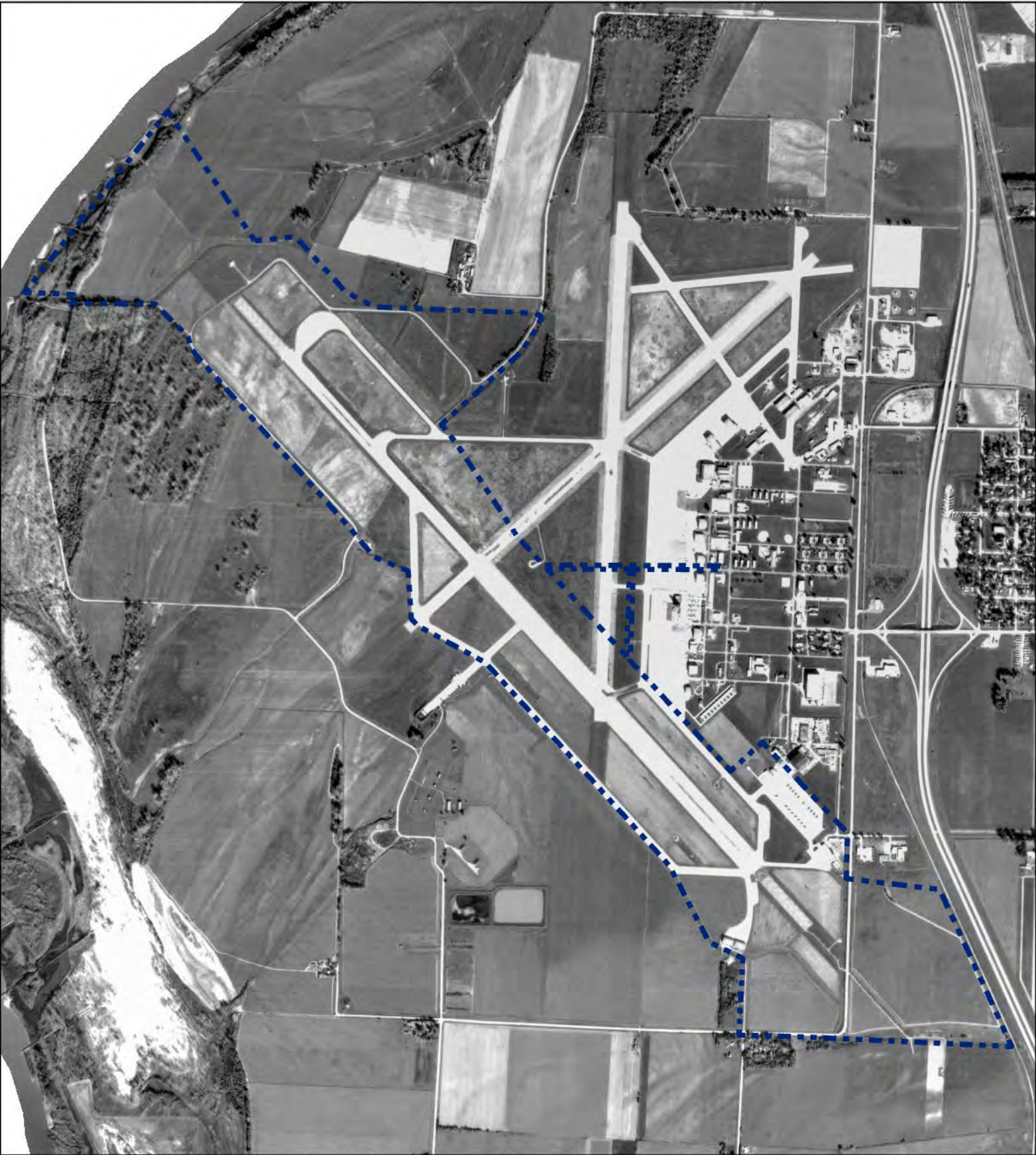
Legend

 Project Study Area

0 1,500 3,000 Feet



Figure A19
1970s Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

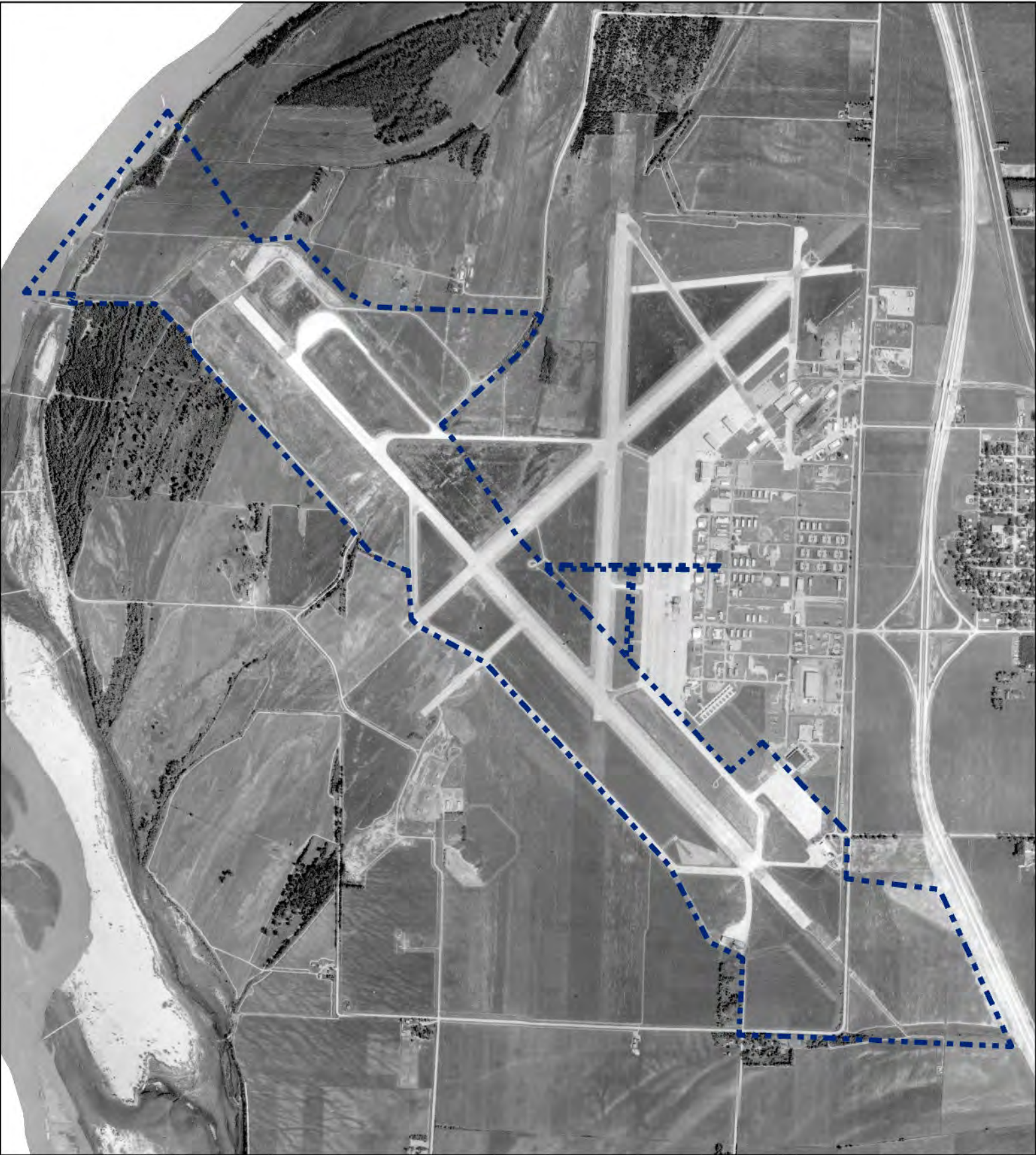
Legend

 Project Study Area

0 1,500 3,000 Feet



Figure A20
1960s Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

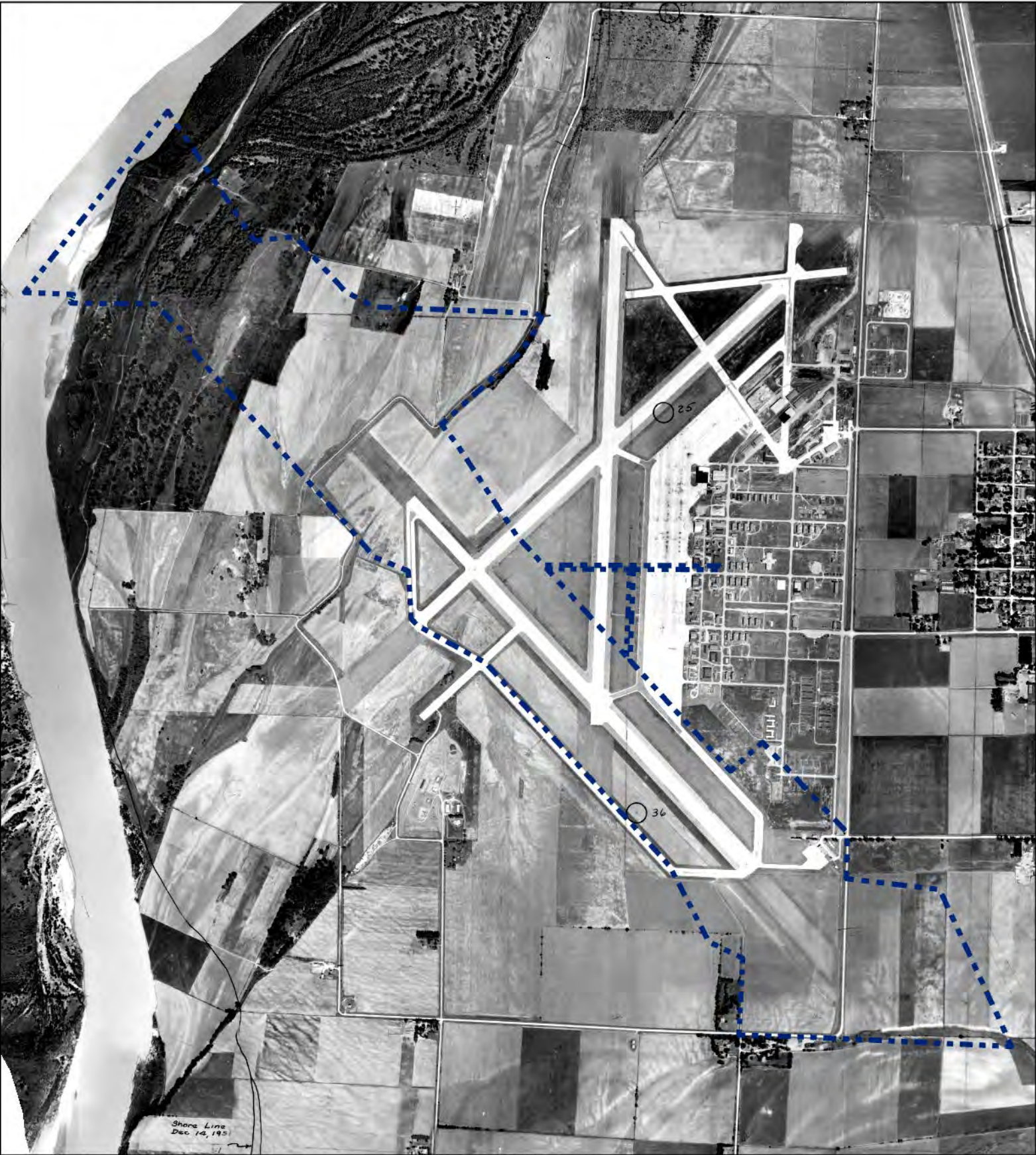
Legend

 Project Study Area

0 1,500 3,000 Feet



Figure A21
1950s Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

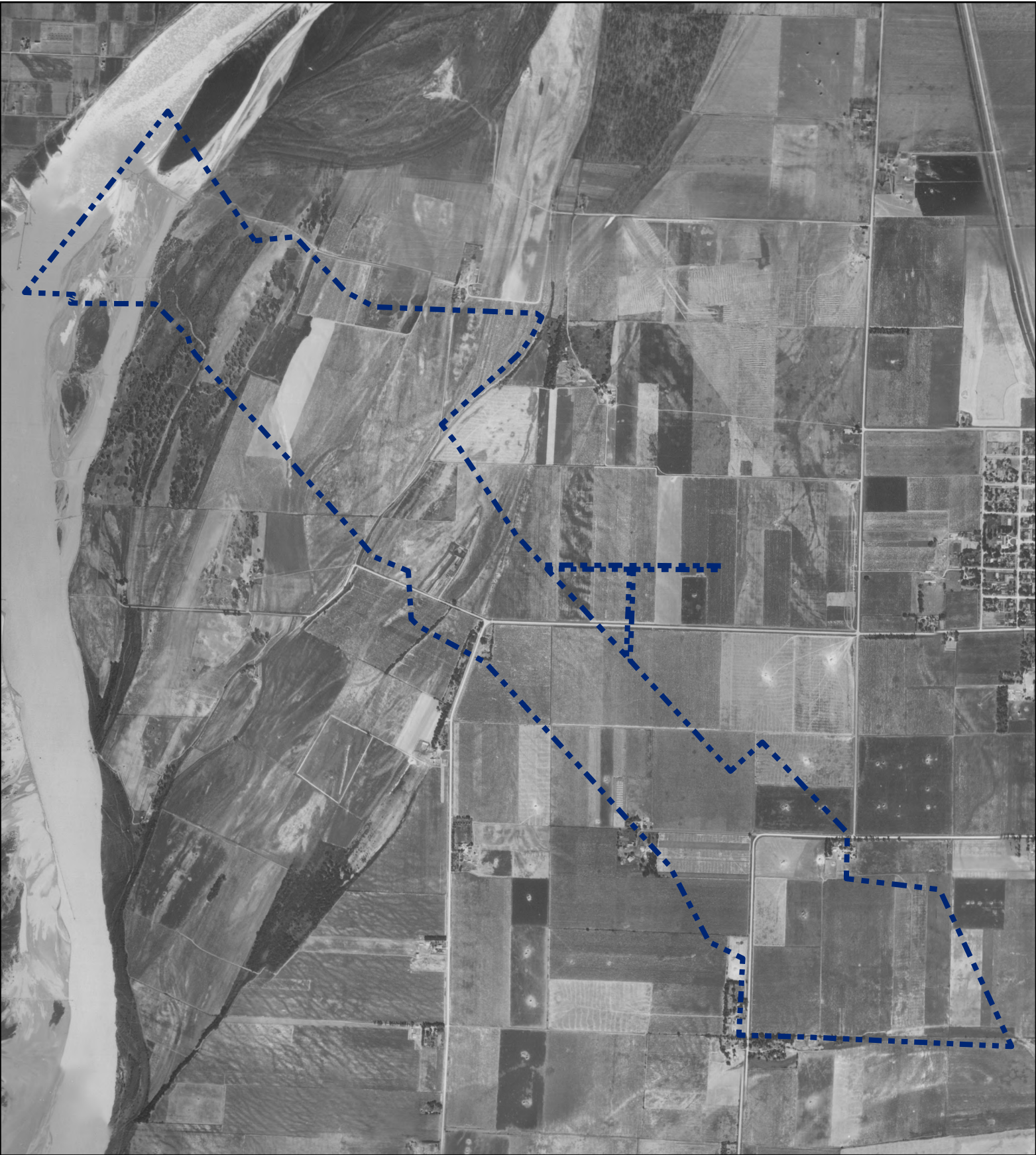
Legend

 Project Study Area

0 1,500 3,000
Feet



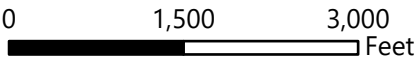
Figure A22
1930 Aerial Mapping



Source: Iowa Geographic Map Server - <https://ortho.gis.iastate.edu/>

Legend

 Project Study Area



Attachment D
Photographic Log

Client's Name: RS&H	Site Location: Sioux Gateway Airport	Project No. 23S049.00
-------------------------------	--	---------------------------------

Photo No. 1	Date: 5/8/24	
Direction Photo Taken: Southeast		
Photo Taken By: Morgan Langer		
Description: View of Ditch D-1 from bottom of the bank near the Missouri River.		

Photo No. 2	Date: 5/8/24	
Direction Photo Taken: Northwest		
Photo Taken By: Morgan Langer		
Description: Scrub/shrub vegetation along northwestern Project Study Area border.		

Client's Name: RS&H	Site Location: Sioux Gateway Airport	Project No. 23S049.00
-------------------------------	--	---------------------------------

Photo No. 3	Date: 5/8/24	
Direction Photo Taken: Southeast		
Photo Taken By: Morgan Langer		
Description: Scrub/shrub vegetation along northwestern border of the Project Study Area.		

Photo No. 4	Date: 5/8/24	
Direction Photo Taken: Northeast		
Photo Taken By: Morgan Langer		
Description: Scrub/shrub vegetation along northwestern border of the Project Study Area.		

Client's Name: RS&H	Site Location: Sioux Gateway Airport	Project No. 23S049.00
-------------------------------	--	---------------------------------

Photo No. 5	Date: 5/8/24	
Direction Photo Taken: North		
Photo Taken By: Morgan Langer		
Description: Scrub/shrub vegetation along northwestern border of the Project Study Area.		

Photo No. 6	Date: 5/8/24	
Direction Photo Taken: Northwest		
Photo Taken By: Morgan Langer		
Description: Wooded vegetation area southwest of the Project Study Area.		

Client's Name: RS&H	Site Location: Sioux Gateway Airport	Project No. 23S049.00
-------------------------------	--	---------------------------------

Photo No. 7	Date: 5/8/24	
Direction Photo Taken: Northwest		
Photo Taken By: Morgan Langer		
Description: Farm field adjacent to scrub/shrub vegetation in northwest portion of Project Study Area		

Photo No. 8	Date: 5/8/24	
Direction Photo Taken: West		
Photo Taken By: Morgan Langer		
Description: Ditch adjacent to perimeter road in western portion of Project Study Area		

Client's Name: RS&H	Site Location: Sioux Gateway Airport	Project No. 23S049.00
-------------------------------	--	---------------------------------

Photo No. 9	Date: 5/8/24	
Direction Photo Taken: Southeast		
Photo Taken By: Morgan Langer		
Description: Open herbaceous area near perimeter road		

Photo No. 10	Date: 5/8/24	
Direction Photo Taken: West		
Photo Taken By: Morgan Langer		
Description: Ditch D-1 within the Project Study Area		

Client's Name: RS&H	Site Location: Sioux Gateway Airport	Project No. 23S049.00
-------------------------------	--	---------------------------------

Photo No. 11	Date: 5/8/24	
Direction Photo Taken: Northwest		
Photo Taken By: Morgan Langer		
Description: Open herbaceous area in central portion of Project Study Area		

Photo No. 12	Date: 5/8/24	
Direction Photo Taken: Southeast		
Photo Taken By: Morgan Langer		
Description: Open herbaceous area in central portion of Project Study Area		

Client's Name: RS&H	Site Location: Sioux Gateway Airport	Project No. 23S049.00
-------------------------------	--	---------------------------------

Photo No. 13	Date: 5/8/24	
Direction Photo Taken: Northeast		
Photo Taken By: Morgan Langer		
Description: Airport buildings in eastern portion of Project Study Area		

Photo No. 14	Date: 5/8/24	
Direction Photo Taken: Southeast		
Photo Taken By: Morgan Langer		
Description: Ditch in southeastern portion of Project Study Area		

Client's Name: RS&H	Site Location: Sioux Gateway Airport	Project No. 23S049.00
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Photo No. 15	Date: 5/8/24	
Direction Photo Taken: East		
Photo Taken By: Morgan Langer		
Description: Open herbaceous area on southern end of Project Study Area.		

Photo No. 16	Date: 5/8/24
Direction Photo Taken: Southeast	
Photo Taken By: Morgan Langer	
Description: Tree line outside of the Project Study Area near Southbridge Drive	

A photograph showing a wide, grassy field in the foreground, with a dense line of green trees in the background. Several utility poles with power lines are visible, stretching from the left towards the center. The sky is filled with heavy, grey clouds. The field appears to be a mix of green grass and some dry patches. In the distance, a paved area or road is partially visible on the right side.

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