APPENDIX H

Wetlands

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

THIS PAGE INTENTIONALLY LEFT BLANK

Appendix H.1

Approved Jurisdictional Determination

THIS PAGE INTENTIONALLY LEFT BLANK

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, ROCK ISLAND DISTRICT
PO BOX 2004 CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61204-2004

April 21, 2025

Regulatory Division

SUBJECT: CEMVR-RD-2024-0547

Sioux Gateway Airport
C/O Mr. Mike Collett
405 6th Street
Sioux City, Iowa 5111

Dear Mr. Collett:

Our office has reviewed your approved jurisdictional determination received September 5, 2024, concerning the proposed Sioux Gateway Airport expansion located at 2403 Aviation Boulevard, Sioux City, Section 36, Township 88 North, Range 48 West, Woodbury County, Iowa. (42.4145 / -96.40695)

We have determined that any impacts to D-1, D-2, D-3, D-4, D-5, D-6, D-7, and S-1 do not occur in a Water of the United States and therefore does not require a Department of the Army (DA) Section 404 permit. W-1 (0.13 acres PEM) is not included in this determination. W-1 is assumed to be jurisdictional but as this wetland will not be impacted by the project it was not included in the AJD, and a PJD will not be issued. The decision regarding this action is based on information found in the administrative record which documents the District's decision-making process, the basis for the decision, and the final decision.

This letter contains an Approved Jurisdictional Determination (AJD) for the subject site, D-1 (6,040LF), D-2 (2,080LF), D-3 (1,060LF), D-4 (950LF), D-5 (3,805LF), D-6 (2,250LF), D-7 (740LF), and S-1 (1,385LF). If you object to this jurisdictional determination, you may request an administrative appeal under Corps regulations found at 33 CFR Part 331. Enclosed is a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this approved jurisdictional determination, you must submit a completed RFA form to the Mississippi Valley Division Office at the following address:

Brian Oberlies
Regulatory Appeals Review Officer
Mississippi Valley Division
1400 Walnut Street
Vicksburg, Mississippi 39180

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. It is not necessary to submit an RFA form to the Division Office if you do not object to the AJD contained in this letter.

You are advised that this determination for your project is valid for five years from the date of this letter. If the project is not completed within this five-year period or your project plans change, you should contact our office for another determination.

Although a DA permit will not be required for the project, this does not eliminate the requirement that you must still acquire other applicable Federal, state, and local permits.

The Rock Island District Regulatory Division is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our web site at https://regulatory.ops.usace.army.mil/ords/f?p=136:4 (be sure to select "Rock Island District" under the area entitled: Which Corps office did you deal with?).

Should you have any questions, please contact me email Kirsten.L.Brown@usace.army.mil or phone 309-215-5831.

Sincerely,

Kirsten Brown
Senior PM, Western Branch
Regulatory Division

Enclosures

cc:

IADNR
section401wqc@dnr.iowa.gov

Sioux Gateway Airport
mcollett@sioux-city.org

Foth
eva.moritz@foth.com

Omaha District
adam.r.nebel@usace.army.mil
christine.k.cieslik@usace.army.mil

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ROCK ISLAND DISTRICT
CLOCK TOWER BUILDING, P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204

CEMVR April 21, 2025

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023) ,[1] 2024-0547[2]

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.[3] AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.[4] For the purposes of this AJD, we have relied on section 10 of the Rivers and Harbors Act of 1899 (RHA),[5] the Clean Water Act (CWA) implementing regulations published by the Department of the Army in 1986 and amended in 1993 (references 2.a. and 2.b. respectively), the 2008 *Rapanos-Carabell* guidance (reference 2.c.), and other applicable guidance, relevant case law and longstanding practice, (collectively the pre-2015 regulatory regime), and the *Sackett* decision (reference 2.d.) in evaluating jurisdiction.

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. The features addressed in this AJD were evaluated consistent with the definition of “waters of the United States” found in the pre-2015 regulatory regime and consistent with the Supreme Court's decision in *Sackett*. This AJD did not rely on the 2023 “Revised Definition of ‘Waters of the United States,’” as

[1] While the Supreme Court’s decision in *Sackett* had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.
[2] When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, interstate water, or territorial seas that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).
[3] 33 CFR 331.2.
[4] Regulatory Guidance Letter 05-02.
[5] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

amended on 8 September 2023 (Amended 2023 Rule) because, as of the date of this decision, the Amended 2023 Rule is not applicable Iowa due to litigation.

1. SUMMARY OF CONCLUSIONS.

    a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

        - Ditch 1 – generally non-jurisdictional – 6,040 LF
        - Ditch 2 – generally non-jurisdictional – 2,080 LF
        - Ditch 3 – generally non-jurisdictional – 1,060 LF
        - Ditch 4 – generally non-jurisdictional – 950 LF
        - Ditch 5 – generally non-jurisdictional – 3,805 LF
        - Ditch 6 – generally non-jurisdictional – 2,250 LF
        - Ditch 7 – generally non-jurisdictional – 740 LF
        - Stream 1 – generally non-jurisdictional – 1,385 LF

2. REFERENCES.

    a. Final Rule for Regulatory Programs of the Corps of Engineers, 51 FR 41206 (November 13, 1986).

    b. Clean Water Act Regulatory Programs, 58 FR 45008 (August 25, 1993).

    c. U.S. EPA & U.S. Army Corps of Engineers, Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States* (December 2, 2008)

    d. *Sackett v. EPA*, 598 U.S. _, 143 S. Ct. 1322 (2023)

3. REVIEW AREA. 710 acre Sioux Gateway Airport, 2403 Aviation Boulevard, Sioux City, Woodbury County, Iowa 42.4145 -96.40695

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), INTERSTATE WATER, OR THE TERRITORIAL SEAS TO WHICH THE AQUATIC RESOURCE IS CONNECTED. Missouri River[6]

[6] This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899

5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, INTERSTATE WATER, OR THE TERRITORIAL SEAS roadside drainage ditches → Missouri River (TNW)

6. SECTION 10 JURISDICTIONAL WATERS[7]: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.[8] N/A

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the pre-2015 regulatory regime and consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the pre-2015 regulatory regime. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

    a. TNWs (a)(1): N/A

    b. Interstate Waters (a)(2): N/A

    c. Other Waters (a)(3): N/A

    d. Impoundments (a)(4): N/A

(RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.
[7] 33 CFR 329.9(a)

[8] This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

e. Tributaries (a)(5): N/A

f. The territorial seas (a)(6): N/A

g. Adjacent wetlands (a)(7): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified as "generally non-jurisdictional" in the preamble to the 1986 regulations (referred to as "preamble waters").[9] Include size of the aquatic resource or feature within the review area and describe how it was determined to be non-jurisdictional under the CWA as a preamble water. N/A

b. Describe aquatic resources and features within the review area identified as "generally not jurisdictional" in the *Rapanos* guidance. Include size of the aquatic resource or feature within the review area and describe how it was determined to be non-jurisdictional under the CWA based on the criteria listed in the guidance.

- Ditch 1 – generally non-jurisdictional – roadside/airport drainage ditch constructed in uplands to drain uplands between 1958 – 1963, does not carry a relatively permanent flow, and is not a relocated WUS – 6,040 LF

- Ditch 2 – generally non-jurisdictional – roadside/airport drainage ditch constructed in uplands to drain uplands between 1958 – 1963, does not carry a relatively permanent flow, and is not a relocated WUS – 2,080 LF

- Ditch 3 – generally non-jurisdictional – roadside/airport drainage ditch constructed in uplands to drain uplands between 1958 – 1963, does not carry a relatively permanent flow, and is not a relocated WUS – 1,060 LF

- Ditch 4 – generally non-jurisdictional – roadside/airport drainage ditch constructed in uplands to drain uplands between 1958 – 1963, does not carry a relatively permanent flow, and is not a relocated WUS – 950 LF

- Ditch 5 – generally non-jurisdictional – roadside/airport drainage ditch constructed in uplands to drain uplands between 1958 – 1963, does not carry a relatively permanent flow, and is not a relocated WUS – 3,805 LF

[9] 51 FR 41217, November 13, 1986.

- Ditch 6 – generally non-jurisdictional – roadside/airport drainage ditch constructed in uplands to drain uplands between 1958 – 1963, does not carry a relatively permanent flow, and is not a relocated WUS – 2,250 LF

- Ditch 7 – generally non-jurisdictional – roadside/airport drainage ditch constructed in uplands to drain uplands between 1958 – 1963, does not carry a relatively permanent flow, and is not a relocated WUS – 740 LF

- Stream 1 – generally non-jurisdictional – roadside/airport drainage ditch constructed in uplands to drain uplands between 1958 – 1963, does not carry a relatively permanent flow, and is not a relocated WUS – 1,385 LF

c. Describe aquatic resources and features identified within the review area as waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA. Include the size of the waste treatment system within the review area and describe how it was determined to be a waste treatment system. N/A

d. Describe aquatic resources and features within the review area determined to be prior converted cropland in accordance with the 1993 regulations (reference 2.b.). Include the size of the aquatic resource or feature within the review area and describe how it was determined to be prior converted cropland. N/A

e. Describe aquatic resources (i.e. lakes and ponds) within the review area, which do not have a nexus to interstate or foreign commerce, and prior to the January 2001 Supreme Court decision in "*SWANCC*," would have been jurisdictional based solely on the "Migratory Bird Rule." Include the size of the aquatic resource or feature, and how it was determined to be an "isolated water" in accordance with *SWANCC*. N/A

f. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the pre-2015 regulatory regime consistent with the Supreme Court's decision in *Sackett* (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).
N/A

9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

a. August 7, 2024 wetland delineation conducted by Foth on May 8, 2024

b. Wetland delineation aerial and site photos

c. USGS Topo maps – 1930, 1955, 1958, 1963, 1964, 2022

d. NWI

e. Hydric soil classification

f. LiDAR w/hillshade

g. Historical aerial images 1930 – recent

h. APT

i. Historic weather data

10. OTHER SUPPORTING INFORMATION. N/A

11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Sioux City Airport	File Number: 2024-0547	Date: 4/21/2025
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL WITHOUT PREJUDICE	C
	PERMIT DENIAL WITH PREJUDICE	D
X	APPROVED JURISDICTIONAL DETERMINATION	E
	PRELIMINARY JURISDICTIONAL DETERMINATION	F

SECTION I

The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/appeals/ or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C. PERMIT DENIAL WITHOUT PREJUDICE: Not appealable
You received a permit denial without prejudice because a required Federal, state, and/or local authorization and/or certification has been denied for activities which also require a Department of the Army permit before final action has been taken on the Army permit application. The permit denial without prejudice is not appealable. There is no prejudice to the right of the applicant to reinstate processing of the Army permit application if subsequent approval is received from the appropriate Federal, state, and/or local agency on a previously denied authorization and/or certification.

D: PERMIT DENIAL WITH PREJUDICE: You may appeal the permit denial
You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information for reconsideration

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

- RECONSIDERATION: You may request that the district engineer reconsider the approved JD by submitting new information or data to the district engineer within 60 days of the date of this notice. The district will determine whether the information submitted qualifies as new information or data that justifies reconsideration of the approved JD. A reconsideration request does not initiate the appeal process. You may submit a request for appeal to the division engineer to preserve your appeal rights while the district is determining whether the submitted information qualifies for a reconsideration.

F: PRELIMINARY JURISDICTIONAL DETERMINATION: Not appealable
You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision you may contact:
Kirsten Brown
US Army Corps of Engineers District Rock Island ATTN: Regulatory Division
Clock Tower Building
Post Office Box 2004
Rock Island, Illinois 61204-2004
(309) 215-5831

If you have questions regarding the appeal process, or to submit your request for appeal, you may contact:
Brian Oberlies
Regulatory Appeals Review Officer
Mississippi Valley Division
1400 Walnut St.
Vicksburg, MS 39180
(601) 634-5820

SECTION II – REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. Use additional pages as necessary. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:
Email address of appellant and/or agent:	Telephone number:

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

September 4, 2024

Ms. Kirsten Brown
United States Army Corps of Engineers
P.O. Box 2004, Clock Tower Building
Rock Island, IL 61204-2004

RE: Section 404 Permit Application: Environmental Assessment for the Runway Program, Sioux Gateway Airport, 2403 Aviation Boulevard, Sioux City, Iowa, CEMVR-RD-2024-0547

Dear Ms. Brown:

Foth Infrastructure & Environment, LLC is assisting RS&H Iowa, P.C. in the preparation of an Environmental Assessment (EA) on behalf of the Sioux Gateway Airport. The Proposed Action includes Runway 13-31 reconstruction and extension, parallel taxiway extension, land acquisition, as well as other associated developments. The Federal Aviation Administration is the lead agency for the National Environmental Policy Act (NEPA) documents. The Project Study Area and Proposed Action are depicted on Figures 1 and 2.

In an email dated April 30, 2024, the U.S. Army Corps of Engineers (USACE) submitted comments regarding the EA (see attachment). The following items address the USACE comments:

1. It is Foth's opinion that a USACE permit will not be required for the proposed impacts. Three ditches will be impacted by the Proposed Action. These ditches were created in uplands to drain uplands, do not carry a relatively permanent flow of water, and do not meet the definition of a Waters of the United States (WUS). Wetlands will not be impacted by the Proposed Action. The following tables summarize the proposed impacts, which are depicted on the attached Figures 2 through 2B.

Table 1 – Wetland Impact Summary

Wetland	Delineated Area (acres)	Wetland Impact (acres)
WL-1	0.13	0.00
Total	**0.13**	**0.00**

Table 2 – Non-Jurisdictional Feature Impact Summary

ID	WUS Type	Delineated Length (feet)	Impact Length (feet)	Purpose of Impact
D-1	Upland Ditch	6,040	2,485	Drainage Ditch Realignment
D-2	Upland Ditch	2,080	1,075	Perimeter Road Realignment, Blast Pad Construction
D-3	Roadside Ditch	1,060		
D-4	Upland Ditch	950	950	Blast Pad Construction
D-5	Roadside Ditch	3,805	3,250	Blast Pad Construction, Cable Replacement
D-6	Roadside Ditch	2,205		
D-7	Upland Ditch	740		
S-1	Swale	1,385		
Total		18,265	7,760	

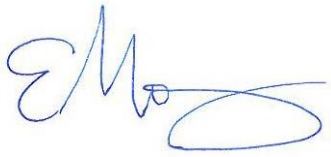
2. It is Foth's opinion that the relocated drainage ditch on the northwest corner of the Project Study Area is a non-jurisdictional feature. Additional documentation regarding Ditch 1 can be found in Foth's Wetland & WUS Delineation Report.
3. A Wetland & WUS Delineation was completed in May 2024 and a copy of the report was uploaded to the Regulatory Request System (RRS) along with the Section 404 Permit Application.
4. Compensatory mitigation is not proposed because wetlands and/or jurisdictional WUS will not be impacted by the Proposed Action.
5. Since compensatory mitigation is not proposed, permittee-responsible mitigation will not be necessary.
6. Copies of the Phase I Cultural Resources Report and Biological Resources Habitat Assessment will be uploaded to RRS.
7. The Proposed Action does not include impacts to the Missouri River levee system.

Please advise our client if a Section 404 Permit will be required for the Proposed Action.

If you have any questions or need additional information, please contact me at 515-251-2524 or Eva.Moritz@Foth.com.

Sincerely,

Foth Infrastructure & Environment, LLC

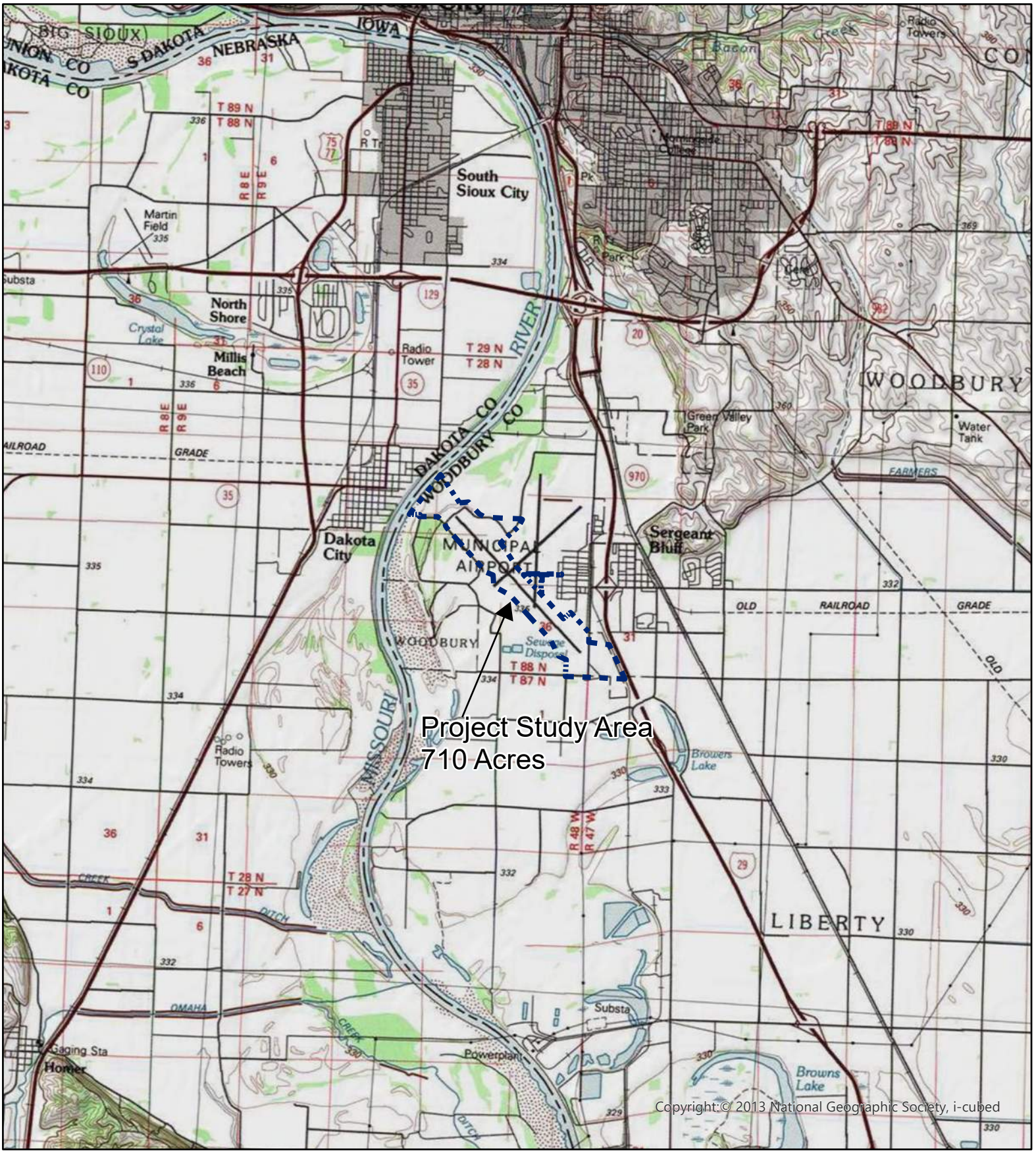


Eva Moritz
Lead Environmental Engineer
Licensed in IA, IL, NE & SD

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

Enclosures

Figure 1
Topographic Map



Sources: ESRI, 2023; Foth, 2024

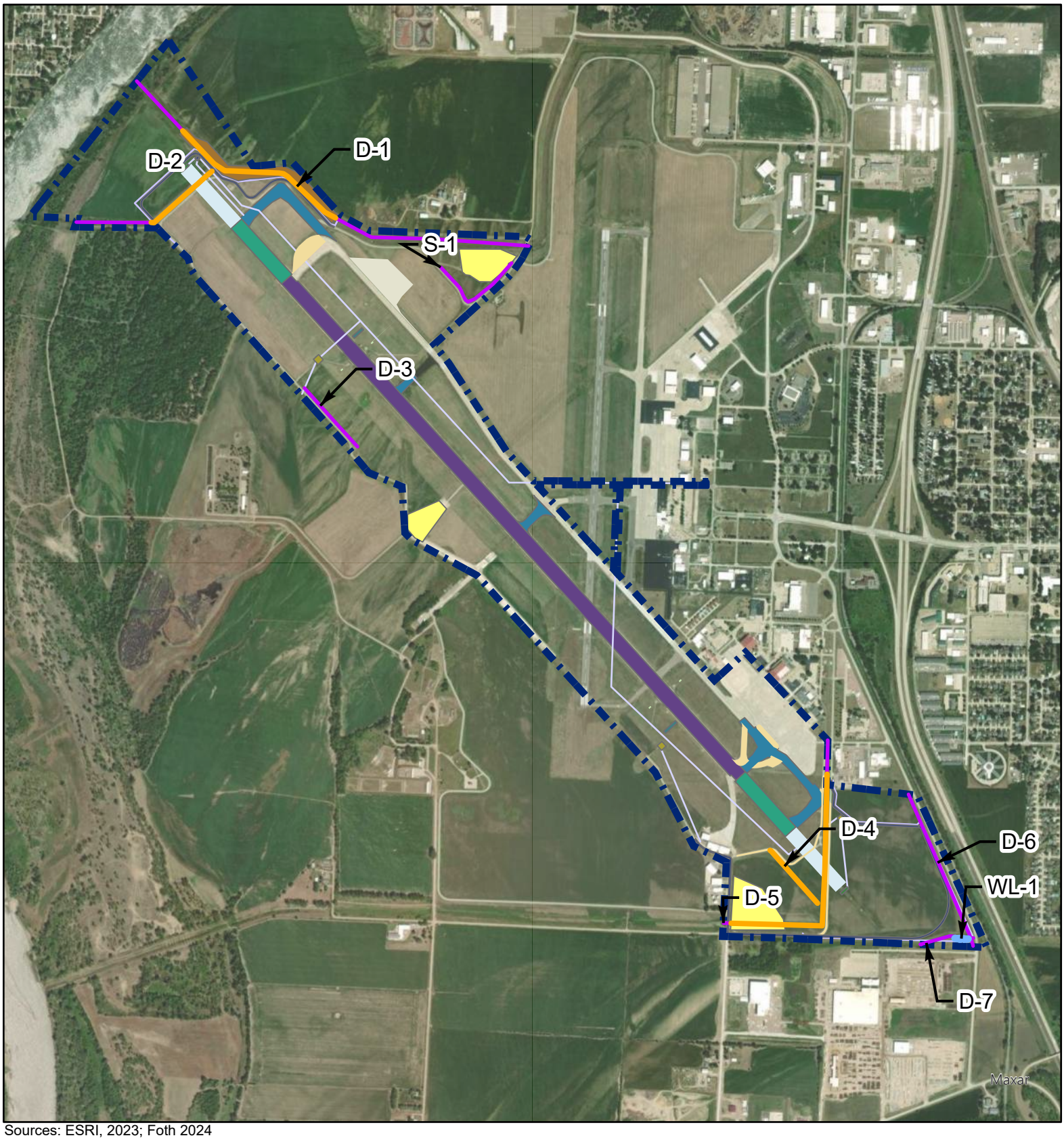
0 5,000 10,000 Feet

N

Legend

Project Study Area

Figure 2
Proposed Action Map



Sources: ESRI, 2023; Foth 2024

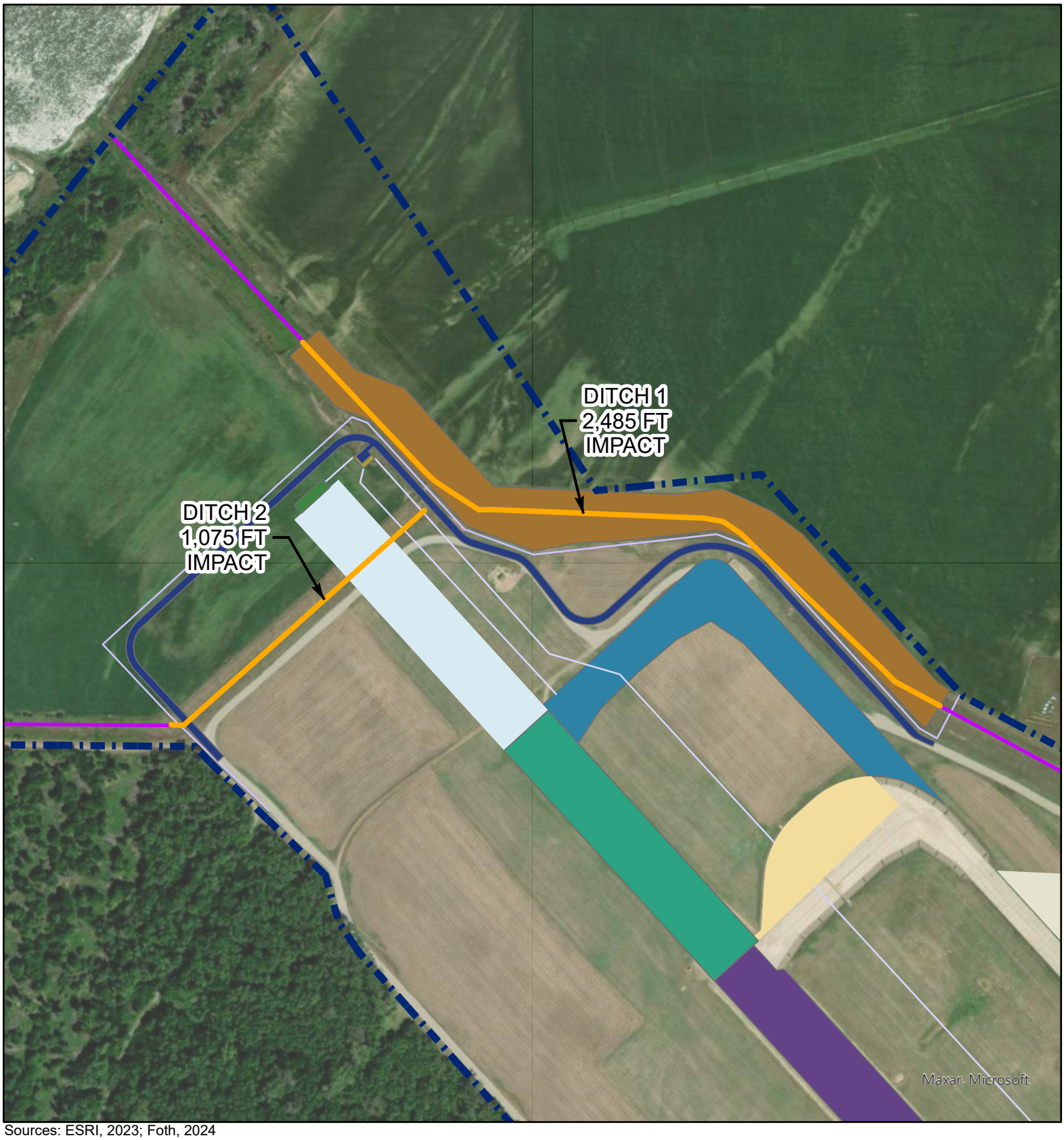
Legend

- Project Study Area
- Wetland
- Non-Jurisdictional Feature
- Non-Jurisdictional Feature Impact
- Aircraft Arresting System Relocation
- Blast Pad Construction
- Cables Replacement
- Drainage Ditch Realignment
- Fence Realignment
- Localizer Relocation
- NAVAID Shelters Construction
- PAPIs Construction
- Pavement Demolition
- Perimter Road Realignment
- Runway Extension
- Runway Reconstruction
- Staging Areas
- Taxiway Construction
- Warm Up-Holding Pad Construction

0 1,500 3,000 Feet

N

Figure 2A
Proposed Action Map



Sources: ESRI, 2023; Foth, 2024

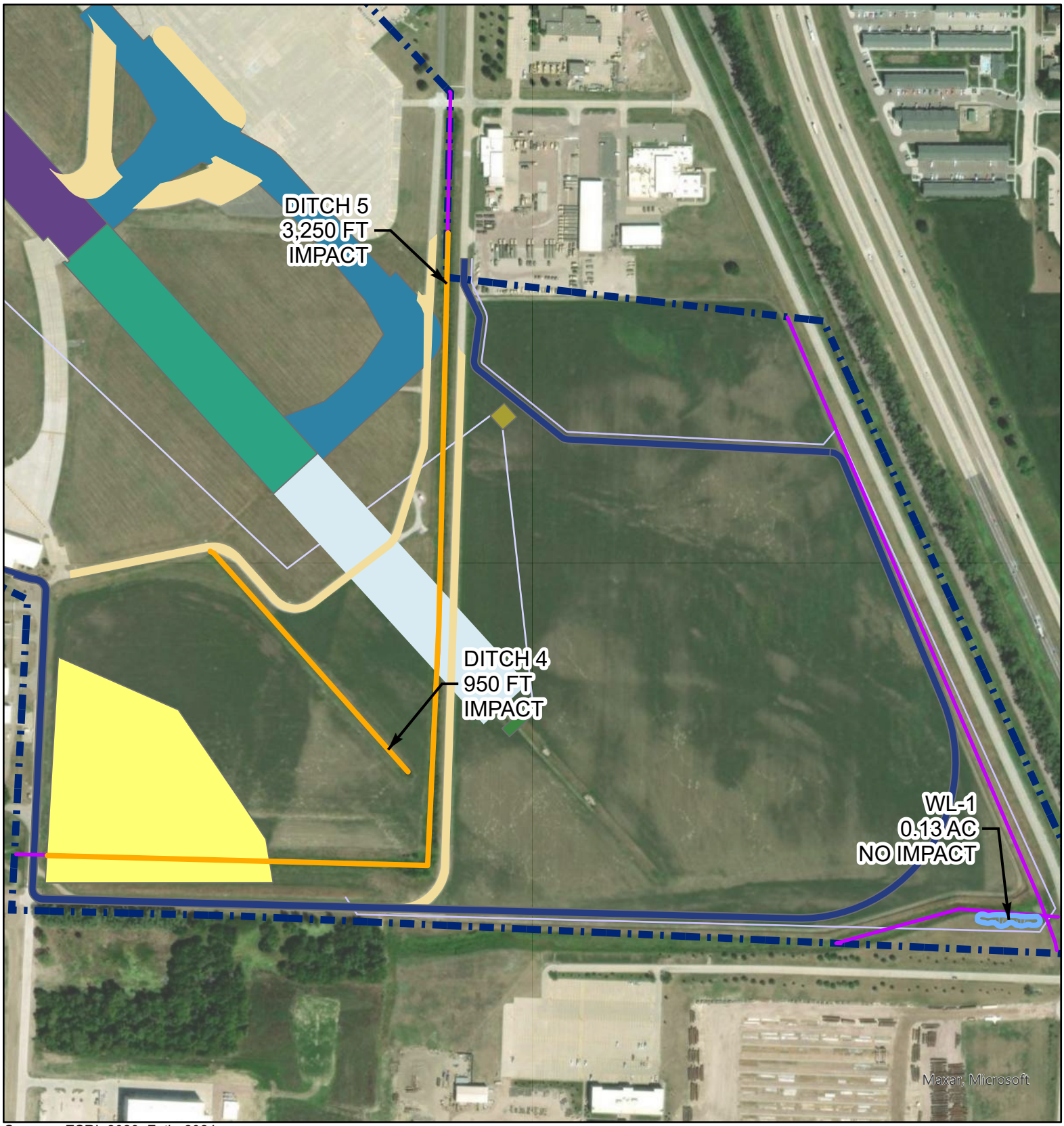
Legend

- Project Study Area
- Non-Jurisdictional Feature
- Non-Jurisdictional Feature Impact
- Blast Pad Construction
- Cables Replacement
- Drainage Ditch Realignment
- Fence Realignment
- Localizer Relocation
- NAVAID Shelters Construction
- Pavement Demolition
- Perimter Road Realignment
- Runway Extension
- Runway Reconstruction
- Taxiway Construction
- Warm Up-Holding Pad Construction

N

0 200 400 900 Feet

Figure 2B
Proposed Action Map



Sources: ESRI, 2023; Foth, 2024

Legend

- Project Study Area
- Wetland
- Non-Jurisdictional Feature
- Non-Jurisdictional Feature Impact
- Blast Pad Construction
- Cables Replacement
- Fence Realignment
- Localizer Relocation
- NAVAID Shelters Construction
- Pavement Demolition
- Perimter Road Realignment
- Runway Extension
- Runway Reconstruction
- Staging Areas
- Taxiway Construction

0 200 400 900 Feet

N

Appendix H.2

Section 408 Request

THIS PAGE INTENTIONALLY LEFT BLANK

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

April 18, 2025

Planning Programs and Project Management

Section 408 Request Number: (408-NWO-2024-0094)

Sioux Gateway Airport
C/O Mr. Mike Collett
405 6th Street
Sioux City, Iowa 5111

Dear Mr. Collett,

The Omaha District ("District") of the U.S. Army Corps of Engineers (USACE) has received your request regarding the proposed Sioux Gateway Airport expansion located at 2403 Aviation Boulevard, Sioux City, Section 36, Township 88 North, Range 48 West, Woodbury County, Iowa. (42.4145 / -96.40695) under Section 14 of the Rivers and Harbors Act of 1899, 33 USC 408 (Section 408).

The District has reviewed your submittal consistent with Engineer Circular (EC) 1165-2-220, to determine whether the Section 408 request is required. We have determined that, as submitted, the project will not result in alterations to, or temporarily or permanently occupy or use, any US Army Corps of Engineers (USACE) federally authorized Civil Works project under 33 USC 408 (Section 408) within the Omaha District.

The proposed project is in the near proximity of USACE structures associated with the Missouri River Bank Stabilization and Navigation Project (BSNP). Construction activities in the near proximity of the structures have the potential to adversely impact the structure. Therefore, USACE recommends that the drawing package include drawing notes on the project plan sheet(s) to state that a federally constructed structure exists in the vicinity, that the federal structure shall not be altered, and that a reasonable construction buffer should be maintained. Suggested language for consideration, that may be adapted to meet project designer and contracting standards, is provided as follows:

a. The project is in the vicinity of an existing Federally constructed river stabilization project with structure(s) that included rock and possibly timber pile cables. The Contractor shall maintain a reasonable construction buffer from the previously built Federal structures during all activities to prevent any structure impact.

b. While the visible BSNP structures on the river are apparent, the landward extent of structure materials can vary significantly. Tie-back structures were often used within the floodplain that are now below grade and no longer visible. Therefore, the Contractor should be prepared to encounter bank stabilization structure materials anywhere within the floodplain. Removal or relocation of these materials shall not be conducted without prior approval of the Corps of Engineers. Structure materials include pile, rock, and cable.

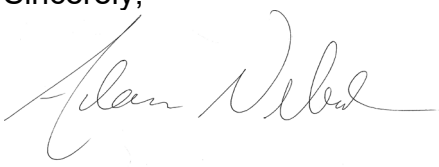
c. If bank stabilization materials are encountered during construction activities, the Contractor shall cease activities in this area and immediately inform the Construction Oversight Officer. The Contractor shall not disturb those materials until receiving clearance from the Corps of Engineers.

d. Any historic structure rock material encountered shall not be removed from the site and the integrity of the stabilization structure shall not be altered due to proximity construction work.

This does not eliminate the requirement that you obtain other applicable Federal, State, Tribal and/or Local permits as required. One such requirement is complying with Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344), which prohibits the discharge of dredged or fill material into waters of the U.S. (WOTUS) without authorization in the form of a Department of the Army (DA) permit. USACE also regulates structures or work in, over, and under navigable waters of the United States under Section 10 of the Rivers and Harbors Act (RHA) (33 U.S.C. 403). To ensure compliance with these Acts, please contact the appropriate USACE Regulatory Office, at https://regulatory.ops.usace.army.mil/offices/.

If you have questions regarding this determination, or if the project changes in scope or alignment, please contact the undersigned at 402-995-2068 or Section408NWO@usace.army.mil.

Sincerely,



Adam Nebel
Section 408 Coordinator & Program Manager
Omaha District

Cc: Foth Infrastructure & Environment, LLC (Eva Moritz)

Appendix H.3

Wetland & Waters of the US Delineation Report

THIS PAGE INTENTIONALLY LEFT BLANK

Report

Wetland & Waters of the US Delineation Report Sioux Gateway Airport

RS&H Iowa, P.C.
Denver, CO 80237

August 7, 2024

Project I.D.: 0023S049.00

8191 Birchwood Court, Suite L
Johnston, IA 50131
(515) 254-1393
foth.com

August 7, 2024

Ms. Abby Steele
United States Army Corps of Engineers, Rock Island District
Clock Tower Building
P.O. Box 2004
Rock Island, IL 61204-2004

Re: Wetland & Waters of the United States Delineation Report: Environmental Assessment for the Runway Program, Sioux Gateway Airport, 2403 Aviation Boulevard, Sioux City, Iowa, CEMVR-RD-2024-0547

Dear Ms. Steele:

Foth Infrastructure & Environment, LLC (Foth) is pleased to submit the Wetland & Waters of the United States Delineation Report prepared for RS&H on behalf of the City of Sioux City, which owns and operates the Sioux Gateway Airport. This report describes the technical criteria, field indicators, and other sources of information used to identify and delineate wetlands. The delineation identified 0.13-acre of adjacent wetlands and 18,265 feet of non-relatively permanent waters.

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

Sincerely,

Foth Infrastructure & Environment, LLC

Morgan Langer
Environmental Scientist

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

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

Enclosure

Wetland & Waters of the United States Delineation Report

Distribution

No. of Copies	Sent To
Electronic	Ms. Abby Steele United States Army Corps of Engineers, Rock Island District Clock Tower Building P.O. Box 2004 Rock Island, IL 61204-2004
Electronic	Ms. Julie Barrow RS&H Iowa, P.C. 4582 S Ulster Street, Suite 1100 Denver, CO 80237
Electronic	Mr. Mike Collett Sioux Gateway Airport 405 6th Street Sioux City, IA and 51102

Wetland & Waters of the United States Delineation Report

Sioux Gateway Airport

Project ID: 0023S049.00
CEMVR-RD-2024-0547

Prepared for
RS&H Iowa, P.C.
4582 S Ulster Street, Suite 1100
Denver, CO 80237

Prepared by
Foth Infrastructure & Environment, LLC

August 7, 2024

8191 Birchwood Court, Suite L, Johnston, IA 50131
foth.com

Wetland & Waters of the United States Delineation Report

Table of Contents

Table of Contents (continued)

Tables

Figures

Appendices

Wetland & Waters of the United States Delineation Report

Executive Summary

The purpose of performing the wetland delineation was to assess if wetlands or Waters of the United States (WUS) are present and, if so, to identify the boundaries. Foth reviewed map and aerial photograph resources, mobilized to the site to conduct the wetland delineation, and prepared this Wetland & WUS Delineation Report for the Project Study Area.

The delineation resulted in 0.13-acre of adjacent wetlands and 18,265 feet of non-relatively permanent waters. Only the U.S. Army Corps of Engineers (USACE) can make the final determination on the jurisdictional status of wetlands or WUS and on the need for permit processing and compensatory mitigation. If jurisdictional wetlands or WUS impacts are proposed, the USACE should be contacted regarding the need for a Section 404 Permit, Mitigation Plan, or other permitting requirements.

List of Abbreviations, Acronyms, and Symbols

DP	Data Point
EF	Erosional Feature
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FWS	U.S. Fish and Wildlife Service
Foth	Foth Infrastructure & Environment, LLC
FOTG	Field Office Technical Guide
GPS	Global Positioning System
IDNR	Iowa Department of Natural Resources
JD	Jurisdictional Determination
LiDAR	Light Detection And Ranging
NHD	National Hydrography Dataset
NL or NI	Not Listed or No Indicator
NRCS	Natural Resource Conservation Service
NRGIS	Natural Resources Geographic Information Systems Library
NWI	National Wetland Inventory
NWPL	National Wetland Plant List
Non-RPT	Non-Relatively Permanent Tributary
OHWM	Ordinary High Water Mark
OBL	Obligate Wetland
PEM1A	Palustrine Emergent Persistent Temporarily Flooded
PEM1C	Palustrine Emergent Persistent Seasonally Flooded
PEM2A	Palustrine Emergent Nonpersistent Temporarily Flooded
PFO1A	Palustrine Forested Broad-Leaved Deciduous Temporarily Flooded
PFO1C	Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded
PSS1A	Palustrine Scrub-Shrub Broad-Leaved Deciduous Temporarily Flooded
PUBFx	Palustrine Unconsolidated Bottom Semipermanently Flooded Excavated
R2UBH	Riverine Lower Perennial Unconsolidated Bottom Permanently Flooded
R2USC	Riverine Lower Perennial Unconsolidated Shore Seasonally Flooded
R4SBC	Riverine Intermittent Streambed Seasonally Flooded
TNW	Traditional Navigable Water
UPL	Obligate Upland
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
WL	Wetland
WSS	Web Soil Survey
WUS	Waters of the United States

1. Introduction

RS&H, Iowa P.C. (RS&H) retained Foth Infrastructure & Environment, LLC (Foth) on behalf of the City of Sioux City, which owns and operates the Sioux Gateway Airport, to perform a wetland delineation for the Environmental Assessment for the Runway Program. The Project Study Area covers approximately 710 acres and is in Section 23, 25, 26, 31, 35, and 36 Township 88 North, Range 48 West, Sioux City, Woodbury County, Iowa as depicted on Figure 1.

1.1 Purpose

The purpose of performing the wetland delineation was to assess if wetlands or Waters of the United States (WUS) are present and, if so, to identify the boundaries. The wetland delineation was performed in accordance with the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Midwest Regional Supplement (USACE, 2010). According to USACE guidelines, wetlands generally have three essential characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology.

1.2 Scope of Work

Foth performed the following scope of work:

- Reviewed map and aerial photograph resources to assist with identifying suspect WUS and wetland areas at the Project Study Area.
- Mobilized to the Project Study Area to conduct the wetland delineation.
- Conducted the wetland delineation on May 8, 2024 in the Project Study Area according to USACE Wetlands Delineation Manual and Midwest Region Supplement.
- Prepared a wetland delineation map showing WUS and wetland areas identified during the site visit, if any.
- Completed a Wetland & WUS Delineation Report that included delineation rationale, a discussion of applicable data, and recommendations for the Project Study Area.

2. Background Information

Foth reviewed several map and aerial photograph resources prior to performing the delineation, to assist with identifying WUS and wetland areas at the Project Study Area. The sections below describe each source of data in detail.

2.1 Topographic Map

Foth reviewed the U.S. Geological Survey (USGS) 7.5-Minute Topographic Map (ESRI et. al., 2024) to identify drainages or WUS within the Project Study Area. The Missouri River is a WUS located near the northwestern border of the Project Study Area, as depicted on Figure 1. The topography of the Project Study Area is flat.

2.2 National Wetland Inventory Map

Foth reviewed the U.S. Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) map (FWS, 2021) to identify potential wetland areas within the Project Study Area. The NWI map depicts probable wetland areas based on stereoscopic analysis of high-altitude aerial photographs.

The NWI map, as depicted on Figure 2 identified eight types of wetlands within the Project Study Area:

1. Palustrine Emergent Persistent Temporarily Flooded (PEM1A),
2. Riverine Lower Perennial Unconsolidated Shore Seasonally Flooded (R2USC),
3. Palustrine Forested Broad-Leaved Deciduous Temporarily Flooded (PFO1A),
4. Palustrine Emergent Persistent Seasonally Flooded (PEM1C),
5. Riverine Intermittent Streambed Seasonally Flooded (R4SBC),
6. Riverine Lower Perennial Unconsolidated Bottom Permanently Flooded (R2UBH),
7. Palustrine Scrub-Shrub Broad-Leaved Deciduous Temporarily Flooded (PSS1A), and
8. Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded (PFO1C).

2.3 Soil Survey of Woodbury County, Iowa

Foth used the Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) to identify soil types within the Project Study Area. The WSS maps depict soil types using the NRCS Map Unit Symbol, as listed on Table 2-1. The soil types, mapped by the NRCS Unit Symbol, can be seen on Figure 3. The following table lists the hydric rating of the soils in the study area, as identified by the WSS. According to the WSS, the rating indicates the proportion of map units that meets the criteria for hydric soils.

Table 2-1 – Soil Survey Summary

NRCS Map Unit Symbol	Map Unit Name	WSS Hydric Soil Rating	Hydric Soil Rating Description [a]
137	Haynie silt loam, deep loess, 0 to 2% slopes, rarely flooded	0	Non-hydric
144	Blake silty clay loam, 0 to 2% slopes, rarely flooded	8	Predominantly non-hydric
156	Albaton silty clay, 0 to 2% slopes, rarely flooded	90	Predominantly hydric
237	Sarpy loamy fine sand, 0 to 2% slopes, rarely flooded	0	Non-hydric
237B	Sarpy loamy fine sand, 2 to 5% slopes, rarely flooded	0	Non-hydric
151	Percival silty clay, 0 to 2% slopes, rarely flooded	5	Predominantly non-hydric
518	Morconick fine sandy loam, 0 to 2% slopes, rarely flooded	0	Non-hydric

NRCS Map Unit Symbol	Map Unit Name	WSS Hydric Soil Rating	Hydric Soil Rating Description [a]
945	Albaton silty clay, depressional, drained, 0 to 1% slopes, frequently flooded	100	Hydric
1238	Sarpy-Morconick complex, 0 to 2% slopes, occasionally flooded	0	Non-hydric
3146	Onawa-Albaton complex, 0 to 2% slopes, rarely flooded	25	Predominantly non-hydric
3513	Grable-Morconick complex, 0 to 2% slopes, rarely flooded	0	Non-hydric
3549	Modale complex, 0 to 2% slopes, rarely flooded	10	Predominantly non-hydric
5040	Udorthents, loamy	0	Non-hydric

[a] "Hydric" means that all components listed for a given map unit are rated as being hydric. "Predominantly hydric" means components that comprise 66 to 99% of the map unit are rated as hydric. "Partially hydric" means components that comprise 33 to 66% of the map unit are rated as hydric. "Predominantly non-hydric" means components that comprise up to 33% of the map unit are rated as hydric. "Non-hydric" means that none of the components are rated as hydric. (NRCS, 2023)

2.4 LiDAR Map

Foth reviewed the Color-Infrared Light Detection and Ranging (LiDAR) Map (ESRI et. al., 2024) of the Project Study Area to assist in identifying potential lowland areas. The map uses LiDAR data to depict the approximate topography. The green shaded areas represent lower elevations and the red to white colors represent higher elevations. As depicted in Figure 4, the Project Study Area is flat throughout with slightly lower topography to the north toward the Missouri River, which runs along the northwestern border of the Project Study Area. The northwest portion of the Project Study Area depicts scarring from historic flooding of the Missouri River.

2.5 National Hydrography Dataset Map

Foth reviewed the USGS National Hydrography Dataset (NHD) map of surface waters to assist in identifying WUS within or near the Project Study Area (USGS, 2019). The Project Study Area consists of generally flat topography with several ditches within the Project Study Area flowing into the Missouri River, as depicted on Figure 5. The Missouri River was identified as a stream/river.

2.6 Aerial Photographs

Foth reviewed aerial photographs obtained from the ESRI (ESRI et. al., 2024), and Iowa Geospatial Data (State of Iowa, 2021) to identify suspected wetland areas within the Project Study Area. Foth reviewed aerial photographs from 2023, 2021, 2019, 2017, 2015, 2014, 2013, 2011, 2010, 2009, 2008, 2007, 2006, 2005, 2004, 2002, 1990s, 1980s, 1970s, 1960s, 1950s, and 1930s included them in Appendix A as Figures A1 through A22.

Foth used the NRCS Climate Analysis for Wetlands (WETS) Tables for Woodbury County to give an indication of whether a year is “wet,” “dry,” or “normal” depending on when the photograph was taken. The WETS tables define the normal range for monthly precipitation and growing season required to assess the climatic characteristics for a geographic area over a representative period of time. The tables give a month-by-month summary and probability analysis of temperature and precipitation. The tables also provide the average length of the growing season using three index temperatures (32, 28, and 24 degrees Fahrenheit) at 50% and 70% probabilities (NRCS, 2024a).

Table 2-2 summarizes the “wet,” “dry,” and “normal” precipitation aerials according to the NRCS WETS table for Woodbury County:

Table 2-2 – Aerial Photograph Summary – Woodbury County

Aerial Year	April to June	May to July	June to August
2002	Normal	Normal	Wet
2004	Normal	Normal	Dry
2005	Normal	Normal	Dry
2006	Normal	Dry	Normal
2007	Wet	Normal	Wet
2008	Normal	Wet	Normal
2009	Normal	Wet	Wet
2010	Normal	Wet	Wet
2011	Wet	Normal	Normal
2013	Wet	Normal	Normal
2014	Normal	Wet	Wet
2015*	Normal	Wet	Wet
2017*	Normal	Normal	Normal
2019*	Normal	Wet	Normal
2021*	Normal	Normal	Normal
2023*	Normal	Normal	Normal

* 2015-2023 Precipitation data was evaluated using the NRCS normal precipitation from 1971-2000 and county precipitation data from the National Centers for Environmental Information (NOAA, 2022) (NRCS, 2024b) (NRCS, 2024c)

Based on the previous table, 2017, 2021 and 2023 would be considered “normal” years. 2014 would be considered a “wet” to "normal" year and 2006 was a “dry” to “normal” year.

Foth observed several areas of possible saturation on the historic aerials within the Project Study Area; Foth collected data points during the site visit in each of the areas that showed historic saturation or inundation.

The 1930s aerial depicts the Project Study Area as agricultural land without man-made drainage channels or ditches. Historic flooding of the Missouri River has scarred the northwest portion of the Project Study Area. The airport was constructed between the 1930s and the 1950s, with an additional runway being added within the Project Study Area prior to the 1960s. The airport construction included the creation of two drainage ditches that flow directly into the Missouri River. Due to the flat topography of the area, these ditches were dug in upland areas to direct stormwater away from the airport to the Missouri River. The final major project to be completed along the northeastern border of the Project Study Area was the addition of a large ditch which connects to the Missouri River. This ditch is identified as Ditch D-1 in this Delineation Report. The table below notes the history of the ditch's construction.

Table 2-3 – 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 is completed on drainage ditch, ditch is dry
2007	Ditch is dry
2008	Ditch is dry
2009	Ditch is dry, with the exception of 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

The Lower Missouri River sustained three devastating floods within 30 years: 1993, 2011, and 2019 (Google, 2024). 2010 is also historically noted as a year with above-normal precipitation and flooding. The flooding events in 2011 and 2019 and the high rainfall events in 2010 correspond with flooding of D-1 depicted on the historic aerials.

2.7 Agricultural Land

The 2010 Midwest Supplement provides guidance for determining whether wetlands are present on agricultural lands where vegetation, soil, hydrology, or a combination of these factors have been manipulated (USACE, 2010). Based on the guidance in the supplement, Foth used the following tools to evaluate what plant community, soils and hydrology may exist if the land was not disturbed by farming.

- Vegetation: Foth examined the site for plants that have grown on their own between cultivations, plantings, or after the crop harvest. The Wetland Determination Data Forms in Appendix B record the presence or absence of volunteer vegetation.
- Soils: The Midwest Supplement indicates that the standard soil profile description and examination for hydric soil indicators is usually sufficient to determine whether hydric soils are present. In addition to reviewing the soil profile, Foth examined NRCS soil survey maps and the local hydric soils list for the likely presence of hydric soils on the site. The Wetland Determination Data Forms in Appendix B record the soil observations.
- Hydrology: Foth examined five or more years of annual Farm Service Agency aerial photographs, or aerial photos from other sources, for wetness signatures. The procedure for documenting hydrology is discussed below.

Foth used the NRCS Wetland Mapping Conventions for Agricultural Lands and the USACE St. Paul District Guidance for Offsite Hydrology/Wetland Determinations to interpret wetland hydrology in agricultural areas (NRCS, 1994) (USACE St. Paul District and the Minnesota Board of Water & Soil Resources, 2016). The St. Paul District method was used because the Rock Island District has not published specific guidelines for aerial photograph interpretation. Using these methods, aerial imagery is evaluated in the context of antecedent moisture conditions. The methods recommend evaluating a minimum of five years of imagery taken during normal climate conditions to draw meaningful conclusions about the presence or absence of wetlands. If five normal years are not available, an equal number of wet and dry years from the respective spring or summer period should be added to the assessment. Topographic, soil survey, and NWI imagery should also be reviewed when using this method. Characteristics of aerial imagery that relate to the presence/absence of wetland hydrology used by the methods include the following: Crop Stress, Drowned Out, Not Cropped, Standing Water, Wetland Signature, Normal Vegetative Cover, Altered Pattern, Soil Wetness Signature, and Multiple Signatures. Using the methods, wetland hydrology is present if wetland signatures are visible on more than 50% of the aerials or more than 40% if the area is identified on the NWI Map.

As documented in Section 2.6, 2017, 2021 and 2023 are considered “normal” climatic years. 2006 and 2014 were also evaluated as “dry” and “wet” years since there were not five “normal” precipitation years. The wetland signatures, identified with the numbering of A through RR, and a summary of the hydrology determination for each area evaluated are included on Table 2-4. The farmed wetland signature locations for 2006, 2014, 2017, 2021, and 2023 are depicted on Figures A13, A6, A4, A2, and A1 in Appendix A.

Table 2-4 – Farmed Wetland Signatures

Aerial Date	8/30/06	9/16/14	7/16/17	8/12/21	8/12/23				
Figure	A13	A6	A4	A2	A1				
Wetland Signature ID	Dry (May to July)	Wet (May to August)	Normal (April to August)	Normal (April to August)	Normal (April to August)	# of Years with Wet Signatures	% with Wet Signatures	NWI Map Id	Wetland Hydrology Present? *
A			Drowned out	Crop Stress		2	40%	--	No
B			Drowned out			1	20%	--	No
C			Drowned out	Crop Stress		2	40%	--	No
D			Drowned out	Crop Stress		2	40%	--	No
E			Drowned out			1	20%	--	No
F			Drowned out			1	20%	--	No
G		Crop Stress	Drowned out			2	40%	--	No
H		Crop Stress		Crop Stress		2	40%	--	No
I				Drowned out	Crop Stress	2	40%	--	No
J				Drowned out	Crop Stress	2	40%	--	No
K				Drowned out	Crop Stress	2	40%	--	No

Aerial Date	8/30/06	9/16/14	7/16/17	8/12/21	8/12/23				
Figure	**A13**	**A6**	**A4**	**A2**	**A1**				
Wetland Signature ID	**Dry (May to July)**	**Wet (May to August)**	**Normal (April to August)**	**Normal (April to August)**	**Normal (April to August)**	**# of Years with Wet Signatures**	**% with Wet Signatures**	**NWI Map Id**	**Wetland Hydrology Present? ***
L DP-13		Crop Stress	Altered Pattern	Crop Stress	Altered Pattern	4	80%	--	Yes
M					Wetland Signature	1	20%	--	No
N					Crop Stress	1	20%	--	No
O DP-12	Drowned Out	Drowned Out	Drowned Out	Crop Stress		4	80%	--	Yes
P			Drowned Out		Wetland Signature	2	40%	--	No
Q DP-11	Drowned Out	Drowned Out	Wetland Signature		Crop stress	4	80%	--	Yes
R Photo 25			Wetland Signature	Wetland Signature	Wetland Signature	3	60%	--	Yes
S			Wetland Signature		Wetland Signature	2	40%	--	No
T			Drowned Out		Drowned Out	2	40%	--	No
U			Drowned out		Drowned out	2	40%	--	No
V					Drowned out	1	20%	--	No
W			Wetland Signature		Wetland Signature	2	40%	--	No

Aerial Date	8/30/06	9/16/14	7/16/17	8/12/21	8/12/23				
Figure	A13	A6	A4	A2	A1				
Wetland Signature ID	Dry (May to July)	Wet (May to August)	Normal (April to August)	Normal (April to August)	Normal (April to August)	# of Years with Wet Signatures	% with Wet Signatures	NWI Map Id	Wetland Hydrology Present? *
X			Crop Stress		Wetland Signature	2	40%	--	No
Y			Crop Stress		Wetland Signature	2	40%	--	No
Z DP-6	Crop Stress			Wetland Signature	Wetland Signature	3	60%	--	Yes
AA DP-5	Crop Stress		Wetland Signature	Wetland Signature	Wetland Signature	4	80%	--	Yes
BB DP-4	Crop Stress		Wetland Signature	Wetland Signature	Wetland Signature	4	80%	--	Yes
CC		Crop Stress				1	20%	--	No
DD	Crop Stress	Crop Stress				1	20%	--	No
EE	Crop Stress	Crop Stress				1	20%	--	No
FF				Wetland Signature	Wetland Signature	1	20%	--	No
GG				Wetland Signature	Wetland Signature	1	20%	--	No
HH					Crop Stress	1	20%	--	No
II DP-7	Crop Stress	Crop Stress			Wetland Signature	3	60%	--	Yes

Aerial Date	8/30/06	9/16/14	7/16/17	8/12/21	8/12/23				
Figure	**A13**	**A6**	**A4**	**A2**	**A1**				
Wetland Signature ID	**Dry (May to July)**	**Wet (May to August)**	**Normal (April to August)**	**Normal (April to August)**	**Normal (April to August)**	**# of Years with Wet Signatures**	**% with Wet Signatures**	**NWI Map Id**	**Wetland Hydrology Present? ***
JJ DP-8		Crop Stress	Wetland Signature		Crop Stress	3	60%	Yes	Yes
KK DP-9			Crop Stress	Wetland Signature	Wetland Signature	3	60%	--	Yes
LL			Crop Stress		Wetland Signature	2	40%	--	No
MM	Crop Stress					1	20%	--	No
NN DP-10			Crop Stress	Wetland Signature	Wetland Signature	3	60%	--	Yes
OO				Wetland Signature	Wetland Signature	2	40%	--	No
PP	Crop Stress				Disturbed by grading	1	20%	--	No
QQ			Wetland Signature	Disturbed by grading	Disturbed by grading	1	20%	--	No
RR			Wetland Signature	Disturbed by grading	Disturbed by grading	1	20%	--	No

* >50% wet signatures without NWI or >40% wet signatures with NWI

Based on the aerial photograph evaluation shown in Figures A1, A2, A4, A6, and A12 in Appendix A, points L, O, Q, JJ, KK, NN, Z, AA, BB, and II had the secondary wetland hydrology indicator of Saturation Visible on Aerial Imagery because they exhibited wetland signatures in more than 50% of normal precipitation years or at least 40% if the area was identified on the NWI Map. Foth took data points or photos at these locations to evaluate the presence or absence of hydric soils. The data points or photos corresponding to each location that exhibited wetland signatures are listed on Table 2-4. Data point and photo locations can be seen on Figures 6 through 6C .

2.8 Climatic Data

Foth used the NRCS Field Office Technical Guide (FOTG) website (NRCS, 2024c) to prepare a precipitation analysis for the Project Study Area. The FOTG site uses NRCS National Water and Climate Center historical climatic data from National Weather Service data stations throughout the United States. As discussed in Section 2.6, FOTG WETS analysis data allows users to calculate the growing season limits and "normal" monthly and annual precipitation based on 30-years of accumulated temperature and rainfall records. Foth used a NRCS spreadsheet to analyze precipitation data in comparison to the WETS data to evaluate whether the Project Study Area is drier than normal, normal, or wetter than normal in the seven and thirty calendar days prior to the site visit. The evaluation used WETS and precipitation data from the Sioux City Airport weather station. According to the spreadsheet evaluation, the amount of precipitation was wetter than normal seven days and 30 days prior to the site visit.

Based on the precipitation analysis, the normal 7-day precipitation range was 0.63 to 0.99 inches, and the normal 30-day range was 1.90 to 3.57 inches of rainfall. The Project Study Area received 3.03 inches of rainfall in the 7-days prior and 6.90 inches in the 30-days prior to the site visit. The amount of rainfall received prior to the site visit was two to three times greater than the normal range. A copy of the evaluation has not been included with this report but can be provided upon request.

3. USACE Jurisdiction

The USACE has established seven categories of Jurisdictional Waters, as defined below:

- (a)(1) Traditional Navigable Waters (TNW): Waters used in interstate or foreign commerce.
- (a)(2) Interstate Waters: Waters that cross or act as State boundaries.
- (a)(3) Other Waters: Intrastate lakes, rivers, streams, wetlands, etc. that affect interstate or foreign commerce.
- (a)(4) Impoundments: Impoundments of waters otherwise defined as WUS. Requires demonstration that the water meets the criteria for another jurisdictional category.
- (a)(5) Tributaries: Natural, man-altered, or man-made water bodies that flow directly or indirectly to a TNW. Tributaries can include rivers, streams, lakes, ponds, impoundments, ditches, and canals. Jurisdictional tributaries must be relatively permanent which is defined as typically having flow or standing water year-round or continuously at least seasonally (typically three months).
- (a)(6) Territorial Seas: Defined as the belt of the sea measured from a line of ordinary low water along that portion of the coast which is in direct contact with the open sea and

the line marking the seaward limit of inland waters and extending seaward a distance of three miles.

- (a)(7) Adjacent Wetlands: Wetlands that have a continuous surface connection to a TNW, interstate water, territorial sea, or a relatively permanent tributary or impoundment. This includes abutting wetlands that "touch" the jurisdictional water (i.e., are not separated by uplands, a berm, dike, or similar barrier from the Ordinary High Water Mark (OHWM) of the water to which they are adjacent. Wetlands also have a continuous surface connection when they are connected to a jurisdictional water by a discrete feature like a non-jurisdictional ditch, swale, pipe, or culvert.

The USACE does not have jurisdiction over the following features:

- Non-relatively permanent tributaries (Non-RPT), which have flow or standing water only in response to precipitation or that do not have continuously flowing or standing water at least seasonally.
- Waste treatment facilities including treatment ponds or lagoons.
- Prior converted cropland if the areas meet USDA's longstanding definition of prior converted cropland. Prior converted cropland is considered to be abandoned unless it produces an agricultural commodity once in every five years or the area has been used in a rotation with aquaculture, grasses, legumes or pasture production.
- Artificially irrigated areas, which would revert to upland if the irrigation ceased.
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water (i.e., stock watering, irrigation, settling basins, etc.)
- Artificial reflecting or swimming pools or other small ornamental bodies of water.
- Waterfilled depressions or pits created in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of WUS.
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.
- Swales or erosional features (*e.g.*, gullies, small washes characterized by low volume, infrequent, or short duration flow).

4. Methods

4.1 Wetland Observations

An experienced Foth wetland scientist or engineer used technical criteria, field indicators, historic aerial photographs, and other sources of information to evaluate the Project Study Area. The evaluation methods generally followed the routine on-site determination method referenced in the 1987 USACE Manual and 2010 Midwest Supplement.

Wetlands generally have three essential characteristics: hydrophytic (wetland) vegetation, hydric soils, and wetland hydrology. Several representative observation locations were selected within each suspected wetland area to evaluate whether the three wetland indicators were present . Vegetation, soils, and hydrology were evaluated within each suspect area to determine if wetland characteristics were present. The following sections describe the techniques for evaluating the plant community, soils, and hydrology.

4.1.1 Plant Community Assessment

Visual observations took place of suspect wetland areas to assess the species and absolute percentage of ground cover for four strata of plant community types. If plant species were not present due to farming or other disturbances, vegetation was not used as a primary indicator in the determination of wetland status. When vegetation was present, herbs were generally observed within a five-foot radius, shrubs/saplings within a fifteen-foot radius, and trees and vines within a thirty-foot radius of the observation location. Several representative observation locations were selected within each suspected wetland area to generally represent the vegetation characteristics of the whole community. The vegetation for each selected area was identified using resources including, but not limited to, the National Wetland Plant List (USACE, 2020), iNaturalist (California Academy of Sciences and the National Geographic Society, n.d.), Weeds of the Great Plains (Nebraska Department of Agriculture, 2003), and The Shrub Identification Book (Symonds, 1963).

For each species of vegetation observed, their wetland indicator status was evaluated. Indicator status was assessed using the National Wetland Plant List (NWPL) (USACE, 2020). Indicator categories for vegetation are presented below:

- Obligate Wetland (OBL) - almost always occur in wetlands.
- Facultative Wetland (FACW) - usually occur in wetlands but may occur in non-wetlands.
- Facultative (FAC) - occur in wetlands and non-wetlands.
- Facultative Upland (FACU) - usually occur in non-wetlands but may occur in wetlands.
- Upland (UPL) – almost never occur in wetlands.
- Not Listed or No Indicator (NL or NI) – species was not listed in the USACE Plant List for the Midwest regions. If listed, the classification for the Great Plains or Northcentral/Northeast Region was used. Otherwise, the species was assumed to be UPL.

The percent cover of each stratum was assessed, and dominance was evaluated. Dominant species accounted for more than 20 percent of the absolute percent coverage of the stratum. The number of dominant species with an indicator status of OBL, FACW, and/or FAC was compared to the total number of dominant species across all strata. Typically, if more than 50 percent of the dominant species had an indicator status of OBL, FACW, and/or FAC, then hydrophytic vegetation was present.

If the percentage of dominant species with an indicator status of OBL, FACW, and/or FAC was less than 50 percent, prevalence index and morphological adaptations may have been evaluated to confirm if hydrophytic vegetation was present or absent.

4.1.2 Hydric Soils Assessment

After evaluating wetland vegetation, Foth collected subsurface soil samples using a soil probe or tile spade. The samples were collected to a depth of approximately 18 to 24 inches below ground surface and were visually compared to the Munsell Soil Color Book (Munsell Color, 2012), which aided in the evaluation of hydric soil characteristics. Soil characteristics were also evaluated using the 2010 Midwest Regional Supplement (USACE, 2010) and the Field Indicators of Hydric Soils in the United States (USDA, 2018). The soil samples were further examined for

hydric soil indicators including, but not limited to, histosol, thick dark surface, sandy gleyed matrix, sandy redox, loamy gleyed matrix, redox dark surface, and/or redox depressions. If these or other hydric soil indicators were observed in the subsurface soil sample, then the observation location was considered to have hydric soil.

4.1.3 Wetland Hydrology Assessment

Foth evaluated visual indicators of wetland hydrology using the 2010 Midwest Regional Supplement (USACE, 2010). Examples of primary wetland hydrology indicators include, but are not limited to, surface water, high water table, soil saturation, water marks, sediment deposits, drift deposits, iron deposits, inundation visible on aerial imagery, sparsely vegetated concave surface, and water-stained leaves. If at least one primary or two secondary indicators were observed, then the observation location was considered to have wetland hydrology.

4.1.4 Classification of Wetlands

Upon completion of the review of the three wetland criteria at each area, a wetland determination was made. Under normal circumstances, if one or more of the wetland criteria were not identified, then the area was not considered to be a wetland. If all three wetland indicators were identified, then the area was classified as a wetland. Additional observations were made in the vicinity of the wetland area to define the wetland/non-wetland boundary, which was mapped with Global Positioning System (GPS) technology or flagged and surveyed by traditional methods. Vegetation, soil, and hydrology assessment data from at least one location within the wetland and one upland location outside of the wetland were recorded on a USACE Wetland Determination Form. Appendix B contains the recorded data forms for the Project Study Area and Figures 6 through 6C contain the data point locations. Figure 7 depicts the wetland locations plotted on the USGS topographic map.

Observations were made about the potential jurisdictional status of the identified wetlands as defined in Section 0. The following definitions were used:

- Adjacent Wetland: a wetland that has a continuous surface connection to a TNW, interstate water, territorial sea, or a relatively permanent tributary or impoundment. Wetlands also have a continuous surface connection when they are connected to a jurisdictional water by a discrete feature like a non-jurisdictional ditch, swale, pipe, or culvert.
- Non-Adjacent Wetland: a wetland that does not meet the definition of an adjacent wetland.

4.2 WUS Observations

Foth also made observations of site features that may be considered a WUS. If a potential WUS was identified, observations regarding its characteristics were recorded. The following definitions were used when describing the WUS:

- WUS Characteristics:
    - TNW: Waters used in interstate or foreign commerce. See Section 0.
    - Tributary: Natural, man-altered, or man-made water bodies that flow directly or indirectly to a TNW. See Section 0.

    - Ditch: features that are excavated, including roadside ditches.
    - Swale: shallow feature on the landscape that may convey water across upland areas during and following storm events. Swales usually occur on or near flat slopes and typically have grass or other low-lying vegetation throughout the swale.
    - Erosional Feature (EF): eroded features including gullies.
- Flow Characteristics:
    - Relatively permanent: Typically has flow or standing water year-round or continuously at least seasonally (typically three months).
    - Non-relatively permanent: Has flow or standing water only in response to precipitation.
- Ordinary High Water Mark (OHWM): The limit line on the shore established by the fluctuation of the water surface. This limit is shown by such things as a distinct line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, the presence of litter and debris or other features influenced by the surrounding area.
- WUS Bank: the land area immediately adjacent to and which slopes toward the bed of a watercourse and which is necessary to maintain the integrity of the watercourse.
- Bank Shape Descriptions:
    - Undercut: banks that overhang the stream channel
    - Steep: bank slope of approximately greater than 30 degrees
    - Gradual: bank slope of approximately 30 degrees or less
- Aquatic Habitat Descriptions:
    - Pool: deeper portion of a stream where water flows slower than in neighboring, shallower portions, smooth surface, and finer substrate
    - Riffle: shallow area in a stream where water flows swiftly over gravel and rock or other coarse substrate resulting in a rough flow and a turbulent surface
    - Run: section of a stream with a low or high velocity and with little or no turbulence on the surface of the water.

5. Field Observation Results

On May 8, 2024, Foth performed fieldwork and identified wetlands and drainage features within the Project Study Area, as depicted on Figures 6 through 6C. Appendix B contains the Wetland Determination Data Forms for the wetland area. Ground photographs, included in Appendix C, provide an indication of the physical characteristics observed during the site visit. The following sections describe the wetlands and drainage features identified during the delineation.

5.1 Adjacent Wetland Areas

5.1.1 Wetland 1

Wetland Description	
Wetland ID	WL-1
Size	0.13-acre
Sampling Point(s)	DP-16
Photograph ID	39
Jurisdictional Characteristics	(a)(7) Adjacent Wetland
Association with TNW	Adjacent to D-7, however D-7 does not have an apparent connection to the Missouri River or other TNW.
Wetland Description	Depression wetland
NWI Map Designation	None
Cowardin Classification	Palustrine Emergent Nonpersistent Temporarily Flooded (PEM2A)
Wetland Type	Emergent
Vegetative Cover	Dense
Dominant Vegetation	Common Name (Scientific Name) WL Indicator Common Cowparsnip (*Heracleum maximum*) FACW Reed Canary Grass (*Phalaris arundinacea*) FACW Kentucky Bluegrass (*Poa pratensis*) FAC
Hydrogeomorphic Class	Depression
Soil Type (soil survey)	Albaton silty clay, depressional, drained, frequently flooded
Soil Type (field obs.)	Silty clay
Soil Characteristics	Depleted Below Dark Surface, Depleted Matrix
Hydrology Characteristics	Surface Water, High Water Table, Saturation, and FAC Neutral
Hydrology Source	Surface Water Runoff and Groundwater
Other Information	Separated from D-7 by a small berm

Non-Wetland (Upland) Description	
Data Point(s)	DP-17
Habitat Type	Herbaceous vegetation
Was there a marked difference between the wetland/upland	Yes, vegetation and hydrology
Was there a gradual change in vegetation between the wetland and upland creating a “transition zone”	No
Was there an abrupt topographic change between the wetland and upland	No

5.2 Non-Jurisdictional Feature

The following non-relatively permanent waters were identified within the Project Study Area. The USACE may not consider these areas to be jurisdictional because they do not meet the characteristics of Jurisdictional Waters described in Section 3.

5.2.1 Ditch 1

Description	
ID	D-1
Approximate Length Onsite	6,040 feet* (estimated with aerial photography/ LiDAR)
Photograph ID	2, 14, 19, 22
Location	Northern Project Study Area border
Jurisdictional Characteristics	Ditch excavated wholly in and draining only uplands and that does not carry a relatively permanent flow of water
Description	Man-made in 2006, See Table 2-3
Flow Characteristics	Non-relatively permanent, See Table 2-3 for a summary of the duration of inundation based on the aerial photograph review.
NWI Map Designation	Riverine Lower Perennial Unconsolidated Shore Seasonally Flooded (R2USC) and Riverine Intermittent Streambed Seasonally Flooded (R4SBC)
Width	30 to 40 feet
Width Across Bottom	20 to 30 feet
Depth	Dry
Slope On Banks	Steep
Substrate	Vegetation
Riparian Vegetation Description	Kentucky Bluegrass (*Poa pratensis*) Curly Dock (*Rumex crispus*)

*Within approximate project limits, feature continues beyond Project Study Area.

According to Rich Johnson, a consultant who has worked for the Airport Sponsor for 18 years, 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, Foth observed the bottom of the ditch to be 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. See Table 2-3 in Section 2.6 for a summary of the history of the ditch based on aerial photograph observations. The years of historic flooding or

above-normal rainfall in 2010, 2011 and 2019 correspond with observed water within D-1 on historic aerials.

5.2.2 Ditch 2

Description	
ID	D-2
Approximate Length Onsite	2,080 feet* (estimated with aerial photography/ LiDAR)
Photograph ID	11
Location	Northwest portion of the Project Study Area, drains to Missouri River
Jurisdictional Characteristics	Ditch excavated wholly in and draining only uplands and that does not carry a relatively permanent flow of water
Description	Man-made between 1930 and 1950 based on aerial review
Flow Characteristics	Non-relatively permanent
NWI Map Designation	Riverine Intermittent Streambed Seasonally Flooded (R4SBC)
Width	35 to 40 feet
Width Across Bottom	20 to 25 feet
Depth	Dry
Slope On Banks	Gradual
Substrate	Soil, Vegetation
Riparian Vegetation Description	Reed Canary Grass (*Phalaris arundinacea*) Curly Dock (*Rumex crispus*) Common Marsh Bedstraw (*Galium palustre*)
Additional Information	There was no evidence of drainage patterns that would indicate frequent or sustained flow within the ditch.

*Within approximate project limits, feature continues beyond Project Study Area.

5.2.3 Ditch 3

Description	
ID	D-3
Approximate Length Onsite	1,060 feet (estimated with aerial photography/ LiDAR)
Photograph ID	26
Location	Along western portion of Project Study Area, adjacent to the gravel access road. Does not appear to have a connection to any off-site features.
Jurisdictional Characteristics	Ditch excavated wholly in and draining only uplands and that does not carry a relatively permanent flow of water
Description	Man-made between 1930 and 1950 based on aerial review
Flow Characteristics	Non-relatively permanent
NWI Map Designation	None
Width	5 to 10 feet
Width Across Bottom	1 to 2 feet
Depth	Dry
Slope On Banks	Gradual
Substrate	Soil, Vegetation
Riparian Vegetation Description	Reed Canary Grass (*Phalaris arundinacea)*

5.2.4 Ditch 4

Description	
ID	D-4
Approximate Length Onsite	950 feet (estimated with aerial photography/ LiDAR)
Photograph ID	35
Location	Running northwest to southeast on the west side of Harbor Road
Jurisdictional Characteristics	Ditch excavated wholly in and draining only uplands and that does not carry a relatively permanent flow of water
Description	Man-made between 1930 and 1950 based on aerial review
Flow Characteristics	Non-relatively permanent
NWI Map Designation	None
Width	10 to 15 feet
Width Across Bottom	1 to 2 feet
Depth	0 to 0.5 feet
Slope On Banks	Gradual
Substrate	Soil, Vegetation
Riparian Vegetation Description	Reed Canary Grass (*Phalaris arundinacea)* Kentucky Bluegrass (*Poa pratensis)* Sedge Species (*Carex sp*.) Curly Dock (*Rumex crispus)*

5.2.5 Ditch 5

Description	
ID	D-5
Approximate Length Onsite	3,805 feet* (estimated with aerial photography/ LiDAR)
Photograph ID	36, 37
Location	West side of Harbor Drive, turning west along southern boundary.
Jurisdictional Characteristics	Roadside ditch excavated wholly in and draining only uplands and that does not carry a relatively permanent flow of water
Description	Man-made between the 1930s and the 1950s based on aerial review. D-5 appears to continue west beyond the Project Study Area, ultimately draining to the Missouri River.
Flow Characteristics	Non-relatively permanent
NWI Map Designation	Palustrine Emergent Persistent Seasonally Flooded (PEM1C)
Width	15 to 20 feet
Width Across Bottom	2 to 3 feet
Depth	0.5 to 1 foot
Slope On Banks	Steep
Substrate	Soil, Vegetation
Riparian Vegetation Description	Field Brome (*Bromus arvensis*) White Mulberry (*Morus alba*) Field Horsetail (*Equisetum arvense*) Broadleaf Cattails (*Typha latifolia*)

*Within approximate project limits, feature continues beyond Project Study Area.

5.2.6 Ditch 6

Description	
ID	D-6
Approximate Length Onsite	2,205 feet* (estimated with aerial photography/ LiDAR)
Photograph ID	38, 40
Location	Southeast corner of Project Study Area along South Bridge Street
Jurisdictional Characteristics	Roadside ditch excavated wholly in and draining only uplands and that does not carry a relatively permanent flow of water
Description	Man-made between the 1930s and the 1950s based on aerial review. D-6 appears to be a roadside ditch that originates within the project area and drains to D-7.
Flow Characteristics	Non-relatively permanent
NWI Map Designation	None
Width	10 to 15 feet
Width Across Bottom	5 to 7 feet
Depth	Dry
Slope On Banks	Steep
Substrate	Soil, Vegetation
Riparian Vegetation Description	Kentucky Bluegrass (*Poa pratensis*) Common Dandelion (*Taraxacum officinale*)

*Within approximate project limits, feature continues beyond Project Study Area.

5.2.7 Ditch 7

Description	
ID	D-7
Approximate Length Onsite	740 feet* (estimated with aerial photography/ LiDAR)
Photograph ID	38, 40
Location	Along southern border in southeast corner of Project Study Area
Jurisdictional Characteristics	Ditch excavated wholly in and draining only uplands and that does not carry a relatively permanent flow of water
Description	Man-made between 1930 and 1950 based on aerial review. D-7 appears to originate east of I-29 and flows west/southwest beyond the project area. Based on aerial and LiDAR review, the channel appears to dissipate and does not have an apparent connection to the Missouri River or other TNW.
Flow Characteristics	Non-relatively permanent
NWI Map Designation	Palustrine Unconsolidated Bottom Semi-permanently Flooded Excavated (PUBFx)
Width	12 to 15 feet
Width Across Bottom	5 to 6 feet
Depth	1 to 2 feet
Slope On Banks	Gradual
Substrate	Soil, Vegetation
Riparian Vegetation Description	Reed Canary Grass (*Phalaris arundinacea)*

*Within approximate project limits, feature continues beyond Project Study Area.

5.2.8 Swale 1

Description	
ID	S-1
Approximate Length Onsite	1,385 feet (estimated with aerial photography/ LiDAR)
Photograph ID	23
Location	Runs along the west side of Patton Street and the airport access road
Jurisdictional Characteristics	Swale
Description	Man-made between 1930 and 1950 based on aerial review
Flow Characteristics	Non-relatively permanent
Description	No evidence of a defined bed and bank or OWHM
NWI Map Designation	Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded (PFO1C)
Width	2 to 5 feet
Width Across Bottom	1 to 2 feet
Depth	Dry
Slope On Banks	Gradual
Substrate	Soil, Vegetation
Riparian Vegetation Description	Reed Canary Grass (*Phalaris arundinacea)*

6. Wetland and Waters of the United States Summary

This report details the procedures used to identify wetlands and WUS within the Project Study Area. In accordance with the field procedures described in this report, wetlands and non-relatively permanent WUS were identified within the Project Study Area. The following table summarizes the size of the delineated wetland.

Table 6-1 – Adjacent Wetland Summary

Wetland Identification	Wetland Area (acres)
WL-1	0.13
Total	**0.13**

The following table summarizes the approximate lengths of non-relatively permanent WUS within the Project Study Area based on field measurements.

Table 6-2 – Non-Jurisdictional Feature Summary

Identification	Length (feet)
D-1	6,040*
D-2	2,080*
D-3	1,060
D-4	950
D-5	3,805*
D-6	2,205*
D-7	740*
S-1	1,385
Total	**18,265**

* Within Project Study Area

The approximate wetland boundaries are depicted on the Wetland & WUS Delineation Maps (Figures 6 through 6C).

7. Recommendations

Based on the results of the delineation, 0.13-acre of adjacent wetlands and 18,265 feet of non-relatively permanent waters were identified in the Project Study Area. A Request for Corps Jurisdictional Determination (JD) form can be found in Appendix D. Only the USACE can make the final determination on the jurisdictional status of wetlands or WUS, and on the need for permit processing and compensatory mitigation. If jurisdictional wetland or WUS impacts are proposed, the USACE should be contacted regarding the need for a Section 404 Permit, Mitigation Plan, or other permitting requirements.

8. General Comments

The wetland delineation was performed May 8, 2024 using the USACE Manual and Midwest Supplement. The manual provides assistance for delineating wetlands based on the three criteria discussed in Section 4. However, the manual alone may not have provided enough information to document whether or not the three criteria were met. Various physical properties or other visual signs used to evaluate whether the three wetland identification criteria areas were satisfied may not be straightforward, especially in disturbed or problem areas. The manual also allows the user to visually estimate certain indicators such as the percentage of area covered by dominant species for the entire community. Foth did not attempt to identify every possible plant species and did not classify soil type by laboratory methods. Due to seasonal changes, Foth cannot guarantee the area to exhibit or not to exhibit wetland characteristics at all times of the year. The limitations of this wetland delineation should be recognized for the above reasons.

This report has been prepared in accordance with generally accepted scientific and engineering evaluation practices. This report is for the exclusive use of the client for the project being discussed. No warranties, express or implied, are intended or made.

9. References

California Academy of Sciences and the National Geographic Society. (n.d.). Retrieved from https://www.inaturalist.org/

Environmental Laboratory. (1987). *Corps of Engineers Wetlands Delineation Manual.* Washington DC: U.S. Department of Commerce.

ESRI et. al. (2024). *ESRI et. al.* Retrieved from ESRI.

FWS. (2021, May 1). *National Wetlands Inventory*. Retrieved from http://www.fws.gov/wetlands/Data/mapper.html

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=AL9hbdgAAAAAZlidT027jHBXTlwqw_vZVdmJgWclr3lf&ved=0ahUKEwj8i8T-zLWGAxV74MkDHeuxDpUQ4dUDCA8&uact=5&o

Munsell Color. (2012). *Munsell Soil Color Charts.* Grand Rapids: Munsell Color.

Nebraska Department of Agriculture. (2003). *Weeds of the Great Plains* . Lincoln: Nebraska Department of Agriculture.

NOAA. (2022, June 15). *Climate at A Glance*. Retrieved from https://www.ncdc.noaa.gov/cag/county/time-series

NRCS. (1994). *Wetland Mapping Conventions for Agricultural Lands*. Retrieved from https://www.nrcs.usda.gov/sites/default/files/2022-09/WetlandMapping.pdf

NRCS. (2023 , September 12). *Web Soil Survey*. Retrieved from https://websoilsurvey.nrcs.usda.gov/app/

NRCS. (2024). *Wetland Climate Tables*. Retrieved from https://www.nrcs.usda.gov/programs-initiatives/sswsf-snow-survey-and-water-supply-forecasting-program/wetlands-climate-tables

NRCS. (2024a). *Wetland Climate Tables*. Retrieved from https://www.nrcs.usda.gov/programs-initiatives/sswsf-snow-survey-and-water-supply-forecasting-program/wetlands-climate-tables

NRCS. (2024b). *Field Office Technical Guide*. Retrieved from Rainfall Data: https://efotg.sc.egov.usda.gov/#/

NRCS. (2024c, April). *Field Office Technical Guide*. Retrieved from AgACIS: http://agacis.rcc-acis.org/

State of Iowa. (2021). *Iowa Geospatial Data*. Retrieved from Iowa Imagery Catelog: https://geodata.iowa.gov/pages/imagery

Symonds, G. (1963). *The Shrub Identification Book.* New York: HarperCollins Publishers, Inc.

USACE. (2010). *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region.* Vicksburg: U.S. Army Corps of Engineers.

USACE. (2020). *National Wetland Plant List*. Retrieved from https://wetland-plants.sec.usace.army.mil/nwpl_static/v34/home/home.html

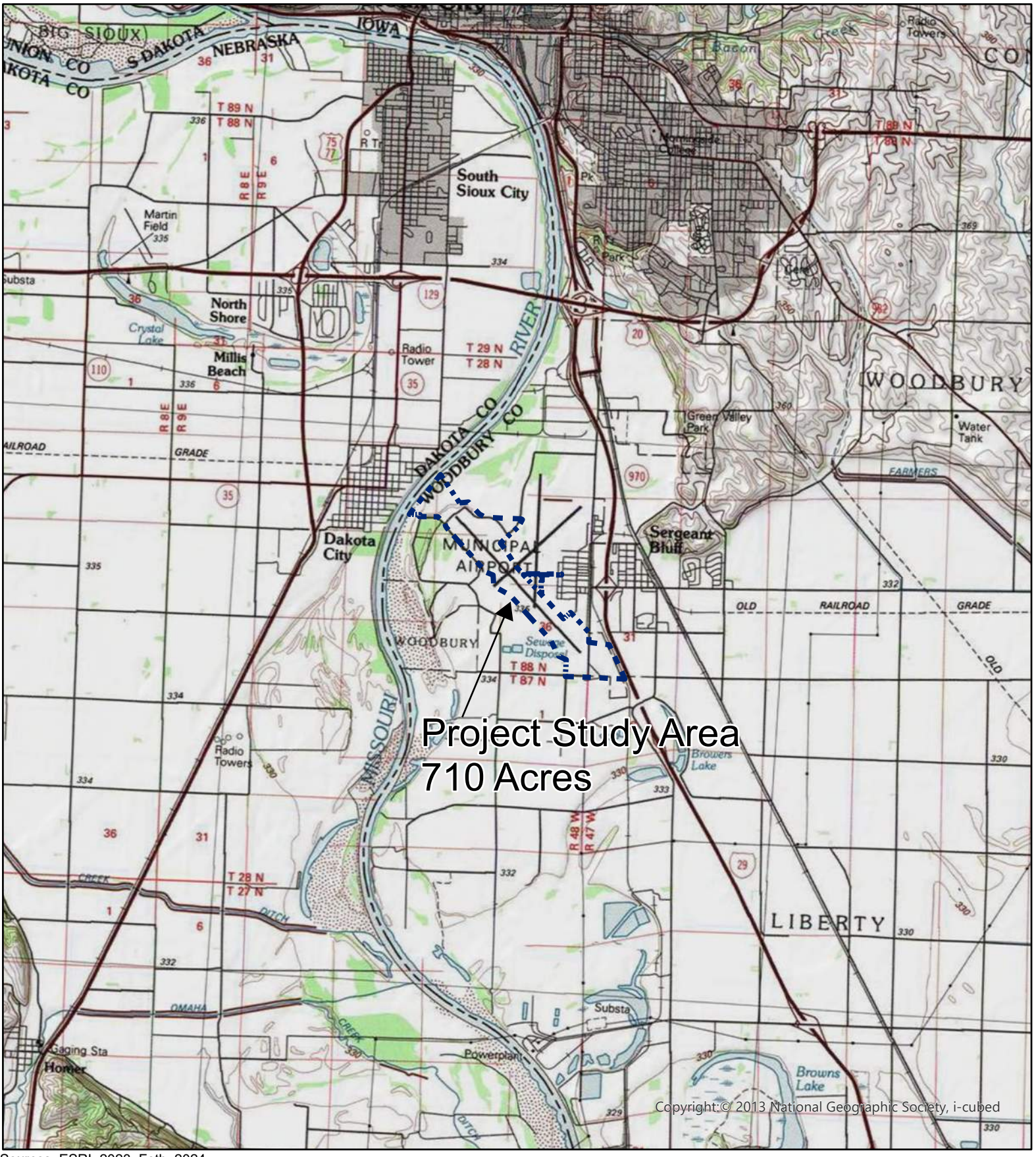
USACE St. Paul District and the Minnesota Board of Water & Soil Resources. (2016, July 1). *Joint Guidance for Offsite Hydrology/Wetland Determinations.* Retrieved February 7, 2017, from https://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/Joint%20Guidance%20for%20Offsite%20Hydrology%20and%20Wetland%20Determinations.pdf?ver=2016-07-28-133732-907

USDA. (2018). *Field Indicators of Hydric Soils in the United States.* Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi_v5GBmPP_AhVoDTQIHZYyDBkQFnoECBsQAQ&url=https%3A%2F%2Fwww.nrcs.usda.gov%2Fsites%2Fdefault%2Ffiles%2F2022-09%2FField_Indicators_of_Hydric_Soils.pdf&usg=AOvVaw2b5CmAh8BaXxedx6cMj7O1&

USGS. (2019, October 23). *National Hydrography Dataset* . Retrieved from ver. USGS National Hydrography Dataset Best Resolution for Hydrologic Unit 4 : https://www.usgs.gov/national-hydrography/access-national-hydrography-products

Figures

Figure 1
Topographic Map



Sources: ESRI, 2023; Foth, 2024

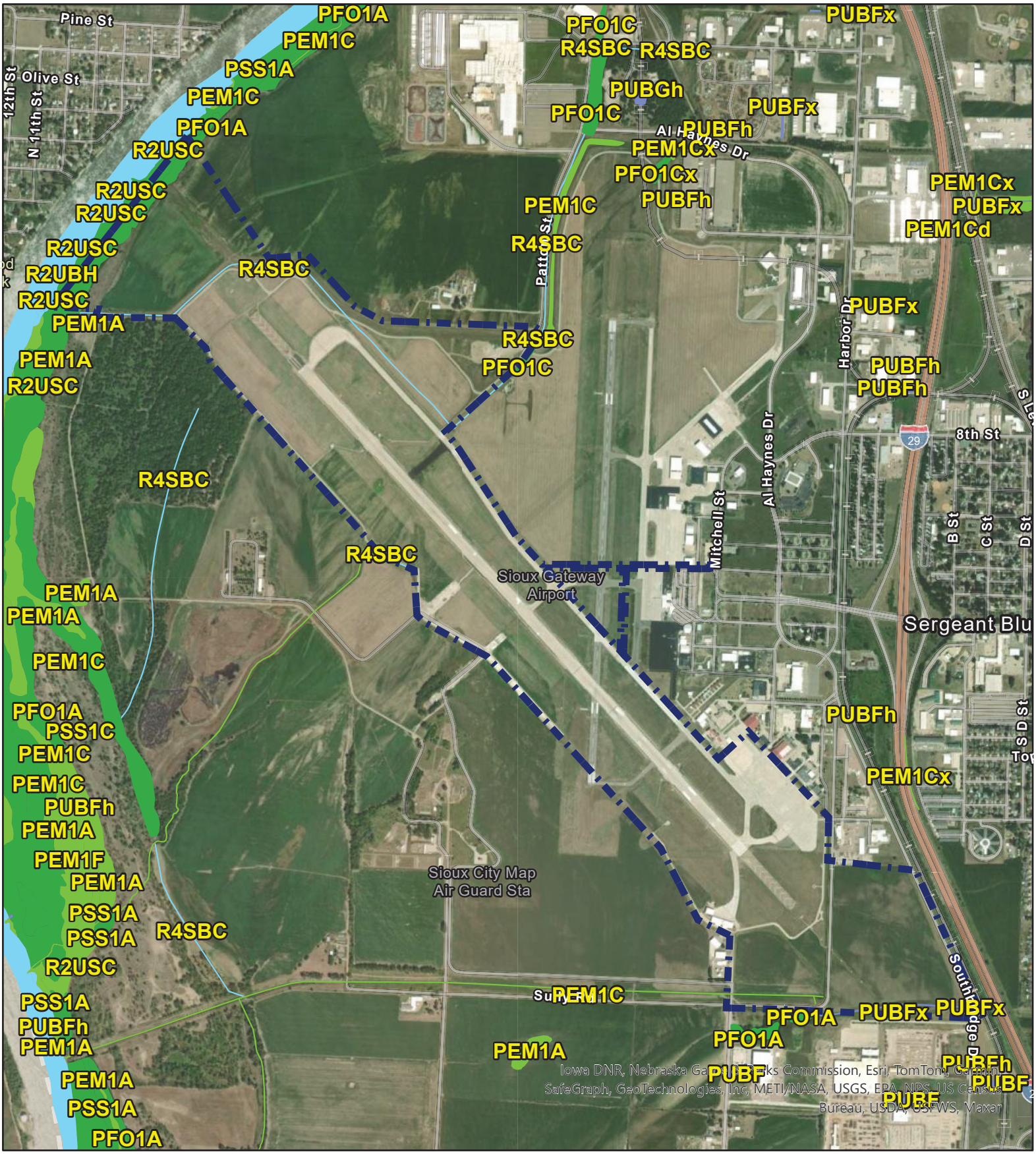
0 5,000 10,000
Feet

N

Legend

Project Study Area

Figure 2
NWI Map



Sources: ESRI, 2023; Foth, 2024; NWI Mapping Courtesy of the US Fish and Wildlife Service

Legend

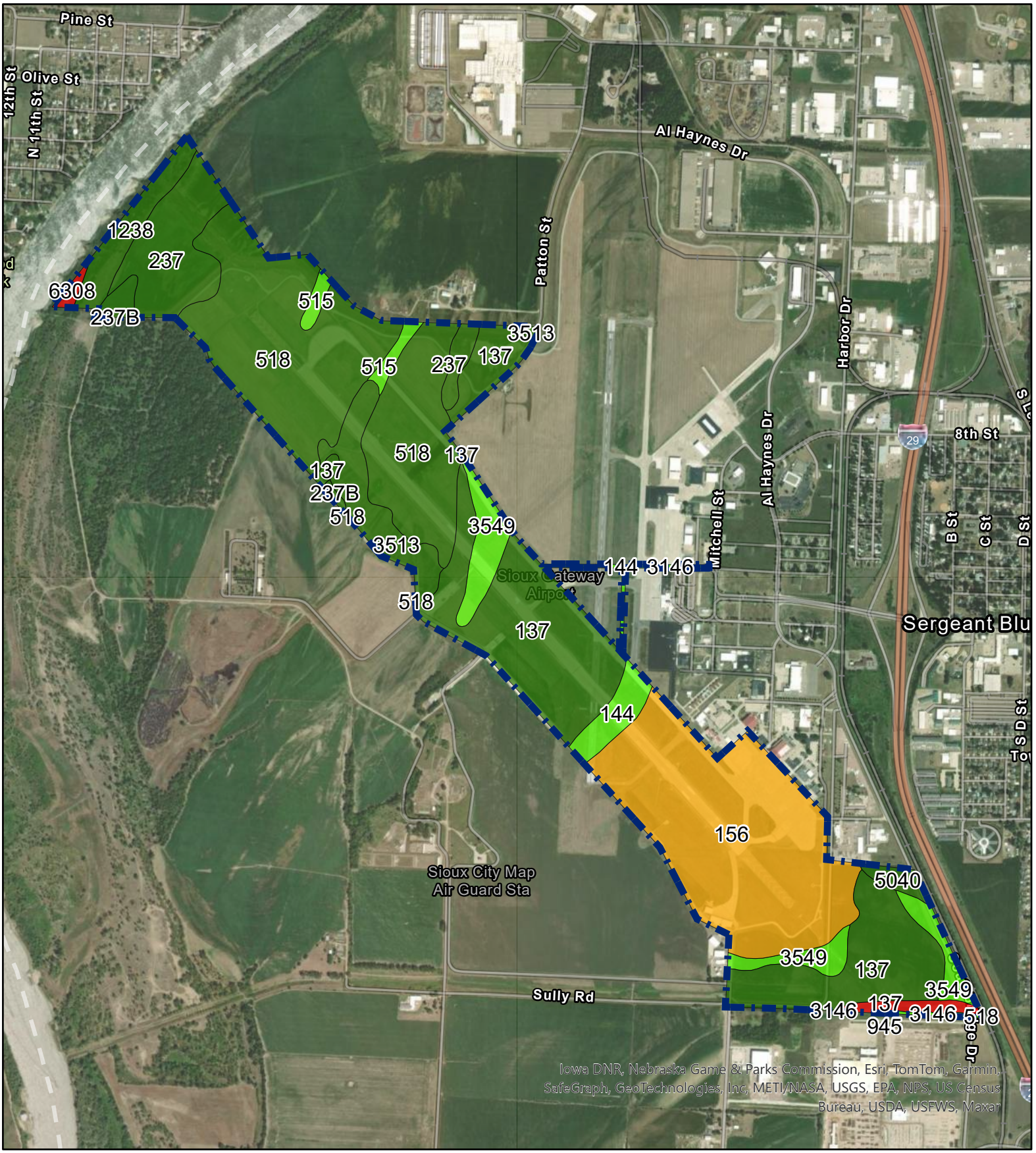
Project Study Area

NWI

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

0 1,500 3,000 Feet

Figure 3
Soil Map



Sources: ESRI, 2023; Foth, 2024; SSURGO Mapping courtesy of USDA-NRCS Web Soil Survey

0 1,500 3,000 Feet

N

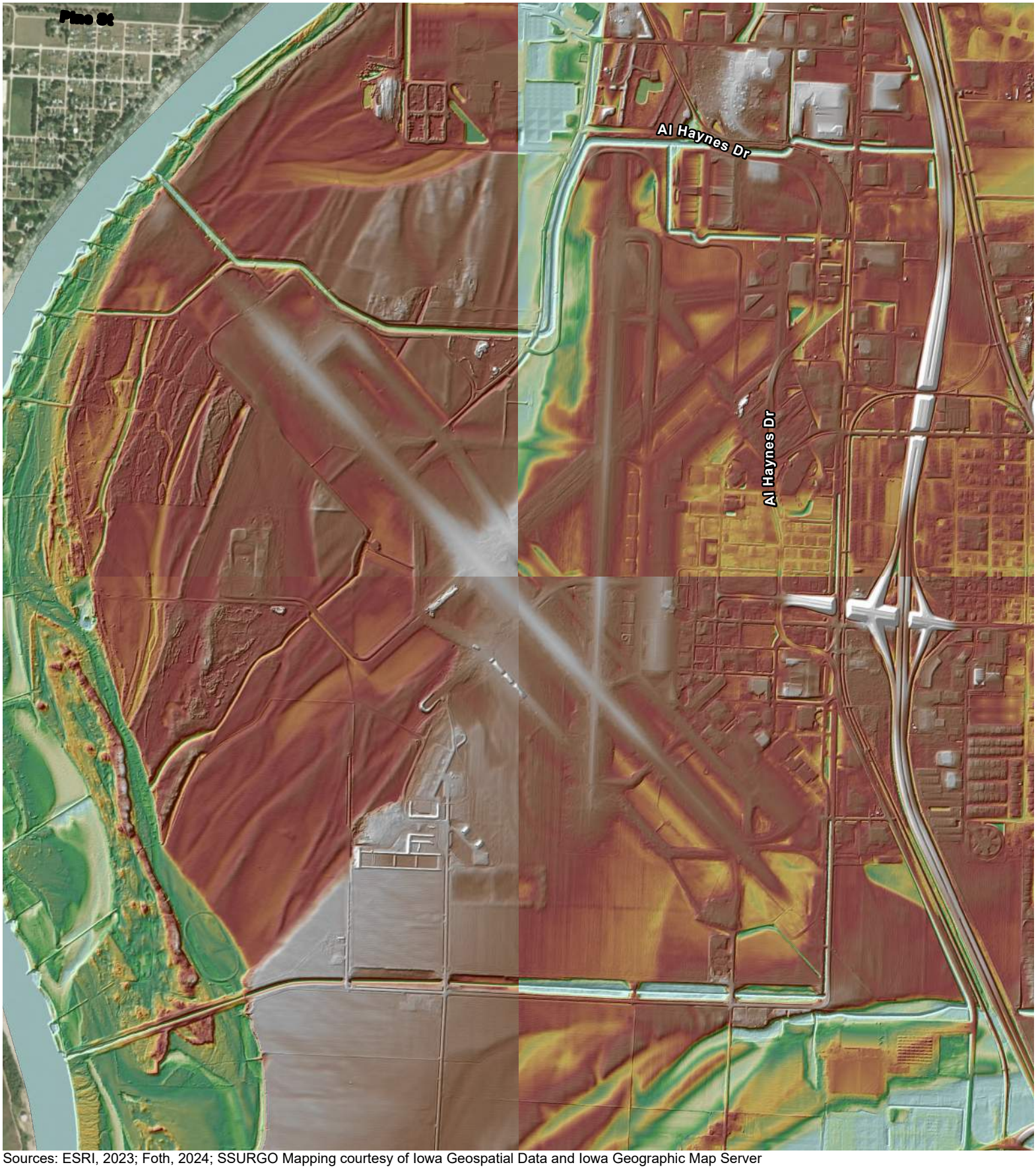
Legend

Project Study Area

Hydric Soil Rating

- Non-hydric
- Predominantly hydric
- Predominantly non-hydric
- Hydric

Figure 4



Sources: ESRI, 2023; Foth, 2024; SSURGO Mapping courtesy of Iowa Geospatial Data and Iowa Geographic Map Server

Legend

Project Study Area

0 1,500 3,000 Feet

Figure 5
National Hydrography Dataset

Sources: ESRI, 2023; Foth, 2024; SSURGO Mapping courtesy of USGS

Legend

Project Study Area

Waterbody
Lake/Pond
Area
Stream/River
Flowline
Ditch

0 1,500 3,000 Feet

N

Figure 6
Wetland Delineation Map

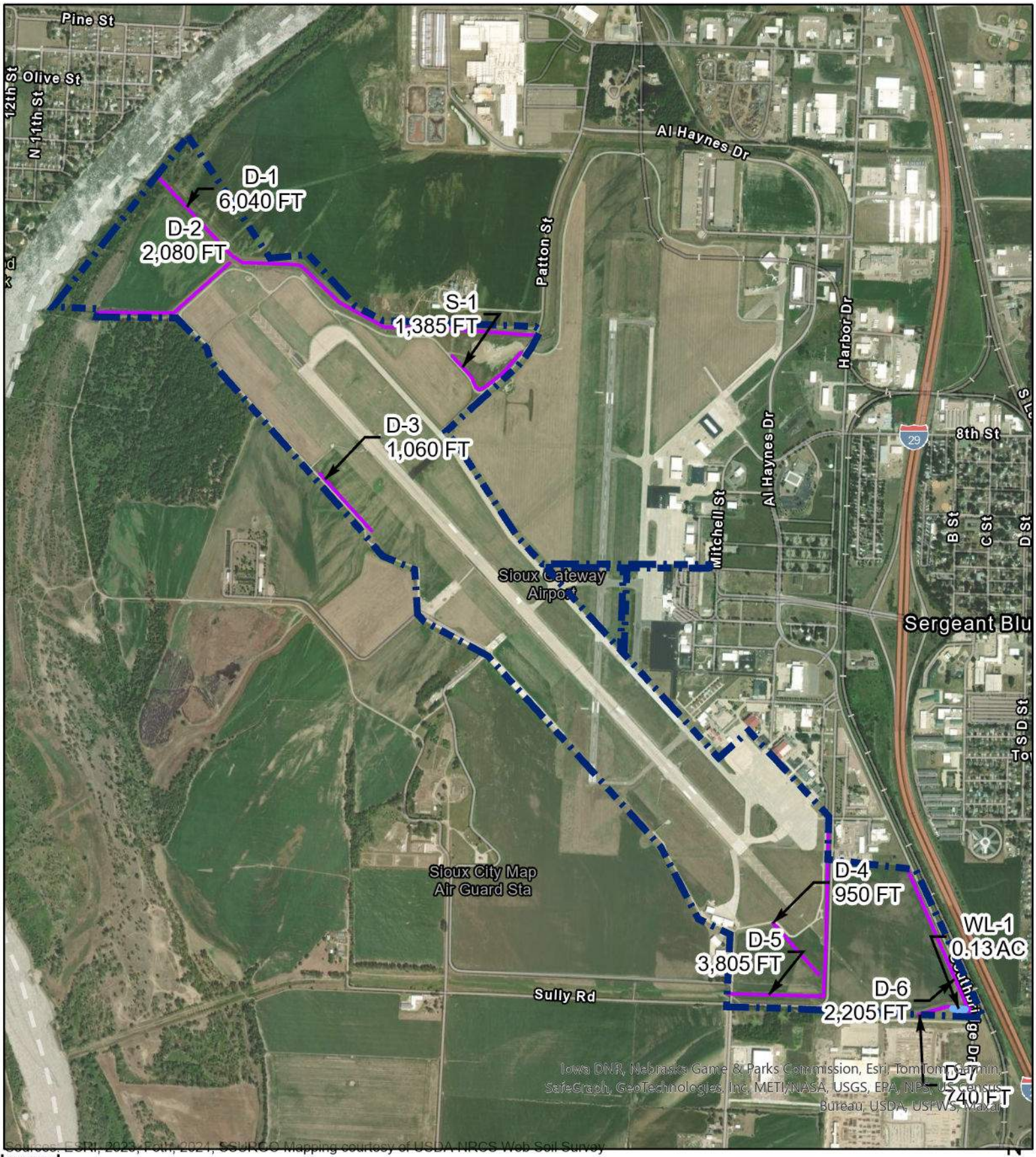
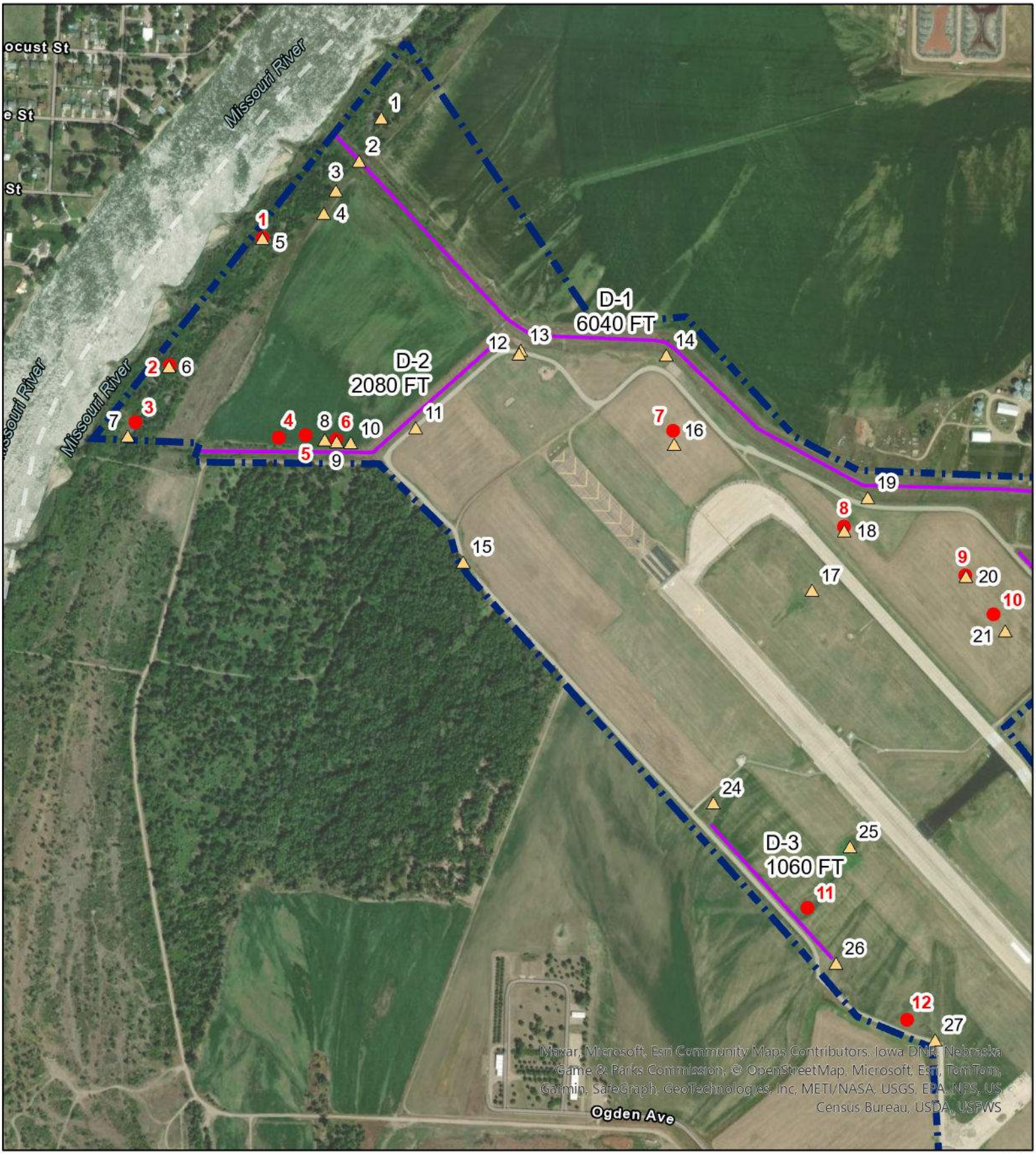


Figure 6A
Wetland Delineation Map



Sources: ESRI, 2023; Foth, 2024; SSURGO Mapping courtesy of USDA-NRCS Web Soil Survey

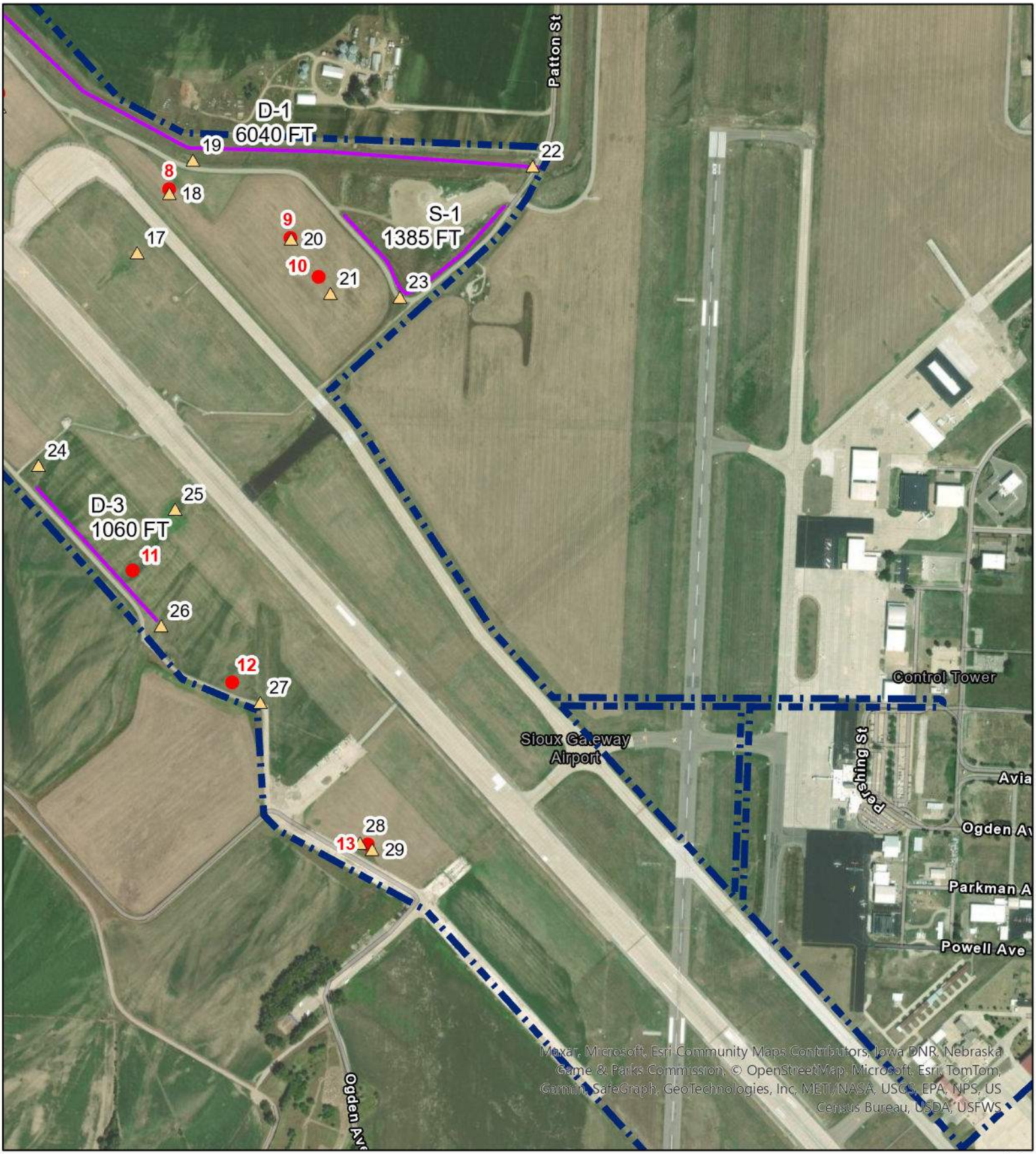
Legend

- Project Study Area
- Non-Jurisdictional Feature
- Data Point (Red Number)
- Photo Point (Black Number)

0 500 1,000 Feet

N

Figure 6B
Wetland Delineation Map



Sources: ESRI, 2023; Foth, 2024; SSURGO Mapping courtesy of USDA-NRCS Web Soil Survey

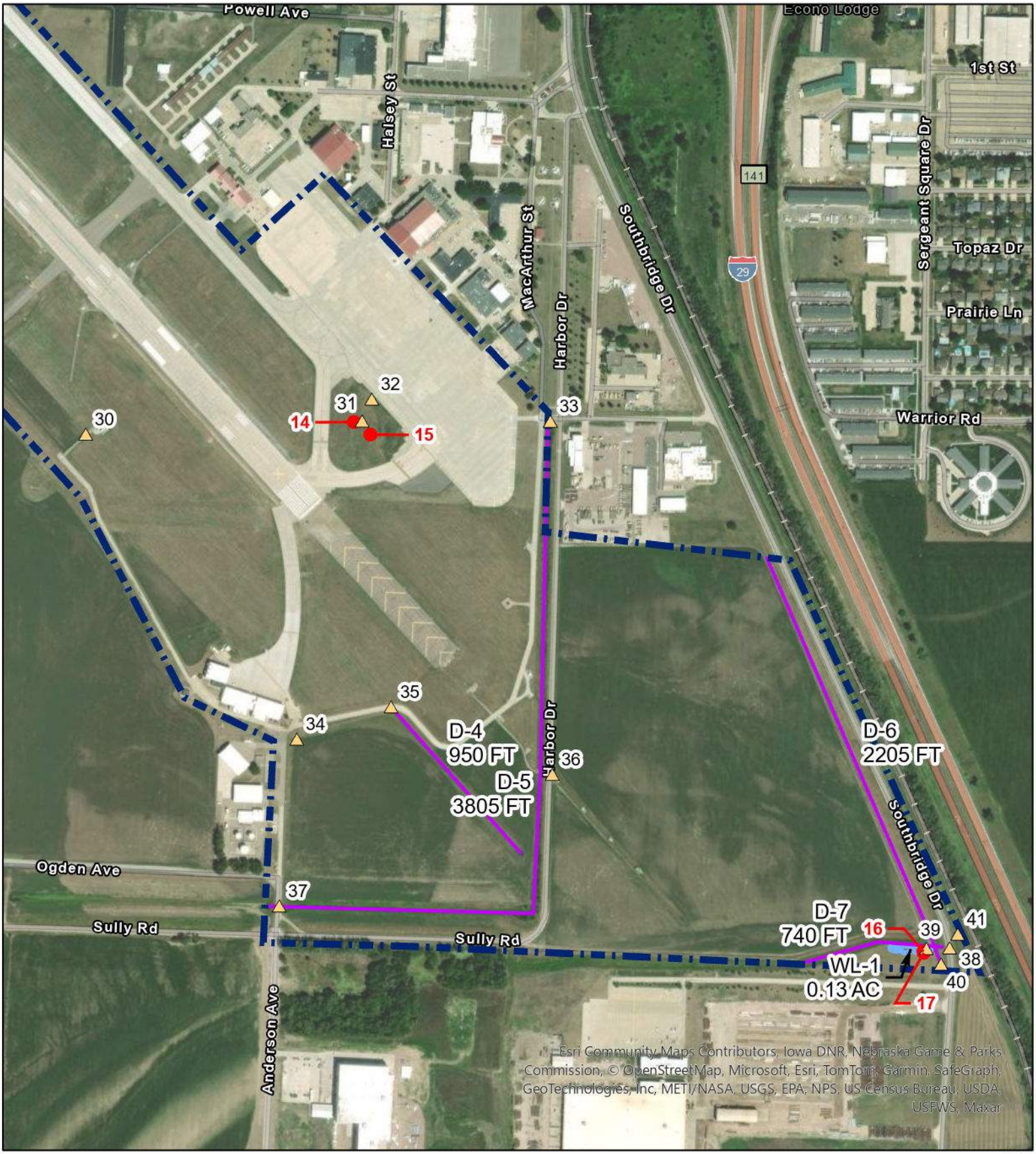
Legend

- Project Study Area
- Non-Jurisdictional Feature
- Data Point (Red Number)
- Photo Point (Black Number)

0 500 1,000 Feet

N

Figure 6C
Wetland Delineation Map



Sources: ESRI, 2023; Foth, 2024; SSURGO Mapping courtesy of USDA-NRCS Web Soil Survey

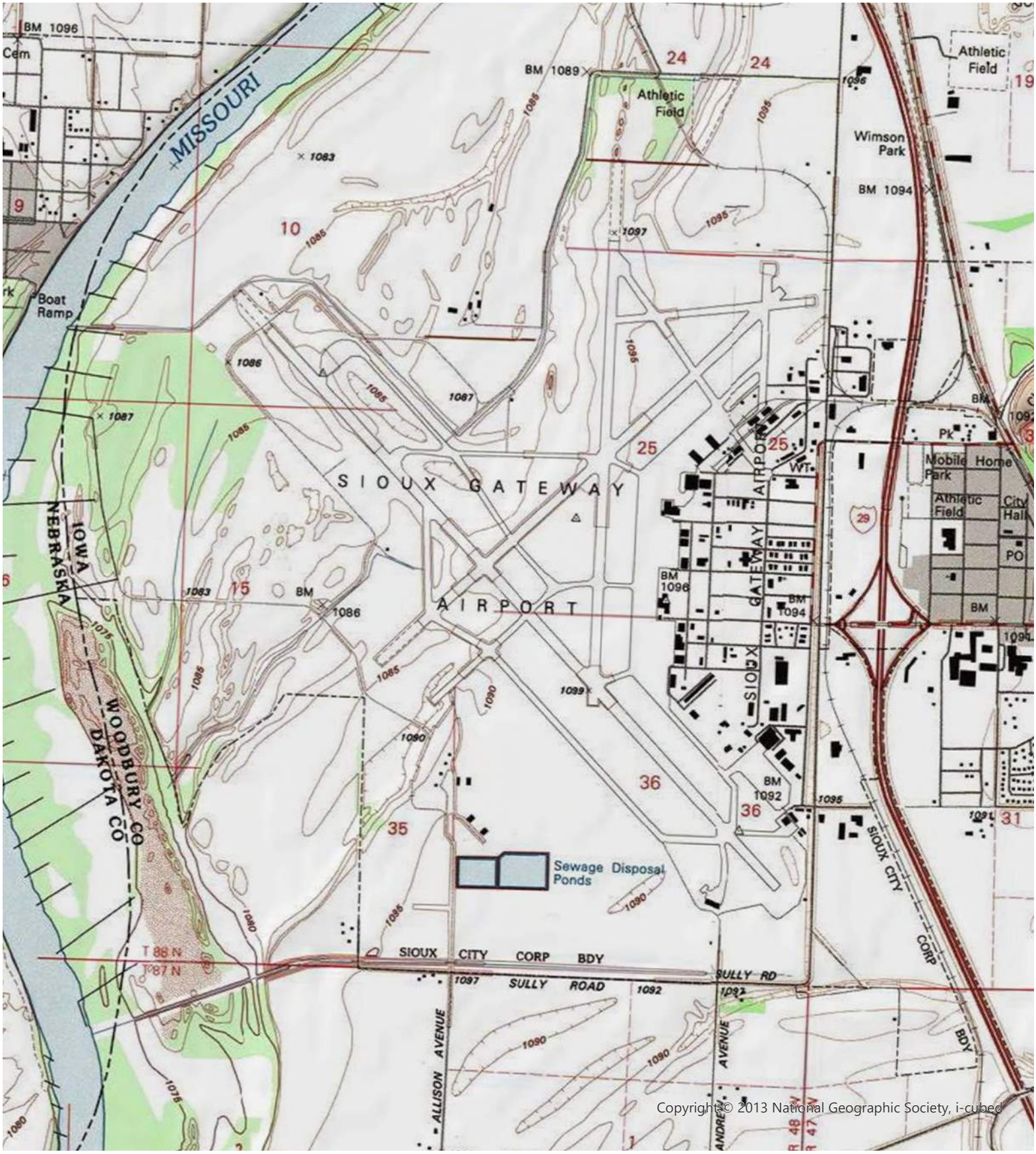
Legend

- Project Study Area
- Wetland
- Non-Jurisdictional Feature
- Data Point (Red Number)
- Photo Point (Black Number)

0 500 1,000 Feet

N

Figure 7
Topographic Map with Wetland Delineation



Sources: ESRI, 2023; Foth, 2024; SSURGO Mapping courtesy of USDA-NRCS Web Soil Survey

Legend

- Project Study Area
- Wetland
- Non-Jurisdictional Feature

0 1,500 3,000 Feet

N

Appendix A

Aerial Photographs

Figure A1
2023 Aerial Mapping

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

0 1,500 3,000 Feet

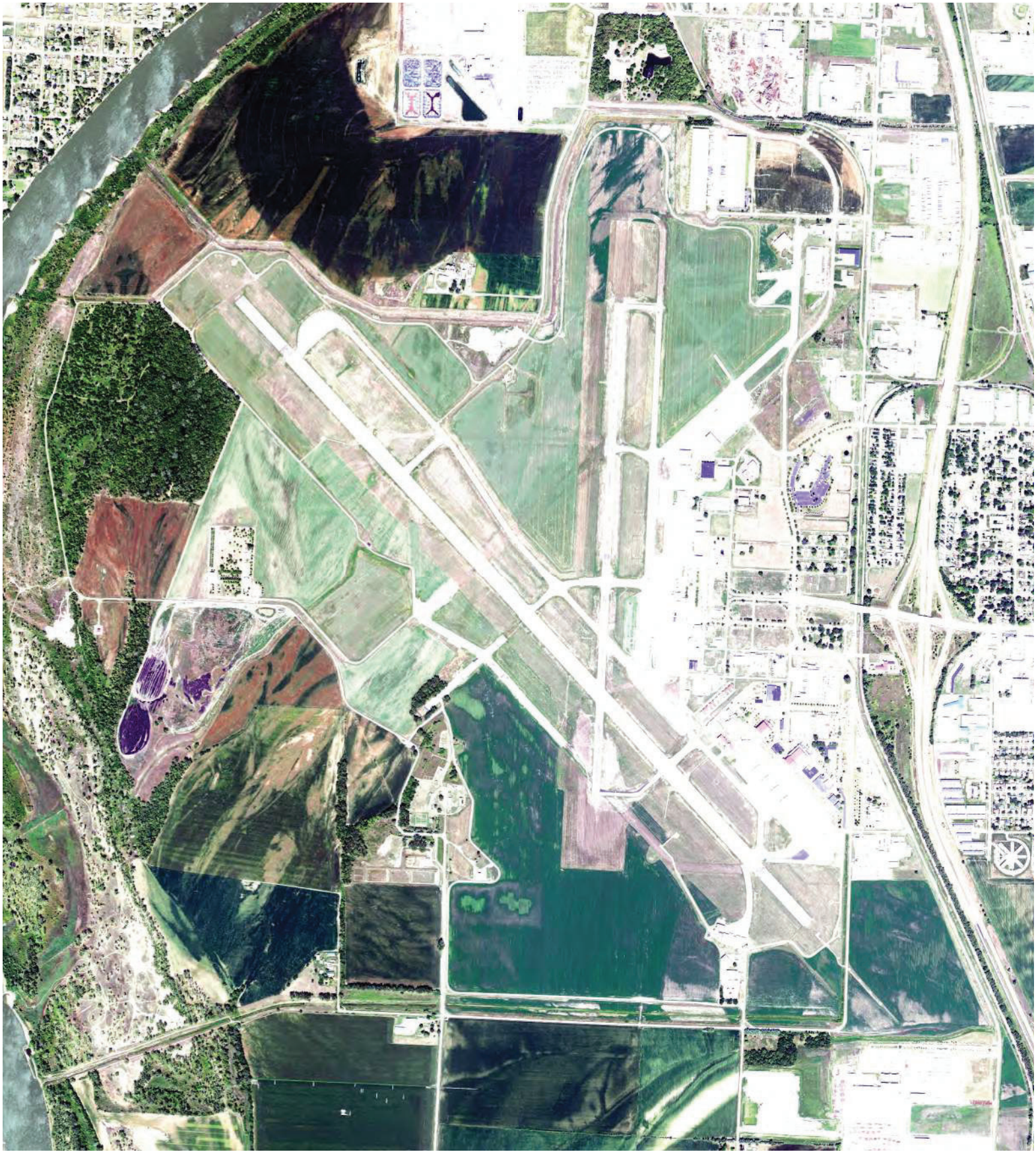
Legend

Project Study Area

Farm Analysis Location with Hydrology

Farm Analysis Location without Hydrology

Figure A2
2021 Aerial Mapping



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

0 1,500 3,000 Feet

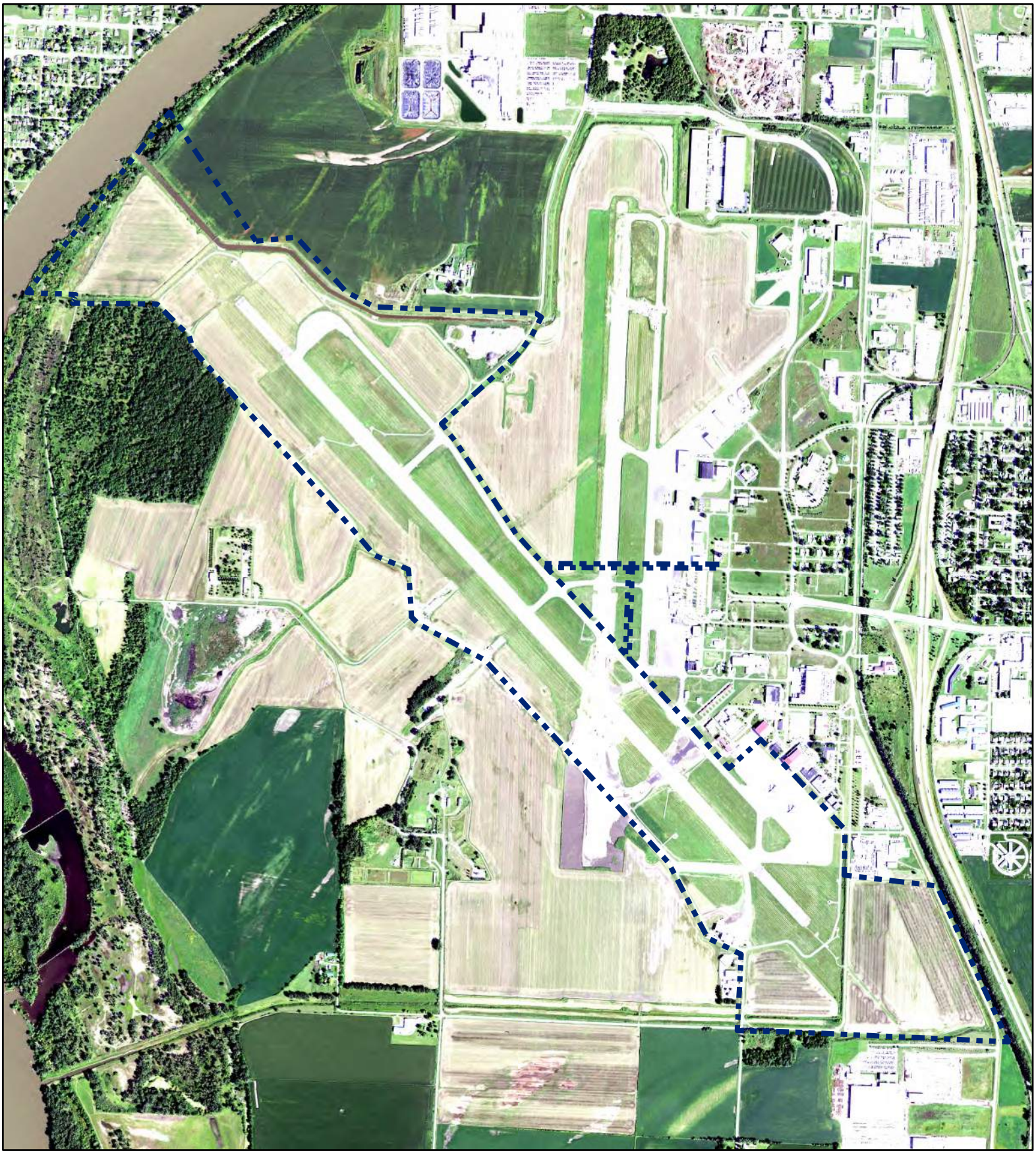
Legend

Project Study Area

Farm Analysis Location with Hydrology

Farm analysis Location without Hydrology

Figure A3
2019 Aerial Mapping



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

0 1,500 3,000 Feet

Legend

Project Study Area

N

Figure A4
2017 Aerial Mapping

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

0 1,500 3,000 Feet

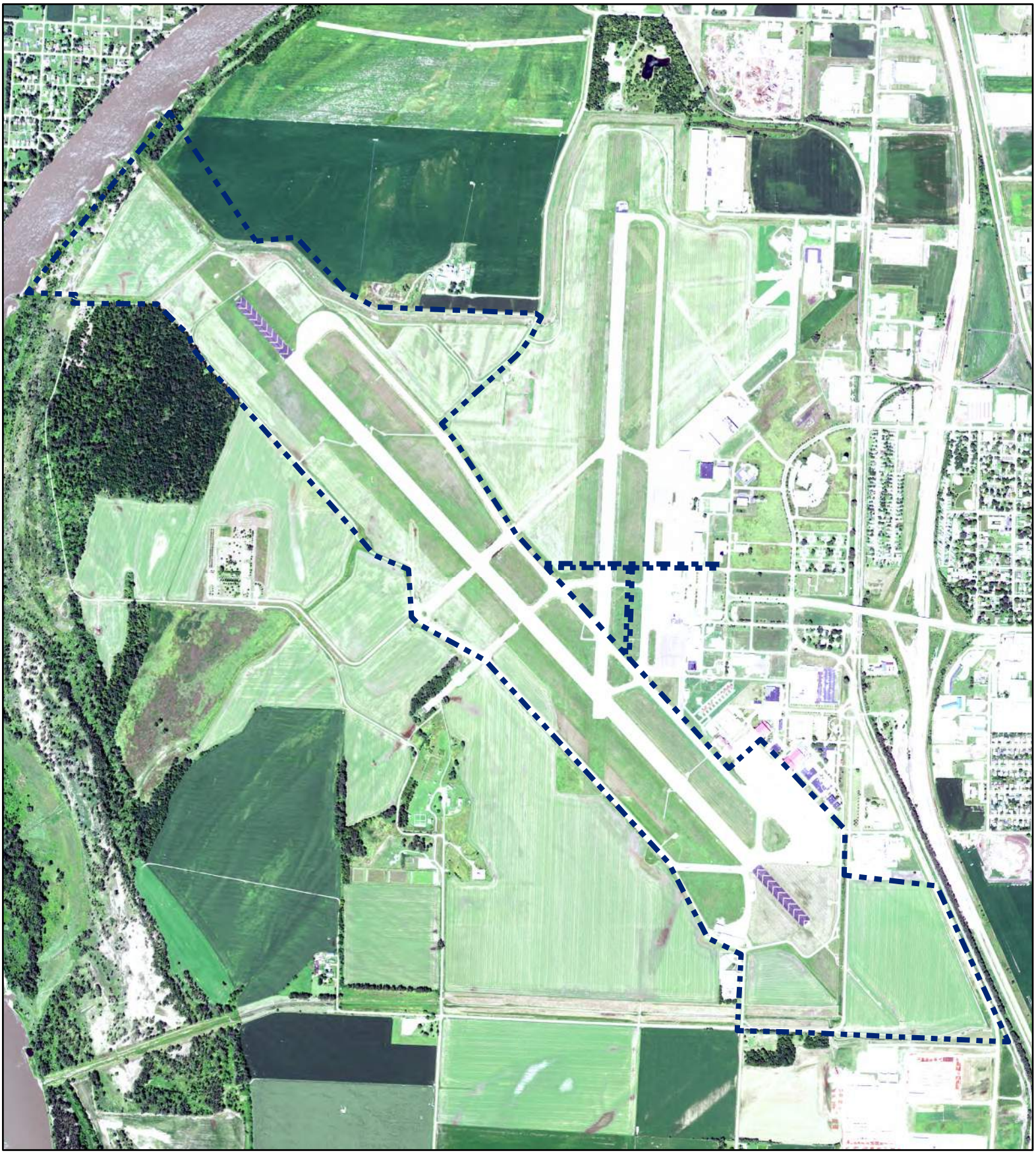
Legend

Project Study Area

Farm Analysis Location with Hydrology

Farm Analysis Location without Hydrology

Figure A5
2015 Aerial Mapping



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

0 1,500 3,000
Feet

Legend

Project Study Area

Figure A6
2014 Aerial Mapping

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

0 1,500 3,000 Feet

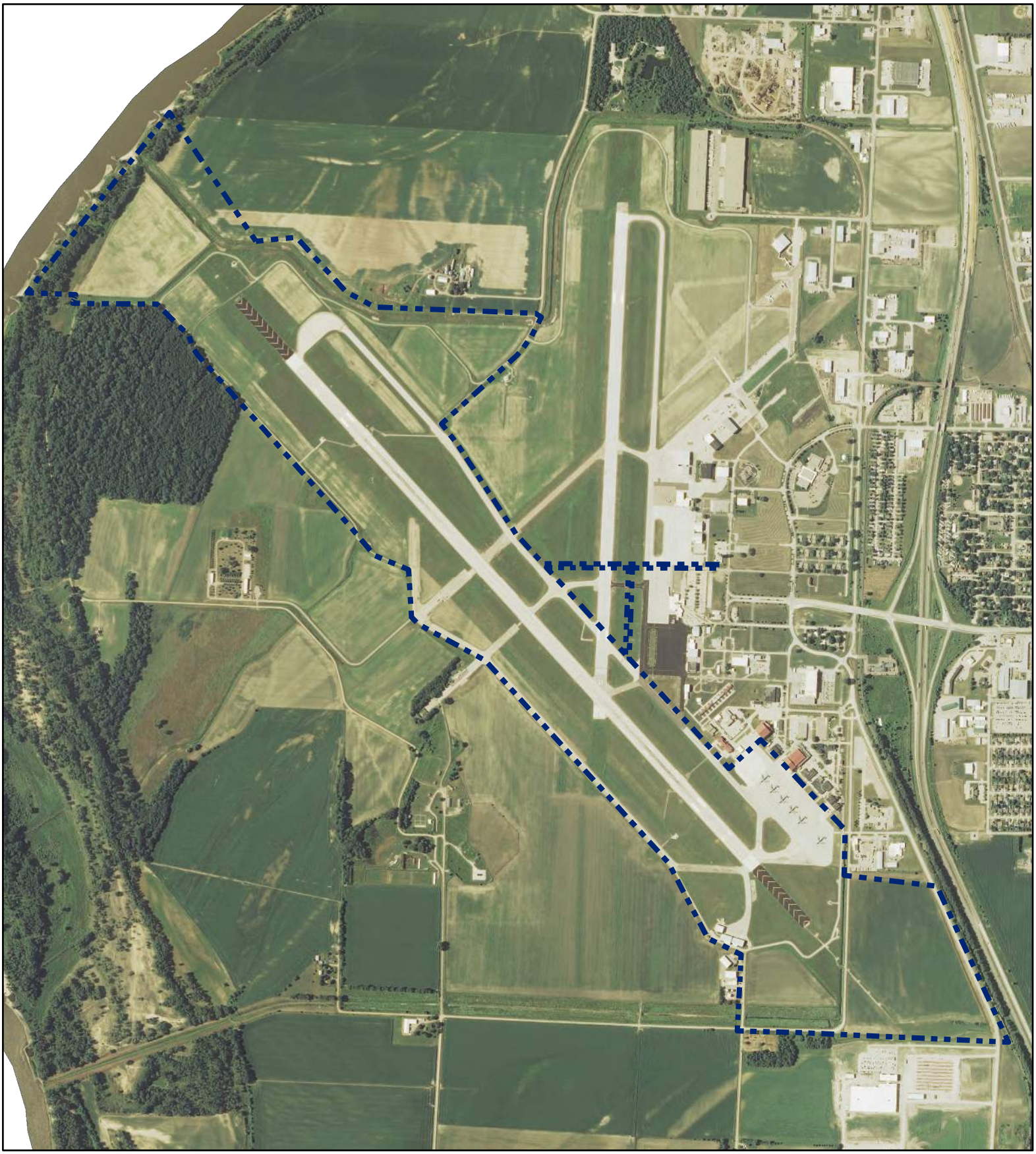
Legend

Project Study Area

Farm Analysis Location with Hydrology

Farm Analysis Location without Hydrology

Figure A7
2013 Aerial Mapping



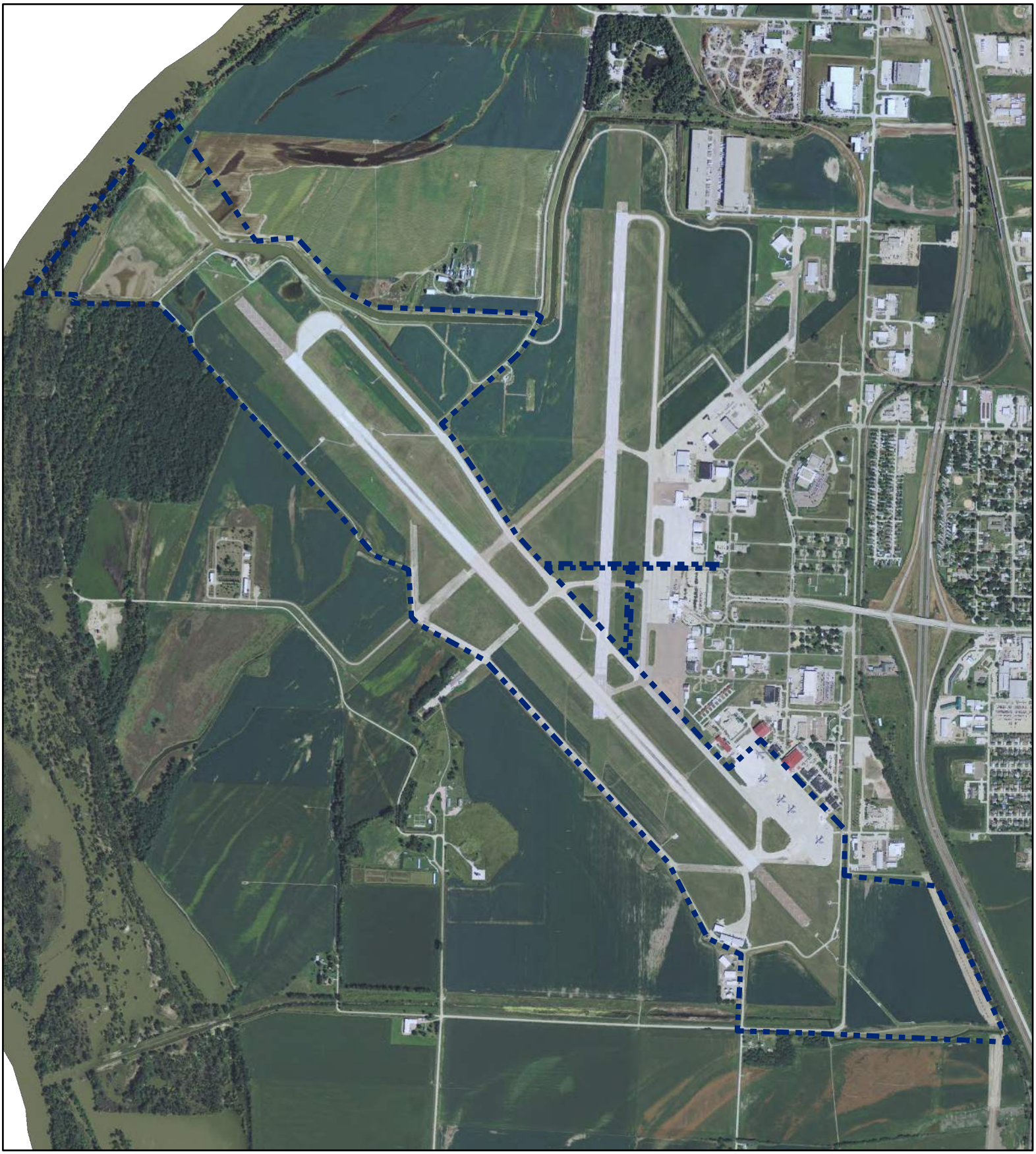
Source: Iowa Geographic Map Server - https://ortho.gis.iastate.edu/

0 1,500 3,000 Feet

Legend

Project Study Area

Figure A8
2011 Aerial Mapping



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

0 1,500 3,000 Feet

Legend

Project Study Area

Figure A9
2010 Aerial Mapping

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

0 1,500 3,000
Feet

Legend

Project Study Area

Figure A10
2009 Aerial Mapping

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

0 1,500 3,000 Feet

Legend

Project Study Area

Figure A11
2008 Aerial Mapping

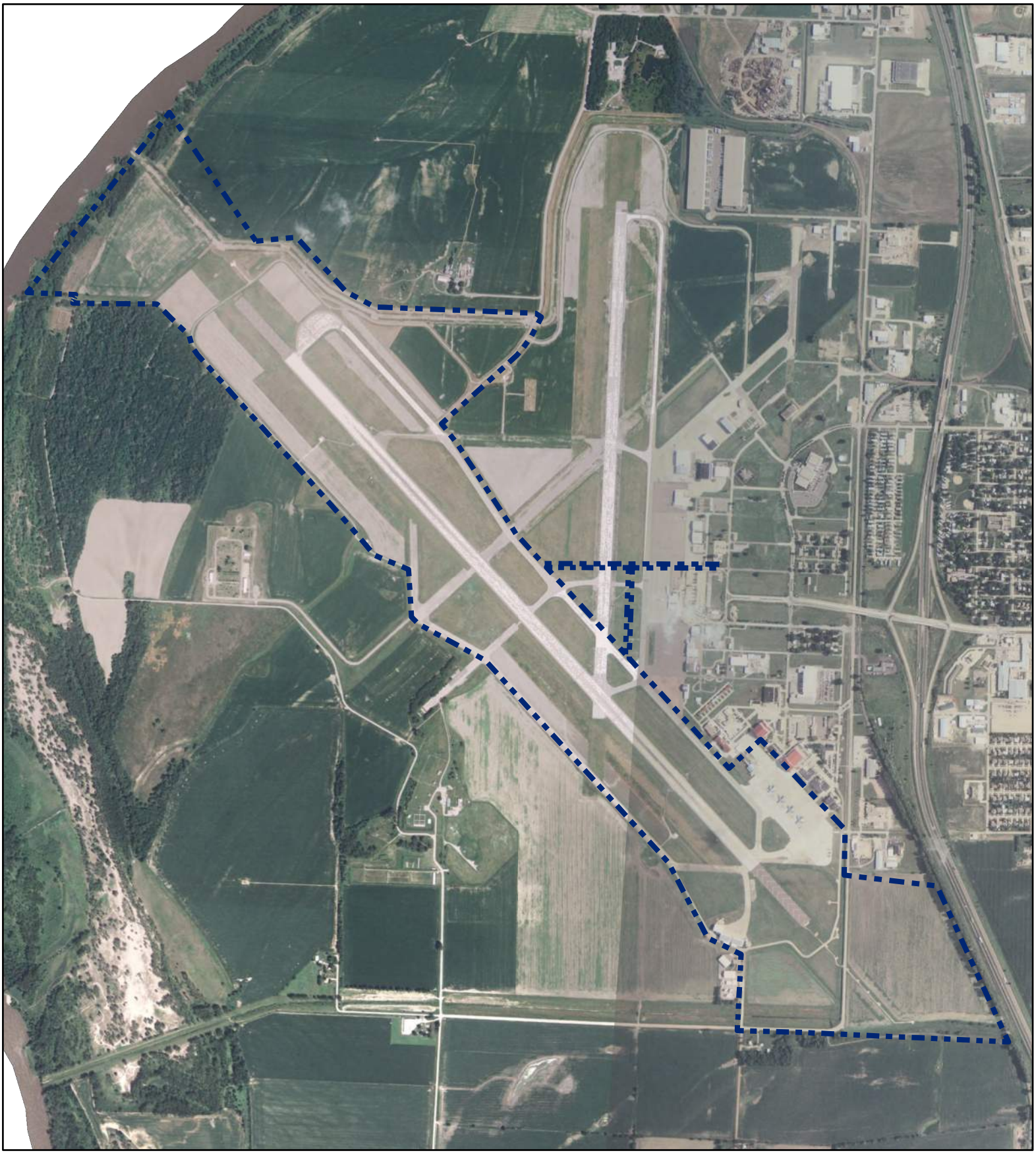
Source: Iowa Geographic Map Server - https://ortho.gis.iastate.edu/

0 1,500 3,000 Feet

Legend

Project Study Area

Figure A12
2007 Aerial Mapping



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

0 1,500 3,000 Feet

Legend

Project Study Area

Figure A13
2006 Aerial Mapping

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

0 1,500 3,000 Feet

Legend

Project Study Area

Farm Analysis Location with Hydrology

Farm Analysis Location without Hydrology

Figure A14
2005 Aerial Mapping

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

0 1,500 3,000 Feet

Legend

Project Study Area

Figure A15
2004 Aerial Mapping

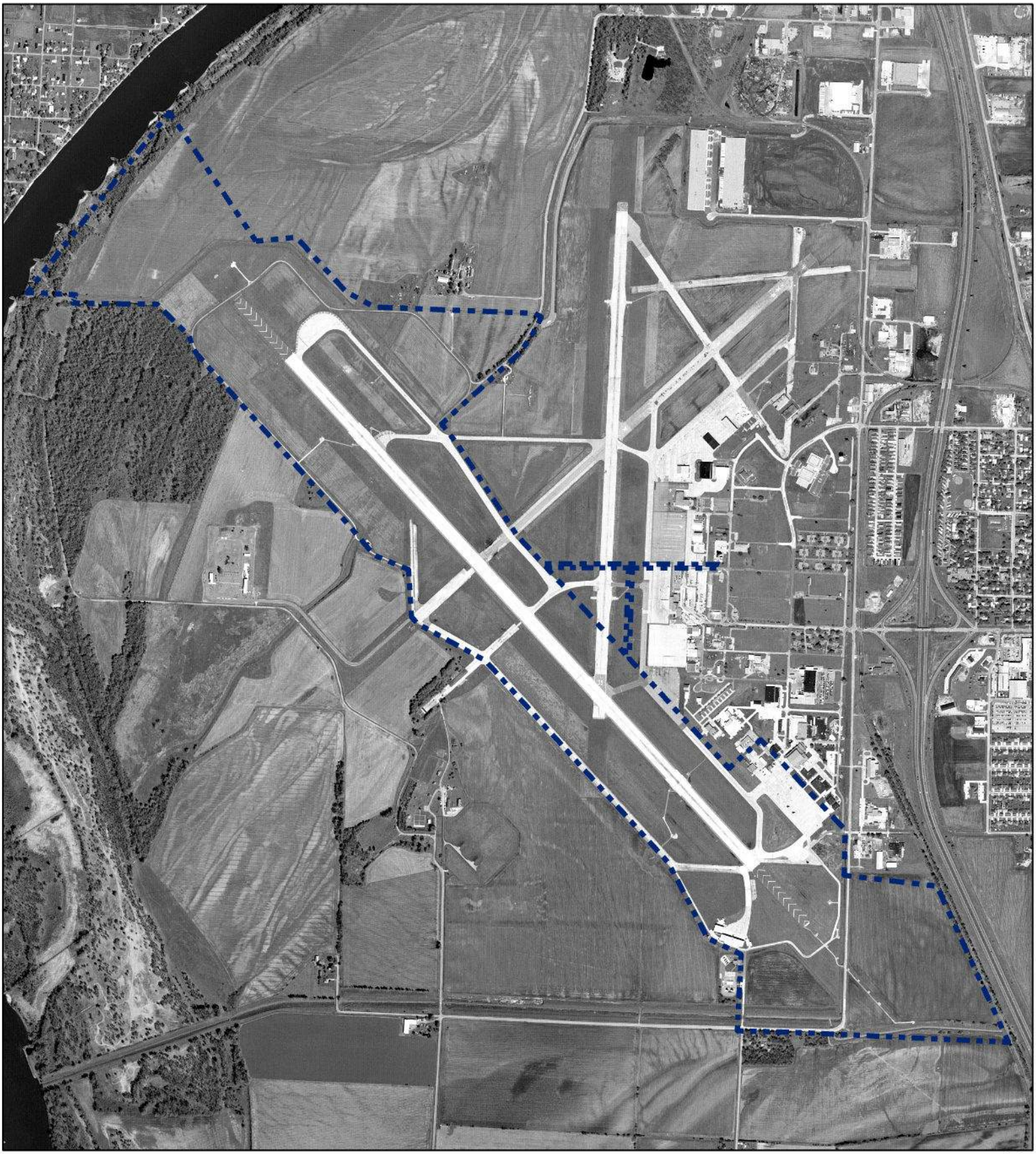
Source: Iowa Geographic Map Server - https://ortho.gis.iastate.edu/

0 1,500 3,000
Feet

Legend

Project Study Area

Figure A16
2002 Aerial Mapping



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

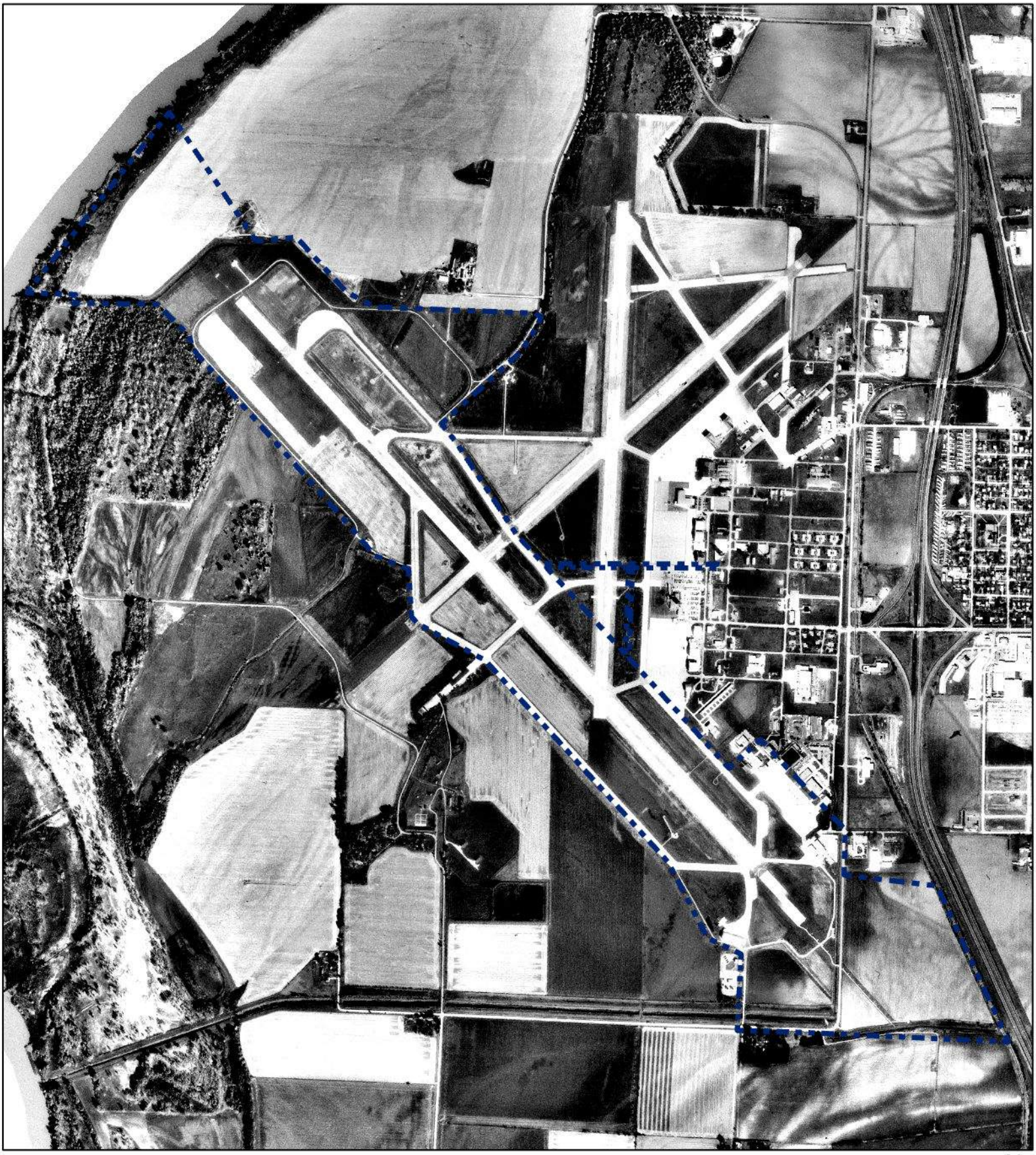
0 1,500 3,000 Feet

N

Legend

Project Study Area

Figure A17
1990s Aerial Mapping



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

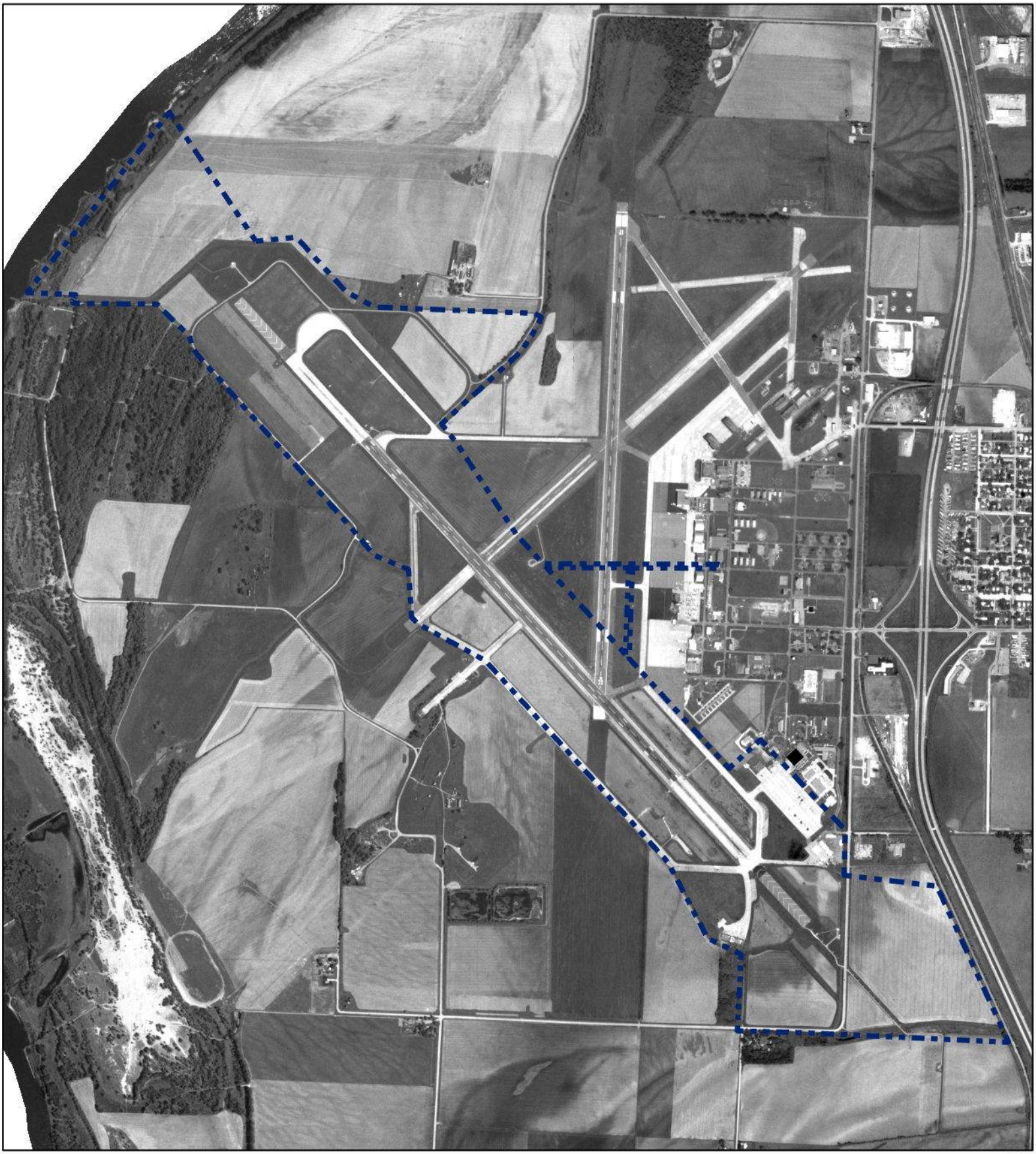
0 1,500 3,000 Feet

N

Legend

Project Study Area

Figure A18
1980s Aerial Mapping



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

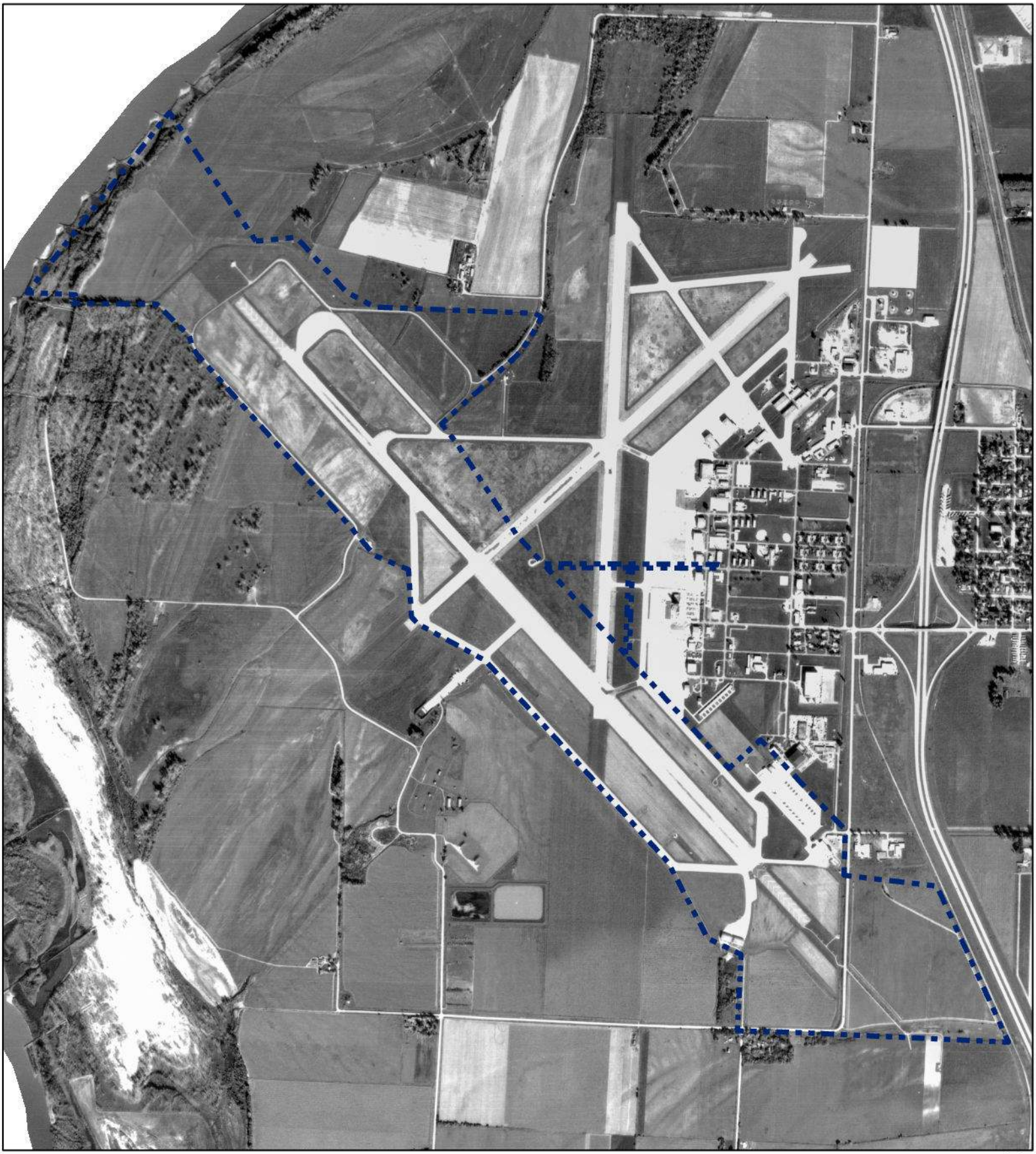
0 1,500 3,000 Feet

N

Legend

Project Study Area

Figure A19
1970s Aerial Mapping



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

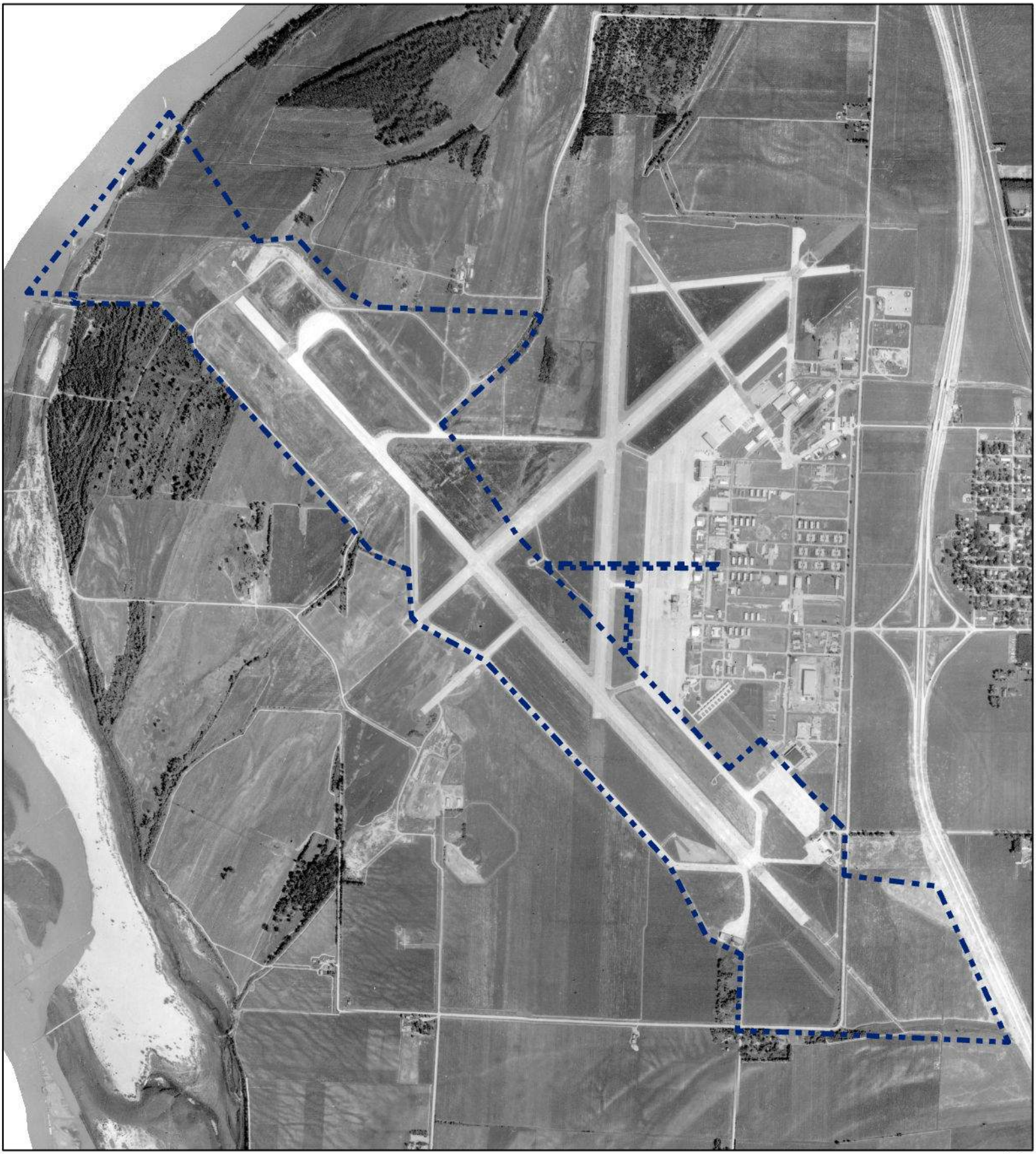
0 1,500 3,000 Feet

N

Legend

Project Study Area

Figure A20
1960s Aerial Mapping



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

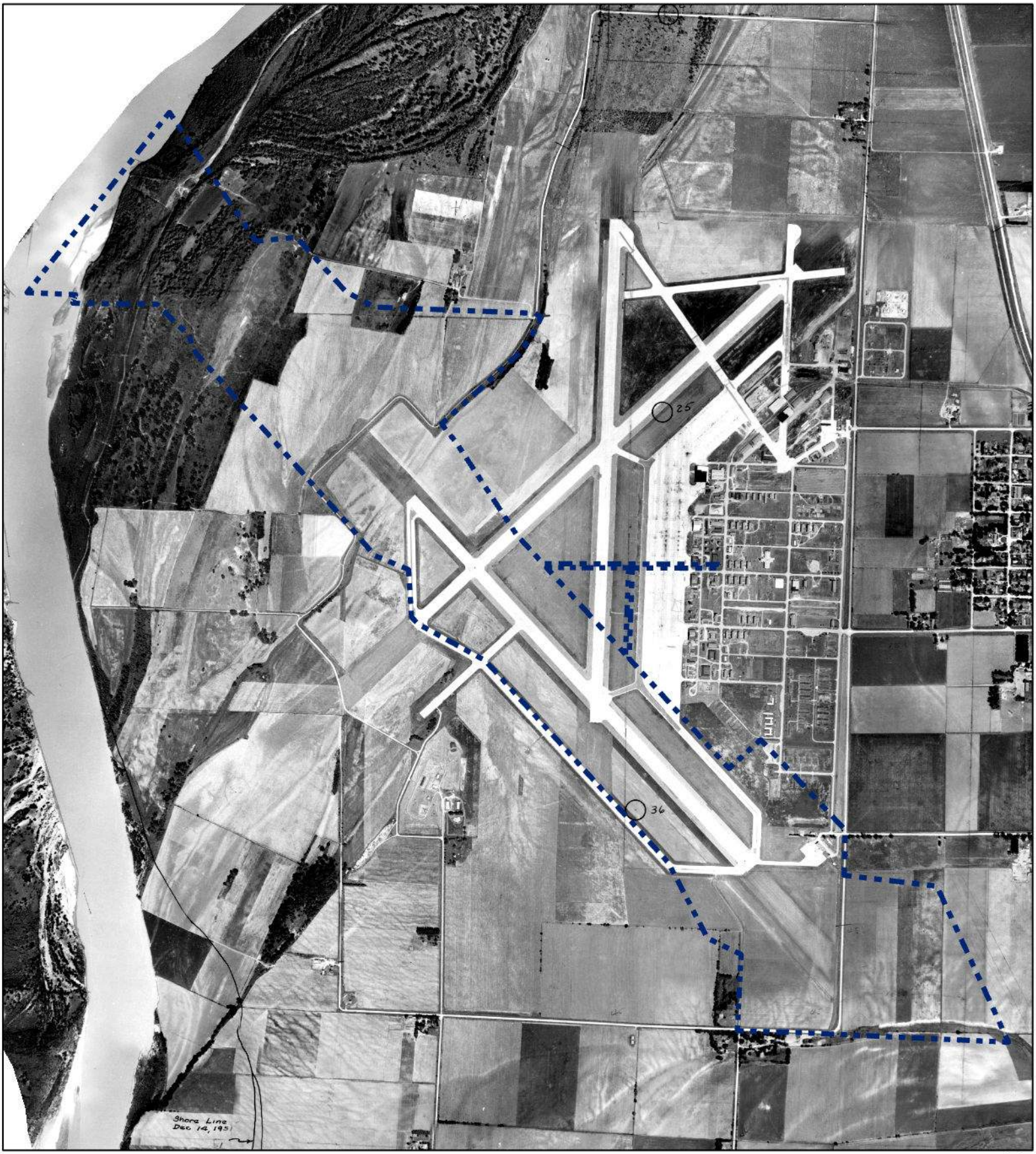
0 1,500 3,000 Feet

N

Legend

Project Study Area

Figure A21
1950s Aerial Mapping



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

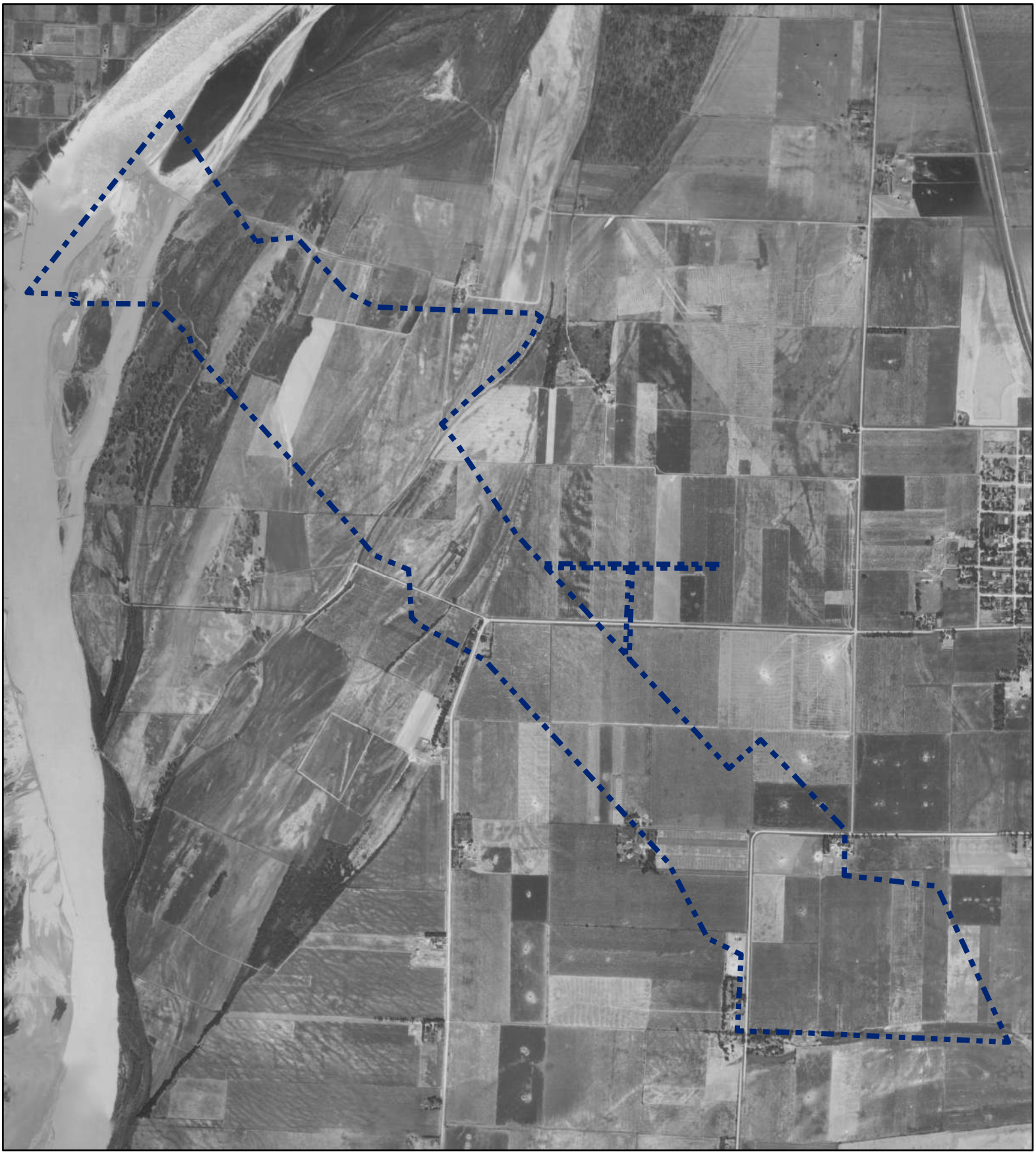
0 1,500 3,000 Feet

N

Legend

Project Study Area

Figure A22
1930 Aerial Mapping



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

0 1,500 3,000
Feet

Legend

Project Study Area

N

Appendix B

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-1
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-2 | Lat: 42.414573 | Long: -96.406945 | Datum: UTM 15, Upland
Soil Map Unit Name: Sarpy-Morconick complex, occasionally flooded | NWI Classification: PSS1A
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? No | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area within a Wetland?** **Yes**		**No**	**X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes		No	X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1 Sandbar Willow (*Salix interior*)	20	Yes	FACW
2			
3			
4			
5			
20% Total Cover 4	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	3
Total Number of Dominant Species Across All Strata (B):	3
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	100

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover		= Total Cover	

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Stinging Nettle (*Urtica dioica*)	70	Yes	FACW
2 Reed Canarygrass (*Phalaris arundinacea*)	30	Yes	FACW
3			
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 50 20% Total Cover 20	100	= Total Cover	

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- X 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover		= Total Cover	

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: Vegetation passes the FAC-Neutral test.

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-9	10YR 3/1	100					Silty clay loam	
9-10	10YR 4/2	98	10YR 5/6	2	R	M	Silty clay	
10-14	10YR 3/1	100					Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks: Restricted gravel layer at 14 inches. Soils do not meet the hydric soil indicator criteria within the Midwest Supplement.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in

Water Table Present? Yes ___ No X Depth: _____ in

Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Remarks:

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-2
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-2 | Lat: 42.412399 | Long: -96.408888 | Datum: UTM 15, Upland
Soil Map Unit Name: Sarpy-Morconick complex, occasionally flooded | NWI Classification: PFO1A
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? No | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area within a Wetland?** **Yes**	**No X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes		No	X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1 Green Ash (*Fraxinus pennsylvanica*)	20	Yes	FACW
2			
3			
4			
5			
20% Total Cover 4	20	= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1 Green Ash (*Fraxinus pennsylvanica*)	20	Yes	FACW
2			
3			
4			
5			
20% Total Cover 4	20	= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Prickly Lettuce (*Lactuca serriola*)	30	Yes	FACU
2 Sedge Sp (*Carex sp.*)	20	Yes	FACW
3 Lamb's Ear (*Stachys byzantine*)	10	No	NL
4 Shepards Purse (*Capsella bursa-pastoris*)	10	No	FACU
5 Canada Goldenrod (*Solidago altissima*)	5	No	FACU
6			
7			
8			
9			
10			
11			
50% Total Cover 38 20% Total Cover 15	75	= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	3
Total Number of Dominant Species Across All Strata (B):	4
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	75%

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- X 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No**

Remarks: Vegetation passes the FAC-Neutral test.

SOIL Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-16	10YR 3/2	100					Loam	
16-20	10YR 5/3	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks: Organic matter present to 16 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery(B7)
___ Sparse Vegetated Concave Surface(B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction on Tilled Soil (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in
Water Table Present? Yes ___ No X Depth: _____ in
Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Remarks:

Prepared by: MJL
Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-3
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): NA | Lat: 42.411453 | Long: -96.409590 | Datum: UTM 15, Upland
Soil Map Unit Name: Barney fine sandy loam, occasionally flooded | NWI Classification: PFO1A
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? No | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area within a Wetland?** **Yes**	**No X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes	X	No		

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	3
Total Number of Dominant Species Across All Strata (B):	3
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	100

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1 Green Ash (*Fraxinus pennsylvanica*)	10	Yes	FACW
2			
3			
4			
5			
20% Total Cover 2	10	= Total Cover	

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Stinging Nettle (*Urtica dioica*)	60	Yes	FACW
2 Reed Canarygrass (*Phalaris arundinacea*)	20	Yes	FACW
3 Curly Dock (*Rumex crispus*)	10	No	FAC
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 45 20% Total Cover 18	90	= Total Cover	

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- X 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Hydrophytic Vegetation Present? **Yes X No ____**

Remarks: Vegetation passes the FAC-Neutral test.

SOIL Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-5	10YR 3/2	100					Loam	
5-7	10YR 2/1	100					Loam	
7-16	10YR 3/1	100					Loam	
16-20	10YR 4/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in

Water Table Present? Yes ___ No X Depth: _____ in

Saturation Present? Yes X No ___ Depth: 5-7 in

(includes capillary fringe)

Wetland Hydrology Present **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Recent recorded rainfall was much higher than normal: 3 inches in the 7 days prior compared with 0.6 to 1 inch for normal rainfall, 6.9 in the 30 days prior compared with 1.9 to 3.6 inches for normal rainfall.

Remarks: Saturation only present in one soil layer (5-7 inches)

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site:	Sioux Gateway Airport	City/County:	Sioux City/Woodbury	Sampling Date:	05-08-24
Applicant/Owner:	RS&H	State:	Iowa	Sampling Point:	DP-4
Investigator(s):	Foth – H. Maudlin & M. Langer	Section, Township Range:	S23, 25, 26, 31, 35, 36, T88N, R48W		
Landform (hillslope, terrace, etc):	Toeslope	Local Relief (concave, convex, none):	Concave		
Slope (%):	2-5	Lat:	42.411286	Long:	-96.406425	Datum:	UTM 15, Upland
Soil Map Unit Name	Sarpy loamy find sand, rarely flooded			NWI Classification:	None

Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)

Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes

Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? **Yes** ____ **No** **X**

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Corn (*Zea mays*)	30	Yes	NL
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 50 20% Total Cover 20	100	= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	1
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- ___ 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-7	10YR 3/2	100					Silty clay loam	
7-20	10YR 4/2	100					Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery(B7)
___ Sparse Vegetated Concave Surface(B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction on Tilled Soil (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
X Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in
Water Table Present? Yes ___ No X Depth: _____ in
Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:
Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL
Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-5
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-2 | Lat: 42.411338 | Long: -96.405857 | Datum: UTM 15, Upland
Soil Map Unit Name: Sarpy loamy fine sand, rarely flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** **X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes	X	No		

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Corn (*Zea mays*)	30	Yes	NL
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover ____ 20% Total Cover ____		= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	1
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	X 1	____
FACW species	____	X 2	____
FAC species	____	X 3	____
FACU species	____	X 4	____
UPL species	____	X 5	____
Totals	(A) ____		(B) ____

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Veg
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations (Provide supporting data in Remarks)
____ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-8	10YR 3/1	100					Silty clay	
8-20	10YR 4/2	100					Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery(B7)
___ Sparse Vegetated Concave Surface(B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction on Tilled Soil (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
X Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth: 0 in
Water Table Present? Yes X No ___ Depth: 0 in
Saturation Present? (includes capillary fringe) Yes X No ___ Depth: 0 in

Wetland Hydrology Present **Yes** **X** **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:
Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL
Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-6
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-4 | Lat: 42.411294 | Long: -96.405186 | Datum: UTM 15, Upland
Soil Map Unit Name: Sarpy loamy fine sand, rarely flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area within a Wetland?** **Yes**		**No**	**X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes		No	X	

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	1
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Corn (*Zea mays*)	30	Yes	NL
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover ____ 20% Total Cover ____		= Total Cover	

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- ___ 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-6

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-7	10YR 3/1	100					Silty clay	
7-20	10YR 3/2	100					Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in

Water Table Present? Yes ___ No X Depth: _____ in

Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-7
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-2 | Lat: 42.411607 | Long: -96.397810 | Datum: UTM 15, Upland
Soil Map Unit Name: Percival silty clay, rarely flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	3
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Tansy Mustard (*Descurainia incana*)	5	Yes	UPL
2 Shepards Purse (*Capsella bursa-pastoris*)	5	Yes	FACU
3 Soybean (*Glycine max*)	5	Yes	NL
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 8 20% Total Cover 3	15	= Total Cover	

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Veg
____ 2-Dominance Test is > 50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations (Provide supporting data in Remarks)
____ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-7

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-13	10YR 3/2	100					Sandy clay loam	
13-18	10YR 4/2	100					Sandy clay loam	
18-20	10YR 5/3	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in

Water Table Present? Yes ___ No X Depth: _____ in

Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-8
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Shoulder | Local Relief (concave, convex, none): Convex
Slope (%): 0-2 | Lat: 42.410142 | Long: -96.394001 | Datum: UTM 15, Upland
Soil Map Unit Name: Percival silty clay, rarely flooded | NWI Classification: R4SBC
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Tansy Mustard (*Descurainia incana*)	5	Yes	UPL
2 Shepards Purse (*Capsella bursa-pastoris*)	5	Yes	FACU
3 Soybean (*Glycine max*)	5	Yes	NL
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover ____ 20% Total Cover ____		= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	3
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1-Rapid Test for Hydrophytic Veg
- ____ 2-Dominance Test is > 50%
- ____ 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ____ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-8

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-13	10YR 3/2	100					Loam	
13-19	10YR 4/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery(B7)
___ Sparse Vegetated Concave Surface(B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction on Tilled Soil (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
X Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in
Water Table Present? Yes ___ No X Depth: _____ in
Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:
Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL
Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-9
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-2 | Lat: 42.409445 | Long: -96.391298 | Datum: UTM 15, Upland
Soil Map Unit Name: Percival silty clay, rarely flooded | NWI Classification:
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	2
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Tansy Mustard (*Descurainia incana*)	10	Yes	UPL
2 Shepards Purse (*Capsella bursa-pastoris*)	10	Yes	FACU
3			
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 10	20% Total Cover 4	20	= Total Cover

Hydrophytic Vegetation Indicators:
- ___ 1-Rapid Test for Hydrophytic Veg
- ___ 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-9

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-10	10YR 4/1	100					Loam	
10-18	10YR 4/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery(B7)
___ Sparse Vegetated Concave Surface(B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction on Tilled Soil (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
X Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in
Water Table Present? Yes ___ No X Depth: _____ in
Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:
Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL
Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-10
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-2 | Lat: 42.408795 | Long: -96.390633 | Datum: UTM 15, Upland
Soil Map Unit Name: Percival silty clay, rarely flooded | NWI Classification:
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area within a Wetland?** **Yes**	**No X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes	X	No		

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Stinging Nettle (*Urtica dioica*)	70	Yes	FACW
2 Tansy Mustard (*Descurainia incana*)	10	No	UPL
3 Shepards Purse (*Capsella bursa-pastoris*)	5	No	FACU
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 43 20% Total Cover 17	85	= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	1
Total Number of Dominant Species Across All Strata (B):	1
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	100

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- X 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Vegetation passes the FAC-Neutral test.

SOIL Sampling Point: DP-10

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-12	10YR 4/1	100					Sandy clay	
12-18	10YR 4/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in

Water Table Present? Yes ___ No X Depth: _____ in

Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** **X** **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:
Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks: Two or more secondary wetland indicators were observed; therefore wetland hydrology is present.

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-11
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Linear | Local Relief (concave, convex, none): Linear
Slope (%): 0-2 | Lat: 42.403986 | Long: -96.394549 | Datum: UTM 15, Upland
Soil Map Unit Name: Grable-Moronick complex, rarely flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area within a Wetland?** **Yes**		**No**	**X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes		No	X	

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Shepards Purse (*Capsella bursa-pastoris*)	34	Yes	FACU
2 Tansy Mustard (*Descurainia incana*)	33	Yes	UPL
3 Alfalfa (*Medicago sativa*)	33	Yes	FACU
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 50 20% Total Cover 20	100	= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	3
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- ___ 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** | **No** X

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-11

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-15	10YR 4/2	100					Sandy loam	
15-20	10YR 5/2	100					Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery(B7)
___ Sparse Vegetated Concave Surface(B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction on Tilled Soil (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
X Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in
Water Table Present? Yes ___ No X Depth: _____ in
Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:
Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL
Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-12
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-2 | Lat: 42.402148 | Long: -96.392253 | Datum: UTM 15, Upland
Soil Map Unit Name: Grable-Moronick complex, rarely flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Normalcircum
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	3
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Shepards Purse (*Capsella bursa-pastoris*)	34	Yes	FACU
2 Tansy Mustard (*Descurainia incana*)	33	Yes	UPL
3 Alfalfa (*Medicago sativa*)	33	Yes	FACU
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover ____ 20% Total Cover ____		= Total Cover	

Hydrophytic Vegetation Indicators:
- ____ 1-Rapid Test for Hydrophytic Veg
- ____ 2-Dominance Test is > 50%
- ____ 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ____ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-12

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-8	10YR 3/1	100					Silty clay loam	
8-14	10YR 4/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks: Restricted layer at 14inches due to sand compaction.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in

Water Table Present? Yes ___ No X Depth: _____ in

Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:
Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-13
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Convex
Slope (%): 0-2 | Lat: 42.399597 | Long: -96.389141 | Datum: UTM 15, Upland
Soil Map Unit Name: Haynie silt loam, deep loess, rarely flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	2
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	X 1	
FACW species	____	X 2	
FAC species	____	X 3	
FACU species	____	X 4	
UPL species	____	X 5	
Totals	(A) ____	(B)	

Prevalence Index = B/A =

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Soybean (*Glycine max*)	10	Yes	NL
2 Alfalfa (*Medicago sativa*)	5	Yes	FACU
3			
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 8	20% Total Cover 3	15	= Total Cover

Hydrophytic Vegetation Indicators:
- ____ 1-Rapid Test for Hydrophytic Veg
- ____ 2-Dominance Test is > 50%
- ____ 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ____ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-13

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-5	10YR 3/1	100					Silty clay loam	
5-12	10YR 4/3	70					Loam	
	10YR 3/1	30					Loam	
12-20	10YR 4/2	100					Loam	
20-21	10YR 4/2	97	7.5YR 4/6	3	R	M	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks: Soils do not meet the hydric soil indicator criteria within the Midwest Supplement.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery(B7)
___ Sparse Vegetated Concave Surface(B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction on Tilled Soil (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
X Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in
Water Table Present? Yes ___ No X Depth: _____ in
Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:
Based on the NRCS method for interpreting historic aerial photographs, wetland hydrology is present as a secondary indicator at this data point. See Section 2.7 of the Delineation Report for additional details.

Remarks:

Prepared by: MJL
Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site:	Sioux Gateway Airport	City/County:	Sioux City/Woodbury	Sampling Date:	05-08-24
Applicant/Owner:	RS&H	State:	Iowa	Sampling Point:	DP-14
Investigator(s):	Foth – H. Maudlin & M. Langer	Section, Township Range:	S23, 25, 26, 31, 35, 36, T88N, R48W		
Landform (hillslope, terrace, etc):	Shoulder	Local Relief (concave, convex, none):	Concave		
Slope (%):	0-2	Lat:	42.392728	Long:	-96.373708
Datum:	UTM 15, Upland				
Soil Map Unit Name	Albaton silty clay, rarely flooded	NWI Classification:	None		

Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)

Are vegetation, soil or hydrology significantly disturbed? No — Are "Normal Circumstances" present? Yes

Are vegetation, soil or hydrology significantly problematic? No — (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** **X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes		No	X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Smooth Brome (*Bromus inermis*)	100	Yes	FACU
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 50 — 20% Total Cover 20	100	= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	0
Total Number of Dominant Species Across All Strata (B):	1
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	0

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ____ 1-Rapid Test for Hydrophytic Veg
- ____ 2-Dominance Test is > 50%
- ____ 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ____ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-14

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-12	10YR 4/2	50					Silty clay	
	10YR 3/2	50					Silty clay	
12-20	10YR 4/2	70	10YR 5/8	30	R	M	Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks: Soils do not meet the hydric soil indicator criteria within the Midwest Supplement.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in

Water Table Present? Yes ___ No X Depth: _____ in

Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Remarks:

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-15
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Toeslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-2 | Lat: 42.392561 | Long: -96.373407 | Datum: UTM 15, Upland
Soil Map Unit Name: Albaton silty clay, rarely flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? No | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area within a Wetland?** **Yes**	**No X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes	X	No		

Remarks: A plugged tile is causing flooding issues, but wetland soils have not developed due to the short duration of inundation.

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Kentucky Bluegrass (*Poa pratensis*)	50	Yes	FAC
2 Sedge Sp (*Carex sp.*)	30	Yes	FACW
3 Tall Stickseed (*Coreopsis tripteris*)	10	No	FAC
4 Purple Clover (*Trifolium purpureum*)	10	No	NL
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 50 20% Total Cover 20	100	= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	2
Total Number of Dominant Species Across All Strata (B):	2
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	100

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- X 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks: Vegetation passes the FAC-Neutral test.

SOIL

Sampling Point: DP-15

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-14	10YR 4/1	100					Silty Clay	
14-22	10YR 3/1	97	10YR 5/8	3	R	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks: Soils do not meet the hydric soil indicator criteria within the Midwest Supplement.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth: 0 in

Water Table Present? Yes X No ___ Depth: 0 in

Saturation Present? (includes capillary fringe) Yes X No ___ Depth: 0 in

Wetland Hydrology Present **Yes** **X** **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Remarks: Inundation due to a plugged tile.

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-16
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Footslope | Local Relief (concave, convex, none): Concave
Slope (%): 0-1 | Lat: 42.385836 | Long: -96.362542 | Datum: UTM 15, Wetland 1
Soil Map Unit Name: Albaton silty clay, depressional, drained, frequently flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? No | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area within a Wetland?** **Yes X No**
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present?	Yes	X	No		

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	3
Total Number of Dominant Species Across All Strata (B):	3
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	100

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover		= Total Cover	

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Common Cowparsnip (*Heracleum maximum*)	40	Yes	FACW
2 Reed Canarygrass (*Phalaris arundinacea*)	30	Yes	FACW
3 Kentucky Bluegrass (*Poa pratensis*)	20	Yes	FAC
4 Shepards Purse (*Capsella bursa-pastoris*)	5	No	FACU
5 Common Dandelion (*Taraxacum officinale*)	5	No	FACU
6			
7			
8			
9			
10			
11			
50% Total Cover 50 20% Total Cover 20	100	= Total Cover	

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- X 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover		= Total Cover	

Hydrophytic Vegetation Present? **Yes X No**

Remarks: Vegetation passes the FAC-Neutral test.

SOIL

Sampling Point: DP-16

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth	Matrix		Redox Features					Remarks
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-8	10YR 3/1	100					Silty clay loam	
8-16	10YR 4/1	93	10YR 5/6	7	R	M	Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth: 0 in

Water Table Present? Yes X No ___ Depth: 0 in

Saturation Present? (includes capillary fringe) Yes X No ___ Depth: 0 in

Wetland Hydrology Present **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Remarks:

Prepared by: MJL

Checked by: ESM

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Sioux Gateway Airport | City/County: Sioux City/Woodbury | Sampling Date: 05-08-24
Applicant/Owner: RS&H | State: Iowa | Sampling Point: DP-17
Investigator(s): Foth – H. Maudlin & M. Langer | Section, Township Range: S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope, terrace, etc): Shoulder | Local Relief (concave, convex, none): Concave
Slope (%): 0-1 | Lat: 42.385836 | Long: -96.362542 | Datum: UTM 15, Upland
Soil Map Unit Name: Albaton silty clay, depressional, drained, frequently flooded | NWI Classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? No, wetter than normal (see Section 2.6)
Are vegetation, soil or hydrology significantly disturbed? Yes | Are "Normal Circumstances" present? Yes
Are vegetation, soil or hydrology significantly problematic? No | (if needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		**Is the Sampled Area within a Wetland?** **Yes**		**No**	**X**
Hydric Soil Present?	Yes		No	X	
Wetland Hydrology Present?	Yes		No	X	

Remarks: Vegetation in the collected area has been mowed

VEGETATION – Use scientific names of plants.

Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Sapling/Shrub Stratum <3" DBH or > 1 m tall (Plot size: 15' radius)			
1			
2			
3			
4			
5			
20% Total Cover ____		= Total Cover	

Herb Stratum non-woody or woody < 1 m tall (Plot size: 5' radius)			
1 Kentucky Bluegrass (*Poa pratensis*)	100	Yes	FAC
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
50% Total Cover 50 20% Total Cover 20	100	= Total Cover	

Woody Vine Stratum > 1 m tall (Plot size: 30' radius)			
1			
2			
3			
20% Total Cover ____		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC (A):	1
Total Number of Dominant Species Across All Strata (B):	1
Percent of Dominant Species That are OBL, FACW, or FAC (A/B):	100

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		X 1	
FACW species		X 2	
FAC species		X 3	
FACU species		X 4	
UPL species		X 5	
Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1-Rapid Test for Hydrophytic Veg
- X 2-Dominance Test is > 50%
- ___ 3-Prevalence Index is ≤3.0[1]
- ___ 4-Morphological Adaptations (Provide supporting data in Remarks)
- ___ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: Vegetation fails the FAC-Neutral test.

SOIL Sampling Point: DP-17

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features					Remarks
	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	
0-8	10YR 3/1	100					Silty clay loam	
8-20	10YR 3/2	100					Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicator for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Sparse Vegetated Concave Surface(B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction on Tilled Soil (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth: _____ in

Water Table Present? Yes ___ No X Depth: _____ in

Saturation Present? (includes capillary fringe) Yes ___ No X Depth: _____ in

Wetland Hydrology Present **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:

Remarks:

Prepared by: MJL

Checked by: ESM

Appendix C

Ground Photographs

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
1	5/8/24

Direction Photo Taken:
Northeast

Photo Taken By:
Morgan Langer

Description:
Northern corner of forested area along the Project Study Area's northwest border

Photo No.	Date:
2	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
View of D-1 from bottom of the bank near the Missouri River

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
3	5/8/24

Direction Photo Taken:
Northwest

Photo Taken By:
Morgan Langer

Description:
Forested area along northwestern Project Study Area border

Photo No.	Date:
4	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
View from northern edge of farm field

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
5	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-1

Photo No.	Date:
6	5/8/24

Direction Photo Taken:
Northeast

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-2

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
7	5/8/24

Direction Photo Taken:
North

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-3

Photo No.	Date:
8	5/8/24

Direction Photo Taken:
West

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-4 & DP-5

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
9	5/8/24

Direction Photo Taken:
Northwest

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-6

Photo No.	Date:
10	5/8/24

Direction Photo Taken:
North

Photo Taken By:
Morgan Langer

Description:
View of farm field from southern corner

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
11	5/8/24

Direction Photo Taken:
Northeast

Photo Taken By:
Morgan Langer

Description:
View of the area near D-2

Photo No.	Date:
12	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
Upland near perimeter road

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
13	5/8/24

Direction Photo Taken:
East

Photo Taken By:
Morgan Langer

Description:
View of the area near D-1

Photo No.	Date:
14	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
View of the area near D-1

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
15	5/8/24

Direction Photo Taken:
Northeast

Photo Taken By:
Morgan Langer

Description:
Upland zone in the center of the Project Study Area

Photo No.	Date:
16	5/8/24

Direction Photo Taken:
North

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-7

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
17	5/8/24

Direction Photo Taken:
Northeast

Photo Taken By:
Morgan Langer

Description:
Culverts between the taxiway and runway

Photo No.	Date:
18	5/8/24

Direction Photo Taken:
North

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-8

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
19	5/8/24

Direction Photo Taken:
East

Photo Taken By:
Morgan Langer

Description:
View of D-1

Photo No.	Date:
20	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-9

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
21	5/8/24

Direction Photo Taken:
Northwest

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-10

Photo No.	Date:
22	5/8/24

Direction Photo Taken:
West

Photo Taken By:
Morgan Langer

Description:
View of D-1

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
23	5/8/24

Direction Photo Taken:
Northwest

Photo Taken By:
Morgan Langer

Description:
View of S-1

Photo No.	Date:
24	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
Upland area northwest of DP-11

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
25	5/8/24

Direction Photo Taken:
Northeast

Photo Taken By:
Morgan Langer

Description:
Tile outlet beneath the runway. A data point was not collected at this location due to the dominance of upland vegetation. Standing water was likely due to recent heavy rainfall.

Photo No.	Date:
26	5/8/24

Direction Photo Taken:
Northwest

Photo Taken By:
Morgan Langer

Description:
View of D-3

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
27	5/8/24

Direction Photo Taken:
Northwest

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-12

Photo No.	Date:
28	5/8/24

Direction Photo Taken:
East

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-13

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
29	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
Tile outlet near DP-13

Photo No.	Date:
30	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
Upland area southwest of the runway

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
31	5/8/24

Direction Photo Taken:
East

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-15

Photo No.	Date:
32	5/8/24

Direction Photo Taken:
West

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-14

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
33	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
View of D-5

Photo No.	Date:
34	5/8/24

Direction Photo Taken:
West

Photo Taken By:
Morgan Langer

Description:
Culvert outlet

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
35	5/8/24

Direction Photo Taken:
Southeast

Photo Taken By:
Morgan Langer

Description:
View of D-4

Photo No.	Date:
36	5/8/24

Direction Photo Taken:
East

Photo Taken By:
Morgan Langer

Description:
Upland on southern end of Project Study Area

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
37	5/8/24

Direction Photo Taken:
East

Photo Taken By:
Morgan Langer

Description:
View of D-5

Photo No.	Date:
38	5/8/24

Direction Photo Taken:
West

Photo Taken By:
Morgan Langer

Description:
View of D-7 and WL-1

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
39	5/8/24

Direction Photo Taken:
West

Photo Taken By:
Morgan Langer

Description:
View of the area near DP-16, DP-17, D-7, and WL-1

Photo No.	Date:
40	5/8/24

Direction Photo Taken:
Southwest

Photo Taken By:
Morgan Langer

Description:
View of D-6 and WL-1

Foth

Photographic Log

Client's Name:	Site Location:	Project No.
RS&H Iowa, P.C.	Sioux Gateway Airport	23S049.00

Photo No.	Date:
41	5/8/24

Direction Photo Taken:
South

Photo Taken By:
Morgan Langer

Description:
Depression near railroad in southeast corner of Project Study Area

Appendix D

Request for Corps JD

Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To: Rock Island District

- I am requesting a JD on property located at: Sioux Gateway Airport, 2403 Aviation Boulevard (Street Address)
  City/Township/Parish: Sioux City County: Woodbury State: IA
  Acreage of Parcel/Review Area for JD: 710
  Section: 23, 25, 26, 31, 35, 36 Township: 88 North Range: 48 West
  Latitude (decimal degrees): 42.414573 Longitude (decimal degrees): -96.406945
  (For linear projects, please include the center point of the proposed alignment.)
- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- ___ I currently own this property. ___ I plan to purchase this property.
  _x_ I am an agent/consultant acting on behalf of the requestor. (Permittee: Sioux Gateway Airport)
  ___ Other (please explain): _____.
- Reason for request: (check as many as applicable)
  ___ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
  ___ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
  _x_ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
  ___ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
  ___ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
  ___ A Corps JD is required in order to obtain my local/state authorization.
  _x_ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
  ___ I believe that the site may be comprised entirely of dry land.
  ___ Other: _____
- Type of determination being requested:
  _x_ I am requesting an approved JD.
  ___ I am requesting a preliminary JD.
  ___ I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
  ___ I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

*Signature: _____ Date: 8/7/2024

- Typed or printed name: Eva Moritz
  Company name: Foth Infrastructure & Environment
  Address: 8191 Birchwood Court, Suite L
  Johnston, IA 50131
  Daytime phone no.: 515-251-2524
  Email address: eva.moritz@foth.com

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.