Archer Datacenters Faribault Campus

Environmental Assessment Worksheet

DRAFT May 2025

Prepared for:

ARCHER DATACENTERS

Prepared by:

Kimley»Horn

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Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's (EQB's) website at: https://www.eqb.state.mn.us. The EAW form provides information about a project that may have the potential for significant environmental effects. Guidance documents provide additional detail and links to resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item or can be addressed collectively under EAW Item 21.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation, and the need for an EIS.

1. Project Title

Archer Datacenters Faribault Campus

2. Proposer

Proposer: Archer Datacenters
Contact Person: Jordan Milman
Title: Chief Executive Officer
Address: 60 Haights Cross Road
City, State, ZIP: Chappaqua, NY 10514
Email: jordan.milman@archerdatacenters.com

3. RGU

RGU: City of Faribault
Contact Person: Harry Davis
Title: Planning Manager
Address: 208 1st Ave. NW
City, State, ZIP: Faribault, MN 55021
Phone: 507-333-0374
Email: hdavis@ci.faribault.mn.us

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4. Reason for EAW Preparation

Check one:

Required:	Discretionary:
☐EIS Scoping	☐Citizen petition
☒Mandatory EAW	☐RGU discretion
	☐Proposer initiated

If EAW or EIS is mandatory, give EQB rule category subpart number(s) and name(s):

5. Project Location

County: Rice
City/Township: Faribault
PLS Location (¼, ¼, Section, Township, Range): Section 1, Township 110N, and Range 21W
Watershed (81 major watershed scale): Cannon River
GPS Coordinates: 44.3668918 N. -93.2899289 W
Tax Parcel Number: 1801100033
At a minimum, attach each of the following to the EAW:

- **County map showing the general location of the project** (see Figure 1)
- **US Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries** (see
- Figure **2: USGS Map**

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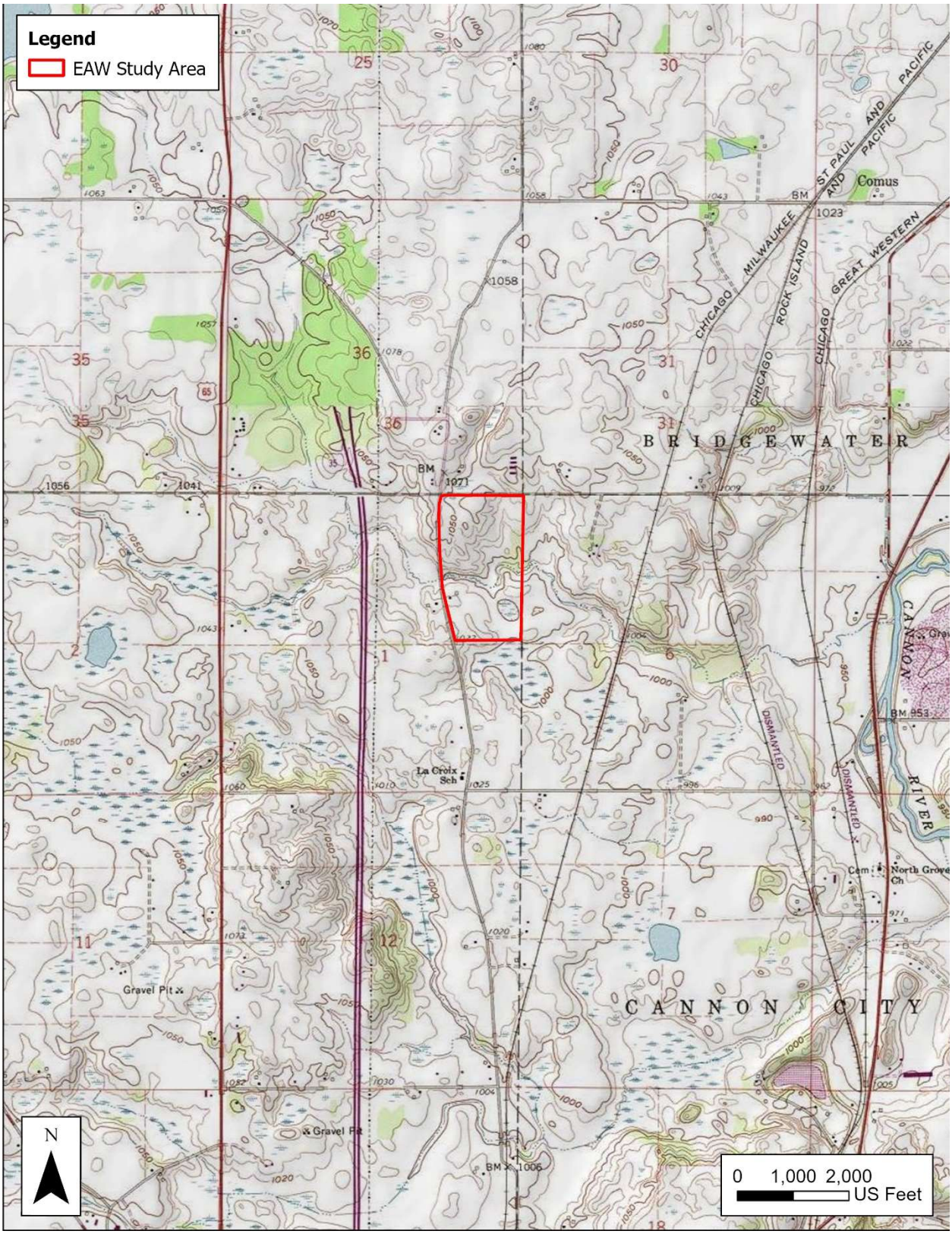
Legend
EAW Study Area
Comus
BRIDGEWATER
CANNON CITY
La Croix Sch
Gravel Pit
Gravel Pit
North Grove Ch
CANNON RIVER
DISMANTLED
DISMANTLED
CHICAGO ROCK ISLAND AND PACIFIC
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CHICAGO GREAT WESTERN
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- **Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.** (see Figure 2 and Appendix A)
- **List of data sources, models, and other resources (from the Item-by-Item Guidance: *Climate Adaptation and Resilience* or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project during the life of the project** (as detailed below in Items 7 and 18).

6. Project Description

a. Provide the brief project summary to be published in the *EQB Monitor* (approximately 50 words).

The Archer Datacenters Faribault Campus project is south of 150th Street West and east of Acorn Trail in Faribault, Rice County, MN. The site consists of one parcel of approximately 84.3 acres of agricultural and undeveloped woodland.

Archer Datacenters proposes to develop the study area from existing agriculture to up to 500,000 square feet of data center buildings with associated utilities and parking lot.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion, include a description of the existing facility. Emphasize 1) construction and operation methods and features that will cause physical manipulation of the environment or will produce wastes; 2) modifications to existing equipment or industrial processes; 3) significant demolition, removal, or remodeling of existing structures; and 4) timing and duration of construction activities.

The Archer Datacenters Faribault Campus project is south of 150th Street West and east of Acorn Trail in Faribault, Rice County, MN (See Figure 1). The site consists of one parcel and approximately 84.3 acres of farmstead, agricultural and undeveloped woodland.

The proposed project includes removal of the existing farmstead and construction of up to 500,000 square feet of new one-story data center buildings with associated parking and landscape improvements and one substation. Up to six data center buildings will be constructed.

The proposed site requires City of Faribault public water and sanitary line extensions in Acorn Trail and will use directional drilling during construction to minimize environmental impacts.

Onsite infrastructure improvements include sanitary sewer, water lines, storm sewer, three stormwater ponds, and electric lines. Two secured entries will be installed along Acorn Trail to access the site. Minimally invasive construction techniques will be used to minimize environmental impacts.

Construction is expected to begin in the summer of 2025 and is anticipated to take up to three construction seasons to complete.

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c. Project magnitude

Table 1: Project Magnitude

Measure	Magnitude
Total Project Acreage	84.3
Commercial Building Area (square feet)	500,000
Structure Height(s)	31.5'

d. Explain the project purpose. If the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The project purpose is to construct up to six data center buildings to house computer systems and associated components, such as servers, telecommunications and storage systems for the computation, storage, and management of data.

e. Are future stages of this development, including development on any other property, planned or likely to happen? ☐ Yes ☒ No

If yes, briefly describe future stages, relationship to present project, timeline, and plans for environmental review.

f. Is this project a subsequent stage of an earlier project? ☐ Yes ☒ No

If yes, briefly describe the past development, timeline, and past environmental review.

Not applicable.

7. Climate Adaption and Resilience

a. Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.

Trends in temperature, precipitation, flood risk, and cooling degree days are described below for the general project location. Some of the climate projections summarized below use Representative Concentration Pathways (RCPs), which are greenhouse gas concentration scenarios used by the Intergovernmental Panel on Climate Change. RCP 4.5 is an intermediate scenario in which emissions decline after peaking around 2040, and RCP 8.5 is a worst-case scenario in which emissions continue to rise through the 21st century.[1]

Temperature

According to the Minnesota Climate Explorer,[2] the historical average temperature in Rice County between 2001-2021 was approximately 45.3°F, with the lowest average in 2014 (41.49°F) and the highest average in 2012 (48.85°F). The average annual temperature in Rice County is projected to be 48.32°F from 2040-2059 under RCP 4.5. In 2080-2099, average annual temperature is projected to be 50.72°F and 54.41°F under RCP 4.5 and 8.5, respectively.

[1] Climate Explorer Metadata. Available at https://www.dnr.state.mn.us/climate/climate-explorer-metadata.html.

[2] Minnesota Climate Explorer. Minnesota Department of Natural Resources.

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Precipitation

According to the Minnesota Climate Explorer, historic average precipitation in Rice County between 2001-2021 was approximately 32.52 inches, with the lowest average in 2003 (22.92 inches) and the highest average in 2019 (48.64 inches). Average annual precipitation in Rice County from 2040-2059 is projected to be 32.56 inches under RCP 4.5. From 2080-2099, average annual precipitation is projected to be 32.85 inches under RCP 4.5 and 35.44 inches under RCP 8.5.

Flood Risk

According to Flood Factor,[3] a tool that identifies a property's risk of flooding, there is a 0 percent chance that 0.5 feet of water will reach the largest building on the Archer Datacenters Faribault Campus due to flooding in 2025. In 15 years (2040) and 30 years (2055), the depth of flooding increases nominally, with a 0 percent chance that 4 feet of water will reach the largest building on campus. In all three years (2025, 2040, and 2055), under the 5 percent flood likelihood scenario, the depth of flooding is 0 feet.[4]

Cooling Degree Days

As defined by the National Weather Service, degree days are based on the assumption that when the outside temperature is 65°F, heating or cooling is not needed to be comfortable. Degree days are the difference between the daily temperature mean and 65°F. If the temperature mean is above 65°F, 65 is subtracted from the mean and the result is the cooling degree days. For example, if the mean temperature over a 24-hour period is 70°F, then there have been 5 cooling degree days.[5] Cooling degree days are used as a proxy to estimate cooling needs for buildings.

According to Heat Vulnerability in Minnesota,[6] the number of cooling degree days in 2019 for Rice County was 423. The number of cooling days in 2050 for Rice County is projected to be 502 and 650 for RCP 4.5 and 8.5, respectively.

b. For each resource category in the table below, describe the project's proposed activities and how the project's design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.

[3] Flood Factor. Available at https://www.floodfactor.com/. Values are based off assumed/researched design rainfall capacity. Hydrography was generated by the National Elevation Dataset and the National Hydrography Dataset. Flood adaptation structures (levees, dams, etc.) were included in the modeling process. See full technical documentation for additional information: https://assets.firststreet.org/uploads/2020/06/FSF_Flood_Model_Technical_Documentation.pdf

[4] Flood Factor assumes a rainfall capacity allowance in urban areas, and thus may not accurately represent carrying capacity on site. Flood Factor also may not account for adaptation infrastructure, which would reduce flooding.

[5] "What Are Heating and Cooling Degree Days." National Weather Service. Available at https://www.weather.gov/key/climate_heat_cool.

[6] Heat Vulnerability in Minnesota. Minnesota Department of Health and the University of Minnesota . Available at https://maps.umn.edu/climatehealthtool/heat_app/.

Climate considerations and adaptations for the proposed project are described in Table 2.

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Table 2: Climate Considerations and Adaptations

Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	**Adaptations**
Project Design	For example, aspects of the building architecture/materials choices and site design that may negatively affect urban heat island conditions in the area considering changing climate zones, temperature trends, and potential for extended heat waves	In the coming decades, the location of the study area is anticipated to experience: • Increased annual temperatures • Increased annual precipitation and more frequent heavy rainfall events • Increased freeze thaw cycles	• Energy end-use efficient appliances and equipment and energy efficient lighting may be incorporated into building design. • Energy efficient data center cooling technology, namely non-evaporative air-cooled primary-loop heat-rejection and secondary closed-loop liquid cooling may be considered based on tenant specifications. • If feasible, implementation of onsite wind power is expected to be incorporated into the project. • Energy efficient building shells may be considered. • Proposed native trees and landscaping that reduce runoff and mitigate heat island effect may be included in design. • Parking areas may be evaluated to potentially reduce impervious areas within the EAW Study Area. • Water efficient design may be incorporated in landscaping.

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Resource Category	Climate Considerations	Project Information	
		Climate Change Risks and Vulnerabilities	Adaptations
Land Use	For example, any critical facilities (i.e., facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) that are proposed in floodplain areas and other areas identified as at risk for localized flooding; describe the risk potential considering changing precipitation and event intensity	Portions of the proposed development may experience flooding during extreme rain events.	If feasible, design of the site and stormwater management facilities will be completed to reduce the risk of flooding in the EAW study area. Filtration areas may be used to improve water quality and stormwater runoff in the project vicinity.
Water Resources	Addressed in Item 12	Addressed in Item 12	Addressed in Item 12
Contamination/ Hazardous Materials/ Wastes	For example, how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the potential environmental effects of generation/ use/storage of hazardous waste and materials	The proposed development is not anticipated to generate hazardous waste or materials.	Not Applicable
Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)	Current Minnesota climate trends and anticipated climate change in the general location of the project may influence the local species and suitable habitat.	Suitable habitat for species may become unsuitable due to land use changes, increased temperature, and increased runoff	The project will consider incorporating climate-appropriate native plantings and stormwater BMPs will provide suitable habitat for small mammals, insects, and bird species.

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8. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development.

Estimated cover type acreages before and after development are provided in Table 3, with additional information on green infrastructure and trees in Table 4 and Table 5, respectively. Figure 4 provides an overview of the existing cover types onsite.

Table 3: Cover Types

Cover Type	Before (Acres)	After (Acres)
Wetlands and Shallow Lakes (less than 2 meters deep)	2.9	2.1
Deep Lakes (more than 2 meters deep)	0	0
Rivers/Streams	2.4	2.4
Wooded/Forest	26.6	18.3
Brush/Grassland	0	0
Cropland	49.5	0
Livestock Rangeland/Pastureland	0	0
Lawn/Landscaping	2	9.3
Green Infrastructure (total from Table 4)	0	5
Impervious Surface	0.9	42.2
Stormwater Pond (wet sedimentation basin)	0	5
Other (describe)	0	0
Total	84.3	84.3

Table 4: Green Infrastructure

Green Infrastructure	Before (Acres)	After (Acres)
Constructed Infiltration Systems (infiltration basins, infiltration trenches, rainwater gardens, bioretention areas without underdrains, swales with impermeable check dams)	0	5
Constructed Tree Trenches and Tree Boxes	0	0
Constructed Wetlands	0	0
Constructed Green Roofs	0	0
Constructed Permeable Pavements	0	0
Other (describe)	0	0
Total	0	5

Table 5: Trees

Trees	Percent	Number
Percent Tree Canopy Removed or Number of Mature Trees Removed During Development	31%	8.3 acres
Number of New Trees Planted	66% of required base plantings	169 trees

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9. Permits and Approvals Required

List all known local, state, and federal permits, approvals, certifications, and financial assistance for the project. Include modifications of any existing permits, governmental review of plans, and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing, and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules Chapter 4410.3100.*

Table 6: Permits and Approvals Required

Unit of Government	Type of Application	Status
Federal	U.S. Army Corps of Engineers (USACE) Section 404 Delineation Concurrence	Approved
State of Minnesota	MN DLI Onsite Plumbing Permit	Approved
	Minnesota Pollution Control Agency (MPCA) Sanitary Sewer Extension	To be applied for
	MPCA Construction Contingency Plan and Response Action Plan approval	To be applied for, if applicable
	MPCA Section 401 Certification	To be applied for, if applicable
	Minnesota Department of Natural Resources Temporary Water Appropriation Permit for Construction Dewatering	To be applied for, if applicable
	Minnesota Department of Health Watermain Installation Permit	To be applied for
	MPCA NPDES	To be applied for
	MPCA Air Registration Permit	To be applied for
City of Faribault	Preliminary Plat	To be applied for
	Final Plat	To be applied for
	Mass Grading	To be applied for
	Site Plan Review	To be applied for
	Building Permit	To be applied for
Rice County	Work in ROW	To be applied for
	Soil and Water Conservation District (SWCD) Wetland Conservation Act Permit	To be applied for
	Utility Permit	To be applied for
	Driveway Permit	To be applied for

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10. Land Use

a. Describe:

i. Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, and prime or unique farmlands.

The 84.3-acre site includes one parcel and consists of primarily agricultural uses. There is a residential property and approximately 26 acres of forested area onsite. The site is generally bounded by Acorn Trail to the west, and 150th Street West to the north.

The site is surrounded by residential properties, agricultural land, and industrial office space, and institutional businesses (see Figure 5). There is an unnamed stream that bisects the site flowing west to east. No cemeteries or prime or unique farmland are located within or adjacent to the site.

ii. Planned land use as identified in comprehensive plans (if available) and any other applicable plan for land use, water, or resource management by a local, regional, state, or federal agency.

The future land use guidance laid out by the City of Faribault in the 2040 Comprehensive plan has the site designated for Industrial use (see Figure 6). The City describes this land use as land containing manufacturing, transportation, construction companies, communications, utilities, or wholesale trade. This category also includes publicly owned industrial lands, such as wastewater treatment plants and water towers. It also includes warehouses and salvage yards.

iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

Current Zoning
The zoning classification of the site is I-2 Heavy Industrial (see Figure 7). The City of Faribault describes I-2 districts as districts established to provide an environment of very heavy industrial uses that allows for manufacturing, warehousing, and other industrial uses.

FEMA National Flood Hazard
The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) was reviewed for the project study area. According to the FEMA, FIRM, the study area is located in Zone X of panel 27131C0260D (effective April 03, 2012), which is outside the designated 100-year floodplain zones.

Shoreland
The development is not located within shoreland zone.

iv. If any critical facilities (i.e., facilities necessary for public health and safety, those storing hazardous materials, or those housing occupants who may be

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insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.

The site is not located within a Federal Emergency Management Agency (FEMA) 100-year floodplain. Risk of localized flooding is described as part of the climate trend analysis summarized under Item 7. The site has a low risk of localized flooding.

b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 10a above, concentrating on implications for environmental effects.

Existing nearby land uses include residential properties, agricultural land, and additional Industrial properties. The project is compatible with the planned land use and zoning as outlined in the City of Faribault's 2040 plan for the site and adjacent areas.

c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.

The proposed development meets all land use and zoning requirements as outlined above.

11. Geology, Soils, and Topography/Landforms

a. Geology – Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

According to the Minnesota Geologic Survey of Rice County (Part A) (1995), bedrock geology of the site consists of the Prairie du Chien Group, which consists of thin- to medium- bedded, yellowish-gray dolostone with interbeds of quartzose sandstone and shale. The estimated depth to bedrock is approximately 50 to 150 feet below grade. The surficial geology consists of loam, with sandy loam, sand, and gravel occasionally present.

No sinkholes, unconfined/shallow aquifers, or karst conditions were identified on the site.

b. Soils and Topography – Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability, or other soil limitations, such as steep slopes or highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections, or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 12.b.ii.

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey (see Figure 8.), there are ten soil units within the site:

- Hayden loam, 2 to 6 percent slopes, 16.6 acres, hydric Rating of 5

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- Hayden loam, 6 to 10 percent slopes, moderately eroded, 33.9 acres, hydric rating of 5
- Hayden loam, 10 to 22 percent slopes, moderately eroded, 5 acres, hydric rating of 8
- Glencoe clay loam, 0 to 1 percent slopes, 3.9 acres, hydric rating of 100
- Hamel loam, 0 to 2 percent slopes, 9.7 acres, hydric rating of 90
- Hawick-Estherville complex, 6 to 12 percent slopes, 3.1 acres, hydric rating of 0
- Klossner, Okoboji and Glencoe soils, ponded, 0 to 1 percent slopes, 0.4 acres, hydric rating of 100
- Le Sueur loam, moderately coarse substratum, 1 to 3 percent slopes, 3.4 acres, hydric rating of 0
- Klossner muck, 0 to 1 percent slopes, 1.6 acres, hydric rating of 100
- Colo silt loam, channeled, 0 to 2 percent slopes, frequently flooded, 7.1 acres, hydric rating of 95

The soil types within the study area are rated from slight to moderate erosion hazard. Disturbed soil and fill are often compacted and more susceptible to erosion. Soil erosion will be mitigated with sediment and erosional control BMPs.

Topography within the site varies from 992 feet in elevation in the eastern-central portion of the site to 1066 feet in elevation in the northwestern portion of the site. The site generally drains into the stream in the central portion of the study area and continues east.

The proposed project will require approximately 93,000 cubic yards of earthwork onsite. An NPDES permit is required because the project will disturb more than 1 acre of land. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared. All unpaved areas disturbed during construction will be revegetated in accordance with the standard NPDES permit requirements. In areas with steep slopes, special consideration will be given to prevent erosion during construction, such as erosion control blankets, along with vegetation establishment to permanently stabilize side slopes and any areas impacted as a result of construction.

12. Water Resources

a. Describe surface water and groundwater features on or near the site below.

i. **Surface Water – lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, shoreland classification and floodplain/floodway, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.**

Kimley-Horn completed a wetland delineation on August 13, 2024, and identified ten wetlands within the study area (see Figure 11). A formal delineation approval was issued with a notice of decision from the City of Faribault on December 17, 2024. The two intermittent streams are located in the northeast and center of the project area.

An ephemeral stream is located in the northeast portion of the project area. One roadside ditch is located on the northern edge of the project area, and one roadside ditch is located along Acorn Trail on the west side of the project area.

According to the MPCA's 2024 Impaired Waters Map, no impaired waters are identified within one mile of the project area (see Figure 9). According to the MnDNR's Public Water Inventory, no public waterways or waterbodies are identified within the project area.

ii. Groundwater – aquifers, springs, and seeps. Include 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; and 3) identification of any onsite and/or nearby wells, including unique numbers and well logs, if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

Historic well data for properties adjacent to the site indicate groundwater is 50-95 feet below the existing surface elevation. Soil borings performed on the southern half of the project area encountered groundwater 8-43 feet below the existing ground surface. The project area is not within an MDH wellhead protection area. An onsite survey of the property identified one domestic water well, but it is not documented in the Minnesota Well Index (see Figure 10). The well will be capped and removed per state requirements.

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects below.

i. Wastewater – For each of the following, describe the sources, quantities, and composition of all sanitary, municipal/domestic, and industrial wastewaters projected or treated at the site.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

The wastewater will be discharged through the public sanitary sewer system and to a publicly owned treatment facility. A 10" sanitary sewer extension of +/-0.60 miles in Acorn Trail is required. The City of Faribault's comprehensive sanitary sewer plan indicates a 24" trunk sanitary sewer line through the site. The future sanitary trunk main and associated public lift station is several years from undergoing development and not anticipated to be complete to serve the development. In discussions with City staff, it was recommended to serve the site through the existing sanitary forcemain south of the site within Acorn Trail. The development will be in communication with the City throughout the design process of the campus to determine when the new trunk sanitary sewer will be installed and utilized. No pretreatment measures are anticipated to be needed. The City's 2040 comprehensive plan notes the water and wastewater treatment plant have capacity to serve the current and anticipated needs of the community through the year 2040.

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Energy & water efficient data center cooling technology, namely non-evaporative air-cooled primary-loop heat-rejection and secondary closed-loop liquid cooling is the prevailing design for the data center campus. However, certain end users may require supplemental evaporative or adiabatic-assisted cooling technologies, which may increase wastewater discharge for HVAC purposes. This document details the range of potential wastewater discharge for the non-evaporative case and the supplemental evaporative case. The project is anticipated to have an annual sewer discharge of 4.9M gallons with an anticipated average day demand of approximately 13,500 GPD. The anticipated max day discharge for the adiabatic-assisted cooling technology use is 30,000 GPD and max hourly flow of 3,500 gallons. This is anticipated to be the peak discharge seen for the development utilizing the adiabatic cooling system technology. If non-evaporative air-cooled technology is utilized, the campus is anticipated to discharge only domestic sewage at a rate of approximately 13,000 GPD.

In discussions with the City, the treatment facility is anticipated to have capacity for this wastewater and will not require an expansion of the treatment facility. If wastewater associated with cooling technologies is discharged to the municipal sanitary sewer system, additional water quality and quantity parameters will be provided to the City in accordance with the Significant Industrial User (SIU) permit as to not adversely affect the Publicly Owned Treatment Works (POTWs) permit.

2) **If the wastewater discharge is to a subsurface sewage treatment system (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity, and amount with this discussion.**

   Not applicable.

3) **If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.**

   Not applicable.

ii. **Stormwater – Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post-construction, including how the project will affect runoff volume, discharge rate, and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency,**

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intensity, and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.

Currently the site generally drains to the streams in the middle and northeast areas with no existing BMPs in place to capture stormwater runoff. The streams flow into the Cannon River +/-1.3 miles to the east.

The proposed project includes stormwater management and treatment of stormwater runoff within the site. Filtration and storage basins will be sized per state and local requirements for the increase in impervious areas and anticipated changes in rainfall. The City's stormwater management design standards require 1" over the new or fully reconstructed impervious surface area; the site is anticipated to require approximately 153,000 cubic feet (cf) of treatment volume for the 42.11 acres of impervious surface coverage. The proposed outlet control structures in each of the basins will be designed to discharge at a rate less than the existing condition. The site is anticipated to have primarily clay soils throughout the development; therefore, infiltration is likely not a feasible alternative for development. If geotechnical investigation uncovers the inability to infiltrate, filtration basins will be utilized to provide stormwater treatment prior to discharge from the site. The three stormwater management basins will attenuate flow as to not increase discharge from the site in post-development conditions when compared to pre-development conditions.

The stormwater will be treated according to the published MPCA guidelines and City of Faribault requirements. The three basins are proposed to filter stormwater runoff from the site prior to discharge to the intermittent stream in the middle of the site and eventually to the Cannon River. The project is expected to disturb approximately 50 acres and will require a SWPPP which will be compliant with all MPCA General Construction Stormwater and City of Faribault standards. The total disturbed area is pending final development plans and subject to change. Erosion control BMPs will be utilized and may consist of inlet protection, silt fence, bioroll, diversion swales, rock check dams, sediment basins, and designated construction entrances.

iii. **Water Appropriation – Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use, and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss**

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environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.

Permanent dewatering is not expected as a part of this project. Temporary construction dewatering may be required for the project. Any temporary dewatering will require a DNR Temporary Water Appropriations General Permit if less than 50 million gallons per year and less than one year in duration. It is anticipated dewatering would only occur during utility installation and potential construction of building footings.

In addition to the well identified through the onsite survey, if unidentified wells are found during construction, the MPCA and MDH must be contacted to determine the course of action, which may include sealing, relocating or preserving by a licensed well contractor according to the Minnesota Rules Chapter 4725.

The project will connect to the City of Faribault's water system. A 12" water main extension of +/-0.30 miles in Acorn Trail is required. The City's water treatment plant is designed to operate at 7 MGD and maximum pumping capacity of 10 MGD with a current total use of approximately 4-6 MGD. The City also recently installed a water tower roughly ½ mile southwest of the site, providing adequate pressure to the site. Additional City infrastructure upgrades beyond a watermain extension are not anticipated to be needed and the project is not expected to have a significant adverse impact on the City's water supply or system. Surface water and groundwater appropriation is not proposed as part of this development as the development will utilize city water services.

Energy & water efficient data center cooling technology, namely non-evaporative air-cooled primary-loop heat-rejection and secondary closed-loop liquid cooling is the prevailing design for the data center campus. However, certain end users may require supplemental evaporative or adiabatic-assisted cooling technologies, which may increase domestic water utilization for HVAC purposes. This document details the range of potential water utilization for the non-evaporative case and the supplemental evaporative case. The project is anticipated to have a maximum day demand of 16,500 GPD and annual water usage of 4.8M GPY. The anticipated max day demand is approximately 280,000 GPD, which would operate at a time when the cooling system is operating at peak; the max day demand is not anticipated to be seen frequently throughout the year. If non-evaporative air-cooled technology is utilized, the campus is anticipated to only have domestic water demands at an estimated rate of approximately 13,000 GPD.

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iv. Surface Waters

1) **Wetlands – Describe any anticipated physical effects or alterations to wetland features, such as draining, filling, permanent inundation, dredging, and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.**

   The project is anticipated to fill +/-0.8 acres of wetlands 4,5,7,8, and 9. Measures to limit and avoid additional wetland impacts include retaining walls and adjustment of proposed building locations. Wetland 6 may undergo temporary impacts for the installation of the public utilities extension; permanent impacts to this wetland will be minimized to the maximum extent practicable. Stormwater BMPs are strategically located throughout the site to provide the necessary detention and treatment for the site prior to discharge offsite while minimizing impacts to existing wetlands to maximum extent practicable. Unavoidable wetland impacts will be reviewed by the Wetland Conservation Act (WCA) Local Governing Unit (LGU) in accordance with the WCA and will be mitigated with wetland bank credits in the same bank service area as the project. The USACE has reviewed the wetland boundaries and determined that it does not have jurisdiction over the wetlands onsite.

2) **Other surface waters – Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal, and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.**

   No impacts are anticipated. Mitigation measures such as double row silt fence and sedimentation traps or basins are proposed during construction. Permanent stormwater BMPs and vegetation on slopes for stabilization are proposed in the

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full buildout condition to prevent sedimentation from discharging into the stream within the site boundary.

13. Contamination/Hazardous Materials/Wastes

a. Pre-project Site Conditions – Describe existing contamination or potential environmental hazards on or in close proximity to the project site, such as soil or groundwater contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize, or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

The MPCA's What's in My Neighborhood database was reviewed to determine if any known contaminated properties or potential environmental hazards are located within or adjacent to the site. No sites were identified within the site or within 250 feet of the site boundary; six listings were identified within 500 feet of the site boundary (see Table 7 and Figure 12). Of the six sites, all have activities that are listed as active.

Unknown materials may also be encountered during construction. A Response Action Plan and Construction Contingency Plan will be developed to outline the methods for identifying, segregating and handling contaminated soil and/or groundwater that may be encountered during construction.

Table 7: What's in My Neighborhood Sites

Site ID	Site Name	Active?	Activity	Program
83996	Paul Dietz Farm	Y	Feedlots	Feedlots
227654	Daikin Applied Americas Inc	Y	Construction Stormwater; Hazardous Waste, Very small quantity generator; Toxics Reduction	Hazardous Waste; Pollution Prevention; Stormwater
120505	Faribault Distribution Center	Y	Industrial Stormwater	Stormwater
151443	Daikin Applied - Faribault North	Y	Industrial Stormwater	Stormwater
85889	Ernest Koktavy Farm	Y	Feedlots	Feedlots
80973	Holden Koktavy Farm - Sec 36	Y	Feedlots	Feedlots

b. Project Related Generation/Storage of Solid Wastes – Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage,

and disposal. Identify measures to avoid, minimize, or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

The project will ensure compliance with applicable laws, rules, and ordinances related to the management of solid and hazardous waste as required by Minnesota Statutes, Section 473.811.

Waste Generated During Construction

Construction of the proposed development will generate construction-related waste materials such as wood, packaging, excess materials, and other wastes, which will either be recycled or disposed of in the proper facilities in accordance with state regulations and guidelines.

Redevelopment of portions of the site may generate earth materials and debris during demolition activities. Demolition debris is inert material such as concrete, brick, bituminous, and rock. The solid wastes generated during demolition will be recycled or disposed of at a state-permitted landfill.

Waste Generated During Operation

For solid waste generated during operations, a source recycling/separation plan will be implemented, and wastes that cannot be recycled will be managed in accordance with state regulations and guidelines.

The proposed development will generate new demands on solid waste management and sanitation services provided in the project area. Based on the proposed area of up to 500,000 square feet of industrial space, it is estimated that the non-residential (institutional) waste stream will be around 7,500 tons per year. Waste generated during operation will be sent to a state-permitted landfill.

c. Project Related Use/Storage of Hazardous Materials – Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location, and size of any new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size, and age of existing tanks on the property that the project will use. Discuss potential environmental effects from accidental spills or releases of hazardous materials. Identify measures to avoid, minimize, or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

No above or below ground tanks currently exist within the site. Any hazardous materials used/stored during construction and/or operation of the project will be disposed of in the manner specified by local or state regulation or by the manufacturer. A spill prevention plan will be developed, and proper spill prevention controls will be in place for any vehicle refueling or maintenance that occurs on site during construction.

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d. Project Related Generation/Storage of Hazardous Wastes – Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize, or mitigate adverse effects from the generation/storage of hazardous wastes including source reduction and recycling.

Removal of the existing residence is not anticipated to generate hazardous waste.

Toxic or hazardous waste to be stored within the site during construction will include fuel and oil necessary to operate heavy construction equipment and during operations may include commercial cleaning supplies. Regulated material and/or waste generated or stored during construction and operations will be managed in accordance with state and local requirements.

14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

a. Describe fish and wildlife resources as well as habitats and vegetation on or near the site.

The current site primarily consists of agricultural and wooded land. There is a stream bisecting the site, providing habitat for aquatic species and riparian vegetation. The existing trees and landscaped areas on site provide potential habitat for wildlife, including small mammals, insects, and bird species that are well adapted to highly disturbed environments. Wetlands within the study area provide potential habitat for wildlife, as well.

Cannon River is located approximately 1.3 miles east of the site, and the Cannon River Trout Lily Scientific and Natural area is located more than 2 miles southeast of the site. Neither of these resources are anticipated to be impacted due to the proposed project.

b. Describe rare features such as state-listed (endangered, threatened, or special concern) species, native plant communities, Minnesota Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-2024-006) and/or correspondence number (MCE 2024-00982) from which the data were obtained and attach the Natural Heritage Review letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe results.

No DNR wildlife management areas, wildlife refuges, or wild and scenic river districts were identified within one mile of the site.

One unlabeled, regionally significant ecological area (RSEA) is mapped approximately 0.55 miles northwest of the project site. One Minnesota County Biological Survey Site of Biodiversity Significance, labeled as Forest 35 Woods, is mapped approximately 0.55 miles northwest of the project site. One DNR native plant community, labeled as a southern mesic oak-basswood forest, is mapped approximately 0.6 miles northwest of the project site.

Consultation with the Minnesota DNR (MCE #2024-00982) identified one or more calcareous fens in the vicinity of the proposed project. Calcareous fens are rare, protected wetlands in

Minnesota. Calcareous fens are fragile and rely on groundwater hydrology, so nearby disturbances can impact these fens.

The MnDNR also identified the study area as a high-potential zone for the rusty patched bumble bee (RPBB), a federally endangered species. The MnDNR recommends reseeding with native seed mixes, to encourage RPBB populations.

A review of the DNR's Natural Heritage Inventory System (NHIS) database was conducted per license agreement LA2024-006 for the area within one mile of the site. The database includes the known occurrences of any state endangered, threatened, or special concern species. The review identified no species within or near the site.

c. Discuss how the identified fish, wildlife, plant communities, rare features, and ecosystems may be affected by the project, including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

The project is not likely to affect species and resources on site. The project proposes to clear approximately two acres of trees during the winter and develop land that was previously used for agricultural purposes. The site plan avoids impacts to unfarmed wetlands and the streams on site. Additionally, the project proposes to implement erosion control measures and will reseeding with native seed mixes, which will provide habitat for small mammals, insects, and bird species.

Invasive species are plants and animals that are not native to an area and are capable of causing harm. Certain measures can be taken to limit the likelihood of introducing invasive species, such as securing local materials to avoid the long-range movement of goods or washing vehicles prior to accessing the project site. Additionally, landscape design will include native, non-invasive plants.

Temporary groundwater dewatering activities associated with the project will have no adverse impact on nearby calcareous fens because all water extracted during the dewatering process will be retained within the same watershed. Discharged water will be directed to a temporary erosion control Best Management Practice (BMP) setup specifically for sediment removal prior to release. This method ensures that no detrimental changes occur to the hydrology or water quality of the nearby sensitive ecosystems, maintaining the ecological balance and integrity of the calcareous fens.

d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

The proposed project will make best effort in conducting tree removal outside of the recommended tree clearing windows as outlined by the US Fish and Wildlife Services (USFWS) and Minnesota DNR to avoid direct effects to overwintering Rusty-patched Bumble Bees, and to limit impacts during bat pup season. No impacts to the stream are anticipated, however, erosion control BMPs will be incorporated into site planning. Native seed mixes will

be added to the proposed development to provide suitable habitat for small mammals, insects, and bird species within the project vicinity.

State requirements necessitate the control and spread of state listed noxious weeds and/or invasive weeds if encountered prior to construction. Methods to avoid spreading noxious weeds and/or invasive species will be incorporated into project specifications and/or the SWPPP when developed. Disturbed areas will be reestablished using appropriate native and stabilization seed mixes.

15. Historic Properties

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include 1) historic designations; 2) known artifact areas; and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

The Minnesota Statewide Historic Inventory Portal (MnSHIP) was reviewed to identify historic resources. According to MnSHIP, there are no historic resources within the study area. According to the Minnesota Office of the State Archeologist (OSA) Public Viewer map, there are no known archeological records in the vicinity of the site.

16. Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

The AUAR study area includes existing agricultural land that is not near any unique designated scenic views or vistas. Any development of agricultural land will have an impact on the visual look of a property. Future development would conform with the city ordinances for building height, building form, landscape screening, and lighting to avoid impacts to neighboring properties and species. No significant visual impacts are anticipated.

As building and site designs advance, lighting practices will be selected to address known ecological concerns and prevent avoidable impacts to insects, wildlife, rare plants, and adjacent natural areas. Guidance from the USFWS to minimize blue light, uplight, and backlight will be adhered to the extent practicable.

17. Air

a. **Stationary Source Emissions – Describe the type, sources, quantities, and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants and criteria pollutants. Discuss effects to air quality including any sensitive receptors, human health, or applicable regulatory criteria. Include a discussion of any methods used to assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures**

that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

This item is not applicable because any stationary air emissions source large enough to merit environmental review requires individual review.

b. Vehicle Emissions – Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g., traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

The Minnesota Department of Transportation (MnDOT) has developed a screening method designed to identify intersections that will not cause a carbon monoxide (CO) impact above state standards. MnDOT has demonstrated that even the 10 highest traffic volume intersections in the Twin Cities do not experience CO impacts. Therefore, intersections with traffic volumes lower than these 10 highest intersections will not cause a CO impact above state standards. MnDOT's screening method demonstrates that intersections with total daily approaching traffic volumes below 82,300 vehicles per day will not have the potential for causing CO air pollution problems. None of the intersections in the study area exceed the criteria that would lead to a violation of the air quality standards.

c. Dust and Odors – Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under Item 17a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

The proposed scenario may generate temporary fugitive dust emissions during construction. The City of Faribault regulates dust in accordance with the standards set by the MPCA.[7] Dust emissions can be controlled by sweeping, watering, sprinkling, as appropriate or as prevailing weather and soil conditions dictate. Dust emissions are not anticipated during operations as all ground surfaces will either be impervious or vegetated.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

a. GHG Quantification – For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to cometo that conclusion and any GHG emission sources not included in the total calculation.

About Greenhouse Gases (GHGs)

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a

[7] https://www.pca.state.mn.us/air-water-land-climate/air-pollutants

smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6), and nitrogen trifluoride (NF3); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming.

Project-related GHG Emissions

This section describes the GHG emissions from the existing buildings within the study area and includes an estimated quantification of the following GHG emissions associated with the proposed scenario.

- Carbon dioxide (CO2)
- Nitrous oxide (N2O)
- Methane (CH4)

The projected GHG emissions are provided on an average annual basis using the CO2 equivalent (CO2e) and include the proposer's best estimate of average annual emissions over the proposed life/design service life of future development. The estimates also include emissions from the construction and operating phases of the scenario. Emissions were estimated using the US Environmental Protection Agency's Simplified GHG Emissions Calculator (SGEC) (Version June 2021)[8] and are summarized in **Table 8** and **Table 9a & 9b** by project phase (i.e., construction and operations) and source type (e.g., combustion from mobile equipment, off-site electricity), see Appendix C. Construction emissions for the proposed scenario is based on length of construction and are from mobile equipment including passenger cars, light-duty trucks, and medium and heavy-duty trucks, and construction equipment (both gasoline and diesel). Operational emissions provided in Table 9a and 9b for this project represent two independent scenarios, based on the customer specifications for testing of emergency generators. Generator testing will be supported by either natural gas (Table 9b) or onsite diesel (Table 9a).

[8] https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator

Table 8. Construction Emissions

Scope	Emission Type	Emission Sub-Type	Emission	Existing CO_{2e} Emissions (total)	Proposed Project-Related CO_{2e} Emissions (tons, total)
Scope 1	Combustion	Mobile equipment	CO_2, N_2O, CH_4	n/a	4,251
Total				**n/a**	**4,251**

Table 9a. Operational Emissions (Diesel Generators)

Scope[9]	Emission Type	Emission Sub-Type	Emission	Existing CO_{2e} Emissions (tons/year)	Proposed CO_{2e} Emissions (tons/year)
Scope 1	Combustion (Diesel Generators)	Stationary equipment	CO, NO, HC, PM	50	702
Scope 2	Off-site electricity	Grid-based	CO_2, N_2O, CH_4	150	526,976
Scope 3	Off-site waste management	Area	CO_2, CH_4	20	2,125
Total				**220**	**529,803**

[9] The diesel and natural gas usage values presented in this report pertain specifically to generator testing and were calculated using the EPA's Greenhouse Gas Emissions Calculator: https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator. The figures are based on data provided by the applicant and have been categorized under Scope 1 emissions.

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Table 9b. Operation Emissions (Natural Gas)

Scope[10]	Emission Type	Emission Sub-Type	Emission	Existing CO_{2e} Emissions (tons/year)	Proposed CO_{2e} Emissions (tons/year)
Scope 1	Combustion (Natural Gas)	Stationary equipment	CO, N*O, HC, PM*	50	531
Scope 2	Off-site electricity	Grid-based	CO_2, N_2O, CH_4	150	526,976
Scope 3	Off-site waste management	Area	CO_2, CH_4	20	2,125
Total				**220**	**529,632**

b. GHG Assessment

i. Describe any mitigation considered to reduce the project's GHG emissions.

Unless otherwise noted differently, the following are potential design strategies and sustainability measures that are under consideration for this project to reduce emissions for this project:

- Energy efficient data center cooling technology, namely non-evaporative air-cooled primary-loop heat-rejection and secondary closed-loop liquid cooling.
- Energy efficient building shells.
- Waste management best practices to recycle and compost appropriate materials when applicable.
- Trees and additional landscaping.
- Elective vehicle charging infrastructure.
- Grid-based wind and solar power and/or the purchase of RECs dependent upon customer specifications.
- Onsite wind power

Implementation of the above strategies will be evaluated on a case-by-case basis based on code requirements, feasibility, availability of materials, schedule, and customer specifications. The project proposer will work with the City to identify additional mitigation strategies that could be implemented to reduce greenhouse gas emissions or offset the carbon footprint of the proposed project.

[10] The diesel and natural gas usage values presented in this report pertain specifically to generator testing and were calculated using the EPA's Greenhouse Gas Emissions Calculator: https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator. The figures are based on data provided by the applicant and have been categorized under Scope 1 emissions.

ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the project's GHG emissions. Explain why the selected mitigation was preferred.

- The proposed project would require new appliances, equipment, and lighting during operation. The use of energy efficient technologies would reduce the amount of electricity used per product. Collectively, the implementation of these technologies would reduce overall energy use and in-turn, GHG emissions.
- The proposed project would require heating and cooling during operation. One of the highest sources of energy use is energy spent heating and cooling buildings. The use of energy efficient building shells reduces the amount of energy needed for heating and cooling, therefore reducing energy use and GHG emissions. Energy efficient data center cooling technology, namely non-evaporative air-cooled primary-loop heat-rejection and secondary closed-loop liquid cooling, will also be considered and implemented based on tenant considerations.
- Waste would be generated during operation of the proposed project. By implementing waste best management practices and recycle and compost appropriate material when applicable, GHG emitted from wastes during operations can be reduced.
- Trees and additional landscaping can reduce the GHG footprint of the project by absorbing greenhouse gas emissions. Tree replacement will occur per City requirements.

The potential mitigation listed in Item 18.b.i. was selected to comply with best management practices for new construction and reduce GHG emissions where practicable during operations.

iii. Quantify the proposed project's predicted net lifetime GHG emissions (total tons per number of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.

The Next Generation Energy Act requires the state to reduce greenhouse gas emissions in the state by 80 percent between 2005 and 2050, while supporting clean energy, energy efficiency and supplementing other renewable energy standards in Minnesota. The MPCA's biennial GHG emissions reduction report from 2021 identifies strategies for reducing emissions in the three economic sectors with the highest emissions – transportation, electricity generation, and agriculture, forestry, and land use.

The current EAW study area currently generates approximately 270 CO2e metric tons per year. Under the proposed project, this amount will increase to 529,803 CO2e

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metric tons per year if diesel generators are used, or 529,632 CO2e metric tons per year if natural gas generators are used.

The expected lifespan of the project (assuming periodic upgrades to IT equipment), is approximately 25-30 years. This equates to a total estimated 13,245,075 CO2e metric tons over the lifetime of the development if diesel generators are used and 13,240,800 CO2e metric tons if natural gas generators are used. The proposer will evaluate implementing the sustainability measures listed in Item 18.b.i to reduce operational emissions to the extent practicable. The proposed project will be built in compliance with state regulations and City building codes.

19. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area; 2) nearby sensitive receptors; 3) conformance to state noise standards; and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

Existing Noise

The EAW study area is currently agricultural land surrounded by agricultural land, county roads and state highways. The existing noise sources at the site consist mainly of the surrounding roadways.

Construction Noise

Construction of the proposed project would comply with MPCA noise standards. A noise study has not yet been conducted but will be completed if required.

Traffic Generated Noise

A sound increase of 3 dBA is barely noticeable by the human ear, a 5 dBA increase is clearly noticeable, and a 10 dBA increase is heard as twice as loud. For example, if the sound energy is doubled (i.e., the amount of traffic doubles), there is a 3 dBA increase in noise, which is just barely noticeable to most people. On the other hand, if traffic increases by a factor of 10, the resulting sound level will increase by about 10 dBA and be heard as twice as loud. Traffic volumes in the project area are either on roadways that do not have receivers that are sensitive to noise, or the traffic levels attributable to the project are well below the amount that would generate a sound increase that could be noticeable. The change in traffic noise levels is not anticipated to be readily perceptible.

Operational Noise

For the proposed Scenario, the main sources of noise include ventilation systems, industrial traffic and the use of generators tested once a month and in the case of emergency. Sensitive receptors within the project site vicinity include adjacent residential houses, and businesses. Further noise evaluation will be completed as design progresses and best practices to reduce noise will be implemented for the technology park uses to ensure compliance with local and state noise regulations. Noise attenuation measures such as sound walls or increased buffering

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from the property line (i.e. physical distance, berms, or dense landscaping) may be incorporated into project design to ensure that MPCA noise rules and City noise ordinances are followed.

20. Transportation

a. Describe traffic-related aspects of project construction and operation. Include 1) existing and proposed additional parking spaces; 2) estimated total average daily traffic generated; 3) estimated maximum peak hour traffic generated and time of occurrence; 4) source of trip generation rates used in the estimates; and 5) availability of transit and/or other alternative transportation modes.

Parking

The site is expected to provide approximately 90 parking spaces. This complies with the standards listed in Appendix B, Sec. 8-200 of the City of Faribault's Code of Ordinances.

Existing Conditions

The existing roadway network in the area includes I-35, 150th Street W, Bagley Avenue, and Acorn Trail. The following provides a brief description of the roadways within the study area:

Interstate 35 (I-35) is an interstate highway which serves as a major regional north-south connector. It is a four-lane divided freeway with two general travel lanes in each direction. I-35 is classified as an interstate with an existing Annual Average Daily Traffic (AADT) of 33,511 vehicles per near the study area, based on MnDOT data from 2023. The posted speed limit is 70 mph.

150th Street W (CSAH 9) is an east-west county road. It is a two-lane undivided road. 150th Street W is classified as a minor collector with an existing AADT of 322 vehicles per day near the study area, based on MnDOT data from 2023. There is no posted speed limit, therefore it is assumed to be the default Minnesota Statute speed limit of 55 mph.

Bagley Avenue (CSAH 46) is a north-south, two-lane undivided roadway. Bagley Avenue is classified as a major collector with an AADT of 1,700 vehicles per day, according to MnDOT data from 2008. The posted speed limit is 55 mph.

Acorn Trail (CSAH 76) is a north-south, two-lane undivided roadway. Acorn Trail is classified as a major collector with an AADT of 920 vehicles per day, according to MnDOT data from 2021. The posted speed limit is 50 mph.

Proposed Conditions – Site Access

The site is proposed to be accessed in two locations along Acorn Trail: one in the southern portion of the site and one in the northern portion of the site. An additional separate access to the substation maybe be provided along Acorn Trail; Access spacing will maintain minimum driveway spacing requirements as set forth by Rice County.

Traffic Generation

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Trip generation for the proposed development was estimated using average trip generation rates given in the Institute of Transportation Engineers' *Trip Generation Manual, 11th Edition*. Trip generation numbers are rounded up to the nearest multiple of 5. Trip generation was estimated using the Land Use Code (LUC) 160 – Data Center. The estimated trip generation of the development is given below in *Table* .

Table 10. Project Trip Generation

Land Use	Intensity	AM Peak Hour			PM Peak Hour			Daily
		Total	In	Out	Total	In	Out	
LUC 160 – Data Center	500 kSF	55	30	25	50	15	35	500

Transit

There are no public transit services available near the site.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. *If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: http://www.dot.state.mn.us/accessmanagement/resources.html) or a similar local guidance.*

A Traffic Impact Analysis was completed in February 2025 for the Archer Datacenter site. Based on the findings of the Archer Datacenter TIA, the area's transportation network is expected to support the development with mitigation.

Under all Existing (2025), Opening Year (2030) and Design Year (2045) conditions without the completion of the interchange at 150th Street, all study intersections are anticipated to operate acceptably, and no capacity improvements are expected to be necessary (see Table 11).

Under Design Year (2045) conditions with the addition of the interchange, both study intersections of 150th Street & Bagley Avenue and 150th Street & Acorn Trail are anticipated to operate at LOS F during the PM peak hour and will require improvements.

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Table 11: Existing and Projected Intersection LOS

Intersection	Existing LOS	No-Build LOS			Build Scenario LOS		
	2025	2030	2045	2045 Int[11]	2030	2045	2045 Int[11]
AM Peak Hour							
150th Street & Bagley Avenue	A	A	A	**E** (C)	A	A	**E** (C)
150th Street & Acorn Trail	A	A	A	A (B)	A	A	A (B)
Acorn Trail & North Access	-	-	-	-	A	A	A
Acorn Trail & South Access	-	-	-	-	A	A	A
PM Peak Hour							
150th Street & Bagley Avenue	A	A	A	**F** (C)	A	A	**F** (C)
150th Street & Acorn Trail	A	A	A	**F** (D)	A	A	**F** (D)
Acorn Trail & North Access	-	-	-	-	A	A	A
Acorn Trail & South Access	-	-	-	-	A	A	A

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

Existing (2025) Conditions

- No recommended mitigation

Opening Year (2030) No-Build Conditions

- No recommended mitigations

[11] 2045 with construction of the interchange at 150th Street. Mitigated conditions results indicated in parentheses (). No-Build mitigated conditions were not conducted but are not expected to differ from Build mitigated conditions significantly.

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Opening Year (2030) Build Conditions

- Install side street stop control at the site access points.

Design Year (2045) No-Build Conditions

- No recommended mitigation

Design Year (2045) Build Conditions

- Install side street stop control at the site access points.

Design Year (2045) No-Build with Interchange Conditions

- Install all-way stop at 150th Street W & Bagley Avenue
- Install eastbound and westbound left turn lanes at 150th Street W & Bagley Avenue
- Install traffic signal at 150th Street W & Acorn Avenue

Design Year (2045) Build with Interchange Conditions

- Install all-way stop at 150th Street W & Bagley Avenue
- Install eastbound and westbound left turn lanes at 150th Street W & Bagley Avenue
- Install traffic signal at 150th Street W & Acorn Avenue

21. Cumulative Potential Effects

a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

Cumulative effects are defined as the "effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects." The geographic areas considered for cumulative effects are those areas adjacent to the EAW study area, and the timeframe considered includes projects that would be constructed in the reasonably foreseeable future.

b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

Future private development projects may result in impacts to transportation, water resources, and utilities. These impacts will be addressed via the regulatory permitting and approval processes and will be individually mitigated to ensure minimal cumulative impacts occur.

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

Not Applicable.

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22. Other Potential Environmental Effects

If the project may cause any additional environmental effects not addressed by Items 1 to 21, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

All known environmental effects are addressed in the preceding sections.

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RGU Certification

*The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.*

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages, or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively,
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature _____ Date 5/14/25

Title CITY PLANNING MANAGER

Figures

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Figure 1: County Map

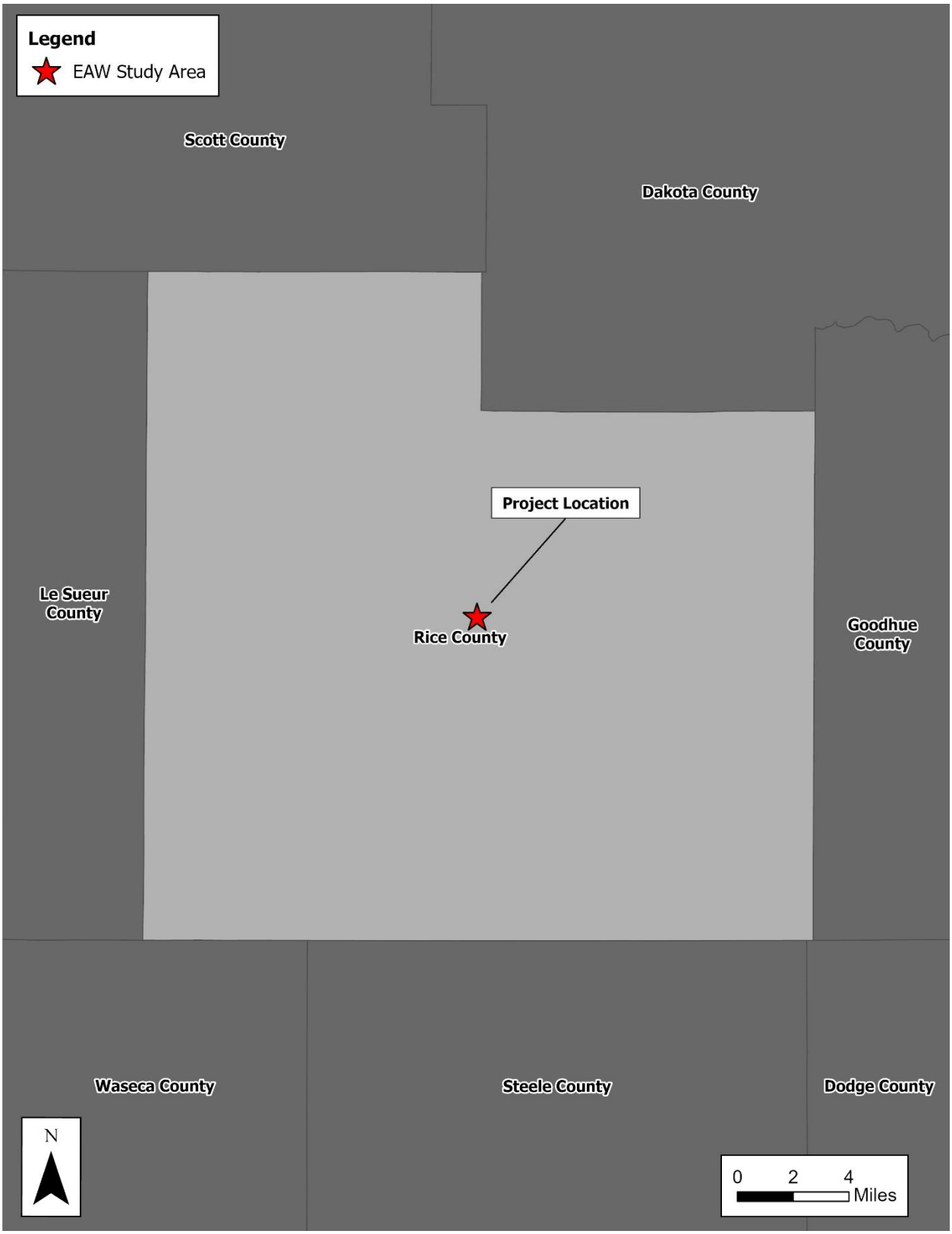


Figure 2: USGS Map

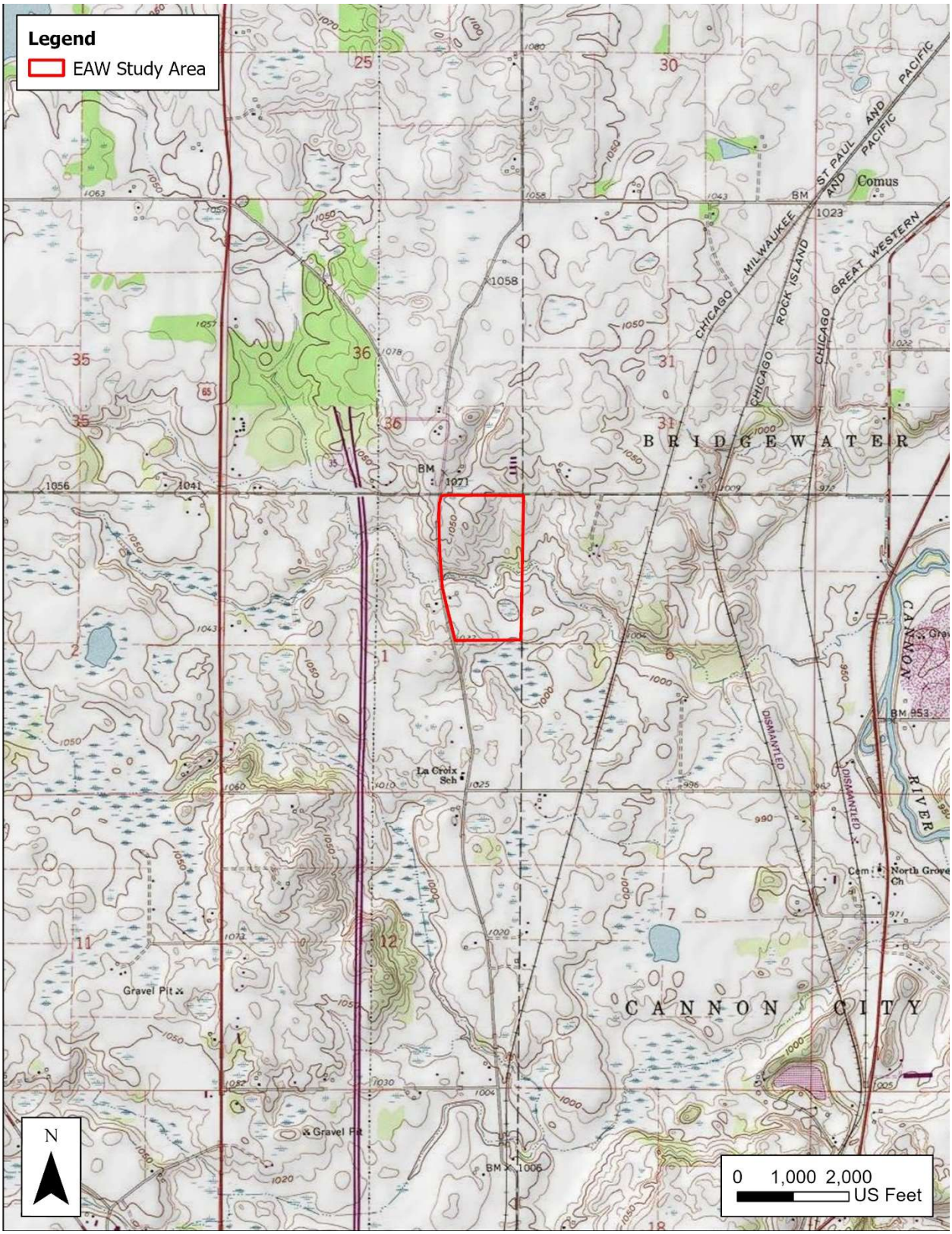


Figure 2: Existing Conditions



Figure 4: Cover Types

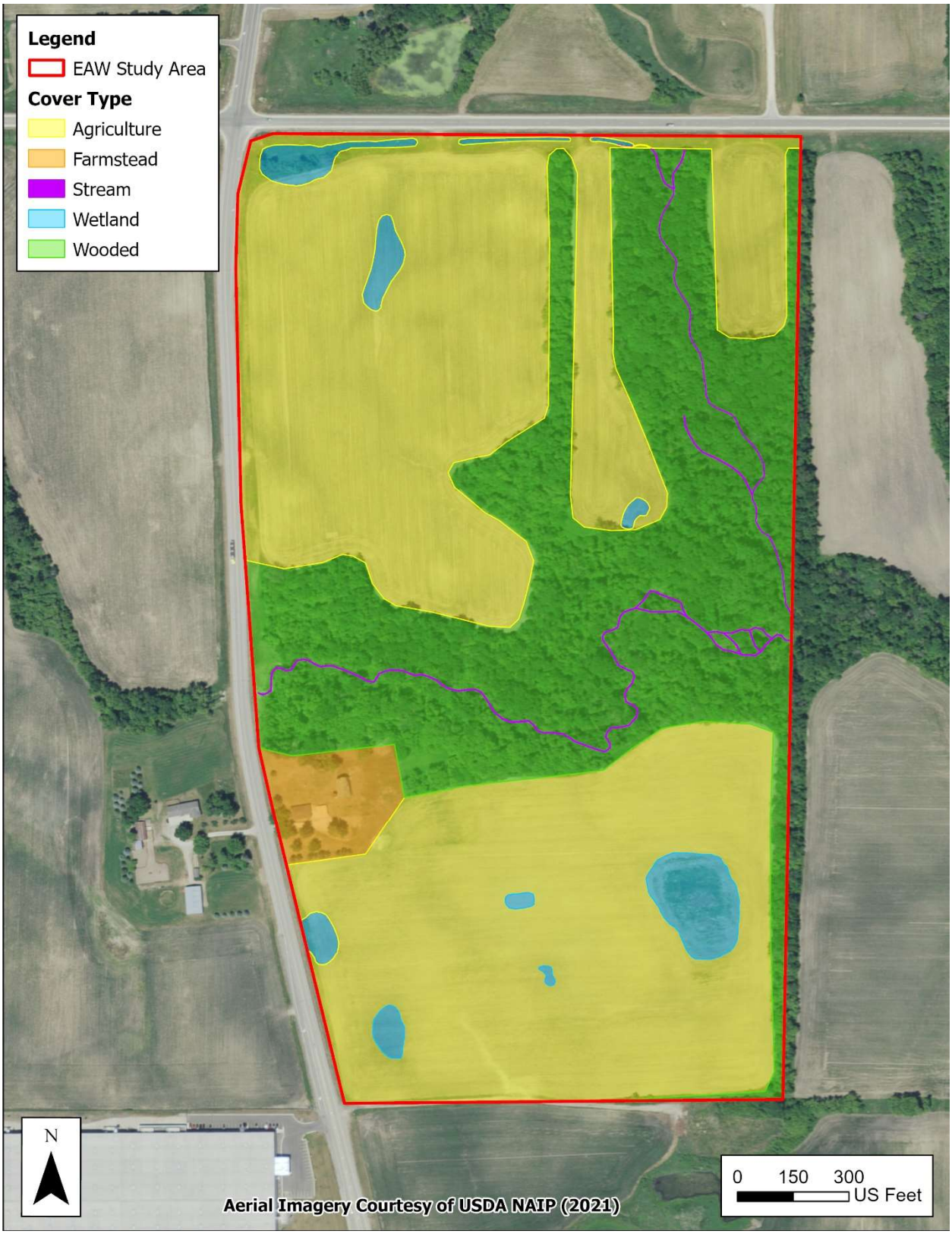


Figure 5: Existing Land Use



Figure 6: Future Land Use



Figure 7: Existing Zoning

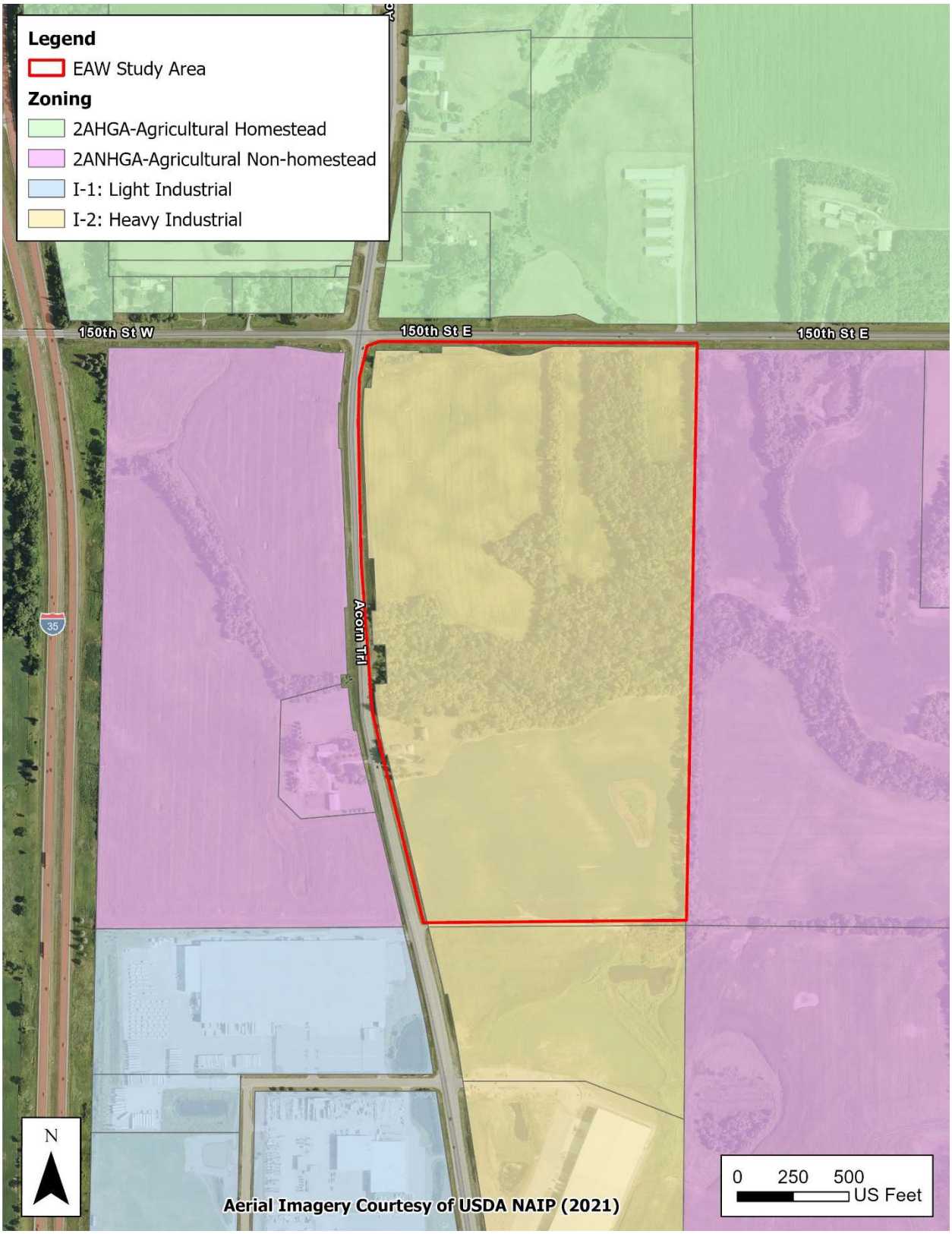


Figure 8: Soil Types

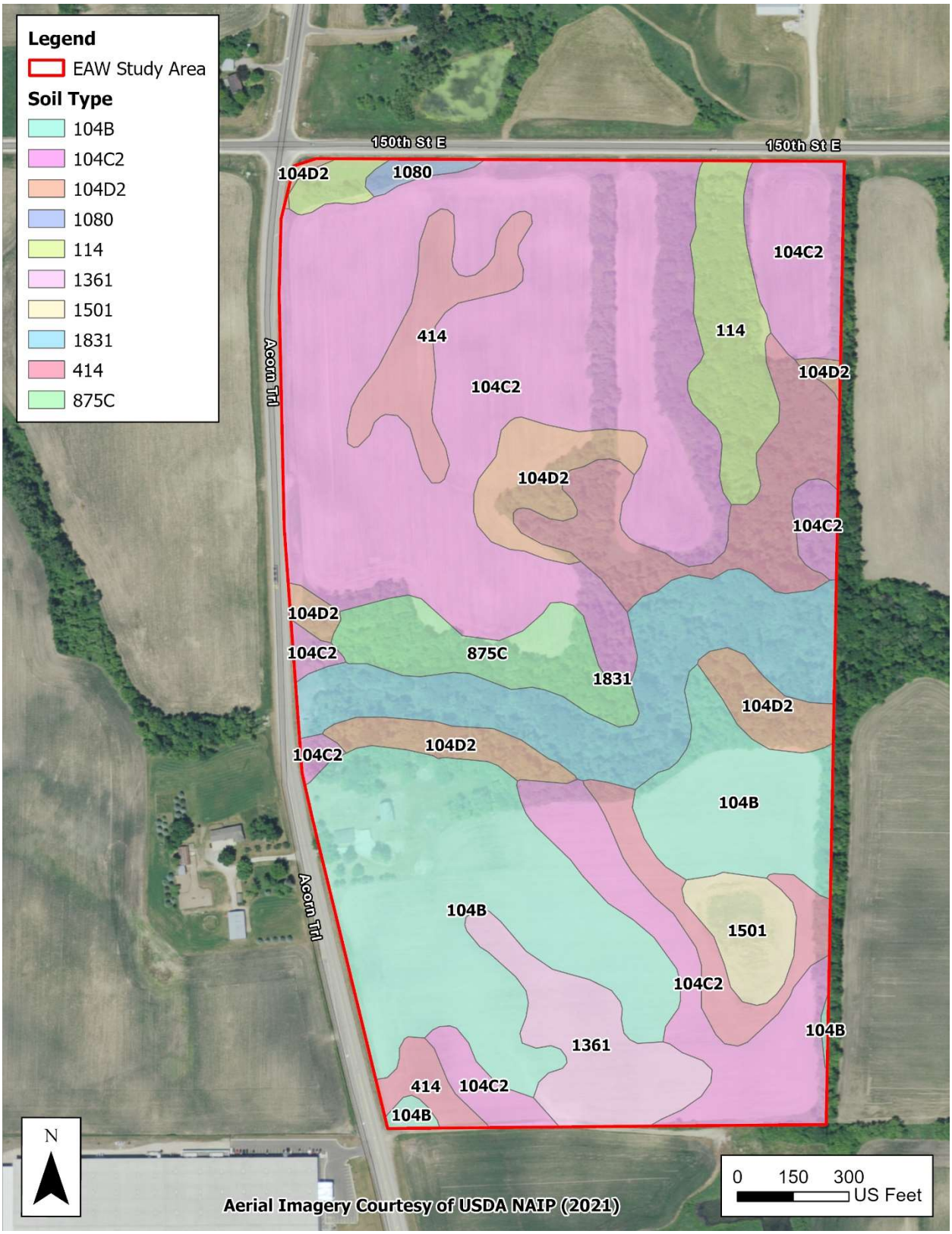


Figure 9: Surface Water Resources

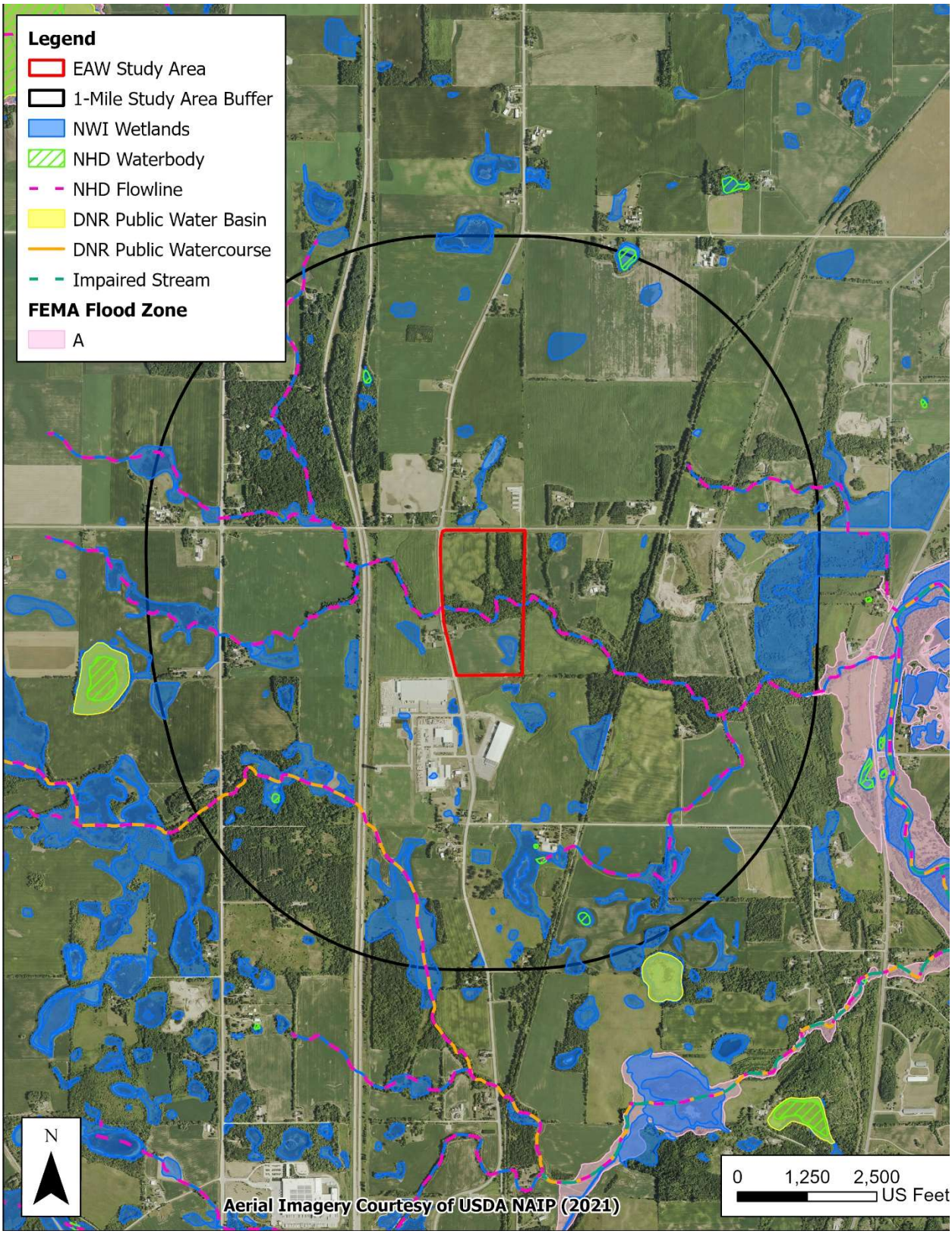


Figure 10: Groundwater Resources



Figure 11: Delineation Summary

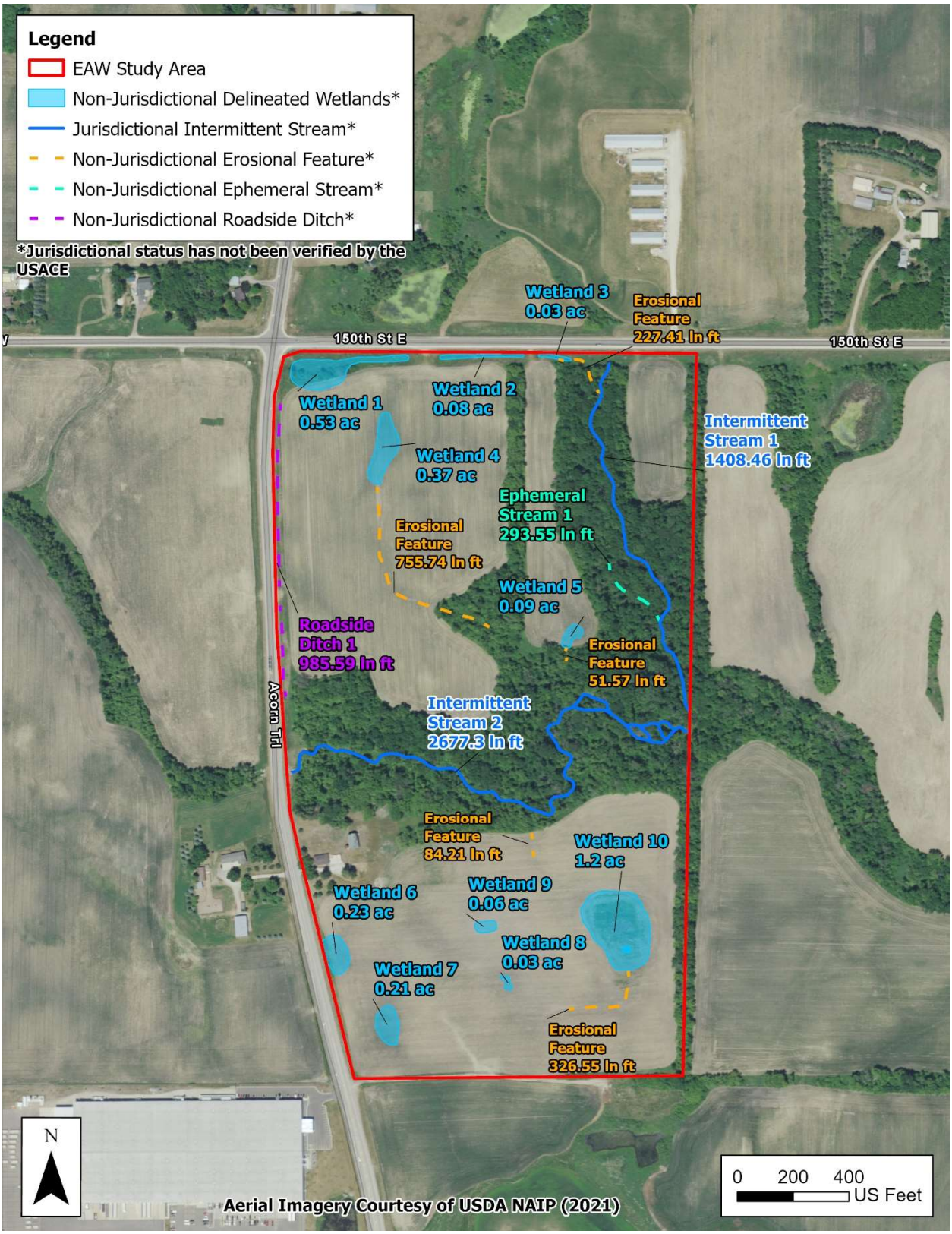
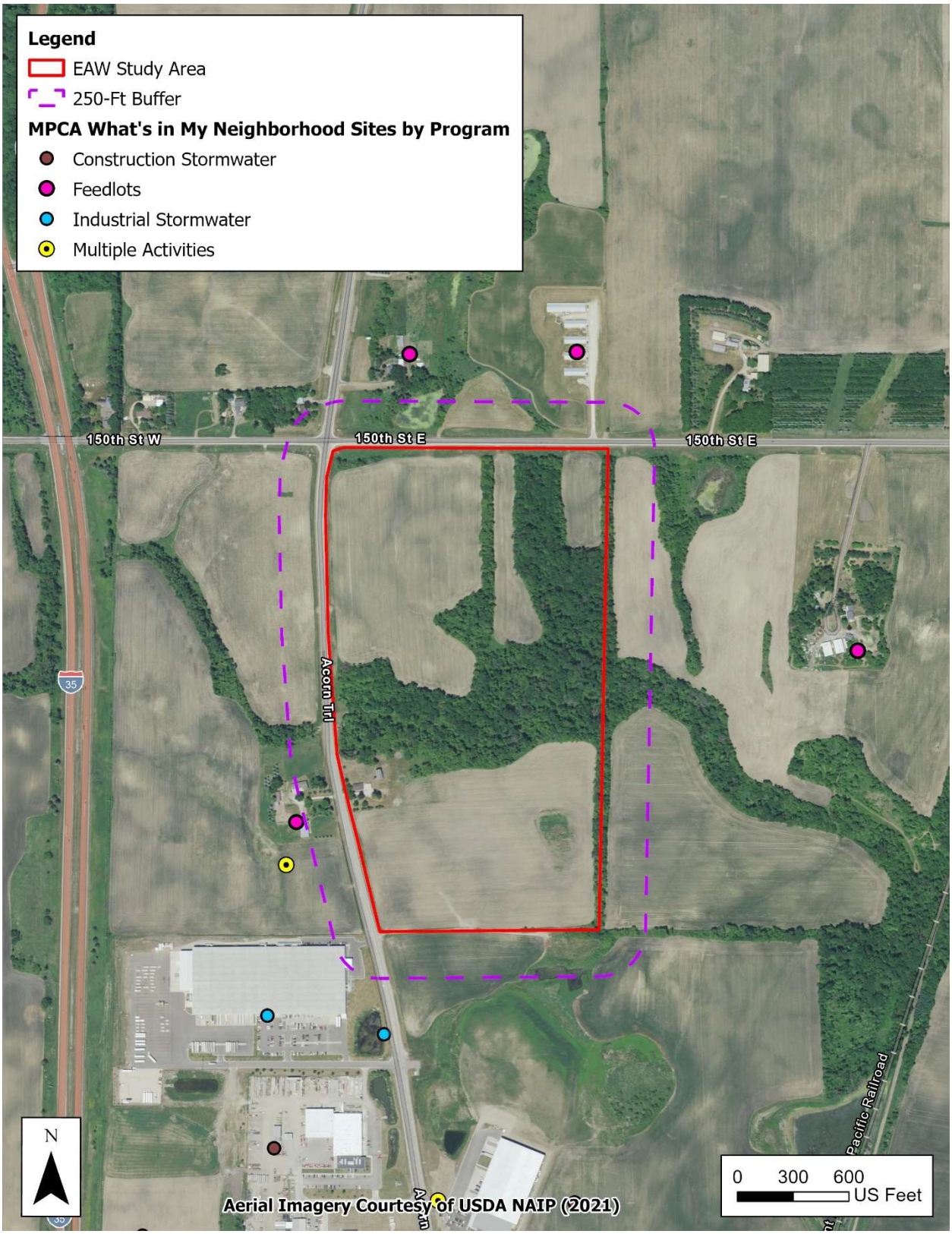


Figure 12: MPCA What's in My Neighborhood



Appendix A

Concept Site Plan

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VICINITY MAP
NOT TO SCALE

GRAPHIC SCALE IN FEET
0 75 150 300

ARCHER DATACENTERS - FARIBAULT, MN

Campus Concept Site Plan - 01

Faribault, MN

Project # 161236000 August 4, 2024

Kimley»Horn

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Appendix B

Wetland Delineation Report

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Wetland Delineation Report

Faribault Site

City of Faribault

Rice County, Minnesota

Prepared for:

Archer DataCenters
70 Bacon Road
Old Westbury, NY 11568

Prepared by:

Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100
Saint Paul, MN 55114

September 2024

FINAL

Kimley»Horn

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Appendix A: Hydric Soils Information

Appendix B: Historic Aerial Review

Appendix C: Precipitation Data

Appendix D: Field Data Sheets

Appendix E: Photos

Executive Summary

Wetland scientists, Mason Kunkel and Lukas Struss with Kimley-Horn and Associates, Inc. conducted a wetland investigation and field delineation for Archer DataCenters and the Faribault Site in Faribault, Rice County, Minnesota. The wetland investigation and delineation included 84 acres in parcel ID #1801100033, within Section 1, Township 110N, and Range 21W (the “study area”). A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010)* occurred on June 27, July 3, and August 13, 2024.

In total 10 wetlands and 3 streams were delineated and are described in Table 1.

1 Introduction

Wetland scientists Mason Kunkel and Lukas Struss with Kimley-Horn and Associates, Inc. conducted a wetland investigation and field delineation for Archer DataCenters and the Faribault Site in Faribault, Rice County, Minnesota. The wetland investigation and delineation included 84 acres in parcel ID #1801100033, within Section 1, Township 110N, and Range 21W (the "study area"). The study area is shown in **Figure 1.** The study area consists of agricultural land and forested land. Cover types within the study area include cultivated crops, deciduous forest, wetland, and streams.

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010)* occurred on June 27, July 3, and August 13, 2024. The purpose of this delineation was to identify the extent of wetlands within the study area. The information will be used to facilitate project design and determine if aquatic resource impacts are avoidable and/or if minimization of impacts can result from design modifications.

2 Project Description

Archer DataCenters is proposing to develop the parcel.

3 Statement of Qualifications

Kimley-Horn has extensive experience completing wetland investigations and delineations across the United States. Kimley-Horn's personnel has been trained to use the *1987 Corps of Engineers Wetlands Delineation Manual (USACE, 1987)* along with the applicable regional supplements. Kimley-Horn has experience completing off-site hydrology analysis, historic aerial reviews, and difficult or atypical situation delineations.

Ashley Payne earned a Bachelor of Arts Degree in Environmental Biology from Saint Mary's University of Minnesota. She is an environmental scientist with 16 years of experience specializing in wetland services environmental documentation and assessments, and geographic information systems mapping and data collection. During the last 16 years, she has successfully completed hundreds of delineations for various types of projects. In the last seven years, Ashley's primary focus has been the delineation of agricultural fields for future development. She is familiar with completing historic aerial reviews and off-site hydrology determinations which are required for delineation of farmed wetlands. Ashley has also obtained environmental permits for clients through efficient and thorough preparation of permit applications, and by coordinating with agency personnel. Ashley is a certified delineator in the state of Minnesota and her primary focus is environmental work in the Midwest. She has extensive experience working in Minnesota, Illinois, Wisconsin, Michigan, Iowa, and South Dakota.

Keller Leet-Otley earned a Bachelor of Arts Degree in Environmental Science from Colby College. He is an environmental scientist who specializes in wetland delineation and permitting, geographic information systems mapping, and threatened and endangered species due diligence. He has led the delineation of agricultural fields, roadway corridors, and undeveloped areas for future development and transit projects. He is proficient using ArcGIS to produce client specific exhibits for various project types. Keller has prepared environmental permit applications and documentation for public and private sector clients. He is a certified delineator in the state of Minnesota and his focus is environmental work in the upper Midwest.

Mason Kunkel earned a Bachelor of Science Degree in Biology with an emphasis in Wildlife Conservation from Western Colorado University. He is a biologist who specializes in wetland delineation and geographic information systems mapping. He has assisted with the delineation of agricultural fields, roadway corridors,

and undeveloped areas for future development and transit projects. He is proficient using ArcGIS to produce client specific exhibits for various project types. He is familiar with completing historic aerial reviews and off-site hydrology determinations which are required for delineation of farmed wetlands. He has extensive experience working in Minnesota, Iowa, Illinois, and Michigan.

Lukas Struss is a going into his senior year of college seeking a Bachelor of Science Degree in Environmental Science – Geosciences, along with a minor in Sustainability at the University of St. Thomas. He has experience with GIS mapping, research, soil systems, hydrogeology, and wetland delineation in Minnesota. Lukas has worked in completing delineations for agricultural areas along with forested areas through geographic information systems mapping, along with historic aerial analysis.

4 Regulatory Requirements

A summary of the permit requirements that may pertain to the project is provided below. Any activity planned within areas identified as wetland must be coordinated with and approved by the appropriate agencies prior to commencement of such activities.

Agencies in Minnesota that regulate activities that affect lakes, rivers, streams, and wetlands include:

- U.S. Army Corps of Engineers (USACE)
  - Section 404 of the Clean Water Act
- Local Governmental Units (LGUs)
  - Wetland Conservation Act (WCA)

The LGU for this project is Rice County Soil and Water Conservation District (SWCD). The WCA applies to nearly all wetlands not regulated by the DNR.

The regulatory authority of the U.S. Army Corps of Engineers (USACE) covers Waters of the United States (WOTUS) in accordance with Section 404 of the Clean Water Act. Generally, the USACE reviews delineations to determine whether wetlands are jurisdictional (i.e., WOTUS). On December 30, 2022, the U.S. Environmental Protection Agency and Department of the Army ("the agencies") announced the final "Revised Definition of 'Waters of the United States'" rule. The rule took effect on March 20, 2023. Based on a preliminary federal injunction on April 12, 2023, the Revised Definition was revoked and the pre-2015 regulatory regime is in effect for 27 states. In Minnesota, the 2023 Revised Definition of the Waters of the United States is in effect as of the date of this report. As of September 8, 2023, the EPA and the Department of the Army amended the WOTUS rule to conform to the 2023 Supreme Court decision in Sackett v. EPA.

Based on the May 25, 2023 ruling of Sackett v. EPA (2023), the Clean Waters Act's use of "waters" encompasses only relatively permanent, standing, or continuously flowing bodies, ordinarily called streams, oceans, rivers, and lakes. Wetlands qualify as WOTUS only if "indistinguishable from waters of the United States," having a continuous surface connection to bodies that are waters of the United States in their own right, with no clear division between waters and wetlands.

In Minnesota, a joint application process has been developed for projects with anticipated wetland impacts. Applications are coordinated between the USACE, DNR, and LGU.

5 Mapping and Background Information

Prior to field reconnaissance, potential wetland areas within the project study areas were identified through a desktop review of United States Geological Survey (USGS) Topographic maps, National Wetlands Inventory (NWI), National Hydrography Dataset (NHD), Department of Natural Resources (DNR) Public Waters Inventory (PWI), LiDAR, the soil survey for Rice County, Federal Emergency Management Agency

(FEMA) Flood Insurance Rate Maps (FIRM), aerial photography (2021), and antecedent precipitation for a location near the study area. The selected resources are described below:

5.1 Topographic Map

The Saint Paul, MN 7.5-minute United States Geological Survey (USGS) topographic map and LiDAR data from the DNR's MnTOPO web application were reviewed for the study area. According to the USGS topographic map (see **Figure 2**), the study area is largely undeveloped, partially wooded land with a nearby residence. There is an intermittent stream bisecting the central portion of the study area. There is a wetland depicted in the southeastern portion of the study area. The LiDAR map depicts the site sloping south and north towards the central intermittent stream. The site ranges from 992 feet (above mean sea level) to 1,066 feet, see **Figure 3**.

5.2 National Wetlands Inventory

NWI mapping, available from the Minnesota DNR (updated in 2021), depicts potential wetland areas and waterbodies based on stereoscopic analysis of high altitude and aerial photographs and was reviewed for the study area. According to the NWI map, there is a linear wetland feature (R4SBC) in the central portion of the study area, and another wetland feature (PEM1Af) in the southeastern portion of the study area, **see Figure 3**.

5.3 National Hydrography Dataset

The National Hydrography Dataset (NHD), available from USGS, depicts drainage networks and related features, including rivers, streams, canals, lakes, and ponds. The NHD dataset is not field verified. According to NHD mapping, there is one NHD flowline in the central portion of the study area that approximately aligns with the NWI mapped feature**, see Figure 3**.

5.4 DNR Public Waters Inventory

The Department of Natural Resources (DNR) Public Waters Inventory (PWI) depicts DNR Public Waterways and Waterbodies. According to the PWI inventory, are no public waterways within or in the vicinity of the study area.

5.5 Soil Survey

The Natural Resources Conservation Service's (NRCS) *Web Soil Survey* for Rice County was reviewed for the study area. According to the survey, there are ten soil mapping units within the study area which are generally loams, clay loams, and silt loams. Approximately 73% of the study area was mapped with soils with a non-hydric or predominantly non-hydric soil rating from 0% to 8%. The remainder of the study area is mapped with a predominately hydric or hydric soil rating of 90-100%. Maps and information obtained from the NRCS online web soil survey are included in **Appendix A and Figure 4**.

5.6 Federal Emergency Management Agency Floodplain

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) was reviewed for the project study area. According to the FEMA, FIRM, the study area is located in Zone X of panel 27131C0260D (effective April 03, 2012), which is outside the designated 100-year and 500-year floodplain zones, see **Figure 5**.

5.7 Precipitation

Precipitation data for the study area were obtained from the U.S. Army Corps of Engineers Antecedent Precipitation Tool. WETS (Wetlands) tables were reviewed for climate stations within the vicinity of the study area to determine the current hydrologic conditions for the site and if those conditions are typical for

this time of year. Ninety-day rolling precipitation levels leading up to the field review were compared to historical data. The data show that April, May, June, and July months had wetter than normal, and August had normal precipitation levels. In summary, all the field visits constituted wetter than normal precipitation conditions. This information is included in **Appendix C.**

5.8 Aerial Photography Review

Aerial photography, acquired from Google Earth, was reviewed to identify the potential for wetlands across the site. Fourteen photos were reviewed between 1991 and 2024, available in **Appendix B**. These photos were used to determine the presence of wetland hydrology using industry accepted offsite hydrology analysis for areas showing crop stress or other potential wetland signatures. Each image was interpreted for the presence or lack of hydrologic indicators.

Twelve Areas of Investigation (AOIs) were identified in the study area. AOIs 1, 2, 7, 8, 9, and 10 had wetland signatures in at least 30% of the historic aerials with normal precipitation conditions, met primary or secondary hydrology indicators during the field delineation, and were delineated as Wetland 4, 5, 10, 6, 7, and 8 respectively. AOIs 3, 4, 5, and 12 did not have wetland signatures in at least 30% of the historic aerials with normal precipitation conditions and lacked hydrology indicators or hydric soils in the field; thus, these areas were not delineated as wetland. AOIs 6 and 11 also did not meet wetland signatures in at least 30% of the historic aerials with normal precipitation conditions but met primary or secondary hydrology indicators during the field delineation and were delineated as Wetland 1 and 9, respectively. The AOIs are shown in **Appendix B**.

6 Field Investigation

A routine level 2 (onsite) wetland delineation, as outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (January 1987) along with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010)* occurred on June 27, July 3, and August 13, 2024.

During the onsite delineation, vegetation, soils, and current hydrologic characteristics were evaluated at each wetland area and area of investigation identified within the study area. Wetland boundaries were flagged with a Geode GPS until one or more of the three criteria were no longer present. The sample point locations, wetland boundaries, and aquatic features were surveyed with a Geode GPS and are shown in **Figure 6**.

In addition to wetlands that were investigated and delineated, non-wetland aquatic features were delineated. Non-wetland aquatic features are defined based on the observation of the following characteristics:

- Flow
    - Perennial: contains water at all times of the year except during extreme drought
    - Intermittent: contains water occasionally or seasonally
    - Ephemeral: contains water only during and immediately after periods of rainfall or snowmelt
- Ordinary High Water Mark (OHWM): The limit line on the shore established by the fluctuation of the water surface. It is shown by such things as a clear 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
- Bank Shape
    - Undercut: banks that overhang the stream channel
    - Steep: bank slope of approximately greater than 30 degrees
    - Gradual: bank slope of approximately 30 degrees or less

Sample points were completed for Wetlands 1, 2, and 4-10. Some wetlands exhibited similar wetland and upland plant communities and were in close proximity to one another; these wetlands were documented with representative sample points, such as Wetland 3. There were three streams throughout the site, which included one ephemeral and two intermittent streams, see **Figure 6**. Upland linear features were documented onsite and are included on Figure 6 to demonstrate surficial connections between resources. Non-wetland linear features include erosional features and roadside ditches. Erosional features contained drainage patterns but lacked vegetation. Roadside ditches contained upland vegetation along roadside areas. Historical Aerials were reviewed for sample points taken in agricultural fields. The field data sheets are included in **Appendix D**. Site photos and a photo locations map can be found in **Appendix E**.

7 Summary of Results

Table 1: Delineation Summary

Resource ID	Wetland Plant Community	HGM[1]	C-39 Type[2]	Cowardin Classification[3]	Size (acres/linear feet)[4]	NWI?	Hydric Soils?[5]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[6]
Wetlands											
Wetland 1	Seasonally Flooded Basin / Wet Meadow / Scrub Shrub	Depression	Type 1,2,6	PSSA PEMB PEMAf	0.53 acres	No	Yes	1-5	SP-6, SP-7 (Wet) SP-8 (Up)	Wetland complex located in a depression that connects to a roadside ditch in the northwest corner of the study area. The wetland collects runoff from the surrounding landscape and conveys drainage east towards a culvert. The wetland boundary was based on the change in topography, presence of hydric soil, hydrophytic vegetation dominance, and aerial photography analysis.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a Traditionally Navigable Water (TNW) or Relatively Permanent Water (RPW). WCA Regulated
Wetland 2	Wet Meadow / Shallow Marsh	Depression	Type 2,3	PEMB	0.07 acres	No	No	6	SP-4 (Wet) SP-5 (Up)	Wetland complex located in roadside ditch along the northern boundary of the study area. The wetland collects runoff from the surrounding landscape and conveys drainage east towards a culvert. The wetland boundary was based on the change in topography and, hydrophytic vegetation dominance.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. Not regulated under WCA

[1] The Hydrogeomorphic classification system for Minnesota can be found here: https://bwsr.state.mn.us/sites/default/files/2022-07/HGM%20Wetland%20Classification%20System%20for%20MN.pdf
[2] The Circular 39 wetland types are found here: https://bwsr.state.mn.us/sites/default/files/2018-12/WETLANDS_delin_Circular_39_MN.pdf
[3] The Cowardin Classification System codes are found here: https://www.fws.gov/wetlands/documents/Wetlands-and-Deepwater-Habitats-Classification-chart.pdf
[4] Size of wetland features and additional areas investigated provided in acres and size of non-wetland, linear features provided in linear feet.
[5] Areas identified as hydric contain partially hydric soils (equal to or greater than 33% of soil component) mapped within the resource area.
[6] Regulatory Status is based on best professional judgment and has not been verified with agency staff.

Resource ID	Wetland Plant Community	HGM[1]	C-39 Type[2]	Cowardin Classification[3]	Size (acres/linear feet)[4]	NWI?	Hydric Soils?[5]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[6]
Wetland 3	Seasonally Flooded Basin	Depression	Type 1	PEMB	0.03 acres	No	No	7	SP-4 (Wet) SP-5 (Up)	Wetland located in a roadside ditch along the northern boundary of the study area. The wetland collects runoff from the surrounding landscape and conveys drainage east to an erosional feature. The wetland boundary was based on hydrophytic vegetation dominance and a change in topography. The wetland was documented with representative sample points SP-4 and SP-5.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. Not regulated under WCA
Wetland 4	Seasonally Flooded Basin	Depression	Type 1	PEMAf	0.36 acres	No	Yes	32-34	SP-9 (Wet) SP-10 (Up)	Wetland located in depression in the central agricultural portion of the study area. The wetland collects runoff from the surrounding landscape and drains south via an erosional feature. The wetland boundary was based on the change in topography, presence of hydric soil, and aerial photography analysis.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. WCA Regulated
Wetland 5	Seasonally Flooded Basin	Depression	Type 1	PEMAf	0.08 acres	No	No	16-18	SP-11 (Wet) SP-12 (Up)	Wetland located in depression in the eastern portion of the study area. The wetland collects runoff from the surrounding landscape and conveys drainage south via an erosional feature. The wetland boundary was based on the change in topography, presence of hydric soil, and aerial photography analysis.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. WCA Regulated
Wetland 6	Seasonally Flooded Basin	Depression	Type 1	PEMAf	0.23 acres	No	No	37-39	SP-23 (Wet) SP-24 (Up)	Wetland located in depression in the southwest portion of the study area. The wetland collects runoff	Non-Jurisdictional (USACE): does not have a continuous

Resource ID	Wetland Plant Community	HGM[1]	C-39 Type[2]	Cowardin Classification[3]	Size (acres/linear feet)[4]	NWI?	Hydric Soils?[5]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[6]
										from the surrounding landscape. The wetland boundary was based on the change in topography, presence of hydric soil, and aerial photography analysis.	surficial connection to a TNW or RPW. WCA Regulated
Wetland 7	Seasonally Flooded Basin	Depression	Type 1	PEMAf	0.21 acres	No	Yes	40-41	SP-25 (Wet) SP-26 (Up)	Wetland located in depression in the southwest portion of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography, presence of hydric soil, and aerial photography analysis.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. WCA Regulated
Wetland 8	Seasonally Flooded Basin	Depression	Type 1	PEMAf	0.03 acres	No	Yes	43-44	SP-16 (Wet) SP-17 (Up)	Wetland located in depression in the southern portion of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography, and aerial photography analysis.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. WCA Regulated
Wetland 9	Seasonally Flooded Basin	Depression	Type 1	PEMAf	0.06 acres	No	No	46-47	SP-19 (Wet) SP-20 (Up)	Wetland located in depression in the south-central portion of the study area. The wetland collects runoff from the surrounding landscape. The wetland boundary was based on the change in topography, presence of hydric soil, and aerial photography analysis.	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. WCA Regulated
Wetland 10	Seasonally Flooded Basin / Shallow Marsh	Depression	Type 1, 3	PEMAf	1.19 acres	PEM1Af	Yes	48-50	SP-21 (Wet) SP-22 (Up)	Wetland located in depression in the southeastern portion of the study area. The wetland collects runoff from the surrounding landscape and an erosional feature. The wetland boundary was based on the change in topography, hydrophytic	Non-Jurisdictional (USACE): does not have a continuous surficial connection to a TNW or RPW. WCA Regulated

Resource ID	Wetland Plant Community	HGM[1]	C-39 Type[2]	Cowardin Classification[3]	Size (acres/linear feet)[4]	NWI?	Hydric Soils?[5]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[6]
										vegetation dominance, and aerial photography analysis.	
Non-Wetland Aquatic Resources											
Intermittent Stream 1	-	-	-	R4SBC	1408 ln ft	N/A	Yes	8,11,14,19	-	Intermittent Stream 1 was located in the eastern portion of the site and collected drainage from the surrounding landscape, Ephemeral Stream 1, and an erosional feature. The stream drained southwest offsite. The stream had steep banks 3 to 4 feet deep and 7 to 10 feet wide. Flowing water was observed entering the stream through the culvert and flowing offsite. Water levels were approximately 4 to 12 inches in depth.	Tributary classifies as a RPW and contributes surface water flow to an offsite TNW.
Intermittent Stream 2	-	-	-	R4SBC	2689 ln ft	R4SBC	Yes	21,23,25, 27	-	Intermittent Stream 2 was located in the southern portion of the site and collected drainage from the surrounding landscape and a culvert. The stream drained southwest offsite connecting to Intermittent Stream 1 outside of the study area. The stream had steep banks 3 to 6 feet deep and 6 to 12 feet wide. Flowing water was observed entering the stream through the culvert and flowing offsite. Water levels were approximately 8 to 18 inches in depth.	USACE-Jurisdictional: tributary classifies as a RPW and contributes surface water flow to an offsite TNW or RPW.
Ephemeral Stream 1	-	-	-	-	293 ln ft	N/A	Yes	15	-	Ephemeral Stream 1 was located in the east-central portion of the site and	Non-Jurisdictional

Resource ID	Wetland Plant Community	HGM[1]	C-39 Type[2]	Cowardin Classification[3]	Size (acres/linear feet)[4]	NWI?	Hydric Soils?[5]	Photo ID	Associated Sample Points	NOTES	Regulatory Status[6]
										collected drainage from the surrounding landscape. The stream conveyed drainage into Intermittent Stream 1. The stream had gentle 1 ft banks and was 2 to 4 feet wide. Flowing water was observed. Water levels were approximately 2-4 inches in depth.	(USACE): does not meet the definition of a TNW or RPW.

8 Report Preparation

The procedures followed for this wetland delineation are in accordance with the *Corps of Engineers Wetlands Delineation Manual* and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (August 2010).

This report describes site conditions for a specific date in time and is generally valid for a period of five years from the date of the final field investigation and delineation, which was June 27, July 3, and August 13, 2024.

9 Conclusion

The field delineation identified ten wetlands, two intermittent streams, one ephemeral stream, five erosional features, and one roadside ditch within the study area. Each of the delineated resources are described in Table 1. The erosional features and roadside ditches are not included in Table 1 but have been included for reference in Figure 6 to demonstrate surficial connections between resources. Wetlands 1-10 and Ephemeral Stream 1 are expected to be USACE non-jurisdictional. Intermittent Streams 1 and 2 are anticipated to be USACE-jurisdictional. Wetlands 2 and 3 are not anticipated to be regulated under WCA, while Wetland 1 and Wetlands 4 -10 are anticipated to be regulated under WCA.

10 Disclaimer

Kimley-Horn has prepared this document based on limited field observations and our interpretation, as scientists, of applicable regulations and agency guidance. While Kimley-Horn believes our interpretation to be accurate, final authority to interpret the regulations lies with the appropriate regulatory agencies. Regulatory agencies occasionally issue guidance that changes the interpretation of published regulations. Guidance issued after the date of this report has the potential to invalidate our conclusions and/or recommendations and may cause a need to reevaluate our conclusions and/or recommendations.

Because Kimley-Horn has no regulatory authority, the Client understands that proceeding based solely upon this document does not protect the Client from potential sanction or fines from the applicable regulatory agencies. The Client acknowledges that they have the opportunity to submit documentation to the regulatory agencies for concurrence prior to proceeding with any work. If the Client elects not to do so, then the Client proceeds at their sole risk.

References

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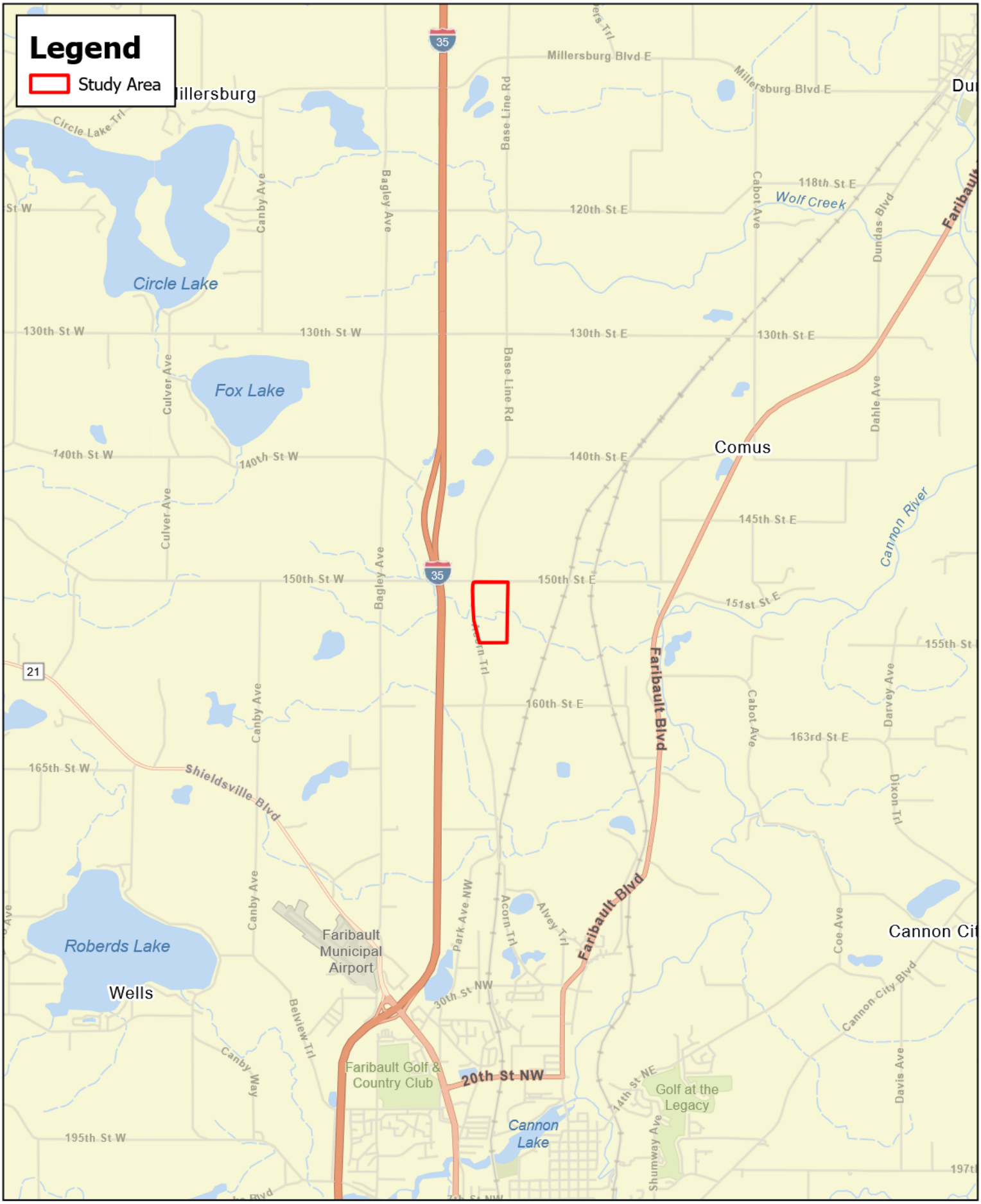
Figures

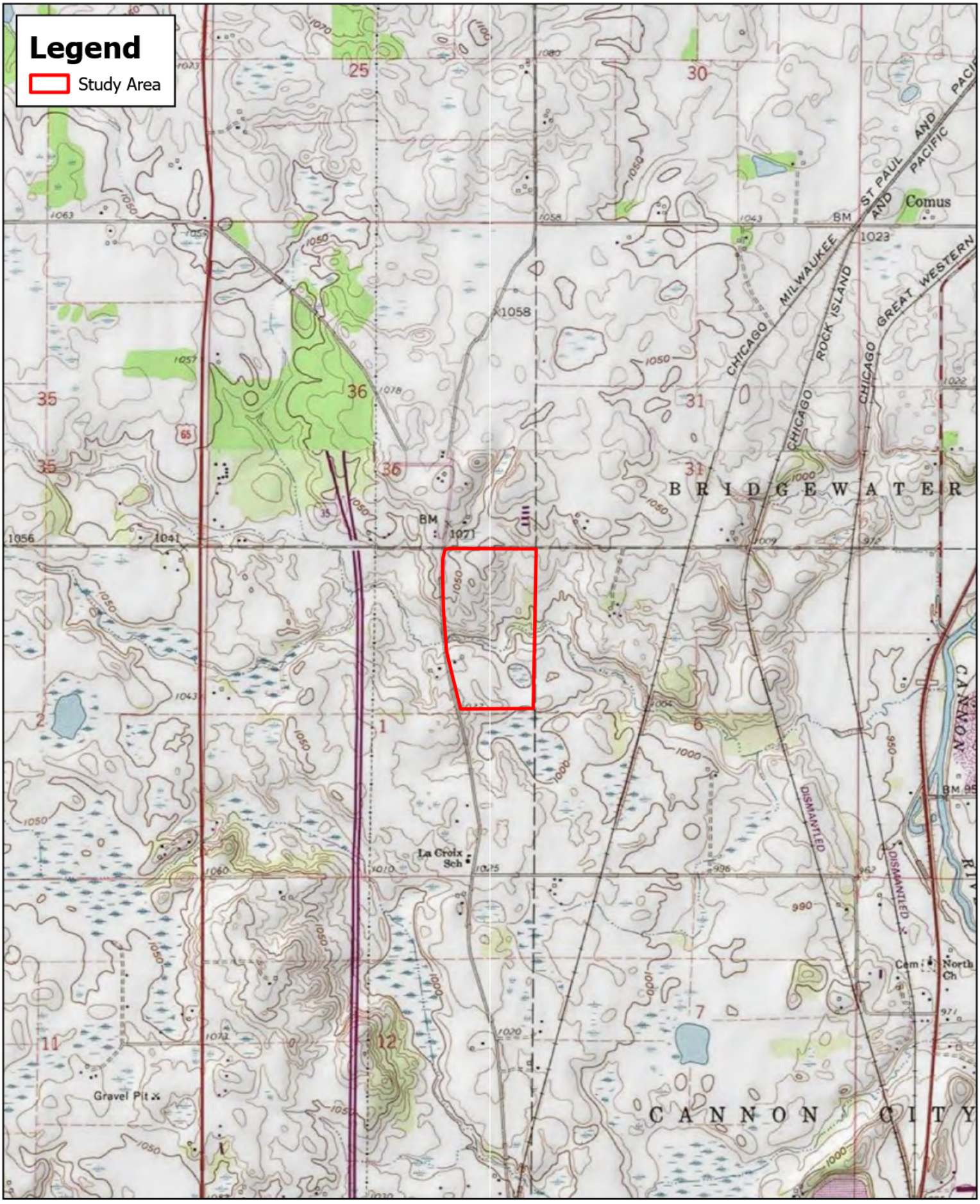


Kimley»Horn

0 0.5 1 Miles

N

Figure 1. Project Location Map
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

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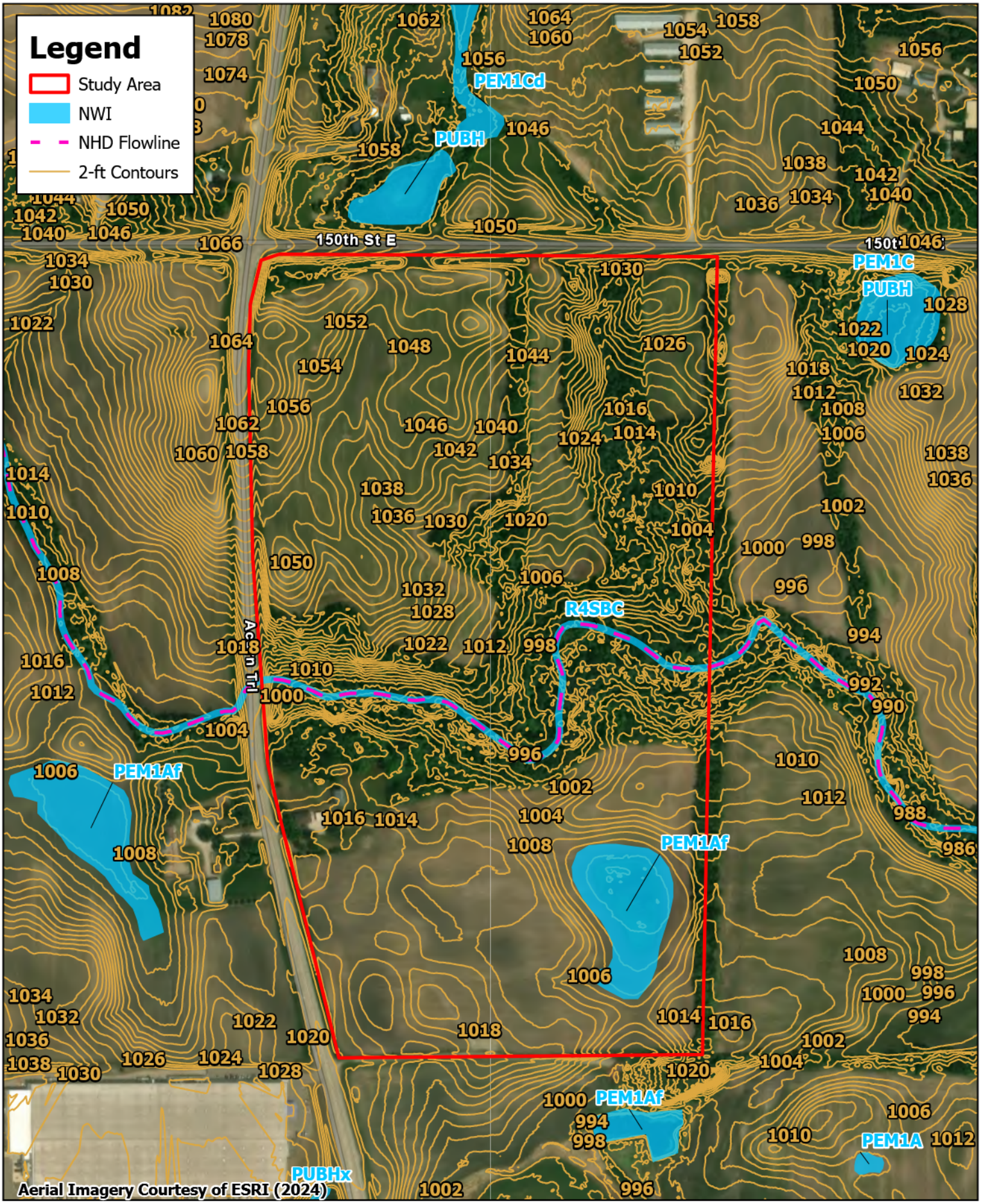
Figure 2. USGS Topographic Map
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

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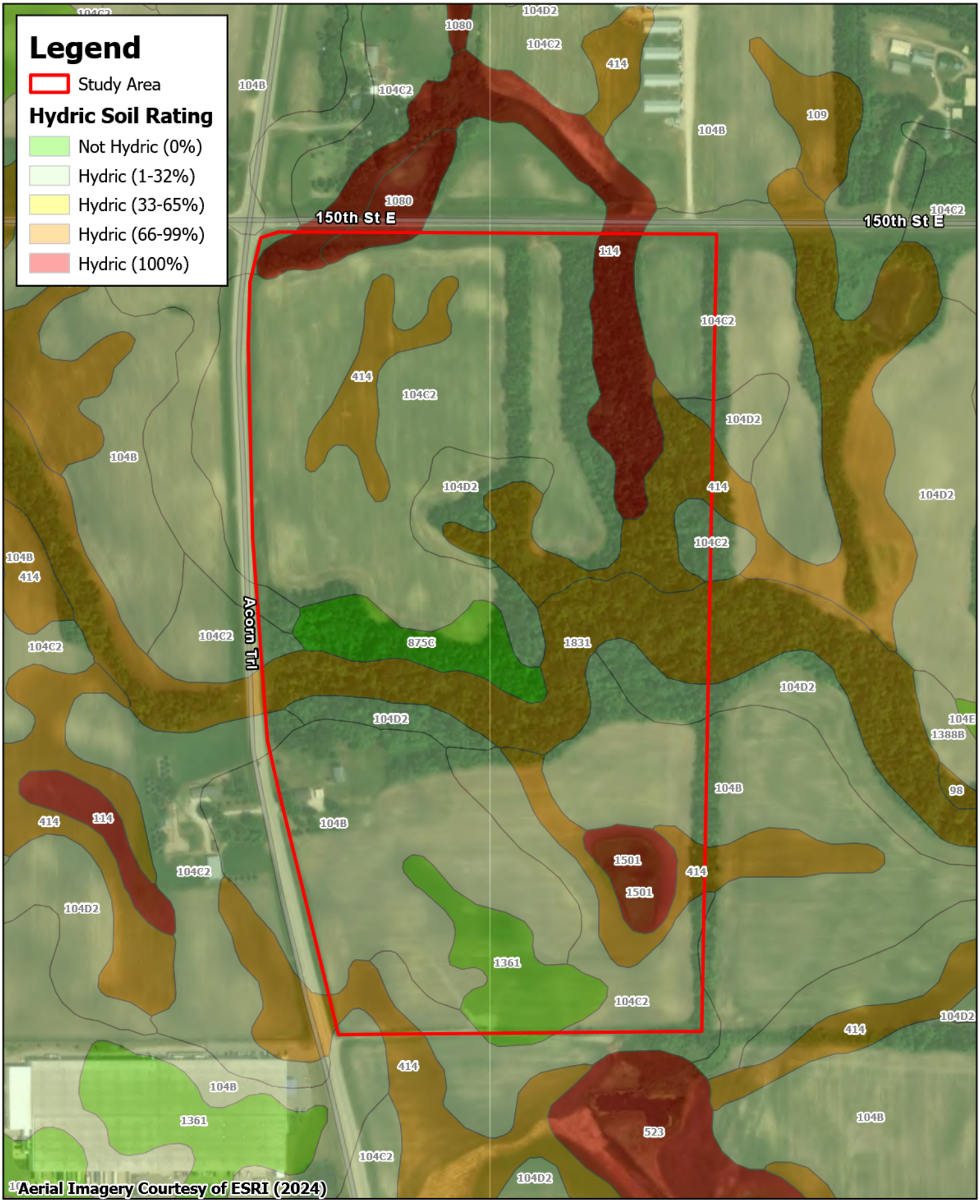
Figure 3. NWI, NHD, 2-ft Contours Map
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

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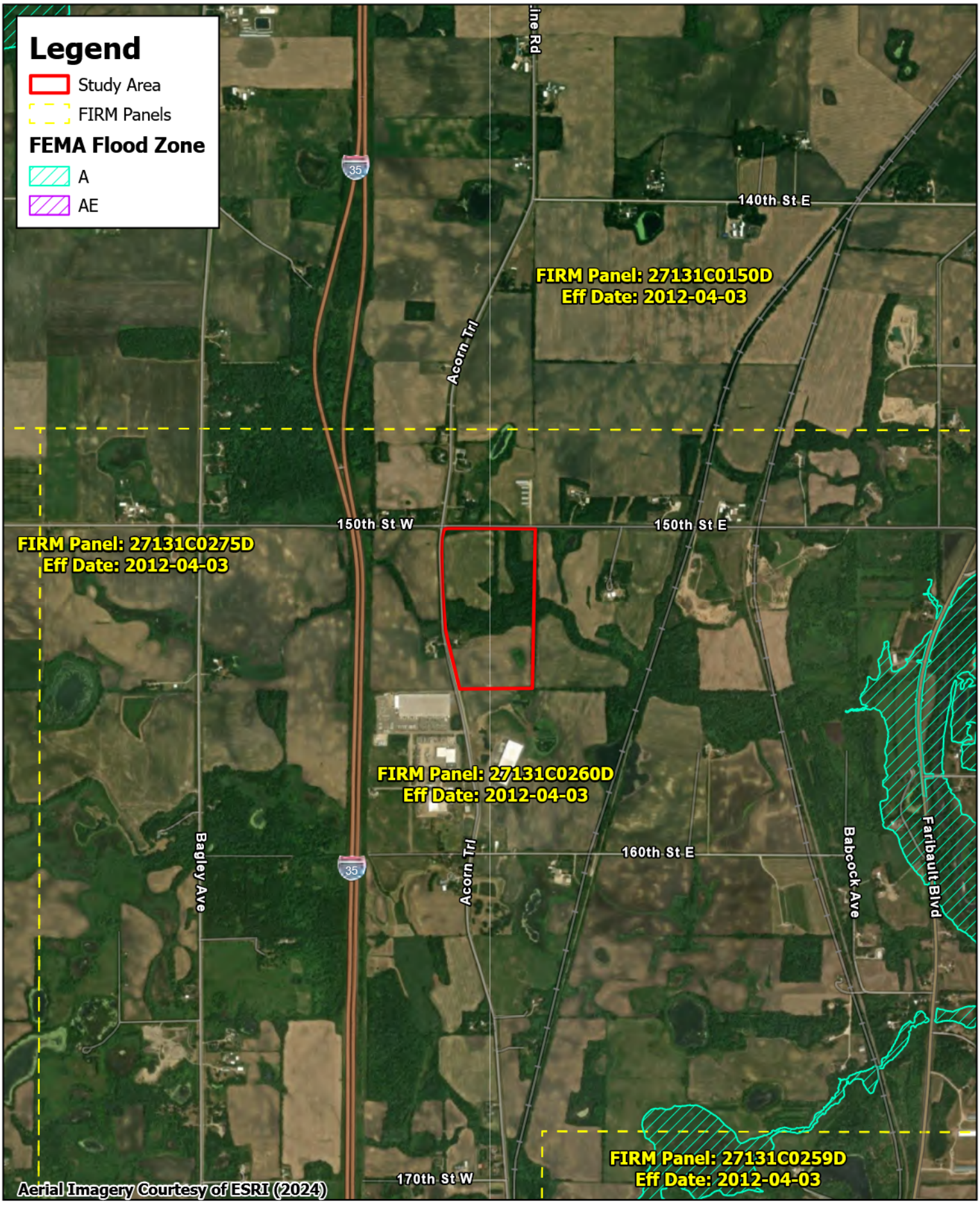
Figure 4. Hydric Soils Map
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

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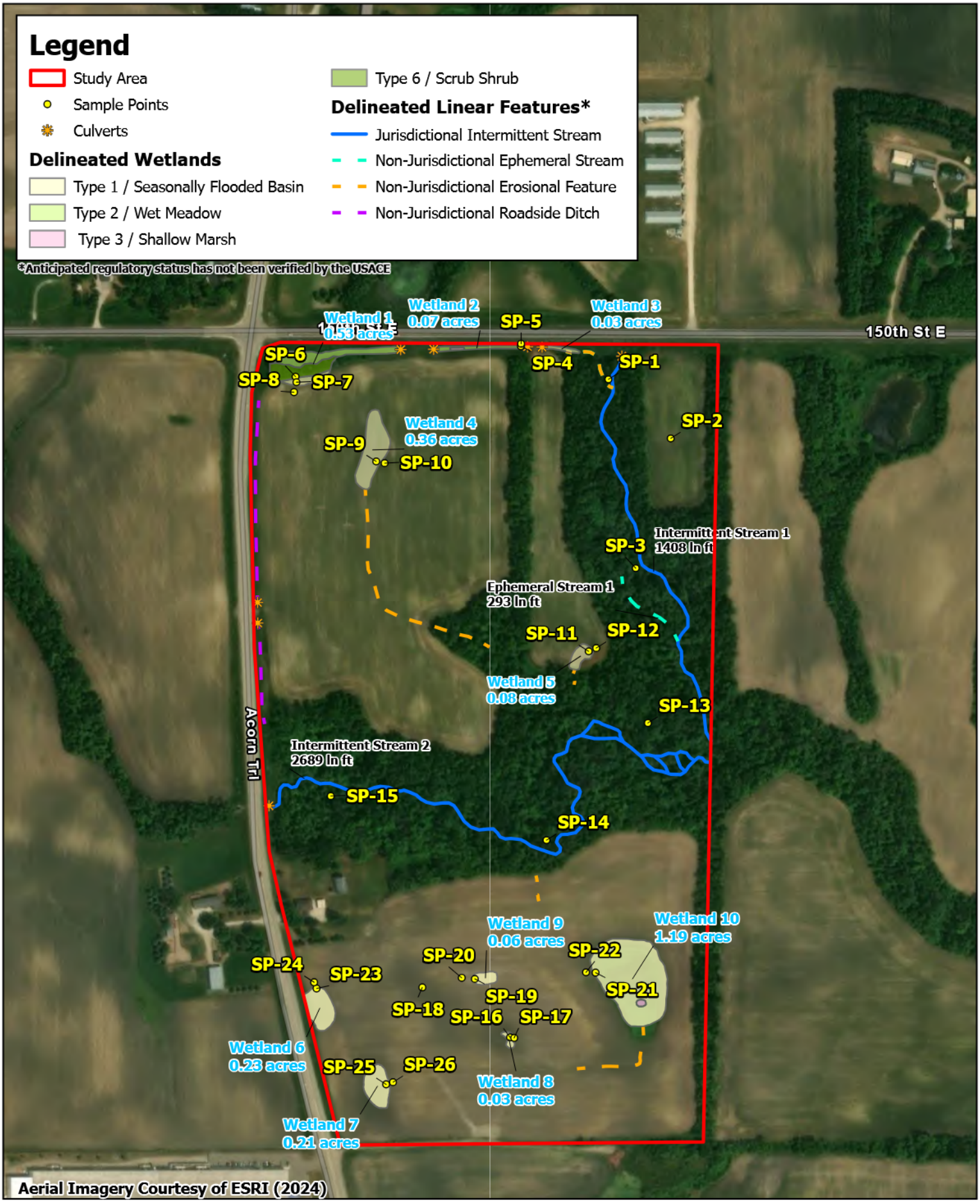
Figure 5. FEMA Floodplain Map
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

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Figure 6. Delineation Summary Map
Faribault Township, Rice County
Archer DataCenters

Appendix A: Hydric Soils Information

Hydric Rating by Map Unit—Rice County, Minnesota
(CombinedFaribaultSite_08222024)



Map Scale: 1:4,640 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rice County, Minnesota
Survey Area Data: Version 18, Sep 10, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2020—Oct 8, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
104B	Hayden loam, 2 to 6 percent slopes	5	16.6	19.7%
104C2	Hayden loam, 6 to 10 percent slopes, moderately eroded	5	33.9	40.0%
104D2	Hayden loam, 10 to 22 percent slopes, moderately eroded	8	5.0	5.9%
114	Glencoe clay loam, 0 to 1 percent slopes	100	3.9	4.6%
414	Hamel loam, 0 to 2 percent slopes	90	9.7	11.4%
875C	Hawick-Estherville complex, 6 to 12 percent slopes	0	3.1	3.6%
1080	Klossner, Okoboji and Glencoe soils, ponded, 0 to 1 percent slopes	100	0.4	0.4%
1361	Le Sueur loam, moderately coarse substratum, 1 to 3 percent slopes	0	3.4	4.1%
1501	Klossner muck, 0 to 1 percent slopes	100	1.6	1.9%
1831	Colo silt loam, channeled, 0 to 2 percent slopes, frequently flooded	95	7.1	8.4%
Totals for Area of Interest			**84.7**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

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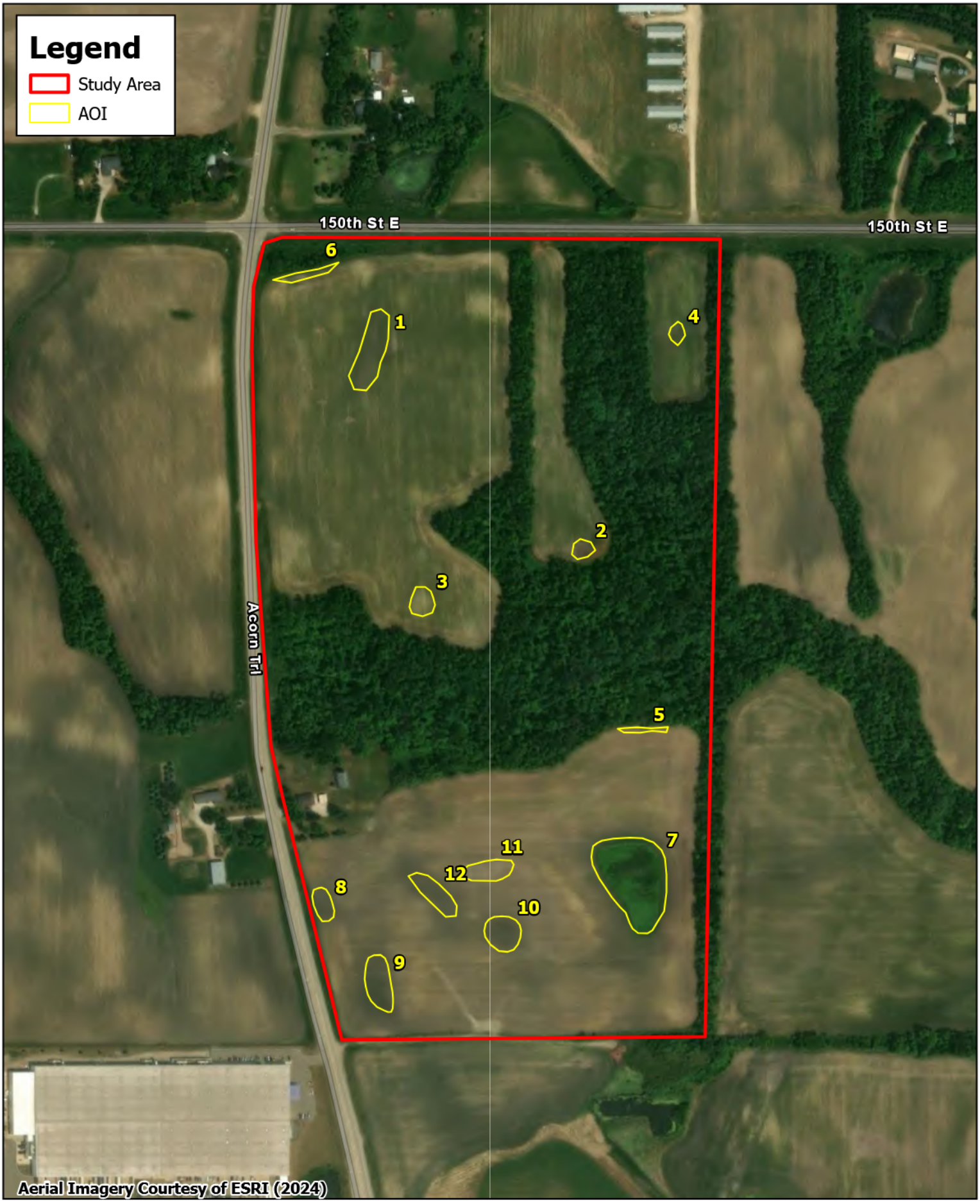
Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Appendix B: Historic Aerial Review



Kimley»Horn

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Feet

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Appendix B. Historic AOI Map
Faribault Township, Rice County
Archer DataCenters

Appendix B. Historic Aerial Review*

		Image Interpretation** (Area of Investigation)											
Date Image Taken	Climate Condition***	1	2	3	4	5	6	7	8	9	10	11	12
4/16/1991	Normal	SS	CS	NV	SS	NV	SS	CS	SS	SS	CS	CS	SS
5/31/2003	Wetter than Normal	CS	CS	NV	NV	NV	CS	CS	NV	CS	CS	CS	NV
5/31/2006	Drier than Normal	NV	NV	NV	NV	CS	CS	CS	NV	CS	CS	CS	NV
5/21/2008	Normal	NV	NV	NV	NV	CS	NV	NC	CS	SS	NV	NV	NV
6/2/2009	Drier than Normal	NV	NV	NV	NV	NV	NV	NC	NC	NC	SS	SS	SS
6/23/2010	Normal	CS	CS	NV	NV	NV	NV	CS	CS	CS	NV	NV	NV
8/28/2012	Normal	NV	CS	NV	NV	CS	NV	NC	NC	CS	NV	NV	NV
4/22/2015	Drier than Normal	SS	SS	CS	SS	NV	NV	SS	SS	SS	NV	NV	SS
5/31/2017	Wetter than Normal	SS	NC	NV	SS	NV	SS	NC	SS	SS	NV	SS	SS
5/2/2020	Normal	CS	CS	NV	NV	NV	NV	CS	SS	SS	NV	NV	NV
8/14/2021	Drier than Normal	CS	NV	NV	NV	CS	NV	NC	SS	SS	NV	NV	NV
6/8/2022	Normal	SS	NC	NV	NV	NV	NV	NC	SS	SS	SS	NV	SS
5/28/2023	Normal	SS	CS	NV	NV	NV	NV	NC	SS	SS	SS	NV	SS
5/10/2024	Wetter than Normal	SS	SS	SS	SS	NV	SS	NC	SS	SS	SS	SS	SS
Number of normal years		7	7	7	7	7	7	7	7	7	7	7	7
Number of normal years with wet signatures		5	6	0	1	2	1	7	7	7	3	1	3
Percent of normal years with wet signatures		71%	86%	0%	14%	29%	13%	100%	100%	100%	43%	14%	43%
Hydric Soils present		Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Identified on NWI		No	No	No	No	No	No	Yes	No	No	No	No	No
Hydrology indicators observed during field review?		Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Has wetland signature in 30% or more in normal years?		Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Wetland Present?		Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Wetland Number		4	5	NA	NA	NA	1	10	6	7	8	9	NA

**Methodology for determining the presence of wetland explained in Guidance for Offsite Hydrology/ Wetland Determinations from Minnesota Board of Water and Soil Resources (BWSR) and St Paul District Corps of Engineers (July 1, 2016)*

***CS = Crop Stress, NC = Not Cropped, SS = Soil Wetness Signature, SW = Standing Water, AP = Altered Pattern, NV = Normal Vegetative Cover, DO= Drowned Out*

****Climate condition based on USACE APT 90-day rolling precipitation total for wetland hydrology determination for the given photo date. Methodology is described in report.*



Kimley»Horn

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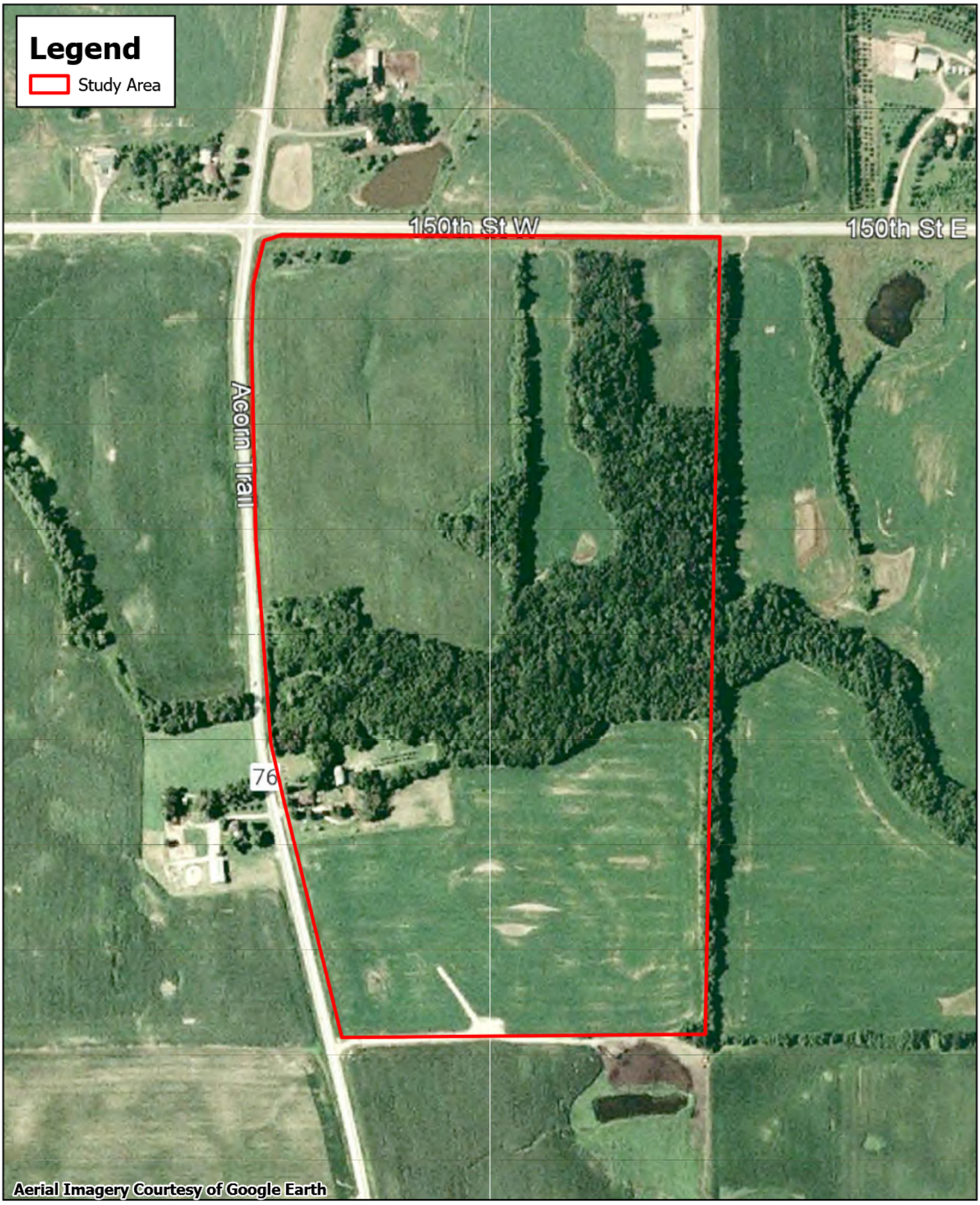
Appendix B. Historic Aerial (1991)
Faribault Township, Rice County
Archer DataCenters



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Appendix B. Historic Aerial (2003)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

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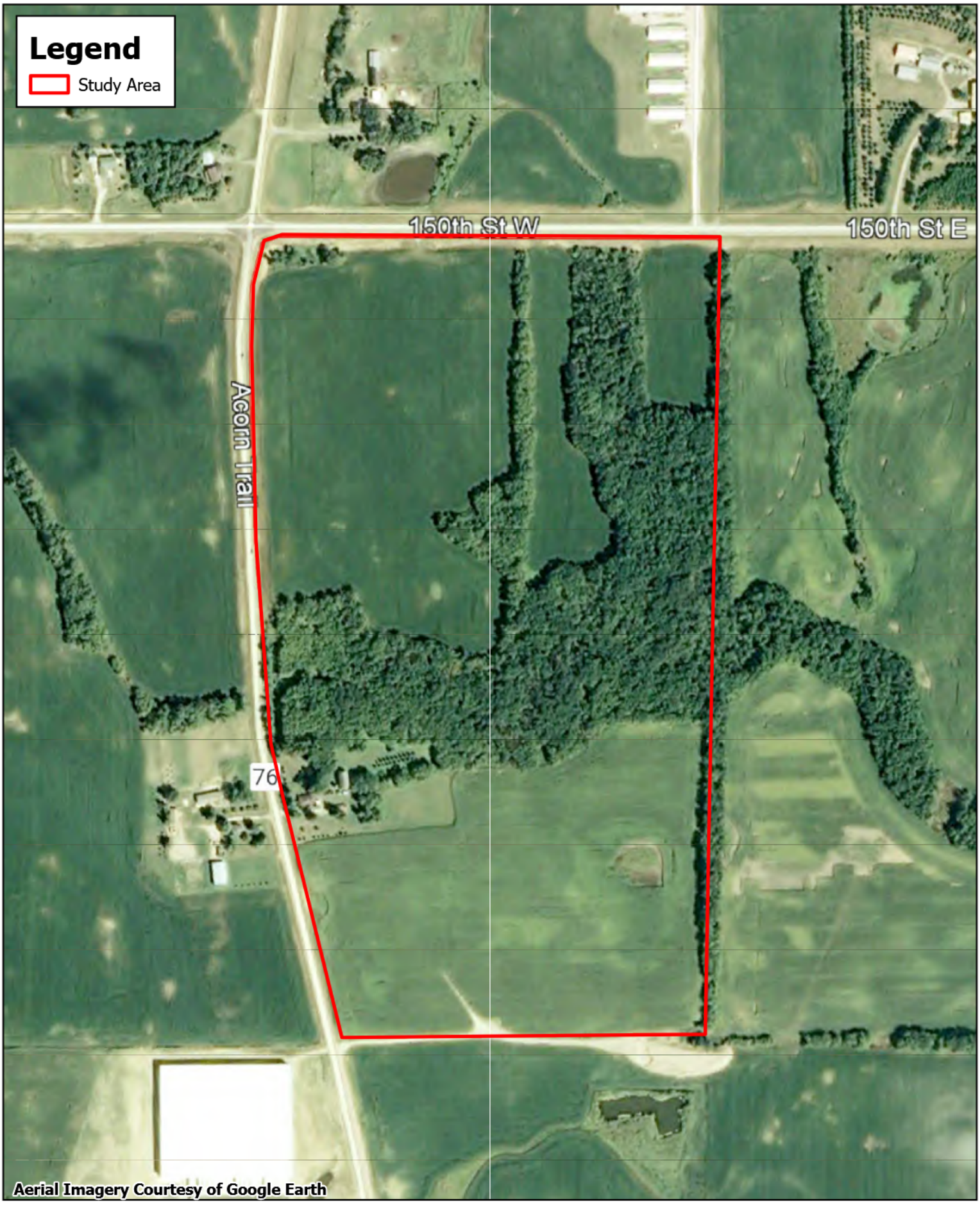
Appendix B. Historic Aerial (2006)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

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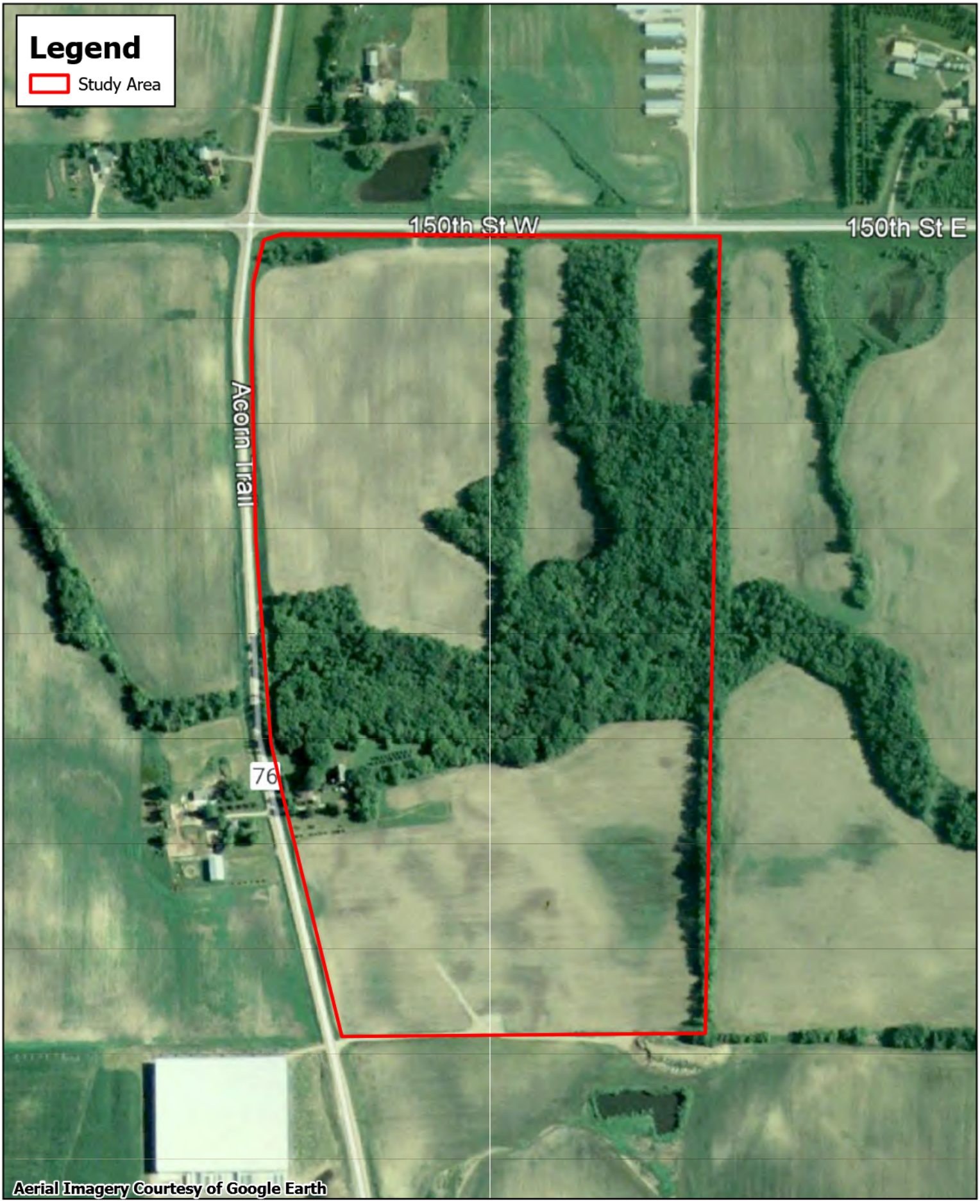
Appendix B. Historic Aerial (2008)
Faribault Township, Rice County
Archer DataCenters



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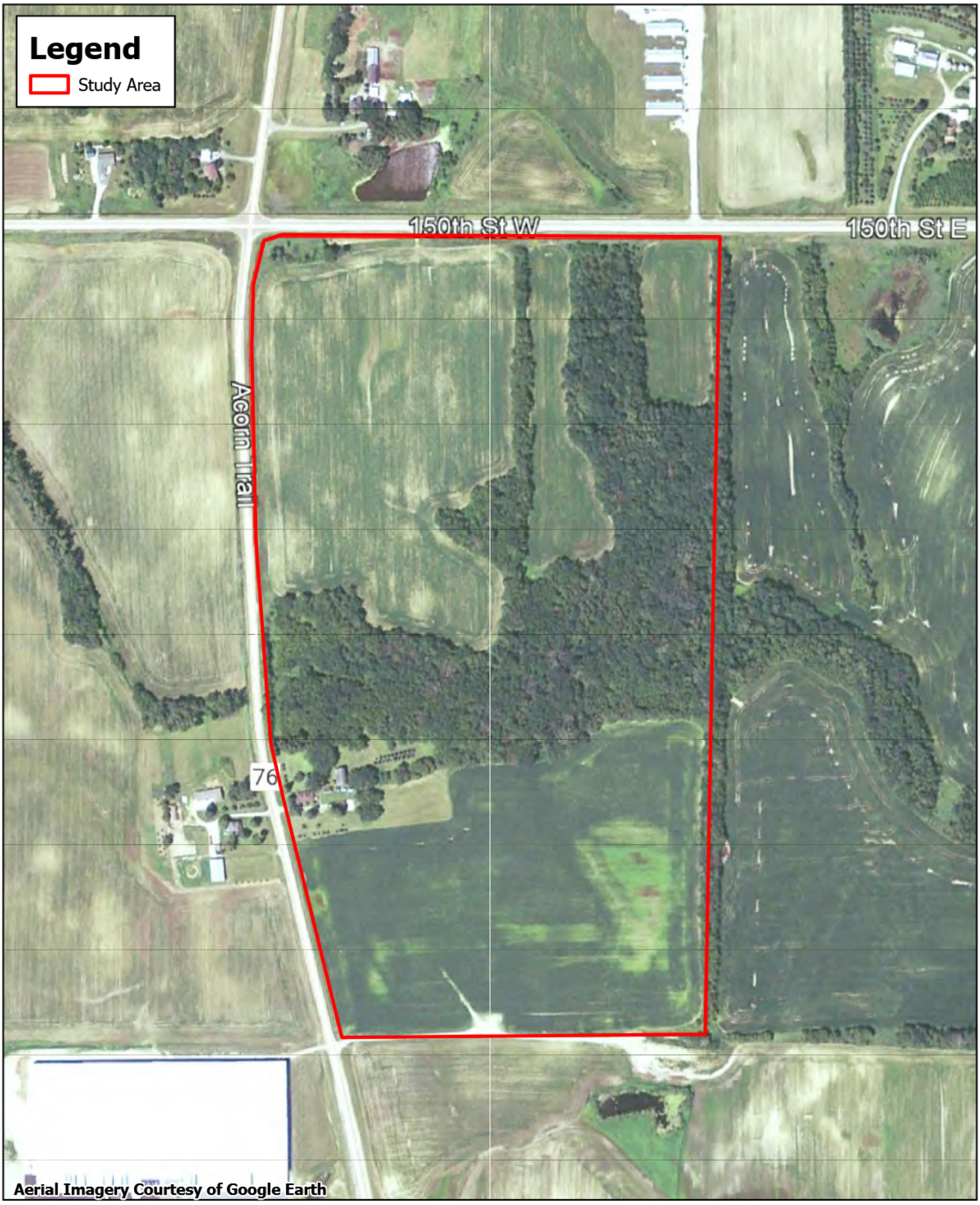
Appendix B. Historic Aerial (2009)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

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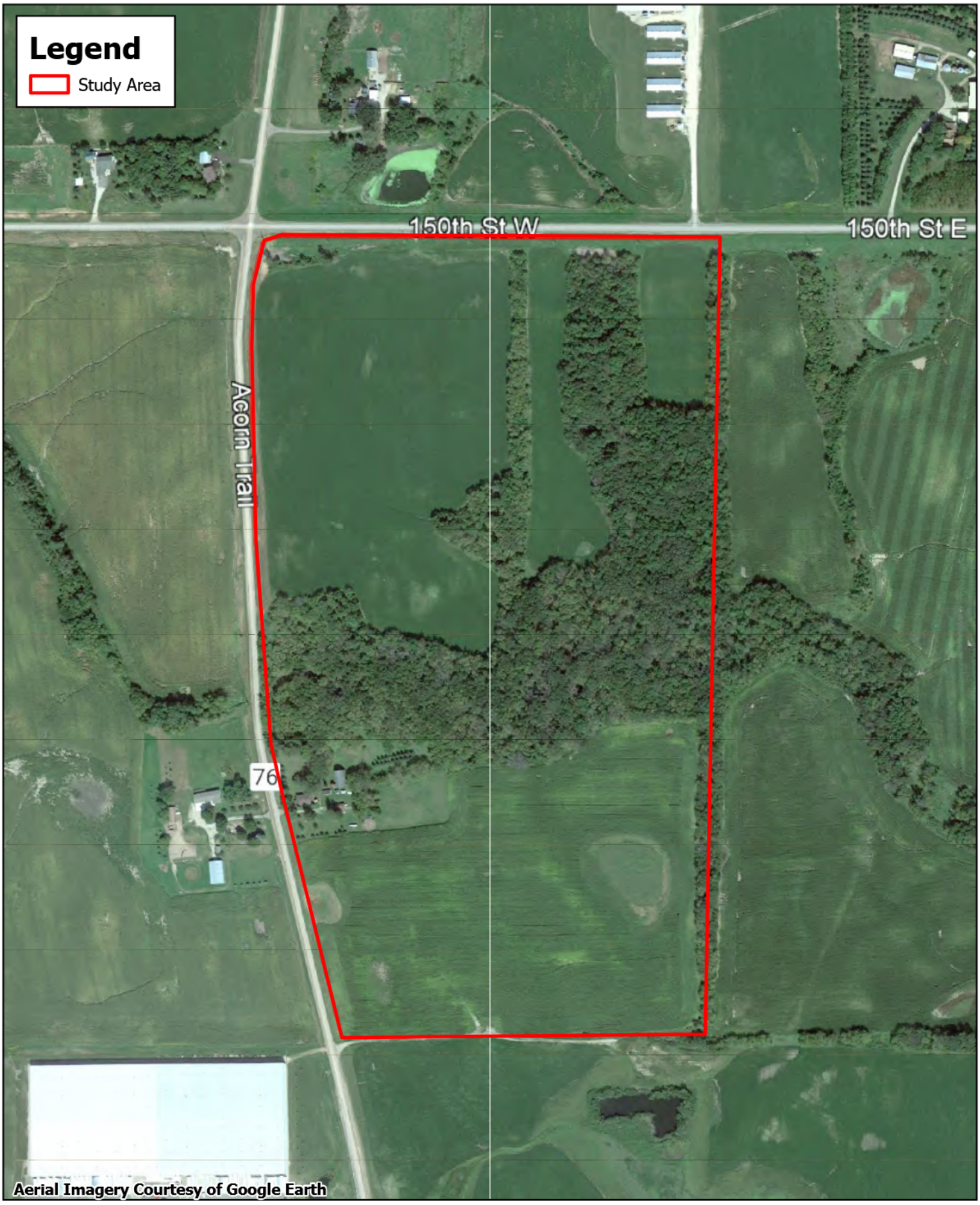
Feet

N

Appendix B. Historic Aerial (2010)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

0 200 400
Feet

N

Appendix B. Historic Aerial (2012)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

0 200 400
Feet

N

Appendix B. Historic Aerial (2015)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

0 200 400
Feet

N

Appendix B. Historic Aerial (2017)
Faribault Township, Rice County
Archer DataCenters

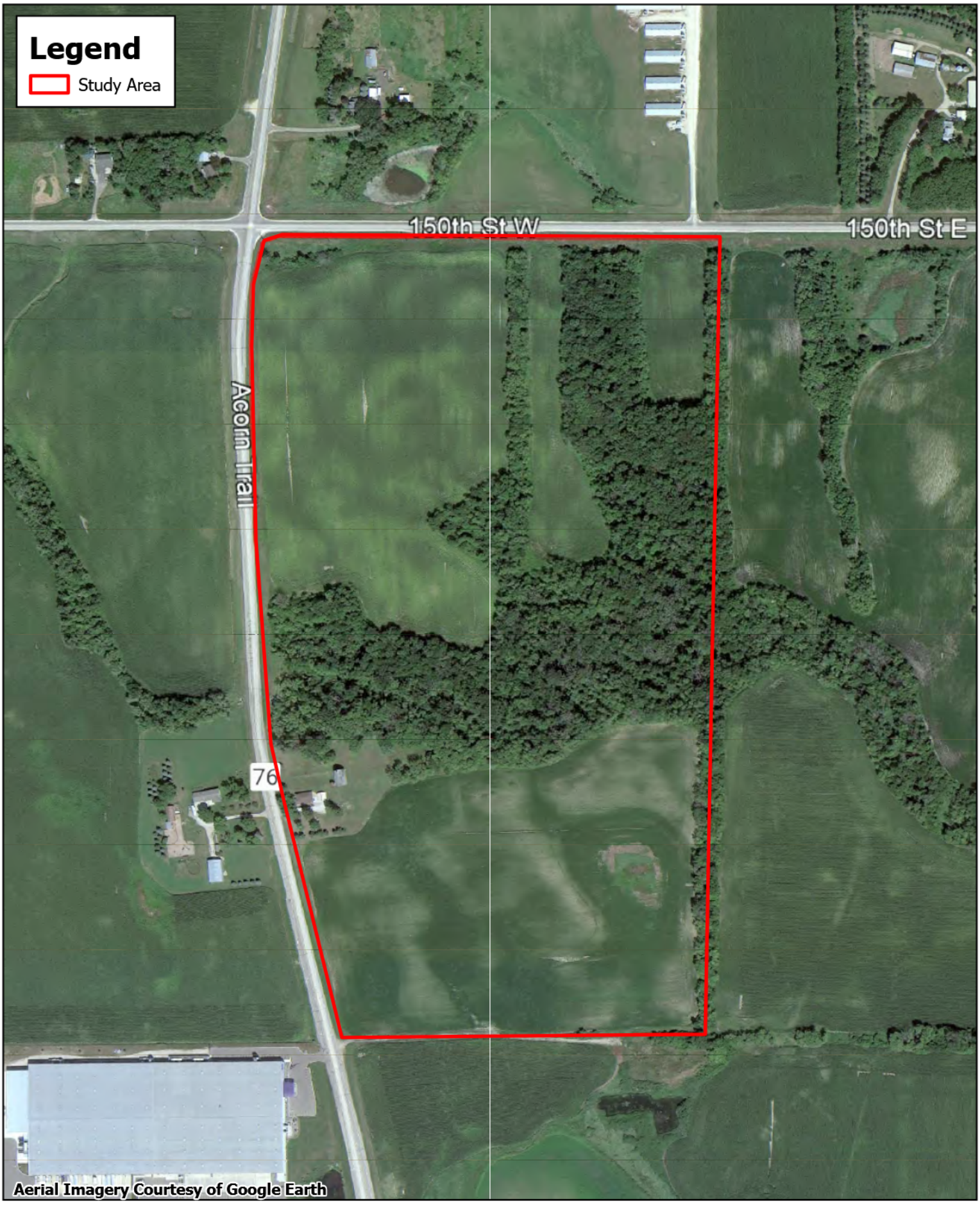


Kimley»Horn

0 200 400
Feet

N

Appendix B. Historic Aerial (2020)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

0 200 400
Feet

N

Appendix B. Historic Aerial (2021)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

0 200 400
Feet

N

Appendix B. Historic Aerial (2022)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

0 200 400
Feet

N

Appendix B. Historic Aerial (2023)
Faribault Township, Rice County
Archer DataCenters



Kimley»Horn

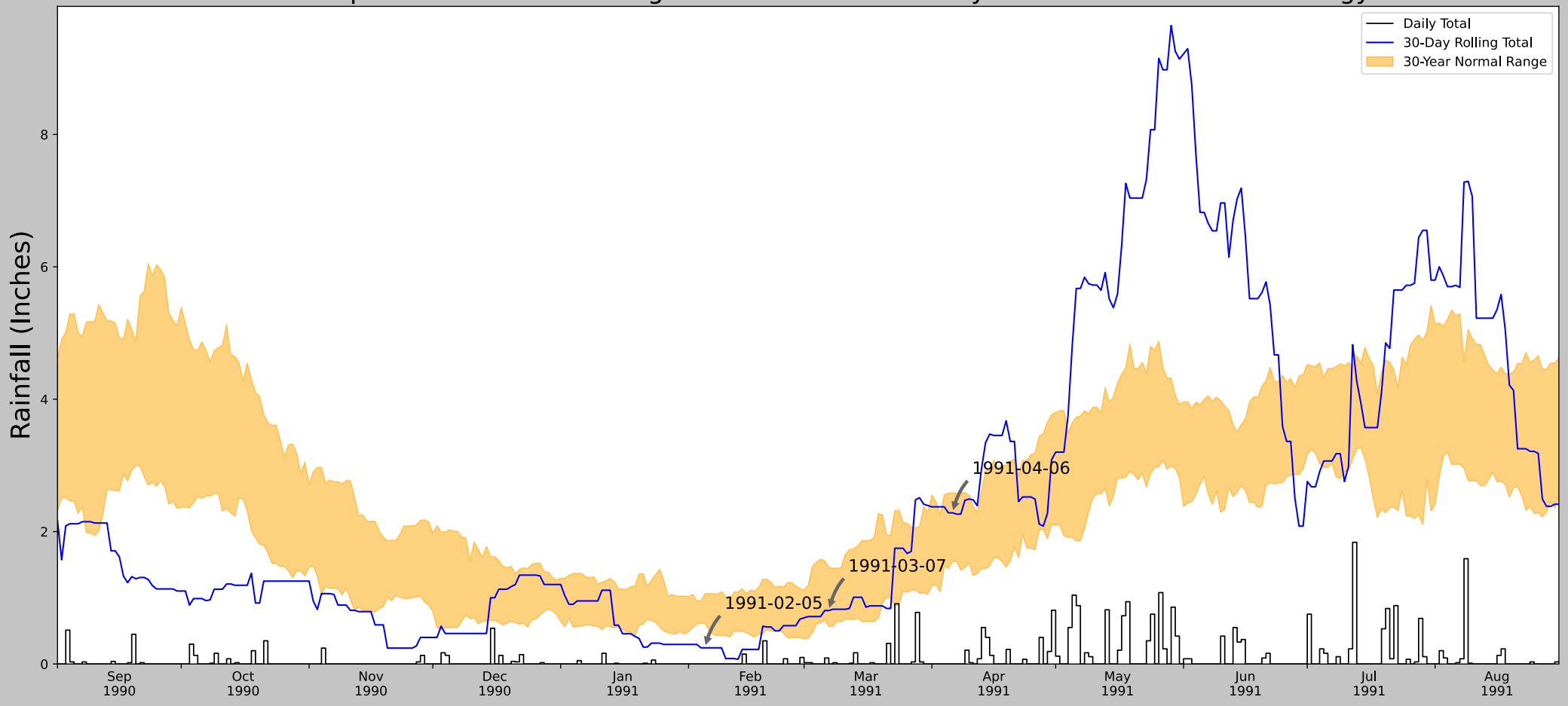
0 200 400
Feet

N

Appendix B. Historic Aerial (2024)
Faribault Township, Rice County
Archer DataCenters

Appendix C: Precipitation Data

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	1991-04-06
Elevation (ft)	1028.85
Drought Index (PDSI)	Moderate wetness
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
1991-04-06	1.546457	2.582284	2.283465	Normal	2	3	6
1991-03-07	0.565354	1.460236	0.807087	Normal	2	2	4
1991-02-05	0.612205	1.064173	0.244094	Dry	1	1	1
Result							Normal Conditions - 11

US Army Corps of Engineers

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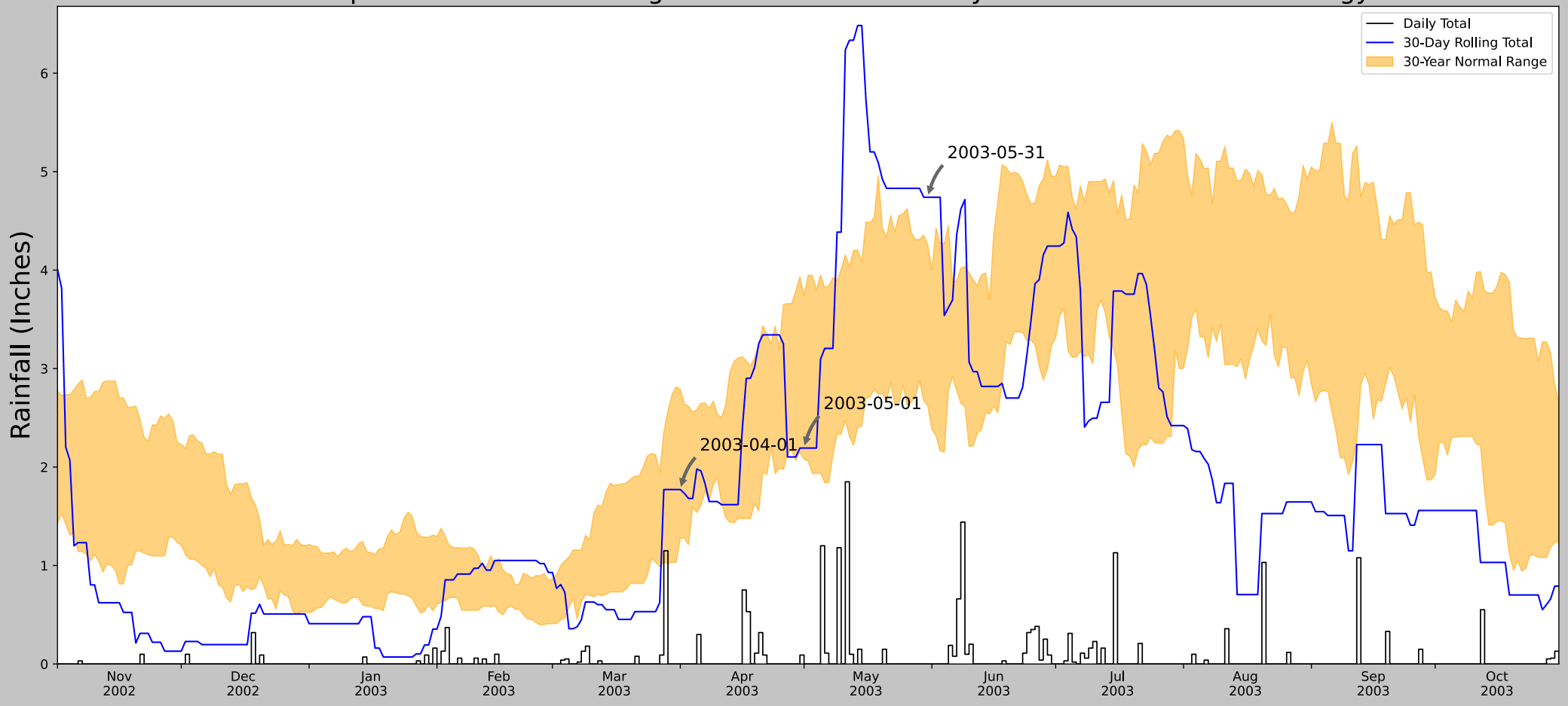
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11317	90
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	34	0
FARMINGTON 1 W	44.6333, -93.1667	921.916	22.923	48.228	11.421	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2003-05-31
Elevation (ft)	1028.85
Drought Index (PDSI)	Incipient wetness
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2003-05-31	2.621654	4.25315	4.740158	Wet	3	3	9
2003-05-01	2.079134	3.745669	2.192913	Normal	2	2	4
2003-04-01	1.278346	2.788189	1.771654	Normal	2	1	2
Result							Wetter than Normal - 15

US Army Corps of Engineers

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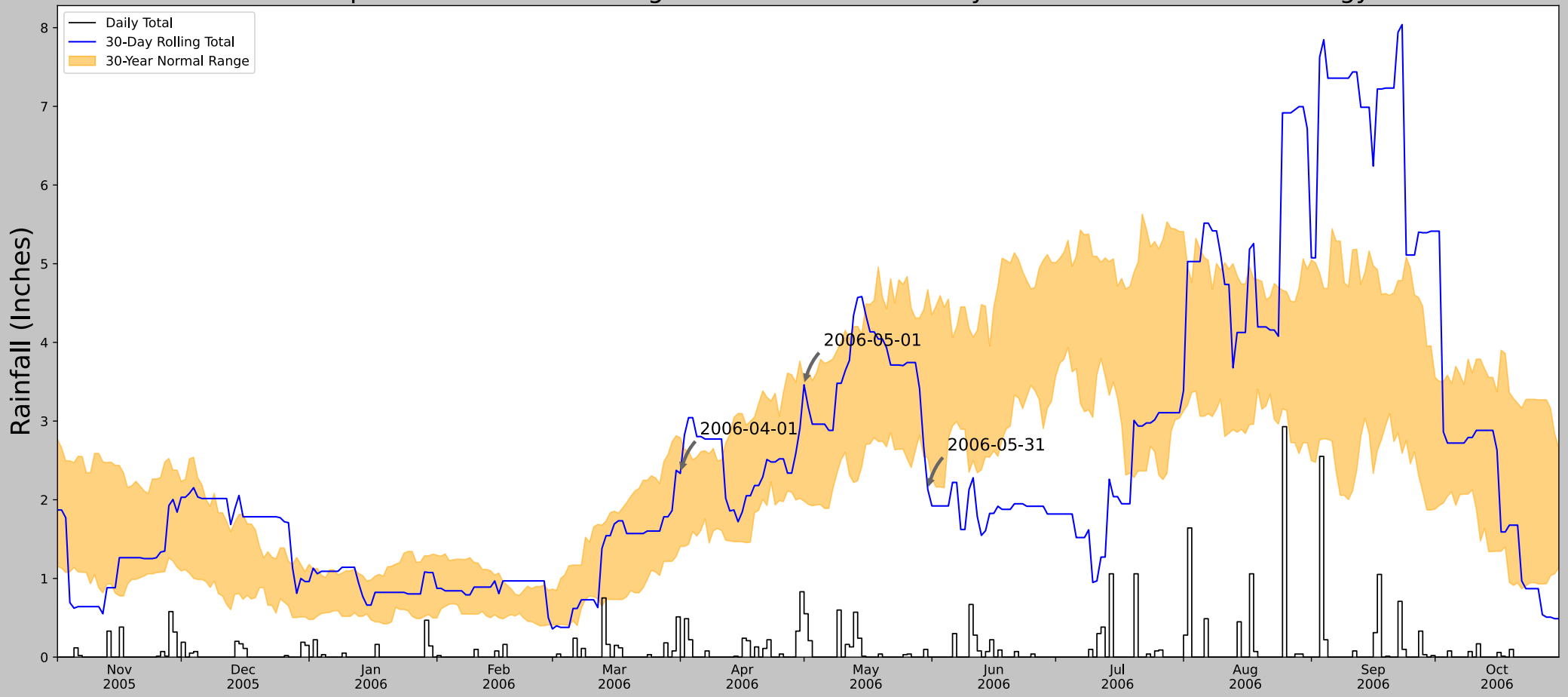
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11325	90
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	28	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2006-05-31
Elevation (ft)	1028.85
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2006-05-31	2.536221	4.67126	2.129921	Dry	1	3	3
2006-05-01	1.98189	3.505906	3.46063	Normal	2	2	4
2006-04-01	1.407087	2.788189	2.334646	Normal	2	1	2
Result							Drier than Normal - 9

US Army Corps of Engineers

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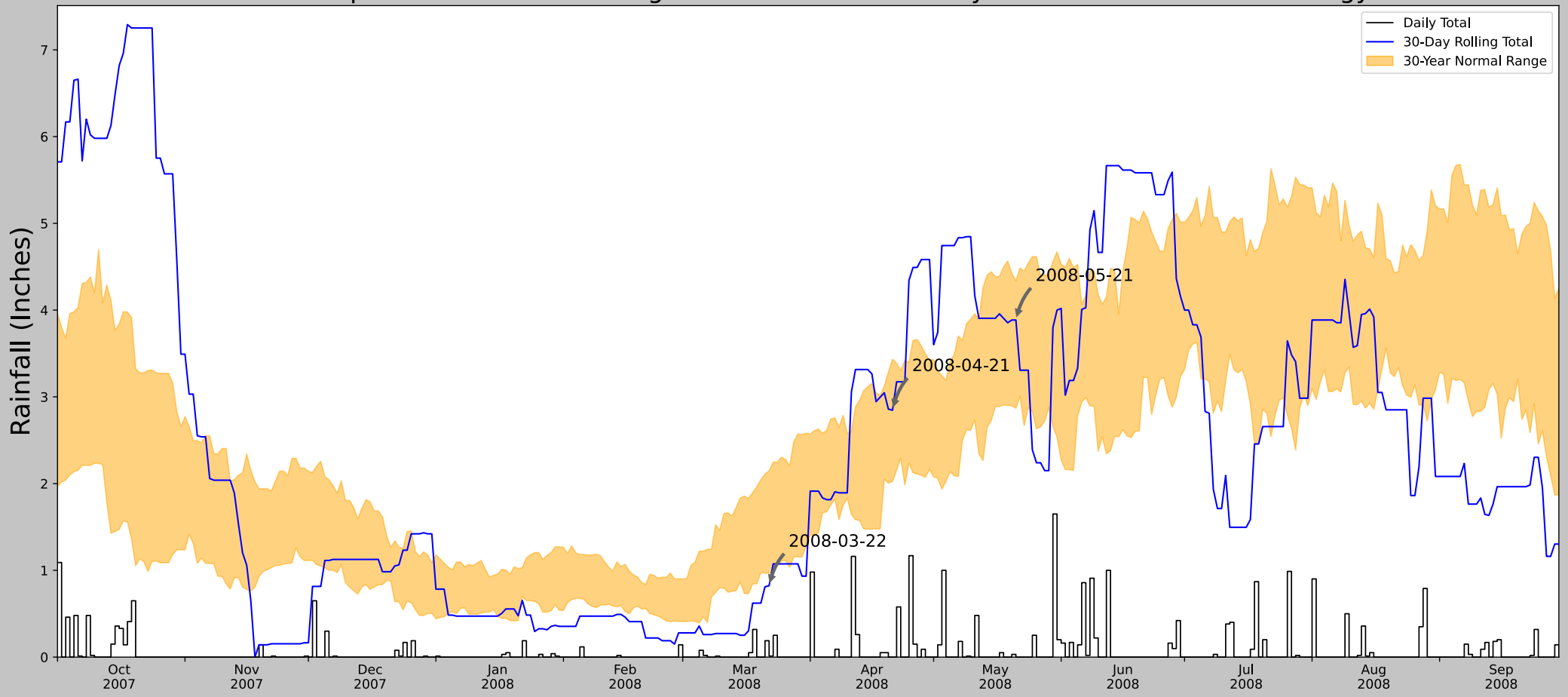
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11233	90
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	89	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2008-05-21
Elevation (ft)	1028.85
Drought Index (PDSI)	Severe wetness
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2008-05-21	2.868898	4.337008	3.885827	Normal	2	3	6
2008-04-21	2.022835	3.433465	2.846457	Normal	2	2	4
2008-03-22	0.96811	2.144488	0.822835	Dry	1	1	1
Result							Normal Conditions - 11

US Army Corps of Engineers

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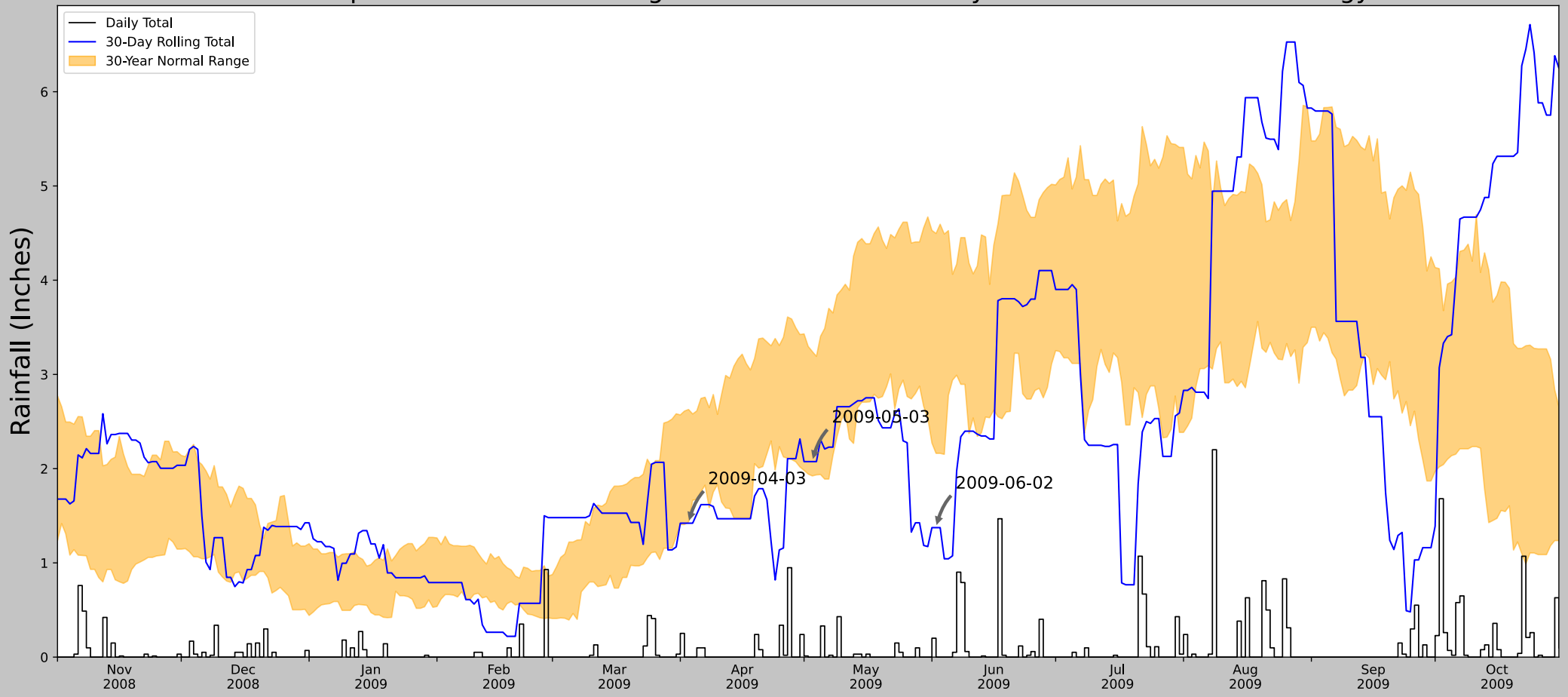
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11181	90
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	140	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2009-06-02
Elevation (ft)	1028.85
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2009-06-02	2.162205	4.495669	1.374016	Dry	1	3	3
2009-05-03	1.922835	3.243307	2.074803	Normal	2	2	4
2009-04-03	1.432677	2.628347	1.42126	Dry	1	1	1
Result							Drier than Normal - 8

US Army Corps of Engineers

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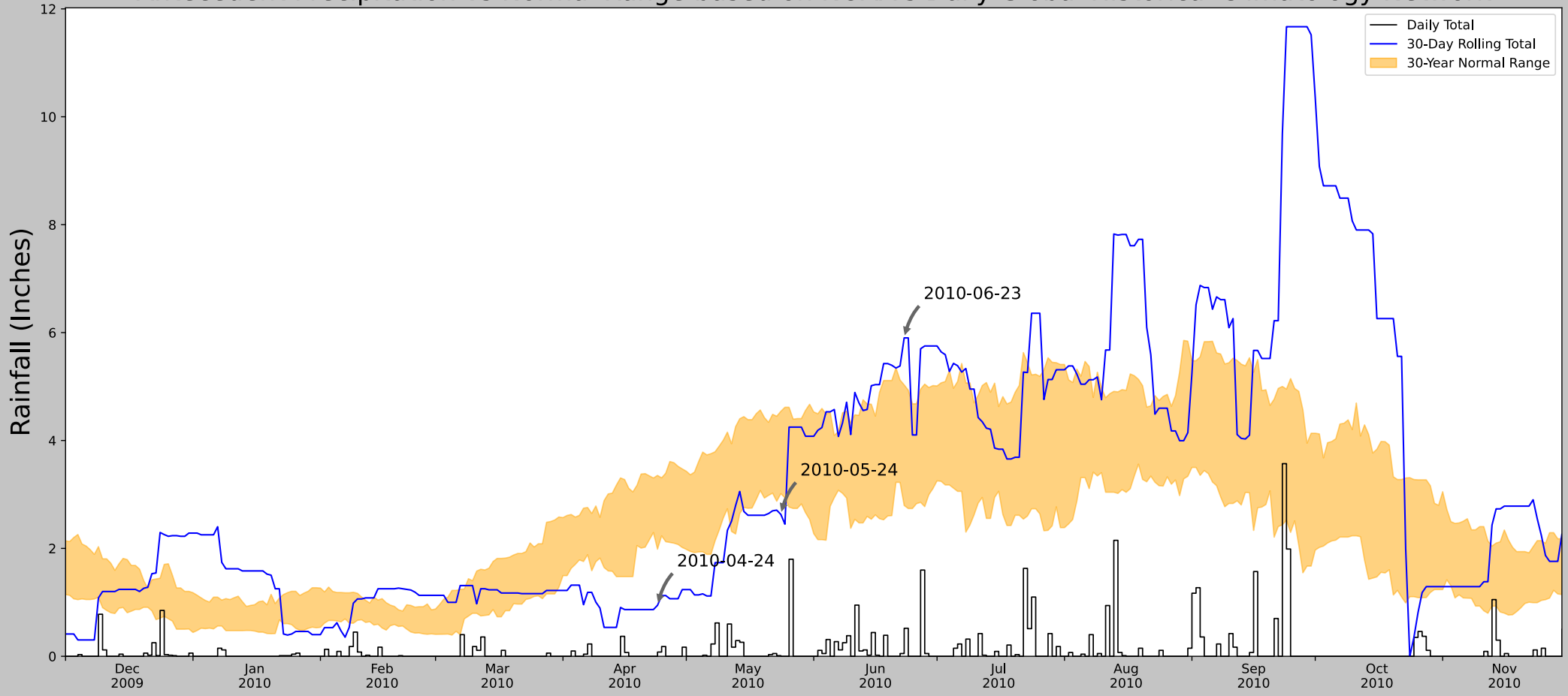
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11182	90
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	140	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2010-06-23
Elevation (ft)	1028.85
Drought Index (PDSI)	Moderate wetness
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2010-06-23	2.795669	5.030709	5.901575	Wet	3	3	9
2010-05-24	3.014173	4.540945	2.629921	Dry	1	2	2
2010-04-24	1.985433	3.35315	0.944882	Dry	1	1	1
Result							Normal Conditions - 12

US Army Corps of Engineers

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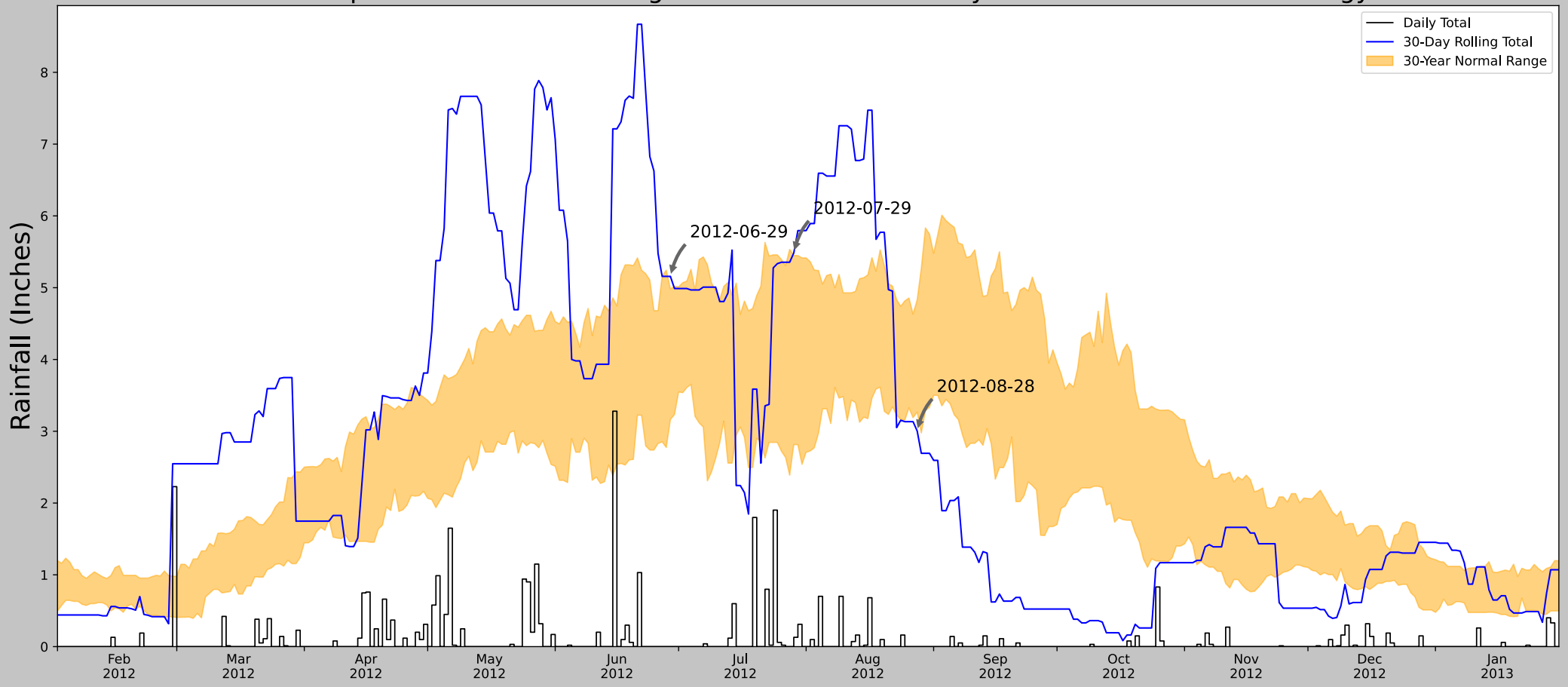
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11182	90
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	140	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2012-08-28
Elevation (ft)	1028.85
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2012-08-28	3.26811	4.831103	3.003937	Dry	1	3	3
2012-07-29	2.815354	5.449606	5.484252	Wet	3	2	6
2012-06-29	3.163386	4.982284	5.15748	Wet	3	1	3
Result							Normal Conditions - 12

US Army Corps of Engineers

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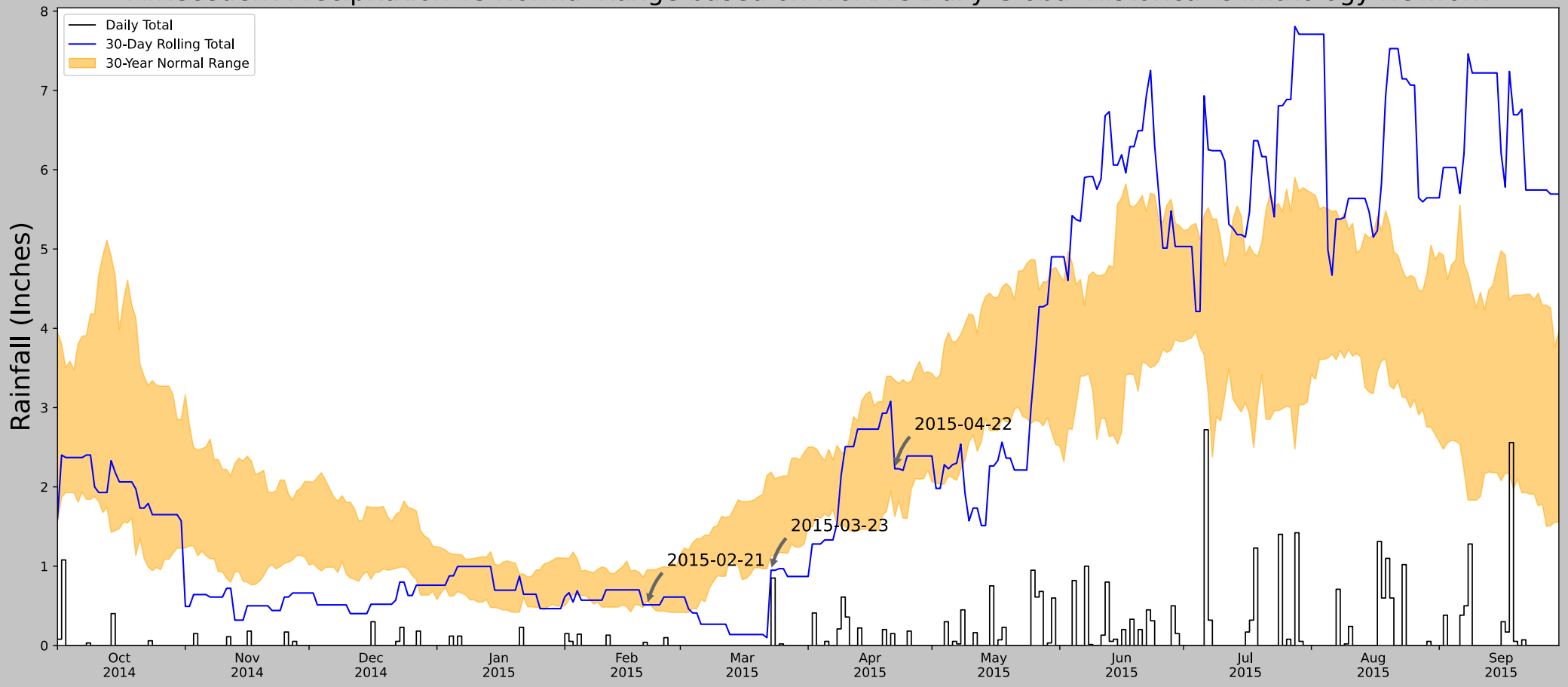
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11176	89
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	1	1
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	1	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	143	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2015-04-22
Elevation (ft)	1028.85
Drought Index (PDSI)	Moderate drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2015-04-22	1.623228	3.344882	2.228347	Normal	2	3	6
2015-03-23	1.135433	2.185827	0.948819	Dry	1	2	2
2015-02-21	0.561811	0.954724	0.511811	Dry	1	1	1
Result							Drier than Normal - 9

US Army Corps of Engineers

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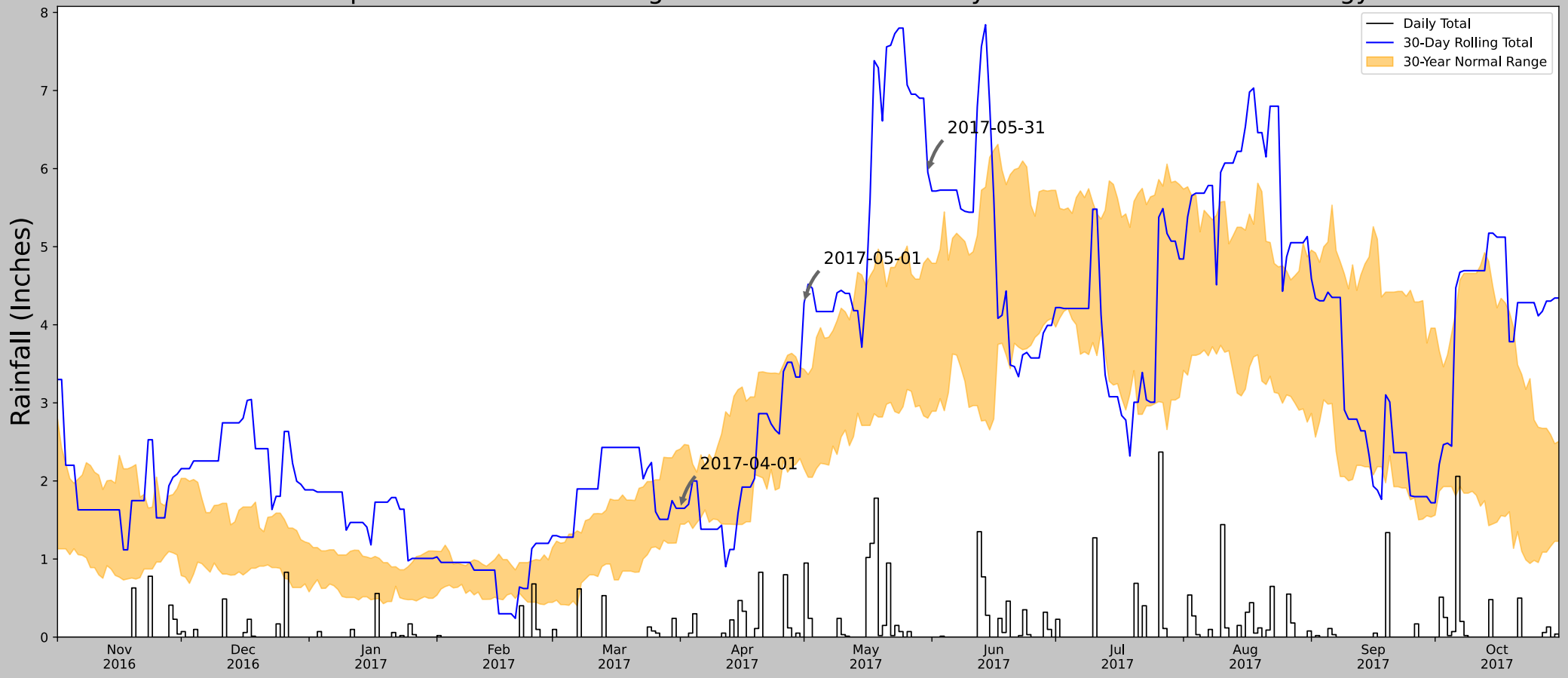
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11167	90
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	143	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2017-05-31
Elevation (ft)	1028.85
Drought Index (PDSI)	Extreme wetness
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2017-05-31	2.803543	4.854725	5.952756	Wet	3	3	9
2017-05-01	2.15748	3.430315	4.279528	Wet	3	2	6
2017-04-01	1.446063	2.409449	1.649606	Normal	2	1	2
Result							Wetter than Normal - 17

US Army Corps of Engineers

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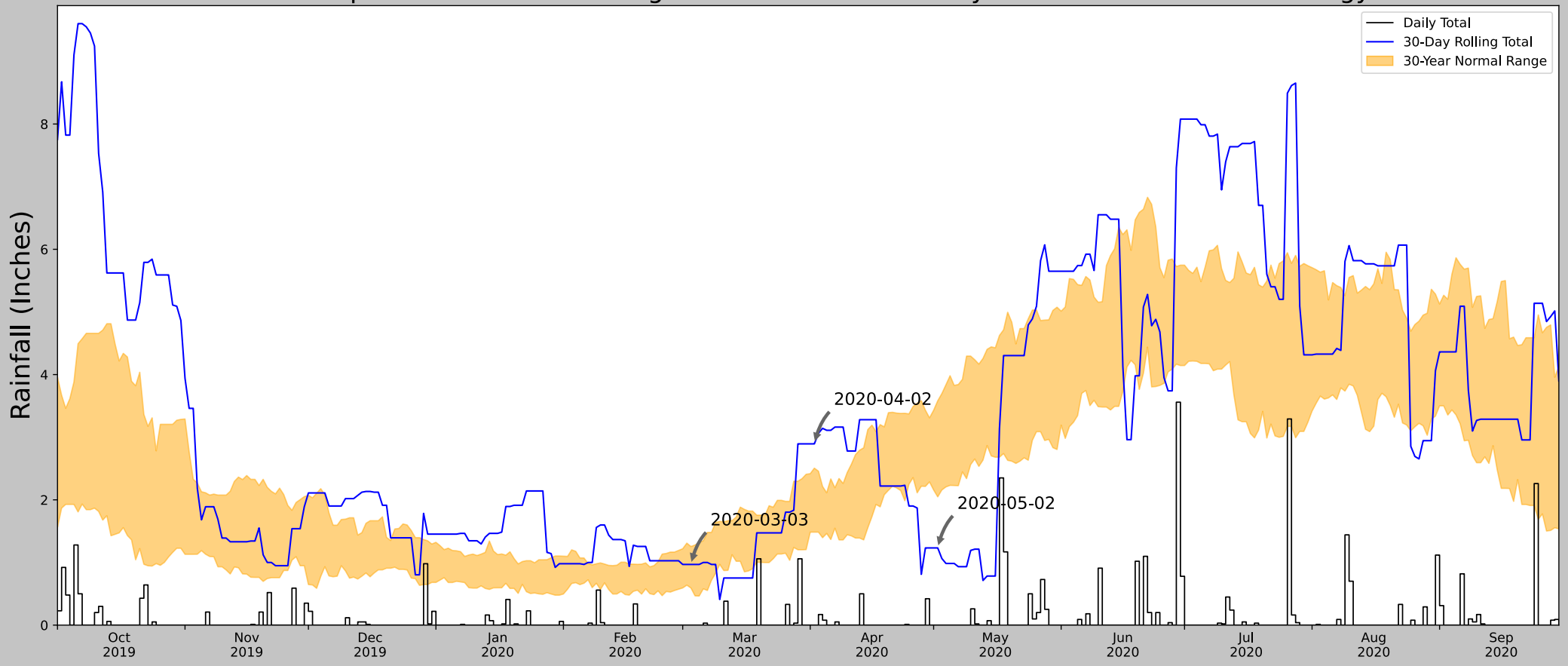
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11164	90
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 0.8 SE	44.4484, -93.1505	976.05	11.184	5.906	5.099	3	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	143	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2020-05-02
Elevation (ft)	1028.85
Drought Index (PDSI)	Extreme wetness
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-05-02	2.047638	3.581496	1.232284	Dry	1	3	3
2020-04-02	1.484646	2.505906	2.893701	Wet	3	2	6
2020-03-03	0.592913	1.254724	0.968504	Normal	2	1	2
Result							Normal Conditions - 11

US Army Corps of Engineers

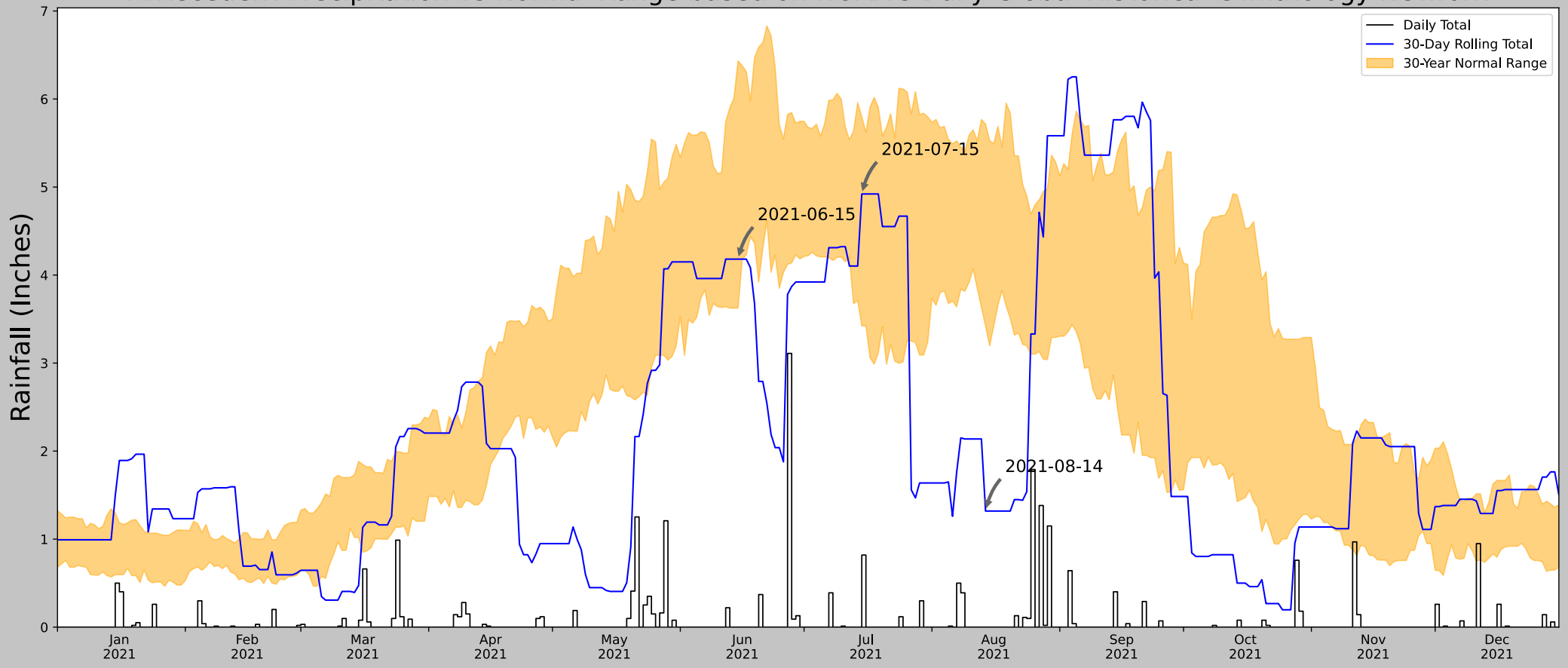
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11161	88
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 3.9 SSW	44.4086, -93.2002	994.095	7.6	23.951	3.602	0	2
NORTHFIELD 0.8 SE	44.4484, -93.1505	976.05	11.184	5.906	5.099	3	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
DENNISON 0.4 SSE	44.4039, -93.0382	981.955	13.022	11.811	6.014	2	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	143	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2021-08-14
Elevation (ft)	1028.85
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-08-14	3.422441	5.715748	1.318898	Dry	1	3	3
2021-07-15	3.423228	5.798032	4.92126	Normal	2	2	4
2021-06-15	3.62441	6.433858	4.181102	Normal	2	1	2
Result							Drier than Normal - 9

US Army Corps of Engineers

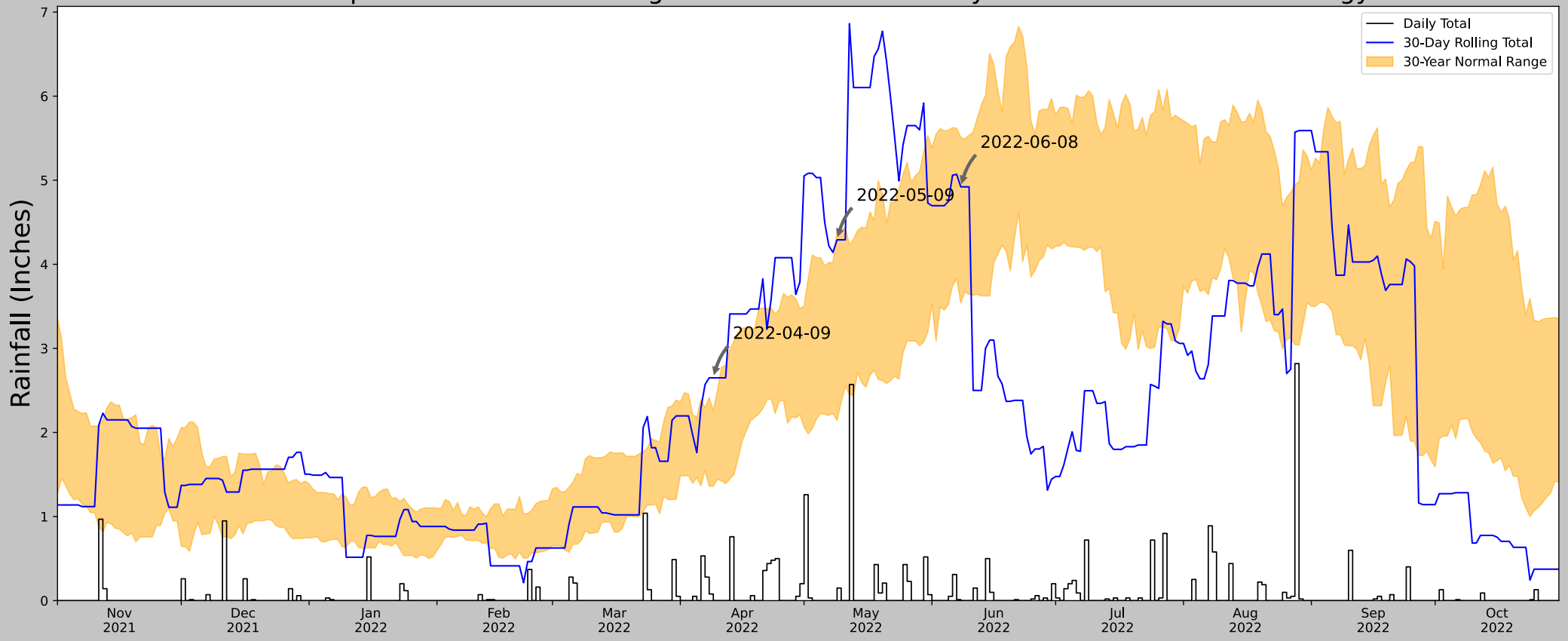
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11158	90
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 3.9 SSW	44.4086, -93.2002	994.095	7.6	23.951	3.602	2	0
NORTHFIELD 0.8 SE	44.4484, -93.1505	976.05	11.184	5.906	5.099	3	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
DENNISON 0.4 SSE	44.4039, -93.0382	981.955	13.022	11.811	6.014	4	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	143	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2022-06-08
Elevation (ft)	1028.85
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-06-08	3.541732	5.510236	4.92126	Normal	2	3	6
2022-05-09	2.141339	4.392914	4.291339	Normal	2	2	4
2022-04-09	1.36063	2.261024	2.649606	Wet	3	1	3
Result							Normal Conditions - 13

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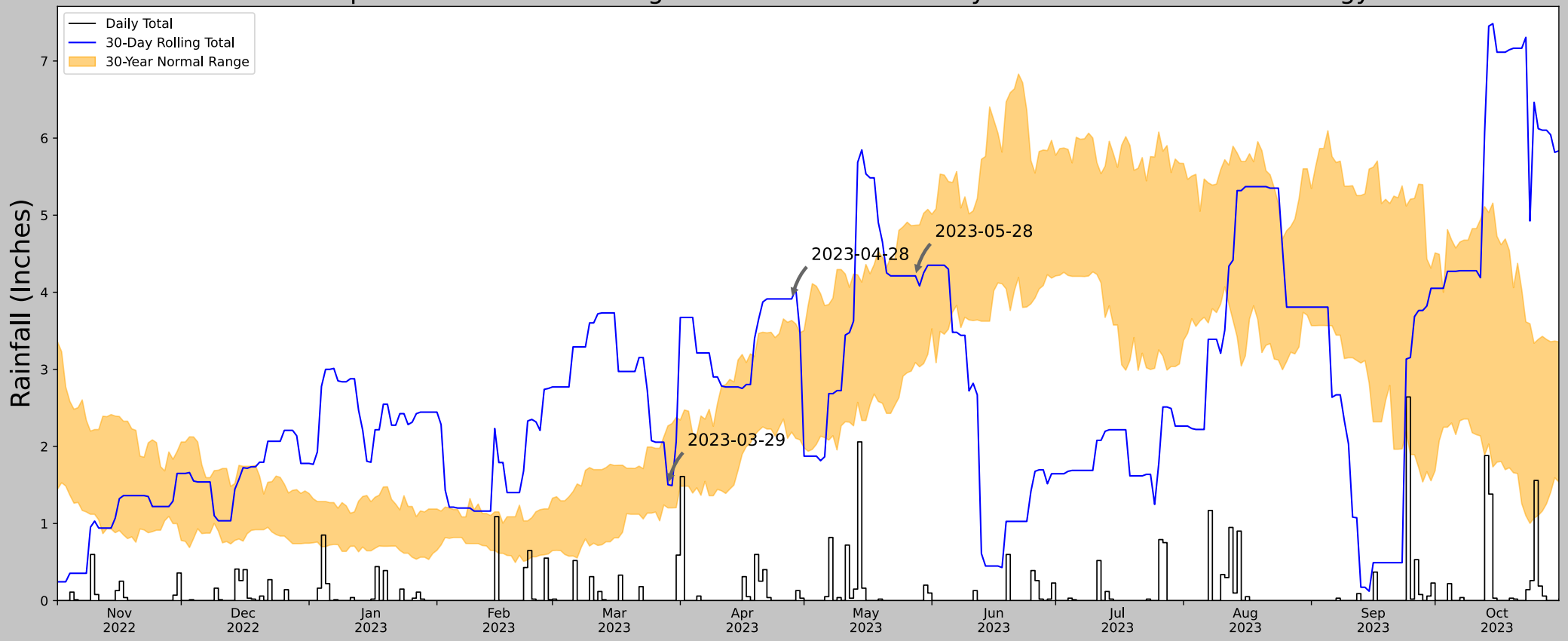
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11184	84
FARIBAULT 1.1 E	44.3001, -93.2562	1109.908	0.797	139.764	0.47	2	5
FARIBAULT 0.7 SW	44.2917, -93.2878	998.032	1.617	27.888	0.773	0	1
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 3.9 SSW	44.4086, -93.2002	994.095	7.6	23.951	3.602	2	0
NORTHFIELD 0.8 SE	44.4484, -93.1505	976.05	11.184	5.906	5.099	3	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
DENNISON 0.4 SSE	44.4039, -93.0382	981.955	13.022	11.811	6.014	4	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	115	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2023-05-28
Elevation (ft)	1028.85
Drought Index (PDSI)	Moderate wetness
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-05-28	3.088189	4.869685	4.212599	Normal	2	3	6
2023-04-28	2.186221	3.634646	3.913386	Wet	3	2	6
2023-03-29	1.202756	2.266536	1.503937	Normal	2	1	2
Result							Normal Conditions - 14

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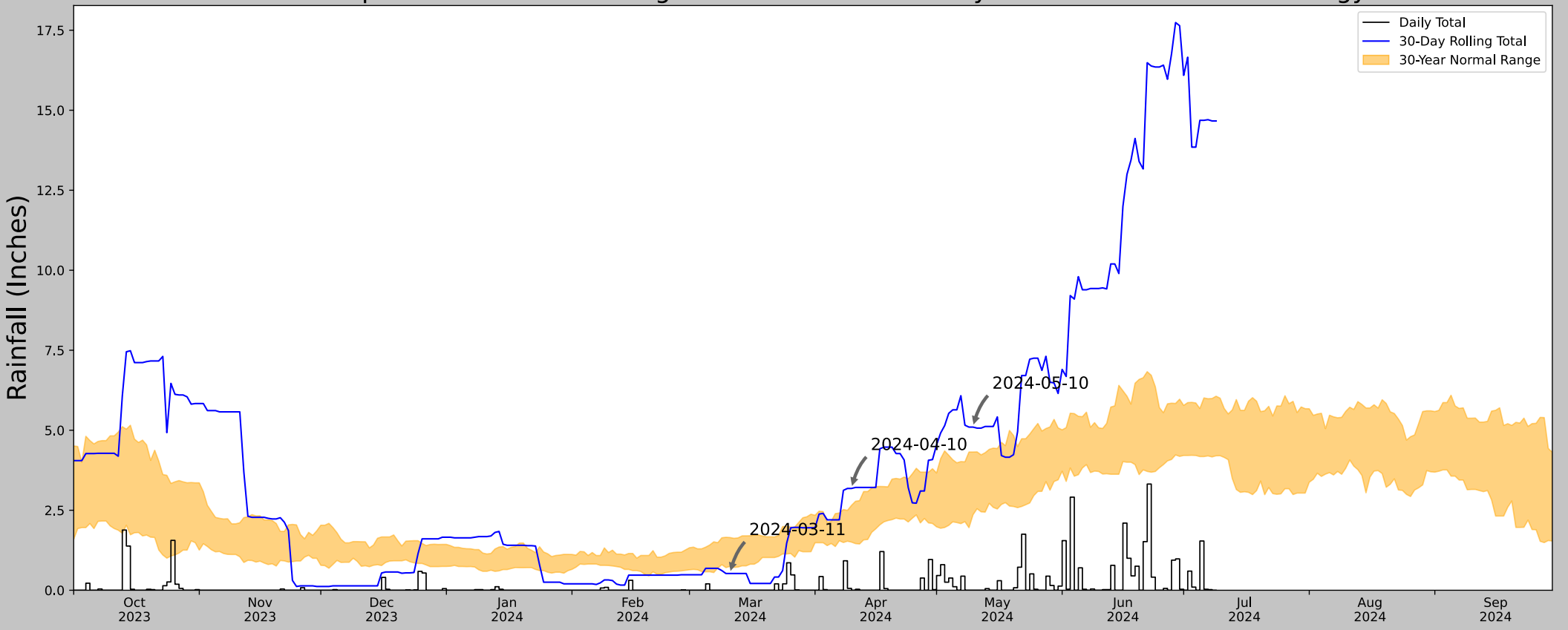
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11178	90
FARIBAULT 1.1 E	44.3001, -93.2562	1109.908	0.797	139.764	0.47	7	0
FARIBAULT 0.7 SW	44.2917, -93.2878	998.032	1.617	27.888	0.773	1	0
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 3.9 SSW	44.4086, -93.2002	994.095	7.6	23.951	3.602	2	0
NORTHFIELD 0.8 SE	44.4484, -93.1505	976.05	11.184	5.906	5.099	3	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
DENNISON 0.4 SSE	44.4039, -93.0382	981.955	13.022	11.811	6.014	4	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	115	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2024-05-10
Elevation (ft)	1028.85
Drought Index (PDSI)	Mild wetness
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-05-10	2.359055	4.319685	5.098425	Wet	3	3	9
2024-04-10	1.504331	2.65315	3.181102	Wet	3	2	6
2024-03-11	0.744882	1.647638	0.523622	Dry	1	1	1
Result							Wetter than Normal - 16

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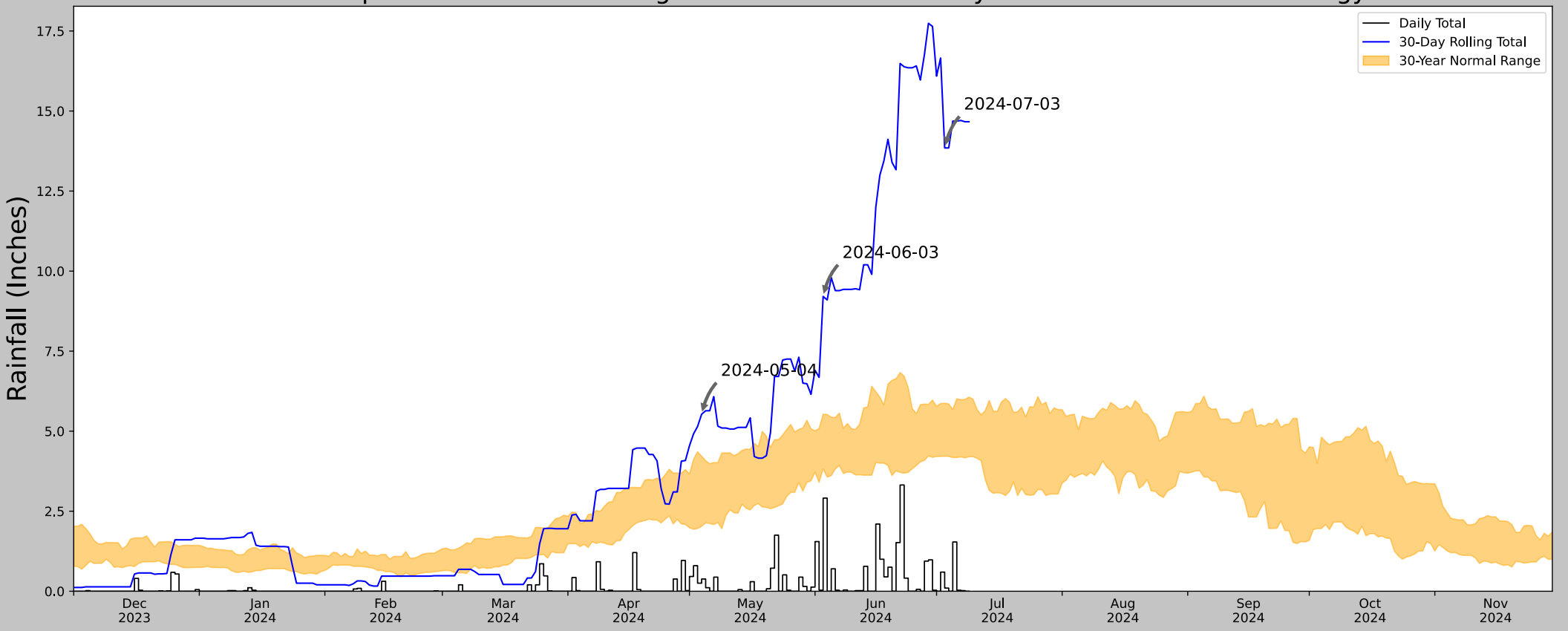
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11177	90
FARIBAULT 1.1 E	44.3001, -93.2562	1109.908	0.797	139.764	0.47	7	0
FARIBAULT 0.7 SW	44.2917, -93.2878	998.032	1.617	27.888	0.773	1	0
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 3.9 SSW	44.4086, -93.2002	994.095	7.6	23.951	3.602	2	0
NORTHFIELD 0.8 SE	44.4484, -93.1505	976.05	11.184	5.906	5.099	3	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
DENNISON 0.4 SSE	44.4039, -93.0382	981.955	13.022	11.811	6.014	4	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	115	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.3683630, -93.2847534
Observation Date	2024-07-03
Elevation (ft)	1028.85
Drought Index (PDSI)	Extreme wetness (2024-06)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-07-03	4.216929	5.871654	13.846457	Wet	3	3	9
2024-06-03	3.820473	5.532284	9.208662	Wet	3	2	6
2024-05-04	2.027559	4.220079	5.527559	Wet	3	1	3
Result							Wetter than Normal - 18

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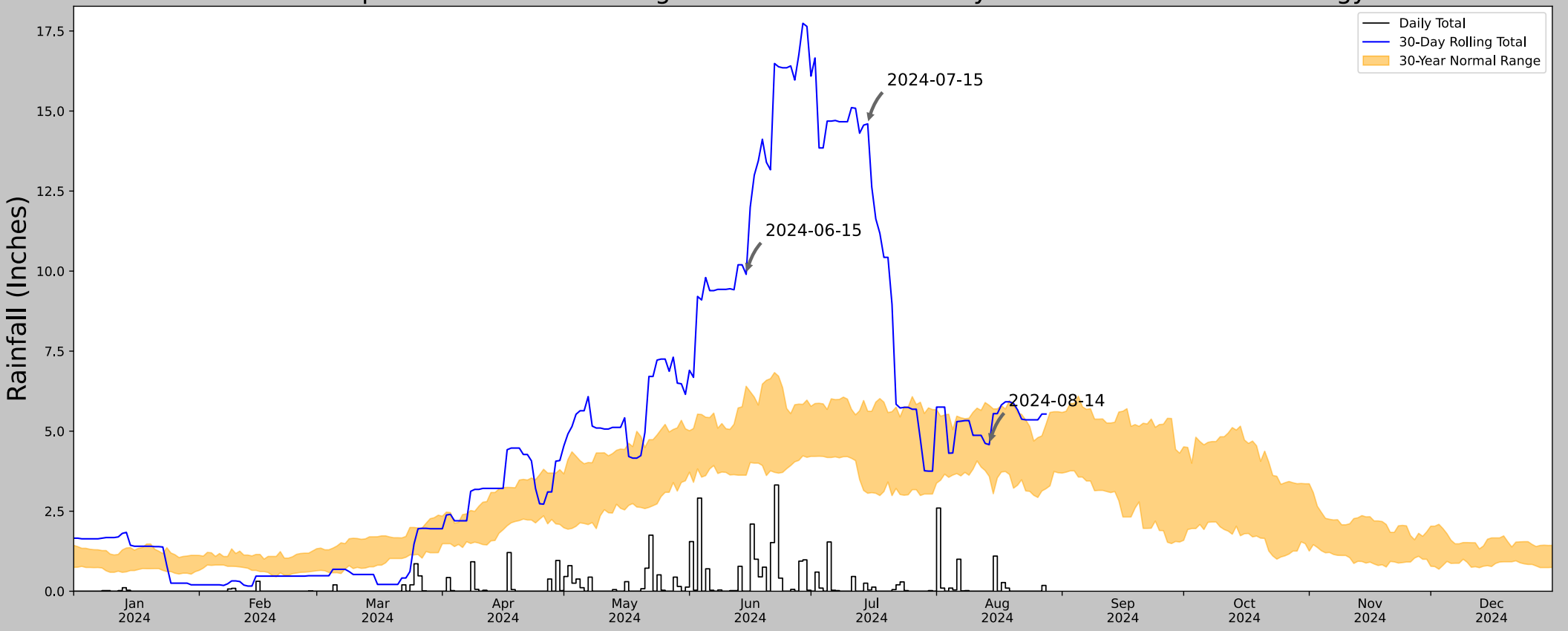
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.19	58.706	2.132	11177	90
FARIBAULT 1.1 E	44.3001, -93.2562	1109.908	0.797	139.764	0.47	7	0
FARIBAULT 0.7 SW	44.2917, -93.2878	998.032	1.617	27.888	0.773	1	0
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 3.9 SSW	44.4086, -93.2002	994.095	7.6	23.951	3.602	2	0
NORTHFIELD 0.8 SE	44.4484, -93.1505	976.05	11.184	5.906	5.099	3	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
DENNISON 0.4 SSE	44.4039, -93.0382	981.955	13.022	11.811	6.014	4	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	115	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	44.36716, -93.28471
Observation Date	2024-08-14
Elevation (ft)	1013.81
Drought Index (PDSI)	Extreme wetness (2024-07)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-14	3.587795	5.806693	4.57874	Normal	2	3	6
2024-07-15	3.059843	5.62441	14.598426	Wet	3	2	6
2024-06-15	3.62441	6.40315	9.897638	Wet	3	1	3
Result							Wetter than Normal - 15

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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
FARIBAULT	44.3092, -93.2661	970.144	4.109	43.666	2.028	11177	89
FARIBAULT 1.1 E	44.3001, -93.2562	1109.908	0.797	139.764	0.47	7	0
FARIBAULT 1.7 N	44.3235, -93.2767	1025.919	1.118	55.775	0.565	0	1
FARIBAULT 0.7 SW	44.2917, -93.2878	998.032	1.617	27.888	0.773	1	0
DUNDAS 3.2 SSW	44.3875, -93.2392	1006.89	5.571	36.746	2.712	6	0
NORTHFIELD 3.9 SSW	44.4086, -93.2002	994.095	7.6	23.951	3.602	2	0
NORTHFIELD 0.8 SE	44.4484, -93.1505	976.05	11.184	5.906	5.099	3	0
NORTHFIELD 1.1 NNW (126)	44.4722, -93.1702	967.848	12.217	2.296	5.526	1	0
DENNISON 0.4 SSE	44.4039, -93.0382	981.955	13.022	11.811	6.014	4	0
NERSTRAND 4.2 E	44.3425, -92.9792	1054.134	14.366	83.99	7.671	5	0
OWATONNA	44.0975, -93.2317	1140.092	14.726	169.948	9.129	115	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	25.06	10.17	11.532	27	0
MONTGOMERY	44.4597, -93.6631	1100.066	22.19	129.922	12.868	4	0

Appendix D: Field Data Sheets

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-1
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave
Slope (%): 2 | Lat: 44.37028 | Long: -93.283106 | Datum: WGS1984
Soil Map Unit Name: 114 - Glencoe clay loam, 0 to 1 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y
Hydric soil present?	N
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	N
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample Point located between ephemeral and intermittent stream in a wood nettle dominated pocket. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1 *Ulmus americana*	60	Y	FACW
2 *Fraxinus pennsylvanica*	20	N	FACW
3 *Acer saccharinum*	15	N	FACW
4 *Celtis occidentalis*	15	N	FAC
5			
	110	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1 *Acer saccharinum*	20	Y	FACW
2 *Acer negundo*	20	Y	FAC
3			
4			
5			
	40	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Laportea canadensis*	90	Y	FACW
2 *Geum canadense*	5	N	FAC
3			
4			
5			
6			
7			
8			
9			
10			
	95	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet
Number of Dominant Species that are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across all Strata: 4 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:

OBL species	0	x 1 =	0
FACW species	205	x 2 =	410
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	245 (A)		530 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:
- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-1

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-20	10YR 3/1	100					Loamy clay	
20-24	10YR 2/1	100					Loamy clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-2
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0 | Lat: 44.369755 | Long: -93.282331 | Datum: WGS 1984
Soil Map Unit Name: 104C2 - Hayden loam, 6 to 10 percent slopes, moderately erode | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	N
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	N
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located in depression in fallow agricultural field. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Calamagrostis canadensis*	70	Y	OBL
2 *Fraxinus pennsylvanica*	20	N	FACW
3 *Ambrosia trifida*	10	N	FAC
4 *Phalaris arundinacea*	10	N	FACW
5			
6			
7			
8			
9			
10			
	110	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	70	x 1 =	70
FACW species	30	x 2 =	60
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	110 (A)		160 (B)

Prevalence Index = B/A = 1.45

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-2

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	10YR 3/1	100					Loamy clay	
12-18	10YR 3/1	96	5YR 4/4	4	C	M	Loamy clay	
18-24	10YR 2/1	100					Loamy clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water present due to recent rainfall.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-3
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 44.368598 | Long: -93.282763 | Datum: WGS 1984
Soil Map Unit Name: 114 - Glencoe clay loam, 0 to 1 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y		
Hydric soil present?	N	**Is the sampled area within a wetland?**	N
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located in linear depression next to intermittent stream. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1 *Ulmus americana*	70	Y	FACW
2 *Fraxinus pennsylvanica*	10	N	FACW
3			
4			
5			
	80	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1 *Ulmus americana*	15	Y	FACW
2			
3			
4			
5			
	15	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Laportea canadensis*	50	Y	FACW
2 *Phalaris arundinacea*	30	Y	FACW
3 *Geum canadense*	10	N	FAC
4			
5			
6			
7			
8			
9			
10			
	90	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across all Strata: 4 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	175	x 2 =	350
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	185 (A)		380 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-3

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-11	10YR 3/1	100					Loamy clay	
11-24	10YR 2/1	100					Loamy clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	10
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	7

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Heavy recent rainfall created flooding.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-4
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave
Slope (%): 0 | Lat: 44.370574 | Long: -93.284194 | Datum: WGS 1984
Soil Map Unit Name: 104C2 - Hayden loam, 6 to 10 percent slopes, moderately erode | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located in roadside ditch on the toeslope. Has culverts on both ends of wetland. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Phalaris arundinacea*	60	Y	FACW
2 *Carex lacustris*	20	Y	OBL
3			
4			
5			
6			
7			
8			
9			
10			
	80	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	20	x 1 =	20
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	80 (A)		140 (B)

Prevalence Index = B/A = 1.75

Hydrophytic Vegetation Indicators:

- X Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-4

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- X Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

No soil pit taken due to underground utilities. Hydric soil assumed due to presence of hydrophytic vegetation and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water present in the center of wetland ditch.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-5
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 30 | Lat: 44.370596 | Long: -93.284192 | Datum: WGS 1984
Soil Map Unit Name: 104C2 - Hayden loam, 6 to 10 percent slopes, moderately erode | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N
Hydric soil present?	N
Indicators of wetland hydrology present?	N
Is the sampled area within a wetland?	N
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample Point taken on hillslope on edge of roadside ditch. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 5')			
1 *Bromus inermis*	80	Y	FACU
2 *Vicia sativa*	15	N	FACU
3 *Asclepias syriaca*	5	N	FACU
4 *Solidago lepida*	5	N	FACU
5			
6			
7			
8			
9			
10			
	105 = Total Cover		
Woody vine stratum (Plot size: 30')			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet
Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	105	x 4 =	420
UPL species	0	x 5 =	0
Column totals	105 (A)		420 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:
___ Rapid test for hydrophytic vegetation
___ Dominance test is >50%
___ Prevalence index is ≤3.0*
___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** SP-5

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

No soil pit taken due to underground utilities. No hydric soils assumed due to lack of vegetation and hydrology indicator

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-6
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave
Slope (%): 5 | Lat: 44.370299 | Long: -93.286993 | Datum: WGS 1984
Soil Map Unit Name: 114 - Glencoe clay loam, 0 to 1 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	Y
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located on toeslope from agricultural area into wooded zone which is connected to the roadside ditch, dominated by willow and buckthorn. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1 *Ulmus americana*	20	Y	FACW
2			
3			
4			
5			
	20	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1 *Salix interior*	60	Y	FACW
2 *Frangula caroliniana*	20	Y	FAC
3			
4			
5			
	80	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Phalaris arundinacea*	40	Y	FACW
2 *Solidago lepida*	20	Y	FACU
3 *Helianthus microcephalus*	10	N	FACU
4			
5			
6			
7			
8			
9			
10			
	70	= Total Cover	

Woody vine stratum (Plot size: 30')			
1 *Parthenocissus quinquefolia*	10	Y	FACU
2			
	10	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across all Strata: 6 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	120	x 2 =	240
FAC species	20	x 3 =	60
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column totals	180 (A)		460 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-6

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	10YR 4/1	100					Clay loam	
6-20	10YR 4/1	94	5YR 4/6	6	C	M	Clay loam	
20-24	10YR 2/1	100					Clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-7
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0 | Lat: 44.37025 | Long: -93.286981 | Datum: WGS 1984
Soil Map Unit Name: 104C2 - Hayden loam, 6 to 10 percent slopes, moderately erode | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	Y
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located in depression in fallow agricultural field next to type 6 wetland. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Calamagrostis canadensis*	25	Y	OBL
2 *Dactylis glomerata*	5	N	FACU
3 *Ambrosia trifida*	5	N	FAC
4 *Phalaris arundinacea*	5	N	FACW
5			
6			
7			
8			
9			
10			
	40	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	25	x 1 =	25	
FACW species	5	x 2 =	10	
FAC species	5	x 3 =	15	
FACU species	5	x 4 =	20	
UPL species	0	x 5 =	0	
Column totals	40	(A)	70	(B)

Prevalence Index = B/A = 1.75

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-7

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	10YR 4/1	94	7.5YR 4/6	6	C	PL/M	Sandy clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	7
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	0

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-8
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 8 | Lat: 44.370161 | Long: -93.287011 | Datum: WGS 1984
Soil Map Unit Name: 104C2 - Hayden loam, 6 to 10 percent slopes, moderately erode | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N
Hydric soil present?	N
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? N
If yes, optional wetland site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located on hillslope in fallow agricultural field, 1 foot upslope of wetland. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Salsola tragus*	10	Y	FACU
2 *Ambrosia trifida*	5	Y	FAC
3 *Phalaris arundinacea*	5	Y	FACW
4 *Chenopodium album*	5	Y	FACU
5			
6			
7			
8			
9			
10			
	25	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 4 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	5	x 3 =	15
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column totals	25 (A)		85 (B)

Prevalence Index = B/A = 3.40

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-8

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-16	10YR 4/3	98	10YR 4/6	2	C	M	Sandy loam	
16-24	10YR 4/2	100					Silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	22
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	20

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-9
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0 | Lat: 44.369545 | Long: -93.285989 | Datum: WGS 1984
Soil Map Unit Name: 414 - Hamel loam, 0 to 2 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample Point located in depression in fallow agricultural field. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Calamagrostis canadensis*	50	Y	OBL
2 *Amaranthus viridis*	10	N	FAC
3 *Ambrosia artemisiifolia*	5	N	FACU
4			
5			
6			
7			
8			
9			
10			
	65	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet
Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet
Total % Cover of:

OBL species	50	x 1 =	50
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column totals	65 (A)		100 (B)

Prevalence Index = B/A = 1.54

Hydrophytic Vegetation Indicators:
- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- X Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)
Fallow agricultural field, corn stubble present.

SOIL

Sampling Point: SP-9

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-7	10YR 3/1	100					Clay loam	
7-16	10YR 3/1	98	7.5YR 4/6	2	C	M	Loamy clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	13
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	10

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water present due to recent rainfall.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 6/27/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-10
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 4 | Lat: 44.369531 | Long: -93.285884 | Datum: WGS 1984
Soil Map Unit Name: 414 - Hamel loam, 0 to 2 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	N
Indicators of wetland hydrology present?	N
Is the sampled area within a wetland?	N
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located on hillslope in agricultural field 1 foot upslope of wetland. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Calamagrostis canadensis*	70	Y	OBL
2 *Amaranthus viridis*	15	N	FAC
3 *Fraxinus pennsylvanica*	5	N	FACW
4			
5			
6			
7			
8			
9			
10			
	90	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	70	x 1 =	70	
FACW species	5	x 2 =	10	
FAC species	15	x 3 =	45	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	90	(A)	125	(B)

Prevalence Index = B/A = 1.39

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** SP-10

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-14	10YR 3/2	100					Loam	
14-24	10YR 3/2	98	10YR4/6	2	C	M	Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 7/3/2023
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-11
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 44.367857 | Long: -93.283345 | Datum: WGS 1984
Soil Map Unit Name: 104C2 - Hayden loam, 6 to 10 percent slopes, moderately erode | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	Y
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample Point located on Toeslope of agricultural depression in fallow field. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 5')			
1 *Calamagrostis canadensis*	40	Y	OBL
2 *Eleocharis acicularis*	40	Y	OBL
3 *Phalaris arundinacea*	10	N	FACW
4 *Fraxinus pennsylvanica*	5	N	FACW
5 *Ambrosia trifida*	3	N	FAC
6 *Rorippa sylvestris*	3	N	OBL
7 *Persicaria pensylvanica*	3	N	FACW
8			
9			
10			
	104 = Total Cover		
Woody vine stratum (Plot size: 30')			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	83	x 1 =	83
FACW species	18	x 2 =	36
FAC species	3	x 3 =	9
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	104 (A)		128 (B)

Prevalence Index = B/A = 1.23

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)
Fallow agricultural field, has corn stubble from 1-2 years ago present.

SOIL

Sampling Point: SP-11

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	10YR 2/1	100					silt loam	
12-40	10YR 2/1	100					clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- X Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

A12 assumed due to hydrology and vegetation. Went 40 inches deep with no depleted layer present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water present due to recent rainfall.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 7/3/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-12
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 4 | Lat: 44.367886 | Long: -93.283251 | Datum: WGS 1984
Soil Map Unit Name: 104C2 - Hayden loam, 6 to 10 percent slopes, moderately erode | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	N
Indicators of wetland hydrology present?	N
Is the sampled area within a wetland?	N
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located on hillslope of fallow agricultural field, 1 foot upslope of wetland. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Calamagrostis canadensis*	55	Y	OBL
2 *Ambrosia trifida*	20	N	FAC
3 *Ambrosia artemisiifolia*	15	N	FACU
4 *Rorippa sylvestris*	10	N	OBL
5 *Fraxinus pennsylvanica*	5	N	FACW
6			
7			
8			
9			
10			
	105	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	65	x 1 =	65
FACW species	5	x 2 =	10
FAC species	20	x 3 =	60
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column totals	105 (A)		195 (B)

Prevalence Index = B/A = 1.86

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-12

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	10YR 2/2	100					Silt loam	
12-17	10YR 2/2	100					Clay loam	
17-24	10YR 3/2	100					Clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 7/3/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-13
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 0 | Lat: 44.367219 | Long: -93.282608 | Datum: WGS 1984
Soil Map Unit Name: 1831 - Colo silt loam, channeled, 0 to 2 percent slopes, freq. floo | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances"
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	N	**Is the sampled area within a wetland?**	N
Indicators of wetland hydrology present?	Y	f yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located in forested depression in floodplain, dominated by wood nettle. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1 *Ulmus americana*	20	Y	FACW
2 *Fraxinus pennsylvanica*	10	Y	FACW
3			
4			
5			
	30	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1 *Fraxinus pennsylvanica*	10	Y	FACW
2 *Lonicera sempervirens*	5	Y	FACU
3			
4			
5			
	15	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Laportea canadensis*	40	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	40	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across all Strata: 5 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column totals	85 (A)		180 (B)

Prevalence Index = B/A = 2.12

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-13

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-8	10YR 3/1	100					Clay loam	
8-16	10YR 3/1	100					Clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	13
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	10

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 7/3/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-14
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Linear Depression | Local relief (concave, convex, none): Concave
Slope (%): 2 | Lat: 44.366174 | Long: -93.283865 | Datum: WGS 1984
Soil Map Unit Name: 1831 - Colo silt loam, channeled, 0 to 2 percent slopes, freq. floo | NWI Classification: R4SBC
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances"
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	N	**Is the sampled area within a wetland?**	N
Indicators of wetland hydrology present?	Y	f yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located on toeslope of linear depression around intermittent stream. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1 *Fraxinus pennsylvanica*	30	Y	FACW
2 *Ulmus americana*	25	Y	FACW
3 *Quercus bicolor*	5	N	FACW
4			
5			
	60	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1 *Lonicera sempervirens*	5	Y	FACU
2 *Fraxinus pennsylvanica*	5	Y	FACW
3			
4			
5			
	10	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Laportea canadensis*	40	Y	FACW
2 *Phalaris arundinacea*	15	Y	FACW
3 *Persicaria pensylvanica*	5	N	FACW
4			
5			
6			
7			
8			
9			
10			
	60	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across all Strata: 6 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 83.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	125	x 2 =	250
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column totals	130 (A)		270 (B)

Prevalence Index = B/A = 2.08

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-14

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-8	10YR 3/1	100					Silt loam	
8-12	10YR 3/1	100					Silty clay loam	
12-18	10YR 3/1	98	10YR 4/6	2	C	M	Clay loam	
18-24	10YR 2/1	100					Clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	20
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	18

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 7/3/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-15
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 44.366564 | Long: -93.286546 | Datum: WGS 1984
Soil Map Unit Name: 1831 - Colo silt loam, channeled, 0 to 2 percent slopes, freq. floo | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	N	**Is the sampled area within a wetland?**	N
Indicators of wetland hydrology present?	Y	**If** yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located in forested depression next to intermittent stream, potentiallu old stream bed. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1 *Ulmus americana*	30	Y	FACW
2 *Fraxinus pennsylvanica*	30	Y	FACW
3			
4			
5			
	60	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1 *Sambucus racemosa*	15	Y	FACU
2			
3			
4			
5			
	15	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Laportea canadensis*	15	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	15	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across all Strata: 4 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	75	x 2 =	150
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column totals	90 (A)		210 (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-15

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-18	10YR 3/1	100					Silty clay loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-16
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 44.364411 | Long: -93.284328 | Datum: WGS 1984
Soil Map Unit Name: 1361, Le Sueur loam, moderately coarse substratum, 1 to 3 perc | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	Y
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point located in agricultural depression with stunted and washed out corn. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Panicum capillare*	40	Y	FAC
2 *Amaranthus palmeri*	15	Y	FACU
3 *Zea mays*	15	Y	UPL
4			
5			
6			
7			
8			
9			
10			
	70	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 3 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 33.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	40	x 3 =	120	
FACU species	15	x 4 =	60	
UPL species	15	x 5 =	75	
Column totals	70	(A)	255	(B)

Prevalence Index = B/A = 3.64

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- X Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)
Located in agricultural field with stunted corn.

SOIL

Sampling Point: SP-16

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-18	10YR 2/1	100					Clay Loam	
18-24	10YR 6/1	60	10YR 3/1	35	C	M	Silty Clay	
			7.5YR 5/8	5	C	M		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-17
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 3 | Lat: 44.364411 | Long: -93.284269 | Datum: WGS 1984
Soil Map Unit Name: 1361, Le Sueur loam, moderately coarse substratum, 1 to 3 perc | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	N
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located on hillslope 0.5 feet upslope of wetland in healthy corn. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Zea mays*	50	Y	UPL
2 *Panicum capillare*	20	Y	FAC
3			
4			
5			
6			
7			
8			
9			
10			
	70	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	20	x 3 =	60	
FACU species	0	x 4 =	0	
UPL species	50	x 5 =	250	
Column totals	70	(A)	310	(B)

Prevalence Index = B/A = 4.43

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-17

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	10YR 2/1	100					Clay Loam	
12-24	10YR 5/1	80	10YR 3/1	15	C	M	Silty Clay Loam	
			10YR 5/8	5	C	M		

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-18
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Plain | Local relief (concave, convex, none): None
Slope (%): 0 | Lat: 44.36486 | Long: -93.285399 | Datum: WGS 1984
Soil Map Unit Name: 1361, Le Sueur loam, moderately coarse substratum, 1 to 3 perc | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N
Hydric soil present?	Y
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? N
If yes, optional wetland site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located in agricultural plain with healthy corn present. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Zea mays*	70	Y	UPL
2 *Panicum capillare*	10	N	FAC
3			
4			
5			
6			
7			
8			
9			
10			
	80	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	70	x 5 =	350
Column totals	80 (A)		380 (B)

Prevalence Index = B/A = 4.75

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** SP-18

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-20	10YR 2/1	100					Clay Loam	
20-30	10YR 3/1	96	7.5YR 5/8	4	C	M	Silty Clay	
30-36	10YR 4/1	98	10YR 6/6	2	C	M	Silty Clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-19
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave
Slope (%): 2 | Lat: 44.36493 | Long: -93.28475 | Datum: WGS 1984
Soil Map Unit Name: 104B, Hayden loam, 2 to 6 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located in drowned out corn, dominated by barnyard grass. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Echinochloa crus-galli*	75	Y	FACW
2 *Panicum capillare*	10	N	FAC
3 *Eleocharis acicularis*	5	N	OBL
4			
5			
6			
7			
8			
9			
10			
	90	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	5	x 1 =	5
FACW species	75	x 2 =	150
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	90 (A)		185 (B)

Prevalence Index = B/A = 2.06

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

Point located in agricultural field.

SOIL

Sampling Point: SP-19

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	10YR 3/2	100					Loam	
12-24	10YR 5/1	70	10YR 3/1	26	C	M	Clay Loam	
			7.5YR 4/6	4	C	M	Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-20
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 2 | Lat: 44.36494 | Long: -93.28491 | Datum: WGS 1984
Soil Map Unit Name: 104B, Hayden loam, 2 to 6 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N
Hydric soil present?	N
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? N
If yes, optional wetland site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point in healthy corn 0.5 feet upslope of wetland. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Zea mays*	75	Y	UPL
2			
3			
4			
5			
6			
7			
8			
9			
10			
	75	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	75	x 5 =	375
Column totals	75 (A)		375 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)
Sample point located in agricultural zone.

SOIL

Sampling Point: SP-20

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-13	10YR 3/2	100					Loam	
13-18	10YR 5/2	80	10YR 3/1	16	C	M	Silty Clay Loam	
			10YR 5/6	4	C	M	Silty Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-21
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave
Slope (%): 3 | Lat: 44.3650024 | Long: -93.2832712 | Datum: WGS 1984
Soil Map Unit Name: 414, Hamel loam, 0 to 2 percent slopes | NWI Classification: PEM1Af
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located in toeslope between stunted corn and reed canary grass basin. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Echinochloa crus-galli*	40	Y	FACW
2 *Persicaria virginiana*	15	Y	FAC
3 *Panicum capillare*	10	N	FAC
4 *Amaranthus palmeri*	10	N	FACU
5			
6			
7			
8			
9			
10			
	75	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	25	x 3 =	75
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column totals	75 (A)		195 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** SP-21

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-24	10YR 3/1	92	5YR 4/6	8	C	PL/M	Silty Clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-22
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 4 | Lat: 44.36499 | Long: -93.283378 | Datum: WGS 1984
Soil Map Unit Name: 414, Hamel loam, 0 to 2 percent slopes | NWI Classification: PEM1Af
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N
Hydric soil present?	Y
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? N
If yes, optional wetland site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Sample point located in stunted edge of corn field on hillslope. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Zea mays*	40	Y	UPL
2 *Echinochloa crus-galli*	25	Y	FACW
3 *Panicum capillare*	5	N	FAC
4			
5			
6			
7			
8			
9			
10			
	70	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column totals	70 (A)		265 (B)

Prevalence Index = B/A = 3.79

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-22

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-24	10YR 3/2	96	10YR 5/8	4	C	M	Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-23
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave
Slope (%): 4 | Lat: 44.364855 | Long: -93.286716 | Datum: WGS 1984
Soil Map Unit Name: 104B, Hayden loam, 2 to 6 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y
Hydric soil present?	Y
Indicators of wetland hydrology present?	Y
Is the sampled area within a wetland?	Y
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located at toeslope between corn and spike rush. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Eleocharis acicularis*	60	Y	OBL
2 *Echinochloa crus-galli*	40	Y	FACW
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	60	x 1 =	60
FACW species	40	x 2 =	80
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100 (A)		140 (B)

Prevalence Index = B/A = 1.40

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** SP-23

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	10YR 2/2	98	7.5YR 4/4	2	C	M	Loam	
6-24	10YR 2/1	96	7.5YR 4/4	4	C	M	Silty Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Standing water located in middle of wetland.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-24
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 5 | Lat: 44.364901 | Long: -93.286743 | Datum: WGS 1984
Soil Map Unit Name: 104B, Hayden loam, 2 to 6 percent slopes | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N
Hydric soil present?	N
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? N
If yes, optional wetland site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located on hillslope 1 foot upslope of wetland in corn. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Zea mays*	60	Y	UPL
2 *Echinochloa crus-galli*	15	Y	FACW
3			
4			
5			
6			
7			
8			
9			
10			
	75	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	60	x 5 =	300
Column totals	75 (A)		330 (B)

Prevalence Index = B/A = 4.40

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL **Sampling Point:** SP-24

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-9	10YR 3/2	100					Loam	
9-18	10YR 4/3	96	10YR 4/6	4	C	M	Clay Loam	
18-24	10YR 5/3	100					Clay Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

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

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-25
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Concave
Slope (%): 2 | Lat: 44.36399 | Long: -93.285853 | Datum: WGS 1984
Soil Map Unit Name: 104C2, Hayden loam, 6 to 10 percent slopes, moderately eroded | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	Y
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Sample Point located at toeslope between stunted corn and depression. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Amaranthus palmeri*	60	Y	FACU
2 *Panicum capillare*	15	Y	FAC
3			
4			
5			
6			
7			
8			
9			
10			
	75	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column totals	75 (A)		285 (B)

Prevalence Index = B/A = 3.80

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- X Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)
Point located in stunted corn field.

SOIL **Sampling Point:** SP-25

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-6	10YR 3/1	100					Loam	
6-24	10YR 2/1	96	5YR 4/6	4	C	M	Silty Clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Faribault Site | City/County: Rice | Sampling Date: 8/13/2024
Applicant/Owner: Archer DataCenters | State: MN | Sampling Point: SP-26
Investigator(s): Mason Kunkel, Lukas Struss | Section, Township, Range: Section 1, Township 110N, Range 21W
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): None
Slope (%): 4 | Lat: 44.36401 | Long: -93.28576 | Datum: WGS 1984
Soil Map Unit Name: 104C2, Hayden loam, 6 to 10 percent slopes, moderately eroded | NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
Are vegetation X, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? No
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	N
Hydric soil present?	N
Indicators of wetland hydrology present?	N

Is the sampled area within a wetland? N
If yes, optional wetland site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Sample Point located on hillslope 1 foot upslope of wetland in half-stunted corn. Based on 90-day precipitation rolling totals, the site visit was wetter than normal.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratum (Plot size: 15')			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5')			
1 *Zea mays*	60	Y	UPL
2			
3			
4			
5			
6			
7			
8			
9			
10			
	60	= Total Cover	

Woody vine stratum (Plot size: 30')			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across all Strata: 1 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	60	x 5 =	300
Column totals	60 (A)		300 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP-26

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

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-14	10YR 3/2	100					Sandy Loam	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L)**
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 14

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

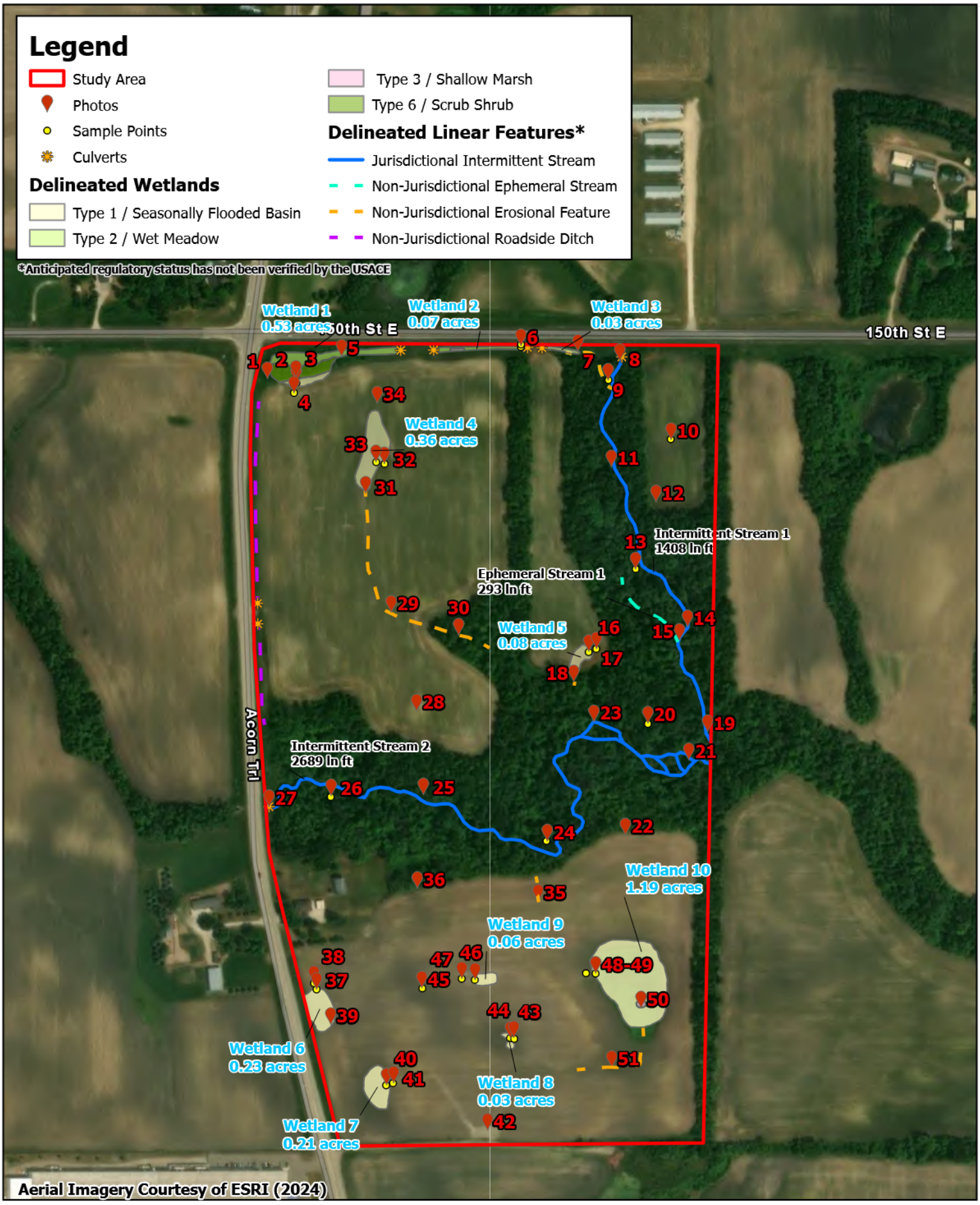
Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix E: Photos



Kimley»Horn

Appendix E. Photo Location Map
Faribault Township, Rice County Archer DataCenters



Photo 1: Facing east over Wetland 1 boundary.



Photo 2: Photo point located on Wetland 1 and SP-6, facing south at upland.



Photo 3: Located on SP-7, facing north at Wetland 1.



Photo 4: Facing east over agricultural boundary of Wetland 1.



Photo 5: Facing east over Wetland 1.



Photo 6: Facing south over SP-5 and Wetland 2.



Photo 7: Looking west over Wetland 3 and the start of erosional feature.



Photo 8: Facing south over Intermittent Stream 1.



Photo 9: Facing east over SP-1 in wood-nettle dominated pocket.



Photo 10: Facing east over upland depression at SP-2.



Photo 11: Facing south over Intermittent Stream 1.



Photo 12: Facing south over upland field edge.



Photo 13: Facing south over SP-3.



Photo 14: Facing north over Intermittent Stream 1.



Photo 15: Photo point located at convergence of Ephemeral Stream 1 and Intermittent Stream 1, facing north.



Photo 16: Facing south over Wetland 5 boundary.



Photo 17: Facing west from SP-12, looking over Wetland 5.



Photo 18: Facing north over erosional feature draining Wetland 5.



Photo 19: Facing south over Intermittent Stream 1 as it leaves the study area.



Photo 20: Facing south over SP-13.



Photo 21: Facing northeast over a branch of Intermittent Stream 2.



Photo 22: Facing west over upland field edge.



Photo 23: Facing east over Intermittent Stream 2.



Photo 24: Facing east over SP-14 and Intermittent stream 2.



Photo 25: Facing west over Intermittent stream 2.



Photo 26: Photo point located at SP-15, facing east.



Photo 27: Start of Intermittent Stream 2, flowing east out of culvert.



Photo 28: Facing south on hilltop with crop stress.



Photo 29: Facing southeast over erosional feature draining wetland.



Photo 30: Facing southeast over erosional feature in wooded area.



Photo 31: Facing north over Wetland 4 and start of erosional feature.



Photo 32: Facing east over upland near Wetland 4.



Photo 33: Facing south from SP-9, looking over Wetland 4.



Photo 34: Looking south over Wetland 4.



Photo 35: Facing south over erosional feature on edge of cornfield.



Photo 36: Facing east at edge of cornfield.



Photo 37: Facing south over Wetland 6 from SP-23.



Photo 38: Facing south from SP-24.



Photo 39: Facing east over Wetland 6.



Photo 40: Facing south over SP-25 in Wetland 7.



Photo 41: Facing west from SP-26.



Photo 42: Facing north over southernmost portion of study area.



Photo 43: Facing northwest over SP-16 in Wetland 8.



Photo 44: Facing west over SP-17.



Photo 45: Facing west over SP-18.



Photo 46: Facing east over SP-19 and Wetland 9.



Photo 47: Facing east over SP-20.



Photo 48: Facing west over SP-22.



Photo 49: Facing east from SP-21 at Wetland 10.



Photo 50: Facing north over cattail pocket in Wetland 10.



Photo 51: Facing west over erosional feature.

Appendix C

Greenhouse Gas Analysis

DRAFT



EPA Simplified GHG Emissions Calculator (SGEC)

Version 7 June 2021

The EPA Simplified GHG Emissions Calculator ("the Calculator") is designed as a simplified calculation tool to help organizations estimate and inventory their annual greenhouse gas (GHG) emissions for US-based operations. All methodologies and default values provided are based on the most current Center for Corporate Climate Leadership Greenhouse *Gas Inventory Guidance Documents* and the *Emission Factors Hub*. The Calculator will quantify the direct and indirect emissions from sources at an organization when activity data are entered into the various sections of the workbook for one annual period.

Before entering data, please: 1) Enable Macros and 2) Familiarize yourself with the *Guide to Greenhouse Gas Management for Small Business & Low Emitters.*

Download the guide: https://www.epa.gov/climateleadership/center-corporate-climate-leadership-small-business-and-low-emitters-guide

There are three primary steps in completing a GHG inventory. Each emissions source also has these three steps.

(1) **DEFINE**: The first step in completing a GHG inventory is to determine the boundaries and emissions sources included within those boundaries. After you have defined your organizational and operational boundaries, you can use the questions on the "Boundary Questions" worksheet to help you determine which emissions sources are relevant to your business.

Go to Boundary Questions

(2) **COLLECT**: The second step is to collect data for the defined annual period. This step is typically the most time consuming, since the data can be difficult to gather. This Calculator has help sheets with suggestions and guidance for each emissions source and a general help sheet for data management. **Click the drop down menu boxes below to navigate to these sheets**.

Help - Data Management

(3) **QUANTIFY**: The third step is to calculate emissions. This Calculator is designed to complete the emissions quantification step for you. Once the user enters data in this MS Excel spreadsheet, the emissions will be calculated and totaled on the "Summary" sheet.

Calculator Guidance - Important Information

(A) Navigate to the data entry sheets using the drop down menu in the dark grey cell below and then clicking on the "Go To Data Entry Sheet" button. On the data entry sheets enter data in ORANGE cells only.

(B) This Calculator has several "Tool Sheets" with useful reference data such as unit conversions, heat contents, and emission factors. Click on the buttons below to go to the appropriate Tool Sheet.

(C) Data must be entered in the units specified on the data entry sheets. Use the "Unit Conversions" or "Heat Content" sheets if unit conversion is necessary prior to entering data into the Calculator.

(D) If more guidance is needed, you can reference the emission factor data sources found on the "Emission Factors" sheet.

Tool Sheets	Quick Data Entry Navigation
Unit Conversions	Fire Suppression
Heat Content	
Emission Factors	

Calculator Notes

Emission sources of all seven major GHGs are accounted for in the inventory and in this Calculator: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The Calculator allows the user to estimate GHG emissions from scope 1 (direct), scope 2 (indirect), and some scope 3 (other indirect) sources.

The Calculator uses U.S.-specific cross-sector emission factors from the *Emission Factors Hub*. Many industrial sectors also have process-related emissions sources that are specific to their sector. EPA's Greenhouse Gas Reporting Program provides guidance and tools that can aid in the calculation and reporting of these emissions:

https://www.epa.gov/ghgreporting

The GHG Protocol also provides guidance on calculating emissions from industrial processes.

Scope 1 Emissions from Stationary Combustion Sources

EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP
U.S. Environmental Protection Agency

Guidance

(A) Enter annual data for each combustion unit, facility, or site (by fuel type) in ORANGE cells on **Table 1**. Example entry is shown in first row (*GREEN Italics*).
- Select "Fuel Combusted" from drop down box.
- Enter "Quantity Combusted" and choose the appropriate units from the drop down box in the unit column. If it's necessary to convert units, common heat contents can be found on the "Heat Content" sheet and unit conversions on the "Unit Conversion" sheet.

(B) If fuel is consumed in a facility but stationary fuel consumption data are not available, an estimate should be made for completeness. See the "Items to Note" section of the Help sheet for suggested estimation approaches.

(C) Biomass CO_2 emissions are not reported in the total emissions, but are reported separately at the bottom of the sheet.

Table 1. Stationary Source Fuel Combustion

Source ID	Source Description	Source Area (sq ft)	Fuel Combusted	Quantity Combusted	Units
BLR-012	*East Power Plant*	*12,517*	*Natural Gas*	*10,000*	*MMBtu*
Datacenters	Operations	500,000	Distillate Fuel Oil No. 2	68,544	Gallons

GHG Emissions

Total Organization-Wide Stationary Source Combustion by Fuel Type

Fuel Type	Quantity Combusted	Units
Anthracite Coal	0	short tons
Bituminous Coal	0	short tons
Sub-bituminous Coal	0	short tons
Lignite Coal	0	short tons
Natural Gas	0	scf
Distillate Fuel Oil No. 2	68,544	gallons
Residual Fuel Oil No. 6	0	gallons
Kerosene	0	gallons
Liquefied Petroleum Gases (LPG)	0	gallons
Wood and Wood Residuals	0	short tons
Landfill Gas	0	scf

Total Organization-Wide CO_2, CH_4 and N_2O Emissions from Stationary Source Fuel Combustion

Fuel Type	CO_2 (kg)	CH_4 (g)	N_2O (g)
Anthracite Coal	0.0	0.0	0.0
Bituminous Coal	0.0	0.0	0.0
Sub-bituminous Coal	0.0	0.0	0.0
Lignite Coal	0.0	0.0	0.0
Natural Gas	0.0	0.0	0.0
Distillate Fuel Oil No. 2	699,834.2	28,103.0	5,483.5
Residual Fuel Oil No. 6	0.0	0.0	0.0
Kerosene	0.0	0.0	0.0
Liquefied Petroleum Gases (LPG)	0.0	0.0	0.0
Total Fossil Fuel Emissions	**699,834.2**	**28,103.0**	**5,483.5**
Wood and Wood Residuals	0.0	0.0	0.0
Landfill Gas	0.0	0.0	0.0
Total Non-Fossil Fuel Emissions	**0.0**	**0.0**	**0.0**
Total Emissions for all Fuels	**699,834.2**	**28,103.0**	**5,483.5**

Total CO_2 Equivalent Emissions (metric tons) - Stationary Combustion	**702.2**
Total Biomass CO_2 Equivalent Emissions (metric tons) - Stationary Combustion	**0.0**

Scope 1 Emissions from Stationary Combustion Sources

EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP
U.S. Environmental Protection Agency

Guidance

(A) Enter annual data for each combustion unit, facility, or site (by fuel type) in ORANGE cells on **Table 1**. Example entry is shown in first row (*GREEN Italics*).
- Select "Fuel Combusted" from drop down box.
- Enter "Quantity Combusted" and choose the appropriate units from the drop down box in the unit column. If it's necessary to convert units, common heat contents can be found on the "Heat Content" sheet and unit conversions on the "Unit Conversion" sheet.

(B) If fuel is consumed in a facility but stationary fuel consumption data are not available, an estimate should be made for completeness. See the "Items to Note" section of the Help sheet for suggested estimation approaches.

(C) Biomass CO_2 emissions are not reported in the total emissions, but are reported separately at the bottom of the sheet.

Table 1. Stationary Source Fuel Combustion

Source ID	Source Description	Source Area (sq ft)	Fuel Combusted	Quantity Combusted	Units
BLR-012	*East Power Plant*	*12,517*	*Natural Gas*	*10,000*	*MMBtu*
Datacenters	Natural Gas Use	500,000	Natural Gas	10,000	MMBtu

GHG Emissions

Total Organization-Wide Stationary Source Combustion by Fuel Type

Fuel Type	Quantity Combusted	Units
Anthracite Coal	0	short tons
Bituminous Coal	0	short tons
Sub-bituminous Coal	0	short tons
Lignite Coal	0	short tons
Natural Gas	9,746,589	scf
Distillate Fuel Oil No. 2	0	gallons
Residual Fuel Oil No. 6	0	gallons
Kerosene	0	gallons
Liquefied Petroleum Gases (LPG)	0	gallons
Wood and Wood Residuals	0	short tons
Landfill Gas	0	scf

Total Organization-Wide CO_2, CH_4 and N_2O Emissions from Stationary Source Fuel Combustion

Fuel Type	CO_2 (kg)	CH_4 (g)	N_2O (g)
Anthracite Coal	0.0	0.0	0.0
Bituminous Coal	0.0	0.0	0.0
Sub-bituminous Coal	0.0	0.0	0.0
Lignite Coal	0.0	0.0	0.0
Natural Gas	530,604.3	10,039.0	974.7
Distillate Fuel Oil No. 2	0.0	0.0	0.0
Residual Fuel Oil No. 6	0.0	0.0	0.0
Kerosene	0.0	0.0	0.0
Liquefied Petroleum Gases (LPG)	0.0	0.0	0.0
Total Fossil Fuel Emissions	**530,604.3**	**10,039.0**	**974.7**
Wood and Wood Residuals	0.0	0.0	0.0
Landfill Gas	0.0	0.0	0.0
Total Non-Fossil Fuel Emissions	**0.0**	**0.0**	**0.0**
Total Emissions for all Fuels	**530,604.3**	**10,039.0**	**974.7**

Total CO_2 Equivalent Emissions (metric tons) - Stationary Combustion	**531.1**
Total Biomass CO_2 Equivalent Emissions (metric tons) - Stationary Combustion	**0.0**

Back to Intro | Back to Summary | Help

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Scope 1 Emissions from Mobile Sources

Guidance

(A) Enter annual data for each vehicle or group of vehicles (grouped by vehicle type, vehicle year, and fuel type) in ORANGE cells in **Table 1**. Example entry is shown in first row (GREEN *Italics*). Only enter vehicles owned or leased by your organization on this sheet. All other vehicle use such as employee commuting or business travel is considered a scope 3 emissions source and should be reported in the corresponding scope 3 sheets.
- Select "On-Road" or "Non-Road" from drop down box to determine the Vehicle Types available.
- Select "Vehicle Type" from drop down box (closest type available).
- Enter "Fuel Usage" in appropriate units (units appear when vehicle type is selected).
- If mileage or fuel usage is unknown, estimate using approximate fuel economy values (see **Reference Table** below).
- Vehicle year and Miles traveled are not necessary for non-road equiment.

(B) When using biofuels, typically the biofuel (biodiesel or ethanol) is mixed with a petroleum fuel (diesel or gasoline) for use in vehicles. Enter the biodiesel and ethanol percentages of the fuel if known, or leave default values.

Biodiesel Percent:	20	%
Ethanol Percent:	80	%

(C) Biomass CO_2 emissions from biodiesel and ethanol are not reported in the total emissions, but are reported separately at the bottom of the sheet.

Table 1. Mobile Source Fuel Combustion and Miles Traveled

Source ID	Source Description	On-Road or Non-Road?	Vehicle Type	Vehicle Year	Fuel Usage	Units	Miles Traveled
Fleet-012	*HQ Fleet*	*NonRoad*	*Ships and Boats - Diesel*	*1990*	*500*	*gal*	*3,670*
Construction Equipment (non-road ga	Construction Equipment	NonRoad	Construction/Mining Equipment - Gasoline (2 stroke)	2007	91,912	gal	0
Passenger Cars	Construction Equipment	OnRoad	Passenger Cars - Gasoline	2007	313	gal	4,368
Construction Equipment (non-road di	Construction Equipment	NonRoad	Construction/Mining Equipment - Diesel	2007	328,257	gal	0
Medium- and Heavy- Duty Trucks	Construction Equipment	OnRoad	Medium- and Heavy-Duty Vehicles - Diesel	2007	657	gal	1,560
Light Trucks	Construction Equipment	OnRoad	Light-Duty Trucks - Gasoline	2007	613	gal	1,560

Reference Table: Average Fuel Economy by Vehicle Type

Vehicle Type	Average Fuel Economy (mpg)
Passenger Cars	24.1
Motorcycles	44.0
Diesel Buses (Diesel Heavy-Duty Vehicles)	7.3
Other 2-axle, 4-Tire Vehicles	17.6
Single unit 2-Axle 6-Tire or More Trucks	7.5
Combination Trucks	6.1

GHG Emissions

Total Organization-Wide Mobile Source Fuel Usage and CO_2 Emissions (On-Road and Off-Road Vehicles)

Fuel Type	Fuel Usage	Units	CO_2 (kg)	
Motor Gasoline	92,837	gallons	815,111.5	
Diesel Fuel	328,914	gallons	3,358,207.9	
Residual Fuel Oil	0	gallons	0.0	
Aviation Gasoline	0	gallons	0.0	
Kerosene-Type Jet Fuel	0	gallons	0.0	
Liquefied Petroleum Gas (LPG)	0	gallons	0.0	
Ethanol	0	gallons	0.0	*Note: emissions here are only for the gasoline portion of the fuel, biogenic CO2 emissions are reported below*
Biodiesel	0	gallons	0.0	*Note: emissions here are only for the diesel portion of the fuel, biogenic CO2 emissions are reported below*
Liquefied Natural Gas (LNG)	0	gallons	0.0	
Compressed Natural Gas (CNG)	0	scf	0.0	

Total Organization-Wide On-Road Gasoline Mobile Source Mileage and CH_4/N_2O Emissions

Vehicle Type	Vehicle Year	Mileage (miles)	CH_4 (g)	N_2O (g)
Passenger Cars - Gasoline	1984-93	0	0.0	0.0
	1994	0	0.0	0.0
	1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0
	2005	0	0.0	0.0
	2006	0	0.0	0.0
	2007	4,368	31.4	22.7
	2008	0	0.0	0.0
	2009	0	0.0	0.0
	2010	0	0.0	0.0
	2011	0	0.0	0.0
	2012	0	0.0	0.0
	2013	0	0.0	0.0
	2014	0	0.0	0.0
	2015	0	0.0	0.0
	2016	0	0.0	0.0
	2017	0	0.0	0.0
	2018	0	0.0	0.0
Light-Duty Trucks - Gasoline	1987-93	0	0.0	0.0
(Vans, Pickup Trucks, SUVs)	1994	0	0.0	0.0
	1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0
	2005	0	0.0	0.0

	2006	0	0.0	0.0
	2007	1,560	16.1	9.5
	2008	0	0.0	0.0
	2009	0	0.0	0.0
	2010	0	0.0	0.0
	2011	0	0.0	0.0
	2012	0	0.0	0.0
	2013	0	0.0	0.0
	2014	0	0.0	0.0
	2015	0	0.0	0.0
	2016	0	0.0	0.0
	2017	0	0.0	0.0
	2018	0	0.0	0.0
Heavy-Duty Vehicles - Gasoline	1985-86	0	0.0	0.0
	1987	0	0.0	0.0
	1988-1989	0	0.0	0.0
	1990-1995	0	0.0	0.0
	1996	0	0.0	0.0
	1997	0	0.0	0.0
	1998	0	0.0	0.0
	1999	0	0.0	0.0
	2000	0	0.0	0.0
	2001	0	0.0	0.0
	2002	0	0.0	0.0
	2003	0	0.0	0.0
	2004	0	0.0	0.0
	2005	0	0.0	0.0
	2006	0	0.0	0.0
	2007	0	0.0	0.0
	2008	0	0.0	0.0
	2009	0	0.0	0.0
	2010	0	0.0	0.0
	2011	0	0.0	0.0
	2012	0	0.0	0.0
	2013	0	0.0	0.0
	2014	0	0.0	0.0
	2015	0	0.0	0.0
	2016	0	0.0	0.0
	2017	0	0.0	0.0
	2018	0	0.0	0.0
Motorcycles - Gasoline	1960-1995	0	0.0	0.0
	1996-present	0	0.0	0.0

Total Organization-Wide On-Road Non-Gasoline Mobile Source Mileage and CH_4/N_2O Emissions

Vehicle Type	Fuel Type	Vehicle Year	Mileage (miles)	CH_4 (g)	N_2O (g)
Passenger Cars - Diesel	Diesel	1960-1982	0	0.0	0.0
		1983-1995	0	0.0	0.0
		1996-2006	0	0.0	0.0
		2007-2018	0	0.0	0.0
Light-Duty Trucks - Diesel	Diesel	1960-1982	0	0.0	0.0
		1983-1995	0	0.0	0.0
		1996-2006	0	0.0	0.0
		2007-2018	0	0.0	0.0
Medium- and Heavy-Duty Vehicles -	Diesel	1960-2006	0	0.0	0.0
		2007-2018	1,560	14.8	67.2
Light-Duty Cars	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Light-Duty Trucks	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Medium-Duty Trucks	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Heavy-Duty Trucks	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0
Buses	Methanol		0	0.0	0.0
	Ethanol		0	0.0	0.0
	CNG		0	0.0	0.0
	LPG		0	0.0	0.0
	LNG		0	0.0	0.0
	Biodiesel		0	0.0	0.0

Total Organization-Wide Non-Road Mobile Source Fuel Usage and CH_4/N_2O Emissions

Vehicle Type	Fuel Type	Fuel Usage (gallons)	CH_4 (g)	N_2O (g)
Ships and Boats	Residual Fuel Oil	-	-	-
	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Locomotives	Diesel	-	-	-
Aircraft	Jet Fuel	-	-	-
	Aviation Gasoline	-	-	-
Agricultural Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Agricultural Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Construction/Mining Equipment	Gasoline (2 stroke)	91,912	1,141,547	6,434
	Gasoline (4 stroke)	-	-	-
	Diesel	328,257	65,651	154,281
	LPG	-	-	-
Construction/Mining Offroad Trucks	Gasoline	-	-	-
	Diesel	-	-	-
Lawn and Garden Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Airport Equipment	Gasoline	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Industrial/Commercial Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Logging Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
Railroad Equipment	Gasoline	-	-	-
	Diesel	-	-	-
	LPG	-	-	-
Recreational Equipment	Gasoline (2 stroke)	-	-	-
	Gasoline (4 stroke)	-	-	-
	Diesel	-	-	-
	LPG	-	-	-

Total CO_2 Equivalent Emissions (metric tons) - Mobile Sources	**4,251.4**
Total Biomass CO_2 Equivalent Emissions (metric tons) - Mobile Sources	**0.0**

Notes:
1. Average mpg values from the U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2019 (Nov 2020), Table VM-1.

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Scope 2 Emissions from Purchase of Electricity

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U.S. Environmental Protection Agency

Guidance

The Indirect Emissions from Purchased Electricity Guidance document provides guidance for quantifying two scope 2 emissions totals, using a **location-based method** and a **market-based method**. The organization should quantify and report both totals in its GHG inventory. The location-based method considers average emission factors for the electricity grids that provide electricity. The market-based method considers contractual arrangements under which the organization procures electricity from specific sources, such as renewable energy.

(A) Enter total annual electricity purchased in kWh and each eGRID subregion for each facility or site in ORANGE cells of **Table 1**.
(B) If electricity consumption data are not available for a facility, an estimate should be made for completeness.
See the "Items to Note" section of the Help sheet for suggested estimation approaches.
(C) Select "eGRID subregion" from drop box and enter "Electricity Purchased."
- Use map (Figure 1) at bottom of sheet to determine appropriate eGRID subregion. If subregion cannot be determined from the map, find the correct subregion by entering the location's zip code into EPA's Power Profiler:
https://www.epa.gov/egrid/power-profiler#/
(D) See the market-based emission factor hierarchy on the market-based method Help sheet. If any of the first four types of emission factors are applicable, enter the factors in the yellow cells marked as "<enter factor>". If not, leave the yellow cells as is, and eGRID subregion factors will be used for market-based emissions.
Example entry is shown in first row (*GREEN Italics*) for a facility that purchases RECs for 100% of its consumption, and therefore has a market-based emission factor of 0.

Help - Market-Based Method

Tips: Enter electricity usage by location and then look up the eGRID subregion for each location.
If you purchase renewable energy that is less than 100% of your site's electricity, see the example in the market-based method Help sheet.

Table 1. Total Amount of Electricity Purchased by eGRID Subregion

					Market-Based — *Use these cells to enter applicable market-based emission factors*						Location-Based		
					Emission Factors			Emissions			Emissions		
Source ID	Source Description	Source Area (sq ft)	eGRID Subregion *where electricity is consumed*	Electricity Purchased (kWh)	CO_2 Emissions (lb/MWh)	CH_4 Emissions (lb/MWh)	N_2O Emissions (lb/MWh)	CO_2 Emissions (lb)	CH_4 Emissions (lb)	N_2O Emissions (lb)	CO_2 Emissions (lb)	CH_4 Emissions (lb)	N_2O Emissions (lb)
Bldg-012	*East Power Plant*	*12,517*	*HIMS (HICC Miscellaneous)*	*200,000*	*0*	*0*	*0*	*0.0*	*0.0*	*0.0*	*237,120.0*	*28.6*	*4.4*
	Datacenters	500,000	MROW (MRO West)	1,050,000,000	<enter factor>	<enter factor>	<enter factor>	1,153,320,000.0	124,950.0	17,850.0	1,153,320,000.0	124,950.0	17,850.0
					<enter factor>	<enter factor>	<enter factor>					

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U.S. Environmental Protection Agency

Scope 3 Emissions from Waste

Guidance

(A) Enter annual waste data in ORANGE cells. Example entry is shown in first row (*GREEN Italics*).

(B) Choose the appropriate material and disposal method from the drop down options. For the average-data method, use one of the mixed material types, such as mixed MSW. If the exact waste material is not available, consider an appropriate proxy. For example, dimensional lumber can be used as a proxy for wood furniture.

(C) Choose an appropriate disposal method. Note that not all disposal methods are available for all materials. If there is a #NA or # Value error in the emissions column, you must pick a new material type or appropriate disposal method.

Table 1. Waste Disposal Weight by Waste Material and Disposal Method (CO_2, CH_4 and N_2O)

Source ID	Source Description	Waste Material	Disposal Method	Weight	Unit	CO_2e Emissions (kg)
Bldg-012	*East Power Plant Finished Goods*	*Steel Cans*	*Landfilled*	*1,000*	*metric ton*	*22,040*
Nonresidential Buildings	Nonresidential Waste	Mixed MSW municipal solid waste	Combusted	0	metric ton	*0*
Residential	Residential Waste	Mixed MSW municipal solid waste	Combusted	0	metric ton	*0*
Nonresidential Buildings	Nonresidential Recycling	Mixed Recyclables	Recycled	0	metric ton	*0*
Residential	Residential Recycling	Mixed Recyclables	Recycled	0	metric ton	*0*
Nonresidential Buildings	Data Center Waste	Mixed Recyclables	Recycled	390	metric ton	*38,680*
Nonresidential Buildings	Data Center Waste	Mixed MSW municipal solid waste	Landfilled	3,640	metric ton	*2,085,866*
Nonresidential Buildings	Data Center Waste	Mixed Electronics	Landfilled	15	metric ton	*331*

GHG Emissions

Total Emissions by Disposal Method

Waste Material	CO_2e (kg)
Recycled	38,680
Landfilled	2,086,196
Combusted	-
Composted	-
Anaerobically Digested (Dry Digestate with Curing)	-
Anaerobically Digested (Wet Digestate with Curing)	-

EPA Climate Leaders Simplified GHG Emissions Calculator (Optional 3.0)

Total CO_2 Equivalent Emissions (metric tons) - Waste **2,124.9**

Appendix D

Traffic Study

DRAFT

TRAFFIC IMPACT ANALYSIS

ARCHER DATACENTERS FARIBAULT CAMPUS

FARIBAULT, MINNESOTA

Prepared for:

Archer Datacenters

Prepared By:

Kimley-Horn and Associates, Inc.

MAY 2025

TRAFFIC IMPACT ANALYSIS

ARCHER DATACENTERS FARIBAULT CAMPUS

FARIBAULT, MINNESOTA

REPORT CERTIFICATION

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



Jacob A. Rojer, P.E., PTOE

License No. 56767

5/8/2025

Date

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INTRODUCTION

Archer Datacenters is proposing a Data Center development at the southeast corner of 150th Street W (CSAH 9) & Acorn Trail in Faribault, Minnesota. The site is currently agricultural land. The proposed site is currently envisioned to include a 500,000 square foot (SF) Data Center development. West of the study area, a potential interchange with I-35 is being considered along 150th Street as a long term means of providing access to developments on the north side of Faribault.

The study of the traffic conditions in the area includes four (4) analysis scenarios: Existing (2025), Opening Year (2030), and the Horizon Year (2045) with and without the proposed interchange. In addition to the "Build" conditions which includes the site traffic, No-Build conditions were also analyzed which assumes no development of the Archer Datacenters site occurs and assumes traffic growth only as a result of background growth.

This Traffic Impact Analysis (TIA) examines the traffic impacts of the proposed Archer Data Center site development and determines the necessary mitigation measures for the nearby roadway network.

STUDY AREA

The proposed development is encapsulated in the area studied in the I-35 and CSAH 9 Interchange Feasibility Study Report. The site is currently undeveloped and is located south of 150th Street W (CSAH 9) and east of Acorn Trail. The following intersections were included in the analysis for the proposed development:

- 150th Street W (CSAH 9) & Bagley Avenue (CSAH 46)
- 150th Street W (CSAH 9) & Acorn Trail (CSAH 76)
- Acorn Trail (CSAH 76) & Access 1
- Acorn Trail (CSAH 76) & Access 2

The locations of the proposed development and study intersection are shown in **Exhibit 1**. Exhibits are included in **Appendix A**.

EXISTING ROADWAYS

The development will have an impact on each of the surrounding roadways as well as all of the internal roadways. All collectors or higher order roadways which are anticipated to see significant impacts as a result of the proposed development are described below.

Interstate 35 (I-35) is an interstate highway which serves as a major regional north-south connector. It is a four-lane divided freeway with two general travel lanes in each direction. I-35 is classified as an interstate with an existing Annual Average Daily Traffic (AADT) of 33,500 vehicles per day near the study area, based on MnDOT data from 2023. The posted speed limit is 70 mph.

150th Street W (CSAH 9) is an east-west County State Aid Highway (CSAH). It is a two-lane undivided road. 150th Street W is classified as a minor collector with an existing AADT of 325 vehicles per day near the study area, based on MnDOT data from 2023. There is no posted speed limit, therefore it is assumed to be the default Minnesota Statute speed limit of 55 mph.

Bagley Avenue (CSAH 46) is a north-south, two-lane undivided roadway. Bagley Avenue is classified as a major collector with an AADT of 1,700 vehicles per day, according to MnDOT data from 2008. The posted speed limit is 55 mph.

Acorn Trail (CSAH 76) is a north-south, two-lane undivided roadway. Acorn Trail is classified as a major collector with an AADT of 920 vehicles per day, according to MnDOT data from 2021. The posted speed limit is 50 mph.

Exhibit 2 provides the existing intersection geometry and intersection control for the study intersections.

PLANNED ROADWAY IMPROVEMENTS

MnDOT currently has no funded projects along 150th Street W (CSAH 9) near the study area. A feasibility study is currently being conducted to determine if the proposed interchange connection to CSAH 9 from I-35 is warranted and the feasibility of the interchange to support and attract industrial development in the area. Therefore, two Horizon Year (2045) conditions were analyzed, without the interchange and with the interchange.

VOLUME DEVELOPMENT

The analysis of the traffic conditions was conducted for the weekday AM and PM peak hours at the study intersections in order to determine the effects of the proposed development on the traffic operations of the surrounding roadways during the busiest times of a typical weekday. Analysis is focused on two scenarios "No-Build", and "Build". The No-Build scenario accounts only for background growth. The No-Build scenario is used as the baseline conditions for determining the impacts of the project, while the Build scenario models the traffic of the development if it were to be completed as currently proposed. The analysis is focused on four study scenarios: Existing Year (2025), the Opening Year proposed development (2030), and the Horizon Year to study long-term traffic conditions (2045) with and without the proposed I-35 interchange.

EXISTING TRAFFIC VOLUMES

To analyze the traffic operations of the surrounding roadway network, weekday AM and PM peak period turning movement counts were collected at the study intersections. Traffic data was collected on Thursday, January 23, 2025, at the two (2) existing study intersections listed in the Study Area section above. The turning movement data is included in **Appendix B**. Based on the traffic counts, the AM peak hour of total street traffic at the study intersections is 7:15 AM to 8:15 AM, while the PM peak hour of street traffic is 4:15 PM to 5:15 PM. The Existing (2025) peak hour traffic volumes are shown in **Exhibit 3** (all volumes are rounded to the nearest 5).

BACKGROUND GROWTH

To determine the change in traffic volumes along the study roadways, the 1% growth rate applied to the study area in the I-35 and CSAH 9 Interchange Feasibility Study Report was utilized. No major planned developments are known in the area.

To confirm that this background growth rate remains a valid estimate, a review of the AADT history of the major study roadways was conducted. It should be noted that the AADT across the roadways has seldom been counted to reflect post-COVID traffic volumes, thus the 1% growth rate determined in the interchange feasibility study was utilized for all movements at the study intersections.

According to the interchange feasibility study, if the proposed interchange connection is added to 150th Street W (CSAH 9), the AADT is expected to increase to approximately 6,000 vehicles along CSAH 9 (based on interpolation from the projected 2052 traffic volumes in the interchange feasibility study). Volumes for the interchange connection scenario were grown to reflect this approximate AADT in the study area.

FUTURE BACKGROUND TRAFFIC VOLUMES

Future background projections were determined by applying the selected growth rate to the Existing (2025) traffic volumes. The Opening Year (2030) No-Build traffic volumes were determined by growing the Existing (2025) Traffic Volumes (**Exhibit 3**) at a 1% annual growth rate over the 5-year period. The Opening Year (2030) No-Build traffic volumes are shown in **Exhibit 4**.

The Horizon Year (2045) No-Build traffic volumes were determined by growing the Existing (2025) Traffic Volumes (**Exhibit 3**) at a 1% annual growth rate over the 20-year period from 2025 to 2045. The Horizon Year (2045) No-Build traffic volumes are shown in **Exhibit 5**.

The Horizon Year (2045) Interchange Scenario No-Build traffic volumes were determined by growing the Existing (2025) to 2045 to the extent where approximate AADT along 150th Street W is 6,000 vehicles. The Horizon Year (2045) Interchange Scenario No-Build traffic volumes are shown in **Exhibit 6**.

PROPOSED DEVELOPMENT

The proposed site is envisioned to include a 500,000 SF Data Center development. The proposed site plan is shown in **Appendix C**.

SITE TRIP GENERATION

The trip generation for the site was calculated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. **Table 1** shows the projected trip generation of the Data Center site. To determine the anticipated trip generation of the site, the average rate for ITE Land Use Code 160 (Data Center) was utilized (and rounded up to the nearest multiple of 5). The site is expected to generate 500 weekday trips, including 55 in the AM peak hour and 50 in the PM peak hour.

Table 1 – Proposed Site Trip Generation

Land Use Description	Intensity / Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Data Center - LUC 160	500k SF	500	30	25	55	15	35	50

SITE ACCESS REVIEW

It is anticipated that the site will have two (2) main access points to/from the site along Acorn Trail. Finalized site access locations will be determined as part of the site planning process. However, the current plan has the north access located approximately 400 feet south of 150th Street W and the south access located approximately 1,600 feet south of the north access.

SITE TRIP DISTRIBUTION

The distribution of traffic to the proposed development was based on origin-destination assumptions recorded in the I-35 and CSAH 9 Interchange Feasibility Study, existing traffic patterns, and professional judgement. The following global distribution was determined for trips entering and exiting the proposed development:

- 40% to/from the north on Bagley Avenue
- 10% to/from the south on Bagley Avenue
- 15% to/from the east on 150th Street W (CSAH 9)
- 5% to/from the west on 150th Street W (CSAH 9)
- 25% to/from the south on Acorn Trail
- 5% to/from the north on Acorn Trail

The distribution of trips to the proposed development is shown in **Exhibit 7**.

The proposed interchange connection to 150th Street W (CSAH 9) would drastically change site traffic distribution, allowing trips to use I-35 as a direct route to the proposed development. The following global distribution was determined for trips entering and exiting the proposed development with the interchange connection:

- 40% to/from the north on I-35
- 25% to/from the south on I-35
- 5% to/from the north on Bagley Avenue
- 10% to/from the east on 150th Street W (CSAH 9)
- 5% to/from the west on 150th Street W (CSAH 9)
- 15% to/from the south on Acorn Trail

The distribution of trips to the proposed development is shown in **Exhibit 8**.

The Opening Year (2030) site traffic assignment was calculated by multiplying the trip generation shown in **Table 1** to the trip distribution proposed for these trips as shown above. The peak hour site trips are shown in **Exhibit 9**. The Opening Year (2030) Build traffic volumes were determined by adding the Opening Year (2030) No-Build Traffic Volumes (**Exhibit 4**) to the site trips shown in **Exhibit 9**. The Opening Year (2030) Build Traffic Volumes are shown in **Exhibit 10**.

The Horizon Year (2045) site traffic assignment was calculated by multiplying the trip generation shown in **Table 1** to the trip distribution proposed for these trips as shown above. The Horizon Year (2045) Build traffic volumes were determined by adding the Horizon Year (2045) No-Build Traffic Volumes (**Exhibit 4**) to the site trips shown in **Exhibit 9**. The Horizon Year (2045) Build Traffic Volumes are shown in **Exhibit 11**.

The total Horizon Year (2045) site traffic assignment with the construction of the proposed interchange was calculated by multiplying the trip generation shown in **Table 1** to the trip distribution proposed for these trips as shown above. The peak hour site trips are shown in **Exhibit 12.** The Horizon Year (2045) Build traffic

volumes were determined by adding the Horizon Year (2045) No-Build Traffic Volumes (**Exhibit 5**) to the site trips shown in **Exhibit 12**. The Horizon Year (2045) Build Traffic Volumes are shown in **Exhibit 13**.

CAPACITY ANALYSIS

A capacity analysis was performed to quantify the delay and level of service at the study intersections during the weekday AM and PM peak hours. The capacity analysis was performed using the traffic analysis software SimTraffic within Synchro 12th Edition.

The capacity of an intersection quantifies its ability to accommodate traffic volumes and is measured in average delay per vehicle. It is expressed in terms of level of service (LOS) which ranges from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM) quantify and categorize the driver's discomfort, frustration, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 2**. The range of control delay for each rating (as detailed in the HCM) is also shown in **Table 2**. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, higher delays are tolerated for the corresponding LOS ratings.

Table 2 – Level of Service Information

Level of Service	Average Control Delay (seconds/vehicle)	Description
A	0-10 (Unsignalized); 0-10 (Signalized)	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	>10-15 (Unsignalized); >10-20 (Signalized)	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	>15-25 (Unsignalized); >20-35 (Signalized)	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	>25-35 (Unsignalized); >35-55 (Signalized)	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	>35-50 (Unsignalized); >55-80 (Signalized)	High control delay; average travel speed no more than 33 percent of free flow speed.
F	>50 (Unsignalized); >80 (Signalized)	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

To determine the impacts of the proposed development, the following scenarios were included in the analysis:

- Existing Year (2025)
- Opening Year (2030) No-Build
- Opening Year (2030) Build
- Horizon Year (2045) No-Build
- Horizon Year (2045) Build
- Horizon Year (2045) No-Build with Interchange

- Horizon Year (2045) Build with Interchange

EXISTING YEAR (2025) CONDITIONS

A capacity analysis was performed for Existing Year (2025) conditions to develop baseline operating conditions for the current year. The study intersections were modeled with the existing geometry and intersection control as summarized in **Exhibit 2**. The Existing (2025) traffic volumes are provided in **Exhibit 3**. The results of the analysis are provided in **Table 3**.

Table 3 – Existing Year (2025) Capacity Analysis

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
150th Street W (CSAH 9) & Bagley Avenue	Side Street Stop	EB	A (3.6)	A (9.1)	A (2.4)	**A (3.3)**	A (3.2)	A (8.9)	A (2.0)	**A (3.4)**
		WB	A (4.9)	A (4.3)	A (4.1)		A (4.6)	B (11.8)	A (4.0)	
		NB	A (0.3)	A (0.5)	A (0.0)		A (0.8)	A (0.6)	A (0.1)	
		SB	A (0.6)	A (0.6)	A (0.1)		A (0.6)	A (0.7)	A (0.1)	
150th Street W (CSAH 9) & Acorn Trail	Side Street Stop	EB	A (4.8)	A (6.9)	A (4.4)	**A (3.5)**	A (5.2)	B (10.6)	A (3.6)	**A (6.2)**
		WB	A (3.1)	A (8.7)	A (2.2)		A (2.6)	A (8.5)	A (1.0)	
		NB	A (0.7)	A (0.5)	A (0.1)		A (0.6)	A (0.7)	A (0.3)	
		SB	A (0.3)	A (0.4)	A (0.0)		A (0.4)	A (0.0)	A (4.2)	

Based on the Existing Year (2025) capacity analysis, all intersection movements currently operate at LOS B or better during the AM and PM peak hours.

A review of SimTraffic queueing results was conducted and all 95th percentile queues are expected to remain within their respective storage bays. The operations of the existing roadway network are acceptable and do not require any mitigation changes. The SimTraffic reports are provided in **Appendix D.**

OPENING YEAR (2030) NO-BUILD CONDITIONS

A capacity analysis was performed for Opening Year (2030) No-Build conditions to develop baseline operating conditions for the opening year. The study intersections were modeled with the existing geometry and intersection control as summarized in **Exhibit 2**. The Opening Year (2030) No-Build traffic volumes include background growth from existing conditions. The traffic volumes are provided in **Exhibit 4**. The results of the Opening Year (2030) No-Build traffic analysis are provided in **Table 4.**

Table 4 – Opening Year (2030) No-Build Intersection Analysis

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
150th Street W (CSAH 9) & Bagley Avenue	Side Street Stop	EB	A (3.6)	A (9.0)	A (2.7)	**A (3.4)**	A (2.8)	A (8.8)	A (1.5)	**A (3.1)**
		WB	A (4.9)	A (4.2)	A (4.1)		A (5.0)	B (10.7)	A (3.3)	
		NB	A (0.3)	A (0.5)	A (0.0)		A (0.3)	A (0.4)	A (0.1)	
		SB	A (0.6)	A (0.6)	A (0.1)		A (0.5)	A (0.6)	A (0.2)	
150th Street W (CSAH 9) & Acorn Trail	Side Street Stop	EB	A (5.7)	A (7.0)	A (4.8)	**A (3.4)**	A (5.7)	B (10.9)	A (3.9)	**A (4.2)**
		WB	A (2.8)	A (8.2)	A (1.7)		A (2.7)	A (8.3)	A (1.9)	
		NB	A (0.7)	A (0.6)	A (0.1)		A (0.7)	A (0.8)	A (0.3)	
		SB	A (0.3)	A (0.5)	A (0.0)		A (0.3)	A (0.0)	A (4.2)	

Based on the Opening Year (2030) No-Build capacity analysis, all intersection movements currently operate at LOS B or better during the AM and PM peak hours.

A review of SimTraffic queueing results was conducted and all 95th percentile queues are expected to remain within their respective storage bays. The operations of the Opening Year (2030) No-Build roadway network are acceptable and do not require any mitigation changes.

OPENING YEAR (2030) BUILD CONDITIONS

Capacity analysis was conducted for the Opening Year (2030) Build conditions to determine the near-term effects of the proposed development on the adjacent roadway network. The Opening Year (2030) Build traffic volumes are shown in **Exhibit 10**. The analysis was conducted using the Existing geometry and intersection control as shown in **Exhibit 2**. The results of the analysis are provided in **Table 5**.

Table 5 – Opening Year (2030) Build Intersection Analysis

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
150th Street W (CSAH 9) & Bagley Avenue	Side Street Stop	EB	A (3.7)	A (9.5)	A (2.4)	**A (3.3)**	A (2.4)	B (11.3)	A (1.5)	**A (2.9)**
		WB	A (5.3)	A (4.2)	A (4.0)		A (4.3)	B (10.5)	A (3.6)	
		NB	A (0.5)	A (0.7)	A (0.1)		A (0.2)	A (0.9)	A (0.1)	
		SB	A (0.5)	A (0.6)	A (0.1)		A (0.8)	A (0.8)	A (0.2)	
150th Street W (CSAH 9) & Acorn Trail	Side Street Stop	EB	A (5.9)	A (7.1)	A (4.5)	**A (3.4)**	A (4.7)	B (12.6)	A (3.0)	**A (4.0)**
		WB	A (2.7)	A (8.9)	A (1.8)		A (0.0)	A (7.0)	A (0.0)	
		NB	A (1.3)	A (0.5)	A (0.1)		A (1.0)	A (1.1)	A (0.1)	
		SB	A (0.2)	A (0.5)	A (0.1)		A (0.1)	A (0.5)	A (0.0)	
Acorn Trail & Access 1	Side Street Stop	EB	-	-	-	**A (0.8)**	-	-	-	**A (0.8)**
		WB	A (4.5)	-	A (2.9)		A (0.0)	-	A (3.0)	
		NB	-	A (0.3)	A (0.0)		-	A (0.3)	-	
		SB	A (1.4)	A (0.5)	-		A (0.9)	A (0.5)	-	

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
Acorn Trail & Access 2	Side Street Stop	EB	-	-	-	**A (0.3)**	-	-	-	**A (0.3)**
		WB	A (3.7)	-	A (0.0)		A (2.0)	-	A (2.0)	
		NB	-	A (0.1)	A (0.0)		-	A (0.1)	A (0.2)	
		SB	A (0.5)	A (0.2)	-		A (0.0)	A (0.2)	-	

With the addition of site-generated traffic, the study area intersections are anticipated to see minimal increases in delay. All movements are anticipated to operate at LOS B or better.

A review of SimTraffic queueing results was conducted and all 95th percentile queues are expected to remain within their respective storage bays. The operations of the Opening Year (2030) Build roadway network are acceptable and do not require any mitigation changes.

HORIZON YEAR (2045) NO-BUILD CONDITIONS

A capacity analysis was performed for Horizon Year (2045) No-Build conditions to develop baseline operating conditions for the horizon year. As was done for the Opening Year (2030) No-Build conditions analysis, the study intersections were modeled with the existing geometry and intersection control as summarized in **Exhibit 2**.

The Horizon Year (2045) No-Build traffic volumes are provided in **Exhibit 5**. The results of the analysis are provided below in **Table 6**.

Table 6 – Horizon Year (2045) No-Build Intersection Analysis

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
150th Street W (CSAH 9) & Bagley Avenue	Side Street Stop	EB	A (4.0)	A (9.4)	A (2.9)	**A (3.5)**	A (3.6)	A (9.1)	A (1.7)	**A (3.3)**
		WB	A (4.9)	A (5.5)	A (3.7)		A (5.2)	B (11.1)	A (3.9)	
		NB	A (0.5)	A (0.4)	A (0.0)		A (0.8)	A (0.8)	A (0.2)	
		SB	A (0.7)	A (0.6)	A (0.0)		A (0.4)	A (0.8)	A (0.1)	
150th Street W (CSAH 9) & Acorn Trail	Side Street Stop	EB	A (6.3)	A (6.8)	A (4.3)	**A (3.4)**	A (5.9)	B (11.3)	A (4.0)	**A (4.4)**
		WB	A (4.1)	A (9.3)	A (1.4)		A (4.3)	A (8.6)	A (1.6)	
		NB	A (0.7)	A (0.5)	A (0.1)		A (0.7)	A (0.8)	-	
		SB	A (0.5)	A (0.3)	A (0.0)		A (0.4)	A (0.3)	A (0.0)	

With the addition of long-term background growth, all study intersections movements are anticipated to continue operating at LOS B or better.

A review of SimTraffic queueing results was conducted and all 95th percentile queues are expected to remain within their respective storage bays. The operations of the Horizon Year (2045) No-Build roadway network are acceptable and do not require any mitigation changes.

HORIZON YEAR (2045) BUILD CONDITIONS

A capacity analysis was conducted for the Horizon Year (2045) build conditions to determine the long-term effects of the full development on the adjacent roadway network. The Horizon Year (2045) Build scenario traffic volumes are shown in **Exhibit 11**. The results of the analysis are provided below in **Table 7**. Existing (2025) intersection control and geometry was assumed for the analysis, as shown in **Exhibit 2**.

Table 7 – Horizon Year (2045) Build Intersection Analysis

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
150th Street W (CSAH 9) & Bagley Avenue	Side Street Stop	EB	A (4.4)	A (9.7)	A (1.9)	**A (3.4)**	A (3.9)	A (8.8)	A (1.9)	**A (3.3)**
		WB	A (5.1)	A (4.6)	A (3.9)		A (5.6)	B (10.9)	A (4.0)	
		NB	A (0.3)	A (0.6)	A (0.1)		A (0.7)	A (0.9)	A (0.2)	
		SB	A (0.7)	A (0.9)	A (0.2)		A (0.8)	A (0.9)	A (0.3)	
150th Street W (CSAH 9) & Acorn Trail	Side Street Stop	EB	A (6.9)	A (6.1)	A (4.9)	**A (3.3)**	A (6.6)	B (11.6)	A (3.7)	**A (4.5)**
		WB	A (3.3)	A (8.9)	A (1.5)		A (2.5)	A (8.8)	A (1.9)	
		NB	A (1.2)	A (0.8)	A (0.1)		A (1.0)	A (0.8)	A (0.1)	
		SB	A (0.9)	A (0.4)	A (0.2)		A (0.3)	A (0.5)	A (0.1)	
Acorn Trail & Access 1	Side Street Stop	EB	-	-	-	**A (0.8)**	-	-	-	**A (0.8)**
		WB	A (4.7)	-	A (2.9)		A (4.2)	-	A (3.0)	
		NB	-	A (0.2)	A (0.0)		-	A (0.3)	-	
		SB	A (1.5)	A (0.5)	-		A (1.3)	A (0.4)	-	
Acorn Trail & Access 2	Side Street Stop	EB	-	-	-	**A (0.4)**	-	-	-	**A (0.4)**
		WB	A (4.0)	-	-		A (3.9)	-	A (2.8)	
		NB	-	A (0.1)	A (0.0)		-	A (0.2)	A (0.0	
		SB	A (0.4)	A (0.3)	-		A (0.0)	A (0.2)	-	

With the addition of site traffic and long-term background growth, the study area intersections are anticipated to see minimal increases in delay. All movements are anticipated to operate at LOS B or better.

A review of SimTraffic queueing results was conducted and all 95th percentile queues are expected to remain within their respective storage bays. The operations of the Horizon Year (2045) Build roadway network are acceptable and do not require any mitigation changes.

HORIZON YEAR (2045) NO-BUILD INTERCHANGE CONDITIONS

A capacity analysis was performed for Horizon Year (2045) No-Build conditions with the interchange to develop baseline operating conditions for the horizon year. The study intersections were modeled with the existing geometry and intersection control as summarized in Exhibit 2, the interchange ramps not modeled for this analysis as the project is still in the concept phase.

The Horizon Year (2045) No-Build traffic volumes are provided in **Exhibit 6**. The results of the analysis are provided below in **Table 8**.

Table 8 – Horizon Year (2045) No-Build Interchange Scenario Intersection Analysis

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
150th Street W (CSAH 9) & Bagley Avenue	Side Street Stop	EB	F (118.3)	F (129.2)	F (114.8)	**E (40.9)**	F (74.2)	F (84.5)	F (74.2)	**F (141.2)**
		WB	C (20.0)	A (8.1)	B (14.0)		F (517.6)	F (483.0)	F (450.3)	
		NB	A (2.5)	A (2.6)	A (0.6)		A (5.3)	A (4.4)	A (1.2)	
		SB	A (2.4)	A (3.4)	A (0.7)		A (4.0)	A (4.4)	A (1.6)	
150th Street W (CSAH 9) & Acorn Trail	Side Street Stop	EB	B (14.7)	A (9.0)	A (9.0)	**A (7.9)**	F (385.6)	F (398.8)	F (384)	**F (161.6)**
		WB	B (13.9)	C (19.4)	B (10.7)		D (26.4)	D (31.8)	C (24.1)	
		NB	A (3.6)	A (3.6)	A (0.5)		A (3.5)	A (4.3)	A (0.0)	
		SB	A (1.4)	A (1.7)	A (0.6)		A (1.8)	A (2.2)	A (0.6)	

With the addition of background growth associated with the construction of an interchange to connect I-35 to 150th Street W (CSAH 9), most intersection movement are anticipated to operate at LOS D or better. The following are anticipated to operate at LOS E or LOS F:

- Eastbound approach at 150th Street W & Bagley Avenue
- Westbound approach at 150th Street W & Bagley Avenue (PM peak only)
- Eastbound approach at 150th Street W & Acorn Trail (PM peak only)

A review of SimTraffic queueing results was conducted and all 95th percentile queues are expected to remain within their respective storage bays. The side street approaches at both intersections see severe queueing during the PM peak hour, with ~400' queues at the eastbound approach of 150th Street W & Bagley Avenue, and queues in excess of 1,000' at the westbound approach of this intersection as well as the eastbound approach of 150th Street W & Acorn Trail. These queues would back up into the interchange ramps at I-35.

The operations of the Horizon Year (2045) No-Build Interchange Scenario roadway network are not acceptable and will require mitigation changes with the construction of the interchange ramps. As this is an issue in the background analysis, no developer mitigation is recommended.

HORIZON YEAR (2045) BUILD INTERCHANGE CONDITIONS

A capacity analysis was conducted for the Horizon Year (2045) build conditions to determine the long-term effects of the full development on the adjacent roadway network. The Horizon Year (2045) Build scenario traffic volumes are shown in **Exhibit 13.** The results of the analysis are provided below in **Table 9.** Existing (2025) intersection control and geometry was assumed for the analysis, as shown in **Exhibit 2.**

Table 9 – Horizon Year (2045) Build with Interchange Scenario Intersection Analysis

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
150th Street W (CSAH 9) & Bagley Avenue	Side Street Stop	EB	F (119.7)	F (128.4)	F (141.3)	**E (41.4)**	F (89.3)	F (88.5)	F (80.0)	**F (158.6)**
		WB	C (19.6)	A (7.9)	C (17.8)		F (537.8)	F (554.3)	F (541.3)	
		NB	A (2.1)	A (2.3)	A (0.4)		A (5.2)	A (4.5)	A (1.0)	
		SB	A (2.5)	A (3.7)	A (1.1)		A (4.5)	A (4.8)	A (1.7)	
150th Street W (CSAH 9) & Acorn Trail	Side Street Stop	EB	C (16.9)	B (11.0)	B (10.6)	**A (9.4)**	F (367.0)	F (360.6)	F (352.8)	**F (145.8)**
		WB	C (19.5)	D (25.3)	C (16.9)		D (28.0)	E (36.6)	C (19.4)	
		NB	A (3.7)	A (2.8)	A (0.2)		A (3.3)	A (3.6)	A (0.3)	
		SB	A (1.3)	A (2.0)	A (0.5)		A (2.4)	A (2.3)	A (0.5)	
Acorn Trail & Access 1	Side Street Stop	EB	-	-	-	**A (1.0)**	-	-	-	**A (1.0)**
		WB	A (6.3)	-	A (3.4)		A (6.7)	-	A (4.0)	
		NB	-	A (0.6)	A (0.1)		-	A (0.8)	-	
		SB	A (2.4)	A (1.1)	-		A (2.8)	A (0.9)	-	
Acorn Trail & Access 2	Side Street Stop	EB	-	-	-	**A (0.4)**	-	-	-	**A (0.6)**
		WB	-	-	A (3.5)		A (9.5)	-	A (3.6)	
		NB	-	A (0.3)	-		-	A (0.5)	-	
		SB	A (1.6)	A (0.5)	-		A (1.1)	A (0.5)	-	

With the addition of site traffic to the background growth associated with the construction of an interchange to connect I-35 to 150th Street W (CSAH 9), most intersection movements are anticipated to operate at LOS D or better. The following are anticipated to operate at LOS E or LOS F:

- Eastbound approach at 150th Street W & Bagley Avenue
- Westbound approach at 150th Street W & Bagley Avenue (PM peak only)
- Eastbound approach at 150th Street W & Acorn Trail (PM peak only)
- Westbound through at 150th Street W & Acorn Trail (PM peak only)

A review of SimTraffic queueing results was conducted and all 95th percentile queues are expected to remain within their respective storage bays. The side street approaches at both study intersections see severe queueing during the PM peak hour, with ~450' queues at the eastbound approach of 150th Street W & Bagley Avenue, and queues in excess of 2,000' at the westbound approach of this intersection as well as the eastbound approach of 150th Street W & Acorn Trail. These queues would back up into the interchange ramps at I-35.

The operations of the Horizon Year (2045) Build Interchange Scenario roadway network are not acceptable and will require mitigation changes with the construction of the interchange ramps. As this is an issue in the background analysis, no developer mitigation is recommended. The following mitigation measure are recommended:

- Provide all-way stop control at 150th Street W & Bagley Avenue

- Construct an eastbound and westbound left-turn lane at 150th Street W & Bagley Avenue
- Signalization at 150th Street W & Acorn Trail

Note that while turn lanes are at 150th Street W & Acorn Trail are not necessary from a capacity standpoint, the addition of turn lanes should be considered, particularly for the eastbound left, eastbound right, and northbound left turn movements which are anticipated to see the highest traffic volumes. However, no added turn lanes were assumed for the analysis.

HORIZON YEAR (2045) BUILD MITIGATED INTERCHANGE CONDITIONS

Capacity analysis was conducted with the proposed mitigation discussed in the previous section to ensure the improvements create satisfactory traffic conditions at the intersection. Note that based on the minimal difference between the level of operations in the Horizon Year (2045) Build conditions and the Horizon Year (2045) No-Build conditions, the proposed development is not expected to the long-term need for capacity mitigations at any intersections. The same mitigations listed above would also be necessary for the Horizon Year (2045) No-Build conditions. Results of the capacity analysis are given below in **Table 10**.

Table 10 – Horizon Year (2045) Build Mitigated Interchange Scenario Intersection Analysis

Intersection	Control	Approach	Operations by Movement							
			AM Peak Hour				PM Peak Hour			
			Left	Through	Right	Overall	Left	Through	Right	Overall
150th Street W (CSAH 9) & Bagley Avenue	All Way Stop	EB	B (10.9)	C (18.0)	B (10.4)	**C (19.8)**	A (9.5)	C (16.5)	A (8.0)	**C (17.0)**
		WB	B (10.7)	A (5.7)	A (7.8)		B (12.1)	A (2.5)	A (7.9)	
		NB	A (9.3)	B (13.8)	A (4.9)		D (28.3)	D (30.9)	A (8.1)	
		SB	E (37.5)	E (43.9)	B (11.4)		C (20.0)	D (25.1)	A (6.5)	
150th Street W (CSAH 9) & Acorn Trail	Signal	EB	B (19.3)	B (11.7)	B (11.4)	**B (12.3)**	D (43.8)	D (47.0)	D (39.0)	**D (37.1)**
		WB	B (14.0)	B (14.7)	A (6.7)		C (24.1)	B (18.1)	B (13.9)	
		NB	B (15.8)	B (13.3)	A (2.5)		D (47.6)	D (48.4)	A (6.3)	
		SB	A (9.9)	B (11.0)	A (3.5)		C (23.2)	C (23.8)	A (4.1)	

Results of the analysis indicate the intersection would experience significantly improved traffic operations as a result of the mitigation recommendations, particularly during the PM peak hour. Most study intersection movements operate with LOS D or better and none operate at LOS F. The southbound left turn and through movements at 150th Street W & Bagley Avenue are anticipated to operate at LOS E during the AM peak hour.

At 150th Street W & Bagley Avenue, the eastbound left turn movement is anticipated to see 95th percentile queue lengths of 92', and thus the turn lane should be as 100 feet along 150th Street W. The westbound left turn movement is anticipated to see 95th percentile queue lengths of 66', and thus the turn lane should be as 75 feet along 150th Street W. Though multiple movements are expected to operate at LOS E, no movements are anticipated to experience excessive delays (LOS F) or major queueing issues and therefore the operations are acceptable given the high levels of traffic present in this scenario. The southbound shared through/left turn lane is anticipated to see 95th percentile queue lengths of 430' and may block the right turn lane at times. Installation of a southbound left turn lane could help reduce these queues.

It should be noted that these improvements should only be considered if/when an all-way stop and a signal warrant have been met, to be coordinated with local agencies. Should the interchange be built, it is recommended the study intersections be reanalyzed to determine final mitigation measures.

TURN LANE WARRANTS

Turn lane warrants were analyzed at the site access points to determine if left or right turn lanes will be warranted based on NCHRP Report 745 methodologies. Turn lane warrants were analyzed for the build conditions. Based on the analysis, the following movements are anticipated to meet the turn lane warrants:

- Southbound left at Access 1 on Acorn Trail (2045 Build with Interchange AM only)

Construction of the southbound left-turn lane is not recommended as the I-35 to CSAH 9 interchange project is not currently funded. Turn Lane warrant sheets are included in **Appendix E**.

CONCLUSIONS AND RECOMMENDATIONS

Archer Datacenters is proposing a Data Center development at the southeast corner of 150th Street W (CSAH 9) & Acorn Trail in Faribault, Minnesota. The site is currently agricultural land. The proposed site is currently envisioned to include a 500,000 square foot (SF) Data Center development.

The proposed development is anticipated to generate 496 weekday trips, including 55 (30/25 in/out) in the AM peak hour and 50 (15/35 in/out) in the PM peak hour.

A capacity analysis was conducted at the study intersections for four study scenarios: Existing (2025), Opening Year (2030), and a Horizon Year (2045) with and without the proposed interchange. For the Opening & Horizon Years, build scenario and no-build scenarios were analyzed, with build scenario including the expected site trips, and the no-build scenario excluding the development.

Based on the results of the capacity analysis, all operations at the study intersections are generally acceptable under Existing (2025) conditions, Opening Year (2030) conditions, and Horizon Year (2045) without the interchange conditions. The addition of anticipated development traffic for the proposed interchange is anticipated to impact traffic operations at the nearby intersections and mitigation may be required. The following mitigation is recommended should the interchange be built based on the results of the analysis and review of the study area:

- Provide all-way stop control at 150th Street W & Bagley Avenue
- Construct an eastbound and westbound left-turn lane at 150th Street W & Bagley Avenue
- Signalization at 150th Street W & Acorn Trail

It should be noted that these improvements should only be considered if/when an all-way stop and a signal warrant have been met, to be coordinated with local agencies. Should the interchange be built, it is recommended the study intersections be reanalyzed to determine final mitigation measures.

With the addition of the mitigation measures listed above, the study intersections operate at an overall LOS D or better and no movements are anticipated to operate at LOS F during the AM or PM peak hours of the Horizon Year (2045) Build interchange conditions.

No mitigation measures are recommended as a result of the buildout of the proposed data center.

APPENDIX

A. Exhibits

B. Turning Movement Counts

C. Proposed Site Plan

D. SimTraffic Reports

E. Turn Lane Warrant Sheets

A. Exhibits



Kimley»Horn

EXHIBIT 1

SITE LOCATION AND STUDY INTERSECTIONS

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 2

EXISTING TRAFFIC CONTROL AND GEOMETRY

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 3

EXISTING (2025) TRAFFIC VOLUMES

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 4

OPENING YEAR (2030) NO-BUILD TRAFFIC VOLUMES

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 5

DESIGN YEAR (2045) NO-BUILD TRAFFIC VOLUMES

ARCHER DATA CENTER, FARIBAULT

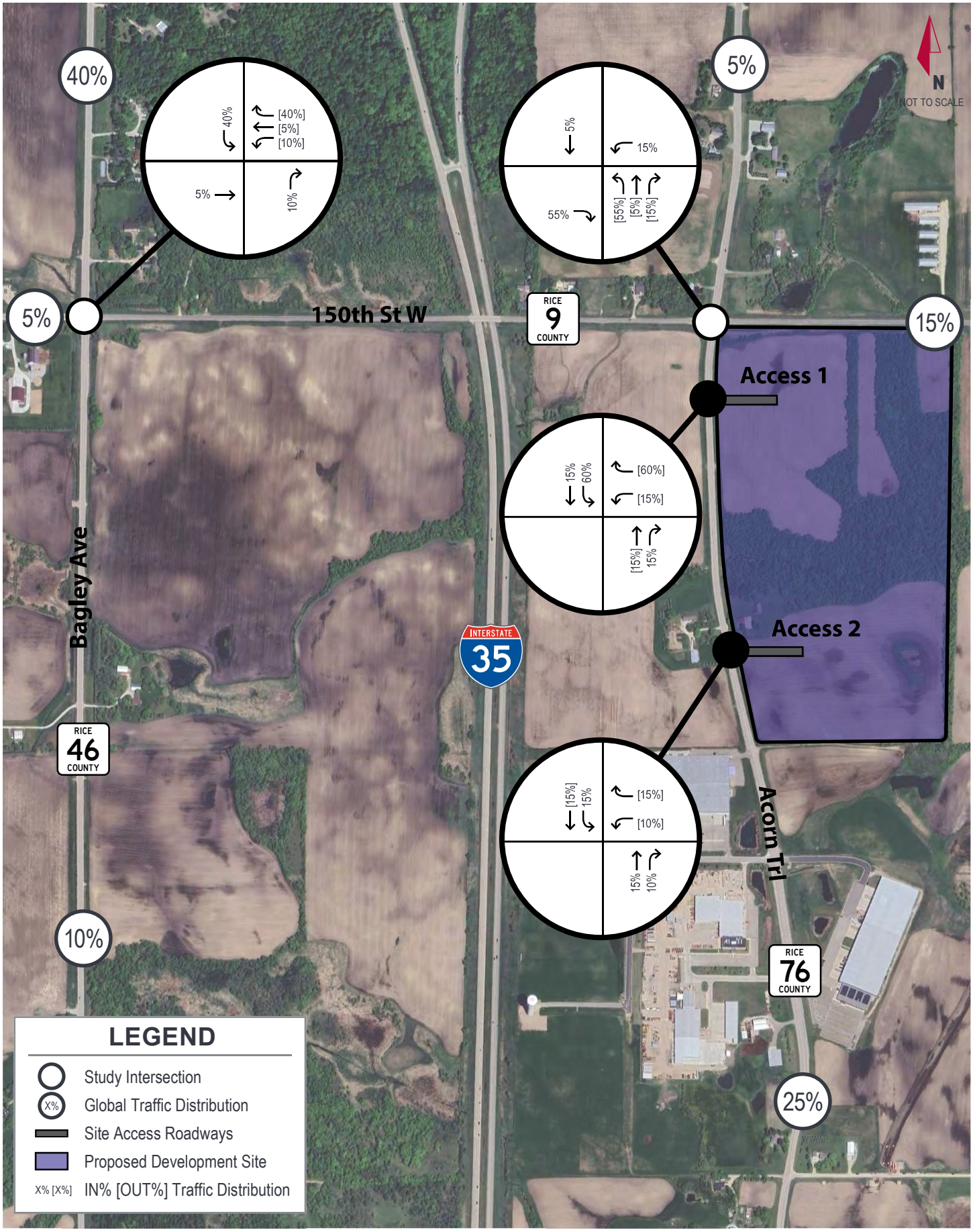


Kimley»Horn

EXHIBIT 6

DESIGN YEAR (2045) NO-BUILD WITH INTERCHANGE

ARCHER DATA CENTER, FARIBAULT

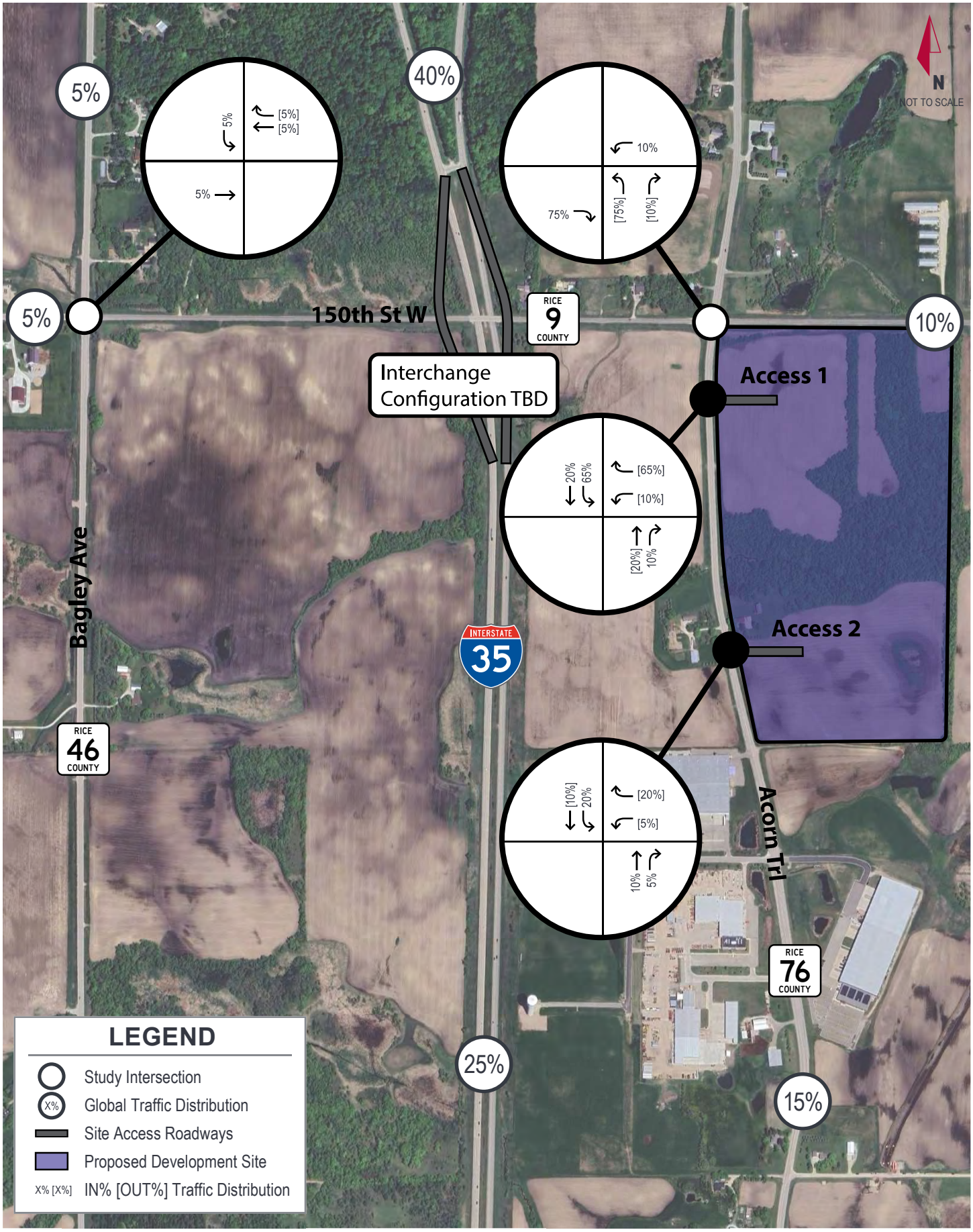


Kimley»Horn

EXHIBIT 7

SITE TRAFFIC DISTRIBUTION

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 8

SITE TRAFFIC DISTRIBUTION (WITH INTERCHANGE)

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 9

SITE TRIP ASSIGNMENT

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 10

OPENING YEAR (2030) BUILD TRAFFIC VOLUMES

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 11

DESIGN YEAR (2045) BUILD TRAFFIC VOLUMES

ARCHER DATA CENTER, FARIBAULT

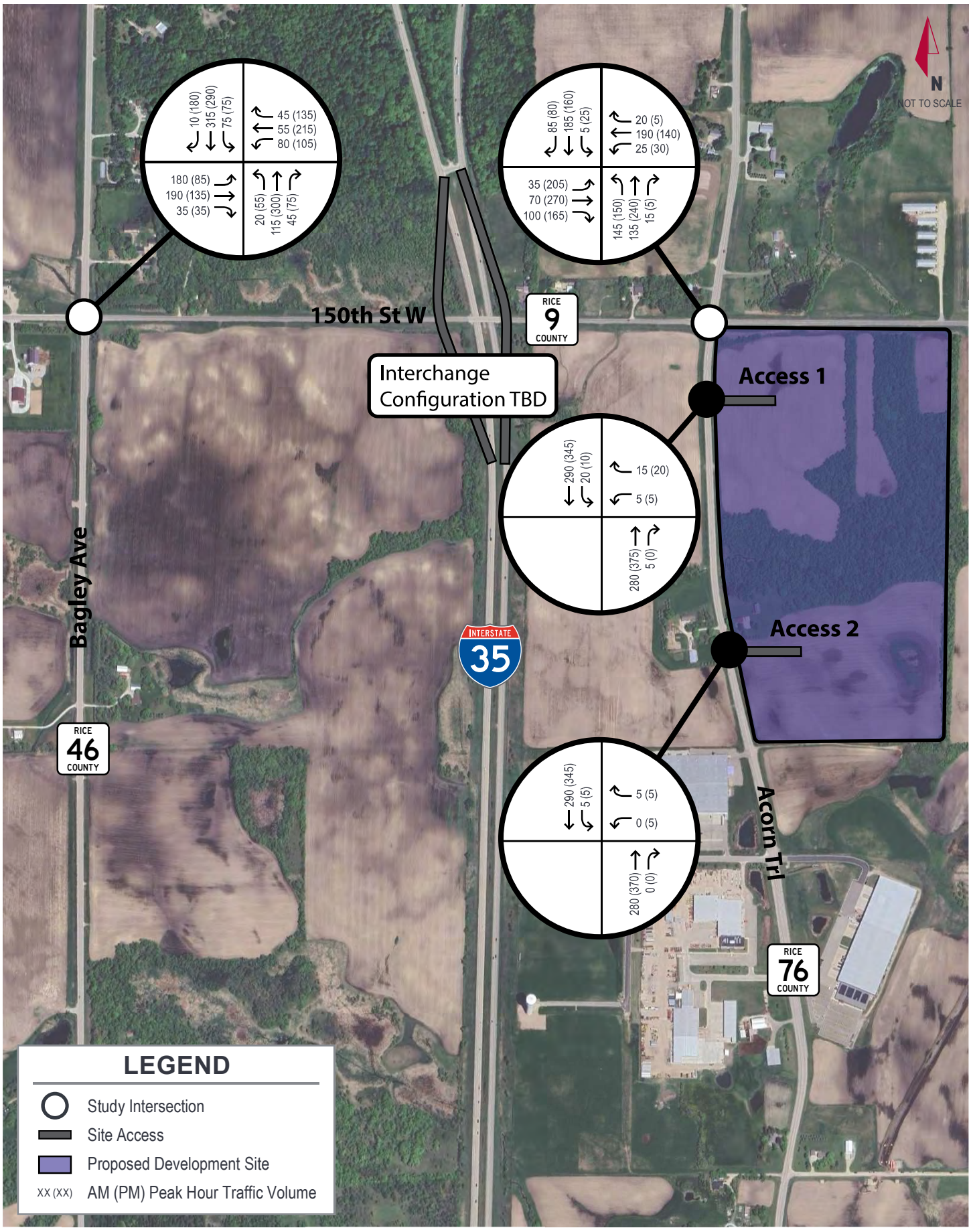


Kimley»Horn

EXHIBIT 12

SITE TRIP ASSIGNMENT (WITH INTERCHANGE)

ARCHER DATA CENTER, FARIBAULT



Kimley»Horn

EXHIBIT 13

DESIGN YEAR (2045) BUILD WITH INTERCHANGE

ARCHER DATA CENTER, FARIBAULT

B. Turning Movement Counts

150th St & Bagley Ave - TMC

Thu Jan 23, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262908, Location: 44.370691, -93.302554

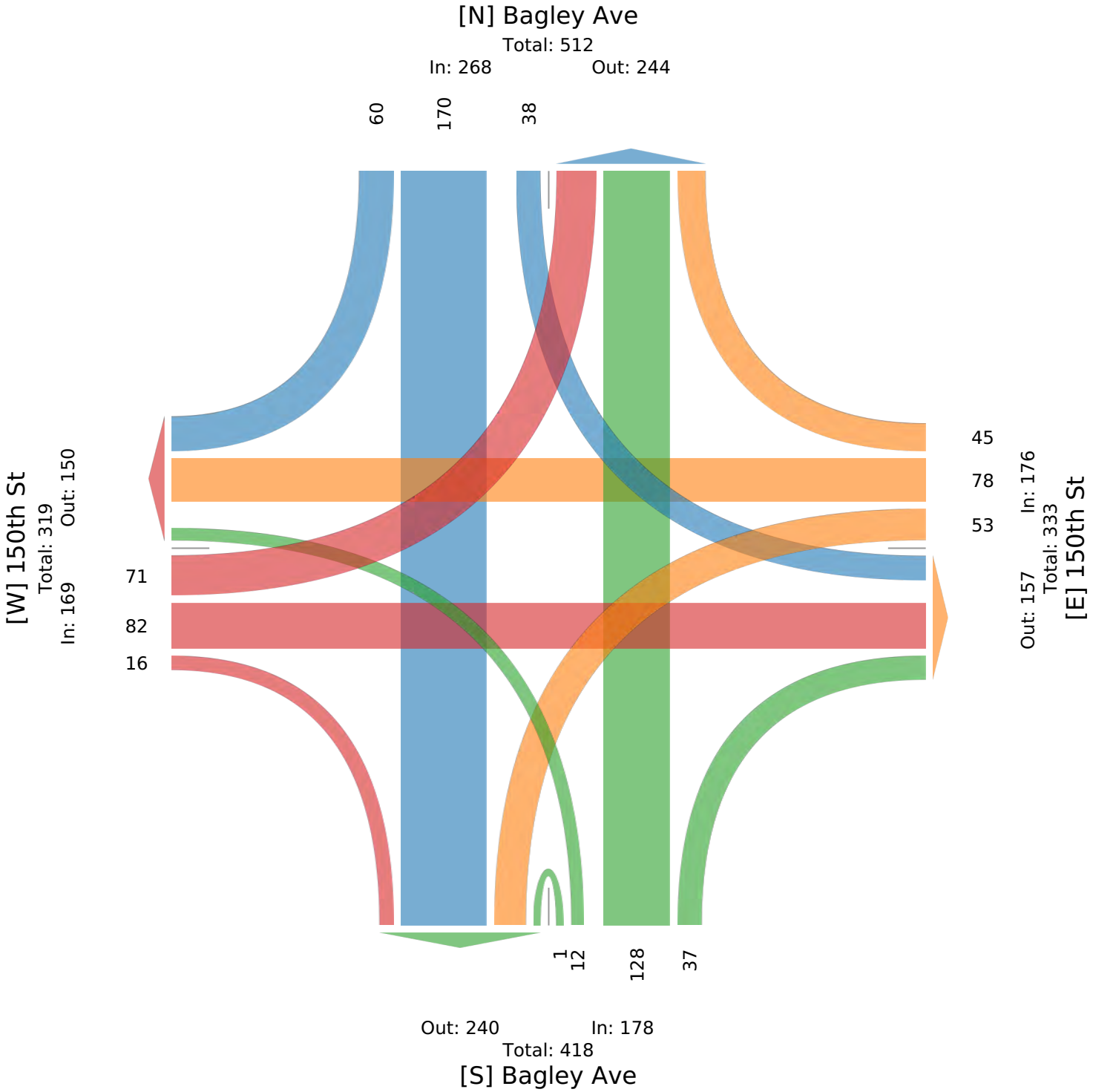
Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg	150th St					150th St					Bagley Ave					Bagley Ave					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	**Int**
2025-01-23 7:00AM	2	9	2	0	**13**	1	3	0	0	**4**	0	5	1	0	**6**	0	12	3	0	**15**	**38**
7:15AM	1	9	12	0	**22**	3	2	4	0	**9**	5	8	1	0	**14**	1	12	2	0	**15**	**60**
7:30AM	1	8	5	0	**14**	1	1	7	0	**9**	1	1	1	0	**3**	1	14	3	0	**18**	**44**
7:45AM	2	5	10	0	**17**	2	3	2	0	**7**	1	5	0	0	**6**	0	13	4	0	**17**	**47**
Hourly Total	6	31	29	0	**66**	7	9	13	0	**29**	7	19	3	0	**29**	2	51	12	0	**65**	**189**
8:00AM	0	3	8	0	**11**	2	1	4	0	**7**	2	4	0	0	**6**	0	6	2	0	**8**	**32**
8:15AM	2	5	4	0	**11**	0	3	4	0	**7**	3	4	1	0	**8**	0	14	2	0	**16**	**42**
8:30AM	0	5	5	0	**10**	3	3	2	0	**8**	1	4	0	0	**5**	2	10	1	0	**13**	**36**
8:45AM	0	4	3	0	**7**	2	2	1	0	**5**	0	6	0	0	**6**	0	6	3	0	**9**	**27**
Hourly Total	2	17	20	0	**39**	7	9	11	0	**27**	6	18	1	0	**25**	2	36	8	0	**46**	**137**
4:00PM	2	4	2	0	**8**	2	10	4	0	**16**	3	9	0	0	**12**	4	12	1	0	**17**	**53**
4:15PM	2	4	3	0	**9**	6	8	3	0	**17**	2	10	3	0	**15**	6	18	3	0	**27**	**68**
4:30PM	2	5	3	0	**10**	8	13	5	0	**26**	4	13	2	1	**20**	12	6	6	0	**24**	**80**
4:45PM	1	3	5	0	**9**	3	6	7	0	**16**	3	12	1	0	**16**	6	12	1	0	**19**	**60**
Hourly Total	7	16	13	0	**36**	19	37	19	0	**75**	12	44	6	1	**63**	28	48	11	0	**87**	**261**
5:00PM	1	10	3	0	**14**	5	8	2	0	**15**	3	14	2	0	**19**	5	11	2	0	**18**	**66**
5:15PM	0	4	3	0	**7**	3	5	4	0	**12**	2	13	0	0	**15**	11	11	0	0	**22**	**56**
5:30PM	0	2	3	0	**5**	4	4	3	0	**11**	4	13	0	0	**17**	6	3	2	0	**11**	**44**
5:45PM	0	2	0	0	**2**	0	6	1	0	**7**	3	7	0	0	**10**	6	10	3	0	**19**	**38**
Hourly Total	1	18	9	0	**28**	12	23	10	0	**45**	12	47	2	0	**61**	28	35	7	0	**70**	**204**
Total	16	82	71	0	**169**	45	78	53	0	**176**	37	128	12	1	**178**	60	170	38	0	**268**	**791**
% Approach	9.5%	48.5%	42.0%	0%	**-**	25.6%	44.3%	30.1%	0%	**-**	20.8%	71.9%	6.7%	0.6%	**-**	22.4%	63.4%	14.2%	0%	**-**	-
% Total	2.0%	10.4%	9.0%	0%	**21.4%**	5.7%	9.9%	6.7%	0%	**22.3%**	4.7%	16.2%	1.5%	0.1%	**22.5%**	7.6%	21.5%	4.8%	0%	**33.9%**	-
Lights	13	80	69	0	**162**	41	74	50	0	**165**	33	113	12	0	**158**	58	150	35	0	**243**	728
% Lights	81.3%	97.6%	97.2%	0%	**95.9%**	91.1%	94.9%	94.3%	0%	**93.8%**	89.2%	88.3%	100%	0%	**88.8%**	96.7%	88.2%	92.1%	0%	**90.7%**	92.0%
Articulated Trucks and Single-Unit Trucks	1	1	2	0	**4**	4	4	3	0	**11**	4	15	0	1	**20**	2	20	3	0	**25**	60
% Articulated Trucks and Single-Unit Trucks	6.3%	1.2%	2.8%	0%	**2.4%**	8.9%	5.1%	5.7%	0%	**6.3%**	10.8%	11.7%	0%	100%	**11.2%**	3.3%	11.8%	7.9%	0%	**9.3%**	7.6%
Buses	2	1	0	0	**3**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	3
% Buses	12.5%	1.2%	0%	0%	**1.8%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0.4%

*L: Left, R: Right, T: Thru, U: U-Turn

150th St & Bagley Ave - TMC
Thu Jan 23, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262908, Location: 44.370691, -93.302554

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US



150th St & Bagley Ave - TMC

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

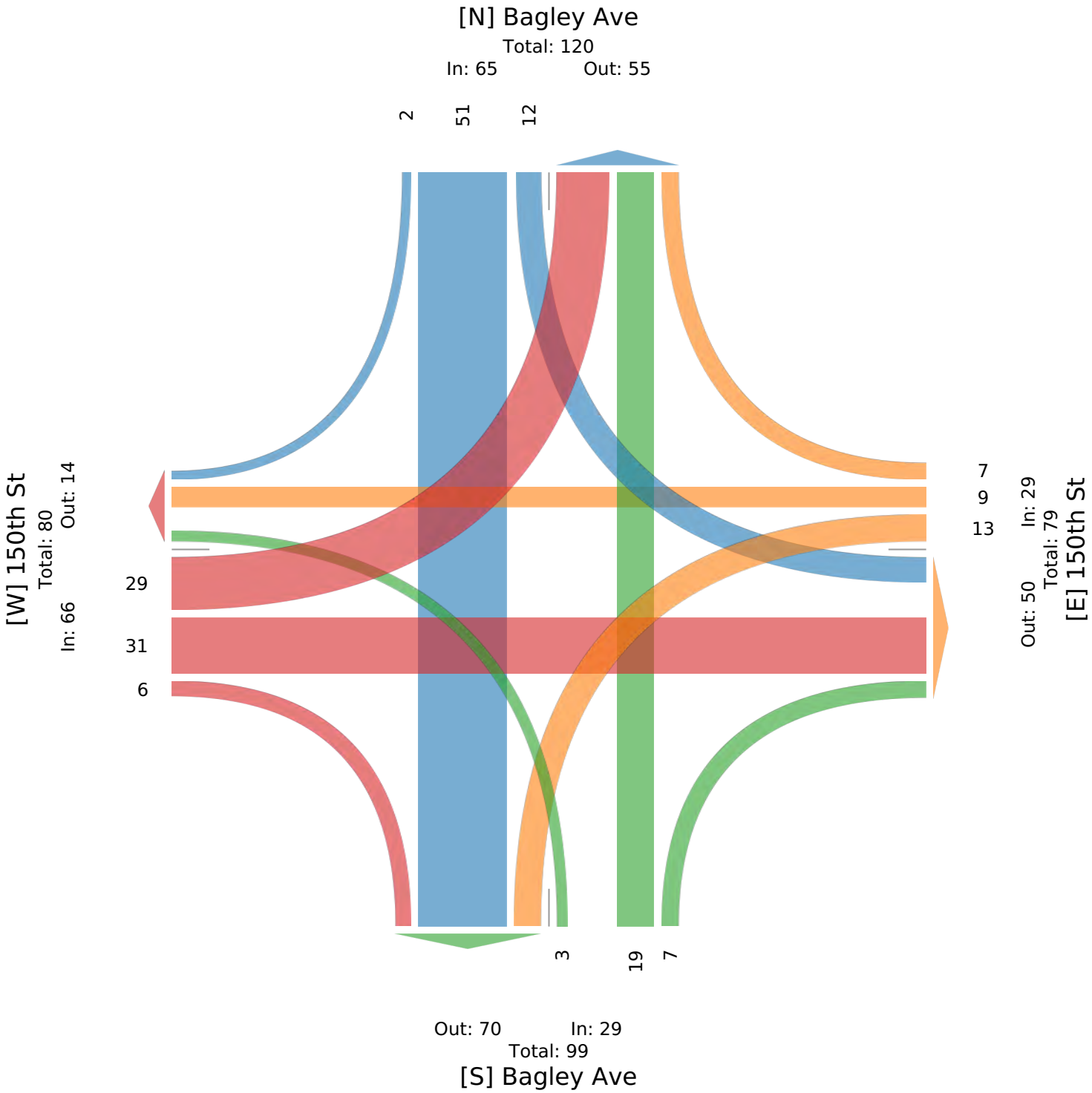
Thu Jan 23, 2025
AM Peak (7 AM - 8 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262908, Location: 44.370691, -93.302554

Leg	150th St					150th St					Bagley Ave					Bagley Ave					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	**Int**
2025-01-23 7:00AM	2	9	2	0	**13**	1	3	0	0	**4**	0	5	1	0	**6**	0	12	3	0	**15**	**38**
7:15AM	1	9	12	0	**22**	3	2	4	0	**9**	5	8	1	0	**14**	1	12	2	0	**15**	**60**
7:30AM	1	8	5	0	**14**	1	1	7	0	**9**	1	1	1	0	**3**	1	14	3	0	**18**	**44**
7:45AM	2	5	10	0	**17**	2	3	2	0	**7**	1	5	0	0	**6**	0	13	4	0	**17**	**47**
Total	6	31	29	0	**66**	7	9	13	0	**29**	7	19	3	0	**29**	2	51	12	0	**65**	**189**
% Approach	9.1%	47.0%	43.9%	0%	**-**	24.1%	31.0%	44.8%	0%	**-**	24.1%	65.5%	10.3%	0%	**-**	3.1%	78.5%	18.5%	0%	**-**	-
% Total	3.2%	16.4%	15.3%	0%	**34.9%**	3.7%	4.8%	6.9%	0%	**15.3%**	3.7%	10.1%	1.6%	0%	**15.3%**	1.1%	27.0%	6.3%	0%	**34.4%**	-
PHF	0.750	0.861	0.604	-	**0.750**	0.583	0.750	0.464	-	**0.806**	0.350	0.594	0.750	-	**0.518**	0.500	0.911	0.750	-	**0.903**	0.788
Lights	5	30	27	0	**62**	6	9	13	0	**28**	6	18	3	0	**27**	2	49	11	0	**62**	179
% Lights	83.3%	96.8%	93.1%	0%	**93.9%**	85.7%	100%	100%	0%	**96.6%**	85.7%	94.7%	100%	0%	**93.1%**	100%	96.1%	91.7%	0%	**95.4%**	94.7%
Articulated Trucks and Single-Unit Trucks	0	0	2	0	**2**	1	0	0	0	**1**	1	1	0	0	**2**	0	2	1	0	**3**	8
% Articulated Trucks and Single-Unit Trucks	0%	0%	6.9%	0%	**3.0%**	14.3%	0%	0%	0%	**3.4%**	14.3%	5.3%	0%	0%	**6.9%**	0%	3.9%	8.3%	0%	**4.6%**	4.2%
Buses	1	1	0	0	**2**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	2
% Buses	16.7%	3.2%	0%	0%	**3.0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	1.1%

*L: Left, R: Right, T: Thru, U: U-Turn

150th St & Bagley Ave - TMC
Thu Jan 23, 2025
AM Peak (7 AM - 8 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262908, Location: 44.370691, -93.302554

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US



150th St & Bagley Ave - TMC

Thu Jan 23, 2025
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262908, Location: 44.370691, -93.302554

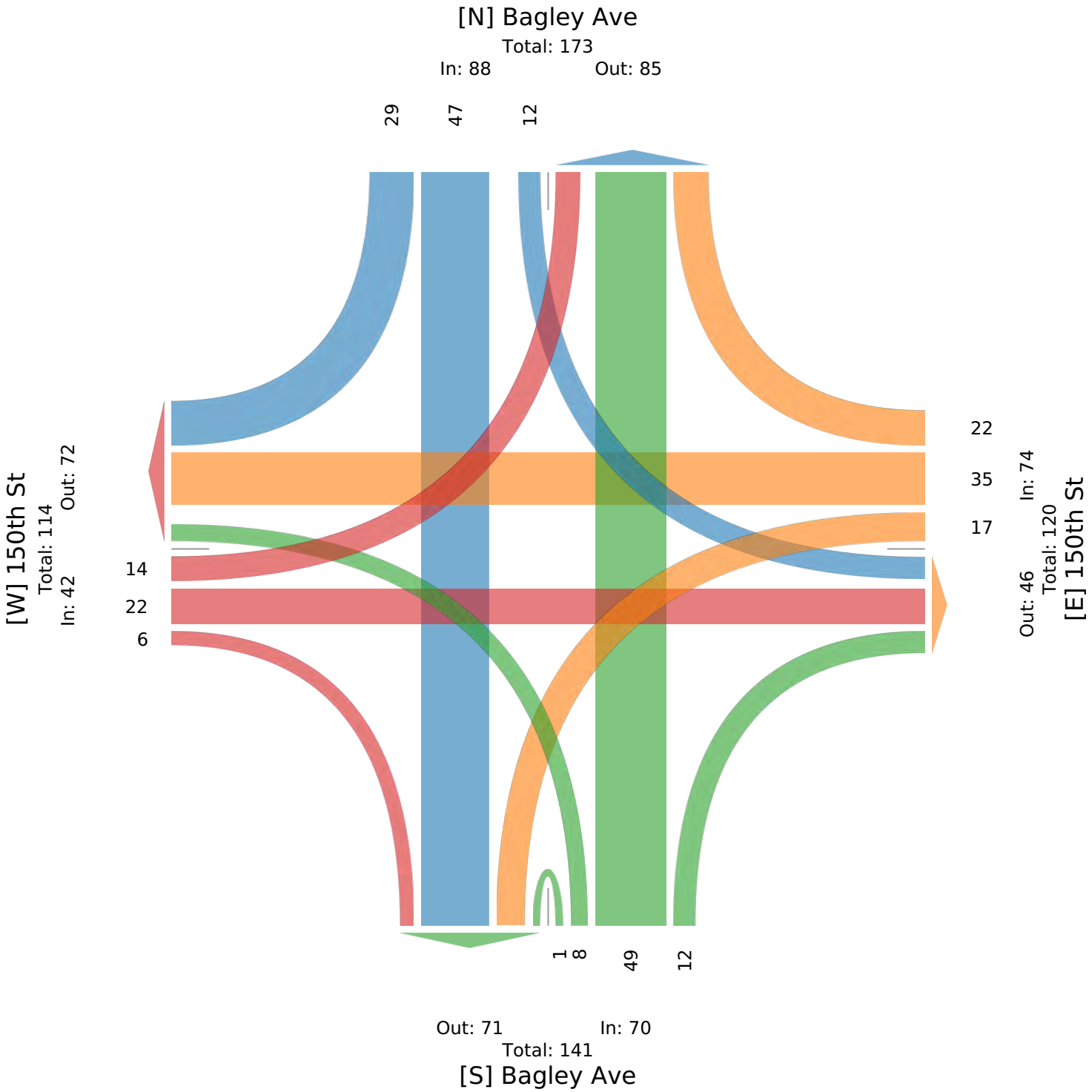
Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg	150th St					150th St					Bagley Ave					Bagley Ave					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	**Int**
2025-01-23 4:15PM	2	4	3	0	**9**	6	8	3	0	**17**	2	10	3	0	**15**	6	18	3	0	**27**	**68**
4:30PM	2	5	3	0	**10**	8	13	5	0	**26**	4	13	2	1	**20**	12	6	6	0	**24**	**80**
4:45PM	1	3	5	0	**9**	3	6	7	0	**16**	3	12	1	0	**16**	6	12	1	0	**19**	**60**
5:00PM	1	10	3	0	**14**	5	8	2	0	**15**	3	14	2	0	**19**	5	11	2	0	**18**	**66**
Total	6	22	14	0	**42**	22	35	17	0	**74**	12	49	8	1	**70**	29	47	12	0	**88**	**274**
% Approach	14.3%	52.4%	33.3%	0%	**-**	29.7%	47.3%	23.0%	0%	**-**	17.1%	70.0%	11.4%	1.4%	**-**	33.0%	53.4%	13.6%	0%	**-**	-
% Total	2.2%	8.0%	5.1%	0%	**15.3%**	8.0%	12.8%	6.2%	0%	**27.0%**	4.4%	17.9%	2.9%	0.4%	**25.5%**	10.6%	17.2%	4.4%	0%	**32.1%**	-
PHF	0.750	0.550	0.700	-	**0.750**	0.688	0.673	0.607	-	**0.712**	0.750	0.875	0.667	0.250	**0.875**	0.604	0.653	0.500	-	**0.815**	0.856
Lights	6	22	14	0	**42**	21	35	16	0	**72**	12	43	8	0	**63**	28	38	12	0	**78**	255
% Lights	100%	100%	100%	0%	**100%**	95.5%	100%	94.1%	0%	**97.3%**	100%	87.8%	100%	0%	**90.0%**	96.6%	80.9%	100%	0%	**88.6%**	93.1%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	**0**	1	0	1	0	**2**	0	6	0	1	**7**	1	9	0	0	**10**	19
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	**0%**	4.5%	0%	5.9%	0%	**2.7%**	0%	12.2%	0%	100%	**10.0%**	3.4%	19.1%	0%	0%	**11.4%**	6.9%
Buses	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%

*L: Left, R: Right, T: Thru, U: U-Turn

150th St & Bagley Ave - TMC
Thu Jan 23, 2025
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262908, Location: 44.370691, -93.302554

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US



150th St & Acorn Trail - TMC

Thu Jan 23, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262909, Location: 44.370699, -93.287536

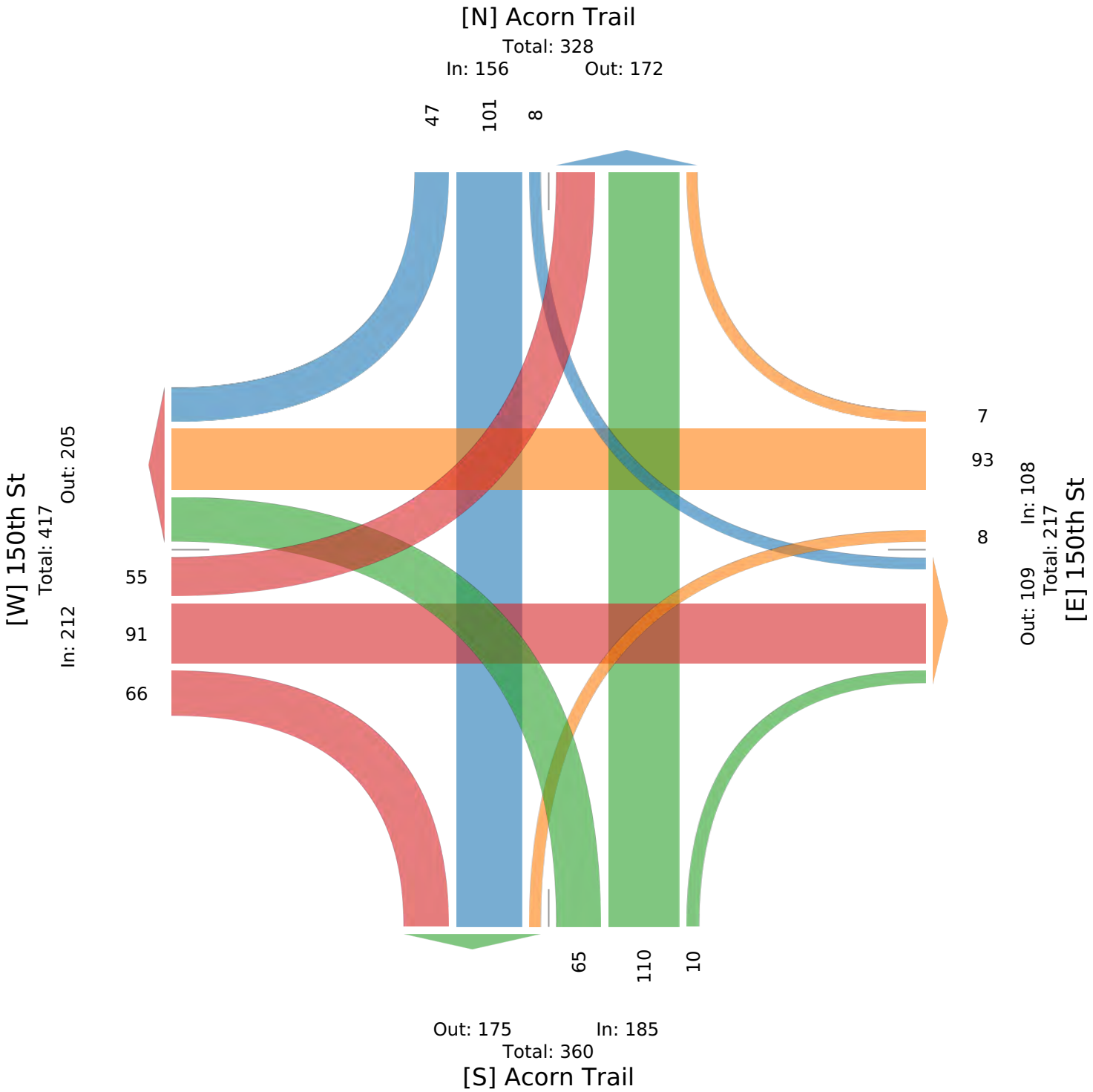
Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg	150th St					150th St					Acorn Trail					Acorn Trail					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-01-23 7:00AM	2	3	1	0	**6**	0	5	0	0	**5**	1	3	2	0	**6**	6	7	1	0	**14**	**31**
7:15AM	6	3	3	0	**12**	0	6	0	0	**6**	1	6	5	0	**12**	4	11	0	0	**15**	**45**
7:30AM	3	2	0	0	**5**	1	7	1	0	**9**	0	7	5	0	**12**	4	6	1	0	**11**	**37**
7:45AM	2	5	2	0	**9**	1	8	0	0	**9**	0	4	6	0	**10**	5	6	0	0	**11**	**39**
Hourly Total	13	13	6	0	**32**	2	26	1	0	**29**	2	20	18	0	**40**	19	30	2	0	**51**	**152**
8:00AM	2	1	1	0	**4**	1	10	2	0	**13**	1	5	5	0	**11**	1	7	0	0	**8**	**36**
8:15AM	3	4	1	0	**8**	0	6	0	0	**6**	0	6	5	0	**11**	4	6	0	0	**10**	**35**
8:30AM	5	3	2	0	**10**	2	4	0	0	**6**	1	4	5	0	**10**	1	5	0	0	**6**	**32**
8:45AM	1	5	1	0	**7**	0	3	0	0	**3**	1	3	3	0	**7**	1	6	0	0	**7**	**24**
Hourly Total	11	13	5	0	**29**	3	23	2	0	**28**	3	18	18	0	**39**	7	24	0	0	**31**	**127**
4:00PM	9	8	5	0	**22**	0	5	1	0	**6**	4	11	1	0	**16**	1	5	2	0	**8**	**52**
4:15PM	4	7	9	0	**20**	0	7	0	0	**7**	0	6	2	0	**8**	2	3	1	0	**6**	**41**
4:30PM	11	11	12	0	**34**	0	10	1	0	**11**	0	12	11	0	**23**	7	9	1	0	**17**	**85**
4:45PM	4	11	4	0	**19**	0	3	1	0	**4**	0	12	7	0	**19**	3	4	0	0	**7**	**49**
Hourly Total	28	37	30	0	**95**	0	25	3	0	**28**	4	41	21	0	**66**	13	21	4	0	**38**	**227**
5:00PM	6	15	8	0	**29**	1	3	2	0	**6**	0	9	1	0	**10**	1	10	2	0	**13**	**58**
5:15PM	3	4	4	0	**11**	0	9	0	0	**9**	1	9	2	0	**12**	2	3	0	0	**5**	**37**
5:30PM	4	7	2	0	**13**	0	3	0	0	**3**	0	7	2	0	**9**	2	8	0	0	**10**	**35**
5:45PM	1	2	0	0	**3**	1	4	0	0	**5**	0	6	3	0	**9**	3	5	0	0	**8**	**25**
Hourly Total	14	28	14	0	**56**	2	19	2	0	**23**	1	31	8	0	**40**	8	26	2	0	**36**	**155**
Total	66	91	55	0	**212**	7	93	8	0	**108**	10	110	65	0	**185**	47	101	8	0	**156**	**661**
% Approach	31.1%	42.9%	25.9%	0%	**-**	6.5%	86.1%	7.4%	0%	**-**	5.4%	59.5%	35.1%	0%	**-**	30.1%	64.7%	5.1%	0%	**-**	-
% Total	10.0%	13.8%	8.3%	0%	**32.1%**	1.1%	14.1%	1.2%	0%	**16.3%**	1.5%	16.6%	9.8%	0%	**28.0%**	7.1%	15.3%	1.2%	0%	**23.6%**	-
Lights	54	90	51	0	**195**	7	89	8	0	**104**	10	103	55	0	**168**	43	96	8	0	**147**	614
% Lights	81.8%	98.9%	92.7%	0%	**92.0%**	100%	95.7%	100%	0%	**96.3%**	100%	93.6%	84.6%	0%	**90.8%**	91.5%	95.0%	100%	0%	**94.2%**	92.9%
Articulated Trucks and Single-Unit Trucks	12	1	4	0	**17**	0	4	0	0	**4**	0	7	10	0	**17**	3	5	0	0	**8**	46
% Articulated Trucks and Single-Unit Trucks	18.2%	1.1%	7.3%	0%	**8.0%**	0%	4.3%	0%	0%	**3.7%**	0%	6.4%	15.4%	0%	**9.2%**	6.4%	5.0%	0%	0%	**5.1%**	7.0%
Buses	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	1	0	0	0	**1**	1
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	2.1%	0%	0%	0%	**0.6%**	0.2%

*L: Left, R: Right, T: Thru, U: U-Turn

150th St & Acorn Trail - TMC
Thu Jan 23, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262909, Location: 44.370699, -93.287536

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US



150th St & Acorn Trail - TMC

Thu Jan 23, 2025
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262909, Location: 44.370699, -93.287536

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg	150th St					150th St					Acorn Trail					Acorn Trail					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-01-23 7:15AM	6	3	3	0	**12**	0	6	0	0	**6**	1	6	5	0	**12**	4	11	0	0	**15**	**45**
7:30AM	3	2	0	0	**5**	1	7	1	0	**9**	0	7	5	0	**12**	4	6	1	0	**11**	**37**
7:45AM	2	5	2	0	**9**	1	8	0	0	**9**	0	4	6	0	**10**	5	6	0	0	**11**	**39**
8:00AM	2	1	1	0	**4**	1	10	2	0	**13**	1	5	5	0	**11**	1	7	0	0	**8**	**36**
Total	13	11	6	0	**30**	3	31	3	0	**37**	2	22	21	0	**45**	14	30	1	0	**45**	**157**
% Approach	43.3%	36.7%	20.0%	0%	**-**	8.1%	83.8%	8.1%	0%	**-**	4.4%	48.9%	46.7%	0%	**-**	31.1%	66.7%	2.2%	0%	**-**	-
% Total	8.3%	7.0%	3.8%	0%	**19.1%**	1.9%	19.7%	1.9%	0%	**23.6%**	1.3%	14.0%	13.4%	0%	**28.7%**	8.9%	19.1%	0.6%	0%	**28.7%**	-
PHF	0.542	0.550	0.500	-	**0.625**	0.750	0.775	0.375	-	**0.712**	0.500	0.786	0.875	-	**0.938**	0.700	0.682	0.250	-	**0.750**	0.872
Lights	7	11	4	0	**22**	3	30	3	0	**36**	2	21	17	0	**40**	13	28	1	0	**42**	140
% Lights	53.8%	100%	66.7%	0%	**73.3%**	100%	96.8%	100%	0%	**97.3%**	100%	95.5%	81.0%	0%	**88.9%**	92.9%	93.3%	100%	0%	**93.3%**	89.2%
Articulated Trucks and Single-Unit Trucks	6	0	2	0	**8**	0	1	0	0	**1**	0	1	4	0	**5**	1	2	0	0	**3**	17
% Articulated Trucks and Single-Unit Trucks	46.2%	0%	33.3%	0%	**26.7%**	0%	3.2%	0%	0%	**2.7%**	0%	4.5%	19.0%	0%	**11.1%**	7.1%	6.7%	0%	0%	**6.7%**	10.8%
Buses	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%

*L: Left, R: Right, T: Thru, U: U-Turn

150th St & Acorn Trail - TMC
Thu Jan 23, 2025
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262909, Location: 44.370699, -93.287536

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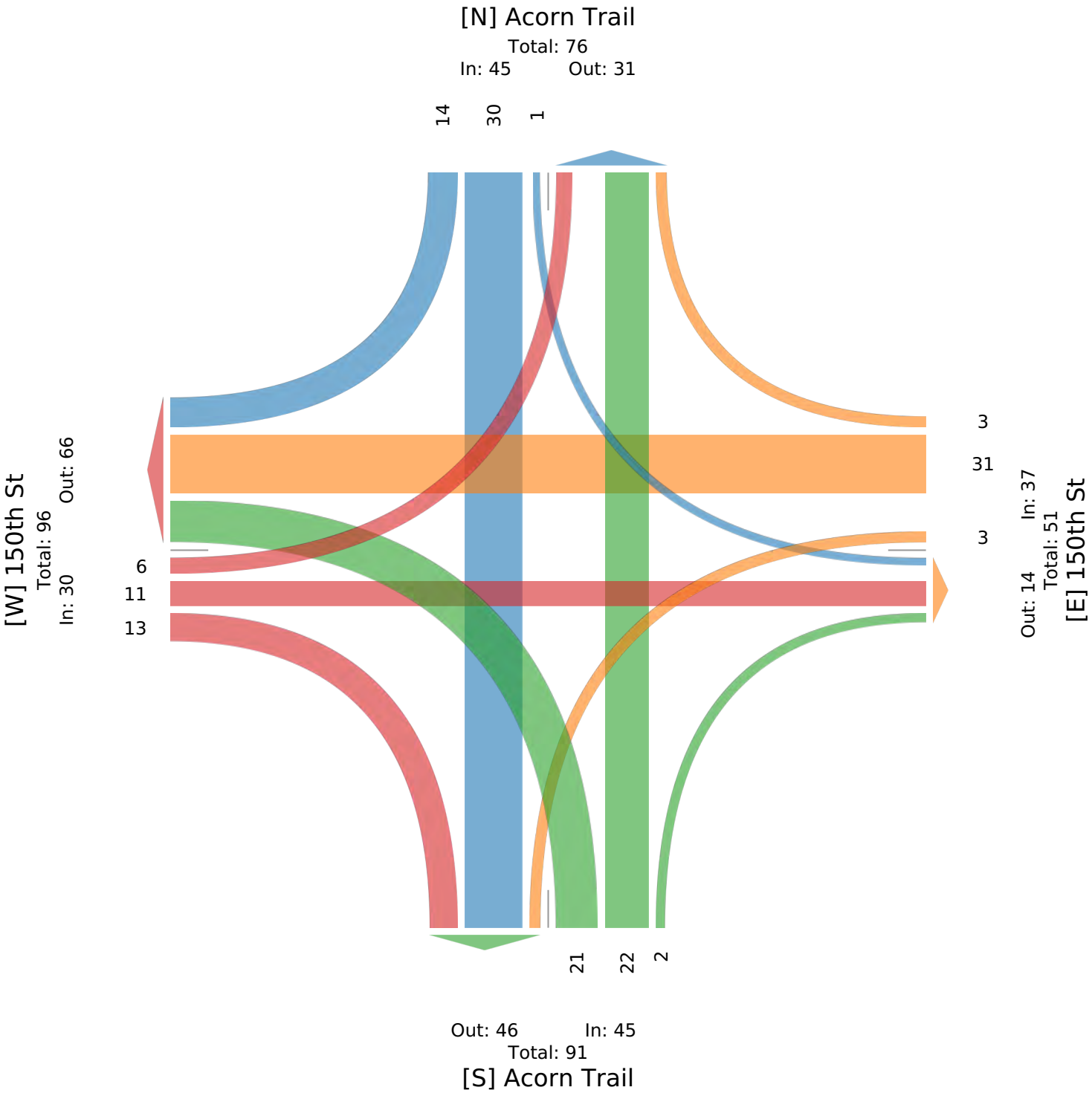

150th St & Acorn Trail - TMC

Thu Jan 23, 2025
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262909, Location: 44.370699, -93.287536

Provided by: Kimley-Horn and Associates, Inc.
767 Eustis Street, Suite 100, Saint Paul, MN, 55114, US

Leg	150th St					150th St					Acorn Trail					Acorn Trail					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	**Int**
2025-01-23 4:15PM	4	7	9	0	**20**	0	7	0	0	**7**	0	6	2	0	**8**	2	3	1	0	**6**	**41**
4:30PM	11	11	12	0	**34**	0	10	1	0	**11**	0	12	11	0	**23**	7	9	1	0	**17**	**85**
4:45PM	4	11	4	0	**19**	0	3	1	0	**4**	0	12	7	0	**19**	3	4	0	0	**7**	**49**
5:00PM	6	15	8	0	**29**	1	3	2	0	**6**	0	9	1	0	**10**	1	10	2	0	**13**	**58**
Total	25	44	33	0	**102**	1	23	4	0	**28**	0	39	21	0	**60**	13	26	4	0	**43**	**233**
% Approach	24.5%	43.1%	32.4%	0%	**-**	3.6%	82.1%	14.3%	0%	**-**	0%	65.0%	35.0%	0%	**-**	30.2%	60.5%	9.3%	0%	**-**	-
% Total	10.7%	18.9%	14.2%	0%	**43.8%**	0.4%	9.9%	1.7%	0%	**12.0%**	0%	16.7%	9.0%	0%	**25.8%**	5.6%	11.2%	1.7%	0%	**18.5%**	-
PHF	0.568	0.733	0.688	-	**0.750**	0.250	0.575	0.500	-	**0.636**	-	0.813	0.477	-	**0.652**	0.464	0.650	0.500	-	**0.632**	0.685
Lights	24	43	32	0	**99**	1	23	4	0	**28**	0	38	20	0	**58**	13	26	4	0	**43**	228
% Lights	96.0%	97.7%	97.0%	0%	**97.1%**	100%	100%	100%	0%	**100%**	0%	97.4%	95.2%	0%	**96.7%**	100%	100%	100%	0%	**100%**	97.9%
Articulated Trucks and Single-Unit Trucks	1	1	1	0	**3**	0	0	0	0	**0**	0	1	1	0	**2**	0	0	0	0	**0**	5
% Articulated Trucks and Single-Unit Trucks	4.0%	2.3%	3.0%	0%	**2.9%**	0%	0%	0%	0%	**0%**	0%	2.6%	4.8%	0%	**3.3%**	0%	0%	0%	0%	**0%**	2.1%
Buses	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%

*L: Left, R: Right, T: Thru, U: U-Turn

150th St & Acorn Trail - TMC
Thu Jan 23, 2025
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1262909, Location: 44.370699, -93.287536

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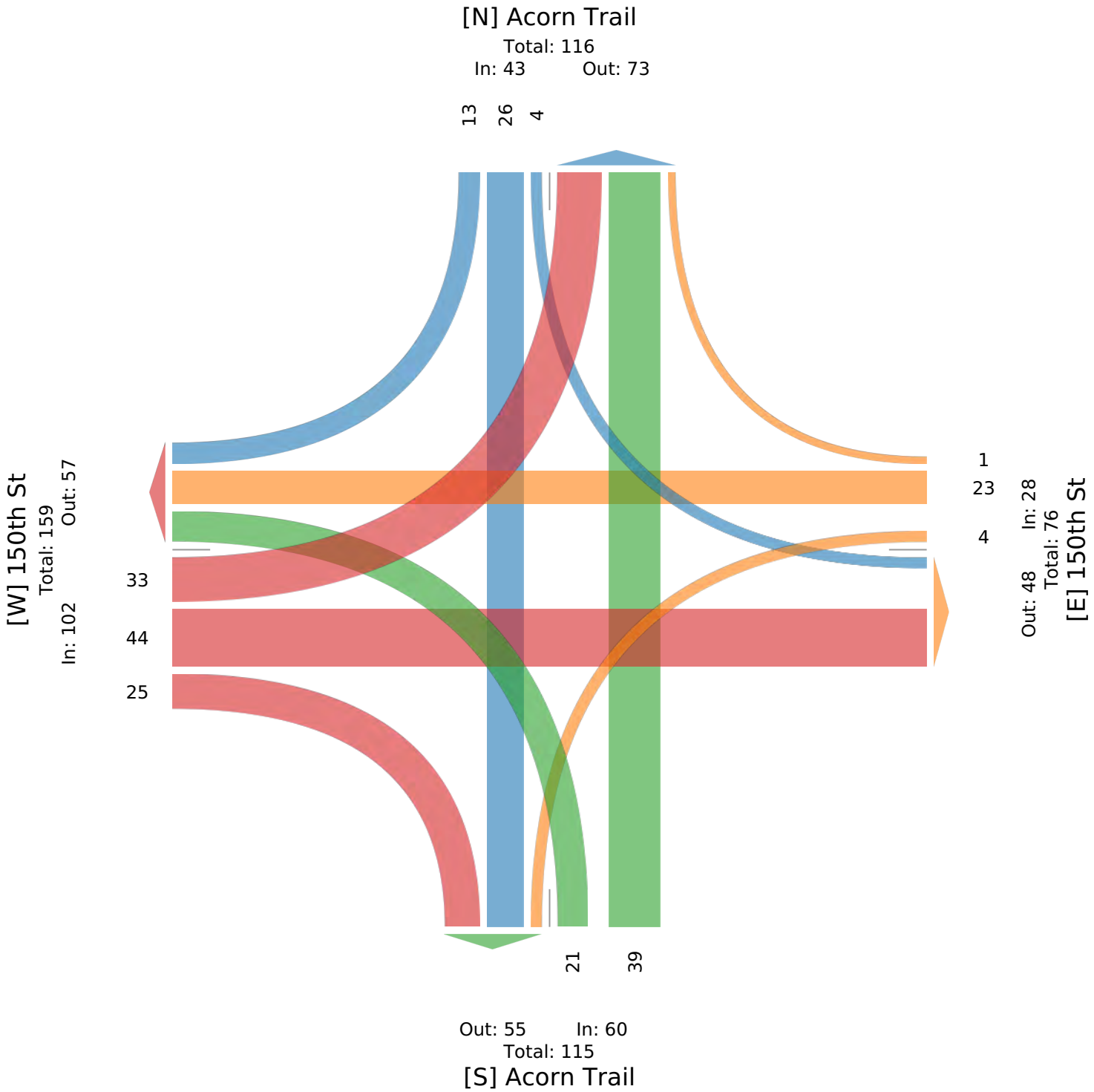
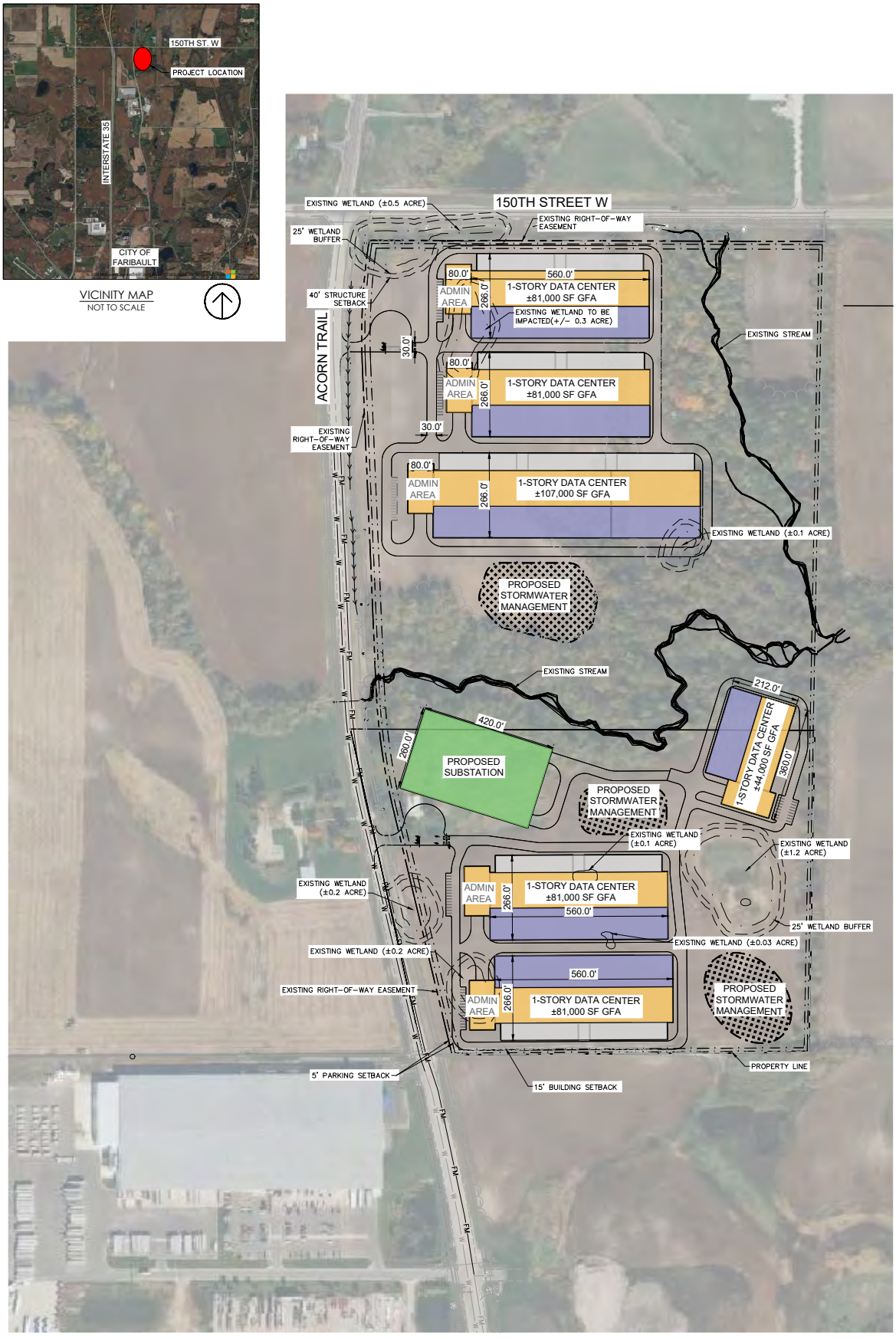


C. Proposed Site Plan



ARCHER DATACENTERS - FARIBAULT, MN

Campus Concept Site Plan - 01

Faribault, MN

Project # 161236000 August 4, 2024

Kimley»Horn

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D. SimTraffic Reports

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	3.8	0.1	0.1	4.0
Total Del/Veh (s)	3.6	9.1	2.4	4.9	4.3	4.1	0.3	0.5	0.0	0.6	0.6	0.1

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	3.3

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.2	3.6	0.2	0.2	4.1
Total Del/Veh (s)	4.8	6.9	4.4	3.1	8.7	2.2	0.7	0.5	0.1	0.3	0.4	0.0

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.5

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	5.6

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	SB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	54	36	5
Average Queue (ft)	23	13	1
95th Queue (ft)	42	29	6
Link Distance (ft)	1633	3850	1749
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	48	32	25
Average Queue (ft)	16	16	2
95th Queue (ft)	37	33	15
Link Distance (ft)	3850	2135	1468
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.2	3.5	0.2	0.2	3.7
Total Del/Veh (s)	3.2	8.9	2.0	4.6	11.8	4.0	0.8	0.6	0.1	0.6	0.7	0.1

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	3.4

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	4.0	0.3
Total Del/Veh (s)	5.2	10.6	3.6	2.6	8.5	1.0	0.6	0.7	0.3	0.4	0.0	4.2

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	6.2

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	35	50	16	10
Average Queue (ft)	15	21	1	0
95th Queue (ft)	30	37	10	5
Link Distance (ft)	1633	3850	1619	1749
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	53	32	5
Average Queue (ft)	22	15	0
95th Queue (ft)	38	31	5
Link Distance (ft)	3850	2135	1468
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	3.7	0.1	0.1	3.4
Total Del/Veh (s)	3.6	9.0	2.7	4.9	4.2	4.1	0.3	0.5	0.0	0.6	0.6	0.1

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	3.4

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.2	3.5	0.2	0.2	3.9
Total Del/Veh (s)	5.7	7.0	4.8	2.8	8.2	1.7	0.7	0.6	0.1	0.3	0.5	0.0

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.4

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	5.4

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	SB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	61	36	5
Average Queue (ft)	23	13	1
95th Queue (ft)	43	30	6
Link Distance (ft)	1633	3850	1749
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	53	31	25
Average Queue (ft)	17	16	2
95th Queue (ft)	40	32	16
Link Distance (ft)	3850	2135	1468
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	3.5	0.2	0.2	3.5
Total Del/Veh (s)	2.8	8.8	1.5	5.0	10.7	3.3	0.3	0.4	0.1	0.5	0.6	0.2

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	3.1

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	4.1	0.3
Total Del/Veh (s)	5.7	10.9	3.9	2.7	8.3	1.9	0.7	0.8	0.3	0.3	0.0	4.2

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	6.1

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	32	47	5
Average Queue (ft)	15	21	0
95th Queue (ft)	29	36	4
Link Distance (ft)	1633	3850	1619
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	54	24	11	4
Average Queue (ft)	24	14	1	0
95th Queue (ft)	42	30	7	3
Link Distance (ft)	3850	2135	1468	1163
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.1	3.7	0.1	0.1	3.6
Total Del/Veh (s)	3.7	9.5	2.4	5.3	4.2	4.0	0.5	0.7	0.1	0.5	0.6	0.1

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	3.3

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	3.9
Total Del/Veh (s)	5.9	7.1	4.5	2.7	8.9	1.8	1.3	0.5	0.1	0.2	0.5	0.1

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	3.4

3: Acorn Trail & Access 1 Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.5	2.9	0.3	0.0	1.4	0.5	0.8

4: Acorn Trail & Access 2 Performance by movement

Movement	WBL	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	3.7	0.1	0.0	0.5	0.2	0.3

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	5.5

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	58	46	6	5
Average Queue (ft)	22	16	0	0
95th Queue (ft)	40	36	5	0
Link Distance (ft)	1633	3850	1619	1749
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	60	38	25
Average Queue (ft)	22	17	2
95th Queue (ft)	47	33	14
Link Distance (ft)	3850	2136	445
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Acorn Trail & Access 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	36
Average Queue (ft)	13
95th Queue (ft)	39
Link Distance (ft)	1021
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Acorn Trail & Access 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	3
95th Queue (ft)	18
Link Distance (ft)	1367
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.2	0.1	0.0	0.0	0.0	0.2	0.2	3.8	0.2	0.1	3.1
Total Del/Veh (s)	2.4	11.3	1.5	4.3	10.5	3.6	0.2	0.9	0.1	0.8	0.8	0.2

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	2.9

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.2	0.1		0.1	0.0	0.0	0.0	0.1	0.1	5.0	0.2
Total Del/Veh (s)	4.7	12.6	3.0		7.0	1.0	1.1	0.1	0.1	0.5	0.0	4.0

9: Acorn Trail & Access 1 Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)		0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)		3.0	0.3	0.9	0.5	0.8

11: Acorn Trail & Access 2 Performance by movement

Movement	WBL	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.1
Total Del/Veh (s)	2.0	2.0	0.1	0.2	0.2	0.3

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	5.6

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	SB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	21	30	5
Average Queue (ft)	17	23	1
95th Queue (ft)	26	39	9
Link Distance (ft)	1633	3850	1749
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	42	29	6
Average Queue (ft)	27	17	2
95th Queue (ft)	49	35	14
Link Distance (ft)	3850	2135	485
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Acorn Trail & Access 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	19
95th Queue (ft)	43
Link Distance (ft)	1057
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Acorn Trail & Access 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	16
Average Queue (ft)	4
95th Queue (ft)	20
Link Distance (ft)	1104
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.2	0.2	0.0	0.0	0.0	0.1	0.1	3.6	0.2	0.1	3.4
Total Del/Veh (s)	4.0	9.4	2.9	4.9	5.5	3.7	0.5	0.4	0.0	0.7	0.6	0.0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	3.5

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	3.7	0.2	0.1	4.2
Total Del/Veh (s)	6.3	6.8	4.3	4.1	9.3	1.4	0.7	0.5	0.1	0.5	0.3	0.0

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	3.4

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	5.4

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	53	35	10	19
Average Queue (ft)	22	15	0	1
95th Queue (ft)	40	30	5	7
Link Distance (ft)	1633	3850	1619	1749
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	56	48	25
Average Queue (ft)	17	17	1
95th Queue (ft)	40	37	9
Link Distance (ft)	3850	2135	1468
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	3.7	0.2	0.2	3.5
Total Del/Veh (s)	3.6	9.1	1.7	5.2	11.1	3.9	0.8	0.8	0.2	0.4	0.8	0.1

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.6
Total Del/Veh (s)	3.3

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	4.2	0.4
Total Del/Veh (s)	5.9	11.3	4.0	4.3	8.6	1.6	0.7	0.8	0.4	0.3	0.0	4.4

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	6.2

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	43	54	37	5
Average Queue (ft)	18	21	2	0
95th Queue (ft)	31	39	17	3
Link Distance (ft)	1633	3850	1619	1749
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	59	45	28
Average Queue (ft)	25	15	1
95th Queue (ft)	41	35	11
Link Distance (ft)	3850	2135	1468
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.2	0.0	0.0	0.0	0.1	0.1	3.7	0.1	0.1	3.4
Total Del/Veh (s)	4.4	9.7	1.9	5.1	4.6	3.9	0.3	0.6	0.1	0.7	0.9	0.2

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	3.4

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	4.1
Total Del/Veh (s)	6.9	6.1	4.9	3.3	8.9	1.5	1.2	0.8	0.1	0.9	0.4	0.2

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	3.3

3: Acorn Trail & Access 1 Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.7	2.9	0.2	0.0	1.5	0.5	0.8

4: Acorn Trail & Access 2 Performance by movement

Movement	WBL	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	4.0	0.1	0.0	0.4	0.3	0.4

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	5.5

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	R	LT
Maximum Queue (ft)	62	54	4	21
Average Queue (ft)	23	19	0	0
95th Queue (ft)	46	39	3	5
Link Distance (ft)	1633	3850		1749
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			275	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	51	48	45	9
Average Queue (ft)	21	20	4	0
95th Queue (ft)	44	37	24	5
Link Distance (ft)	3850	2136	445	1163
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Acorn Trail & Access 1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	41	12
Average Queue (ft)	18	1
95th Queue (ft)	44	7
Link Distance (ft)	1021	445
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Acorn Trail & Access 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	34
Average Queue (ft)	6
95th Queue (ft)	25
Link Distance (ft)	1367
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	3.4	0.3	0.2	3.9
Total Del/Veh (s)	3.9	8.8	1.9	5.6	10.9	4.0	0.7	0.9	0.2	0.8	0.9	0.3

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	3.3

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	4.0
Total Del/Veh (s)	6.6	11.6	3.7	2.5	8.8	1.9	1.0	0.8	0.1	0.3	0.5	0.1

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	4.5

9: Acorn Trail & Access 1 Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.2	3.0	0.3	1.3	0.4	0.8

11: Acorn Trail & Access 2 Performance by movement

Movement	WBL	WBR	NBT	NBR	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.1
Total Del/Veh (s)	3.9	2.8	0.2	0.0	0.2	0.4

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	6.5

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	27	59	6	25
Average Queue (ft)	17	26	0	1
95th Queue (ft)	28	47	6	9
Link Distance (ft)	1633	3850	1619	1749
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	LT
Maximum Queue (ft)	57	38	29	4
Average Queue (ft)	26	15	3	0
95th Queue (ft)	46	33	15	3
Link Distance (ft)	3850	2135	485	1163
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Acorn Trail & Access 1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	43	18
Average Queue (ft)	18	1
95th Queue (ft)	43	8
Link Distance (ft)	1057	485
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Acorn Trail & Access 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	26
Average Queue (ft)	7
95th Queue (ft)	26
Link Distance (ft)	1104
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	0.4	0.0	0.0	0.0	0.3	0.3	3.4	0.3	0.3	3.3
Total Del/Veh (s)	118.3	129.2	114.8	20.0	8.1	14.0	2.5	2.6	0.6	2.4	3.4	0.7

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	40.9

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.2	0.3	0.3	0.3	3.3	0.1	0.4	3.7
Total Del/Veh (s)	14.7	9.0	9.0	13.9	19.4	10.7	3.6	3.6	0.5	1.4	1.7	0.6

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	7.9

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	38.3

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LT
Maximum Queue (ft)	1124	164	38	16	61
Average Queue (ft)	418	53	6	1	13
95th Queue (ft)	1063	116	27	9	44
Link Distance (ft)	1633	3850	1619		1749
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				275	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LT	LT	R
Maximum Queue (ft)	104	154	113	15	22
Average Queue (ft)	43	58	32	1	2
95th Queue (ft)	76	109	80	8	13
Link Distance (ft)	3850	2135	1468	1163	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					275
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.2	0.4	41.3	42.0	38.3	0.6	0.5	3.2	0.6	0.7	3.0
Total Del/Veh (s)	74.2	84.5	74.2	517.6	483.0	450.3	5.3	4.4	1.2	4.0	4.4	1.6

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	11.9
Total Del/Veh (s)	141.2

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	166.1	147.5	188.7	0.2	0.2	0.2	0.3	0.3	0.3	0.4	3.7	70.7
Total Del/Veh (s)	385.6	398.8	384.0	26.4	31.8	24.1	3.5	4.3	1.8	2.2	0.5	161.6

Total Network Performance

Denied Del/Veh (s)	48.9
Total Del/Veh (s)	190.8

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	R	LT	R
Maximum Queue (ft)	460	2912	103	22	74	22
Average Queue (ft)	174	1459	24	2	23	5
95th Queue (ft)	411	3231	73	12	60	19
Link Distance (ft)	1633	3850	1619		1749	
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		1				
Storage Bay Dist (ft)				275		275
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LT	LT	R
Maximum Queue (ft)	2130	219	97	35	21
Average Queue (ft)	1488	70	27	6	1
95th Queue (ft)	2442	161	68	24	10
Link Distance (ft)	3850	2135	1468	1163	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					275
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 1

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.4	0.4	0.4	0.0	0.0	0.0	0.3	0.3	3.5	0.3	0.4	2.9
Total Del/Veh (s)	119.7	128.4	141.3	19.6	7.9	17.8	2.1	2.3	0.4	2.5	3.7	1.1

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	41.4

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.0	0.4	0.4	3.7
Total Del/Veh (s)	16.9	11.0	10.6	19.5	25.3	16.9	3.7	2.8	0.2	1.3	2.0	0.5

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	9.4

3: Acorn Trail & Access 1 Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.3	3.4	0.6	0.1	2.4	1.1	1.0

4: Acorn Trail & Access 2 Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.3	0.0	0.0	0.1
Total Del/Veh (s)	3.5	0.3	1.6	0.5	0.4

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	38.9

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	LT
Maximum Queue (ft)	1142	201	40	23	78
Average Queue (ft)	429	55	5	1	15
95th Queue (ft)	1082	128	23	11	52
Link Distance (ft)	1633	3850	1619		1749
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				275	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	R	LT	R
Maximum Queue (ft)	134	204	122	4	13	25
Average Queue (ft)	54	71	36	0	1	3
95th Queue (ft)	101	162	83	3	7	14
Link Distance (ft)	3850	2136	445		1163	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				275		275
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Acorn Trail & Access 1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	31	44
Average Queue (ft)	14	7
95th Queue (ft)	39	29
Link Distance (ft)	1021	445
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Acorn Trail & Access 2

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	29	21
Average Queue (ft)	3	1
95th Queue (ft)	18	10
Link Distance (ft)	1367	859
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.2	0.3	46.5	41.1	41.9	0.4	0.5	3.0	0.9	0.8	3.0
Total Del/Veh (s)	89.3	88.5	80.0	537.8	554.3	541.3	5.2	4.5	1.0	4.5	4.8	1.7

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	12.3
Total Del/Veh (s)	158.6

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	172.8	156.9	173.6	0.2	0.2	0.1	0.0	0.0	0.0	0.4	0.4	3.6
Total Del/Veh (s)	367.0	360.6	352.8	28.0	36.6	19.4	3.3	3.6	0.3	2.4	2.3	0.5

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	70.8
Total Del/Veh (s)	145.8

9: Acorn Trail & Access 1 Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.7	4.0	0.8	2.8	0.9	1.0

11: Acorn Trail & Access 2 Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.3	0.0	0.0	0.2
Total Del/Veh (s)	9.5	3.6	0.5	1.1	0.5	0.6

Total Network Performance

Denied Del/Veh (s)	49.3
Total Del/Veh (s)	192.7

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	R	LT	R
Maximum Queue (ft)	514	3054	114	23	104	28
Average Queue (ft)	202	1664	27	1	24	7
95th Queue (ft)	455	3240	76	10	66	25
Link Distance (ft)	1633	3850	1619		1749	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				275		275
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	R	LT	R
Maximum Queue (ft)	2159	225	125	4	39	21
Average Queue (ft)	1379	73	33	0	6	1
95th Queue (ft)	2452	177	88	3	26	9
Link Distance (ft)	3850	2135	485		1163	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				275		275
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 9: Acorn Trail & Access 1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	49	47
Average Queue (ft)	17	4
95th Queue (ft)	44	23
Link Distance (ft)	1057	485
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Acorn Trail & Access 2

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	35	14
Average Queue (ft)	9	1
95th Queue (ft)	30	6
Link Distance (ft)	1104	1003
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.1	0.6	0.8	0.0	0.0	0.0	0.3	0.3	3.5	0.4	0.4	2.9
Total Del/Veh (s)	10.9	18.0	10.4	10.7	5.7	7.8	9.3	13.8	4.9	37.5	43.9	11.4

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	19.8

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.0	0.4	0.4	3.7
Total Del/Veh (s)	19.3	11.7	11.4	14.0	14.7	6.7	15.8	13.3	2.5	9.9	11.0	3.5

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	12.3

3: Acorn Trail & Access 1 Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.2	3.5	0.8	0.1	4.4	2.6	1.9

4: Acorn Trail & Access 2 Performance by movement

Movement	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.3	0.0	0.0	0.1
Total Del/Veh (s)	3.5	0.3	1.9	0.7	0.6

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	26.0

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	R	LT	R
Maximum Queue (ft)	116	121	57	63	83	74	537	187
Average Queue (ft)	50	51	26	28	41	30	169	22
95th Queue (ft)	92	94	48	51	67	61	435	151
Link Distance (ft)		1634		3852	1613		1743	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100			275		275
Storage Blk Time (%)	1	1					12	
Queuing Penalty (veh)	2	2					1	

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	R	LT	R
Maximum Queue (ft)	144	127	222	29	136	60
Average Queue (ft)	59	58	98	7	51	21
95th Queue (ft)	111	107	176	26	103	47
Link Distance (ft)	3852	2136	439		1157	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				275		275
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 3: Acorn Trail & Access 1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	31	74
Average Queue (ft)	14	9
95th Queue (ft)	39	42
Link Distance (ft)	1021	439
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Acorn Trail & Access 2

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	29	26
Average Queue (ft)	3	1
95th Queue (ft)	18	13
Link Distance (ft)	1367	859
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 6

1: Bagley Avenue & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.3	0.4	0.4	0.0	0.0	0.0	0.5	0.5	3.1	0.8	0.7	3.0
Total Del/Veh (s)	9.5	16.5	8.0	12.1	2.5	7.9	28.3	30.9	8.1	20.0	25.1	6.5

1: Bagley Avenue & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	1.0
Total Del/Veh (s)	17.0

2: Acorn Trail & 150th Street W Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.3	0.3	0.2	0.2	0.1	4.4	3.8	0.0	0.3	0.4	3.8
Total Del/Veh (s)	43.8	47.0	39.0	24.1	18.1	13.9	47.6	48.4	6.3	23.2	23.8	4.1

2: Acorn Trail & 150th Street W Performance by movement

Movement	All
Denied Del/Veh (s)	1.5
Total Del/Veh (s)	37.1

9: Acorn Trail & Access 1 Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	24.1	9.9	3.3	4.4	2.3	3.1

11: Acorn Trail & Access 2 Performance by movement

Movement	WBL	WBR	NBT	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.3	0.0	0.0	0.1
Total Del/Veh (s)	6.1	3.4	0.5	1.1	0.7	0.7

Total Network Performance

Denied Del/Veh (s)	1.6
Total Del/Veh (s)	37.9

Intersection: 1: Bagley Avenue & 150th Street W

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	R	LT	R
Maximum Queue (ft)	68	107	78	76	361	186	252	85
Average Queue (ft)	30	40	36	33	133	41	109	41
95th Queue (ft)	53	76	66	62	308	149	203	68
Link Distance (ft)		1634		3852	1613		1743	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100			275		275
Storage Blk Time (%)	0	0	0	0	6		0	
Queuing Penalty (veh)	0	0	0	0	5		1	

Intersection: 2: Acorn Trail & 150th Street W

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	R	LT	R
Maximum Queue (ft)	700	183	464	54	226	48
Average Queue (ft)	284	62	220	5	70	22
95th Queue (ft)	606	135	427	30	141	40
Link Distance (ft)	3852	2135	479		1157	
Upstream Blk Time (%)			2			
Queuing Penalty (veh)			10			
Storage Bay Dist (ft)				275		275
Storage Blk Time (%)			15		0	
Queuing Penalty (veh)			1		0	

Intersection: 9: Acorn Trail & Access 1

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	48	110	48
Average Queue (ft)	18	9	4
95th Queue (ft)	45	69	26
Link Distance (ft)	1057	1003	479
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Acorn Trail & Access 2

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	26	16
Average Queue (ft)	6	1
95th Queue (ft)	24	10
Link Distance (ft)	1104	1003
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 17

E. Turn Lane Warrant Sheets

Access 1 2030 AM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

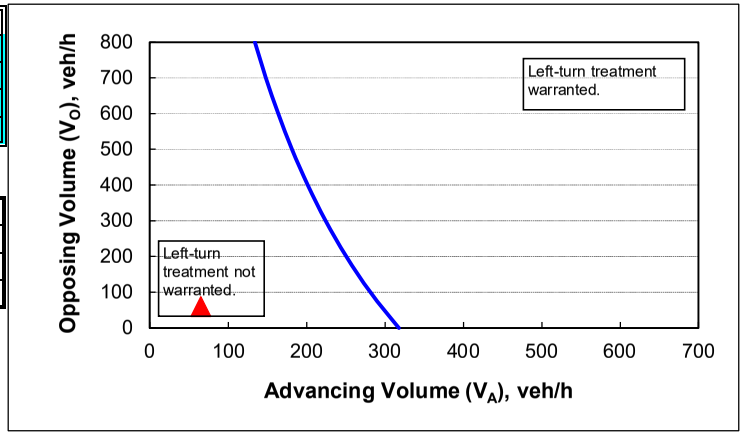
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	25%
Advancing volume (V_A), veh/h:	65
Opposing volume (V_O), veh/h:	60

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	295
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 1 2030 PM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

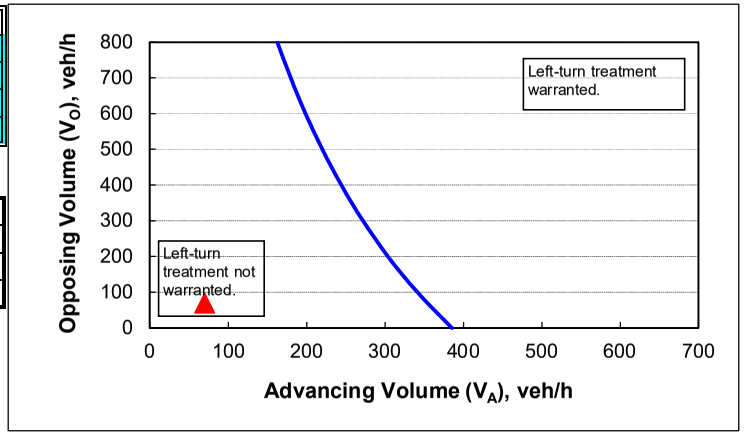
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	15%
Advancing volume (V_A), veh/h:	70
Opposing volume (V_O), veh/h:	70

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	354
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 2 2030 AM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

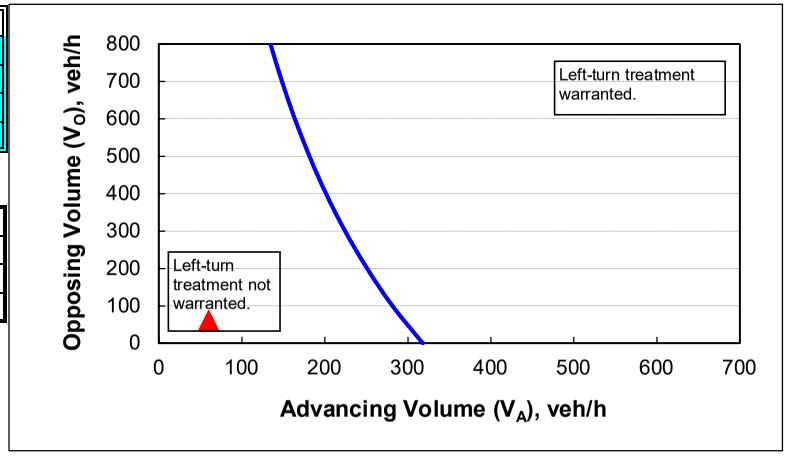
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	8%
Advancing volume (V_A), veh/h:	60
Opposing volume (V_O), veh/h:	60

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	295
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 2 2030 PM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

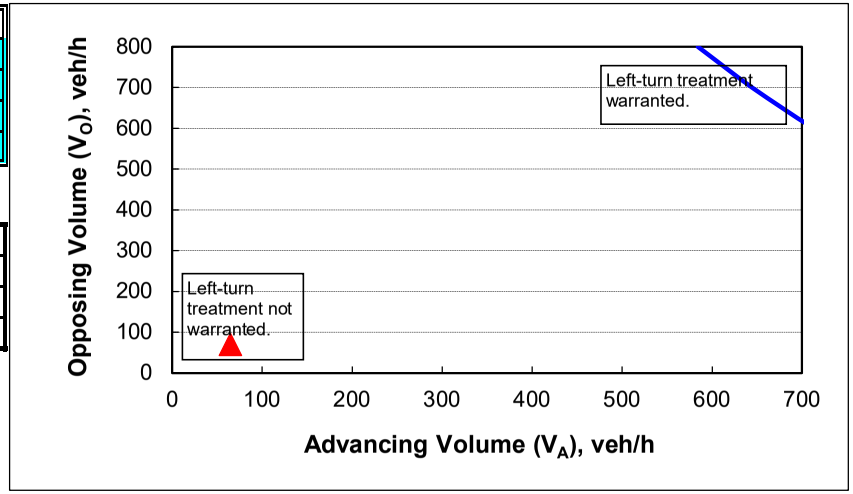
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	1%
Advancing volume (V_A), veh/h:	65
Opposing volume (V_O), veh/h:	70

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1269
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 1 2045 AM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

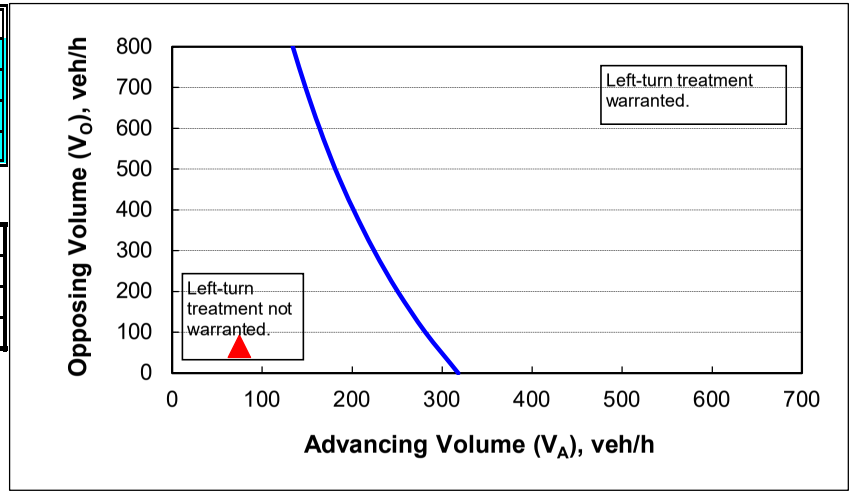
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	20%
Advancing volume (V_A), veh/h:	75
Opposing volume (V_O), veh/h:	65

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	295
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 1 2045 PM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

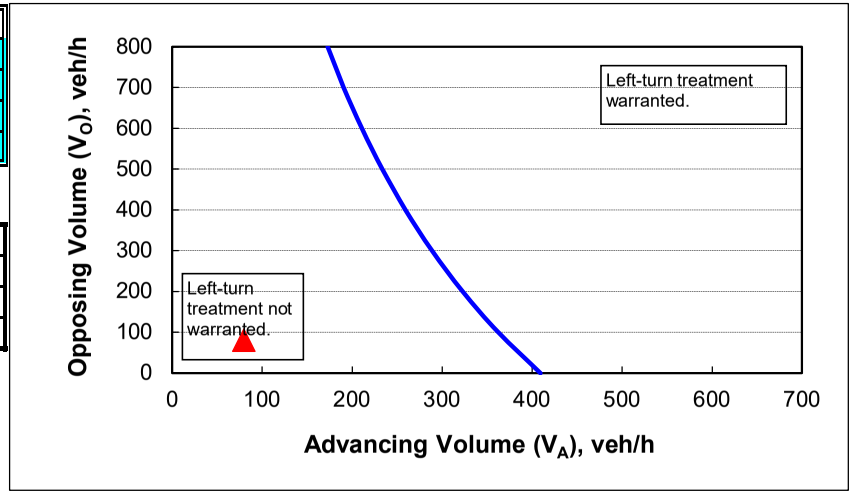
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	13%
Advancing volume (V_A), veh/h:	80
Opposing volume (V_O), veh/h:	80

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	371
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 2 2045 AM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

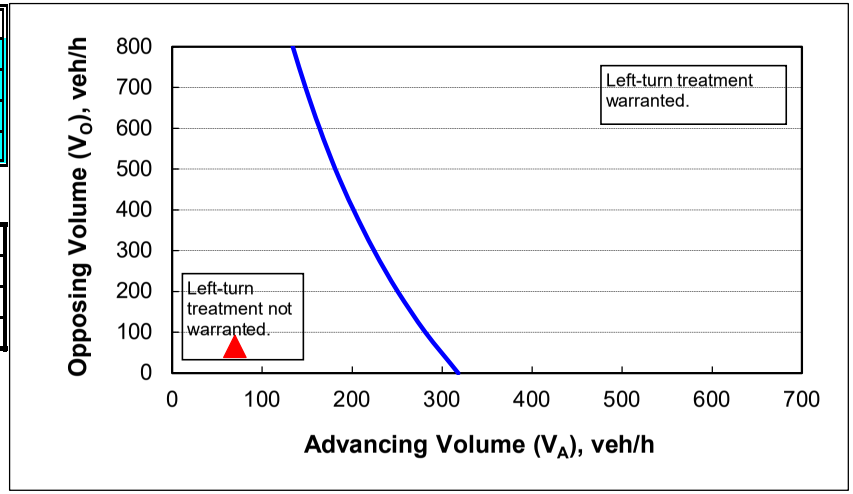
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	7%
Advancing volume (V_A), veh/h:	70
Opposing volume (V_O), veh/h:	65

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	295
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 2 2045 PM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

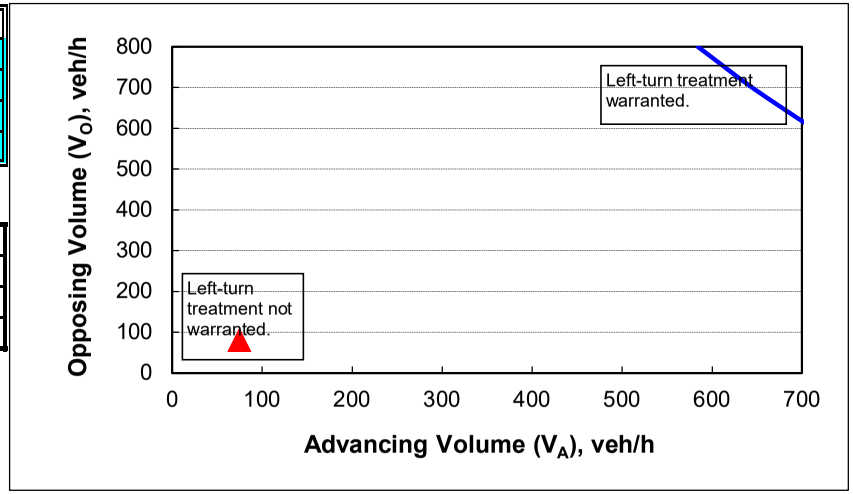
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	1%
Advancing volume (V_A), veh/h:	75
Opposing volume (V_O), veh/h:	80

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1254
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 1 2045 (With Interchange) AM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

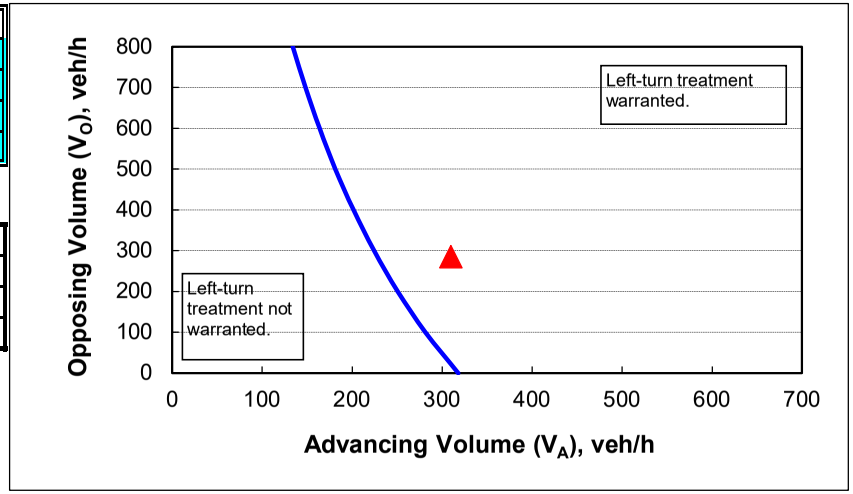
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	6%
Advancing volume (V_A), veh/h:	310
Opposing volume (V_O), veh/h:	285

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	295
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 1 2045 (With Interchange) PM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

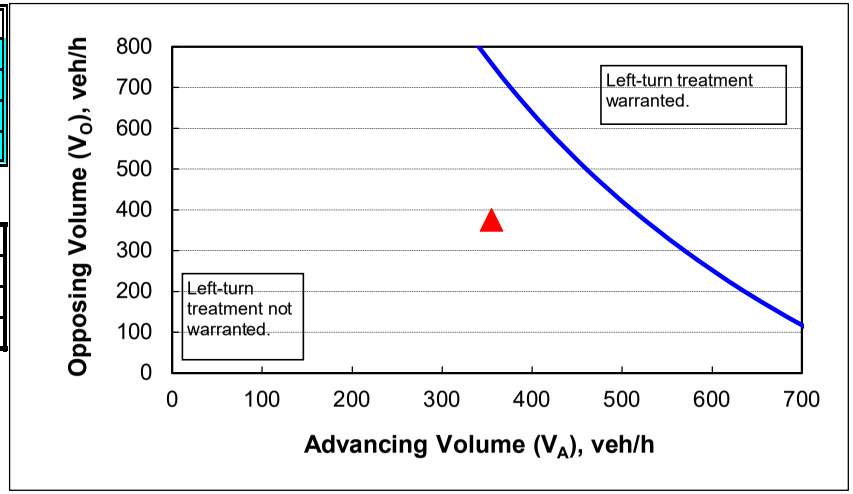
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	355
Opposing volume (V_O), veh/h:	375

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	525
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 2 2045 (With Interchange) AM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

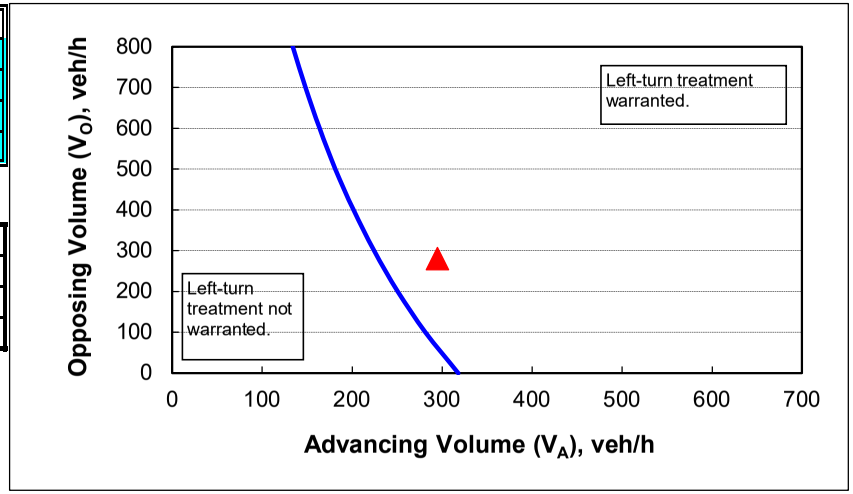
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	295
Opposing volume (V_O), veh/h:	280

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	295
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 2 2045 (With Interchange) PM Peak Hour

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

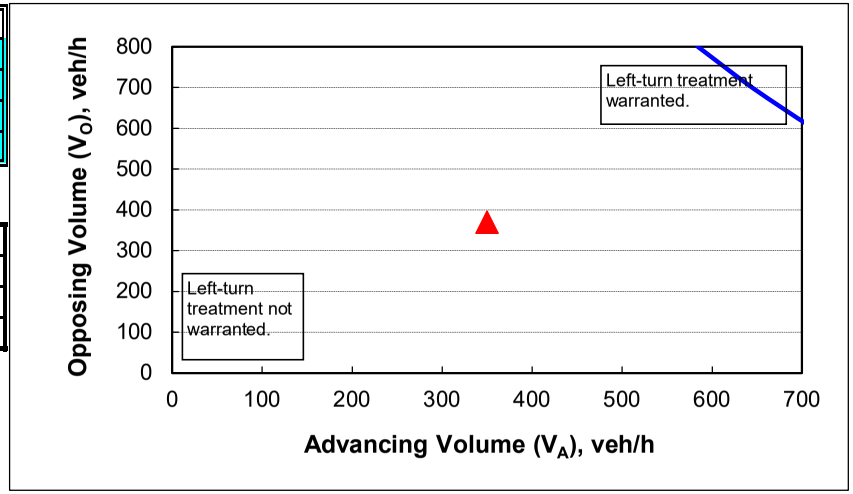
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	1%
Advancing volume (V_A), veh/h:	350
Opposing volume (V_O), veh/h:	370

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	905
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Access 1 2030 AM Peak Hour

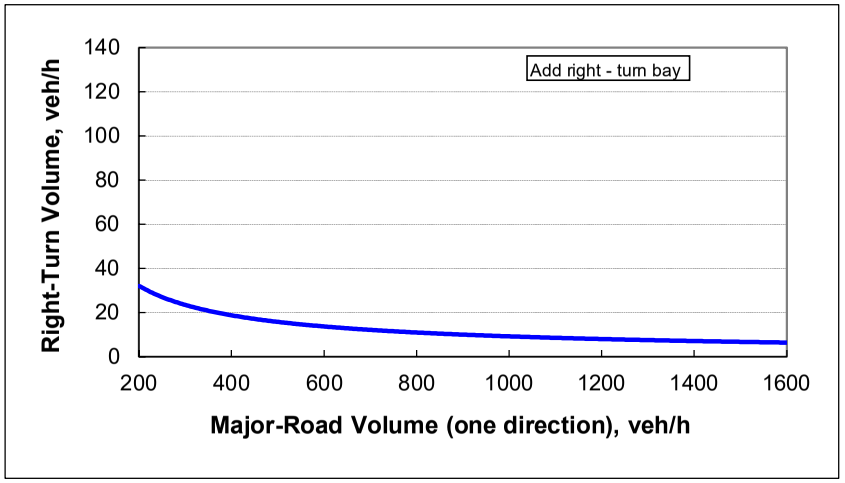
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	60
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	82
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 1 2030 PM Peak Hour

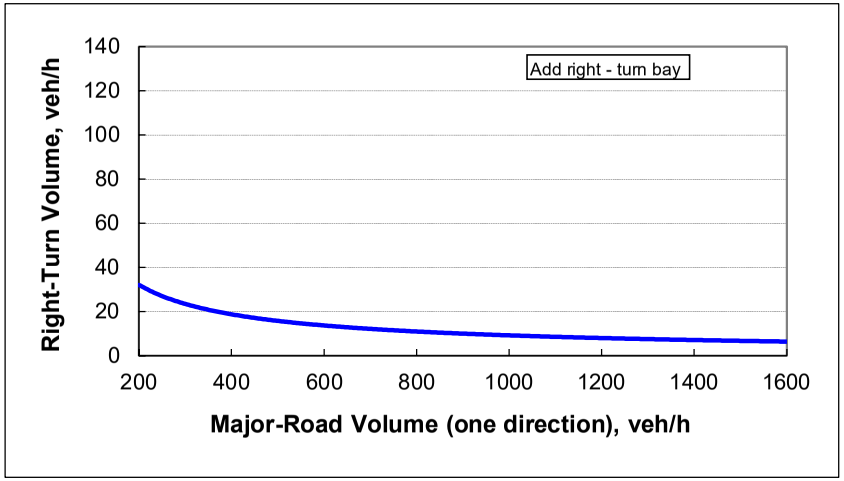
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	70
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	73
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 2 2030 AM Peak Hour

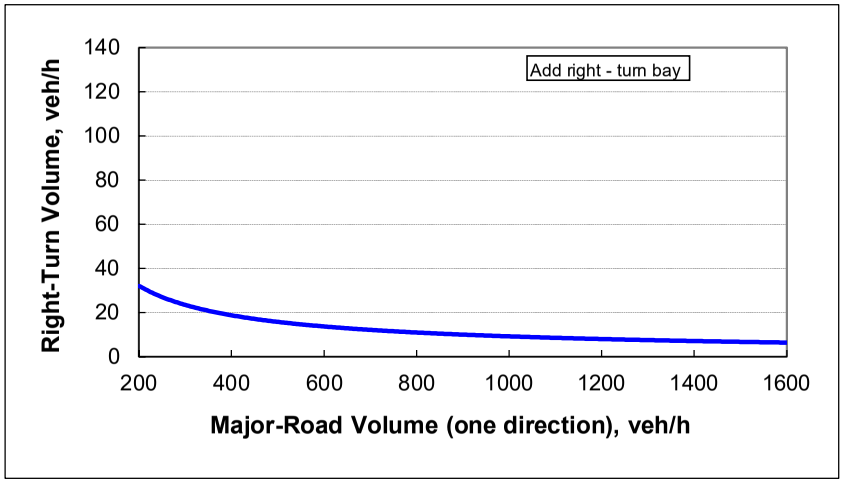
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	60
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	82
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 2 2030 PM Peak Hour

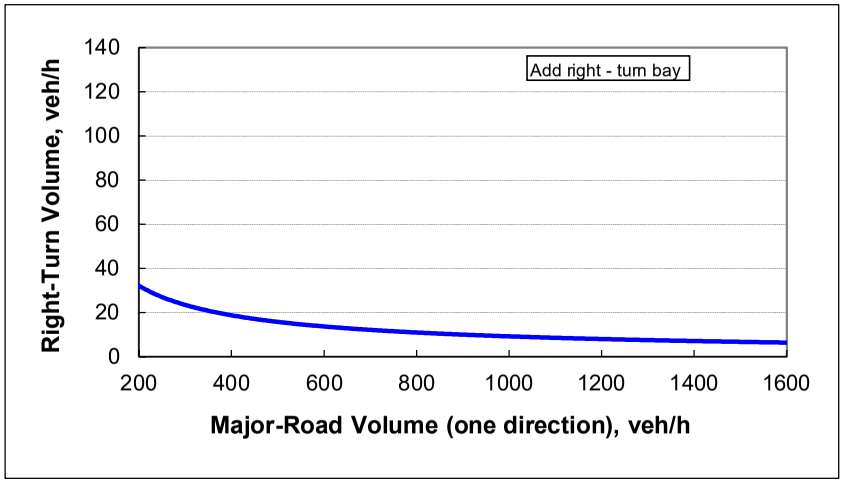
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	70
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	73
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 1 2045 AM Peak Hour

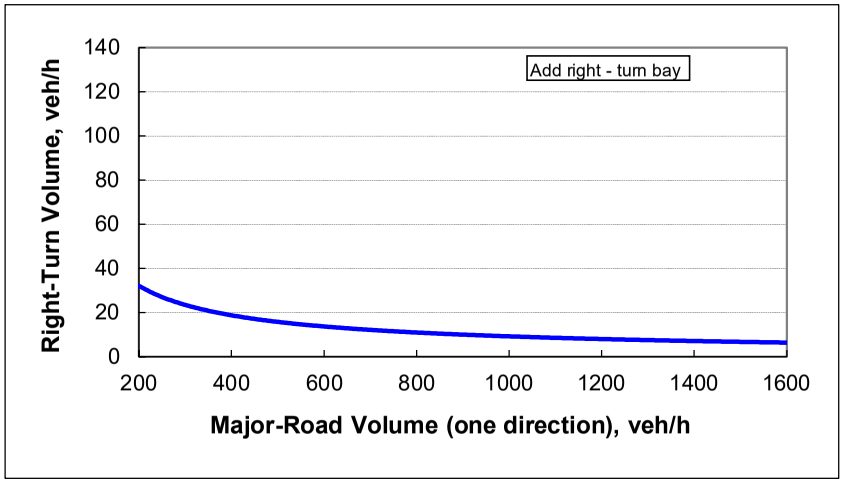
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	65
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	82
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 1 2045 PM Peak Hour

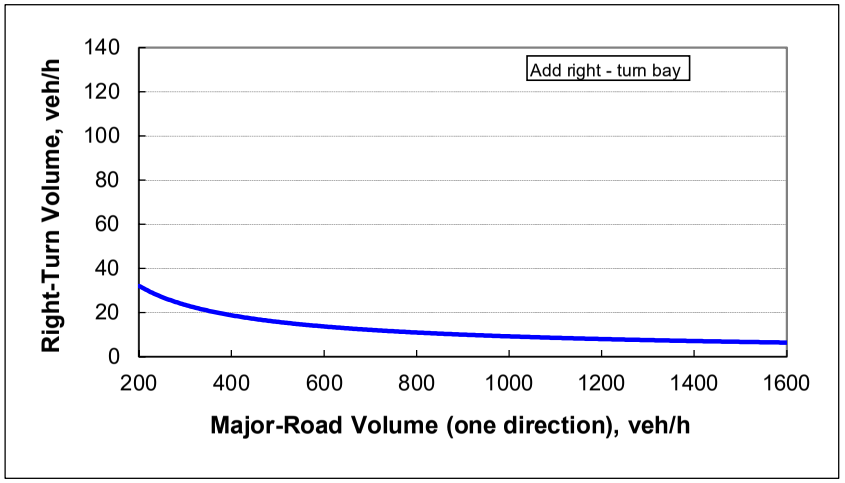
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	80
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	65
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 2 2045 AM Peak Hour

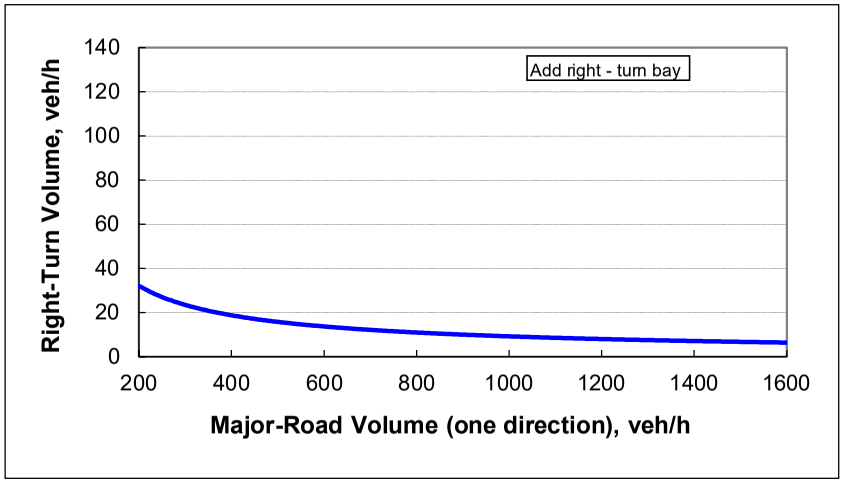
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	65
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	82
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 2 2045 PM Peak Hour

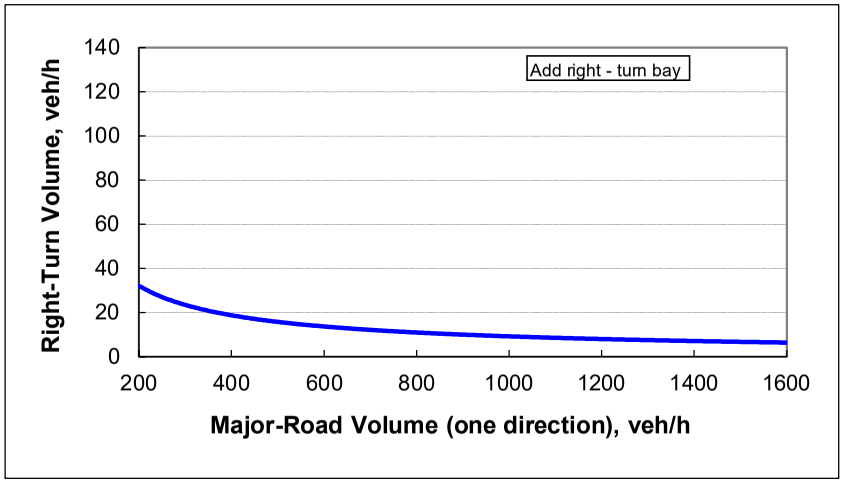
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	75
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	69
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 1 2045 (With Interchange) AM Peak Hour

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

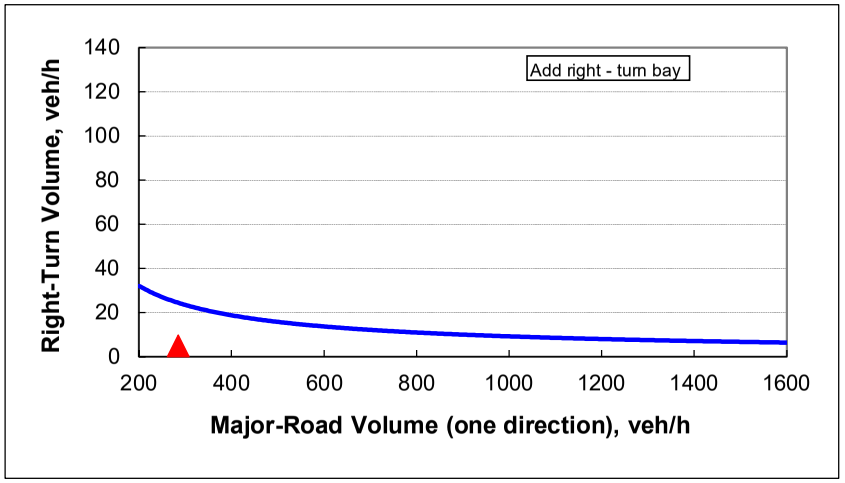
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	285
Right-turn volume, veh/h:	5

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	82
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 1 2045 (With Interchange) PM Peak Hour

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

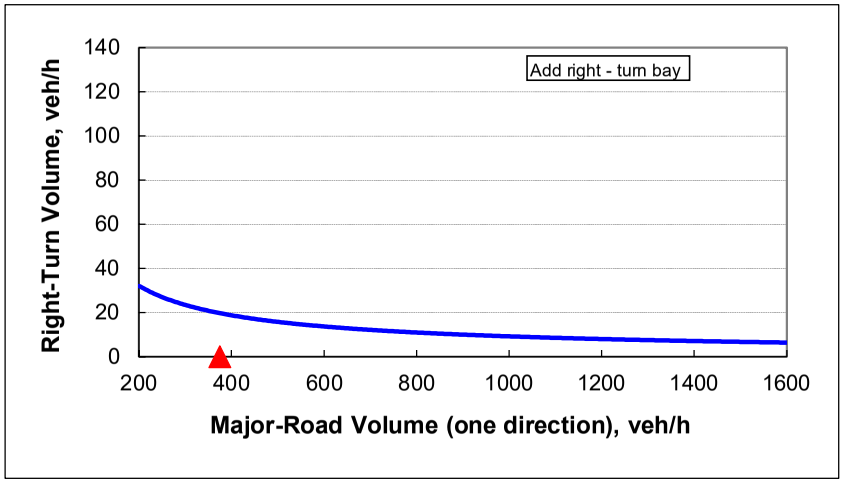
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	375
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	20
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 2 2045 (With Interchange) AM Peak Hour

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

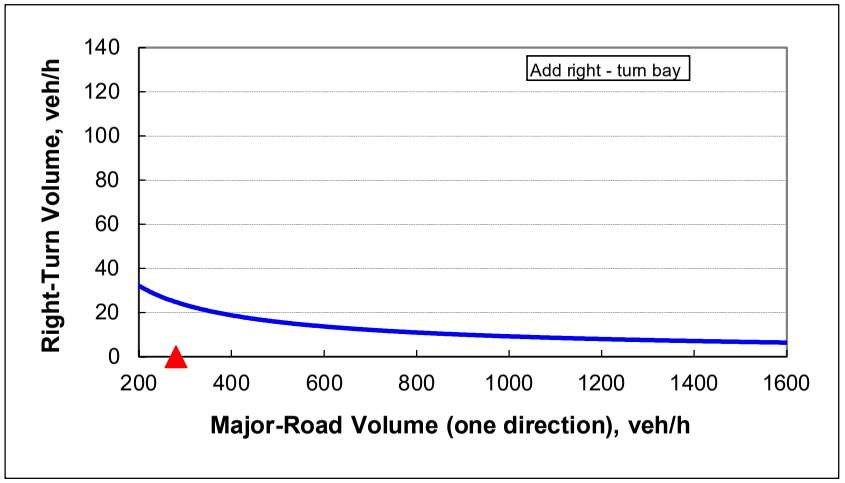
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	280
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	82
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Access 2 2045 (With Interchange) PM Peak Hour

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	370
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	20
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

