APPENDIX H

Wetlands



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Appendix H - Wetlands	
	Appendix H.1
	Approved Jurisdictional Determination

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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

Kirsten Brown

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 2024-0547²

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 iurisdiction.

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.

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), 2024-0547

amended on 8 September 2023 (Amended 2023 Rule) because, as of the date of this decision, the Amended 2023 Rule is not applicable lowa 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 River⁶

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

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), 2024-0547

- 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 WATERS⁷: 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.

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), 2024-0547

- 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

4

⁹ 51 FR 41217, November 13, 1986.

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), 2024-0547

- 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.

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), 2024-0547

- 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:	Attached is:								
INITIAL PROF	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)								
PROFFERED	PROFFERED PERMIT (Standard Permit or Letter of permission)								
PERMIT DEN	IAL WITHOUT PREJUDICE		С						
PERMIT DEN	PERMIT DENIAL WITH PREJUDICE								
X APPROVED J	X APPROVED JURISDICTIONAL DETERMINATION								
PRELIMINAR'	PRELIMINARY JURISDICTIONAL DETERMINATION								

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 OBJE	ECTIONS TO AN INITIAL PROFFERED PERMIT
REASONS FOR APPEAL OR OBJECTIONS: (De your objections to an initial proffered permit in clean necessary. You may attach additional information objections are addressed in the administrative recommendation.)	ar concise statements. Use additional pages as to this form to clarify where your reasons or
ADDITIONAL INFORMATION: The appeal is limit Corps memorandum for the record of the appeal of information that the review officer has determined Neither the appellant nor the Corps may add new you may provide additional information to clarify the administrative record.	conference or meeting, and any supplemental is needed to clarify the administrative record. information or analyses to the record. However,
	the right of entry to Corps of Engineers personnel, stigations of the project site during the course of the otice of any site investigation and will have the
	Date:
Signature of appellant or agent.	
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

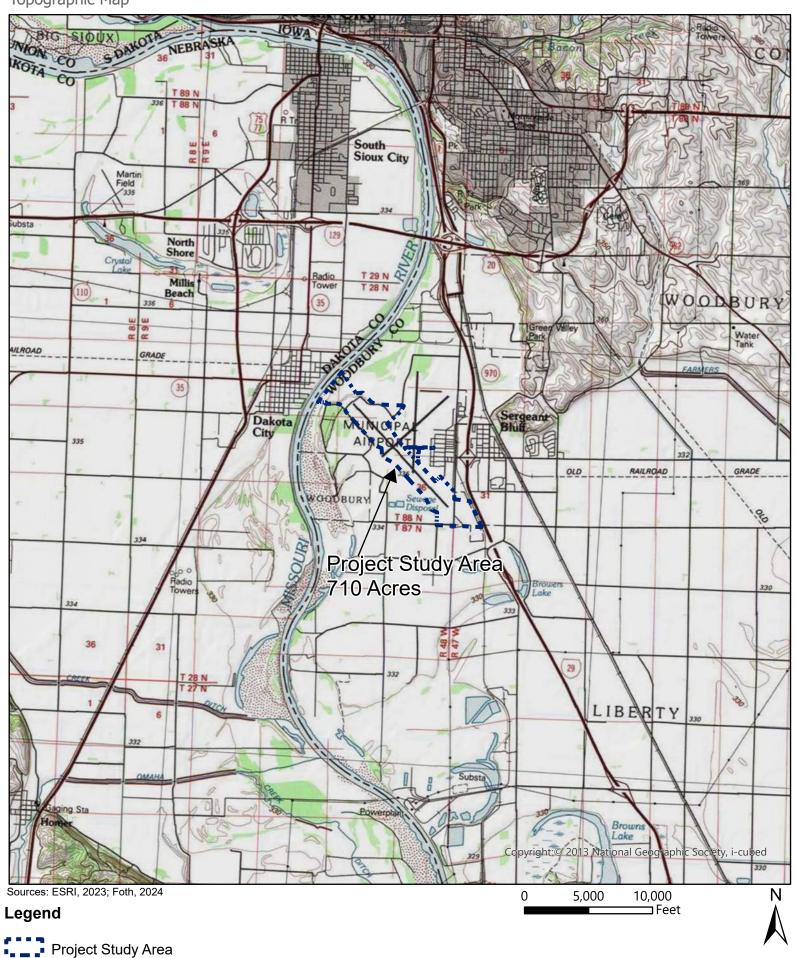
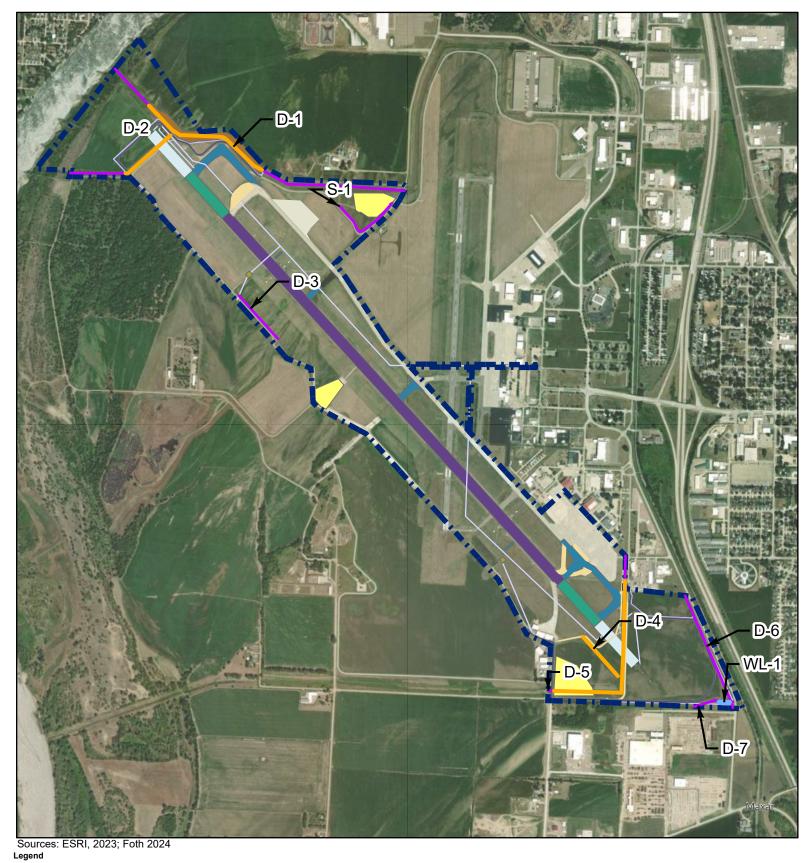


Figure 2 Proposed Action Map

Cables Replacement

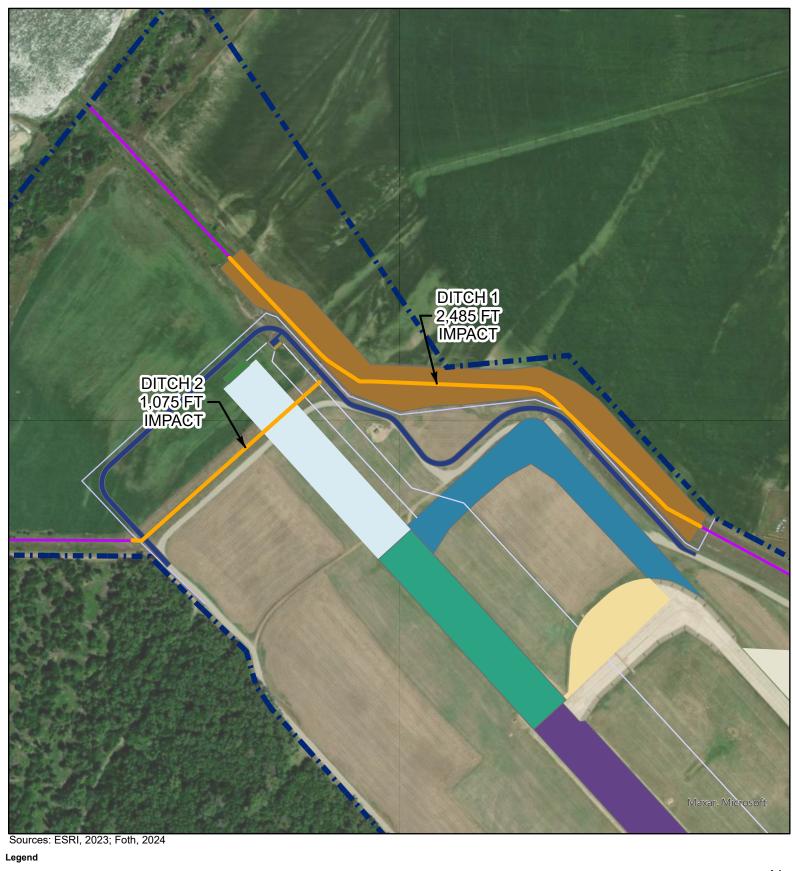




Perimter Road Realignment

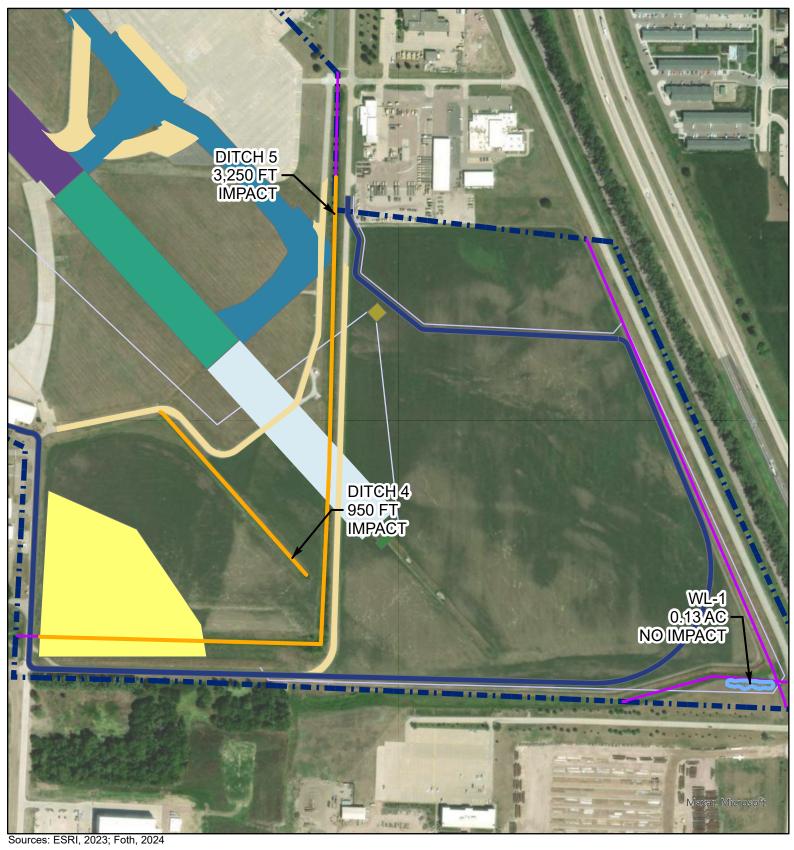


Figure 2A Proposed Action Map



Project Study Area Drainage Ditch Realignment Perimter Road Realignment Non-Jurisdictional Feature Fence Realignment Runway Extension Non-Jurisdictional Feature Impact Localizer Relocation Runway Reconstruction 200 400 900 NAVAID Shelters Construction Blast Pad Construction **Taxiway Construction** ■ Feet Warm Up-Holding Pad Construction Cables Replacement Pavement Demolition

Figure 2B Proposed Action Map









Appendix H - Wetlands Appendix H.2 Section 408 Request

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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 – Wetla	nds				
				App	endix H.3
	Wetland &	Waters o	of the US	Delineatio	n Report

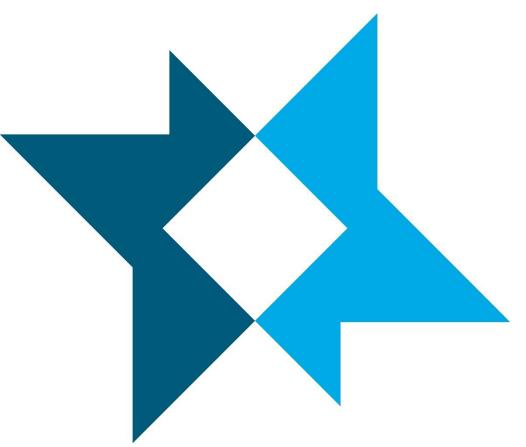
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Report

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

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Sioux Gateway Airport

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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 lowa, P.C.

4582 S Ulster Street, Suite 1100 Denver, CO 80237

Prepared by

Foth Infrastructure & Environment, LLC

August 7, 2024

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Wetland & Waters of the United States Delineation Report

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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	Normal Wet I	
2021*	Normal	Normal Normal No	
2023*	Normal	Normal	Normal

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

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	A 1				
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? *
А			Drowned out	Crop Stress		2	40%		No
В			Drowned out			1	20%		No
С			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
Н		Crop Stress		Crop Stress		2	40%		No
I				Drowned out	Crop Stress	2	40%		No
J				Drowned out	Crop Stress	2	40%		No
К				Drowned out	Crop Stress	2	40%		No

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Aerial Date	8/30/06	9/16/14	7/16/17	8/12/21	8/12/23				
Figure	A13	A6	A4	A2	A 1				
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
М					Wetland Signature	1	20%		No
N					Crop Stress	1	20%		No
0 DP-12	Drowned Out	Drowned Out	Drowned Out	Crop Stress		4	80%		Yes
Р			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
Т			Drowned Out		Drowned Out	2	40%		No
U			Drowned out		Drowned out	2	40%		No
٧					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	A 1				
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
Υ			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
СС		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
НН					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	A 1				
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
ММ	Crop Stress					1	20%	-	No
NN DP-10			Crop Stress	Wetland Signature	Wetland Signature	3	60%	-	Yes
00				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

^{* &}gt;50% wet signatures without NWI or >40% wet signatures with NWI

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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:
 - o 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.

- o 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
 - o 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 connection to the Missouri Ri			
Wetland Description	Depression wetland			
NWI Map Designation	None			
Cowardin Classification	Palustrine Emergent Nonpers (PEM2A)	istent Temporarily Flooded		
Wetland Type	Emergent			
Vegetative Cover	Dense			
Dominant Vegetation	Common Name (Scientific Na Common Cowparsnip (Herac Reed Canary Grass (Phalaris Kentucky Bluegrass (Poa prat	leum maximum) FACW arundinacea) FACW		
Hydrogeomorphic Class	Depression			
Soil Type (soil survey)	Albaton silty clay, depression	al, drained, frequently flooded		
Soil Type (field obs.)	Silty clay			
Soil Characteristics	Depleted Below Dark Surface	, Depleted Matrix		
Hydrology Characteristics	Surface Water, High Water Ta	ble, Saturation, and FAC Neutral		
Hydrology Source	Surface Water Runoff and Gro	oundwater		
Other Information	Separated from D-7 by a sma	ll berm		
N	Ion-Wetland (Upland) Descripti	ion		
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 wetland and upland creating a	_	No		
Was there an abrupt topograph wetland and upland	nic change between the	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 (<i>Phalaris arundinacea</i>) Curly Dock (<i>Rumex crispus</i>) Common Marsh Bedstraw (<i>Galium palustre</i>)			
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 (<i>Phalaris arundinacea</i>) Kentucky Bluegrass (<i>Poa pratensis</i>) Sedge Species (<i>Carex sp.</i>) Curly Dock (<i>Rumex crispus</i>)	

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

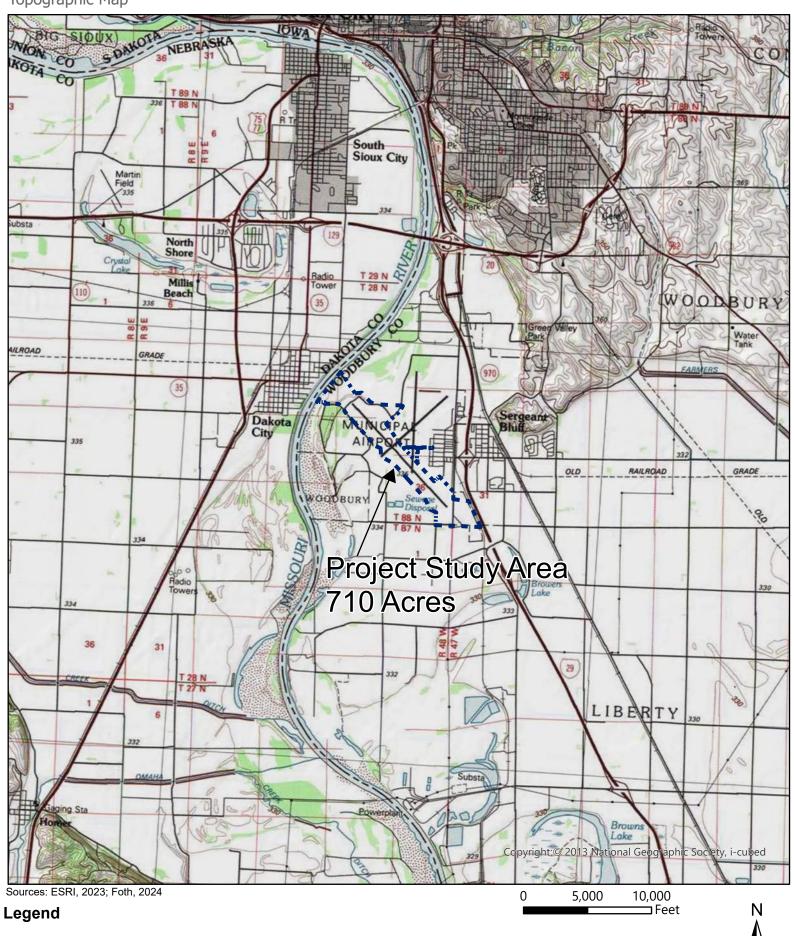
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- 09%2FField_Indicators_of_Hydric_Soils.pdf&usg=A0vVaw2b5CmAh8BaXxedx6cMj701& USGS. (2019, October 23). *National Hydrography Dataset* . Retrieved from ver. USGS National Hydrography Dataset Best Resolution for Hydrologic Unit 4:
 - https://www.usgs.gov/national-hydrography/access-national-hydrography-products

Figures

Figure 1 Topographic Map



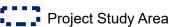
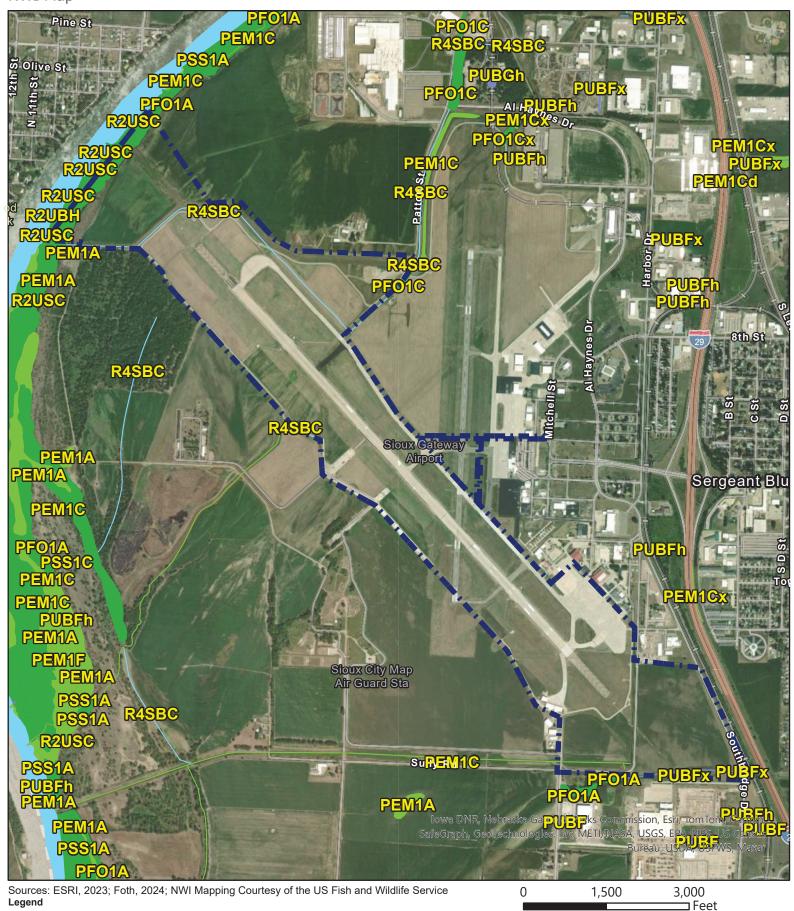


Figure 2 NWI Map



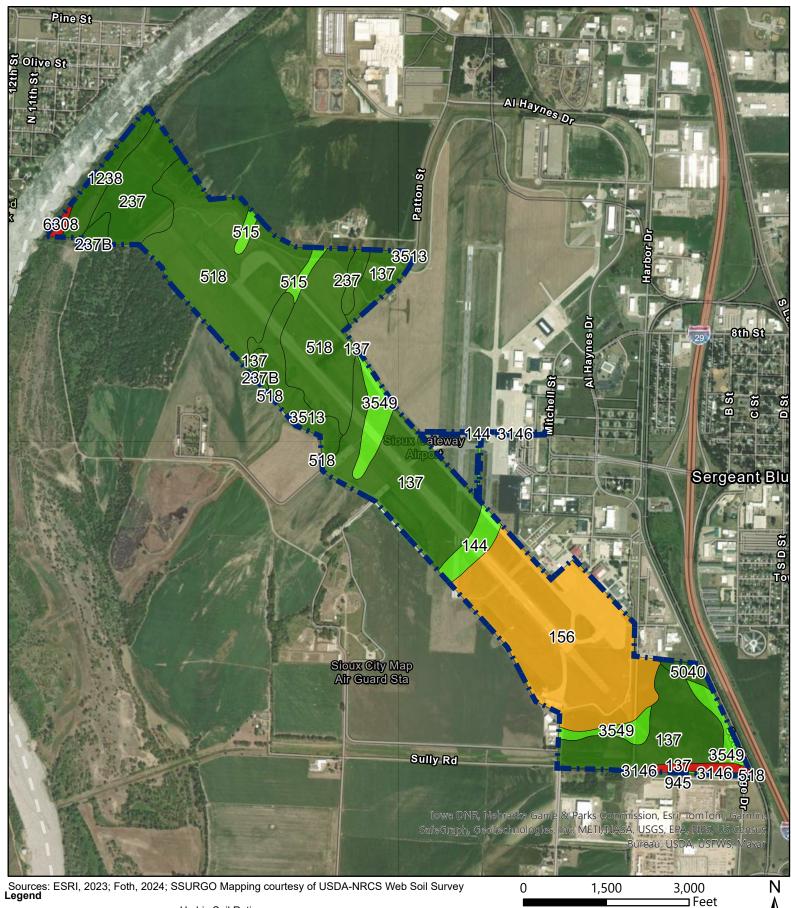
Project Study Area

Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland

Freshwater Pond

Riverine

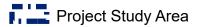
Figure 3 Soil Map



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

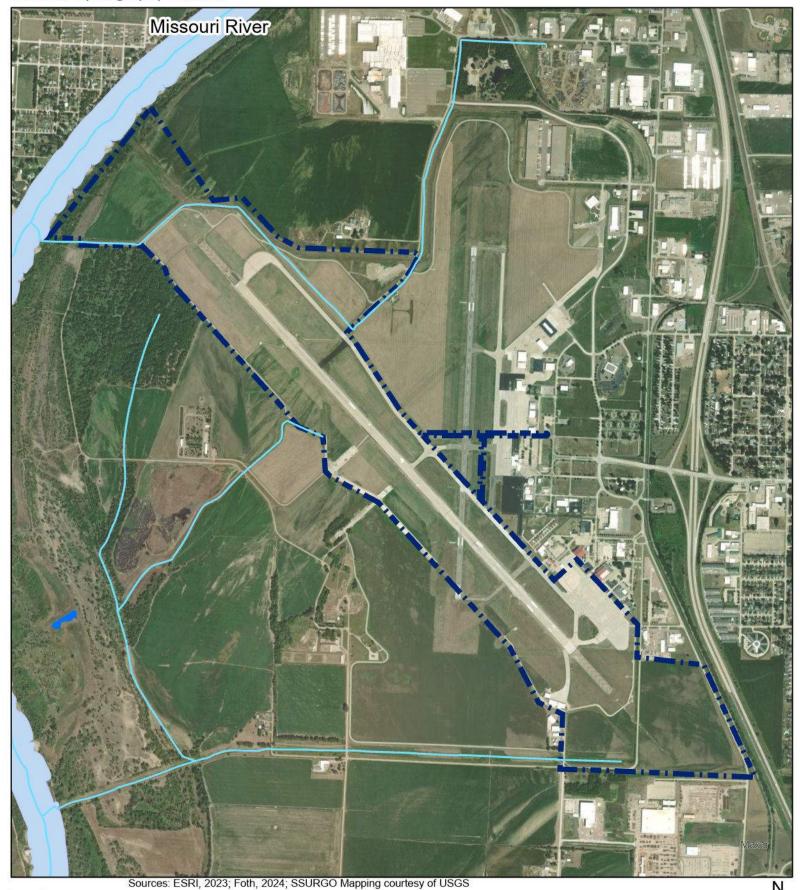
Hydric Soil Rating
Non-hydric
Predominantly hydric
Predominantly non-hydric
Hydric





0	1,500	3,000
		Fee ⁻

Figure 5 National Hydrography Dataset



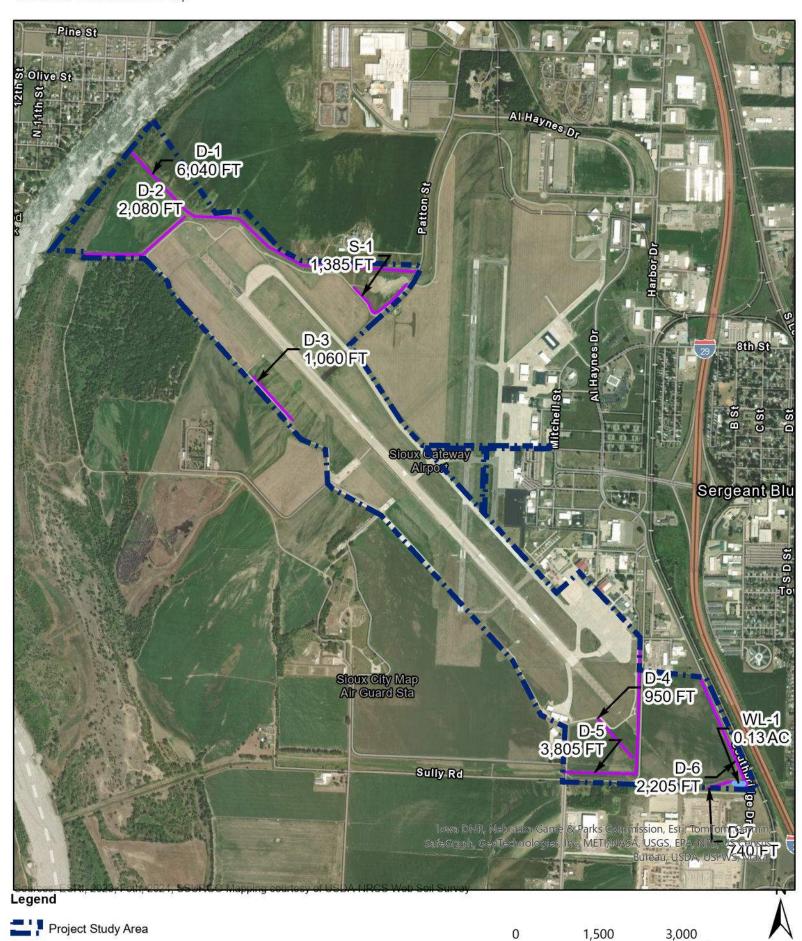
Legend
Project Study Area

Waterbody
Lake/Pond
Area
Stream/River

Flowline Ditch

0 1,500 3,000 Feet

Figure 6 Wetland Delineation Map

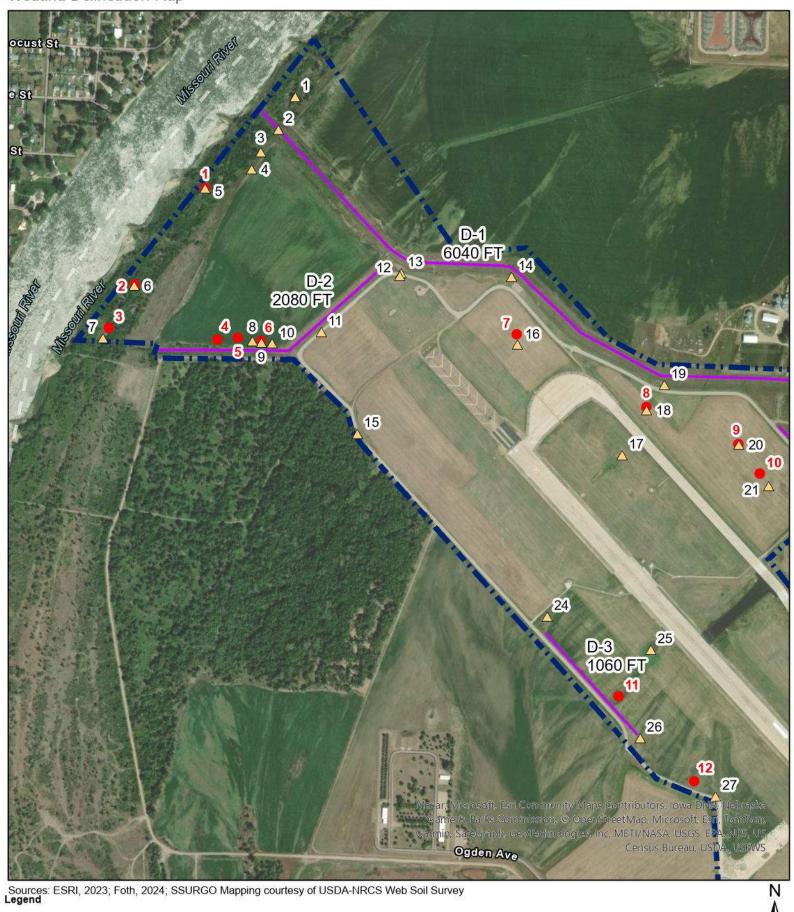


⊐ Feet

Non-Jurisdictional Feature

Wetland

Figure 6A Wetland Delineation Map



500

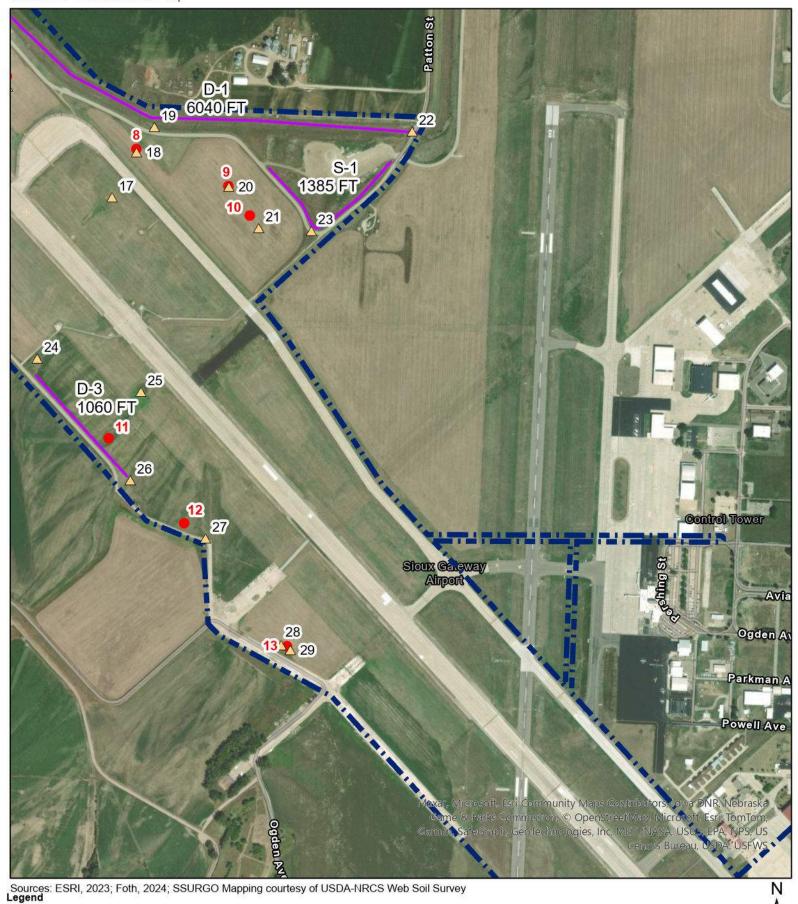
1,000 ____ Feet

Data Point (Red Number)

Photo Point (Black Number)

Non-Jurisdictional Feature

Figure 6B Wetland Delineation Map



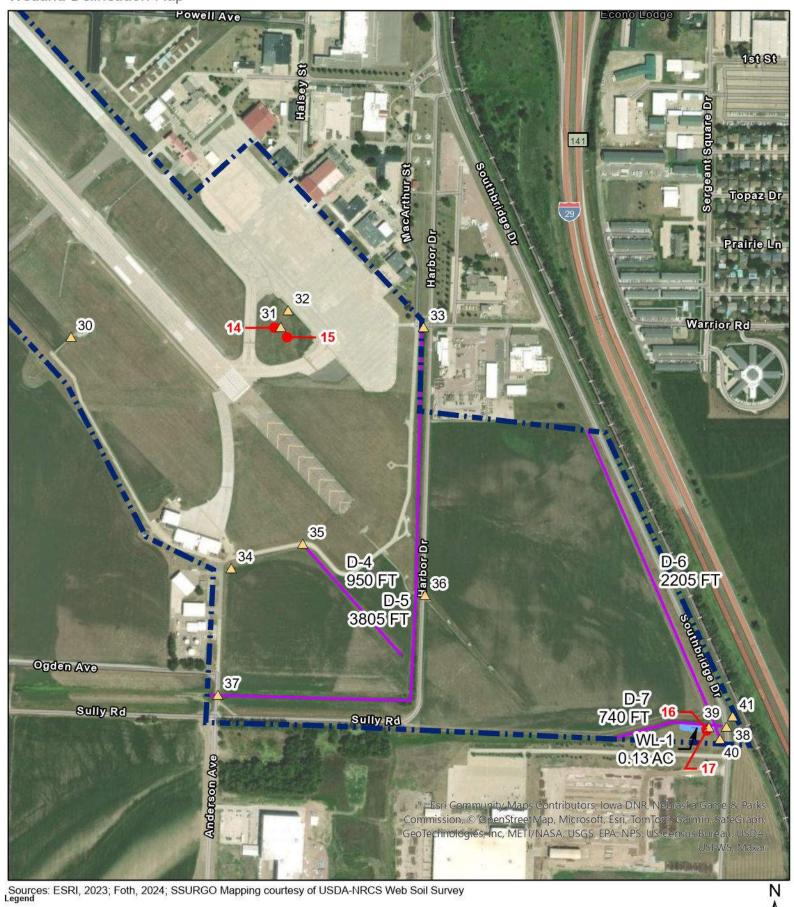
1,000

Feet

500

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

Figure 6C Wetland Delineation Map



1,000

⊐ Feet

500

Data Point (Red Number)

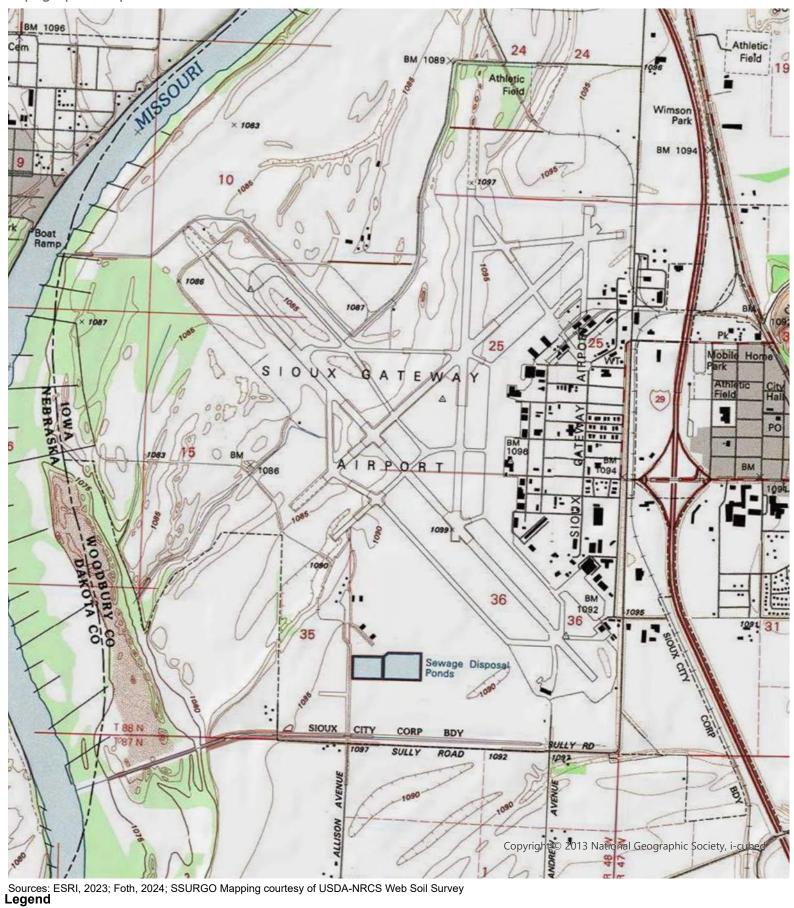
Photo Point (Black Number)

Non-Jurisdictional Feature

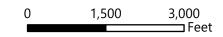
- Project Study Area

Wetland

Figure 7 Topographic Map with Wetland Delineation



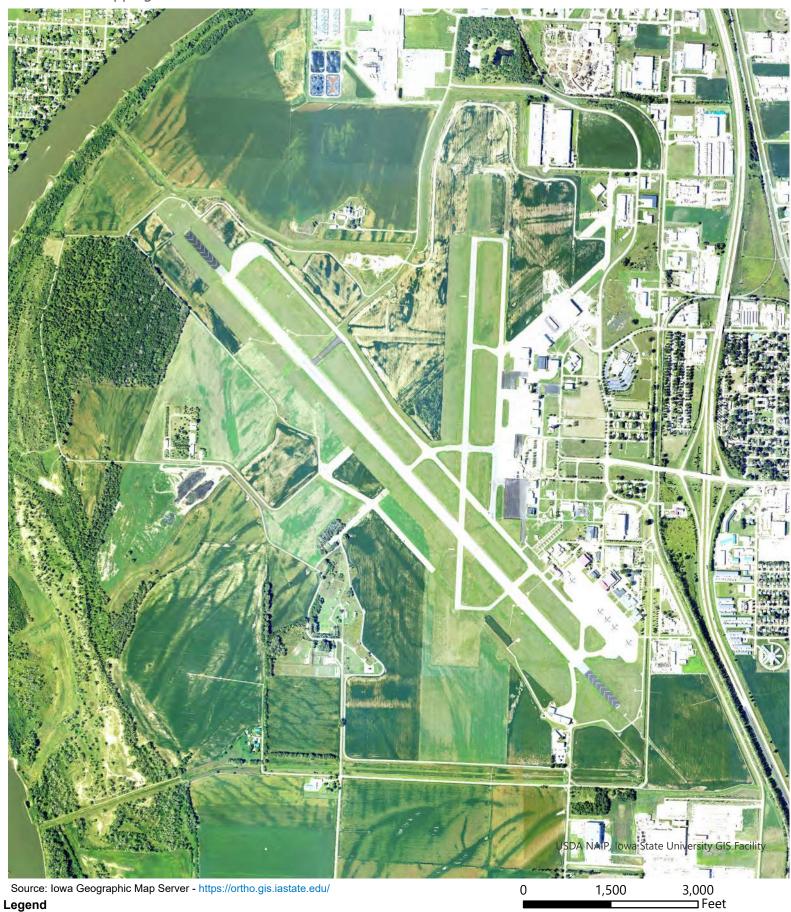






Appendix A Aerial Photographs

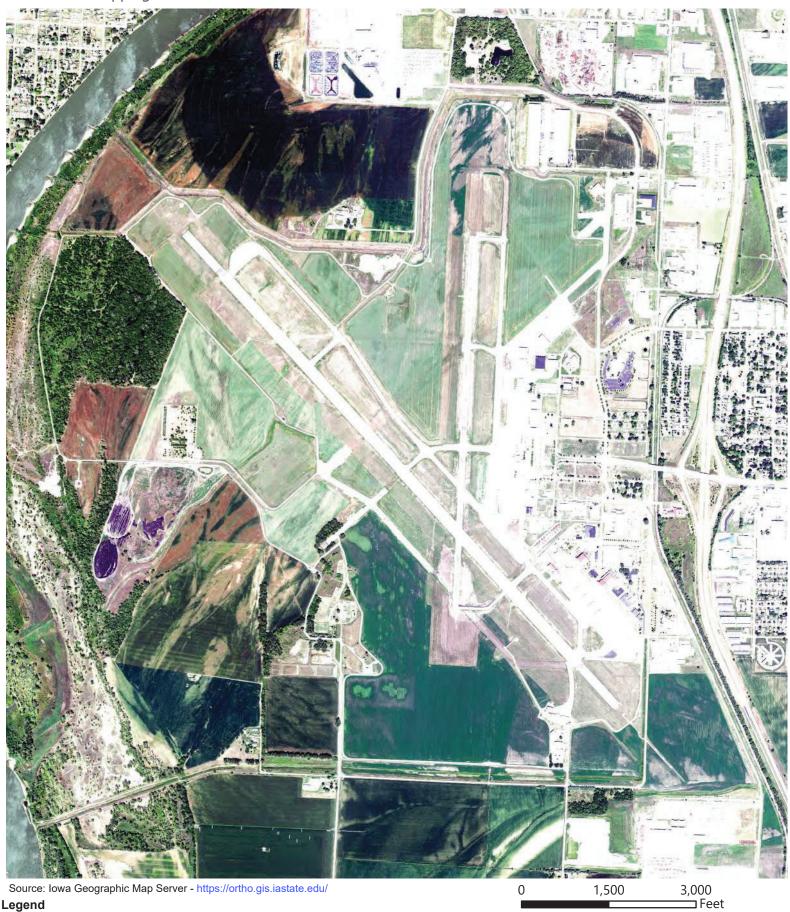
Figure A1 2023 Aerial Mapping



Farm Analysis Location with Hydrology

Farm Analysis Location without Hydrology

Figure A2 2021 Aerial Mapping



Legend

Farm Analysis Location with Hydrology

Farm analysis Location without Hydrology

Figure A3 2019 Aerial Mapping

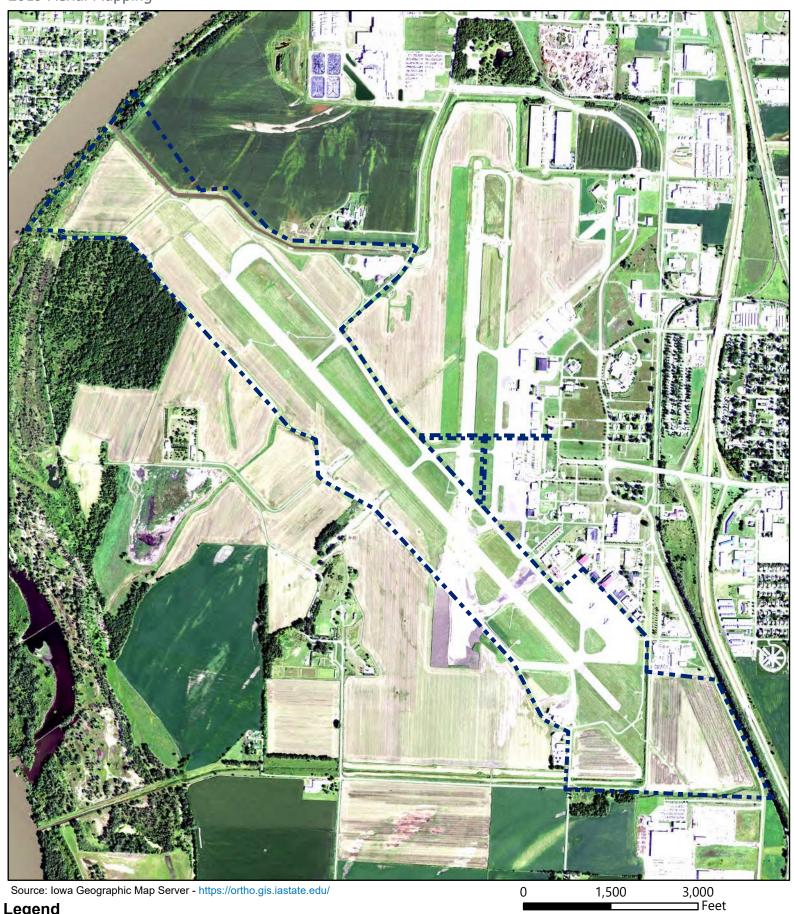


Figure A4 2017 Aerial Mapping



Legend

Farm Analysis Location with Hydrology

Farm Analysis Location without Hydrology

Figure A5 2015 Aerial Mapping

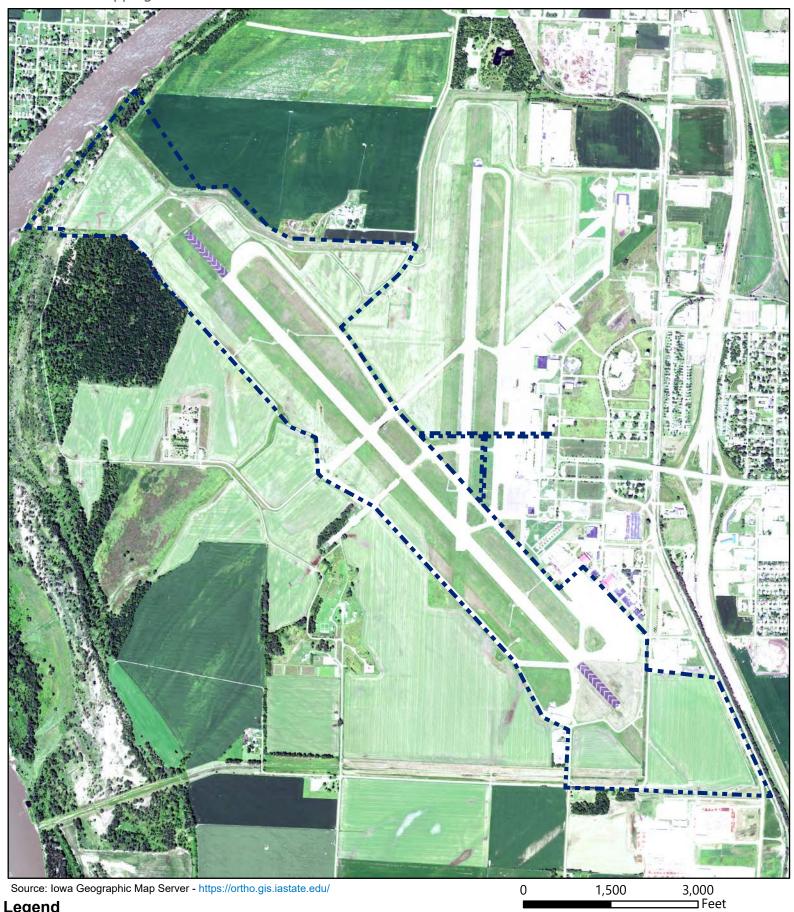


Figure A6 2014 Aerial Mapping



Legend

1,500 3,000 ____ Feet

Project Study Area

Farm Analysis Location with Hydrology

Farm Analysis Location without Hydrology

Figure A7 2013 Aerial Mapping

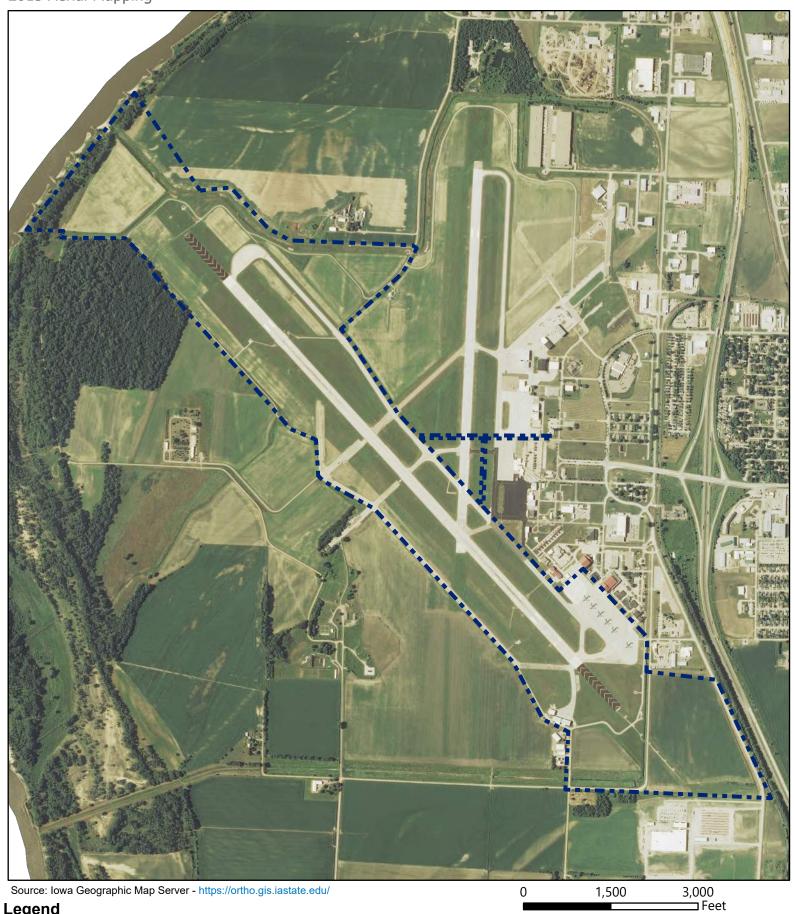


Figure A8 2011 Aerial Mapping

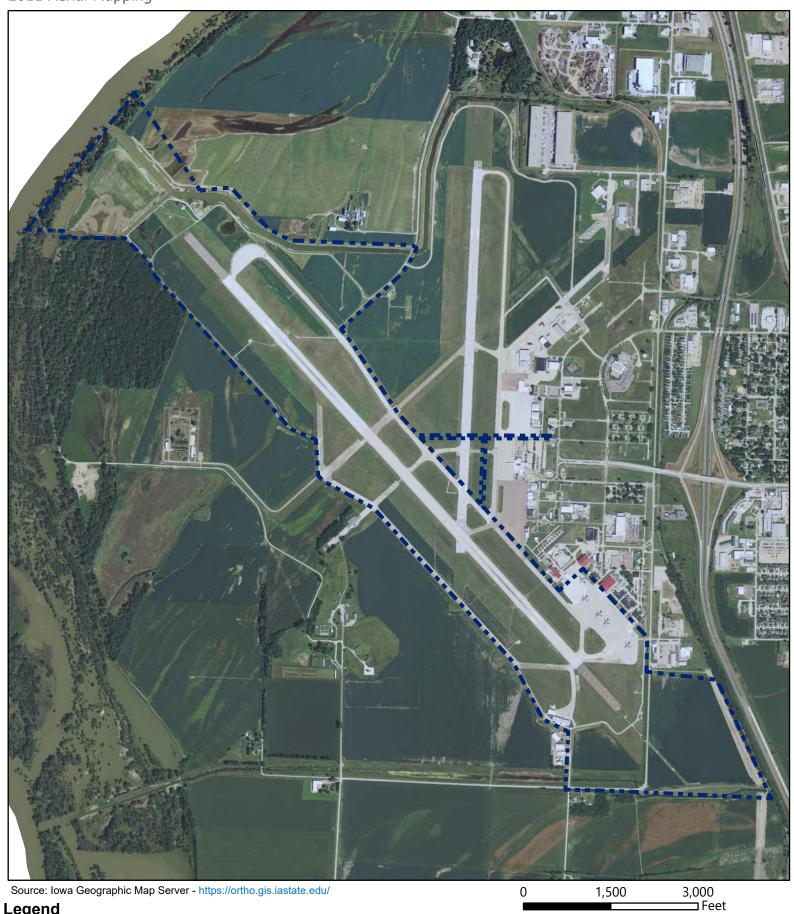


Figure A9 2010 Aerial Mapping

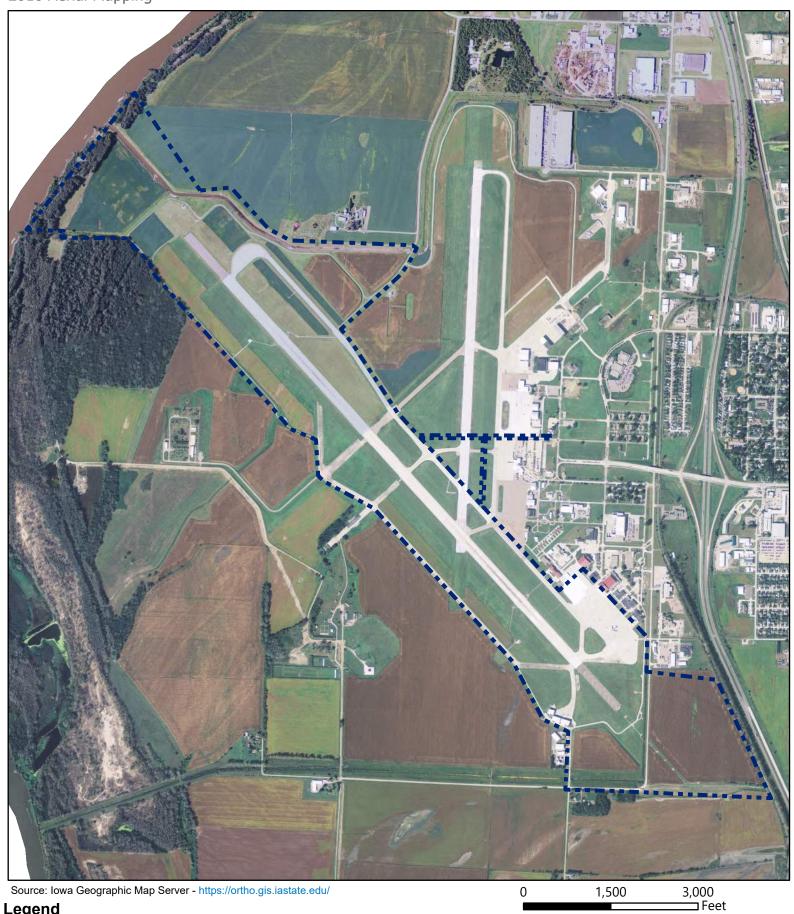


Figure A10 2009 Aerial Mapping



Figure A11 2008 Aerial Mapping

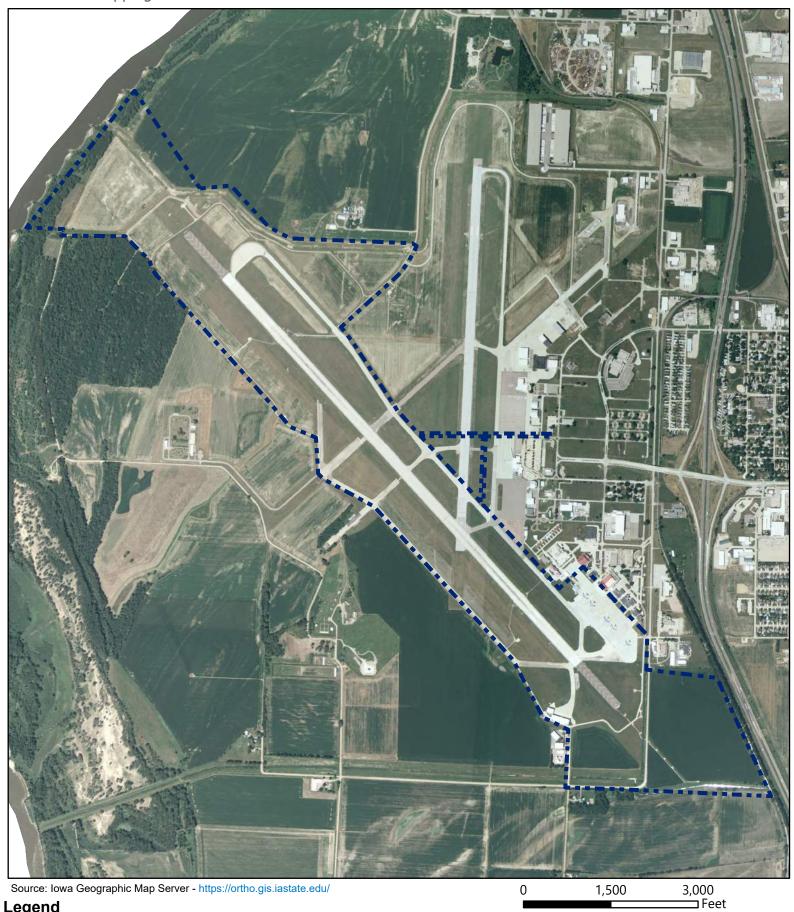


Figure A12 2007 Aerial Mapping

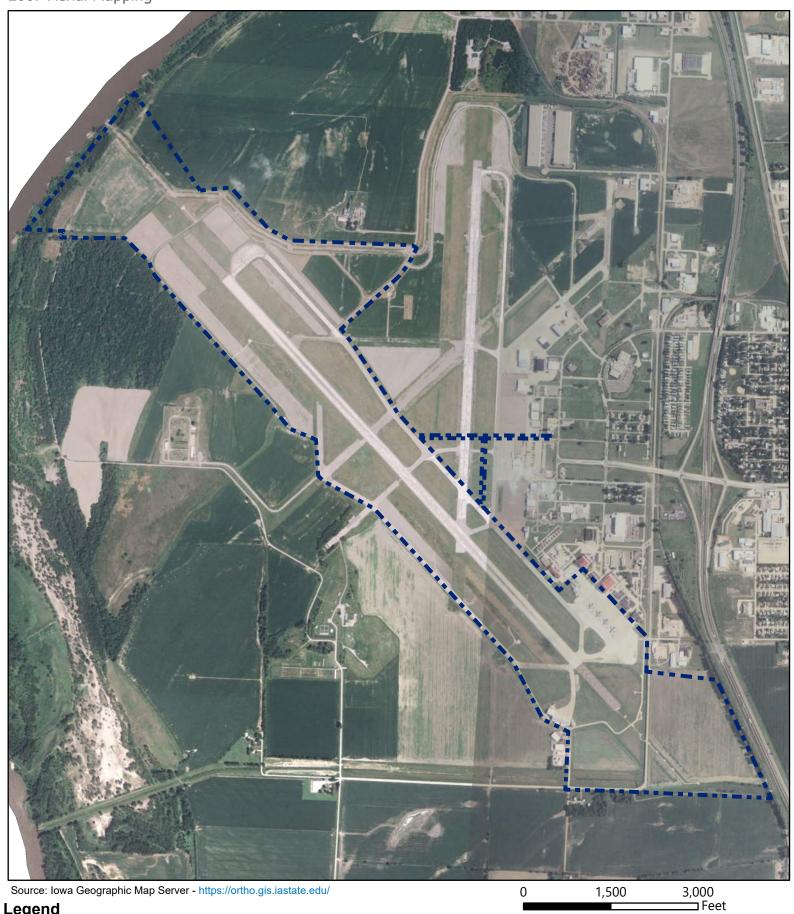


Figure A13 2006 Aerial Mapping



Legend

Farm Analysis Location with Hydrology

Farm Analysis Location without Hydrology

Figure A14 2005 Aerial Mapping



Figure A15 2004 Aerial Mapping



Figure A16 2002 Aerial Mapping

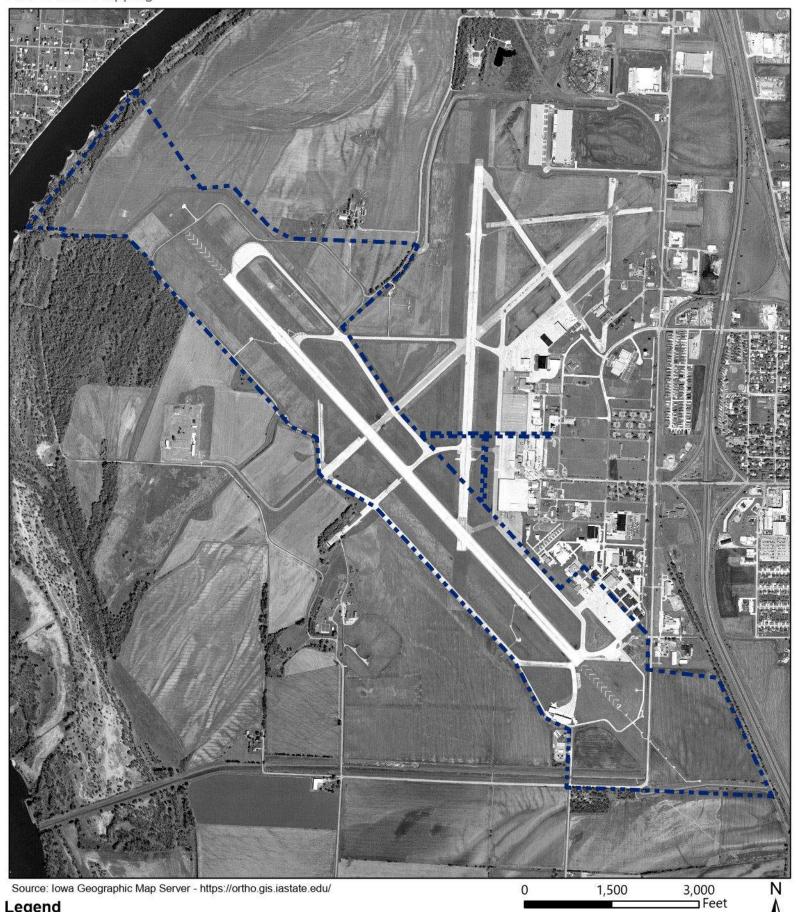


Figure A17 1990s Aerial Mapping

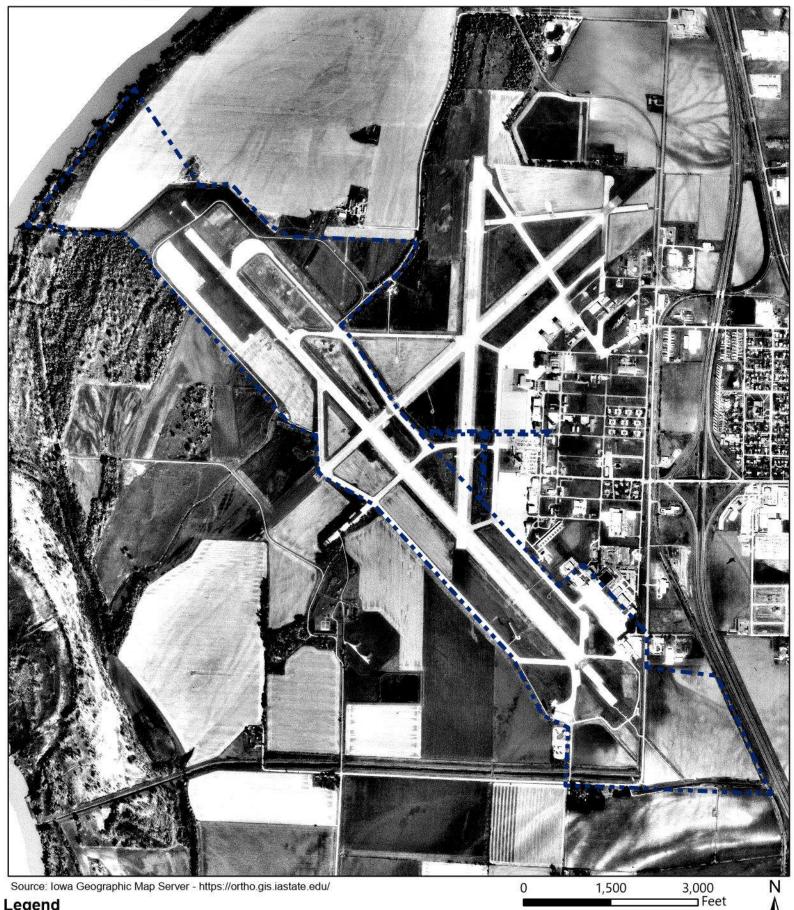


Figure A18 1980s Aerial Mapping

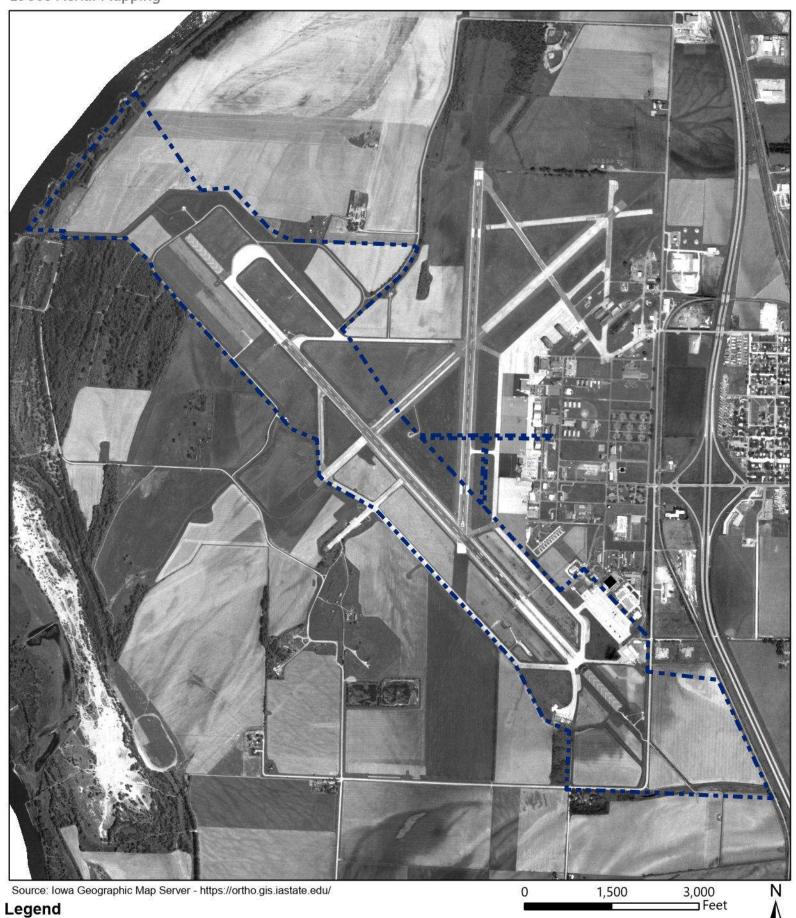


Figure A19 1970s Aerial Mapping

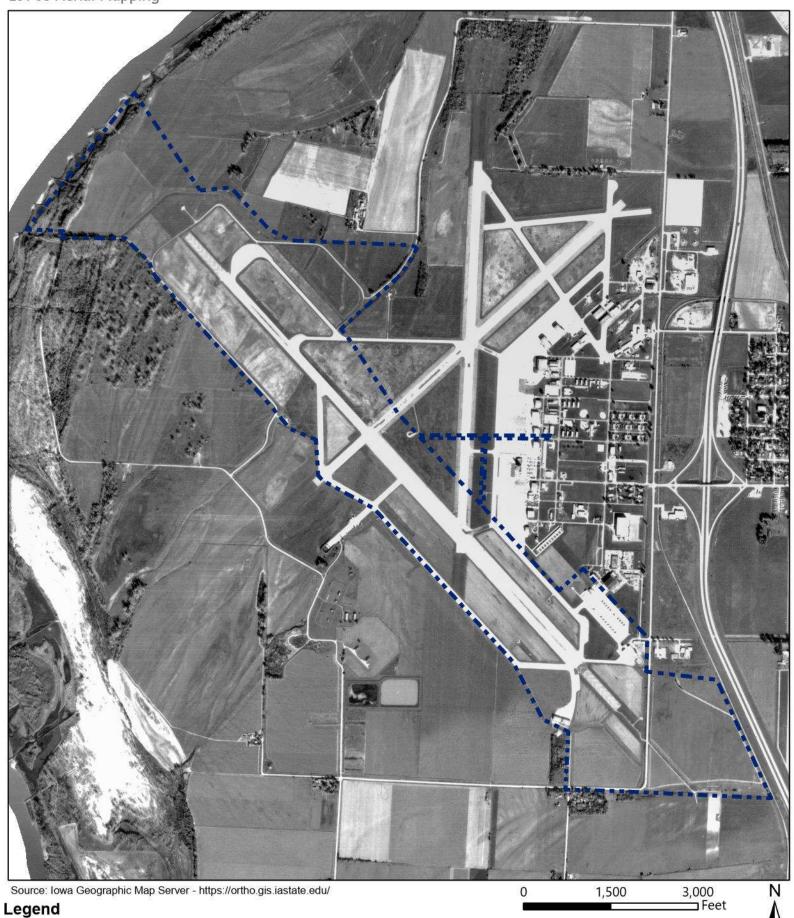


Figure A20 1960s Aerial Mapping

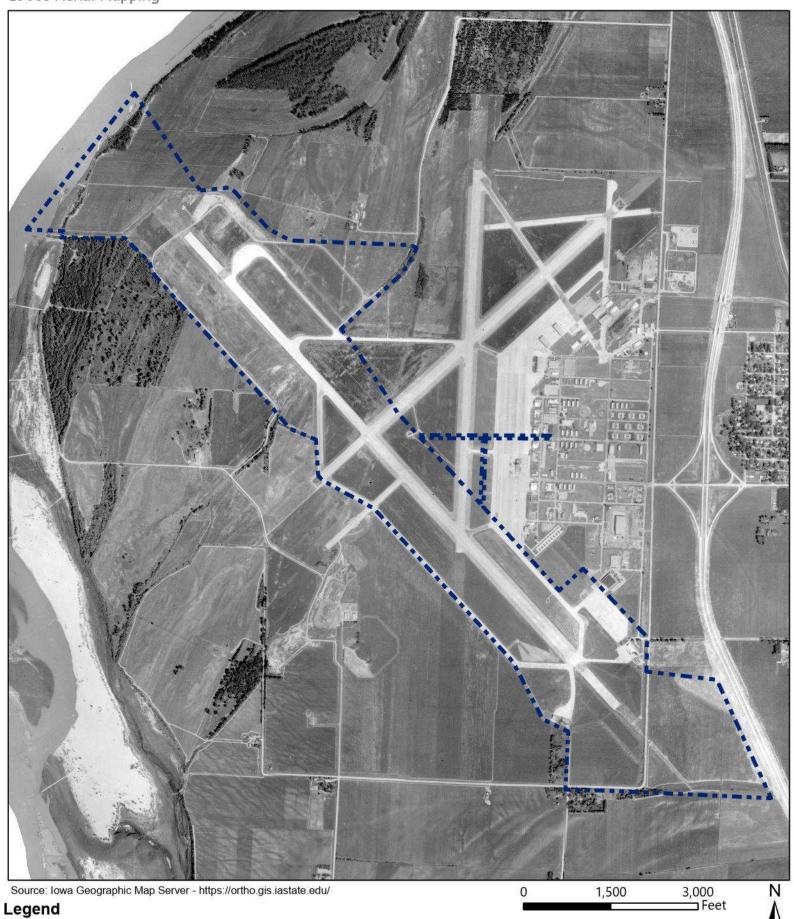


Figure A21 1950s Aerial Mapping

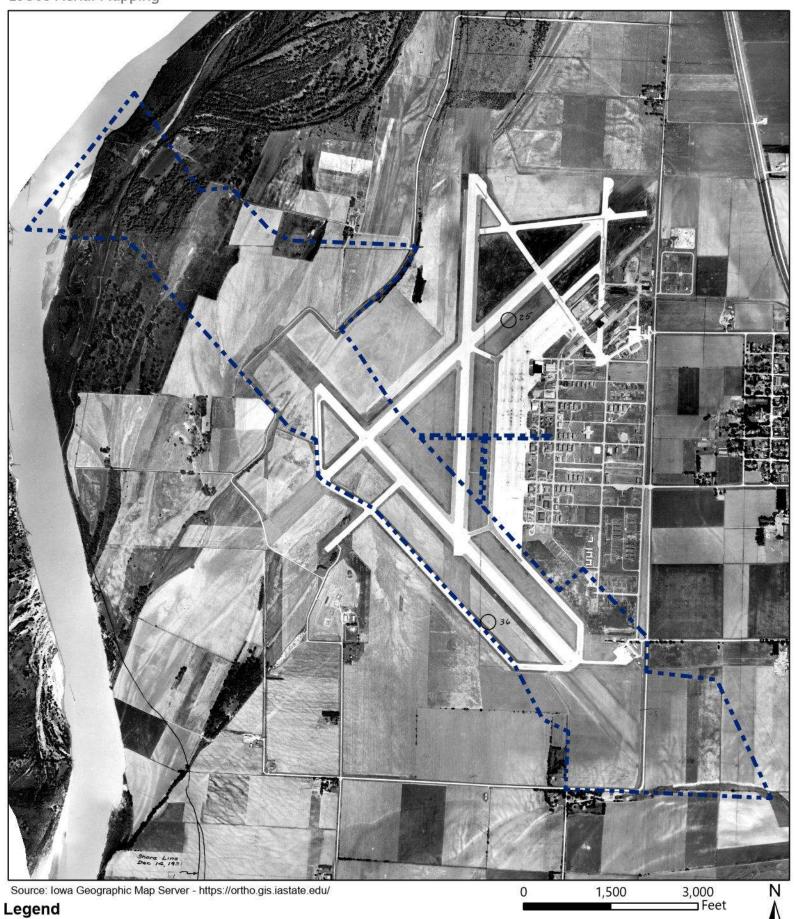
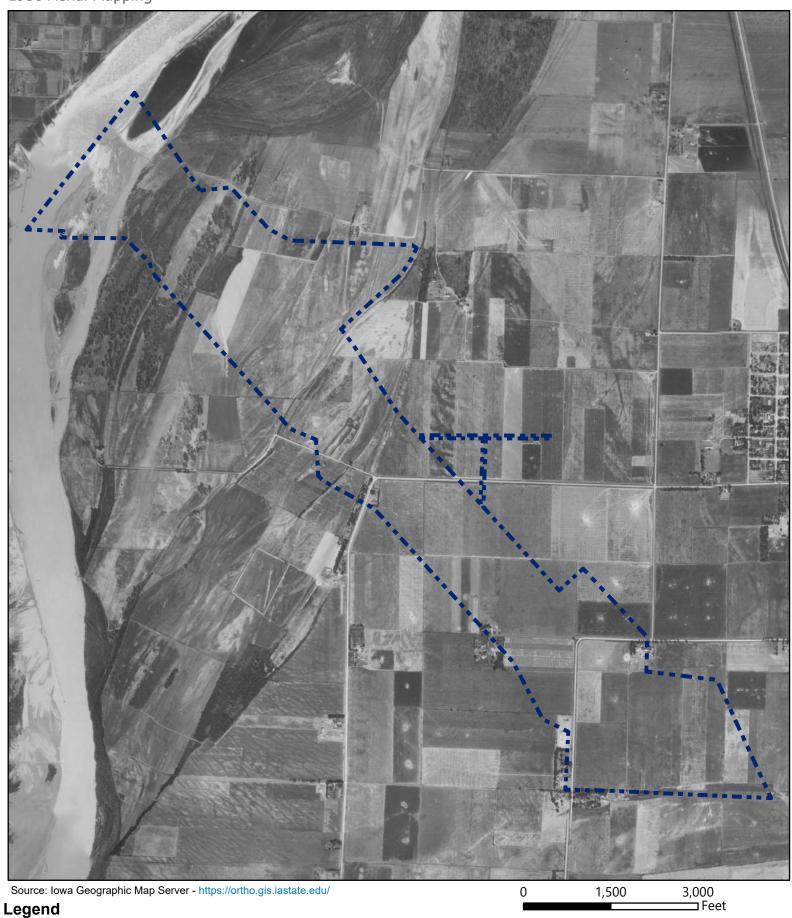


Figure A22 1930 Aerial Mapping



1

Appendix B Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:	Sioux Gateway Airport	Ci	ty/County:	Sioux City/V			3-24
Applicant/Owner:	RS&H			_ State:	lowa Sampling Po		
Investigator(s):	Foth – H. Maudlin & M. Lange	er Se	ection, Town	ship Range:	S23, 25, 26, 31, 35, 36	, T88N, R48\	N
Landform (hillslope,	, terrace, etc): Toeslope	Lo	ocal Relief (c	oncave, con	vex, none): Concave	9	
Slope (%): 0-2	Lat: <u>42.414573</u>	Lo	ong: <u>-96.4</u>	06945	Datum: UTM 15	, Upland	
Soil Map Unit Name	Sarpy-Morconick complex,	occasionally	flooded	NWI	Classification: PSS1A	١	
Are climatic/hydrologi	c conditions on the site typical for	this time of ye	ar? No, w	etter than no	ormal (see Section 2.6)		
Are vegetation, soil o	r hydrology significantly disturbe	d? No		Are "Norma	Circumstances" present?	Ye	S
_	r hydrology significantly problem)	-	d, explain any answers in	Remarks)	
	NDINGS - Attach site map sho		ina point loc				
Hydrophytic Vegeta		No			,,		
Hydric Soil Present?		No X	Is the S	ampled Area	Yes	No	Χ
Wetland Hydrology		No X	within a	Wetland?			
Remarks:							
VEGETATION - U	se scientific names of plants.						
		Absolute	Dominant	Indicator	5 · 7 · W I		
Tree Stratum >3" DBI	H (Plot size: 30' radius)	% Cover	Species?	Status	Dominance Test Works	neet:	
1 Sandbar Willow (Salix interior)	20	Yes	FACW	Number of Dominant Sp		3
2					are OBL, FACW, or FAC		
3					Total Number of Domin	ant Species	3
5					Across All Strata (B):	aaiaa That	
5	20% Total Cover 4	20	= Total Cov	<u>l</u> er	Percent of Dominant Sp are OBL, FACW, or FAC		100
Sapling/Shrub Stratu	<u>m</u> <3" DBH or > 1 m tall (Plot	size: 15' radiı	ıs)		Prevalence Index Works	sheet:	
		1					
1					Total % Cover of:	Multiply	<u>/ by:</u>
3					OBL species FACW species	_ X 1 X 2	
4					FAC species	- X2	
5					FACU species	- X 4	
	20% Total Cover		= Total Cov	er	UPL species	X 5	
		1			Totals (A)	(B)	
Herb Stratum non-wo	oody or woody < 1 m tall (Plot	size: 5' radius	s)		Prevalence Index =	_ ' '	
1 Stinging Nettle (L	Irtica dioica)	70	Yes	FACW	Hydrophytic Vegetation		
2 Reed Canarygras	s (Phalaris arundinacea)	30	Yes	FACW	1-Rapid Test for		Veg
3					X 2-Dominance Te		
4					3-Prevalence Inc	dex is ≤3.0¹	
5					4-Morphological		;
6					(Provide suppor	ting data in	
7 8					Remarks)	ما نما می ساد	
9					Problematic Hyo Vegetation ¹ (Ex		
10					¹ Indicators of hydric so	. ,	Ч
11					hydrology must be pres		u
50% Total Cover	50 20% Total Cover 20	100	= Total Cov	er	disturbed or problemati		
Woody Vine Stratum	> 1 m tall (Plot size: 30	O' radius)					
1					Hydrophytic		
2					Vegetation Yes	X No	
3	000: 7 : 10				Present?		
	20% Total Cover	-	= Total Cov	er			
Remarks: Vegetati	ion passes the FAC-Neutral test.						·

RS & H Iowa\Sioux Gateway Airport NEPA\Design\Reports\Delineation\Attachments\20240515_SUX EA - Appendix B Data Form_v1.0_em.doc

SOIL Sampling Point: DP-1

Profile D	escription: (Descr	ribe to t	he depth needed t	o docu	ment th	e indicato	r to confirm	the absence of indicators.)	
Depth	Matrix		•		ox Featu				
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	– Remarks	
0-9	10YR 3/1	100					Silty clay loam		
9-10	10YR 4/2	98	10YR 5/6	2	R	М	Silty clay		
10-14	10YR 3/1	100					Silty clay loam		
¹Type: C=0	Concentration, D=De	pletion.	RM=Reduced Matrix,	CS=Co	vered or 0	Coated San	d Grains.	2 Location: PL=Pore Lining, M=Matrix	
	oil Indicators:	, p. o		00 00				Indicator for Problematic Hydric Soi	ls³:
•	listosol (A1)		San	dy Gley	ed Matri	x (S4)		Coast Prairie Redox (A16)	
H	listic Epipedon (A2)		dy Red		, ,		Iron-Manganese Masses (F12)	
	Black Histic (A3)				atrix (S6		<u> </u>	Other (Explain in Remarks)	
	lydrogen Sulfide (A				cky Mine				
	Stratified Layers (A	5)			yed Matr				
	cm Muck (A10)				latrix (F3				
	epleted Below Dar				Surface				.
	hick Dark Surface (Sandy Mucky Miner				ark Surfa ressions			³ Indicators of hydrophytic vegetation a wetland hydrology must be present, un	
	i cm Mucky Peat or			ох рер	ressions	(го)		disturbed or problematic.	iess
								distarbed of problematic.	
	ve Layer (if observ	vea):							
Type: Depth (inc	ches):			_		Hydric Soi	il Present?	Yes NoX	
Remarks:	Restricted gra	vel layer	at 14 inches. Soils	do not	meet the	e hydric so	il indicator crit	teria within the Midwest Supplement.	
HYDROI									
Wetland	Hydrology Indicat	tors:							
		n of one	is required; check			(5.0)	Sec	condary Indicators (minimum of 2 requi	red)
	Surface Water (A1)	->			ned Leav			Surface Soil Cracks (B6)	
	ligh Water Table (A	(2)			una (B13			_ Drainage Patterns (B10)	
	Saturation (A3) Vater Marks (B1)				ic Plants	dor (C1)		_ Dry-Season Water Table (C2) Crayfish Burrows (C8)	
	Sediment Deposits	(B2)		-		on Living Roc	nte (C3)	Saturation Visible on Aerial Imagery	(C0)
	orift Deposits (B3)	(DZ)				ed Iron (C4		Stunted or Stressed Plants (D1)	(09)
	Algal Mat or Crust (I	B4)				on Tilled Sc		Geomorphic Position (D2)	
	ron Deposits (B5)	,			Surface		<u>X</u>	-	
	nundation Visible on A	Aerial Ima			/ell Data			_	
S	parse Vegetated Con	cave Sur			ain in Re				
Field Ohs	servations:								
	Vater Present?	Yes	No X I	Depth:		in			
Water Tal	ole Present?	Yes	No X I	Depth:		in			
Saturation	n Present?	Yes	No X I	Depth:		in We	tland Hydrolo	ogy Present Yes No	X
	capillary fringe)								
Describe	Recorded Data (str	eam gai	uge, monitoring wel	I, aerial	photogr	aphs, prev	ious inspectio	ons), if available:	
Remarks:									
								Prepared by: I	ИJL

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Applicant/Owner:	Sioux Gatewa	ay Airport		City	· -	Sioux City/Wo		ng Date: 05-08-	24
	Foth – H. Mai	udlin 0 M I	ongor	Cod	ction, Towns			5, 36, T88N, R48V	A/
Investigator(s):						-			<u>v</u>
Landform (hillslope	•	Toeslope	9		•	ncave, conve	· · · · · · · · · · · · · · · · · · ·		
Slope (%): 0-2		2.412399		Lor	· ——			15, Upland	
Soil Map Unit Name								PF01A	
Are climatic/hydrolog	ic conditions on t	the site typic	al for this	s time of year	r? No, we	etter than nor	mal (see Section 2	<u>′</u> .6)	
Are vegetation, soil of	or hydrology sigr	nificantly dis	turbed?	No		Are "Normal C	ircumstances" prese	ent? Yes	i
Are vegetation, soil of	or hydrology sign	nificantly pro	blemati	ic? No		(if needed,	explain any answer	s in Remarks)	
SUMMARY OF FI	NDINGS - Atta	ach site ma	p show	ing samplin	g point loca	- tions, transe	cts, important feat	tures, etc.	
Hydrophytic Vegeta	ation Present?	Yes	1 X	۸o					
Hydric Soil Present	?	Yes		No X		Sampled Are	a Yes	No _	Χ
Wetland Hydrology	Present?	Yes	1	۸o <u>X</u>	within	a Wetland?			
Remarks:									
VEGETATION - U	lse scientific na	ames of pla	nts.		T	T		_	
Tree Stratum >3" DB	H (Plot size	e: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test V	Worksheet:	
1 Green Ash (<i>Fraxi</i>	nuo nonnovivoni	00)		% Cover 20	Yes	FACW	Number of Domin	ant Chasias that	
2	nus pennsylvanio	ca)		20	162	FACW	are OBL, FACW, or	•	3
3					+		Total Number of D		
4					1		Across All Strata (•	4
5							Percent of Domina	` '	
	20%	Total Cover	4	20	= Total Cov	/er	are OBL, FACW, or		75% ————
Sapling/Shrub Stratu	<u>ım</u> <3" DBH or >	1 m tall	(Plot s	size: 15' radio	ıs)		Prevalence Index	Worksheet:	
1 Green Ash (Fraxi	nus pennsylvanio	ca)		20	Yes	FACW	Total % Cover	of: Multip	oly by:
2							OBL species	X 1	
3							FACW species	X 2	
4							FAC species	X 3	
5		T . 10					FACU species	X 4	
	20%	Total Cover	4	20	= Total Cov	/er	UPL species	X 5	
Harb Ctratum nan w	andy or woody a	. 1 m +all	(Dlot o	izo: E' rodius			Totals (A)	(B)	
Herb Stratum non-wo	oody or woody <	. i iii taii	(Plot s	size: 5' radius	5)		Prevalence	Index = B/A =	
1 Prickly Lettuce (L				30	Yes	FACU	Hydrophytic Vege		
2 Sedge Sp (Care)				20	Yes	FACW		est for Hydrophytic	: Veg
3 Lamb's Ear (Stac				10	No	NL		nce Test is > 50%	
4 Shepards Purse				10	No	FACU		nce Index is ≤3.01	
5 Canada Goldenro	od (Solidago altis	ssima)		5	No	FACU		logical Adaptation	S
6					-			supporting data in	
7					1		Remarks)		
8					1		Problemat 1 (Explain)	tic Hydrophytic Ve	getation
10							` ' '		ad
11							hydrology must be	dric soil and wetlar	iu
50% Total Cover	38 20%	Total Cover	15	75	= Total Cov	/er	disturbed or probl		
Woody Vine Stratum	> 1 m tall	(Plot	size: 30'	radius)					
1							Hydrophytic	V V 11	
2					1			Yes X No	
3					1		Present?		

= Total Cover

20% Total Cover

Remarks: Vegetation passes the FAC-Neutral test.

SOIL Sampling Point: DP-2

	escription: (Descr	ribe to t	he depth needed t	<u>o docu</u>	ment th	e indicato	r to confirm	the absence of	findicators.)	
Depth	Matrix			Red	ox Featu	res			Remarks	
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture		Meiliaiks	
0-16	10YR 3/2	100					Loam			
16-20	10YR 5/3	100					Sand			
		pletion, I	RM=Reduced Matrix,	CS=Co	vered or	Coated Sar	nd Grains.		_=Pore Lining, M	
•	oil Indicators: listosol (A1)		San	dv Glav	ed Matri	iv (SA)		Indicator for P	Problematic Hy rie Redox (A16)	
	listic Epipedon (A2)		dy Gley dy Red		X (34)	-		anese Masses (
	Black Histic (A3)	,			atrix (S6)	_		ain in Remarks)	
	lydrogen Sulfide (A	4)			cky Mine		=			
	tratified Layers (A		Loa	my Gle	yed Matr	rix (F2)				
	cm Muck (A10)				latrix (F3					
	epleted Below Dar				Surface			0.1.11.		
	hick Dark Surface				ark Surfa			³ Indicators of l		
	andy Mucky Miner cm Mucky Peat or			ох рер	Depressions (F8) wetland hydrology must be present, unless disturbed or problematic.					
	ve Layer (if observ	•	<u> </u>					а.ота.ота от р.		
Type:	ve Layer (II observ	veu).								
Depth (in	ches):			_		Hydric So	il Present?	Yes	No _	X
Remarks:	Organic matter	present	to 16 inches		ı					
11)/0000										
HYDROI										
	Hydrology Indicat						_		,	
		n of one	is required; check			.a. (DO)	<u>Se</u>	condary Indicate		of 2 required)
	Surface Water (A1) High Water Table (A	.2)			ned Leav una (B13			Surface Soil Drainage Pat		
	aturation (A3)	(2)			ic Plants				Vater Table (C2)
	Vater Marks (B1)					dor (C1)		Crayfish Burr		,
	Sediment Deposits	(B2)		•		on Living Ro	ots (C3)	_ ′	sible on Aerial I	magery (C9)
	rift Deposits (B3)	` /				ed Iron (C4			ressed Plants (
	lgal Mat or Crust (I	B4)				on Tilled So	oil (C6)		Position (D2)	
	on Deposits (B5)				Surface	` '	X	_ FAC-Neutral	Test (D5)	
	nundation Visible on A		· , ,		/ell Data					
	parse Vegetated Con	cave Suri	ace(B8) Othe	er (Expl	ain in Re	emarks)				
	servations:					. _				
	Vater Present?	Yes		Depth:		_ in				
	ole Present?	Yes		Depth:		_ in w	المادالة مطلعة	Dua	Vec	No V
	n Present? capillary fringe)	Yes	No <u>X</u> [Depth:		_ in W	etland Hydrol	ogy Present	Yes	No X
		eam gai	ıge, monitoring wel	l. aerial	photogr	aphs. prev	ious inspectio	ons), if available	:	
		940	J.,	,	,y	, <u>-,</u>		-,, =: 3		
Remarks:										
									Prepare	d by: MJL

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:	Sioux Gatewa	y Airport			City/0	County:	Sioux City/V	Voodbury	Sampling [05-0) (Date:	8-24
Applicant/Owner:	RS&H				-		State:	lowa	Sampling F	Point: DP-3	}
Investigator(s):	Foth - H. Mai	udlin & M.	Lange	r	Section	on. Town	ship Range:			6, T88N, R48	3W
Landform (hillslope,		Toeslop		•	-		concave, con		Concav		
, ,			<i>.</i>		-	•		•			
Slope (%): NA	_	.411453			Long		09590	Datum:		5, Upland	
Soil Map Unit Name								Classificatio			
Are climatic/hydrologic	c conditions on t	he site typi	cal for t	his time o	f year?	No, w	vetter than n	ormal (see S	ection 2.6)		
Are vegetation, soil or	r hydrology sign	ificantly d	isturbed	d? N	0		Are "Norma	l Circumstance	es" present?	Υe	es
Are vegetation, soil or	r hydrology sign	ificantly p	roblema	atic? N	0		(if needed	d, explain any	answers in	Remarks)	
	,			. –			<u> </u>			_	
SUMMARY OF FIN	IDINGS – Atta	ach site m	ap sho	wing sar	npling	point loc	ations, trans	ects, import	ant feature	es, etc.	
Hydrophytic Vegetat	tion Present?	Yes	ΧΙ	No		_					
Hydric Soil Present?		Yes		No Z	X		Sampled Are	a Yes	;	No	X
Wetland Hydrology I	Present?	Yes	X	No		within a	a Wetland?				
Remarks:		-		-							
Remarks.											
VEGETATION - Us	se scientific na	imes of p	ants.				•				
Tree Stratum >3" DBH	H (Plot size	: 30' radius	3)	Absolu		ominant	Indicator	Dominance	Test Works	sheet:	
	(1 101 3120	. oo raara	<i>-</i> ,	% Cove	er S	pecies?	Status				
1								Number of [•	3
2								are OBL, FA			
3										nant Species	3
4								Across All S	` '		
5								Percent of D			100
	20% To	otal Cover			= '	Total Cov	er	are OBL, FA	CW, or FAC	(A/B):	
Sapling/Shrub Stratur	<u>m</u> <3" DBH or >	1 m tall	(Plot	size: 15' r	adius)			Prevalence	Index Work	sheet:	
1 Green Ash (Fraxin	us pennsylvanio	:a)		10		Yes	FACW	Total % (Cover of:	Multip	ly by:
2	, ,							OBL species		X 1	
3								FACW specie	-	_ X 2	
4								FAC species		X 3	
5								FACU specie		X 4	
	20% To	otal Cover	2	10	= -	Total Cov	er	UPL species		X 5	
					J		<u> </u>		A)	(B)	
Herb Stratum non-wo	ody or woody <	1 m tall	(Plot	size: 5' ra	dius)			-	ence Index		
1 Stinging Nettle (U	Irtica dioica)			60		Yes	FACW			n Indicators:	
2 Reed Canarygrass		dinacea)		20		Yes	FACW		-	r Hydrophytic	· Vea
3 Curly Dock (Rume	•	inacca)		10		No	FAC		•	est is > 50%	, vcg
4	х опораз)					110	1710			dex is ≤3.0 ¹	
5										l Adaptations	
6										rting data in	,
7									arks)	ting data in	
8									lematic Hy	drophytic	
9									etation 1 (E)		
10								_		oil and wetlar	nd
11								hydrology m			iu
50% Total Cover	45 20% To	otal Cover	18	90		Total Cov	or	disturbed or			
•						TOTAL COV	CI				
Woody Vine Stratum	> 1 m tall	(Plot	sıze: 30	o' radius)			1				
1								Hydrophyti		V 11	
2					_			Vegetatior Present?	ı Yes	X No	
3	20% Ta	stal Cavar				T		rresent?			
		otal Cover			= '	Total Cov	er				
Remarks: Vegetati	on passes the F	-AC-Neutra	al test.								

SOIL Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)								
Depth	Matrix				ox Featu			
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	Remarks
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	
		pletion, I	RM=Reduced Matrix,	CS=Co	vered or (Coated San		2 Location: PL=Pore Lining, M=Matrix
	oil Indicators:							Indicator for Problematic Hydric Soils ³ :
	listosol (A1)				ed Matri	x (S4)		Coast Prairie Redox (A16)
	listic Epipedon (A2)		dy Redo			_	Iron-Manganese Masses (F12)
	lack Histic (A3)				atrix (S6)		_	Other (Explain in Remarks)
	lydrogen Sulfide (A				ky Mine			
	tratified Layers (A5	o)			ed Matr			
	cm Muck (A10)	l. Cumfaa			atrix (F3			
	epleted Below Dar				Surface		,	
	hick Dark Surface (ark Surfa			Indicators of hydrophytic vegetation and
	andy Mucky Miner cm Mucky Peat or			ох рері	ressions	(F8)		wetland hydrology must be present, unless disturbed or problematic.
		`	3)		-			disturbed of problematic.
	ve Layer (if observ	/ed):						
Type:				_				
Depth (inc	ches):			_		Hydric Soi	I Present?	Yes No <u>X</u>
Remarks:					•			
HYDROL								
	Hydrology Indicat	ors:						
			is required; check a	all that	apply)		Sec	ondary Indicators (minimum of 2 required)
	urface Water (A1)				ed Leav	es (B9)		Surface Soil Cracks (B6)
— н	ligh Water Table (A	.2)	Aqu	atic Fa	ına (B13	3)		Drainage Patterns (B10)
XS	aturation (A3)	•	True	Aquat	ic Plants	(B14)		Dry-Season Water Table (C2)
V	Vater Marks (B1)		—— Hyd	rogen S	Sulfide O	dor (C1)		Crayfish Burrows (C8)
s	ediment Deposits	(B2)	Oxidi	zed Rhiz	ospheres o	on Living Roo	ots (C3)	Saturation Visible on Aerial Imagery (C9)
D	rift Deposits (B3)		Pres	ence o	f Reduce	ed Iron (C4))	Stunted or Stressed Plants (D1)
A	lgal Mat or Crust (I	34)	Rece	nt Iron F	Reduction	on Tilled So	il (C6)	Geomorphic Position (D2)
Ir	on Deposits (B5)				Surface		X	FAC-Neutral Test (D5)
	nundation Visible on A				ell Data			
s	parse Vegetated Con	cave Surf	face(B8) Othe	er (Expl	ain in Re	marks)		
Field Obs	ervations:							
_	later Present?	Yes	No X [epth:		in		
	ole Present?	Yes		epth:		in in		
Saturation	n Present?	Yes		epth:	5-7	in We	tland Hydrolo	gy Present Yes X No
(includes	capillary fringe)							
		eam gai	ıge, monitoring wel	l, aerial	photogr	aphs, previ	ous inspection	ns), if available:
			igher than normal: 3.6 inches for norma			7 days prio	r compared w	ith 0.6 to 1 inch for normal rainfall, 6.9 in the
Remarks:			in one soil layer (5					
					-,			
								Prepared by: MJL
								Checked by: <u>ESM</u>

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:	Sioux Gateway Airport	C	City/County:	Sioux City/Wood	hury Sampli	ing Date:	05-08-	-24
Applicant/Owner:	RS&H			State:		ing Point:	DP-4	
Investigator(s):	Foth - H. Maudlin & M. Lange	er S	Section, Town	ship Range:	S23, 25, 26, 31, 3	_	, R48V	V
Landform (hillslope,	terrace, etc): Toeslope		ocal Relief (c			ncave		
Slope (%): 2-5	Lat: 42.411286	L	ong: -96.40	06425	Datum: UTN	M 15, Upland	t	
Soil Map Unit Name	Sarpy loamy find sand, rarel	y flooded		NWI	Classification: N	None		
Are climatic/hydrologic	conditions on the site typical for t	his time of ye	ear? No, w	etter than no	ormal (see Section	2.6)		
Are vegetation, soil or	r hydrology significantly disturbed	d? Yes		Are "Norma	Circumstances" pres	sent?	Yes	
Are vegetation, soil or	r hydrology significantly problema	atic? No		(if needed	l, explain any answe	rs in Remark	s)	
SUMMARY OF FIN	IDINGS – Attach site map sho	wing samp	ling point loc	ations, trans	ects, important fea	atures, etc.		
Hydrophytic Vegetat		No X	lo the C	amanlad Ara	_			
Hydric Soil Present?		No X		Sampled Area a Wetland?	a Yes	No	٥	X
Wetland Hydrology F		No X	_					
	ion was disturbed by farming; a hydrological features.	annual tilling	g occurs in thi	is location. A	A farm field analysis	s was condu	ıcted t	0
VEGETATION - Us	se scientific names of plants.							
Tree Stratum >3" DBH	l (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test W			
1					Number of Domina		hat	0
3					are OBL, FACW, or Total Number of D	٠,,	oioo –	
4					Across All Strata (E		cies	1
5					Percent of Domina		hat –	
	20% Total Cover	-	= Total Cove	er	are OBL, FACW, or		_	0
Sapling/Shrub Stratur	m <3" DBH or > 1 m tall (Plot	size: 15' rad	ius)		Prevalence Index \	Worksheet:		
1					Total % Cover o	<u>of:</u> <u>M</u>	ultiply	by:
2					OBL species	X 1		
3					FACW species	X 2		
5					FAC species FACU species	X 3 X 4		
3	20% Total Cover		- Total Cov	O.F.	UPL species	X 5	-	
	20% Total Gover	<u> </u>	= Total Cove	er	Totals (A)	(B)	-	
Herb Stratum non-wo	ody or woody < 1 m tall (Plot	size: 5' radiu	ıs)		Prevalence In		-	
1 Corn (Zea mays)		30	Yes	NL	Hydrophytic Veget		ors:	
2		- 55		112		st for Hydrop		/eg
3					2-Dominan	ce Test is > 5	50%	•
4						ce Index is ≤3		
5						ogical Adapta		
7					(Provide su Remarks)	pporting data	a ın	
8					,	c Hydrophyti	C	
9					Vegetation		•	
10					1 Indicators of hydr	ric soil and w	etland	
11					hydrology must be		ess	
50% Total Cover	50 20% Total Cover 20	100	= Total Cove	er	disturbed or proble	matic.		
Woody Vine Stratum	> 1 m tall (Plot size: 30)' radius)	<u> </u>					
2		 			Hydrophytic Vegetation Y	00	No	v
3		 			Vegetation Y	es	No _	Х
-	20% Total Cover		= Total Cove	er				
Remarks: Vegetati	on fails the FAC-Neutral test.	1	_1					

SOIL Sampling Point: DP-4

Profile D	escription: (Desc	ווטפ נט נו	ne deptir need	ta to acca	incinc an	c illaioato	1 10 0011111111	ile absence of file	aloutoi o. j
Depth	Matrix			Redo	ox Featu	res			Remarks
(inches)	Color (moist)	%	Color (Moist) %	Type ¹	Loc ²	Texture		Remarks
0-7	10YR 3/2	100	,	,			Silty clay		
0-7	101K 3/2	100					loam		
7-20	10YR 4/2	100					Silty clay		
							, ,		
1									
	Concentration, D=De	epletion, l	RM=Reduced Ma	trix, CS=Co\	ered or 0	Coated San			ore Lining, M=Matrix
•	oil Indicators:			0 0		(0.4)			plematic Hydric Soils ³ :
	listosol (A1)			Sandy Gley		X (S4)	_	Coast Prairie F	
	listic Epipedon (A2	<u>()</u>		Sandy Redo			_		se Masses (F12)
	Black Histic (A3)	. 4)		Stripped Ma			_	Other (Explain	in Remarks)
	lydrogen Sulfide (A			Loamy Muc					
	Stratified Layers (A	5)		Loamy Gley					
	cm Muck (A10)	.l. 0f		Depleted M					
	epleted Below Dar			Redox Dark				21 1 1 61 1	the tree to
	hick Dark Surface			Depleted Da					rophytic vegetation and
	Sandy Mucky Miner			Redox Depr	essions	(F8)		wetiand nydrology disturbed or proble	must be present, unless
	cm Mucky Peat o	•	3)		•			disturbed of proble	ematic.
	ve Layer (if obser	ved):							
Type:									
Depth (inc	ches):					Hydric So	il Present?	Yes	No <u>X</u>
Remarks:									
ricinario.									
HYDROI	LOGY								
Wetland	Hydrology Indica	tors:							
Primary I	ndicators (minimur	n of one	is required: che	ck all that a	(vlage		Sec	condary Indicators	(minimum of 2 required)
	Surface Water (A1)			Water-Stain		es (B9)	<u> </u>	Surface Soil Cra	
	ligh Water Table (A	(2)		Aquatic Fau				Drainage Patterr	
	Saturation (A3)	,		True Aquati				Dry-Season Wate	
	Vater Marks (B1)			Hydrogen S				Crayfish Burrows	
	Sediment Deposits	(B2)		Oxidized Rhize		٠,,	ots (C3) X		e on Aerial Imagery (C9)
	Fift Deposits (B3)	()		Presence of		-		Stunted or Stres	
	Algal Mat or Crust (B4)		Recent Iron R		`	·	Geomorphic Pos	• •
	ron Deposits (B5)	,		Thin Muck S				FAC-Neutral Tes	
	nundation Visible on A	Aerial Ima		Gauge or W			-	_	- ()
	parse Vegetated Con			Other (Expl		` '			
	·			(1			
	servations:		Na V	Danthi		:			
			No X	Depth:		_ in			
Surface V	Vater Present?	Yes		Dantle					
Surface V Water Tal	Vater Present? ole Present?	Yes	No X	Depth:		_ in w	stland Usabst-	my Dranam+ Y	N. V
Surface V Water Tal Saturation	Vater Present? ole Present? n Present?						etland Hydrolo	gy Present Y	es No <u>X</u> _
Surface V Water Tal Saturation (includes	Vater Present? ble Present? n Present? capillary fringe)	Yes Yes	No X No X	Depth:	nhets -	_ in We			es No _X
Surface V Water Tal Saturation (includes Describe	Vater Present? ole Present? n Present? capillary fringe) Recorded Data (str	Yes Yes eam gau	No X No X	Depth:		in We	ious inspectio	ns), if available:	
Surface V Water Tal Saturation (includes Describe Based on	Vater Present? ble Present? n Present? capillary fringe) Recorded Data (str the NRCS method	Yes Yes eam gau	No X No X uge, monitoring rpreting historic	Depth: well, aerial aerial phot	ographs	in We	ious inspectio	ns), if available:	es No X lary indicator at this data
Surface V Water Tal Saturation (includes Describe Based on	Vater Present? ole Present? n Present? capillary fringe) Recorded Data (str	Yes Yes eam gau	No X No X uge, monitoring rpreting historic	Depth: well, aerial aerial phot	ographs	in We	ious inspectio	ns), if available:	
Surface V Water Tal Saturation (includes Describe Based on point. See	Vater Present? ble Present? n Present? capillary fringe) Recorded Data (str the NRCS methode Section 2.7 of the	Yes Yes eam gau	No X No X uge, monitoring rpreting historic	Depth: well, aerial aerial phot	ographs	in We	ious inspectio	ns), if available:	
Surface V Water Tal Saturation (includes Describe Based on	Vater Present? ble Present? n Present? capillary fringe) Recorded Data (str the NRCS methode Section 2.7 of the	Yes Yes eam gau	No X No X uge, monitoring rpreting historic	Depth: well, aerial aerial phot	ographs	in We	ious inspectio	ns), if available:	
Surface V Water Tal Saturation (includes Describe Based on point. See	Vater Present? ble Present? n Present? capillary fringe) Recorded Data (str the NRCS methode Section 2.7 of the	Yes Yes eam gau	No X No X uge, monitoring rpreting historic	Depth: well, aerial aerial phot	ographs	in We	ious inspectio	ns), if available:	
Surface V Water Tal Saturation (includes Describe Based on point. See	Vater Present? ble Present? n Present? capillary fringe) Recorded Data (str the NRCS methode Section 2.7 of the	Yes Yes eam gau	No X No X uge, monitoring rpreting historic	Depth: well, aerial aerial phot	ographs	in We	ious inspectio	ns), if available:	

Project/Site:	Sioux Gatewa	ay Airport		City/County:	Sioux City/\	Noodbury S	ampling Date	: 05-08	3-24
Applicant/Owner:	RS&H				State:	lowa S	ampling Poin	t: DP-5	
Investigator(s):	Foth - H. Maı	udlin & M. Lar	nger	Section, Town	ship Range:	S23, 25, 26	, 31, 35, 36, T	88N, R48	W
Landform (hillslope,		Toeslope	_	Local Relief (c			Concave	, -	
Slope (%): 0-2	•	.411338		•	05857	Datum:	UTM 15, U	nland	
Soil Map Unit Name						Classification		Jidiid	
•		•		vaar? Na u					
Are climatic/hydrologic		• •	-	-		ormal (see Se			
Are vegetation, soil of		-			_	l Circumstances		Ye	S
Are vegetation, soil of	r hydrology sign	ificantly proble	ematic? No		(if neede	d, explain any a	nswers in Re	marks)	
SUMMARY OF FIN				oling point loc	ations, trans	sects, importa	nt features,	etc.	
Hydrophytic Vegeta		Yes	_ NoX	_ lo the G	Sampled Are				
Hydric Soil Present?		Yes	_ NoX		a Wetland?	a Yes		No	<u> </u>
Wetland Hydrology I	resent?	Yes X	_ No	_ ********	a Wetland:				
	tion was disturk hydrological fe		g; annual tillin	g occurs in th	is location.	A farm field an	alysis was c	onducted	to
VEGETATION - U	se scientific na	mes of plants		T -		1			
Tree Stratum >3" DBI	H (Plot size:	: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance T	est Workshe	et:	
1						Number of De			0
2						are OBL, FAC			
3						Total Numbe		Species	1
5						Across All St Percent of Do		ina That	
3	20% Tc	otal Cover		= Total Cov	<u> </u>	are OBL, FAC			0
				= Total Cov	eı	a. o o z <u>z</u> , o			
Sapling/Shrub Stratus	<u>m</u> <3" DBH or > 1	1 m tall (P	lot size: 15' rad	lius)		Prevalence In	ndex Worksho	eet:	
1						Total % Co	over of:	<u>Multipl</u>	<u>y by:</u>
2						OBL species		X 1	
3						FACW species	S	X 2	
4						FAC species		X 3	
5					1	FACU species		X 4	
	20% To	otal Cover		= Total Cov	er	UPL species		X 5	
Herb Stratum non-wo	ody or woody <	1 m tall (P	lot size: 5' radi	us)		Totals (A) nce Index = B	(B) / A =	
1 Corn (Zea mays)			30	Yes	NL	Hydrophytic			
2							id Test for Hy		Veg
3						2-Don	ninance Test	is > 50%	
4						3-Pre	valence Index	is ≤3.0 ¹	
5							phological A		;
6							de supporting	g data in	
7						Rema	,		
8							ematic Hydro		
9						_	ation 1 (Expla	•	
10						1 Indicators o			d
11 FOW Tatal Course	200¢ T-	-4-1 0				hydrology mu disturbed or p		i, uniess	
50% Total Cover Woody Vine Stratum		otal Cover	: 30' radius)	= Total Cov	er	disturbed or p	orobiernatic.		
-	- i iii tuli	(1 101 3126	. oo raaras)						
2						Hydrophytic Vegetation	Yes	No	Х
3						Present?	169	110	
<u> </u>	20% Tc	otal Cover		= Total Cov	er				
Remarks: Vegetati	ion fails the FAC	:-Neutral test		1		1			
vegetati	J. Idilo tile i Au								

Depth	Matrix				ox Feature				Remarks		
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture		Remarks		
8-0	10YR 3/1	100					Silty clay				
8-20	10YR 4/2	100					Silty clay				
		1					, ,				
		<u> </u>									
	Concentration, D=De oil Indicators:	epletion,	RM=Reduced Mat	rix, CS=Co	vered or C	oated San	d Grains.		ore Lining, M=Matrix Dlematic Hydric Soils ³ :		
E	Histic Epipedon (A2 Black Histic (A3) Hydrogen Sulfide (A Stratified Layers (A 2 cm Muck (A10) Depleted Below Da Thick Dark Surface Sandy Mucky Miner 5 cm Mucky Peat o	A4) 5) rk Surfac (A12) ral (S1)	= S = L = D = D = C = D = D = D = D = D = D = D	andy Redo tripped Ma oamy Muc oamy Gley epleted M dedox Dark depleted Dark dedox Depr	atrix (S6) cky Miner red Matrix atrix (F3) Surface ark Surfac	ral (F1) x (F2) (F6) ce (F7)		Other (Explain 3 Indicators of hydroxy	rophytic vegetation and must be present, unless		
		•	(3)					disturbed or proble	ematic.		
Restricti Type:	ve Layer (if obser	vea):									
Depth (in	ches):				Н	lvdric So	il Present?	Yes	No X		
HYDRO	LOGY										
Vetland	Hydrology Indica										
X S X X S X X S X X X X X X X X X X X X	ndicators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Orift Deposits (B3) Algal Mat or Crust (A2) (B2)	V T H 0	ck all that a Vater-Stain Aquatic Fau True Aquati Iydrogen S Xidized Rhiza Presence o ecent Iron F	ned Leave una (B13) ic Plants Sulfide Od ospheres of f Reduce	(B14) Ior (C1) n Living Roo d Iron (C4	ots (C3) X	Surface Soil Cra Drainage Patterr Dry-Season Wate Crayfish Burrows	ns (B10) er Table (C2) s (C8) e on Aerial Imagery (C9) sed Plants (D1)		
I	ron Deposits (B5) nundation Visible on Sparse Vegetated Cor	Aerial Ima	agery(B7) G	hin Muck Sauge or Worther (Expl	Surface (Vell Data (C7) (D9)		FAC-Neutral Tes			
ield Obs	nundation Visible on Sparse Vegetated Corservations:	Aerial Ima	agery(B7) G	Sauge or W Other (Expl	Surface (l'ell Data (ain in Rer	C7) (D9) marks)		FAC-Neutral Tes			
Field Obs Surface V Water Ta Saturatio (includes Describe Based or	nundation Visible on Sparse Vegetated Cor servations: Vater Present? ble Present? n Present? capillary fringe) Recorded Data (sti	Aerial Imancave Sur Yes Yes Yes Yes Team gaid for inte	x No X No X No y nonitoring varieting historic is	Depth: Depth: Depth: Depth: Depth: Depth: Depth:	Surface (in the feet of the fe	C7) (D9) marks) in in in maphs, prev	etland Hydro	ology Present Y			
Field Obs Surface V Water Ta Saturatio includes Describe Based or point. Sec	nundation Visible on Sparse Vegetated Cor Servations: Vater Present? ble Present? on Present? capillary fringe) Recorded Data (sting) the NRCS methode e Section 2.7 of the	Aerial Imancave Sur Yes Yes Yes Yes Team gaid for inte	x No X No X No y nonitoring varieting historic is	Depth: Depth: Depth: Depth: Depth: Depth: Depth:	Surface (in the feet of the fe	C7) (D9) marks) in in in maphs, prev	etland Hydro	ology Present Y	es <u>X</u> No		
Field Obs Surface V Vater Ta Saturatio includes Describe Based or	nundation Visible on Sparse Vegetated Cor Servations: Vater Present? ble Present? on Present? capillary fringe) Recorded Data (sting) the NRCS methode e Section 2.7 of the	Aerial Imancave Sur Yes Yes Yes Yes Team gaid for inte	x No X No X No y nonitoring varieting historic is	Depth: Depth: Depth: Depth: Depth: Depth: Depth:	Surface (in the feet of the fe	C7) (D9) marks) in in in maphs, prev	etland Hydro	ology Present Y	es <u>X</u> No		
ield Obsurface Vater Ta aturation ncludes escribe ased or oint. See	nundation Visible on Sparse Vegetated Cor Servations: Vater Present? ble Present? on Present? capillary fringe) Recorded Data (sting) the NRCS methode e Section 2.7 of the	Aerial Imancave Sur Yes Yes Yes Yes Team gaid for inte	x No X No X No y nonitoring varieting historic is	Depth: Depth: Depth: Depth: Depth: Depth: Depth:	Surface (in the feet of the fe	C7) (D9) marks) in in in maphs, prev	etland Hydro	ology Present Y	es <u>X</u> No		

Project/Site:	Sioux Gateway Airport		City/County:	Sioux City/V	Voodbury S	Sampling Date:	05-08	-24
Applicant/Owner:	RS&H			State:	lowa S	Sampling Point:	DP-6	
Investigator(s):	Foth - H. Maudlin & M. Lange	er	Section, Town	ship Range:	S23, 25, 26	, 31, 35, 36, T8	8N, R48\	N
Landform (hillslope,	terrace, etc): Toeslope		Local Relief (c	oncave, con	vex, none):	Concave	· · ·	
Slope (%): 0-4	Lat: 42.411294		Long: -96.4	05186	Datum:	UTM 15, Upla	and	
Soil Map Unit Name	Sarpy loamy fine sand, rarel	y flooded		NWI	Classification	n: None		
Are climatic/hydrologic	c conditions on the site typical for t	this time of y	/ear? No, w	etter than no	ormal (see Se	ection 2.6)		
Are vegetation, soil of	r hydrology significantly disturbe	d? Yes	<u></u>	Are "Normal	Circumstance	s" present?	Yes	3
Are vegetation, soil of	r hydrology significantly problem	atic? No		(if needed	l, explain any a	answers in Rem	arks)	
SUMMARY OF FIN	IDINGS – Attach site map sho	owing sam	pling point loca	 ations, trans	ects, importa	nt features, et	c.	
Hydrophytic Vegeta	tion Present? Yes	No X						
Hydric Soil Present?		No X		Sampled Area a Wetland?	a Yes		No	X
Wetland Hydrology I	Present? Yes	No X	within a	a welland:				
	ion was disturbed by farming; a hydrological features.	annual tillir	ng occurs in thi	s location. A	farm field ar	nalysis was cor	nducted	to
VEGETATION - U	se scientific names of plants.							
<u>Tree Stratum</u> >3" DBI	H (Plot size: 30' radius)	Absolute % Cover		Indicator Status		Test Worksheet		
1						ominant Specie	s that	0
3						CW, or FAC (A): er of Dominant S	nooioo	
4					Across All St		pecies	1
5						ominant Specie	s That	
	20% Total Cover		= Total Cove	er	are OBL, FAC	CW, or FAC (A/B)):	0
Sapling/Shrub Stratu	\underline{m} <3" DBH or > 1 m tall (Plot	size: 15' rad	dius)		Prevalence I	ndex Workshee	t:	
1					Total % C		Multiply	<u>by:</u>
2					OBL species	X		
4					FACW specie		2	
5					FAC species FACU species		3	
<u> </u>	20% Total Cover		= Total Cove	or	UPL species		5	
			- 10tal COV	CI	Totals (A		B)	
Herb Stratum non-wo	ody or woody < 1 m tall (Plot	size: 5' radi	us)		•	nce Index = B/A	·	
1 Corn (Zea mays)		30	Yes	NL		Vegetation Indi		
2						oid Test for Hyd		Veg
3						minance Test is		
4						valence Index is		
5						rphological Ada		
7					(Prov Rema	ide supporting (iata in	
8						ematic Hydroph	vtic	
9						tation ¹ (Explain		
10					_	of hydric soil and		d
11					hydrology m	ust be present, เ		
50% Total Cover	20% Total Cover		= Total Cove	er	disturbed or	problematic.		
Woody Vine Stratum	> 1 m tall (Plot size: 30	O' radius)		<u> </u>	Davida 1 et	_		
2					Hydrophytic Vegetation		No	X
3			+		Present?	163	_ '10	
-	20% Total Cover		= Total Cove	er				
Remarks: Vegetati	on fails the FAC-Neutral test.	1	. 3.0. 307	=-				

Profile D	escription: (Desc	ribe to t	he depth needed 1	o docu	ment ti	he indicato	or to confirm	the absence of inc	licators.)
Depth	Matrix			Red	ox Featı	ures			Domarka
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture		Remarks
0-7	10YR 3/1	100	(2 2 3)		71		Silty clay		
	10)(5.0)	100							
7-20	10YR 3/2	100					Silty Clay		
¹ Type: C=0	L Concentration, D=De	pletion, I	L RM=Reduced Matrix	. CS=Co	vered or	Coated San	nd Grains.	2 Location: PL=Po	re Lining, M=Matrix
	oil Indicators:	p , .		,					lematic Hydric Soils ³ :
•	listosol (A1)		San	dy Gley	ed Matr	rix (S4)		Coast Prairie R	
	listic Epipedon (A2)		dy Red					e Masses (F12)
	Black Histic (A3)				atrix (S6			Other (Explain	in Remarks)
	lydrogen Sulfide (<i>A</i>					eral (F1)			
	Stratified Layers (A	5)			yed Mat				
	cm Muck (A10)				latrix (F				
	epleted Below Dar				Surfac				
	hick Dark Surface					face (F7)			ophytic vegetation and
	andy Mucky Miner			ox Dep	ressions	s (F8)		wetland hydrology disturbed or proble	must be present, unless
	cm Mucky Peat or	•	ა)		1			disturbed of proble	illiatic.
	ve Layer (if obser	ved):							
Type:	-1						:1 D	V	N. V
Depth (inc						Hyaric So	il Present?	Yes	NoX
Remarks:									
HYDROL	_OGY								
Wetland	Hydrology Indica	tors:							
			is required; check	all that	apply)		Se	econdary Indicators ((minimum of 2 required)
	Surface Water (A1)					ves (B9)	_	Surface Soil Crac	
H	ligh Water Table (A	(2)	—Aqu	atic Fa	una (B1	3)		 Drainage Pattern	s (B10)
s	Saturation (A3)		Tru	e Aquat	ic Plant	s (B14)		Dry-Season Wate	er Table (C2)
	Vater Marks (B1)		Hyc	lrogen S	Sulfide (Odor (C1)		Crayfish Burrows	
S	Sediment Deposits	(B2)	Oxid	ized Rhiz	ospheres	on Living Roo	ots (C3) X	Saturation Visible	e on Aerial Imagery (C9)
	rift Deposits (B3)					ed Iron (C4	<i></i>	Stunted or Stress	
	Igal Mat or Crust (B4)				n on Tilled So	oil (C6)	Geomorphic Pos	
	ron Deposits (B5)				Surface			FAC-Neutral Test	t (D5)
	nundation Visible on				/ell Data				
	parse Vegetated Cor	cave Sur	race(B8) Oth	er (Expl	aın ın R	emarks)			
	servations:								
	Vater Present?	Yes		Depth:		in			
	ole Present?	Yes		Depth:		in			
	n Present?	Yes	No _X_	Depth:		in W e	etland Hydro	logy Present Yo	es No <u>X</u>
	capillary fringe)			11 • •				:\ : f !! !! :	
			uge, monitoring we						on indicator at this data
			rpreting historic ae ation Report for add			s, wetland I	nyarology is	present as a second	ary indicator at this data
point. Set	5 OGUNUN Z./ UN UNE		ation isoport for auc	iiliOHal (ucialis.				
Remarks:									
-									Prepared by: MJL
									Checked by: ESM

Project/Site:	Sioux Gateway Airport	Ci	ty/County:	Sioux City/V	Voodbury	Sampling Date:	05-08-24
Applicant/Owner:	RS&H			State:	lowa	Sampling Point:	DP-7
Investigator(s):	Foth - H. Maudlin & M. Lang	jer Se	ection, Town	ship Range:	S23, 25, 26	5, 31, 35, 36, T88	N, R48W
- , ,	, terrace, etc): Toeslope			oncave, con		Concave	
Slope (%): 0-2	Lat: 42.411607		•	97810	Datum:	UTM 15, Upla	nd
Soil Map Unit Name	Percival silty clay, rarely flo	ooded		NWI	Classificatio	n: None	
•	c conditions on the site typical for		ar? No. w		ormal (see Se		
	r hydrology significantly disturb	•			l Circumstance	•	Yes
-	r hydrology significantly probler			_		nswers in Remark	(s)
-	NDINGS – Attach site map sh	-	ng point loc	= '			
Hydrophytic Vegeta Hydric Soil Present?		No X No X	Is the S	Sampled Are	a Yes		No X
Wetland Hydrology		No X	within a	a Wetland?			
Remarks: Vegetat	tion was disturbed by farming; hydrological features.	; annual tilling	occurs in th	is location. A	\ farm field a	nalysis was con	ducted to
VEGETATION - U	se scientific names of plants.	,		T	I		
<u>Tree Stratum</u> >3" DBI	H (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance '	Test Worksheet:	
2						Dominant Species CW, or FAC (A):	that 0
3						er of Dominant Sp	necies
4					Across All S		3
5					1	ominant Species	That 0
	20% Total Cover		= Total Cov	er	are OBL, FA	CW, or FAC (A/B):	:
Sapling/Shrub Stratu	<u>m</u> <3" DBH or > 1 m tall (Plo	t size: 15' radiu	ıs)		Prevalence	Index Worksheet	:
1					Total % C	Cover of:	Multiply by:
2					OBL species	X	1
3					FACW specie		
4					FAC species		
5	20% T-+-1 0				FACU specie		
	20% Total Cover		= Total Cov	er	UPL species	X !	
Herb Stratum non-wo	oody or woody < 1 m tall (Plo	t size: 5' radius)		`	A)(E	<i>'</i>
		,	<u> </u>	1		ence Index = B/A	
	Descurainia incana) Capsella bursa-pastoris)	5 5	Yes Yes	UPL FACU		Vegetation Indic	
3 Soybean (Glycine	<u>, , , , , , , , , , , , , , , , , , , </u>	5	Yes	NL NL		pid Test for Hydro minance Test is >	
4	maxy	3	103	INL		evalence Index is	
5						orphological Adap	
6						vide supporting d	
7					Rem	arks)	
8						lematic Hydrophy	
9					-	etation 1 (Explain)	
10						of hydric soil and	
11 50% Total Cover	8 20% Total Cover 3	45	T : ! ^			iust be present, u problematic.	niess
Woody Vine Stratum		15 30' radius)	= Total Cov	er	alstarbea 01	problematic.	
	FIOU SIZE. 3			1			
2					Hydrophyti Vegetation		No X
3					Present?		

= Total Cover

Remarks:

20% Total Cover

Vegetation fails the FAC-Neutral test.

SOIL DP-7 Sampling Point:

Profile D	Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)										
Depth	Matrix		•		ox Featur						
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	Rema	arks		
, ,	, ,		()	_	75-	1	Sandy clay				
0-13	10YR 3/2	100					loam				
13-18	10YR 4/2	100					Sandy clay loam				
10.00	10VD E /0	100									
18-20	10YR 5/3	100					Sand				
¹ Type: C=0	L Concentration, D=De	pletion, I	RM=Reduced Matrix,	CS=Co	vered or 0	Coated San	d Grains.	2 Location: PL=Pore Lini	ng, M=Matrix		
	oil Indicators:	p						ndicator for Problemat			
	listosol (A1)		San	dy Gley	ed Matri	x (S4)	_	Coast Prairie Redox (
	listic Epipedon (A2)		dy Redo		` ,		Iron-Manganese Mas			
	lack Histic (A3)	,			atrix (S6))		Other (Explain in Ren			
	lydrogen Sulfide (A	4)	Loai	ny Muc	ky Mine	ral (F1)		_ ` '	,		
s	tratified Layers (A5	5) [´]	Loai	ny Gley	ed Matri	ix (F2)					
2	cm Muck (A10)		Dep	leted M	atrix (F3)					
D	epleted Below Darl	k Surfac	e (A11) Red	ox Dark	Surface	(F6)					
T	hick Dark Surface ((A12)			ark Surfa		3	Indicators of hydrophyti	c vegetation and		
s	andy Mucky Miner	al (S1)	Red	ox Depi	ressions	(F8)		wetland hydrology must l			
5	cm Mucky Peat or	Peat (S	3)				C	disturbed or problematic			
Restrictiv	e Layer (if observ	ved):									
Type:	<u> </u>	•									
Depth (inches): Hydric Soil Present? Yes No X											
Remarks:					1						
HYDROL	.OGY										
Wetland	Hydrology Indicat	ors:									
			is required; check a	all that	apply)		Sec	ondary Indicators (minim	num of 2 required)		
	urface Water (A1)	1010110			ed Leav	es (B9)	<u>555</u>	Surface Soil Cracks (Be			
	ligh Water Table (A	.2)			ına (B13			Drainage Patterns (B10			
	aturation (A3)	,			ic Plants			Dry-Season Water Tabl			
	Vater Marks (B1)				Sulfide O			Crayfish Burrows (C8)	- (- /		
	ediment Deposits ((B2)				on Living Roc	ots (C3) X	Saturation Visible on A	erial Imagery (C9)		
	rift Deposits (B3)	,				ed Iron (C4		Stunted or Stressed Pla	- , ,		
	lgal Mat or Crust (I	34)				on Tilled Sc		Geomorphic Position (
	on Deposits (B5)	,			Surface (` ′	FAC-Neutral Test (D5)	,		
	undation Visible on A	Aerial Ima			ell Data			. ,			
s	parse Vegetated Con-	cave Surf			ain in Re						
Field Ohe	ervations:		<u> </u>			Í					
	ater Present?	Yes	No X [Depth:		in					
	ole Present?	Yes		Depth:		_ '''					
Saturation		Yes		Depth:			tland Hydrolo	gy Present Yes	No X		
	capillary fringe)			- opuii		- ''' '''					
		eam gai	ıge, monitoring wel	l. aerial	photogra	aphs, previ	ous inspection	ns), if available:			
Based on	the NRCS method	for inte	rpreting historic aer	ial phot	ographs			esent as a secondary inc	dicator at this data		
point. See	e Section 2.7 of the	Delinea	ation Report for add	itional (details.						
Remarks:											
								Dr	enared by: M.II		

Project/Site:	Sioux Gateway Airport	C	City/County:	Sioux City/	/Woodbury	Sampling Date	: 05-08	3-24
Applicant/Owner:	RS&H			State:	lowa	Sampling Poin	t: DP-8	
Investigator(s):	Foth - H. Maudlin & M. Lange	er S	Section, Towns	hip Range:	S23, 25, 2	6, 31, 35, 36, T	88N, R48\	N
Landform (hillslope,	terrace, etc): Shoulder		ocal Relief (co	ncave, con	vex, none):	Convex		
Slope (%): 0-2	Lat: 42.410142	L	ong: -96.39	4001	Datum:	UTM 15, Սբ	oland	
Soil Map Unit Name	Percival silty clay, rarely floo	oded		NWI	Classification	n: R4SBC		
Are climatic/hydrologic	c conditions on the site typical for	this time of ye	ear? No, we	etter than n	ormal (see S	ection 2.6)		
Are vegetation, soil o	r hydrology significantly disturbe	d? Yes		Are "Norm	al Circumstan	ces" present?	Yes	3
Are vegetation, soil o	r hydrology significantly problem	atic? No		(if needed	d, explain any	answers in Rer	narks)	
SUMMARY OF FIN	NDINGS – Attach site map sho	owing samp	ling point loca	- tions, trans	ects, import	ant features, e	etc.	
Hydrophytic Vegeta		No X	lo the Co		_			
Hydric Soil Present?		No X		ampled Are Wetland?	a Yes		No	X
Wetland Hydrology	Present? Yes	No X	_ Within a	wetiania:				
	tion was disturbed by farming; a hydrological features.	annual tilling	g occurs in this	location. A	A farm field a	ınalysis was co	onducted	to
VEGETATION - U	se scientific names of plants.							
<u>Tree Stratum</u> >3" DBI	H (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicato r Status		Test Workshee		
1						Dominant Spec CW, or FAC (A)		0
3						er of Dominant		
4					Across All S		Орсско	3
5						Dominant Speci	es That	
	20% Total Cover		= Total Cove	er	are OBL, FA	CW, or FAC (A/	B):	0
Sapling/Shrub Stratu	<u>m</u> <3" DBH or > 1 m tall (Plot	size: 15' radi	ius)		Prevalence	Index Workshe	et:	
1					Total % (Cover of:	Multiply	by:
2					OBL species		X 1	
3					FACW specie	es	X 2	
4					FAC species		Х3	
5	200% Tatal Oawar				FACU specie		X 4	
	20% Total Cover		= Total Cove	er	UPL species	· · · · · · · · · · · · · · · · · · ·	X 5	
Herb Stratum non-wo	oody or woody < 1 m tall (Plot	size: 5' radiu	ıs)		`	(A)	(B)	
	Pescurainia incana)	5	Yes	UPL		ence Index = B, c Vegetation In		
	Capsella bursa-pastoris)	5	Yes	FACU		pid Test for Hy		Ven
3 Soybean (Glycine		5	Yes	NL		ominance Test i		vcg
4	/					evalence Index		
5						orphological Ac		
6						vide supporting	ງ data in	
7						narks)		
9						olematic Hydro _l etation ¹ (Expla		
10					_	of hydric soil a	•	1
11						nust be present		J
50% Total Cover	20% Total Cover		= Total Cove	er		r problematic.	, 4111000	
Woody Vine Stratum	> 1 m tall (Plot size: 30	0' radius)						
1					Hydrophyti			
2					Vegetation		No	X
3	20% Total Carra				Present?			
-	20% Total Cover		= Total Cove	er				
Remarks: Vegetati	ion fails the FAC-Neutral test.							

Profile D	escription: (Descr	ibe to t	he depth needed t	o docu	ment th	e indicato	or to confirm the	e absence o	f indicators.)
Depth	Matrix			Rec	lox Featι	ıres			Remarl	(0
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	1	Reman	KS .
0-13	10YR 3/2	100					Loam			
13-19	10YR 4/2	100					Sandy loam			
¹Tvpe: C=0	Concentration, D=De	pletion. I	RM=Reduced Matrix	CS=Co	vered or (Coated Sar	nd Grains.	2 Location:	PL=Pore Linir	ng. M=Matrix
	oil Indicators:	p.o		00 00						Hydric Soils ³ :
	listosol (A1)		San	dy Gley	ed Matri	x (S4)			rie Redox (A´	
	listic Epipedon (A2) lack Histic (A3))		dy Redo	ox (S5) atrix (S6))			anese Masse Iain in Rema	
	lydrogen Sulfide (A	4)			cky Mine			_ Other (Exp	iaiii iii Neiiiai	NS)
	tratified Layers (A5				ed Matr					
	cm Muck (A10)	,			latrix (F3					
	epleted Below Dar				Surface					
	hick Dark Surface (ark Surfa					vegetation and
	andy Mucky Minera cm Mucky Peat or			ox Dep	ressions	(F8)		etland hydrol sturbed or pr		present, unless
	<u> </u>	•	3)		1		ui	sturbed or pr	obiematic.	
	ve Layer (if observ	/ed):								
Type: Depth (inc	.hoe).			_	1.	Uvdria Sa	il Present?	Yes	N	. v
				_		nyunc 30	iii Fresent:	169		o <u>X</u>
Remarks:										
HYDROL	_OGY									
Watland	Hydrology Indicat	orc:								
	ndicators (minimum		is required; check	all that	annly)		Seco	ndary Indicat	ors (minimu	m of 2 required)
	urface Water (A1)	1010110			ned Leav	es (B9)	<u> </u>		il Cracks (B6	
	ligh Water Table (A	.2)			una (B13				atterns (B10)	
s	aturation (A3)	•	True	e Aquat	ic Plants	(B14)			ı Water Table	
	Vater Marks (B1)		Hyd	rogen S	Sulfide O	dor (C1)		Crayfish Bu	ırrows (C8)	
	ediment Deposits ((B2)				on Living Ro				rial Imagery (C9)
	rift Deposits (B3)					ed Iron (C4		-	Stressed Pla	
	lgal Mat or Crust (F	34)				on Tilled So	oil (C6)		c Position (D	2)
	on Deposits (B5) nundation Visible on A	orial Ima			Surface			FAC-Neutra	ai iest (D5)	
	parse Vegetated Con-		- · · · —	-	/ell Data ain in Re					
				JI (EXPI	ani in ite	11101113)				
	servations: Vater Present?	Yes	No X I	Depth:		in				
	ole Present?	Yes		Depth:		_ '''				
	n Present?	Yes		Depth:			etland Hydrology	v Present	Yes	No X
	capillary fringe)	. 50		- 12 41 11		- ··· ···		,		
	Recorded Data (str	eam gai	ige, monitoring wel	l, aerial	photogr	aphs, prev	vious inspections	s), if available	:	
	the NRCS method Section 2.7 of the					s, wetland	hydrology is pre	sent as a sec	condary indic	ator at this data
Remarks:										
									Pren	ared by: MJL

Prepared by: MJL Checked by: ESM

Project/Site: Sioux Gat	eway Airport	Ci	ty/County:	Sioux City/W	oodbury	Sampling Date:	05-08	-24
Applicant/Owner: RS&H				State:	lowa	Sampling Point:	DP-9	
Investigator(s): Foth – H.	Maudlin & M. Lange	r Se	ection, Town	ship Range:	S23, 25, 2	6, 31, 35, 36, T8	3N, R48V	٧
Landform (hillslope, terrace, etc.	c): Toeslope	Lo	cal Relief (c	oncave, conv	/ex, none):	Concave		
Slope (%): 0-2 Lat:	42.409445	Lo	ng: -96.3	91298	Datum:	UTM 15, Upla	nd	
Soil Map Unit Name Percival	silty clay, rarely floo	ded		NWI	Classificatio	n:		
Are climatic/hydrologic conditions	on the site typical for t	his time of yea	ır? No, w	vetter than no	ormal (see S	ection 2.6)		
Are vegetation, soil or hydrology	significantly disturbed	d? Yes		Are "Normal	Circumstance	es" present?	Yes	
Are vegetation, soil or hydrology	significantly problem	atic? No		(if needed	l, explain any	answers in Rema	arks)	
SUMMARY OF FINDINGS -	Attach site map sho	wing sampli	ng point loc	ations, trans	ects, import	ant features, etc) .	
Hydrophytic Vegetation Presen		No <u>X</u>	lo the C	ampled Area				
Hydric Soil Present?		No X		ampled Area Wetland?	Yes		No	X
Wetland Hydrology Present?	Yes	No X	Within	i Wetiana:				
Remarks: Vegetation was dis identify hydrologic	sturbed by farming; a al features.	annual tilling	occurs in th	is location. A	farm field a	nalysis was cor	ducted 1	to
VEGETATION - Use scientific	c names of plants.							
•	size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status		Test Worksheet:		
1						Dominant Species	s that	0
3						CW, or FAC (A): er of Dominant S	necies -	
4					Across All S		pecies	2
5						ominant Species	That	0
20	% Total Cover		= Total Cov	er	are OBL, FA	CW, or FAC (A/B)	: <u>-</u>	0
Sapling/Shrub Stratum <3" DBH (or > 1 m tall (Plot	size: 15' radiu	ıs)		Prevalence	Index Worksheet	:	
1					Total % C		Multiply	<u>by:</u>
2					OBL species	X		
4					FACW species			
5					FACU species			
	% Total Cover		= Total Cov	er	UPL species	x		
		1	10101001	-			3)	
Herb Stratum non-woody or wood	dy < 1 m tall (Plot	size: 5' radius)		•	ence Index = B/A	·	
1 Tansy Mustard (Descurainia i	ncana)	10	Yes	UPL		Vegetation Indi		
2 Shepards Purse (Capsella bur	sa-pastoris)	10	Yes	FACU	1-Ra	pid Test for Hydr	ophytic \	/eg
3						minance Test is		
4						evalence Index is		
5 6						orphological Ada _l vide supporting d		
7					Rem		ata iii	
8						lematic Hydroph	vtic	
9						etation ¹ (Éxplain)		
10						of hydric soil and		
11						ust be present, u	nless	
	% Total Cover <u>4</u>	20	= Total Cov	er	disturbed or	problematic.		
Woody Vine Stratum > 1 m tall	(Plot size: 30)' radius)			Uvdranh±	•		
2					Hydrophyti Vegetation		No	X
3					Present?			
	% Total Cover		= Total Cov	er				
Remarks: Vegetation fails the	FAC-Neutral test.	<u>I</u>						

Profile D Depth	Description: (Desc Matrix	ribe to t	he depth needed t		iment th dox Feati		or to confirm th	ne absence of in	aicators.)
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	-	Remarks
0-10	10YR 4/1	100	Color (Wolst)	,0	Турс	Loc	Loam		
10-18	10YR 4/2	100					Sandy Ioam		
						_			
		epletion,	RM=Reduced Matrix	, CS=Co	vered or	Coated Sar			Pore Lining, M=Matrix
	Soil Indicators:		0	J., Ol.,		(0.4)	lı .		blematic Hydric Soils ³ :
	Histosol (A1)	.\			ed Matri	x (S4)		_ Coast Prairie	
	Histic Epipedon (A2 Black Histic (A3)	<u>(2)</u>		dy Red	ox (S5) atrix (S6	`		iron-iviangane Other (Explair	se Masses (F12)
	Hydrogen Sulfide (A	14)			cky Mine				illi Remarks)
	Stratified Layers (A				yed Matr				
	2 cm Muck (A10)	3)			1atrix (F3				
	Depleted Below Dai	rk Surfac			Surface				
	Thick Dark Surface				ark Surfa		3	Indicators of hyd	Irophytic vegetation and
	Sandy Mucky Miner				ressions				must be present, unless
	5 cm Mucky Peat o	r Peat (S	3)				d	isturbed or probl	ematic.
Restricti	ive Layer (if obser	ved):							
Type:				_					
Depth (in	ches):			_		Hydric So	il Present?	Yes	No <u>X</u>
Remarks:	:								
HYDRO	LOGY								
	Hydrology Indica								
		<u>n of one</u>	is required; check			(50)	Seco		(minimum of 2 required)
	Surface Water (A1)	۸۵)			ned Leav			_ Surface Soil C	
	High Water Table (A	42)			una (B13 tic Plants			_ Drainage Patte	erns (B10) ater Table (C2)
	Saturation (A3) Water Marks (B1)				Sulfide O			_ Crayfish Burro	
	Sediment Deposits	(B2)		-		on Living Ro	ots (C3) X		ible on Aerial Imagery (C9)
	Drift Deposits (B3)	(DZ)				ed Iron (C4			essed Plants (D1)
	Algal Mat or Crust (B4)				on Tilled S		Geomorphic P	
	ron Deposits (B5)	/			Surface			FAC-Neutral T	
	nundation Visible on	Aerial Ima			Vell Data			_	` ,
	Sparse Vegetated Cor			-	lain in Re				
Field Obs	servations:								
Surface V	Water Present?	Yes	No X	Depth:		in			
Water Ta	ble Present?	Yes		Depth:		in			
	n Present?	Yes	No X	Depth:		in W	etland Hydrolog	y Present	/es No <u>X</u>
	capillary fringe)								
			uge, monitoring we						
						s, wetland	hydrology is pre	esent as a secon	dary indicator at this data
point. Se	e Section 2.7 of the	e Deline	ation Report for add	iilional	uetalis.				
Remarks	:								
									Dropored by MIII
									Prepared by: MJL Checked by: ESM

Project/Site:	Sioux Gateway Airport	Cit	y/County:	Sioux City/\	Noodbury Sa	ampling Date:	05-08	3-24
Applicant/Owner:	RS&H			State:	lowa Sa	ampling Point:	DP-10)
Investigator(s):	Foth - H. Maudlin & M. Lange	er Se	ction, Towns	hip Range:	S23, 25, 26,	31, 35, 36, T88	N, R48\	N
Landform (hillslope,	terrace, etc): Toeslope	Lo	cal Relief (co	ncave, conv	ex, none):	Concave		
Slope (%): 0-2	Lat: 42.408795	Lo	ng: -96.39	0633	Datum:	UTM 15, Upla	nd	
Soil Map Unit Name	Percival silty clay, rarely floo	oded		NWI	Classification	:		
Are climatic/hydrologic	c conditions on the site typical for t		r? No, we	etter than no	rmal (see Sec	ction 2.6)		
Are vegetation, soil or	r hydrology significantly disturbed	d? Yes			l Circumstance	•	Yes	3
	r hydrology significantly problem			=		nswers in Rema	rks)	
SUMMARY OF FIN	NDINGS – Attach site map sho	wing sampli	ng point loca	- tions, transe	ects, importar	nt features, etc		
Hydrophytic Vegetat	tion Present? Yes X	No						
Hydric Soil Present?		No X		impled Area	Yes		No	X
Wetland Hydrology F	Present? Yes X	No	within a	Wetland?				
	tion was disturbed by farming; a hydrological features.	annual tilling	occurs in this	location. A	farm field and	alysis was cond	ducted	to
VEGETATION - Us	se scientific names of plants.							
<u>Tree Stratum</u> >3" DBH	H (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance T	est Worksheet:		
1						ominant Species	s that	1
2						W, or FAC (A):		•
4						r of Dominant ss All Strata (B)		1
5						ominant Species		
<u> </u>	20% Total Cover		= Total Cove	er		W, or FAC (A/B)		100
	_	1					•	
Sapling/Shrub Stratur	\underline{m} <3" DBH or > 1 m tall (Plot	size: 15' radiu	s)		Prevalence In	ndex Worksheet	:	
1					Total % Co	over of:	Multiply	bv:
2					OBL species			
3					FACW	x 2	,	
4					species			
5					FAC species FACU species	X 3		
<u> </u>	20% Total Cover		= Total Cove	ır.	UPL species	X :		
		1	- 10tal 00vc	,1	Total (A)			
Herb Stratum non-wo	oody or woody < 1 m tall (Plot	size: 5' radius)		S '			
1 Stinging Nettle (U	Irtina dinina)	70	Yes	FACW		ce Index = B/A Vegetation Indi		
	Pescurainia incana)	10	No	UPL		id Test for Hydr		Vea
, ,	Capsella bursa-pastoris)	5	No	FACU		ninance Test is		veg
4	suprema sure puerement					valence Index is		
5					4-Mor	phological Ada	otations	;
6						ide supporting d	ata in	
7					Rema	•		
8						ematic Hydroph		
10						ation 1 (Explain) of hydric soil and		٨
11						ist be present, u		u
50% Total Cover	43 20% Total Cover 17	85	= Total Cove	er	disturbed or p		111033	
Woody Vine Stratum	> 1 m tall (Plot size: 30	o' radius)						
1					Hydrophytic			
2					Vegetation	Yes X	No	
3					Present?			
	20% Total Cover		= Total Cove	er				
Remarks: Vegetati	ion passes the FAC-Neutral test.						· · · · · ·	

	escription: (Desci	ribe to t	he depth needed				or to confirm	the absence of in	dicators.)	
Depth	Matrix			Redox	Featur				Remarks	
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture		Remaine	
0-12	10YR 4/1	100					Sandy clay			
12-18	10YR 4/2	100					Sandy loam			
							,			
¹Type: C=0	L Concentration, D=De	pletion, I	ı RM=Reduced Matri	x, CS=Cover	ed or 0	Coated Sa	nd Grains.	2 Location: PL=P	ore Lining, M=Matrix	
	oil Indicators:								olematic Hydric Soils ³ :	
	listosol (A1)			ndy Gleyed		x (S4)		Coast Prairie I		
	listic Epipedon (A2	2)		ndy Redox					se Masses (F12)	
	Black Histic (A3)			ripped Matr				Other (Explain	in Remarks)	
	lydrogen Sulfide (<i>A</i>			amy Mucky						
	Stratified Layers (A	5)		amy Gleyed						
	cm Muck (A10)			pleted Mat						
	Depleted Below Dar		` ′	dox Dark S		` '				
	hick Dark Surface			pleted Dark					rophytic vegetation and	
	Sandy Mucky Miner i cm Mucky Peat or			dox Depres	sions	(F8)		wetland hydrology disturbed or problem	must be present, unless	
	ve Layer (if obser	•						disturbed of proble	emanc.	
Type:	ve Layer (II obser	vea).								
Depth (inc	-hes).				١,	Hydric Sa	oil Present?	Yes	No X	
	· ·					ilyulic oc	Jii i resent:			
Remarks:										
HYDROI	OCV									
	Hydrology Indicat		ia wa mujiwa du aba al		- l\		Co		(inima of 2	
	ndicators (minimur Surface Water (A1)	n or one		<u>c all that ap</u> ater-Stainec		oo (BO)	Sec	condary indicators Surface Soil Cra	(minimum of 2 required)	
	ligh Water Table (A	(2)		juatic Faun				Drainage Patter		
	Saturation (A3)	(2)		ue Aquatic				Dry-Season Wat		
	Vater Marks (B1)			drogen Sul				Crayfish Burrow		
	Sediment Deposits	(R2)		idized Rhizosı		` '	note (C3) X		le on Aerial Imagery (C9)	
	Prift Deposits (B3)	(02)		esence of F		-		Stunted or Stres		
	Algal Mat or Crust (B4)		cent Iron Rec				Geomorphic Pos		
	ron Deposits (B5)	-7		in Muck Su			<u>X</u>	FAC-Neutral Tes		
	nundation Visible on A	Aerial Ima		uge or Wel					(-)	
s	parse Vegetated Con	cave Surf		her (Explair						
Field Oho	servations:					j				
	Vater Present?	Yes	No X	Depth:		in				
	ole Present?	Yes	No X	Depth:		in				
Saturation	n Present?	Yes	No X	Depth:		_	etland Hydrolo	ogy Present Y	es X No	
(includes	capillary fringe)					_	•	-		
	Recorded Data (str	eam gai	uge, monitoring w	ell, aerial pł	notogra	aphs, pre	vious inspectio	ons), if available:		
						, wetland	hydrology is p	resent as a second	lary indicator at this data	
point. See	e Section 2.7 of the	e Delinea	ation Report for a	ditional de	tails.					
Remarke:	Two or more s	econdar	v wetland indicato	rs were oh	served	l: therefor	e wetland hydi	rology is present		
Remarks:	Two or more s	econdar	y wetland indicato	ors were ob	served	l; therefor	e wetland hydi	rology is present.		
Remarks:	Two or more s	econdar	y wetland indicato	ors were ob	served	l; therefor	e wetland hydi	rology is present.		
Remarks:	Two or more s	econdar	y wetland indicato	ors were ob	served	l; therefor	e wetland hydi	rology is present.	Prepared by: MJL	

Project/Site:	Sioux Gateway Airport	Cit	City/County: Sioux City/Woodbury Sampling Date: 0				05-08	-24	
Applicant/Owner:	RS&H			State:	lowa S	Sampling Point:	DP-11		
Investigator(s):	Foth - H. Maudlin & M. Lange	r Se	ction, Town	ship Range:	S23, 25, 26	, 31, 35, 36, T88	N, R48V	٧	
Landform (hillslope,	terrace, etc): Linear	Lo	cal Relief (c	oncave, con	vex, none):	Linear			
Slope (%): 0-2	Lat: 42.403986	Lo	ng: -96.3 ^e	94549	Datum:	UTM 15, Upla	nd		
Soil Map Unit Name	Grable-Moronick complex, ra	arely flooded		NWI	Classification	n: None			
Are climatic/hydrologic	c conditions on the site typical for t	his time of yea	r? No, w	etter than n	ormal (see Se	ection 2.6)			
	hydrology significantly disturbed	-			l Circumstance		Yes		
-	r hydrology significantly problem					answers in Rema	rks)		
_	IDINGS – Attach site map sho	-	ng point loc	_ `			,		
Hydrophytic Vegetat	tion Present? Yes	No X							
Hydric Soil Present?		No X		ampled Are	a Yes		No	X	
Wetland Hydrology F		No X	within a	Wetland?					
Remarks: Vegetat	ion was disturbed by farming:	nnual tilling	occurs in thi	s location A	A farm field ar	nalysis was cond	ducted t	·O	
	Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.								
VEGETATION - Us	se scientific names of plants.	<u> </u>	- ·		Г				
<u>Tree Stratum</u> >3" DBH	H (Plot size: 30' radius)	Absolute % Cover	Dominan t Species?	Indicator Status	Dominance 1	Гest Worksheet:			
1						ominant Species	that	0	
2					1	CW, or FAC (A):	_	U	
3						er of Dominant Sp	ecies	3	
5					Across All St				
3	20% Total Cover		T-4-1 O			ominant Species CW, or FAC (A/B):		0	
	20% Total Gover		= Total Cov	er	ure obe, i ne	711, 61 1710 (71, 15).			
Sapling/Shrub Stratur	\underline{m} <3" DBH or > 1 m tall (Plot	size: 15' radiu	s)		Prevalence I	ndex Worksheet:	;		
1					Total % C	over of:	Multiply	by:	
2					OBL species	X ^			
3					FACW specie				
5					FAC species	X3			
3	20% Total Cover		T . 10		FACU species UPL species	S X 4			
	20% Total Cover		= Total Cov	er	_				
Herb Stratum non-wo	ody or woody < 1 m tall (Plot	size: 5' radius))		Totals (A	· ·			
		24	Vaa	EA OLL		nce Index = B/A			
2 Tansy Mustard (D	Capsella bursa-pastoris)	34	Yes Yes	FACU UPL		Vegetation Indic oid Test for Hydro		log	
3 Alfalfa (Medicago		33 33	Yes	FACU		minance Test is >		reg	
4	Sauva)	33	163	1 ACO		valence Index is			
5						rphological Adap			
6						ide supporting da			
7					Rema				
8					Probl	ematic Hydrophy	rtic .		
9					_	tation ¹ (Explain)			
10						of hydric soil and			
11	F0 000 T					ust be present, ui	nless		
50% Total Cover	50 20% Total Cover 20	100	= Total Cov	rer	disturbed or	problematic.			
Woody Vine Stratum	> 1 m tall (Plot size: 30	radius)							
1					Hydrophytic				
2					Vegetation Present?	Yes	No	X	
3	20% Total Cover		T , ! 0		rresent?				
	20% Total Cover		= Total Cov	er					
Remarks: Vegetati	on fails the FAC-Neutral test.								

FIOITIED	escription. (Descr	120 10 1	no alepan meedee	to accu	ment the	indicato	n to commi	the absence of indicators.)
Depth	Matrix			Redo	ox Feature	es		Damanika
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	Remarks
,	` '		(1 1 4		71		Sandy	
0-15	10YR 4/2	100					loam	
15.00	10VD E/0	100					Loamy	
15-20	10YR 5/2	100					sand	
1Type: C=C	<u>l</u> Concentration, D=De	nlotion I	DM-Daduaad Matri	v CS=Co	vored or C	ooted Con	d Craina	2 Location: PL=Pore Lining, M=Matrix
	oil Indicators:	pietion, i	RIVI-REGUCEG IVIALIT	x, cs-co	vereu or C	oateu Sai	iu Grairis.	Indicator for Problematic Hydric Soils ³ :
	listosol (A1)		90	ndy Glov	ed Matrix	(04)		Coast Prairie Redox (A16)
	` '	1		ndy Redo		(34)		Iron-Manganese Masses (F12)
	listic Epipedon (A2 Black Histic (A3)	.)			atrix (S6)			Other (Explain in Remarks)
	lydrogen Sulfide (A	(4)			cky Miner			Other (Explain in Remarks)
	Stratified Layers (A				yed Matrix			
	• •	3)			latrix (F3)			
	cm Muck (A10) Depleted Below Dar	k Surfac			Surface			
	hick Dark Surface							2
	andy Mucky Miner				ark Surfac ressions (3 Indicators of hydrophytic vegetation and
	cm Mucky Peat or			uox Depi	ressions ((FO)		wetland hydrology must be present, unless disturbed or problematic.
	•	,	<u> </u>		1			disturbed of problematic.
	ve Layer (if obser	ved):						
Type:								
Depth (inc	ches):				H	łydric So	il Present?	Yes No <u>X</u> _
Remarks:								
rterriarito.								
HYDROL	_OGY							
Wetland	Hydrology Indicat	tore:						
	ndicators (minimun		is required check	all that	annly)		94	econdary Indicators (minimum of 2 required)
	Surface Water (A1)	ii oi onc			ned Leave	s (R9)	<u> </u>	Surface Soil Cracks (B6)
	ligh Water Table (A	(2)			una (B13)			Drainage Patterns (B10)
	Saturation (A3)	12)			ic Plants			Dry-Season Water Table (C2)
	Vater Marks (B1)				Sulfide Od			Crayfish Burrows (C8)
			11)	urogenic	Julilue Ou	101 (01)		Crayiisii builows (CO)
		(R2)		idizad Dhiz	ochhoroc o		ote (C2) Y	
	Sediment Deposits	(B2)				n Living Roo	· · · —	Saturation Visible on Aerial Imagery (C9)
	rift Deposits (B3)		Pr	esence o	f Reduced	n Living Roo d Iron (C4	l)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
D	orift Deposits (B3) Algal Mat or Crust (Pr Re	esence o cent Iron F	f Reduced Reduction of	n Living Roo d Iron (C4 on Tilled So	l)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
D	orift Deposits (B3) Algal Mat or Crust (Fron Deposits (B5)	B4)	Pr Re Th	esence o cent Iron F in Muck	of Reduced Reduction of Surface (0	n Living Roo d Iron (C4 on Tilled So C7)	l)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
D	Orift Deposits (B3) Algal Mat or Crust (I Fon Deposits (B5) Hundation Visible on A	B4) Aerial Ima	Pr Re Th Gary(B7)	esence o cent Iron F iin Muck auge or W	of Reduced Reduction of Surface (Vell Data (n Living Roo d Iron (C4 on Tilled So C7) (D9)	l)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
D A Ir Ir S	Orift Deposits (B3) Algal Mat or Crust (I Fron Deposits (B5) Hundation Visible on A Pparse Vegetated Con	B4) Aerial Ima	Pr Re Th Gary(B7)	esence o cent Iron F iin Muck auge or W	of Reduced Reduction of Surface (0	n Living Roo d Iron (C4 on Tilled So C7) (D9)	l)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
A III	orift Deposits (B3) Algal Mat or Crust (I Fron Deposits (B5) Aundation Visible on A Parse Vegetated Con Servations:	B4) Aerial Ima	Pr Re Th Garagery(B7) Garace(B8) Ot	esence o cent Iron F in Muck auge or W her (Expl	of Reduced Reduction of Surface (Vell Data (n Living Roo d Iron (C4 on Tilled So C7) (D9)	l)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
A III Ir S Field Obs	orift Deposits (B3) Algal Mat or Crust (I Fron Deposits (B5) Aundation Visible on A Parse Vegetated Con Servations: Vater Present?	B4) Aerial Ima cave Surf	Pr	esence o cent Iron F in Muck auge or W her (Expl Depth:	of Reduced Reduction of Surface (Vell Data (n Living Roo d Iron (C4 on Tilled So C7) (D9)	l)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
A III III III III III III III III III I	orift Deposits (B3) Algal Mat or Crust (I Fron Deposits (B5) Aundation Visible on A Parse Vegetated Con Servations: Vater Present? Die Present?	B4) Aerial Ima	Pr Re Th Ga Ga Color No X No X X	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth:	of Reduced Reduction of Surface (Vell Data (n Living Rood d Iron (C4 on Tilled So C7) (D9) marks) in in in	bil (C6)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Field Obs Surface W Water Tak	orift Deposits (B3) Algal Mat or Crust (I Fron Deposits (B5) Aundation Visible on A Parse Vegetated Con Servations: Vater Present?	B4) Aerial Ima cave Surf	Pr	esence o cent Iron F in Muck auge or W her (Expl Depth:	of Reduced Reduction of Surface (Vell Data (n Living Rood d Iron (C4 on Tilled So C7) (D9) marks) in in in	bil (C6)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Field Obs Surface W Water Tal Saturation (includes	orift Deposits (B3) Algal Mat or Crust (I Fron Deposits (B5) Algal Mat or Crust (I Fron Deposits (B5) Algal Mat or Crust (I Fron Deposits (B5) Algal Mat or Crust (I Fron Deposits (B3) Algal Mat or Crust (I Fron Deposits	B4) Aerial Ima cave Surf Yes Yes Yes Yes	Pr Re Th Ga Ga Color No X No	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth:	f Reduced Reduction of Surface (I Vell Data (I ain in Ren	n Living Roo d Iron (C4 on Tilled So (C7) (D9) marks) in in in	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Field Obs Surface W Water Tal Saturation (includes Describe	orift Deposits (B3) Algal Mat or Crust (Information Visible on Apparse Vegetated Conservations: Vater Present? The Present	B4) Aerial Ima cave Surt Yes Yes Yes Yes	Pr Re Th Gace(B8)	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth:	f Reduced Reduction of Surface (I Vell Data (I ain in Ren	n Living Rood d Iron (C4 on Tilled Sc (C7) (D9) marks) in in in in aphs, prev	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) logy Present Yes NoX ons), if available:
Field Obs Surface W Water Tal Saturation (includes Describe Based on	orift Deposits (B3) Algal Mat or Crust (Information Visible on Apparse Vegetated Conservations: Vater Present? The Present (Stringe) The Corded Data (Stringe) The NRCS method	B4) Aerial Imacave Surf	Pr Re Th	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth: ell, aerial erial phot	f Reduced Reduction of Surface (I Vell Data (I ain in Ren photogra tographs,	n Living Rood d Iron (C4 on Tilled Sc (C7) (D9) marks) in in in in aphs, prev	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Field Obs Surface W Water Tal Saturation (includes Describe Based on	orift Deposits (B3) Algal Mat or Crust (Information Visible on Apparse Vegetated Conservations: Vater Present? The Present	B4) Aerial Imacave Surf	Pr Re Th	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth: ell, aerial erial phot	f Reduced Reduction of Surface (I Vell Data (I ain in Ren photogra tographs,	n Living Rood d Iron (C4 on Tilled Sc (C7) (D9) marks) in in in in aphs, prev	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) logy Present Yes NoX ons), if available:
Field Obs Surface W Water Tal Saturation (includes Describe Based on point. See	orift Deposits (B3) Algal Mat or Crust (Information Visible on Apparse Vegetated Conservations: Vater Present? The Present	B4) Aerial Imacave Surf	Pr Re Th	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth: ell, aerial erial phot	f Reduced Reduction of Surface (I Vell Data (I ain in Ren photogra tographs,	n Living Rood d Iron (C4 on Tilled Sc (C7) (D9) marks) in in in in aphs, prev	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) logy Present Yes NoX ons), if available:
Field Obs Surface W Water Tal Saturation (includes Describe Based on	orift Deposits (B3) Algal Mat or Crust (Information Visible on Apparse Vegetated Conservations: Vater Present? The Present	B4) Aerial Imacave Surf	Pr Re Th	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth: ell, aerial erial phot	f Reduced Reduction of Surface (I Vell Data (I ain in Ren photogra tographs,	n Living Rood d Iron (C4 on Tilled Sc (C7) (D9) marks) in in in in aphs, prev	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) logy Present Yes NoX ons), if available:
Field Obs Surface W Water Tal Saturation (includes Describe Based on point. See	orift Deposits (B3) Algal Mat or Crust (Information Visible on Apparse Vegetated Conservations: Vater Present? The Present	B4) Aerial Imacave Surf	Pr Re Th	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth: ell, aerial erial phot	f Reduced Reduction of Surface (I Vell Data (I ain in Ren photogra tographs,	n Living Rood d Iron (C4 on Tilled Sc (C7) (D9) marks) in in in in aphs, prev	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) logy Present Yes NoX ons), if available:
Field Obs Surface W Water Tal Saturation (includes Describe Based on point. See	orift Deposits (B3) Algal Mat or Crust (Information Visible on Apparse Vegetated Conservations: Vater Present? The Present	B4) Aerial Imacave Surf	Pr Re Th	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth: ell, aerial erial phot	f Reduced Reduction of Surface (I Vell Data (I ain in Ren photogra tographs,	n Living Rood d Iron (C4 on Tilled Sc (C7) (D9) marks) in in in in aphs, prev	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) logy Present Yes No X ons), if available: present as a secondary indicator at this data
Field Obs Surface W Water Tal Saturation (includes Describe Based on point. See	orift Deposits (B3) Algal Mat or Crust (Information Visible on Apparse Vegetated Conservations: Vater Present? The Present	B4) Aerial Imacave Surf	Pr Re Th	esence o cent Iron F in Muck auge or W her (Expl Depth: Depth: Depth: ell, aerial erial phot	f Reduced Reduction of Surface (I Vell Data (I ain in Ren photogra tographs,	n Living Rood d Iron (C4 on Tilled Sc (C7) (D9) marks) in in in in aphs, prev	etland Hydro	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5) logy Present Yes NoX ons), if available:

US Army Corps of Engineers

Project/Site:	Sioux Gateway Airport	Ci	ty/County:	Sioux City/V	Woodbury Sampling Da	te: 05-08	3-24	
Applicant/Owner:	RS&H			State:	lowa Sampling Po	int: DP-12	2	
Investigator(s):	Foth - H. Maudlin & M. Lange	er Se	ection, Town	ship Range:	S23, 25, 26, 31, 35, 36	, T88N, R48	W	
Landform (hillslope,					vex, none): Concave			
Slope (%): 0-2	Lat: 42.402148		,	92253	Datum: UTM 15,	Upland		
Soil Map Unit Name	_		J		Classification: None			
•	c conditions on the site typical for	•			ormal (see Section 2.6)			
	r hydrology significantly disturbe	-			l Circumstances" present?	Normalo	ircum	
	r hydrology significantly problem			_	d, explain any answers in F			
_				_				
	NDINGS – Attach site map sho		ng point loc	ations, trans	sects, important features	, etc.	,	
Hydrophytic Vegeta		No X	le the S	ampled Are	a			
Hydric Soil Present?		No X		ampieu Area Wetland?	a Yes	No	Х	
Wetland Hydrology	Present? Yes	No X		· Wettana.				
Remarks: Vegetation was disturbed by farming; annual tilling occurs in this location. A farm field analysis was conducted to identify hydrological features.								
-	se scientific names of plants.							
Tree Stratum >3" DBI	H (Plot size: 30' radius)	Absolute	Dominant	Indicator	Dominance Test Worksh	eet:		
1		% Cover	Species?	Status	Number of Dominant Sp	ecies that		
2					are OBL, FACW, or FAC (0	
3					Total Number of Domina	nt Species	3	
4					Across All Strata (B):		<u> </u>	
5					Percent of Dominant Spe		0	
	20% Total Cover		= Total Cov	er	are OBL, FACW, or FAC (4/B):		
Sapling/Shrub Stratu	m <3" DBH or > 1 m tall (Plot	size: 15' radiu	ıs)		Prevalence Index Works	heet:		
1					<u>Total % Cover of:</u>	Multiply	/ b <u>y:</u>	
2					OBL species	X 1	<u>-</u> _	
3					FACW species	X 2		
4					FAC species	X 3		
5	000.7				FACU species	_ X 4		
	20% Total Cover		= Total Cov	er	UPL species	X 5		
Herb Stratum non-wo	ody or woody < 1 m tall (Plot	size: 5' radius	:)		Totals (A)	(B)		
		1	-		Prevalence Index =	-		
	Capsella bursa-pastoris)	34	Yes	FACU	Hydrophytic Vegetation		V	
3 Alfalfa (<i>Medicago</i>	escurainia incana)	33 33	Yes Yes	UPL FACU	1-Rapid Test for I 2-Dominance Tes		veg	
4	Sauva)	33	162	TACO	3-Prevalence Inde			
5					4-Morphological			
6					(Provide supporti			
7					Remarks)			
8					Problematic Hydi			
9					Vegetation ¹ (Exp			
10					¹ Indicators of hydric soi		d	
11 50% Total Cover	20% Total Cover		T		hydrology must be prese disturbed or problemation			
	20% Total Cover	<u> </u>	= Total Cov	er	disturbed of problematic	•		
Woody Vine Stratum	> 1 m tall (Plot size: 3)	O' radius)		1				
2					Hydrophytic	No	v	
3					Vegetation Yes _ Present?	NO	X	
<u> </u>	20% Total Cover	1	= Total Cov	l or				
Remarks: Vegetati	ion fails the FAC-Neutral test.	1	10.01000					

Depth	Matrix				ox Featur			the absence of indi	Domarka
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture		Remarks
0-8	10YR 3/1	100					Silty clay		
		1					loam		
8-14	10YR 4/2	100					Sand		
	Concentration, D=De	epletion, l	RM=Reduced Matrix	, CS=Cov	vered or C	Coated San		2 Location: PL=Poi	
•	oil Indicators:		_			(5.1)			ematic Hydric Soils ³ :
	Histosol (A1))\			ed Matrix	k (S4)	_	Coast Prairie Re	
	Histic Epipedon (A2 Black Histic (A3)	-)		dy Redo	ox (S5) atrix (S6)		_	Iron-Manganese Other (Explain in	
	Hydrogen Sulfide (A	\4)			cky Miner		_	Other (Explain II	i nemarkoj
	Stratified Layers (A	,			ed Matri				
2	2 cm Muck (A10)		Dep		latrix (F3)				
	Depleted Below Dar				Surface				
	Thick Dark Surface				ark Surfa				phytic vegetation and
	Sandy Mucky Miner			lox Depr	ressions ((F8)			nust be present, unless
	cm Mucky Peat or		<i>ა)</i>		1			disturbed or probler	nauc.
≀estricti √ype:	ve Layer (if obser	vea):							
ype. Depth (in	chos).					Judric Sci	il Present?	Yes	No X
Remarks:			ches due to sand o			1,4110 00			
HYDRO	LOGY								
Vetland	Hydrology Indica	tors:							
Primary I	ndicators (minimur						Sec		ninimum of 2 required)
	Surface Water (A1)				ned Leave			_ Surface Soil Crac	
	High Water Table (A	\ 2)			una (B13)			_ Drainage Patterns	
	Saturation (A3)				ic Plants			Dry-Season Water	` '
	Water Marks (B1)	(D2)			Sulfide Oc			Crayfish Burrows	
	Sediment Deposits Orift Deposits (B3)	(DZ)				on Living Rooted Iron (C4	· · · —	Stunted or Stress	on Aerial Imagery (C9)
			116			,	<i></i>	Geomorphic Posi	` '
		B4)	Rec	ent Iron F	Reduction (on Tilled Sc	oil (C6)		ION (1)/)
[Algal Mat or Crust (B4)				on Tilled So (C7)	oil (C6)		
[•	Thi	n Muck :	Reduction (Surface (/ell Data ((C7)	oil (C6)	FAC-Neutral Test	
[Algal Mat or Crust (ron Deposits (B5)	Aerial Ima	Thir	n Muck : ige or W	Surface ((C7) (D9)	oil (C6)		
[Algal Mat or Crust (ron Deposits (B5) nundation Visible on A	Aerial Ima	Thir	n Muck : ige or W	Surface (/ell Data ((C7) (D9)	oil (C6)		
Field Obs	Algal Mat or Crust (ron Deposits (B5) nundation Visible on A Sparse Vegetated Cor	Aerial Ima	Thin agery(B7) Gau Gace(B8) Oth	n Muck : ge or W er (Expl: Depth:	Surface (/ell Data ((C7) (D9)	oil (C6)		
Field Obs	Algal Mat or Crust (ron Deposits (B5) nundation Visible on a Sparse Vegetated Cor servations: Water Present? ble Present?	Aerial Ima ncave Surf Yes Yes	Thir Gau Gau Oth	n Muck : lige or W er (Expli Depth: Depth:	Surface (/ell Data ((C7) (D9) marks) _ in _ in		FAC-Neutral Test	(D5)
Field Obs Surface V Water Ta Saturatio	Algal Mat or Crust (ron Deposits (B5) nundation Visible on A Sparse Vegetated Cor servations: Water Present? ble Present? n Present?	Aerial Ima ncave Sur Yes	Thinggery(B7) Gaude Gaud	n Muck : ge or W er (Expl: Depth:	Surface (/ell Data ((C7) (D9) marks) _ in _ in	etland Hydrolo	FAC-Neutral Test	(D5)
Field Obs Surface V Water Ta Saturatio includes	Algal Mat or Crust (ron Deposits (B5) nundation Visible on A Sparse Vegetated Cor servations: Water Present? ble Present? n Present? capillary fringe)	Aerial Ima ncave Surf Yes Yes Yes	Thinggery(B7) Gauding Gauding	n Muck s ige or W er (Expl Depth: Depth: Depth:	Surface (/ell Data (ain in Rer	(C7) (D9) marks) - in - in - in We	etland Hydrok	FAC-Neutral Test	(D5)
Field Obs Surface V Water Ta Saturatio includes Describe Based or	Algal Mat or Crust (ron Deposits (B5) nundation Visible on a Sparse Vegetated Cor servations: Water Present? ble Present? n Present? capillary fringe) Recorded Data (str	Aerial Ima ncave Suri Yes Yes Yes	Thingery(B7) Gaudiace(B8) Oth No X No X No X Uge, monitoring we repreting historic ae	n Muck Sige or Wer (Explination) Depth: Depth: Depth: Depth: II, aerial	Surface (/ell Data (ain in Rer photogra tographs,	(C7) (D9) marks) - in - in - in We	etland Hydrok	FAC-Neutral Test ogy Present Ye ons), if available:	(D5)
Field Obs Surface V Water Ta Saturatio (includes Describe Based or point. Sec	Algal Mat or Crust (ron Deposits (B5) nundation Visible on a Sparse Vegetated Cor servations: Water Present? ble Present? n Present? capillary fringe) Recorded Data (strong the NRCS methode Section 2.7 of the	Aerial Ima ncave Suri Yes Yes Yes	Thingery(B7) Gaudiace(B8) Oth No X No X No X Uge, monitoring we repreting historic ae	n Muck Sige or Wer (Explination) Depth: Depth: Depth: Depth: II, aerial	Surface (/ell Data (ain in Rer photogra tographs,	(C7) (D9) marks) - in - in - in We	etland Hydrok	FAC-Neutral Test ogy Present Ye ons), if available:	s No _X
ield Obstartace V Vater Ta Saturatio Sincludes Describe Based or	Algal Mat or Crust (ron Deposits (B5) nundation Visible on a Sparse Vegetated Cor servations: Water Present? ble Present? n Present? capillary fringe) Recorded Data (strong the NRCS methode Section 2.7 of the	Aerial Ima ncave Suri Yes Yes Yes	Thingery(B7) Gaudiace(B8) Oth No X No X No X Uge, monitoring we repreting historic ae	n Muck Sige or Wer (Explination) Depth: Depth: Depth: Depth: II, aerial	Surface (/ell Data (ain in Rer photogra tographs,	(C7) (D9) marks) - in - in - in We	etland Hydrok	FAC-Neutral Test ogy Present Ye ons), if available:	s No _X
ield Obsurface V /ater Ta aturatio ncludes escribe ased or oint. Sec	Algal Mat or Crust (ron Deposits (B5) nundation Visible on a Sparse Vegetated Cor servations: Water Present? ble Present? n Present? capillary fringe) Recorded Data (strong the NRCS methode Section 2.7 of the	Aerial Ima ncave Suri Yes Yes Yes	Thingery(B7) Gaudiace(B8) Oth No X No X No X Uge, monitoring we repreting historic ae	n Muck Sige or Wer (Explination) Depth: Depth: Depth: Depth: II, aerial	Surface (/ell Data (ain in Rer photogra tographs,	(C7) (D9) marks) - in - in - in We	etland Hydrok	FAC-Neutral Test ogy Present Ye ons), if available:	s No _X
eld Observation of the second	Algal Mat or Crust (ron Deposits (B5) nundation Visible on a Sparse Vegetated Cor servations: Water Present? ble Present? n Present? capillary fringe) Recorded Data (strong the NRCS methode Section 2.7 of the	Aerial Ima ncave Suri Yes Yes Yes	Thingery(B7) Gaudiace(B8) Oth No X No X No X Uge, monitoring we repreting historic ae	n Muck Sige or Wer (Explination) Depth: Depth: Depth: Depth: II, aerial	Surface (/ell Data (ain in Rer photogra tographs,	(C7) (D9) marks) - in - in - in We	etland Hydrok	FAC-Neutral Test ogy Present Ye ons), if available:	s No _X

Project/Site:	Sioux Gatewa	y Airport		City/0	County:	Sioux City/\	Voodbury	Sampling Date	e: <u>05-08</u>	3-24
Applicant/Owner:	RS&H					State:	Iowa	Sampling Poin	nt: DP-1	3
Investigator(s):	Foth - H. Mai	udlin & M. Lan	ger	Secti	on, Town	ship Range:	S23, 25, 2	6, 31, 35, 36,	T88N, R48	W
Landform (hillslope,	terrace, etc):	Toeslope		Loca	Relief (c	oncave, con	vex, none):	Convex		
Slope (%): 0-2	Lat: 42.	.399597		Long	: -96.3	89141	Datum:	UTM 15, U	pland	
Soil Map Unit Name	Haynie silt l	oam, deep loe	ss, rarely flo			NWI	Classification	on: None	-	
Are climatic/hydrologic					No, w	etter than n	ormal (see S	Section 2.6)		
Are vegetation, soil o				-			l Circumstanc		Ye	S
Are vegetation, soil o		=	-)		_		answers in Re		
SUMMARY OF FIN	IDINGS – Atta	ach site map s	howing san	npling	point loc	ations, trans	sects, import	tant features,	etc.	
Hydrophytic Vegeta		Yes		<u> </u>						
Hydric Soil Present?		Yes		(Sampled Are a Wetland?	a Yes	s	No	Х
Wetland Hydrology	Present?	Yes	_ No	<u> </u>	within	a weuanu?				
	ion was disturk hydrological fe		g; annual till	ing occ	curs in th	is location. A	A farm field a	analysis was o	conducted	to
VEGETATION - U	se scientific na	mes of plants				1	T			
Tree Stratum >3" DBI	H (Plot size:	: 30' radius)	Absolu		ominant Species?	Indicator Status		Test Workshe		
1								Dominant Spe		0
3								.CW, or FAC (A per of Dominar	•	
4							Across All S		it Species	2
5								Dominant Spec	ies That	
	20% To	otal Cover		=	Total Cov	/er		.CW, or FAC (A		0
Sapling/Shrub Stratu	<u>m</u> <3" DBH or >	1 m tall (Pl	ot size: 15' ra	adius)			Prevalence	Index Worksh	eet:	
1							Total %	Cover of:	Multiply	/ b <u>y:</u>
2							OBL species		X 1	
3							FACW speci		X 2	
5							FAC species FACU species		X 3 X 4	
<u> </u>	20% To	otal Cover			Total Cov	/or	UPL species		X 5	
	20% 10				TOTAL COV	/ei		(A)	(B)	
Herb Stratum non-wo	ody or woody <	1 m tall (Pl	ot size: 5' rad	dius)			`	ence Index = E		
1 Soybean (Glycine	max)		10		Yes	NL		c Vegetation I	•	
2 Alfalfa (Medicago			5		Yes	FACU		apid Test for H		Veg
3	•						2-Do	ominance Test	is > 50%	
4								evalence Inde		
5								orphological A		
7								vide supportin narks)	g data in	
8								olematic Hydro	nhytic	
9								etation 1 (Expl		
10							_	of hydric soil	•	d
11								nust be preser		-
50% Total Cover	8 20% To	otal Cover 3	15	=	Total Cov	/er	disturbed o	r problematic.		
Woody Vine Stratum	> 1 m tall	(Plot size:	30' radius)							
1							Hydrophyt			
2							Vegetation Present?		No	<u> </u>
3	20% Ta	otal Cover			T		Present?			
Daniel V 12				=	Total Cov	/er				
Remarks: Vegetati	on fails the FAC	-ineutral test.								

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)									
Depth	Matrix			Redo	ox Feature	es		Rema	rke
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	Kema	
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	М	Loam		
17 0 6				00.0	1 0		10 :		
		pletion, I	RM=Reduced Matrix,	CS=Co	vered or C	Coated San	d Grains.	2 Location: PL=Pore Lini	
Hydric Soil Indicators: Indicator for Problematic Hydric Soils ³ : Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16)									
Histic Epipedon (A2) Sandy Gleyed Matrix (S4) Histic Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F12)									
	lack Histic (A3)	.)			atrix (S6)		-	Other (Explain in Rem	
	lydrogen Sulfide (A	4)			ky Miner		-		
	tratified Layers (A				ed Matrix				
	cm Muck (A10)		Dep	leted M	atrix (F3))			
	epleted Below Dar				Surface				
	hick Dark Surface				ark Surfac	, ,		³ Indicators of hydrophyti	
	andy Mucky Miner			ox Depi	essions ((F8)		wetland hydrology must l	
	cm Mucky Peat or		3)					disturbed or problematic.	
	ve Layer (if obser	ved):							
Type:				_				v	N V
Depth (inc				_			I Present?		No X
Remarks:	Soils do not m	eet the h	ydric soil indicator	criteria	within the	e Midwest	Supplement.		
HYDROL	_OGY								
Wetland	Hydrology Indicat	tore:							1
			is required; check	all that a	apply)		Se	condary Indicators (minim	num of 2 required)
	urface Water (A1)				ed Leave	es (B9)	<u></u>	Surface Soil Cracks (B6	
	ligh Water Table (A	(2)			una (B13)			 Drainage Patterns (B10	,
s	aturation (A3)	•	True	e Aquati	ic Plants	(D14)			
W	Vater Marks (B1)					(B14)		Dry-Season Water Tabl	
			Hyd	rogen S	Sulfide Od	, ,		Crayfish Burrows (C8)	e (C2)
	ediment Deposits	(B2)	Oxid	ized Rhiz	Sulfide Od ospheres o	dor (C1) on Living Roc	· · · —	Crayfish Burrows (C8) Saturation Visible on A	e (C2) erial Imagery (C9)
D	rift Deposits (B3)		Oxid Pres	ized Rhiz sence o	Sulfide Od ospheres of f Reduced	dor (C1) on Living Roo d Iron (C4))	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla	e (C2) erial Imagery (C9) ants (D1)
D	ediment Deposits rift Deposits (B3) Ilgal Mat or Crust (Oxid Pres Rece	ized Rhiz sence o ent Iron F	Sulfide Od ospheres of f Reduce Reduction o	dor (C1) on Living Roo d Iron (C4) on Tilled So)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I	e (C2) erial Imagery (C9) ants (D1)
D A Ir	ediment Deposits prift Deposits (B3) algal Mat or Crust (on Deposits (B5)	B4)	Oxid Pres	ized Rhiz sence o ent Iron F n Muck	Sulfide Od ospheres of f Reduced Reduction of Surface (6	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7))	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla	e (C2) erial Imagery (C9) ants (D1)
D A Ir	dediment Deposits orift Deposits (B3) algal Mat or Crust (on Deposits (B5) annuation Visible on A	B4) Aerial Ima	Oxid Pres Reco Thir gery(B7) Gau	ized Rhize sence o ent Iron F n Muck i ge or W	Sulfide Od ospheres of f Reduced Reduction of Surface (Vell Data (dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9))	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I	e (C2) erial Imagery (C9) ants (D1)
D A Ir In S	dediment Deposits orift Deposits (B3) algal Mat or Crust (on Deposits (B5) andation Visible on A parse Vegetated Con	B4) Aerial Ima	Oxid Pres Reco Thir gery(B7) Gau	ized Rhize sence o ent Iron F n Muck i ge or W	Sulfide Od ospheres of f Reduced Reduction of Surface (6	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9))	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I	e (C2) erial Imagery (C9) ants (D1)
D A Ir	dediment Deposits orift Deposits (B3) algal Mat or Crust (on Deposits (B5) nundation Visible on a parse Vegetated Conservations:	B4) Aerial Ima	Oxid Pres Record Thir Gau Gau	ized Rhiz sence o ent Iron F n Muck ge or W er (Expl	Sulfide Od ospheres of f Reduced Reduction of Surface (Vell Data (dor (C1) on Living Roc d Iron (C4) on Tilled Sc (C7) (D9) marks))	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I	e (C2) erial Imagery (C9) ants (D1)
D A A Ir In S	dediment Deposits (B3) algal Mat or Crust (con Deposits (B5) and the parse Vegetated Conservations:	B4) Aerial Ima	Oxid Pres Recc Thir Gau Oth	ized Rhiz sence o ent Iron F n Muck ge or W er (Expl	Sulfide Od ospheres of f Reduced Reduction of Surface (Vell Data (dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks))	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I	e (C2) erial Imagery (C9) ants (D1)
Field Obs Surface W Water Tab	dediment Deposits orift Deposits (B3) algal Mat or Crust (on Deposits (B5) nundation Visible on a parse Vegetated Conservations:	B4) Aerial Ima cave Surf Yes Yes	Oxid Pres Record Thir	ized Rhiz sence o ent Iron F n Muck ge or W er (Expl Depth:	Sulfide Od ospheres of f Reduced Reduction of Surface (Vell Data (dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in) iil (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I FAC-Neutral Test (D5)	e (C2) erial Imagery (C9) ants (D1) D2)
Field Obs Surface W Water Tab Saturation	dediment Deposits (B3) algal Mat or Crust (con Deposits (B5) and the parse Vegetated Conservations: Vater Present? The Present?	B4) Aerial Ima	Oxid Pres Record Thir	ized Rhiz sence o ent Iron F n Muck ge or W er (Expl	Sulfide Od ospheres of f Reduced Reduction of Surface (Vell Data (dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in) iil (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I	e (C2) erial Imagery (C9) ants (D1)
Field Obs Surface W Water Tab Saturation (includes	dediment Deposits (B3) algal Mat or Crust (con Deposits (B5) and attention Visible on a parse Vegetated Conservations: Vater Present? In Present? Capillary fringe)	B4) Aerial Ima cave Surf Yes Yes Yes Yes	Oxid Pres Record Thir	ized Rhizi sence o ent Iron F n Muck i ge or W ge or W er (Expl Depth: Depth:	Sulfide Od ospheres o f Reduced Reduction o Surface ('ell Data (ain in Rer	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in in we	il (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I FAC-Neutral Test (D5)	e (C2) erial Imagery (C9) ants (D1) D2)
Field Obs Surface W Water Tab Saturation (includes Describe I Based on	dediment Deposits orift Deposits (B3) algal Mat or Crust (on Deposits (B5) andation Visible on a parse Vegetated Con servations: Vater Present? on Present? on Present? capillary fringe) Recorded Data (str the NRCS method	B4) Aerial Imacave Surf	Oxid	ized Rhizi sence o ent Iron F n Muck ge or W ger (Expl Depth: Depth: Depth: Jepth:	Sulfide Odospheres of Reduced Reduction of Surface (1/2 ll Data (1/2 lin in Renumber 1/2 ll Data (1/2 lin in Renumber 1/2 lin	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in in aphs, previ	il (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I FAC-Neutral Test (D5)	e (C2) erial Imagery (C9) ants (D1) D2) No X
Field Obs Surface W Water Tab Saturation (includes Describe I Based on	dediment Deposits orift Deposits (B3) algal Mat or Crust (on Deposits (B5) andation Visible on a parse Vegetated Con servations: Vater Present? on Present? on Present? capillary fringe) Recorded Data (str the NRCS method	B4) Aerial Imacave Surf	Oxid Pres Record Thir	ized Rhizi sence o ent Iron F n Muck ge or W ger (Expl Depth: Depth: Depth: Jepth:	Sulfide Odospheres of Reduced Reduction of Surface (1/2 ll Data (1/2 lin in Renumber 1/2 ll Data (1/2 lin in Renumber 1/2 lin	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in in aphs, previ	il (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I FAC-Neutral Test (D5) ogy Present Yes ons), if available:	e (C2) erial Imagery (C9) ants (D1) D2) No X
Field Obs Surface W Water Tab Saturation (includes Describe I Based on point. See	dediment Deposits (B3) algal Mat or Crust (Iron Deposits (B5) and attention Visible on Aparse Vegetated Conservations: Vater Present? In Present? In Present? In Present? In Present? In Present (Iron Deposits (Iron D	B4) Aerial Imacave Surf	Oxid	ized Rhizi sence o ent Iron F n Muck ge or W ger (Expl Depth: Depth: Depth: Jepth:	Sulfide Odospheres of Reduced Reduction of Surface (1/2 ll Data (1/2 lin in Renumber 1/2 ll Data (1/2 lin in Renumber 1/2 lin	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in in aphs, previ	il (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I FAC-Neutral Test (D5) ogy Present Yes ons), if available:	e (C2) erial Imagery (C9) ants (D1) D2) No X
Field Obs Surface W Water Tab Saturation (includes Describe I Based on	dediment Deposits (B3) algal Mat or Crust (Iron Deposits (B5) and attention Visible on Aparse Vegetated Conservations: Vater Present? In Present? In Present? In Present? In Present? In Present (Iron Deposits (Iron D	B4) Aerial Imacave Surf	Oxid	ized Rhizi sence o ent Iron F n Muck ge or W ger (Expl Depth: Depth: Depth: Jepth:	Sulfide Odospheres of Reduced Reduction of Surface (1/2 ll Data (1/2 lin in Renumber 1/2 ll Data (1/2 lin in Renumber 1/2 lin	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in in aphs, previ	il (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I FAC-Neutral Test (D5) ogy Present Yes ons), if available:	e (C2) erial Imagery (C9) ants (D1) D2) No X
Field Obs Surface W Water Tab Saturation (includes Describe I Based on point. See	dediment Deposits (B3) algal Mat or Crust (Iron Deposits (B5) and attention Visible on Aparse Vegetated Conservations: Vater Present? In Present? In Present? In Present? In Present? In Present (Iron Deposits (Iron D	B4) Aerial Imacave Surf	Oxid	ized Rhizi sence o ent Iron F n Muck ge or W ger (Expl Depth: Depth: Depth: Jepth:	Sulfide Odospheres of Reduced Reduction of Surface (1/2 ll Data (1/2 lin in Renumber 1/2 ll Data (1/2 lin in Renumber 1/2 lin	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in in aphs, previ	il (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I FAC-Neutral Test (D5) ogy Present Yes ons), if available:	e (C2) erial Imagery (C9) ants (D1) D2) No X
Field Obs Surface W Water Tab Saturation (includes Describe I Based on point. See	dediment Deposits (B3) algal Mat or Crust (Iron Deposits (B5) and attention Visible on Aparse Vegetated Conservations: Vater Present? In Present? In Present? In Present? In Present? In Present (Iron Deposits (Iron D	B4) Aerial Imacave Surf	Oxid	ized Rhizi sence o ent Iron F n Muck ge or W ger (Expl Depth: Depth: Depth: Jepth:	Sulfide Odospheres of Reduced Reduction of Surface (1/2 ll Data (1/2 lin in Renumber 1/2 ll Data (1/2 lin in Renumber 1/2 lin	dor (C1) on Living Roo d Iron (C4) on Tilled So (C7) (D9) marks) in in in aphs, previ	il (C6)	Crayfish Burrows (C8) Saturation Visible on A Stunted or Stressed Pla Geomorphic Position (I FAC-Neutral Test (D5) ogy Present Yes ons), if available: present as a secondary ince	e (C2) erial Imagery (C9) ants (D1) D2) No X

Project/Site:	Sioux Gateway Airport	Ci	ty/County:	City/Wood	odbury Sampling Date: 05-08-24				
Applicant/Owner:	RS&H			State:		ampling Point:	DP-14	4	
Investigator(s):	Foth - H. Maudlin & M. Lange	r Se	ection, Town	-		, 31, 35, 36, T88			
Landform (hillslope,		_	cal Relief (c			Concave			
Slope (%): 0-2	Lat: 42.392728		•	73708	Datum:	UTM 15, Upla	and		
Soil Map Unit Name	_		70.0		Classification				
·	conditions on the site typical for t		ar? No w		ormal (see Se				
	hydrology significantly disturbed	-	110, 11		l Circumstances	•	Yes		
-	· hydrology significantly problema			-		s present: swers in Remark		•	
Are vegetation, son or	nydrology significantly problems	alic: NO		(II Heeded,	explain any ans	sweis iii keiliair	(5)		
SUMMARY OF FIN	IDINGS – Attach site map sho	wing sampli	ng point loc	ations, trans	sects, importa	nt features, etc).		
Hydrophytic Vegetat	tion Present? Yes I	No X							
Hydric Soil Present?		No X		Sampled Are	ea Yes		No	Χ	
Wetland Hydrology F	Present? Yes	No X	within a	a Wetland?					
Remarks:			l .						
VEGETATION									
VEGETATION - Us	se scientific names of plants.	A la l 4 -	l 5 · ·						
Tree Stratum >3" DBH	l (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Te	est Worksheet:			
1		% COVE	орсско:	Status	Number of Do	minant Species	that		
2					are OBL, FACV			0	
3					Total Number	of Dominant Sp	ecies	1	
4					Across All Stra	` '		ı.	
5						minant Species		0	
	20% Total Cover		= Total Cov	/er	are OBL, FACV	N, or FAC (A/B):			
Sapling/Shrub Stratur	m <3" DBH or > 1 m tall (Plot	size: 15' radiu	ıs)		Prevalence In	dex Worksheet:	:		
1					Total % Co	over of:	Multiply	<u>/ by:</u>	
2					OBL species	X	1		
3					FACW species				
5					FAC species	X			
5	20% Total Cover		T		FACU species UPL species	X			
			= Total Cov	/er	Totals (A		э В)		
Herb Stratum non-wo	ody or woody < 1 m tall (Plot	size: 5' radius)		` .	nce Index = B/A	·		
1 Smooth Brome (B	romus inermis)	100	Yes	FACU		/egetation Indic			
2	omas memms)	100	103	1700		oid Test for Hyd		Vea	
3						minance Test is		- 3	
4					3-Pre	valence Index is	3 ≤3.01		
5						rphological Ada		3	
6						ride supporting o	data in		
7					Rema	,			
9						lematic Hydroph tation ¹ (Explain			
10					-	f hydric soil and	•	ı	
11						st be present, ur			
50% Total Cover	50 20% Total Cover 20	100	= Total Cov	/er	disturbed or p	roblematic.			
Woody Vine Stratum	> 1 m tall (Plot size: 30)' radius)							
1					Hydrophytic				
2					Vegetation	Yes	No	X	
3	000 Table				Present?				
	20% Total Cover		= Total Cov	/er					
Remarks: Vegetati	on fails the FAC-Neutral test.								

Profile Description: (Describe to the depth needed to document the indicator to confirm the absence of indicators.)										
Depth	Matrix		•		ox Feature			·		
(inches)	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	М	Silty clay			
¹Tvpe: C=0	<u>I</u> Concentration. D=De	l pletion. I	I RM=Reduced Matrix,	CS=Co	L vered or C	oated San	d Grains.	2 Location: PL=Pore Lining, M=Matrix		
Hydric S	oil Indicators:	,						Indicator for Problematic Hydric Soils ³ :		
	listosol (A1) listic Epipedon (A2)			ed Matrix	(S4)	-	Coast Prairie Redox (A16) Iron-Manganese Masses (F12)		
Histic Epipedon (A2) Black Histic (A3) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Other (Explain in Remarks)										
	lydrogen Sulfide (A				cky Miner		-			
	Stratified Layers (A5 2 cm Muck (A10)	5)			yed Matrix latrix (F3)					
	Depleted Below Darl	k Surfac			Surface					
T	hick Dark Surface ((A12)	Dep	leted D	ark Surfac	ce (F7)		³ Indicators of hydrophytic vegetation and		
	Sandy Mucky Miner			ox Dep	ressions ((F8)		wetland hydrology must be present, unless		
	cm Mucky Peat or	•	3)					disturbed or problematic.		
Type:	ve Layer (if observ	/ea):								
Depth (inches): Hydric Soil Present? Yes No X										
Remarks:		eet the h	ydric soil indicator	 criteria						
rterriarito.	20110 20 1101 1111		.,				опристопи.			
HYDROI	LOGY									
	Hydrology Indicat									
		n of one	is required; check a			()	<u>Se</u>	econdary Indicators (minimum of 2 required)		
	Surface Water (A1)	0)			ned Leave			Surface Soil Cracks (B6)		
	ligh Water Table (A Saturation (A3)	.2)			una (B13) ic Plants (Drainage Patterns (B10) Dry-Season Water Table (C2)		
	Vater Marks (B1)				Sulfide Od			Crayfish Burrows (C8)		
	Sediment Deposits ((B2)		•		n Living Roc		Saturation Visible on Aerial Imagery (C9)		
	orift Deposits (B3)	(32)			-	d Iron (C4	· · · —	Stunted or Stressed Plants (D1)		
	Algal Mat or Crust (E	34)				on Tilled Sc		Geomorphic Position (D2)		
	ron Deposits (B5)			Muck	Surface (C7)		FAC-Neutral Test (D5)		
	nundation Visible on A		· / · / —	-	/ell Data (
	parse Vegetated Con-	cave Sur	face(B8) Othe	er (Expl	ain in Ren	narks)				
	servations:									
	Vater Present?	Yes		Depth:		in - :				
	ole Present?	Yes		Depth:		in Wa	tland Uvdual	agy Dresent Vos No V		
	n Present? capillary fringe)	Yes	No <u>X</u> [Depth:		in We	tland Hydrol	ogy Present Yes No X		
		eam gai	uge, monitoring wel	l, aerial	photogra	phs, previ	ous inspection	ons), if available:		
	•	-	-		•		•			
Remarks:										
								Prepared by: MJL		
	Checked by: ESM									

Project/Site:	Sioux Gateway Airport		City/County:	Sioux City/\	Noodbury Sampling Date:	05-08-24
Applicant/Owner:	RS&H			State:	lowa Sampling Point:	DP-15
Investigator(s):	Foth - H. Maudlin & M. Lange	er S	Section, Town	ship Range:	S23, 25, 26, 31, 35, 36, T88N	, R48W
Landform (hillslope,	terrace, etc): Toeslope		Local Relief (c	oncave, con	vex, none): Concave	
Slope (%): 0-2	Lat: 42.392561		Long: -96.3	73407	Datum: UTM 15, Upland	b
Soil Map Unit Name	Albaton silty clay, rarely floo			NWI	Classification: None	
•	conditions on the site typical for t		ear? No. w		ormal (see Section 2.6)	
	hydrology significantly disturbed	•			l Circumstances" present?	Yes
-	hydrology significantly problem			_	d, explain any answers in Remark	
	IDINGS – Attach site map sho	-	oling point loc			-,
Hydrophytic Vegetat Hydric Soil Present? Wetland Hydrology F	Yes	No X No X		Sampled Are a Wetland?	a YesN	оХ
	ed tile is causing flooding issue	es, but wetl	and soils have	not develo	ped due to the short duration of	f
	se scientific names of plants.				-	
		Absolute	Dominan	Indicator		
<u>Tree Stratum</u> >3" DBH	l (Plot size: 30' radius)	% Cover	1 +	Status	Dominance Test Worksheet:	
1					Number of Dominant Species th	hat 2
2					are OBL, FACW, or FAC (A):	
4					Total Number of Dominant Spe Across All Strata (B):	cies 2
5					Percent of Dominant Species T	hat
3		= Total Cov	/er	are OBL, FACW, or FAC (A/B):	100	
Sapling/Shrub Stratur	\underline{m} <3" DBH or > 1 m tall (Plot	size: 15' rad	lius)		Prevalence Index Worksheet:	
1					Total % Cover of: M	ultiply by:
2					OBL species X 1	
3					FACW species X 2	
4					FAC species X 3	
5	20% Total Cover				FACU species X 4 UPL species X 5	
	20% Total Cover		= Total Cov	/er		
Herb Stratum non-wo	ody or woody < 1 m tall (Plot	size: 5' radiı	us)		Totals (A) (B) Prevalence Index = B/A =	
1 Kentucky Bluegras	ss (Poa pratensis)	50	Yes	FAC	Hydrophytic Vegetation Indicat	ors:
2 Sedge Sp (Carex		30	Yes	FACW	1-Rapid Test for Hydrop	
3 Tall Stickseed (Co		10	No	FAC	X 2-Dominance Test is > 5	50%
4 Purple Clover (Trif	olium purpureum)	10	No	NL	3-Prevalence Index is ≤3	
5					4-Morphological Adapta	
7					(Provide supporting data Remarks)	a in
8					Problematic Hydrophytic	0
9					Vegetation 1 (Explain)	C
10					¹ Indicators of hydric soil and w	etland
11					hydrology must be present, unle	
50% Total Cover	50 20% Total Cover 20	100	= Total Cov	/er	disturbed or problematic.	
Woody Vine Stratum	> 1 m tall (Plot size: 30)' radius)				
1					Hydrophytic	
2					<u> </u>	No
3	20% Total Cover		T : 16		Present?	
Domarka: Varat-:		-	= Total Cov	/er		
Remarks: Vegetation	on passes the FAC-Neutral test.					

Profile D	escription: (Descr	ibe to t	he depth needed t	o docu	ment the	e indicato	r to confirm	the absence of indicators.)	
Depth	Matrix			Red	ox Featur	es		Domorko	
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-14	10YR 4/1	100			-		Silty Clay		
14-22	10YR 3/1	97	10YR 5/8	3	R	М	Silty Clay		
¹ Type: C=0	Concentration, D=De	pletion. I	RM=Reduced Matrix,	CS=Co	vered or C	Coated San	d Grains.	2 Location: PL=Pore Lining, M=Matrix	
	oil Indicators:	,						Indicator for Problematic Hydric Soils ³ :	
Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16)									
Histic Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F12)									
	lack Histic (A3) lydrogen Sulfide (A	4)			atrix (S6) cky Miner		_	Other (Explain in Remarks)	
	tratified Layers (A5				ed Matri				
	cm Muck (A10)	,,			latrix (F3)				
	epleted Below Darl	k Surfac			Surface				
	hick Dark Surface (ark Surfa			³ Indicators of hydrophytic vegetation and	
	andy Mucky Miner			ox Depi	ressions ((F8)		wetland hydrology must be present, unless	
	cm Mucky Peat or		3)					disturbed or problematic.	
	ve Layer (if observ	/ed):							
Type:									
Depth (inc	· ·			_		•	I Present?	Yes No <u>X</u>	
Remarks:	Soils do not me	eet the h	ydric soil indicator	criteria	within the	e Midwest	Supplement.		
HYDROL	OGV								
	Hydrology Indicat								
			is required; check a	all that	annly)		Se	condary Indicators (minimum of 2 required)	
	urface Water (A1)	1010110	Wat	er-Stair	ned Leave	es (B9)	<u>50</u>	Surface Soil Cracks (B6)	
	ligh Water Table (A	2)			una (B13)			Drainage Patterns (B10)	
XS	aturation (A3)				ic Plants			Dry-Season Water Table (C2)	
	Vater Marks (B1)		Hyd	rogen S	Sulfide Oc	dor (C1)		Crayfish Burrows (C8)	
	ediment Deposits ((B2)				n Living Roo		Saturation Visible on Aerial Imagery (C9)	
	rift Deposits (B3)	- 4\				d Iron (C4)		_ Stunted or Stressed Plants (D1)	
	lgal Mat or Crust (F	34)				on Tilled So		Geomorphic Position (D2)	
	on Deposits (B5)	orial Ima			Surface (X	_ FAC-Neutral Test (D5)	
	nundation Visible on A parse Vegetated Con			-	<i>l</i> ell Data (ain in Rer				
	ervations:					1			
	later Present?	Yes	X No [Depth:	0	in			
Water Tab	ole Present?	Yes	X No [Depth:	0	in			
Saturation	n Present?	Yes	X No [Depth:	0	in We	tland Hydrol	ogy Present Yes X No	
	capillary fringe)								
Describe l	Recorded Data (str	eam gal	ige, monitoring wel	l, aerial	photogra	aphs, previ	ous inspectio	ons), if available:	
Remarks:	Inundation due	to a plu	gged tile.						
								Prepared by: MJL	
								Checked by: ESM	

Project/Site:	Sioux Gateway Airport	Sioux City/V	Voodbury Sampling Date: 05-08-24		
Applicant/Owner:	RS&H			State:	Iowa Sampling Point: DP-16
Investigator(s):	Foth - H. Maudlin & M. Lange	er Se	ction, Town	ship Range:	S23, 25, 26, 31, 35, 36, T88N, R48W
Landform (hillslope,	terrace, etc): Footslope			oncave, con	
Slope (%): 0-1	Lat: 42.385836		,	62542	Datum: UTM 15, Wetland 1
Soil Map Unit Name	_		J		Classification: None
•	conditions on the site typical for t				ormal (see Section 2.6)
•	hydrology significantly disturbe	-			l Circumstances" present? Yes
-	r hydrology significantly problem				d, explain any answers in Remarks)
_	IDINGS - Attach site map sho	-	na point loc	<u> </u>	
			ing point loc	ations, trans	sects, important reatures, etc.
Hydrophytic Vegetat		No	le the S	ampled Are	a ,, ,, ,,
Hydric Soil Present?		No		a Wetland?	a Yes <u>X</u> No
Wetland Hydrology I	Present? Yes X	No	-		
Remarks:					
VEGETATION - Us	se scientific names of plants.				
			Dominan		
Tree Stratum >3" DBH	f (Plot size: 30' radius)	Absolute	t	Indicator	Dominance Test Worksheet:
<u></u> 5 52.	(* 101 0.201 00 144.40)	% Cover	Species?	Status	
1					Number of Dominant Species that
2					are OBL, FACW, or FAC (A):
3					Total Number of Dominant Species
4					Across All Strata (B):
5	20% Total Cover		T . 10		Percent of Dominant Species That are OBL, FACW, or FAC (A/B):
	20% Total Cover		= Total Cov	ver	are obt, i Acw, or i Ac (A/b).
Sapling/Shrub Stratur	m <3" DBH or > 1 m tall (Plot	size: 15' radiu	s)		Prevalence Index Worksheet:
1					
2					OBL species X 1
3					FACW species X 2
4					FAC species X 3
5					FACU species X 4
	20% Total Cover		= Total Cov	er er	UPL species X 5
					Totals (A) (B)
Herb Stratum non-wo	ody or woody < 1 m tall (Plot	size: 5' radius)		Prevalence Index = B/A =
1 Common Cowpar	snip (Heracleum maximum)	40	Yes	FACW	Hydrophytic Vegetation Indicators:
	s (Phalaris arundinacea)	30	Yes	FACW	1-Rapid Test for Hydrophytic Veg
3 Kentucky Bluegra		20	Yes	FAC	X 2-Dominance Test is > 50%
	Capsella bursa-pastoris)	5	No	FACU	3-Prevalence Index is ≤3.0¹
5 Common Dandeli6	on (Taraxacum officinale)	5	No	FACU	4-Morphological Adaptations (Provide supporting data in
7					Remarks)
8					Problematic Hydrophytic
9					Vegetation 1 (Explain)
10					¹ Indicators of hydric soil and wetland
11					hydrology must be present, unless
50% Total Cover	50 20% Total Cover 20	100	= Total Cov	ver	disturbed or problematic.
Woody Vine Stratum	> 1 m tall (Plot size: 30	O' radius)			
1			Hydrophytic		
2					Vegetation Yes X No
3					Present?
	20% Total Cover	1	= Total Cov	er er	
	on passes the FAC-Neutral test				

Profile D	escription: (Descr	<u>ribe to</u> t	he depth needed t	<u>o doc</u> u	ment th	ne indicato	r to confirm	the absence of indicators.)
Depth	Matrix			Red	ox Featu	ıres		Domarka
(inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	, ,		, ,		, ,		Silty clay	
υ-δ	10YR 3/1	100					loam	
8-16	10YR 4/1	93	10YR 5/6	7	R	М	Silty clay	
	- ,						- , - ,	
¹ Tvpe: C=0	Concentration. D=De	pletion.	RM=Reduced Matrix,	CS=Co	vered or	Coated San	nd Grains.	2 Location: PL=Pore Lining, M=Matrix
	oil Indicators:	p ,						Indicator for Problematic Hydric Soils ³ :
	listosol (A1)		San	dy Gley	ed Matri	ix (S4)		Coast Prairie Redox (A16)
H	listic Epipedon (A2)		dy Redo			_	Iron-Manganese Masses (F12)
	lack Histic (A3)				atrix (S6			Other (Explain in Remarks)
	lydrogen Sulfide (A				ky Mine			
	tratified Layers (A	5)			ed Matı			
	cm Muck (A10)	l. Cumfa a	<u>X</u> Dep					
	epleted Below Dar hick Dark Surface				Surface	e (F6) ace (F7)		3 Indicators of hydrophytic vegetation and
	andy Mucky Miner				ressions	` '		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless
	cm Mucky Peat or			ох Бері	CSSIONS	(10)		disturbed or problematic.
	e Layer (if observ							
Type:	re Layer (II observ	veu).						
Depth (inc	.hes).			_		Hydric So	il Present?	Yes X No
				_		11,4110 00		<u> </u>
Remarks:								
HYDROL	.OGY							
Wetland	Hydrology Indicat	ors:						
			is required; check	all that	apply)		Se	condary Indicators (minimum of 2 required)
	urface Water (A1)				ned Leav	res (B9)		Surface Soil Cracks (B6)
	ligh Water Table (A	(2)			una (B13			Drainage Patterns (B10)
XS	aturation (A3)	-	True	Aquat	ic Plants	s (B14)		Dry-Season Water Table (C2)
V	Vater Marks (B1)		Hyd	rogen S	Sulfide O	dor (C1)		_ Crayfish Burrows (C8)
	ediment Deposits	(B2)				on Living Roo	· · · · —	_ Saturation Visible on Aerial Imagery (C9)
	rift Deposits (B3)					ed Iron (C4	, <u> </u>	_ Stunted or Stressed Plants (D1)
	Igal Mat or Crust (I	B4)				on Tilled So	` '	Geomorphic Position (D2)
	on Deposits (B5)				Surface	` '	X	_ FAC-Neutral Test (D5)
	nundation Visible on A			-	/ell Data	` '		
	parse Vegetated Con	cave Sur	ace(B8) Othe	er (Exbl	ain in Re	emarks)		
	ervations:							
	/ater Present?	Yes		Depth:	0	in		
	ole Present?	Yes		Depth:	0	_ in w	-41	
	n Present?	Yes	X No I	Depth:	0	_ in We	etland Hydrol	ogy Present Yes X No
	capillary fringe)	00m ac	uge, monitoring wel	Locrici	photos	ranha nra	ious inspecti	ana) if available:
Describe	necolueu Dala (Str	eam gai	age, monitoring wei	ı, aerial	priotogi	apris, prev	ious irispectio	ons), n avanable.
Remarks:								
								Prepared by: MJL
								Checked by: ESM

Project/Site: Sloux Gateway Airport		ity/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. Lange	er S	ection, Town	ship Range:	S23, 25, 26, 31, 35, 36, T88N	, R48W		
Landform (hillslope, terrace, etc): Shoulder		ocal Relief (c	-	-	,		
Slope (%): 0-1 Lat: 42.385836		•	62542	Datum: UTM 15, Upland	1		
Soil Map Unit Name Albaton silty clay, depressional,		J		Classification: None			
Are climatic/hydrologic conditions on the site typical for t				ormal (see Section 2.6)			
		air NO, W			V		
Are vegetation, soil or hydrology significantly disturbed				l Circumstances" present?	Yes		
Are vegetation, soil or hydrology significantly problem	atic? No		(it needed	d, explain any answers in Remark	s)		
SUMMARY OF FINDINGS - Attach site map sho	wing sampl	ing point loc	ations, trans	sects, important features, etc.			
	No						
, , , <u> </u>	No X	ls the S	ampled Are	a Yes No			
	No X		Wetland?	163	o <u>X</u>		
Remarks: Vegetation in the collected area has be	en mowed						
VEGETATION – Use scientific names of plants.							
	T	Dominan					
Tree Stratum >3" DBH (Plot size: 30' radius)	Absolute % Cover	t	Indicator Status	Dominance Test Worksheet:			
1		Species?		Novel or of Densire and One size 4			
1 2				Number of Dominant Species to are OBL, FACW, or FAC (A):	nat 1		
3				Total Number of Dominant Spe			
4				Across All Strata (B):	1		
5				Percent of Dominant Species T	hat		
20% Total Cover		= Total Cover are OBL, FACW, or FAC (A/B):			100		
Sapling/Shrub Stratum < 3" DBH or > 1 m tall (Plot	size: 15' radi	us)		Prevalence Index Worksheet:			
1				Total % Cover of: Multiply by:			
2				OBL species X 1			
3				FACW species X 2			
4				FAC species X 3			
5	 	<u> </u>		FACU species X 4			
20% Total Cover	_	= Total Cover		UPL species X 5			
Herb Stratum non-woody or woody < 1 m tall (Plot	size: 5' radiu:	s)		Totals (A) (B)			
· · · · · · · · · · · · · · · · · · ·	1	,		Prevalence Index = B/A =			
1 Kentucky Bluegrass (Poa pratensis)	100	Yes	FAC	Hydrophytic Vegetation Indicat			
3				1-Rapid Test for Hydrop X 2-Dominance Test is > 5			
4	 			X 2-Dominance Test is > 5 3-Prevalence Index is ≤3			
5				4-Morphological Adapta			
6				(Provide supporting date			
7				Remarks)			
8				Problematic Hydrophytic	С		
9				Vegetation 1 (Éxplain)			
10				¹ Indicators of hydric soil and w	etland		
11				hydrology must be present, unle	ess		
50% Total Cover 50 20% Total Cover 20	100	= Total Cov	ver	disturbed or problematic.			
Woody Vine Stratum > 1 m tall (Plot size: 30)' radius)						
1				Hydrophytic			
2					No		
3				Present?			
20% Total Cover	<u> </u>	= Total Cov	ver				
Remarks: Vegetation fails the FAC-Neutral test.							

Profile D	escription: (Desci	<u>ribe to</u> t	<u>he depth needed t</u>	<u>o doc</u> u	ment t	<u>he indica</u> to	r to confirm	the absence of ir	ndicators.)		
Depth					ures			·			
(inches)	Color (moist)	%	Color (Moist)	%	Type	l Loc2	Texture	7	Remarks		
0-8	` '		` ′				Silty clay				
U-Ø	10YR 3/1	100					loam				
8-20	10YR 3/2	100					Silty clay				
							- , - ,				
¹Tvpe: C=0	<u>I</u> Concentration. D=De	pletion. I	ı RM=Reduced Matrix.	CS=Co	vered or	Coated San	d Grains.	2 Location: PL=F	Pore Lining, M=Matrix	(
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators: 2 Location: PL=Pore Lining, M=Matrix Indicator for Problematic Hydric Soils3:											
	Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16)										
H	listic Epipedon (A2)	San	dy Red	ox (S5)		_		ese Masses (F12)		
	Black Histic (A3)				atrix (S		-	Other (Explain	n in Remarks)		
	lydrogen Sulfide (A					eral (F1)					
	Stratified Layers (A	5)				trix (F2)					
	cm Muck (A10)				latrix (F						
	epleted Below Dar				Surfac			2 :			
	hick Dark Surface andy Mucky Miner					face (F7)			drophytic vegetation y must be present, i		
	cm Mucky Peat or			ох Бері	ression	S (FO)		disturbed or prob		illess	
			3)					diotarbed of prob	iciliatio.		
	ve Layer (if obser	vea):									
Type:	-1			_		Lluduia Ca	:I Dunnam#2	Vaa	Na V		
Depth (inc				_		Hyaric So	il Present?	Yes	No <u>X</u>	_	
Remarks:											
HYDROL	_OGY										
Wotland	Hydrology Indicat	toro:									
			is required; check	all that	annly)		Se	condary Indicators	s (minimum of 2 rec	uired)	
	Surface Water (A1)	ii oi one				ves (B9)	<u> </u>	Surface Soil Cra		<u>uncu</u>	
Surface Water (A1) — Water-Stained Lea High Water Table (A2) — Aquatic Fauna (B											
Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2)											
	Vater Marks (B1)					Odor (C1)		Crayfish Burrov	, ,		
	Sediment Deposits	(B2)				on Living Roo	ots (C3)		ole on Aerial Imager	y (C9)	
	rift Deposits (B3)		Pres	sence o	f Reduc	ed Iron (C4)	Stunted or Stres	ssed Plants (D1)		
	lgal Mat or Crust (B4)	Rece	ent Iron F	Reductio	n on Tilled So	oil (C6)	Geomorphic Po	sition (D2)		
	on Deposits (B5)				Surface	` '		FAC-Neutral Te	st (D5)		
	nundation Visible on A			-	ell Data	` '					
S	parse Vegetated Con	cave Sur	face(B8) Othe	er (Expl	ain in R	emarks)					
Field Obs	servations:										
Surface V	Vater Present?	Yes	No <u>X</u> I	Depth:		in					
Water Tal	ole Present?	Yes	No <u>X</u> [Depth:		in					
	n Present?	Yes	No <u>X</u> [Depth:		in We	etland Hydrol	ogy Present	Yes No	X	
	capillary fringe)										
Describe Recorded Data (stream gauge, monitoring well, aerial photographs, previous inspections), if available:											
Remarks:											
nemarks.											
<u> </u>									Prepared by:	MJL	
									Checked by:	ESM	

Appendix C Ground Photographs



Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No.

1

Date: 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:

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







Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No.

3

Date: 5/8/24

Direction Photo

Taken:

Northwest

Photo Taken By:

Morgan Langer

Description:

Forested area along northwestern Project Study Area border



Photo No.

Date:

5/8/24

Direction Photo

Taken:Southeast

Photo Taken By:

Morgan Langer **Description**:

View from northern edge of farm field







Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

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







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

Photo No.

Date: 5/8/24

Direction Photo

Taken: North

Photo Taken By:

Morgan Langer

Description:

View of the area near DP-3



Photo No.

Date: 5/8/24 8

Direction Photo

Taken: West

Photo Taken By: Morgan Langer

Description:

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







Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

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





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date: 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





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

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: 5/8/24

Direction Photo Taken:Southeast

Photo Taken By: Morgan Langer

Description:View of the area near D-1





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date: 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: 5/8/24

Direction Photo Taken: North

Photo Taken By: Morgan Langer

Description: View of the area near DP-7







Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date: 5/8/24

Direction Photo Taken: Northeast

Photo Taken By: Morgan Langer

Description:Culverts between the taxiway and runway



Photo No. Date: 5/8/24

Direction Photo Taken:North

Photo Taken By: Morgan Langer

Description:View of the area near DP-8





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

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





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date: 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





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date: 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







Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date: 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: 5/8/24

Direction Photo Taken:Northwest

Photo Taken By: Morgan Langer

Description: View of D-3





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date: 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







Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. 29 Date: 5/8/24
Direction Photo

Taken:
Southeast

Photo Taken By: Morgan Langer Description:

Tile outlet near DP-



Photo No. Date: 30 5/8/24

Direction Photo Taken:Southeast

Photo Taken By: Morgan Langer

Description:Upland area southwest of the runway





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date: 5/8/24

Direction Photo Taken:

East

Photo Taken By: Morgan Langer

Description:View of the area near DP-15



Photo No. Date: 5/8/24

Direction Photo Taken:West

Photo Taken By: Morgan Langer

Description:View of the area near DP-14





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. Date:

33 5/8/24

Direction Photo Taken:

Southeast

Photo Taken By: Morgan Langer

Description: View of D-5



Photo No. Date: 5/8/24

Direction Photo Taken:

West

Photo Taken By: Morgan Langer

Description:Culvert outlet





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. 35 Date: 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





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

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





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

Photo No. 39 Date: 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





Client's Name:Site Location:Project No.RS&H Iowa, P.C.Sioux Gateway Airport23S049.00

 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**

•	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: 31, 35, 36 Township: 88 North Range: 48 West
	_atitude (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.
	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
	he 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
	ncluded 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
	urisdiction 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:
	<u>x</u> I am requesting an approved JD I am requesting a preliminary JD.
	I am requesting a preliminary 5D. 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.
	gning below, you are indicating that you have the authority, or are acting as the duly authorized agent of a
	on or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the f needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property
	s to request a JD on the subject property.
*Sid	nature: Date: 8/7/2024
Ų,	Tive Marite
•	Foth Infrastructure & Environment
	Company name:
	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.