

Appendix H

Preliminary Wetland Delineation Report for Two Additional Parcels

Note: Delineation results are undergoing review by the Dakota County Soil and Water Conservation District

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Wetland Delineation Report Addendum

Castle Rock Solar Project
Dakota County, MN
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May 16, 2025

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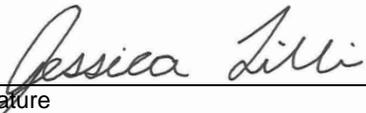
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The conclusions in the Report titled Wetland Delineation Report are Stantec’s professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

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Introduction
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1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) performed a wetland and waterway determination and delineation for the proposed Castle Rock Solar Project on behalf of Castle Rock Solar LLC (Castle Rock Solar). Stantec completed a wetland delineation for the Castle Rock Solar Project previously in 2024, encompassing an approximate 1,314.7-acre area. The delineation report for the 2024 survey was provided to the Dakota County Soil and Water Conservation District (SWCD), the Wetland Conservation Act (WCA) Local Government Unit (LGU), for review on August 8, 2024. Following comments from the LGU, a final report was submitted on December 23, 2024. Boundary concurrence for the 1,314.7-acre area was provided by the LGU on December 26, 2024. The U.S. Army Corps of Engineers (USACE) responded on August 27, 2024, that a delineation concurrence may not be necessary from the USACE.

Since the time of the original wetland delineation in 2024, Castle Rock Solar obtained approximately 77.19 additional acres to support the proposed 150-megawatt solar energy generation facility. This report provides a wetland and waterway delineation for the additional 77.19 acres (Study Area), shown on Figures 1 through 5 in Appendix A as the “2025 Study Area”. The previously delineated 1,314.7-acre area is shown as the “2024 Study Area” on Figures 1 through 5 in Appendix A. The Study Area is located in Castle Rock Township in Dakota County, Minnesota, southeast of the City of Farmington and west of the City of Hampton (**Table 1**). The Study Area is along the north side of 240th Street West and east of Biscayne Avenue West (**Appendix A, Figure 1**).

Table 1. Township, Range, and Section Intersected by the Study Area

Township Name	Township, Range	Section
Castle Rock	T113N, R19W	9

The purpose of this field effort was to identify the extent and spatial arrangement of wetlands and waterways within the Study Area. The field investigation was performed April 23, 2025.

Stantec verified with the LGU that the Study Area was within the growing season on April 14, 2025. Stantec confirmed in the field that the growing season was underway based on the presence of visible plant growth by more than two species, including reed canary grass (*Phalaris arundinacea*) and bull thistle (*Cirsium vulgare*).

Wetlands and waterways that are considered Waters of the U.S. (WOTUS) are subject to regulation under Section 404 of the Clean Water Act (CWA) and the jurisdictional regulatory authority lies with the USACE. The Minnesota Department of Natural Resources (MNDNR) has regulatory authority over certain wetlands, navigable waters, and adjacent lands under Statute 103G and Rule 6115.0250. All wetlands are protected under the WCA Rules Chapter 8420 and administered by an LGU. LGUs can be a City, County, Watershed District or SWCD depending on the project location. The LGU for this Study Area is the Dakota County SWCD. Stantec recommends this report be submitted to the LGU and USACE for a preliminary jurisdictional review and concurrence.

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2.0 METHODS

2.1 WETLANDS

Wetland delineations were based on the criteria and methods outlined in the *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1 (1987) and subsequent guidance documents (USACE 1991a, 1991b, 1992), and applicable Regional Supplements to the *Corps of Engineers Wetland Delineation Manual*.

The wetland delineation involved the use of available resources to assist in the assessment such as U.S. Geological Survey (USGS) topographic maps, U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping, MNDNR Minnesota NWI Update mapping, MNDNR Protected/Public Waters mapping, and aerial photography.

On-site wetland delineations were made using the three criteria (vegetation, soil, and hydrology) and technical approach defined in the USACE 1987 Manual and applicable Regional Supplement. According to procedures described in the 1987 Manual and applicable Regional Supplement, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands.

A review of U.S. Department of Agriculture Farm Service Agency (FSA), National Agriculture Imagery Program (NAIP) aerial imagery, and other available aerial imagery from Dakota County was conducted for the farmed areas within the Study Area. This effort was conducted to assist in the delineation of farmed wetlands as these areas lack natural vegetation and often have altered hydrology from artificial drainage.

Wetland signatures are characteristics viewed in aerial imagery that correlate with the presence of wetland hydrology. Wetland signatures may vary based on the type and seasonal date of the aerial imagery. Commonly recognized signatures in aerial imagery as described in *Guidance for Offsite Hydrology/Wetland Determinations* (USACE, BWSR 2016) are detailed below:

1. Crop Stress (CS) – differences in vigor of planted crops compared to surrounding conditions due to wetness. Often seen as a different color compared to surrounding vegetation of the same type.
2. Drowned Out (DO) – areas that appear to have been tilled/planted, but the crop has been drowned out.
3. Not Cropped (NC) – areas within or adjacent to a cropped field that appear to be bare or in natural vegetation rather than cropped.
4. Standing Water (SW) – areas where surface water is visible, usually appear black or white in aerial imagery.

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5. Altered Pattern (AP) – areas with differences in cropping patterns because of delayed planting during the early part of the growing season due to wetness.
6. Soil Wetness Signature (SS) – areas where the soils are darker in color due to saturation; standing water may also be present.
7. Wetland Signature (WS) – areas that have greener vegetation during dry conditions. Also, the presence of a wetland in non-cropped areas based on vegetative cover.
8. Normal Vegetative Cover (NV) or No Soil Wetness (NSS) – areas of potential wetland seen in other imagery that cannot be readily distinguished from known adjacent upland areas or an area that is distinguishable from the adjacent upland for factors other than wetness (i.e., droughty conditions).

Antecedent precipitation was determined for each photo date utilizing the USACE Antecedent Precipitation Tool (APT) and the Minnesota State Climatology Office Precipitation Worksheet. The tool and the worksheet compare precipitation totals from the three months prior to the date of the image with 30-year normal amounts, calculating a weighted multi-month score and determining the climate conditions (dry, normal, wet). Stantec reviewed the most recently available aerial images and utilized the five most recent images determined to be under normal antecedent precipitation conditions. Typically, aerial imagery review should include no less than five normal years. If aerial imagery from five normal years is not available, an equal number of wet and dry years are analyzed. A summary of the precipitation analysis used for the offsite review and the field investigations is provided in **Appendix D**.

Additionally, the presence of mapped poorly and somewhat poorly drained soils, NWI mapping, and topography within the Study Area were reviewed in conjunction with an analysis of available aerial imagery for wetland signatures in these areas. Areas within agricultural fields are typically identified as wetland if they contain a combination of hydric soils, show the wetland signatures observed on aerial photographs taken in the five (or more) most recent normal precipitation normal years, and/or exhibit other hydrology indicators, as detailed in USACE/BWSR guidance (2016). During the field review, areas that contained mapped poorly and somewhat poorly drained soils, all NWI mapped wetlands, and all areas that exhibited wetland characteristics during the on-site investigation were sampled, regardless of the results of the aerial imagery review, and the final wetland determination was made based on the field sample points.

The uppermost wetland boundary and sampling points were identified and surveyed with a Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Geographical Information System (GIS) software.

2.2 WATERWAYS AND WATERBODIES

Waterways, waterbodies, culverts, and/or other connections to off-site wetland or aquatic features that may be under federal or state authority were surveyed using a GPS and mapped using GIS software. The Ordinary High Water Mark (OHWM) was determined by identifying a line on the shore established by the usual fluctuations of water, often marked by physical characteristics like a distinct line on the bank, shelving, changes in soil, destruction of vegetation, or the presence of debris.

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The OHWM is not a specific elevation but rather a location determined by observing natural features and indicators along the shoreline. Indicators of the OHWM may include:

- **Physical Indicators:**
 - Distinct Line on the Bank: A clear, natural line where the water regularly reaches.
 - Shelving: A gradual slope or ledge where the water often stops.
 - Changes in Soil Character: Different soil types can indicate the usual water level.
 - Destruction of Terrestrial Vegetation: The OHWM is often marked by the line where terrestrial plants are no longer able to survive due to the water's influence.
 - Litter and Debris: The presence of organic matter and debris can point to the area regularly submerged.
- **Vegetation Indicators:**
 - Change in Plant Communities: A shift in the type of plants present can indicate the OHWM.
 - Matted or Bent Vegetation: Vegetation that is regularly bent or pushed over by the water can be an indicator.
 - Absent Vegetation: Areas where vegetation is completely absent due to water action may be a good indicator.
- **Other Indicators:**
 - Bank Erosion and Undercutting: The OHWM can be marked by the erosion of the bank or exposed root systems.
 - Water Staining on Rocks: Stains on rocks can show the regular high water level.
 - Historic Stabilization: Locations where previous stabilization efforts have been placed can also indicate the OHWM.

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3.0 RESULTS

3.1 SITE DESCRIPTION

The Study Area is comprised primarily of active agricultural fields, road right-of-way (ROW), a few small areas with woody vegetation, and a large wetland complex on the northern boundary. The Study Area is used primarily for agriculture and was planted with field corn and soybeans. The Study Area is relatively flat and generally averaged between 900 and 922 feet above mean sea level (msl) with occasional, gently rolling terrain.

NRCS mapped soils present within the Study Area and their hydric status are summarized in **Table 2** and mapped in **Appendix A, Figure 2**. During Stantec's field delineation, it was found that a large portion of the site contained loamy soils, particularly in the farmed areas.

Table 2. Summary of Soils Identified within the Study Area

Soil Symbol	Soil Unit Name	Acreage in Study Area	Percent of Study Area	Hydric Soil Rating
213B	Klinger silt loam, 1 to 5 percent slopes	15.80	20.46	5
378	Maxfield silty clay loam	13.44	17.41	95
41B	Estherville sandy loam, 2 to 6 percent slopes	10.54	13.66	1
539	Klossner muck, 0 to 1 percent slopes	8.79	11.39	100
39B	Wadena loam, 2 to 6 percent slopes	7.08	9.17	0
2B	Ostrander loam, 1 to 6 percent slopes	6.94	9.00	0
1055	Aquolls and Histosols, ponded	4.82	6.24	100
495	Zumbro fine sandy loam	4.72	6.11	0
415B	Kanaranzi loam, 2 to 6 percent slopes	4.42	5.72	0
81C	Boone loamy fine sand, 6 to 12 percent slopes	0.65	0.84	0

The MNDNR Protected/Public Waters map identified no MNDNR protected watercourses within the Study Area (**Appendix A, Figure 3**). The MNDNR protected watercourse, Vermillion River South Branch (M-049-005), is located outside the Study Area approximately 330 feet to the north at its closest point.

The National Wetland Inventory (NWI) map identified one wetland complex (PEM1Ad, PEM1Cd) of emergent wetlands along the northern boundary of the Study Area, as shown in **Appendix A, Figure 4**. The NWI feature corresponded with field delineated Wetland W2. The National Hydrography Dataset (NHD) identified one intermittent stream crossing through the NWI wetland complex, as shown in **Appendix A, Figure 4**. The NHD feature corresponded with field delineated waterway S3.

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3.2 CLIMATIC CONDITIONS

Precipitation was analyzed using the Minnesota State Climatology Office Precipitation Worksheet which calculates a three-month rolling precipitation total using the nearest station to the Study Area with available data (MNDNR 2025a, 2025b). Precipitation was considered **normal** prior to the field investigation on April 23, 2025, as shown in the precipitation figure in **Appendix D**.

3.3 WETLANDS

Two wetlands, including one wet ditch located within the road ROW, were identified and delineated within the Study Area during the Stantec field efforts. Wetland determination data forms were completed for sample points along transects through the wetlands and adjacent uplands and are included in **Appendix B**. The wetlands are summarized in **Table 3** below and described in detail in the following sections. Photographs of the wetlands and adjacent lands are included in **Appendix C**. The wetland boundaries and sample point locations are shown in **Appendix A, Figure 5**.

Table 3. Summary of Wetlands Identified within the Study Area

Wetland ID	Wetland Type*	Adjacent Surface Waters	Acres in Study Area	Latitude	Longitude
W2	Farmed Wetland, Degraded Wet Meadow, Shrub-Carr	Vermillion River, South Branch (M-049-005)	18.03	44.611065	-93.107769
W19	Degraded Wet Meadow	---	0.06	44.601645	-93.109724
		TOTAL	18.09 acres		

*Wetland type based on Eggers & Reed, 2015; the mapped NWI wetland may or may not correspond to field observed wetland type.

3.3.1 Vegetation

Farmed Wetland

One farmed wetland community (W2) was delineated within the Study Area during the field survey. The vegetation in this portion of the wetland was typically disturbed by row cropping with corn or soybeans. Of the volunteer vegetation present, it was often dominated by reed canary grass (*Phalaris arundinacea*, FACW) and switchgrass (*Panicum virgatum*, FAC).

Degraded Wet Meadow

Two degraded wet meadow wetland communities (W2, W19) were delineated within the Study Area during the field survey. The vegetation in these wetlands was typically disturbed and dominated by the invasive species, reed canary grass. Other present vegetation included red-osier dogwood (*Cornus sericea*, FACW) and hybrid cattail (*Typha x glauca*, OBL).

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Shrub-Carr

One shrub-carr wetland community (W2) was delineated within the Study Area during the field survey. Dominant species in the shrub layer included red-osier dogwood and common buckthorn (*Rhamnus cathartica*, FAC), and the herbaceous layer species included reed canary grass and hybrid cattail.

3.3.2 Soils

Mapped soils within the Study Area are shown in **Appendix A, Figure 2**. The Minnesota Soil Survey is an ongoing effort by the Board of Water and Soil Resources (BWSR) in cooperation with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) collecting and mapping soils data in each county of the state.

Soil profiles documented during the field investigation are provided on the data forms in **Appendix B**. The most common NRCS field indicators of hydric soil identified during the wetland delineation in order of frequency were Redox Dark Surface (F6) and Other.

3.3.3 Hydrology

Wetland hydrology indicators observed in the wetlands within the Study Area included secondary indicators Geomorphic Position (D2) and a positive FAC-Neutral Test (D5). No primary hydrology indicators were observed during the field investigation on April 23, 2025. For a complete description of hydrology indicators observed at each wetland, refer to the data forms presented in **Appendix B**.

3.3.4 Wetland Boundary

In general, wetland boundaries of non-farmed wetlands were determined based on distinct differences in vegetation, hydrology, soils, and topography consisting of the following: 1) transition from a wetland plant community to upland meadow or forest; 2) transition from areas that had wetland hydrology indicators to areas that lacked wetland hydrology indicators; 3) transition from soils that had field indicators of hydric soil to soils that lacked hydric soil field indicators (though hydric soils were observed on both sides of many wetland boundaries); 4) topographic break; and 5) location of wetland signatures from the aerial imagery review in normal precipitation years.

For farmed areas, a USACE APT analysis was conducted for the years of historic aerial imagery that were used in the aerial imagery review and precipitation data was obtained for the Study Area. From this analysis it was determined that the images from September 2021, July 2019, October 2018, August 2017, May 2017, May 2016, and September 2015 were taken under "normal" precipitation conditions. Additionally, precipitation for both spring and fall images of 2022 and 2023 was reviewed, however the precipitation conditions when the photos were taken were determined to be not normal precipitation. The historical precipitation analysis is documented in **Appendix E**.

In the aerial review, wetland hydrology "signatures" including altered pattern, wetland signature, not cropped, soil wetness signature, drowned out, standing water, and crop stress expressed as a difference in vegetative cover or color were identified within the evaluation areas. Within the Study Area, ten areas

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had a wetland signature in at least one out of five normal years and are identified on the aerial photos (**Figures 6-13**) in **Appendix E** as Areas AWS-42, and AWS-44 through AWS-52. A signature for AWS-43 was not identified within the normal years of aerial imagery. Of these ten areas, one area (AWS-48) was located within a mapped hydric soil unit and mapped as a NWI wetland. No other areas were located within mapped hydric soil units or mapped as a NWI wetland.

Based on the offsite aerial review, seven areas were determined to be not wetland, and four areas were either determined to be wetlands or determined to be wetlands if other hydrology indicators are determined to be present in the field.

During the field investigation, a conservative approach was used, and sample points were taken in evaluation areas with a wet signature percent greater than 30 percent to confirm the presence or absence of wetlands within the farmed portions of the Study Area. Hydrology determinations and wetland criteria evaluations for each evaluation area are located within the tables in **Appendix E** and the sample point data sheets located in **Appendix B**.

Many of the areas identified as possible wetlands during the offsite review were determined to be upland. One of these areas, AWS-51, was observed to have hydric soil but lacked hydrophytic vegetation and hydrology indicators (sample point UPL-14). When field verified, areas AWS-45 and AWS-50 did not meet hydric soil or hydrology indicators (UPL-12 and UPL-13, respectively), therefore, these three areas were determined to be upland for not meeting all three wetland criteria. During the field investigation, one wetland was determined to be present in evaluation area AWS-48. **Figures 6-13**, located in **Appendix E**, illustrate the evaluation areas overlaid on each year of imagery reviewed.

The boundaries for the farmed wetlands were determined based on minor differences in vegetation including the presence/absence of hydrophytic volunteer vegetation, crop stress or drowned out areas, healthy crops versus dried out crops, as well as minor topographic changes, and in some cases, lack of hydrology and/or hydric soil indicators.

3.4 UPLANDS

Uplands within the Study Area consisted of cultivated cropland, road ROW, and upland forest. Agricultural crops planted within the Study Area included field corn and soybeans.

Tree species in upland areas were dominated by eastern cottonwood (*Populus deltoides*, FAC) and white pine (*Pinus strobus*, FACU). Shrubs in upland areas included common buckthorn. Herbaceous vegetation found in uplands within the Study Area included smooth brome (*Bromus inermis*, UPL), Kentucky bluegrass (*Poa pratensis*, FAC), red-raspberry (*Rubus idaeus*, FACU), bull thistle (*Cirsium vulgare*, FACU), Canada goldenrod (*Solidago canadensis*, FACU), Canada thistle (*Cirsium arvense*, FACU), black-eyed Susan (*Rudbeckia hirta*, FACU), yellow foxtail (*Setaria pumila*, FAC), common burdock (*Arctium minus*, FACU), switchgrass, and Canada wild rye (*Elymus canadensis*, FACU).

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3.5 WATERWAYS AND WATERBODIES

One waterway was identified and desktop delineated within the Study Area as the waterway was not accessible in the field due to site conditions. Waterway S3, which corresponds with Tributary No. 5 to South Branch Vermillion River, flows from the south and crosses through the northwestern portion of the Study Area before joining the DNR protected watercourse, South Branch Vermillion River (M-049-005), outside of the Study Area. The waterway is summarized in **Table 4** and shown in **Appendix A, Figure 5**.

Table 4. Summary of Waterways Identified within Study Area

Waterway ID	PWI ID	Flow Class	OHWM Width/Height (feet)*	Bank Width/Height (feet)*	Length In Study Area (linear feet)
S3	---	Perennial	3.5 ft, 0.60 ft	5 ft, 4 ft	389
				Total	389

*Approximated based on desktop review.

3.6 OTHER ENVIRONMENTAL CONSIDERATIONS

This report is limited to the identification of state and/or federally regulated wetlands and waterways within the Study Area. However, there may be other regulated features within the Study Area, including, but not limited to, historical or archeological features, endangered or threatened species, navigable waters, shoreland zones, and/or floodplains, etc. Federal, state, and local units of government and regional planning organizations may have regulatory authority to control or restrict land uses within or in close proximity to these features.

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4.0 CONCLUSION

Stantec performed a wetland and waterway determination and delineation of the proposed Castle Rock Solar Project on behalf of Castle Rock Solar LLC. Stantec completed a wetland delineation for the Castle Rock Solar Project, with the final revised report dated December 23, 2024, encompassing an approximate 1,314.7-acre area. Since the time of the original wetland delineation in 2024, Castle Rock Solar obtained a lease agreement on approximately 77.19 additional acres to support the Project. This report provides a wetland and waterway delineation for the additional 77.19-acre Study Area shown on Figures 1 through 5 in Appendix A as the “2025 Study Area.” The previously delineated 1,314.7-acre area is shown as the “2024 Study Area” on Figures 1 through 5 in Appendix A. The Study Area is located in Section 9, Township 113 North, Range 19 West, Castle Rock Township, in Dakota County, Minnesota. The purpose and objective of this field effort was to identify the extent and spatial arrangement of wetlands and potentially jurisdictional waterways within the Study Area.

During the field efforts, the boundaries of **two wetlands and one waterway** were identified and delineated within the Study Area by Stantec in accordance with state and federal guidelines and were subsequently surveyed with GPS and mapped using GIS software. There was a total of **18.09 acres** of wetlands and **389 linear feet** of waterways delineated within the Study Area by Stantec. The two wetlands were composed of farmed wetland, degraded wet meadow, and shrub-carr wetland communities. Uplands within the Study Area were primarily composed of cultivated cropland, as well as a few areas of road ROW and upland forest.

The USACE has regulatory authority over WOTUS including adjacent wetlands, and the MNDNR has regulatory authority over certain wetlands, navigable waters, and adjacent lands under Statute 103G and Rule 6115.0250. All wetlands are protected under WCA Rules Chapter 8420 and administered by a LGU. LGUs can be a City, County, Watershed District or SWCD depending on project location. Stantec recommends this report be submitted to the LGU and USACE for final jurisdictional review and concurrence. Finally, counties, townships, and municipalities may have local zoning authority over certain types of wetlands and waterways.

Prior to beginning work at this site or disturbing or altering wetlands, waterways, or adjacent lands in any way, Stantec recommends that the owner obtain the necessary permits or other agency regulatory review and concurrence with regard to the proposed work to comply with applicable regulations. Stantec can assist with identification and/or assessment of additional regulated resources at your request.

The information provided by Stantec regarding wetland boundaries is a scientific-based analysis of the wetland and upland conditions present in the Study Area at the time of the fieldwork. The delineation was performed by experienced and qualified professionals using standard practices and sound professional judgment. The ultimate decision on wetland boundaries rests with the USACE and LGU, in some cases, the MNDNR as well. As a result, there may be adjustments to boundaries based upon review by a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to, recent precipitation patterns and the season of the year. In addition, the physical characteristics of the Study Area can change over time, depending on the weather, vegetation patterns,

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drainage activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands on the site. This wetland delineation report and the associated wetland boundaries are not considered finalized until they are approved by the USACE and the LGU administering WCA.

5.0 REFERENCES

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WETLAND DELINEATION REPORT ADDENDUM

Castle Rock Solar Project
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May 2025

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WETLAND DELINEATION REPORT ADENDUM

Castle Rock Solar Project
Appendix A Figures

Appendix A FIGURES

Figure 1. Project Location

Figure 2. NRCS Soil Survey Data – Hydric Ratings

Figure 3. MNDNR Protected/Public Waters Inventory

Figure 4. National Wetlands Inventory

Figure 5. Field Collected Data

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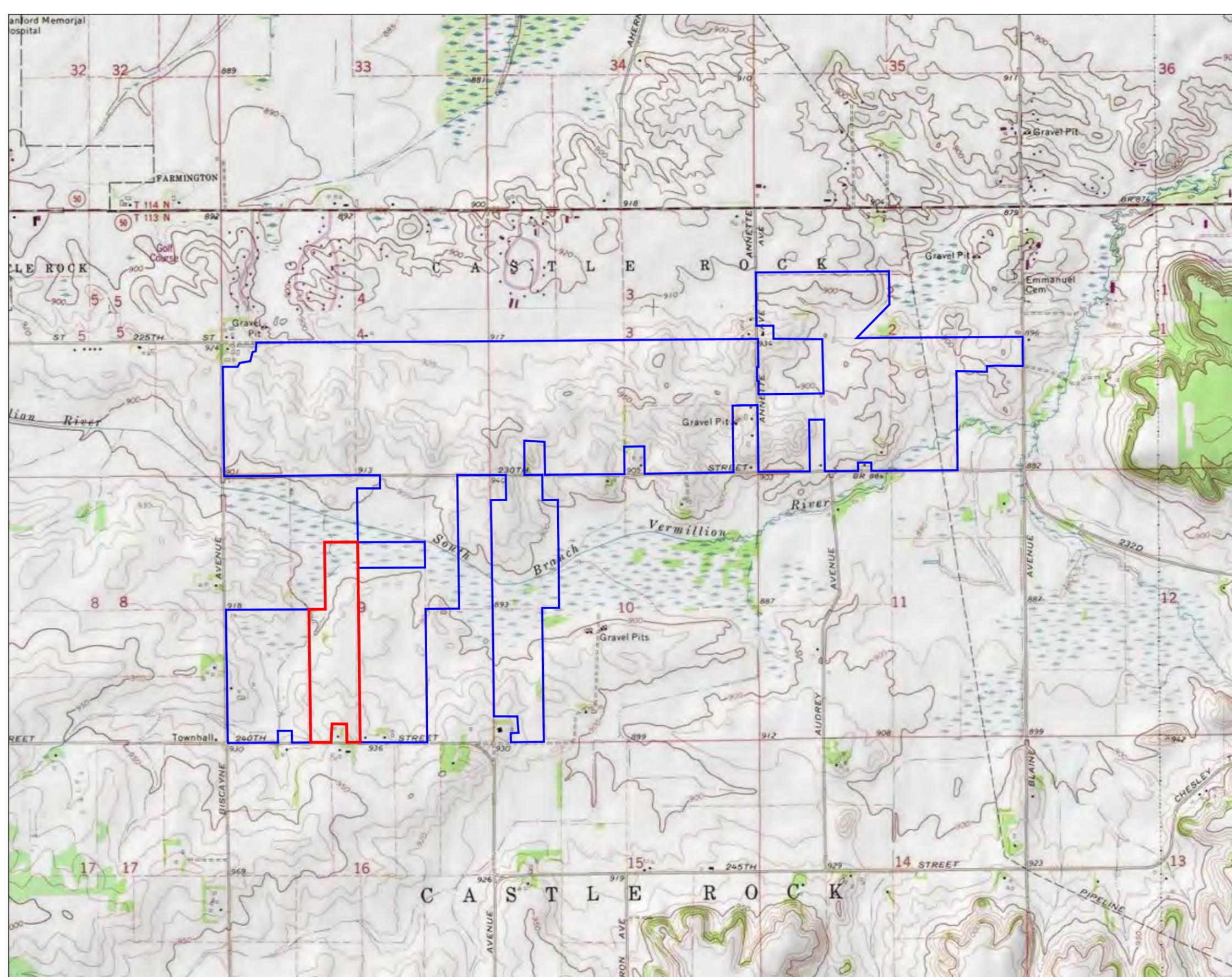


Figure No.

1

Title

Project Location Map

Client/Project
Castle Rock Solar LLC
Castle Rock Solar Project

193709215

Project Location
T. of Castle Rock
Dakota Co., MN

Prepared by KJM on 2025-04-25
TR by XX on 2025-XX-XX
IR by XX on 2025-XX-XX



0 1,000 2,000 Feet
(At original document size of 11x17)
1:24,000

Legend

- 2025 Study Area
- 2024 Study Area



- Notes**
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS
 3. Background: USGS 7.5' Topographic Quadrangles



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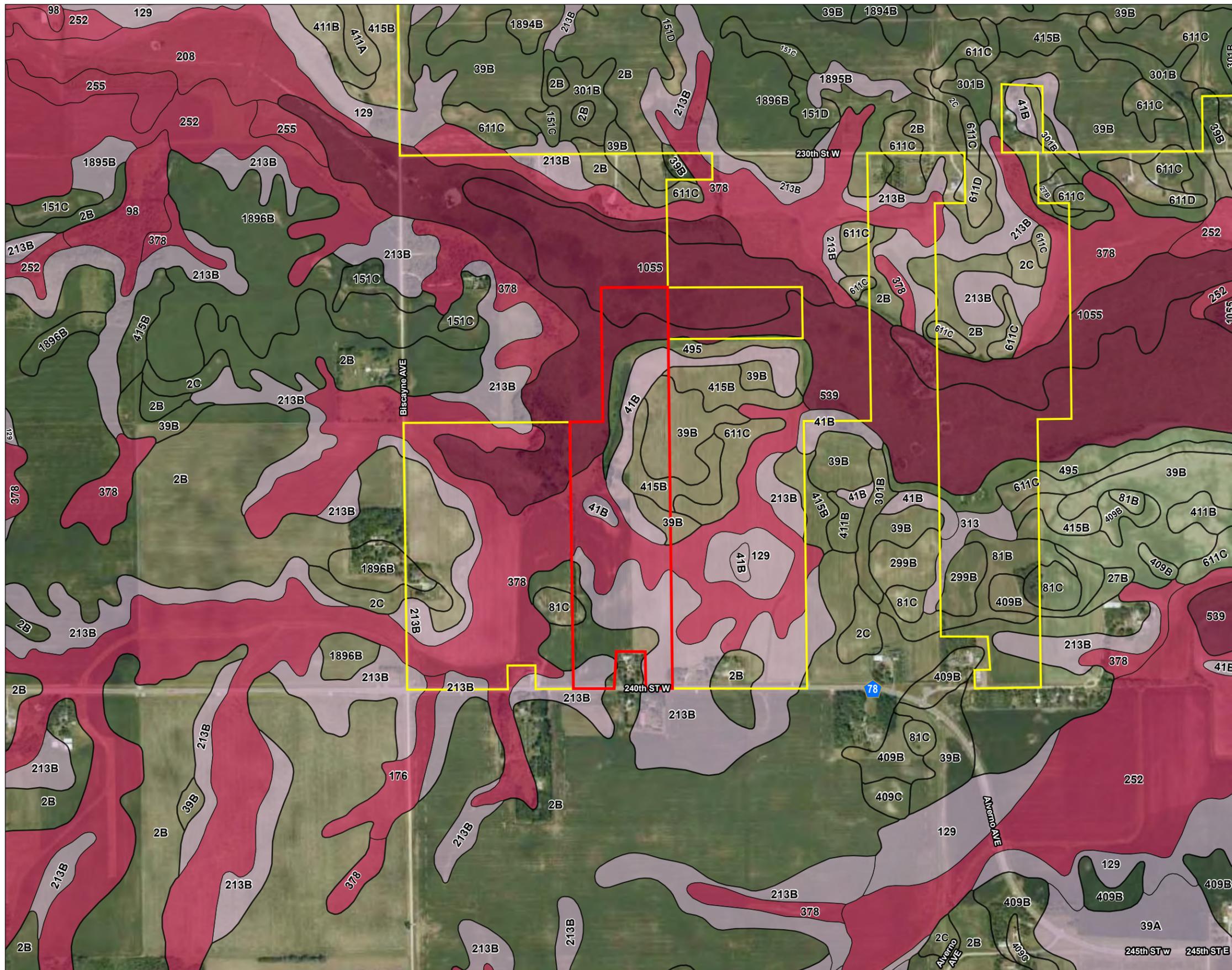
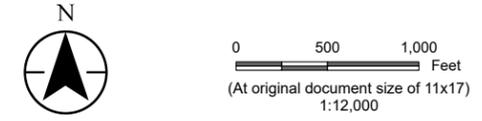


Figure No. **2**
 Title **NRCS Soil Survey Data Hydric Ratings**

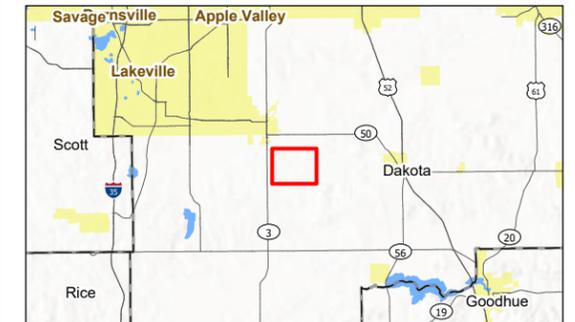
Client/Project **Castle Rock Solar LLC
 Castle Rock Solar Project** 193709215

Project Location **T. of Castle Rock
 Dakota Co., MN** Prepared by KJM on 2025-04-25
 TR by XX on 2025-XX-XX
 IR by XX on 2025-XX-XX



- Legend**
- 2025 Study Area
 - 2024 Study Area
 - NRCS Soil Survey Data
 - Hydric Soil Rating
 - Hydric
 - Predominantly Hydric
 - Partially Hydric*
 - Predominantly Non-Hydric
 - Non-Hydric

*No features within data frame



- Notes**
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, USGS, MNDOT, NRCS
 3. Background: NAIP 2023



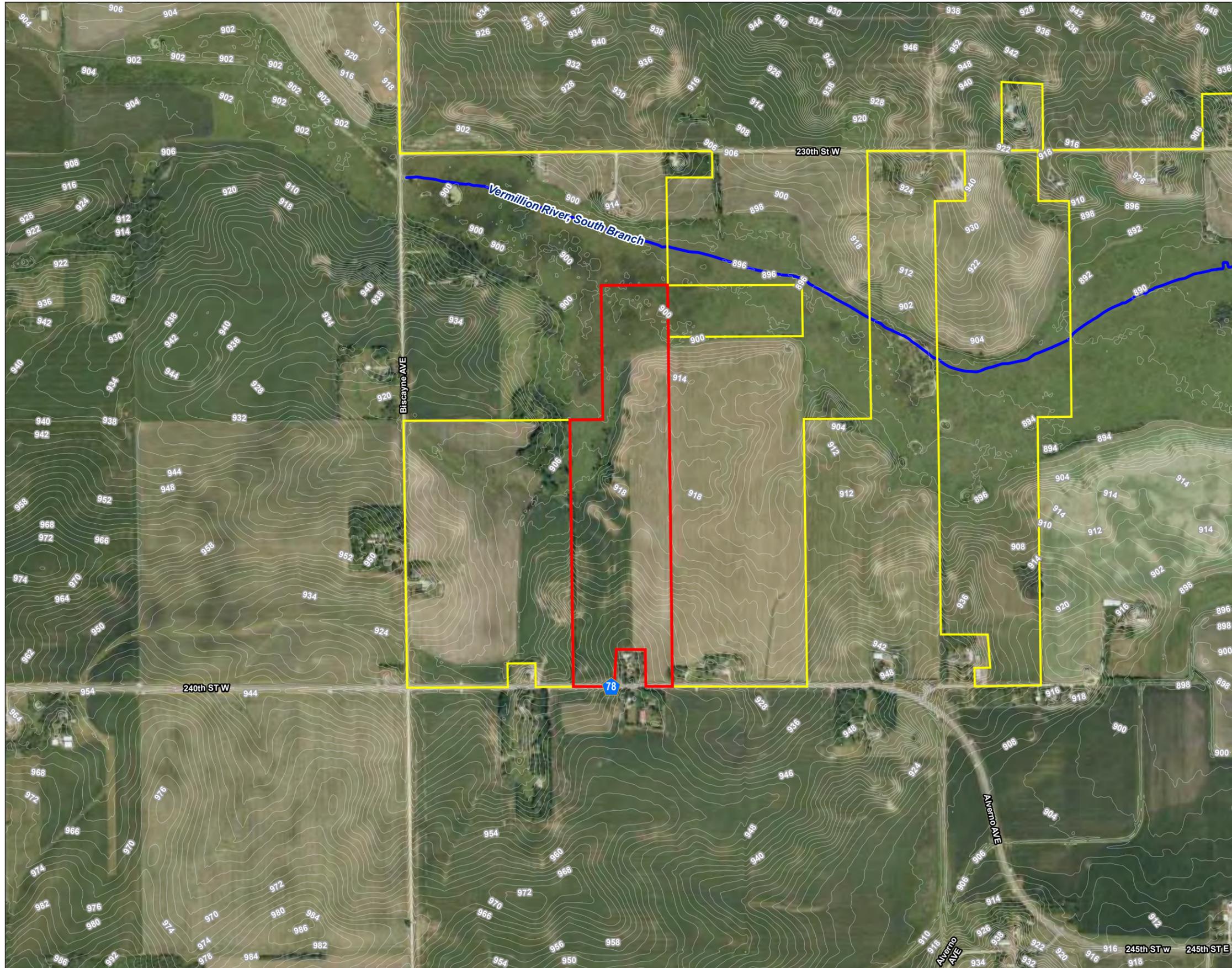


Figure No.

3

Title

MN Protected/Public Waters Map

Client/Project
 Castle Rock Solar LLC
 Castle Rock Solar Project

193709215

Project Location
 T. of Castle Rock
 Dakota Co., MN

Prepared by KJM on 2025-04-25
 TR by XX on 2025-XX-XX
 IR by XX on 2025-XX-XX

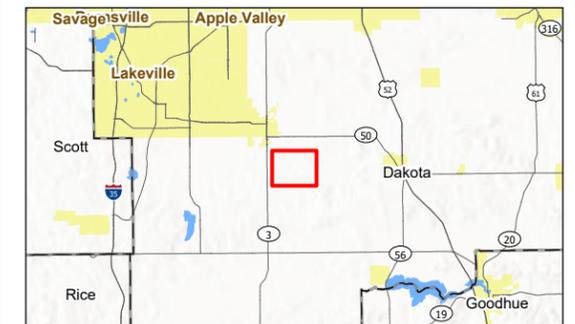


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 (At original document size of 11x17)
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Legend

- 2025 Study Area
- 2024 Study Area
- 2 Ft Elevation Contour
- Minnesota Public Waters Delineations
- Public Water Watercourse
- - - Public Ditch/Altered Natural Watercourse*
- Public Waters Basins*

*No features within data frame



- Notes
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, USGS, MNDNR, MNDOT
 3. Background: NAIP 2023



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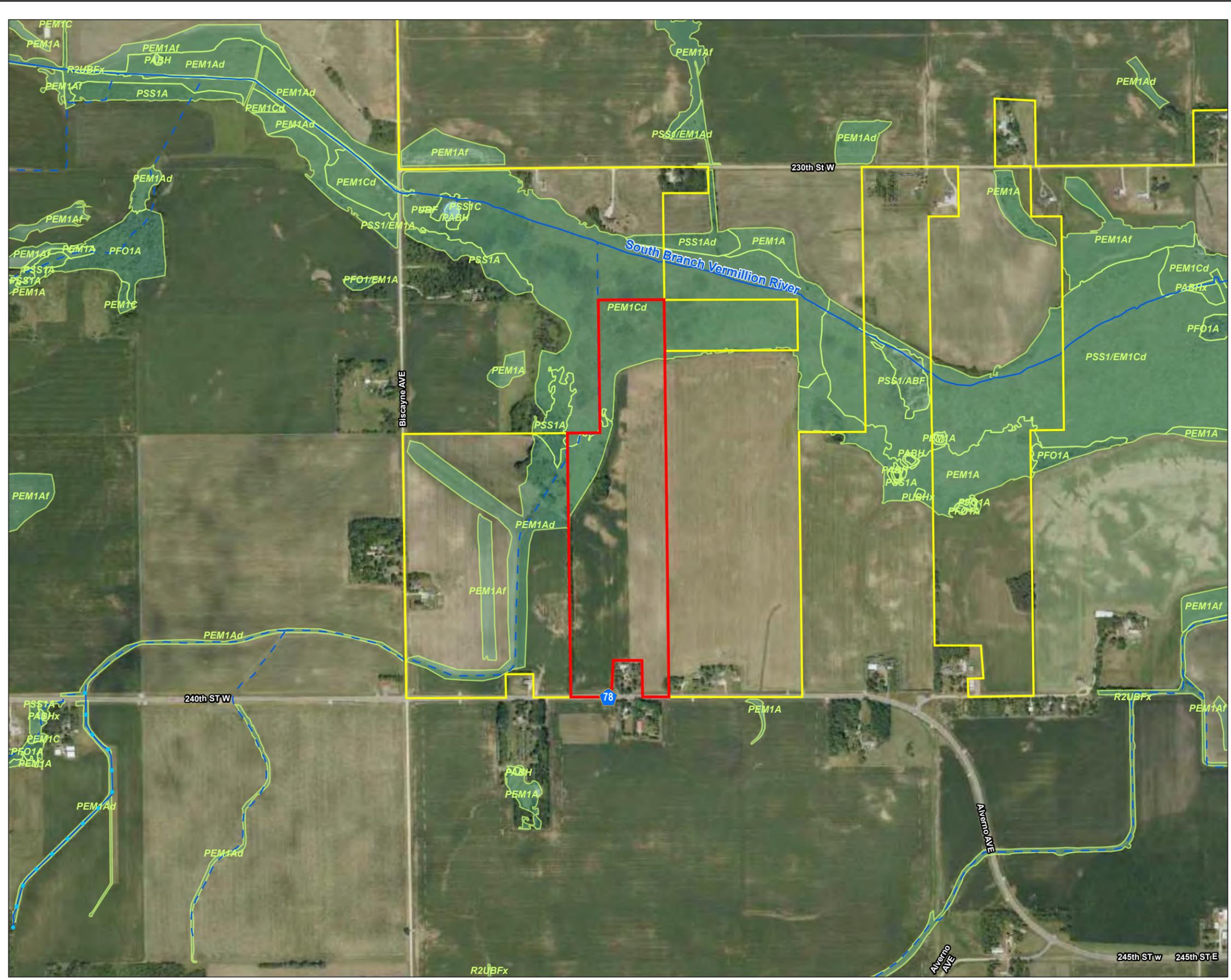


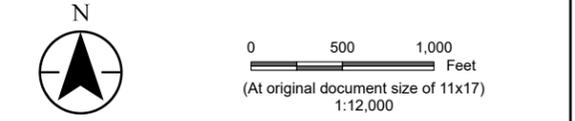
Figure No.

4

Title
NWI & NHD Map

Client/Project
Castle Rock Solar LLC
Castle Rock Solar Project 193709215

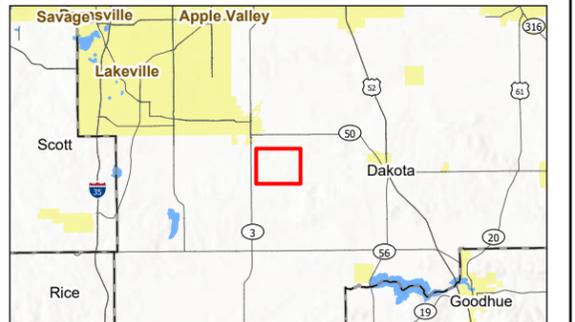
Project Location
T. of Castle Rock
Dakota Co., MN
Prepared by KJM on 2025-04-25
TR by XX on 2025-XX-XX
IR by XX on 2025-XX-XX



Legend

- 2025 Study Area
 - 2024 Study Area
 - National Wetlands Inventory Feature
- National Hydrography Dataset
- Perennial Stream
 - Intermittent Stream
 - Ephemeral Stream*
 - Canal/Ditch*
 - Waterbody

*No features within data frame



- Notes
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, USGS, MNDNR, MNDOT
 3. Background: NAIP 2023



V:\1937\Active\193709215\03_data\gis\mxd\Wetland_Delineation\Wetland_Delineation_Ruud_Expansion.aprx Revised: 2025-05-16 By: Kmueller

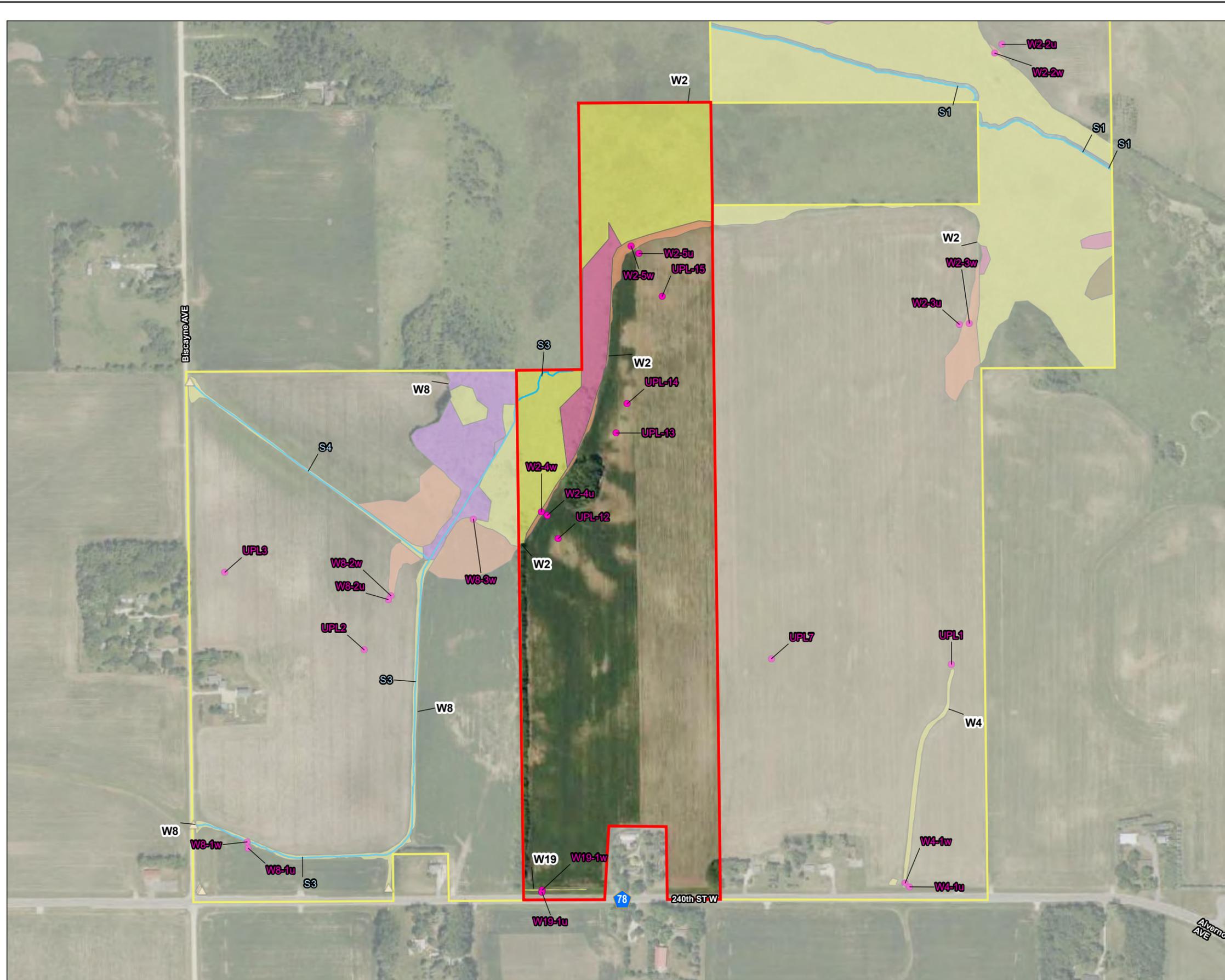


Figure No.

5

Title

Field Collected Data

Client/Project
 Castle Rock Solar LLC
 Castle Rock Solar Project

193709215

Project Location
 T. of Castle Rock
 Dakota Co., MN

Prepared by KJM on 2025-04-25
 TR by XX on 2025-XX-XX
 IR by XX on 2025-XX-XX



0 250 500 Feet
 (At original document size of 11x17)
 1:6,000

Legend

- 2025 Study Area
- 2024 Study Area
- Culvert
- Sample Point
- ~ Field Delineated Waterway
- Field Delineated Waterway Area
- Field Delineated Wetland Area
- Wetland Community Type
- Degraded Wet Meadow
- Farmed Wetland
- Hardwood Swamp
- Sedge Meadow
- Shrub-Carr



- Notes
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, USGS, MNDOT
 3. Background: NAIP 2023



WETLAND DELINEATION REPORT ADENDUM

Castle Rock Solar Project
Appendix B Wetland Determination Data Forms

Appendix B WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL-12
 Investigator(s): JAL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope %: 3
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.606444 Long: -93.109322 Datum: WGS84
 Soil Map Unit Name: Estherville sandy loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sampled area is farmed soybean.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
 No veg. Farm field.

SOIL

Sampling Point: UPL-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix			Redox Features				Texture	Remarks	
	Color (moist)		%	Color (moist)	%	Type ¹	Loc ²			
0-6	10YR 3/3		98	7.5YR 4/6	2	C	M	Sand		
6-12	10YR 3/3		100					Sand		
12-18	10YR 4/4		100					Sand		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Red Parent Material (F21)
	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> Other (Explain in Remarks)

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
---	---

Remarks:
Large rocks throughout soil profile.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL-13
 Investigator(s): JAL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope %: 7
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.607876 Long: -93.108189 Datum: WGS84
 Soil Map Unit Name: Estherville sandy loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sampled area is farmed soy.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0¹
- 4 - Morphological Adaptations¹
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
 No veg. Farmed soybean.

SOIL

Sampling Point: UPL-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 3/3	100					Sand	
14-20	10YR 5/6	100					Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Red Parent Material (F21)
	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> Other (Explain in Remarks)

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
---	---

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL-14
 Investigator(s): JAL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope %: 7
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.608273 Long: -93.107974 Datum: WGS84
 Soil Map Unit Name: Estherville sandy loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sampled area is harvested soybean.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Hydrophytic Vegetation Indicators:
 - 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹
 (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
 No veg. Farmed soybean.

SOIL

Sampling Point: UPL-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix			Redox Features				Texture	Remarks	
	Color (moist)		%	Color (moist)		%	Type ¹			Loc ²
0-12	10YR	3/2	98	7.5YR	4/6	2	C	M	Sand	
12-20	10YR	5/6	100						Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input checked="" type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Red Parent Material (F21)
	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> Other (Explain in Remarks)

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Large rocks throughout soil profile to a depth of 12 inches.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
(includes capillary fringe)	

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL-15
 Investigator(s): JL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope %: 5
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.609734 Long: -93.10728 Datum: WGS84
 Soil Map Unit Name: Estherville sandy loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sampled area is farmed corn.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Hydrophytic Vegetation Indicators:
 - 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹
 (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
 No veg. Farmed corn.

SOIL

Sampling Point: UPL-15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/3	100					Sand	
8-24	10YR 4/4	100					Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-4u
 Investigator(s): JAL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.606762 Long: -93.109527 Datum: WGS84
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sampled area is farmed soybean.	

VEGETATION – Use scientific names of plants.

Stratum	Plot size	Absolute % Cover	Dominant Species	Indicator Status	Notes
<u>Tree Stratum</u>	<u>(Plot size: 30 ft)</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u>	<u>(Plot size: 15 ft)</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		<u>0</u>	= Total Cover		
<u>Herb Stratum</u>	<u>(Plot size: 5 ft)</u>				Hydrophytic Vegetation Indicators: - <u>1</u> - Rapid Test for Hydrophytic Vegetation - <u>2</u> - Dominance Test is >50% - <u>3</u> - Prevalence Index is ≤3.0 ¹ - <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) - <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small>
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
		<u>0</u>	= Total Cover		
<u>Woody Vine Stratum</u>	<u>(Plot size: 30 ft)</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet.)
 No veg. Farmed soy.

SOIL

Sampling Point: W2-4u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix		Redox Features					Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²				
0-10	10YR 3/1	98	7.5YR 4/6	2	C	M	Loam			
10-16	10YR 3/1	95	7.5YR 4/6	5	C	M	Loam			
16-20	10YR 2/1	95	7.5YR 4/6	5	C	M	Loam			
20-24	10YR 5/2	95	7.5YR 4/6	5	C	M	Loam			

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-4w
 Investigator(s): JAL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.606811 Long: -93.109637 Datum: WGS84
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Sampled area is farmed soybean.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>5</u> (A) <u>10</u> (B) Prevalence Index = B/A = <u>2</u>
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Phalaris arundinacea</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>5</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)
 Area is farmed. Little evidence of soybean in sampled area.

SOIL

Sampling Point: W2-4w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/1	100					Loam	
8-17	10YR 3/1	95	7.5YR 4/4	5	C	M	Loam	
17-24	10YR 2/1	98	7.5YR 4/4	2	C	M	Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

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 Depth (inches): _____
 Water Table Present Yes No Depth (inches): _____
 Saturation Present Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-5u
 Investigator(s): JAL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Convex Slope %: 2
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.610323 Long: -93.107718 Datum: WGS84
 Soil Map Unit Name: Zumbro fine sandy loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Area is farmed corn.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Panicum virgatum</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
_____ = Total Cover					
Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					

Remarks: (Include photo numbers here or on a separate sheet.)
 40% farmed corn.

SOIL

Sampling Point: W2-5u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/2	100					Sandy Loam	
8-24	10YR 2/2	95	7.5YR 4/4	5	C	M	Sandy Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

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 Depth (inches): _____
- Water Table Present Yes No Depth (inches): _____
- Saturation Present Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

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

Remarks:

Switchgrass crept up to corn. Remaining corn stalks are uniform to ones up slope no obvious signs of stress.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-5w
 Investigator(s): JAL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 1
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.610425 Long: -93.107866 Datum: WGS84
 Soil Map Unit Name: Zumbro fine sandy loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Area is farmed corn.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>35</u> (A) <u>85</u> (B) Prevalence Index = B/A = <u>2.43</u>
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: - <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				
<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)
 20% harvested corn.

SOIL

Sampling Point: W2-5w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-24	10YR 2/1	90	7.5YR 4/4	10	C	M	Loam		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Coast Prairie Redox (A16)	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Red Parent Material (F21)
	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> Other (Explain in Remarks)

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Obvious rutting in soil from tractor trying to pass through wet soil.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: W19-1u
 Investigator(s): JL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Convex Slope %: 8
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.601617 Long: -93.10971 Datum: WGS84
 Soil Map Unit Name: Klinger silt loam, 1 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Area within Road ROW	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>25</u> x 2 = <u>50</u> FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>95</u> (A) <u>280</u> (B) Prevalence Index = B/A = <u>2.95</u>
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Poa pratensis</u>	50	Yes	FAC	
2. <u>Phalaris arundinacea</u>	25	Yes	FACW	
3. <u>Elymus canadensis</u>	20	Yes	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>95</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Hydrophytic Vegetation Indicators:
 - 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0¹
 _____ 4 - Morphological Adaptations¹
 (Provide supporting data in Remarks or on a separate sheet)
 _____ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: W19-1u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- 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 Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
No soil pit taken due to possible buried utilities. Soils assumed non hydric.

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 Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 04/23/2025
 Applicant/Owner: Stone Solar State: Min Sampling Point: W19-1w
 Investigator(s): JL Section, Township, Range: T113N, R019W, S09
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.601645 Long: -93.109702 Datum: WGS84
 Soil Map Unit Name: Klinger silt loam, 1 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Ditch within road ROW and partillay hydric NRCS soils.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Phalaris arundinacea</u>	80	Yes	FACW	
2. <u>Poa pratensis</u>	10	No	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

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

WETLAND DELINEATION REPORT ADENDUM

Castle Rock Solar Project
Appendix C Site Photographs

Appendix C SITE PHOTOGRAPHS



Photo 1. View of wetland W2, photo taken facing north.



Photo 2. View from sample point W2-4u, photo taken facing south.



Photo 3. View from sample point W2-4w, photo taken facing south.



Photo 4. View from sample point W2-5u, photo taken facing north.



Photo 5. View from sample point W2-5w, photo taken facing north.



Photo 6. View of wetland W19, photo taken facing west.



Photo 7. View of wetland W19, photo taken facing southwest.



Photo 8. View from sample point W19-1u, photo taken facing east.



Photo 9. View from sample point W19-1w, photo taken facing west.



Photo 10. View from upland point UPL-12, photo taken facing south.



Photo 11. View from upland point UPL-13, photo taken facing south.



Photo 12. View from upland point UPL-14, photo taken facing north.



Photo 13. View from upland point UPL-15, photo taken facing north.



Photo 14. General land cover photo of harvested soybean field, photo taken facing east.



Photo 15. General land cover photo of harvested corn field, photo taken facing north.



Photo 16. General land cover photo of upland forest area, photo taken facing north.



Photo 17. General land cover photo of road right-of-way on eastern side of study area, photo taken facing west.



Photo 18. General land cover photo of upland forest along farmed edge, photo taken facing west.

WETLAND DELINEATION REPORT ADENDUM

Castle Rock Solar Project
Appendix D Precipitation Analysis

Appendix D PRECIPITATION ANALYSIS

Minnesota State Climatology Office: Precipitation Worksheet Using Gridded Database

Precip Data for Target Wetland Location

County: Dakota Township: Castle Rock Wetland Location: T113N, R19W, Section 09

Site Visit Date: April 23, 2025

Score using 1991-2020 normal period

values are in inches	first prior month: Mar-25	second prior month: Feb-25	third prior month: Jan-25
estimated precipitation total for this location:	2.41	0.36	0.11
there is a 30% chance this location will have less than:	1.10	0.56	0.53
there is a 30% chance this location will have more than:	2.10	1.15	1.04
type of month: dry normal wet	wet	dry	dry
monthly score	3 * 3 = 9	2 * 1 = 2	1 * 1 = 1
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	12 = Normal		

WETLAND DELINEATION REPORT ADENDUM

Castle Rock Solar Project
Appendix E OffSite Aerial Imagery Analysis and Figures

Appendix E OFFSITE AERIAL IMAGERY ANALYSIS AND FIGURES

Figure 6. NAIP Imagery 2021

Figure 7. Dakota County Imagery 2021

Figure 8. NAIP Imagery 2019

Figure 9. Dakota County Imagery 2018

Figure 10. Dakota County Imagery 2017

Figure 11. NAIP Imagery 2017

Figure 12. Dakota County Imagery 2016

Figure 13. NAIP Imagery 2015

Castle Rock LLC Solar Project Part 2 - Castle Rock Township; Dakota County, MN

Additional Aerial Review Areas

Project Location: Township 113N, Range 19W, Section 9

Investigator Jessica Lillie

Wetland Hydrology from Aerial Imagery - Recording Form

Image Date ¹ (M-D-Y)	Image Source	Climate Condition	Image Interpretation(s)											
			AWS-42	AWS-43	AWS-44	AWS-45	AWS-46	AWS-47	AWS-48	AWS-49	AWS-50	AWS-51	AWS-52	
06/18/2021	NAIP	Dry	NSS	NSS	NSS	NSS	NSS	NSS	NSS	WS	NSS	NSS	NSS	NSS
09/2021	Dakota County	Normal	NSS	NSS	NSS	SS	SS	SS	WS	SS	SS	SS	SS	SS
07/30/2019	NAIP	Normal	NV	NV	CS	CS	NV	NV	WS	NV	CS	CS	NV	NV
10/24/2018	Dakota County	Normal	NSS	NSS	NSS	NSS	NSS	NSS	WS	NSS	NSS	NSS	NSS	NSS
05/2017	Dakota County	Normal	SS	NSS	NSS	NSS	NSS	NSS	WS	NSS	NSS	NSS	NSS	NSS
08/31/2017	NAIP	Normal	NV	NV	NV	NV	NV	NV	WS	NV	NV	NV	NV	NV
05/2016	Dakota County	Normal	SS	NSS	NSS	NSS	NSS	NSS	WS	NSS	NSS	NSS	NSS	NSS
09/30/2015	NAIP	Normal	NSS	NSS	SS	SS	SS	SS	WS	SS	SS	SS	SS	SS
Normal Climate Condition			AWS-42	AWS-43	AWS-44	AWS-45	AWS-46	AWS-47	AWS-48	AWS-49	AWS-50	AWS-51	AWS_52	
Number of years with normal climate conditions			7	7	7	7	7	7	7	7	7	7	7	
Number with wet signatures			2	0	2	3	2	2	7	2	3	3	2	
Percent with wet signatures			29	0	29	43	29	29	100	29	43	43	29	

KEY		
WS - wetland signature	SS - soil wetness signal	CS - crop stress
NC - not cropped	AP - altered pattern	NV - normal vegetative cover
DO - Drowned out	SW - standing water	NSS - no soil wetness signature
Other labels or comments:		

¹If only the year is known, assumption is made that FSA slides are taken in July; as a result, climate condition analysis focuses on three months prior to July

Castle Rock LLC Solar Project Part 2 - Castle Rock Township; Dakota County, MN
 Project Location: Township 113N, Range 19W, Section 9
 Investigator: JAL

Wetland Determination from Aerial Imagery - Recording Form

Area	Hydric Soils Present? ¹	Identified on NWI?	Percent of images with wet signatures in normal years? ²	Other hydrology indicators present? ³	Wetland?
AWS-42	No	No	29%	N/A	No
AWS-43	No	No	0%	N/A	No
AWS-44	No	No	29%	N/A	No
AWS-45	No	No	43%	No	No (UPL-12)
AWS-46	No	No	29%	N/A	No
AWS-47	No	No	29%	N/A	No
AWS-48	Yes	Yes	100%	N/A	YES
AWS-49	No	No	29%	N/A	No
AWS-50	No	No	43%	No	No (UPL-13)
AWS-51	Yes	No	43%	No	No (UPL-14)
AWS-52	No	No	29%	N/A	No

¹. "Hydric Soils Present?" is determined from NRCS hydric rating. "Not Hydric" is the only category considered to not have hydric soils. Field sampling for the presence/absence of hydric soil indicators can be used in lieu of the hydric rating if

². Use "Percent with wet signatures" from Hydrology Analysis table.

³. Answer N/A if field verification not required and was not conducted. See Decision Matrix

Decision Matrix

Hydric Soils present ¹	Identified on NWI or other wetland map ²	Percent with wet signatures from Exhibit 1	Field verification required ³	Wetland?
Yes	Yes	>50%	No	Yes
Yes	Yes	30-50%	No	Yes
Yes	Yes	<30%	Yes	Yes, if other hydrology indicators present
Yes	No	>50%	No	Yes
Yes	No	30-50%	Yes	Yes, if other hydrology indicators present
Yes	No	<30%	No	No
No	Yes	>50%	No	Yes
No	Yes	30-50%	No	Yes
No	Yes	<30%	No	No
No	No	>50%	Yes	Yes, if other hydrology indicators present
No	No	30-50%	Yes	Yes, if other hydrology indicators present
No	No	<30%	No	No

¹ The presence of hydric soils can be determined from the "Hydric Rating by Map Unit Feature" under "Land Classifications" from the Web Soil Survey. "Not Hydric" is the only category considered to not have hydric soils. Field sampling for the presence/absence of hydric soil indicators can be used in lieu of the hydric rating if appropriately documented by providing completed field data sheets.

² At minimum, the most updated NWI data available for the area must be reviewed for this step. Any and all other local or regional wetland maps that are publically available should be reviewed.

³ Area should be reviewed in the field for the presence/absence of wetland hydrology indicators per the applicable 87 Manual Regional Supplement, including the D2 indicator (geomorphic position).

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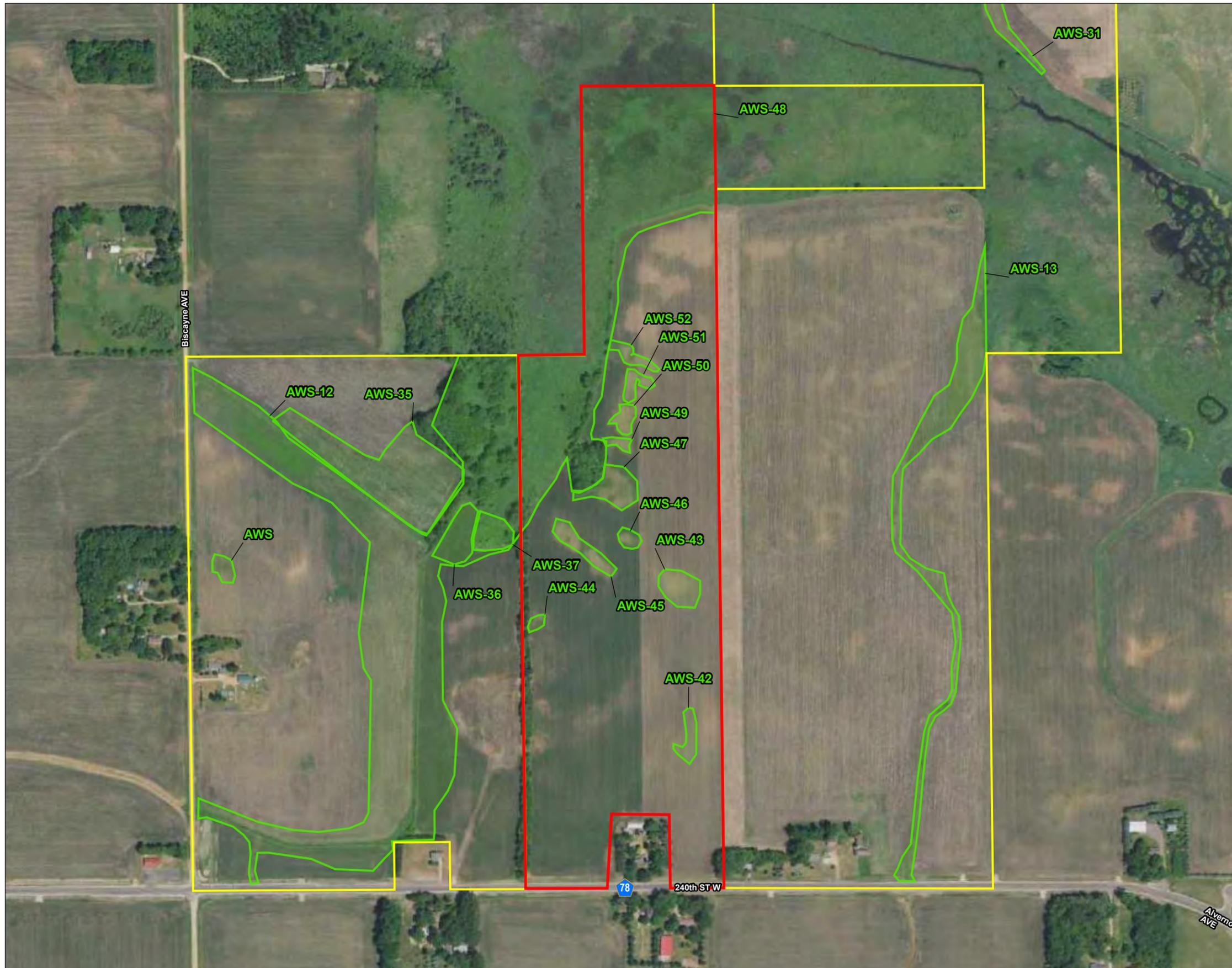
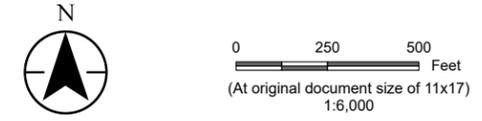


Figure No. 6

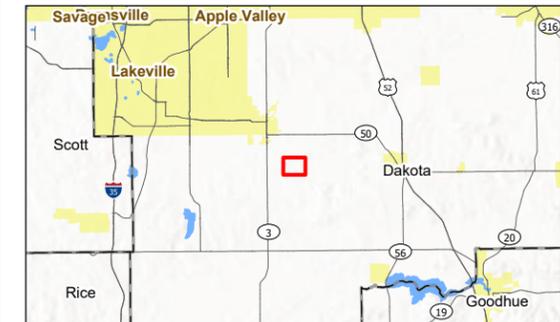
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**Off-Site Aerial Review
(6/18/2021 NAIP Imagery)**

Client/Project
Castle Rock Solar LLC
Castle Rock Solar Project
193709215

Project Location
T. of Castle Rock
Dakota Co., MN
Prepared by KJM on 2025-04-25
TR by XX on 2025-XX-XX
IR by XX on 2025-XX-XX



- Legend
- 2025 Study Area
 - 2024 Study Area
 - Aerial Wetness Signature Wetland



Notes
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
2. Data Sources: Stantec, Castle Rock Solar LLC, USGS, MNDOT



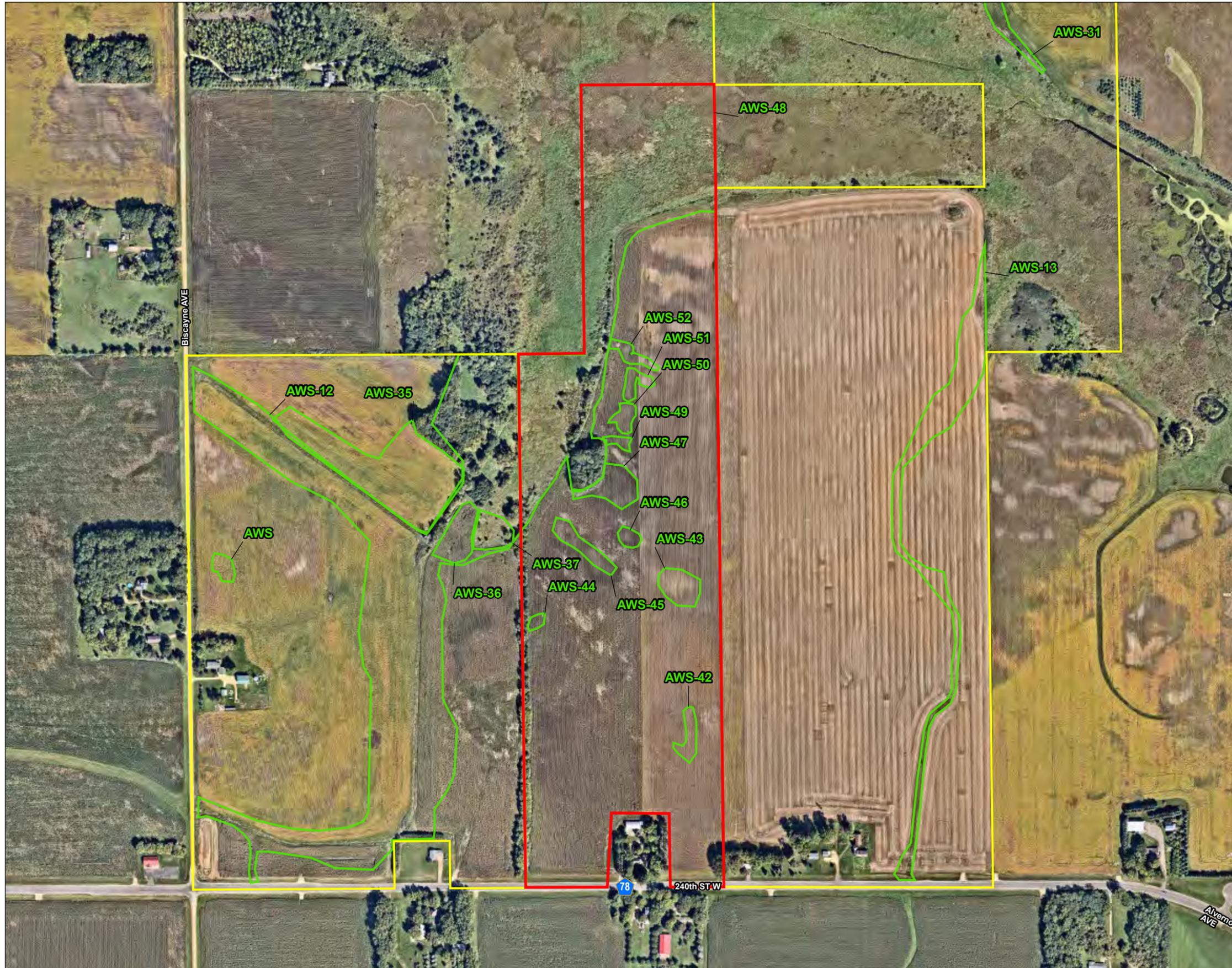
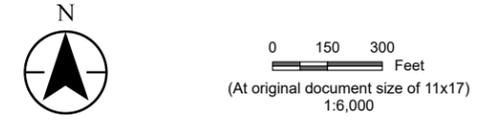


Figure No.
7
Title
**Off-Site Aerial Review
(9/2021 Dakota County Imagery)**

Client/Project
Castle Rock Solar LLC
Castle Rock Solar Project
193709215

Project Location
T. of Castle Rock
Dakota Co., MN
Prepared by KJM on 2025-04-25
TR by XX on 2025-XX-XX
IR by XX on 2025-XX-XX



- Legend
- 2025 Study Area
 - 2024 Study Area
 - Aerial Wetness Signature Wetland



Notes
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
2. Data Sources: Stantec, Castle Rock Solar LLC, Dakota Co., MNDOT, USGS



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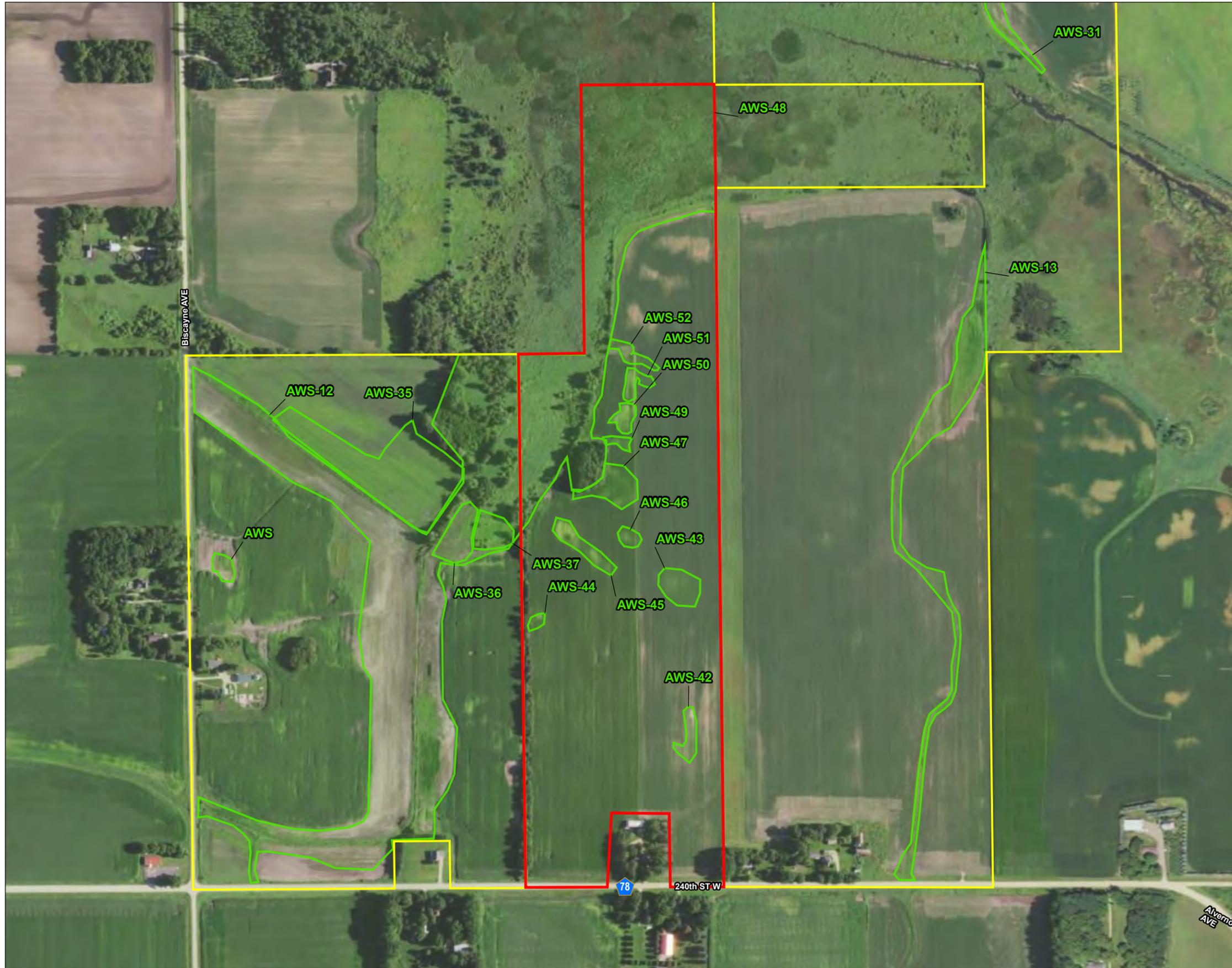


Figure No.
8

Title
**Off-Site Aerial Review
 (7/30/2019 NAIP Imagery)**

Client/Project
 Castle Rock Solar LLC
 Castle Rock Solar Project

193709215

Project Location
 T. of Castle Rock
 Dakota Co., MN

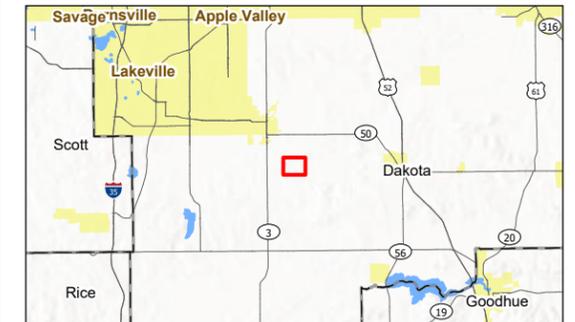
Prepared by KJM on 2025-04-25
 TR by XX on 2025-XX-XX
 IR by XX on 2025-XX-XX



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Legend

- 2025 Study Area
- 2024 Study Area
- Aerial Wetness Signature Wetland



Notes
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, MNDOT, USGS



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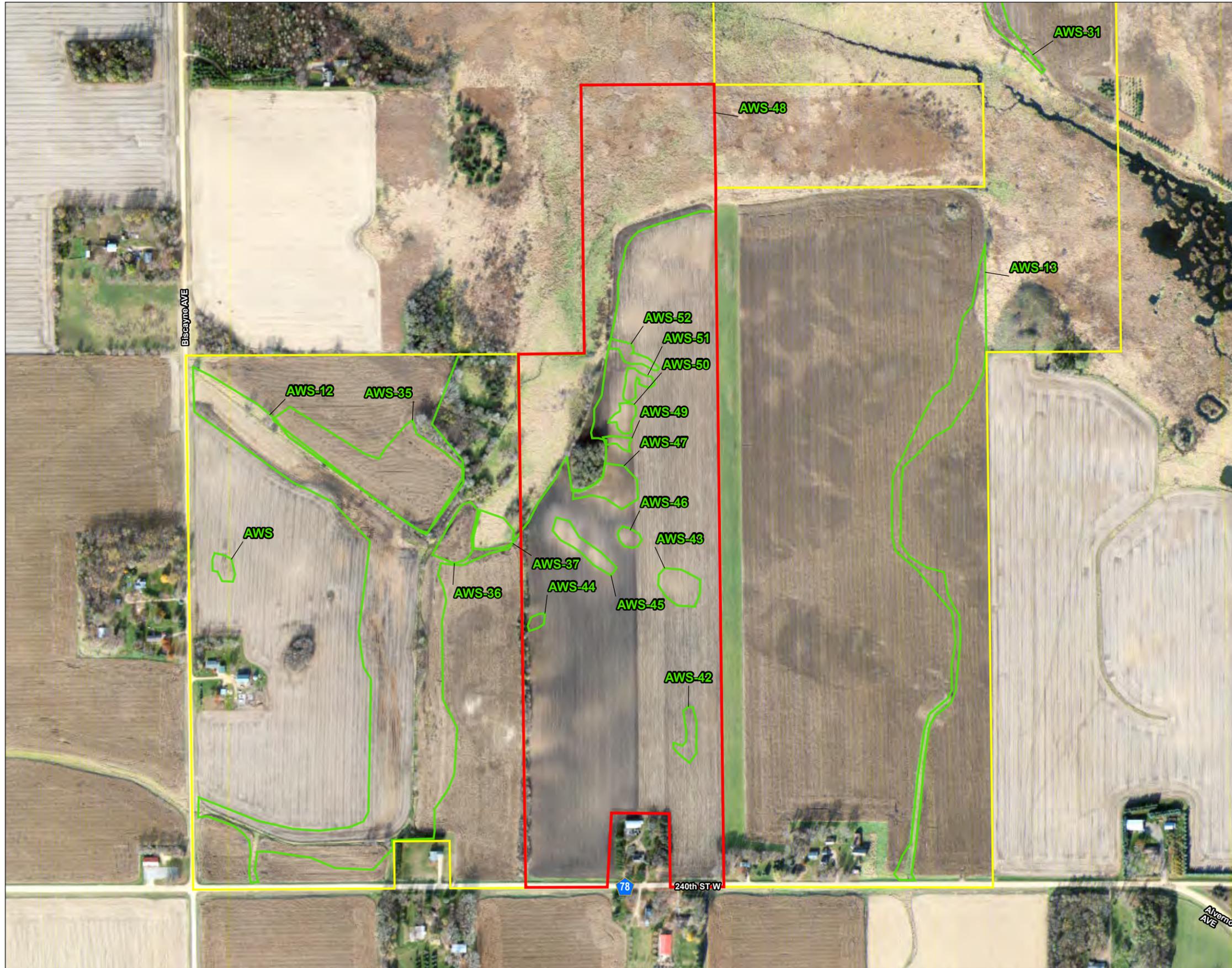
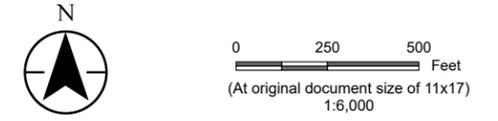


Figure No.
9
Title
**Off-Site Aerial Review
(10/23/2018 Dakota County Imagery)**

Client/Project
Castle Rock Solar LLC
Castle Rock Solar Project
193709215

Project Location
T. of Castle Rock
Dakota Co., MN
Prepared by KJM on 2025-04-25
TR by XX on 2025-XX-XX
IR by XX on 2025-XX-XX



- Legend
- 2025 Study Area
 - 2024 Study Area
 - Aerial Wetness Signature Wetland



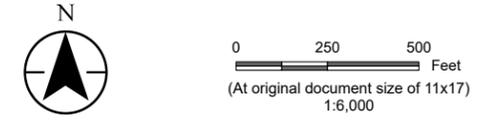
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2. Data Sources: Stantec, Castle Rock Solar LLC, Dakota Co., MNDOT, USGS



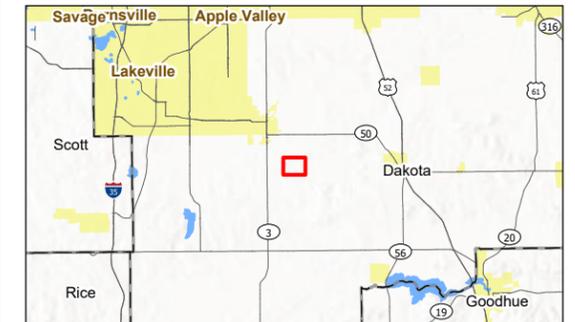
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Figure No. **10**
 Title **Off-Site Aerial Review (5/2017 Dakota County Imagery)**
 Client/Project **Castle Rock Solar LLC** 193709215
Castle Rock Solar Project
 Project Location **T. of Castle Rock, Dakota Co., MN** Prepared by KJM on 2025-04-25
 TR by XX on 2025-XX-XX
 IR by XX on 2025-XX-XX



- Legend
- 2025 Study Area
 - 2024 Study Area
 - Aerial Wetness Signature Wetland



Notes
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, Dakota Co., MNDOT, USGS



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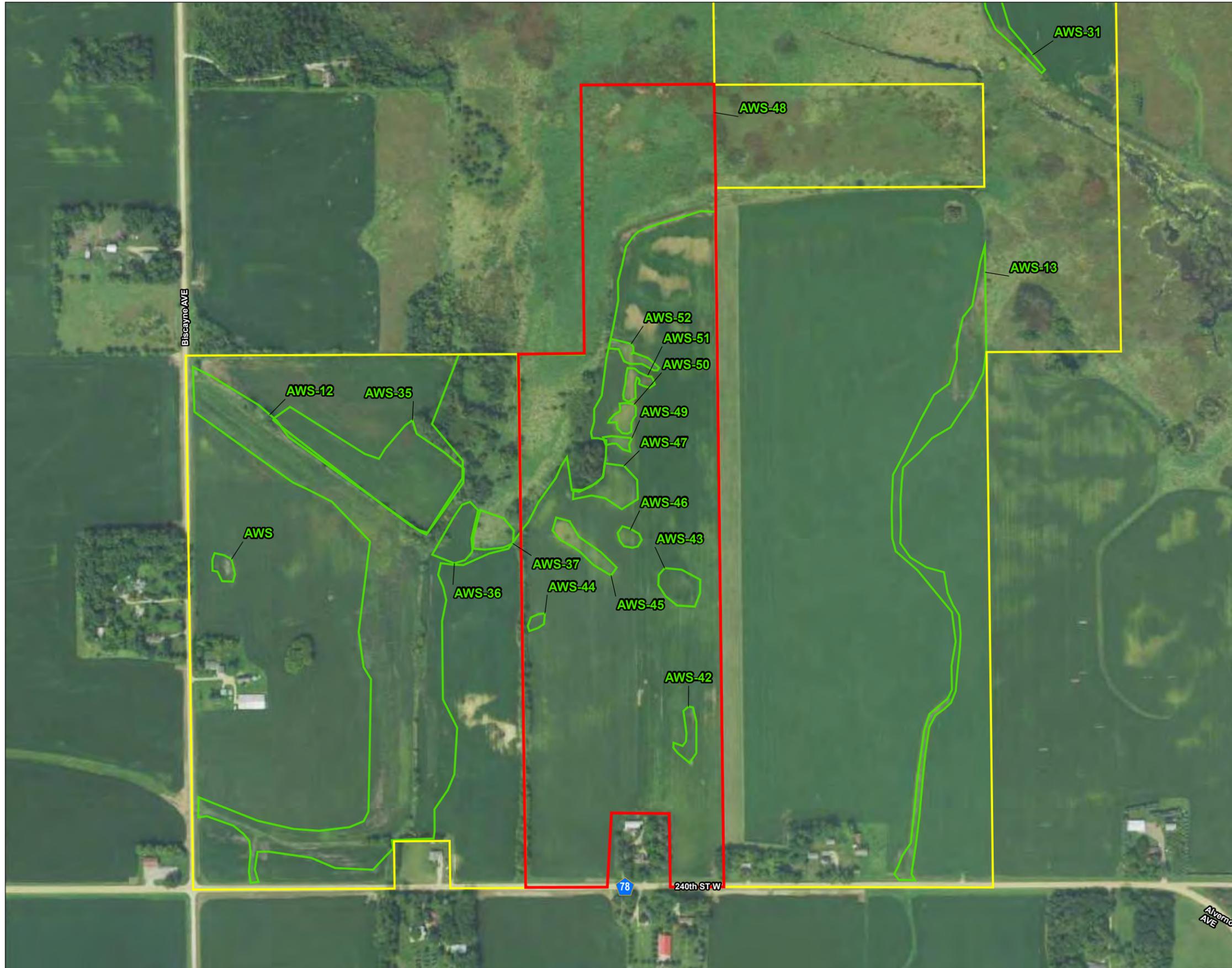


Figure No. 11

**Off-Site Aerial Review
(8/31/2017 NAIP Imagery)**

Client/Project
Castle Rock Solar LLC
Castle Rock Solar Project

193709215

Project Location
T. of Castle Rock
Dakota Co., MN

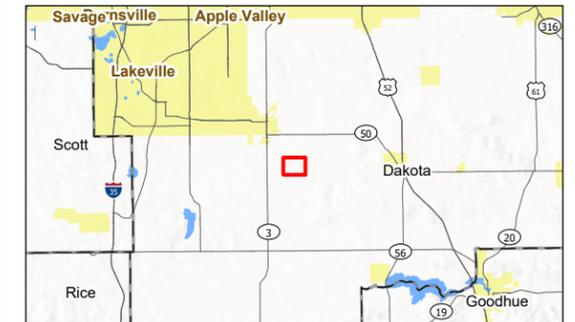
Prepared by KJM on 2025-04-25
TR by XX on 2025-XX-XX
IR by XX on 2025-XX-XX



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Legend

- 2025 Study Area
- 2024 Study Area
- Aerial Wetness Signature Wetland



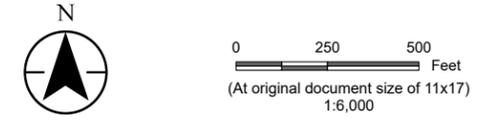
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2. Data Sources: Stantec, Castle Rock Solar LLC, Dakota Co., MNDOT, USGS



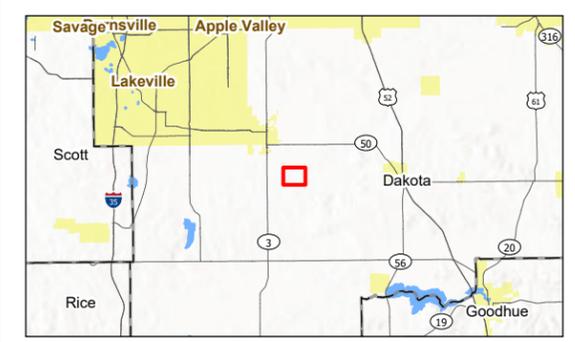
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Figure No. **12**
 Title **Off-Site Aerial Review (5/2016 Dakota County Imagery)**
 Client/Project **Castle Rock Solar LLC** 193709215
Castle Rock Solar Project
 Project Location **T. of Castle Rock, Dakota Co., MN** Prepared by KJM on 2025-04-25
 TR by XX on 2025-XX-XX
 IR by XX on 2025-XX-XX



- Legend
- 2025 Study Area
 - 2024 Study Area
 - Aerial Wetness Signature Wetland



Notes
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, Dakota Co., MNDOT, USGS



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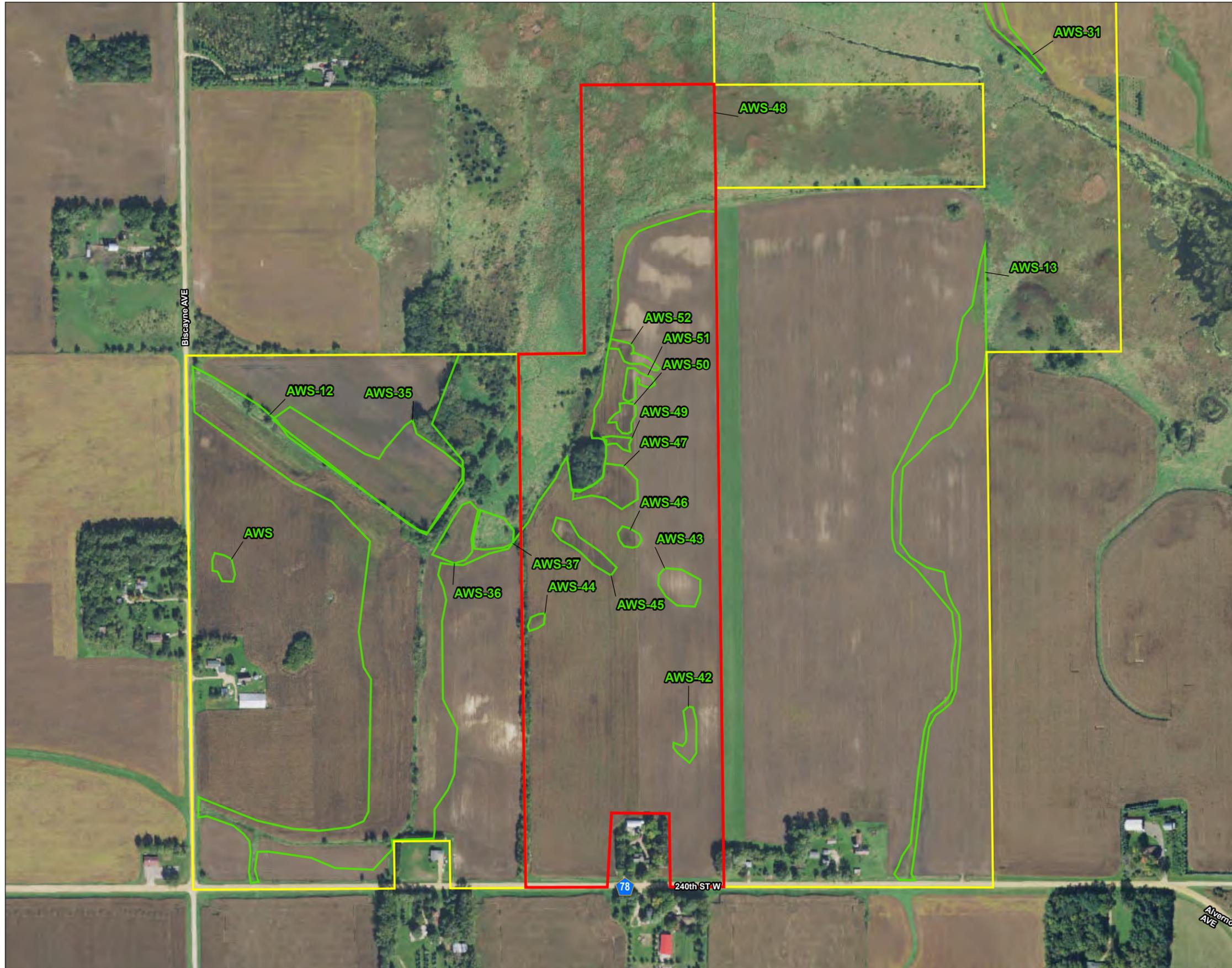


Figure No.
13

Title
**Off-Site Aerial Review
(9/30/2015 NAIP Imagery)**

Client/Project
Castle Rock Solar LLC
Castle Rock Solar Project

193709215

Project Location
T. of Castle Rock
Dakota Co., MN

Prepared by KJM on 2025-04-25
TR by XX on 2025-XX-XX
IR by XX on 2025-XX-XX



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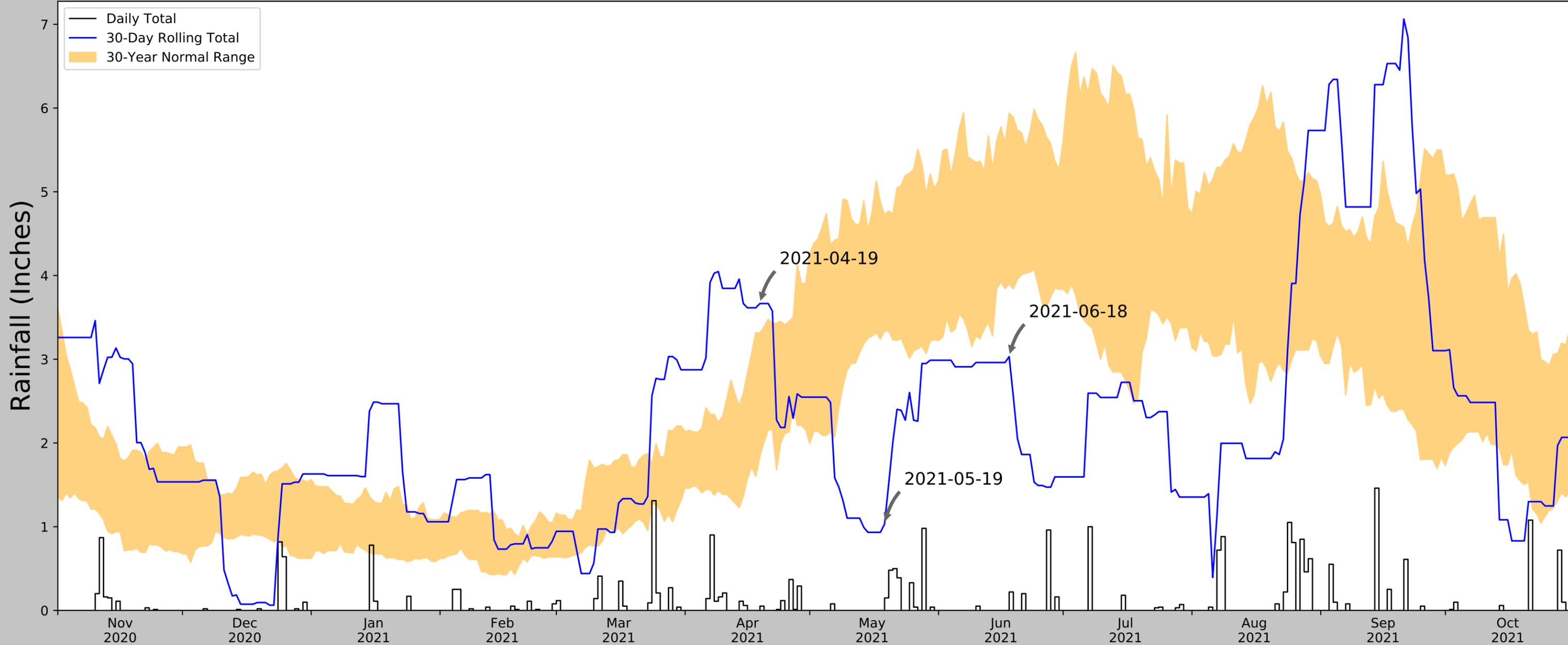
- 2025 Study Area
- 2024 Study Area
- Aerial Wetness Signature Wetland



Notes
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet
 2. Data Sources: Stantec, Castle Rock Solar LLC, Dakota Co., MNDOT, USGS



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



Coordinates	44.607003, -93.098016
Observation Date	2021-06-18
Elevation (ft)	901.04
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-06-18	3.895669	5.938583	3.031496	Dry	1	3	3
2021-05-19	3.337402	4.722047	1.031496	Dry	1	2	2
2021-04-19	1.837008	3.312992	3.665354	Wet	3	1	3
Result							Drier than Normal - 8



Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
ROSEMOUNT RSCH & OUTREACH CTR	44.7167, -93.0981	944.882	7.579	43.842	3.743	9192	53
ROSEMOUNT 3.3 SW	44.7182, -93.121	951.116	1.129	6.234	0.515	518	11
ROSEMOUNT 3.7 WSW	44.73, -93.1373	959.974	2.133	15.092	0.992	9	0
ROSEMOUNT 4.5 WSW	44.7208, -93.1497	940.945	2.549	3.937	1.157	353	20
ROSEMOUNT 3.9 W	44.7394, -93.1451	959.974	2.79	15.092	1.298	2	4
ROSEMOUNT 3.3 W	44.7506, -93.1326	978.018	2.89	33.136	1.396	11	0
ROSEMOUNT 4.1 W	44.7504, -93.1502	941.929	3.458	2.953	1.566	38	0
ROSEMOUNT 3.3 WNW	44.7608, -93.13	979.987	3.426	35.105	1.662	391	2
FARMINGTON 3 NW	44.6697, -93.17	979.987	4.798	35.105	2.328	575	0
BURNSVILLE 3.0 NE	44.7914, -93.2304	950.131	8.293	5.249	3.775	2	0
EAGAN 1.7 W	44.815, -93.1981	875.0	8.378	69.882	4.356	4	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	10.735	134.843	6.278	2	0
MINNEAPOLIS/ST PAUL AP	44.8831, -93.2289	872.047	13.165	72.835	6.883	256	0

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Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

county: **Dakota** township number: **113N**
 township name: **Castle Rock** range number: **19W**
 nearest community: **Farmington** section number: **3**

Aerial photograph or site visit date:

Wednesday, September 15, 2021

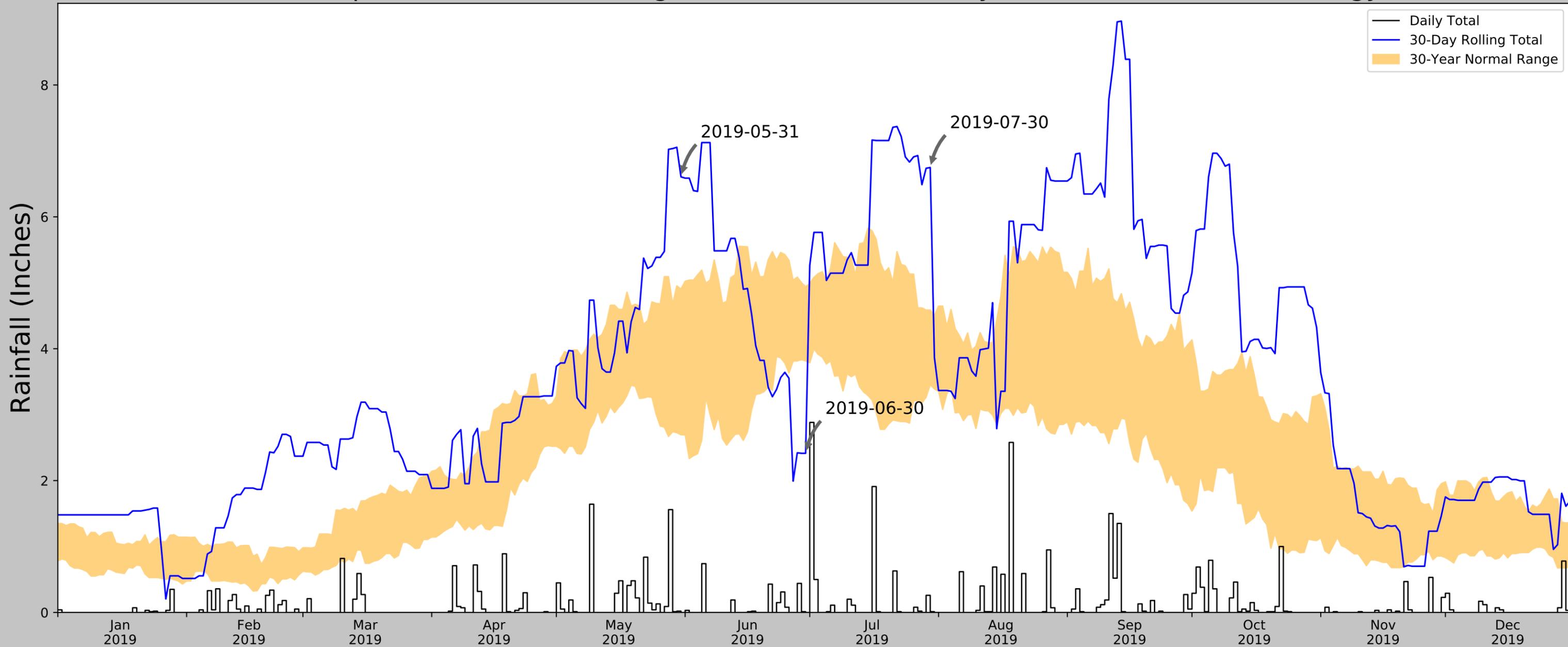
Score using 1991-2020 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: August 2021	second prior month: July 2021	third prior month: June 2021
estimated precipitation total for this location:	6.23	1.32	2.50
there is a 30% chance this location will have less than:	3.58	2.69	3.68
there is a 30% chance this location will have more than:	5.73	4.77	5.16
type of month: dry normal wet	wet	dry	dry
monthly score	3 * 3 = 9	2 * 1 = 2	1 * 1 = 1
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	12 (Normal)		

Other Resources:

- [retrieve daily precipitation data](#)
- [view radar-based precipitation estimates](#)
- [view weekly precipitation maps](#)
- [Evaluating Antecedent Precipitation Conditions](#) (BWSR)

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



Coordinates	44.607003, -93.098016
Observation Date	2019-07-30
Elevation (ft)	901.04
Drought Index (PDSI)	Extreme wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2019-07-30	3.454331	4.587008	6.748032	Wet	3	3	9
2019-06-30	3.814961	4.938583	2.413386	Dry	1	2	2

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHASKA 1.7 E	44.8147, -93.5752	902.887	27.476	1.847	12.415	579	76
CHANHASSEN 1.2 W	44.8536, -93.5863	971.129	29.407	70.089	15.294	903	14
CHANHASSEN 1.0 ESE	44.8467, -93.5456	905.84	27.514	4.8	12.513	240	0
CARVER 0.7 W	44.7573, -93.6416	847.113	28.652	53.927	14.439	584	0
CHASKA 0.6 E	44.8148, -93.597	943.898	28.398	42.858	13.996	181	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	14.761	59.176	7.516	202	0
BURNSVILLE 0.6 WNW	44.7674, -93.2919	904.856	14.613	3.816	6.632	77	0
INVER GROVE HEIGHTS 2.1 N	44.8554, -93.0634	913.058	17.247	12.018	7.968	40	0
EAGAN 1.7 W	44.815, -93.1981	875.0	15.188	26.04	7.23	87	0
EAGAN 2.9 SW	44.7836, -93.2012	914.042	13.212	13.002	6.117	196	0
ROSEMOUNT 3.3 WNW	44.7608, -93.13	979.987	10.742	78.947	5.682	134	0
INVER GROVE HEIGHTS 1.3 ENE	44.8344, -93.0358	918.963	16.006	17.923	7.49	2	0
RICHFIELD 1.2 WSW	44.8717, -93.3055	852.034	20.933	49.006	10.446	7	0
KOHLMAN PARK	45.0208, -93.0542	860.892	28.671	40.148	14.053	4	0
RIVER FALLS 0.4 E	44.8559, -92.6127	916.011	29.38	14.971	13.661	503	0
CHASKA 2NW	44.8131, -93.6311	922.9	29.799	21.86	14.061	1813	0
CHANHASSEN WCEO	44.8497, -93.5644	945.866	28.278	44.926	14.042	2756	0



Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Minnesota State Climatology Office

State Climatology Office - DNR Division of Ecological and Water Resources

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Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

county: **Dakota** township number: **113N**
 township name: **Castle Rock** range number: **19W**
 nearest community: **Farmington** section number: **3**

Aerial photograph or site visit date:

Wednesday, October 24, 2018

Score using 1991-2020 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: September 2018	second prior month: August 2018	third prior month: July 2018
estimated precipitation total for this location:	5.83	3.52	3.31
there is a 30% chance this location will have less than:	1.91	3.58	2.69
there is a 30% chance this location will have more than:	5.33	5.73	4.77
type of month: dry normal wet	wet	dry	normal
monthly score	3 * 3 = 9	2 * 1 = 2	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	13 (Normal)		

Other Resources:

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- [view weekly precipitation maps](#)
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Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

county: **Dakota** township number: **113N**
 township name: **Castle Rock** range number: **19W**
 nearest community: **Farmington** section number: **3**

Aerial photograph or site visit date:

Monday, May 15, 2017

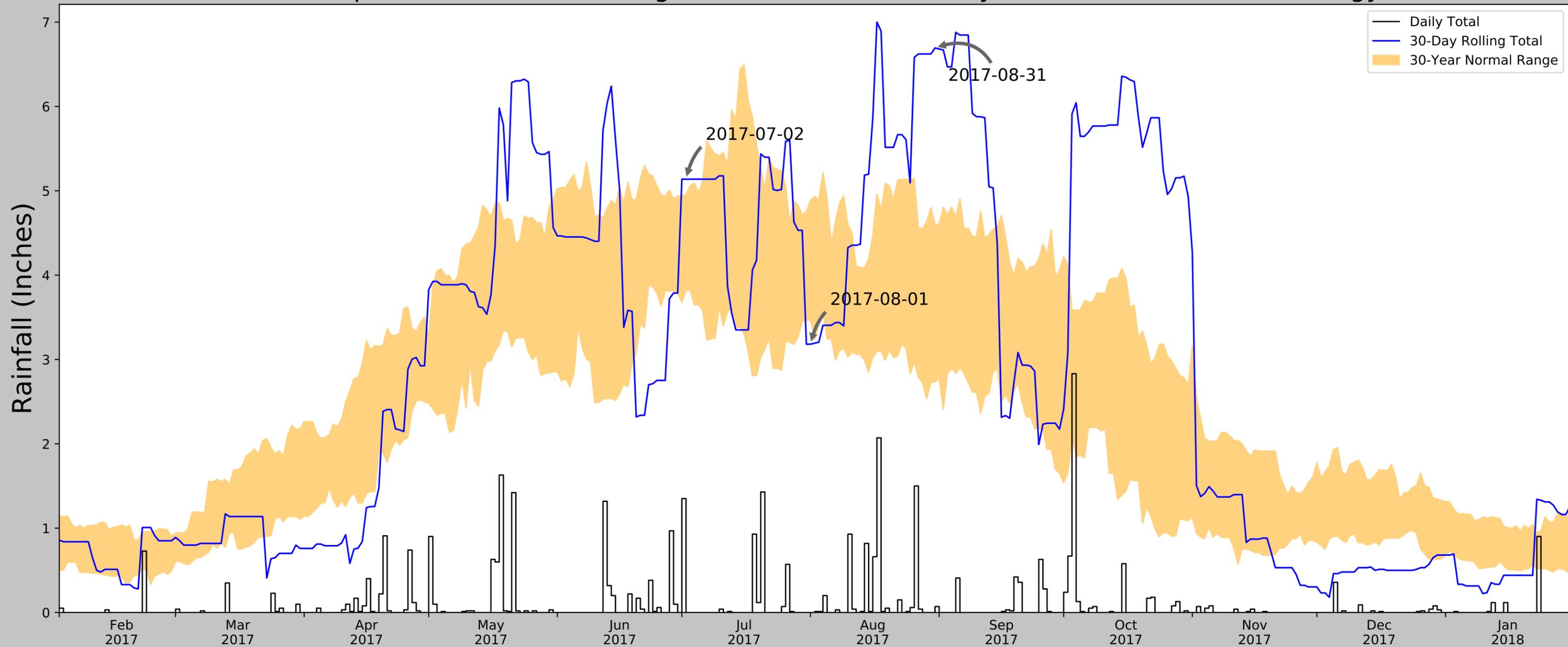
Score using 1991-2020 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: April 2017	second prior month: March 2017	third prior month: February 2017
estimated precipitation total for this location:	5.34	0.58	0.69
there is a 30% chance this location will have less than:	1.92	1.07	0.57
there is a 30% chance this location will have more than:	3.43	2.13	1.20
type of month: dry normal wet	wet	dry	normal
monthly score	3 * 3 = 9	2 * 1 = 2	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	13 (Normal)		

Other Resources:

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



Coordinates	44.607003, -93.098016
Observation Date	2017-08-31
Elevation (ft)	901.04
Drought Index (PDSI)	Extreme wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2017-08-31	2.735827	4.602756	6.692914	Wet	3	3	9
2017-08-01	3.464961	4.88504	3.181102	Dry	1	2	2

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHASKA 1.7 E	44.8147, -93.5752	902.887	27.476	1.847	12.415	292	62
CHANHASSEN 1.2 W	44.8536, -93.5863	971.129	29.407	70.089	15.294	753	19
CHANHASSEN 1.0 ESE	44.8467, -93.5456	905.84	27.514	4.8	12.513	175	9
CARVER 0.7 W	44.7573, -93.6416	847.113	28.652	53.927	14.439	539	0
CHASKA 0.6 E	44.8148, -93.597	943.898	28.398	42.858	13.996	3	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	14.761	59.176	7.516	202	0
BURNSVILLE 0.6 WNW	44.7674, -93.2919	904.856	14.613	3.816	6.632	77	0
INVER GROVE HEIGHTS 2.1 N	44.8554, -93.0634	913.058	17.247	12.018	7.968	40	0
EAGAN 1.7 W	44.815, -93.1981	875.0	15.188	26.04	7.23	87	0
EAGAN 2.9 SW	44.7836, -93.2012	914.042	13.212	13.002	6.117	196	0
ROSEMOUNT 3.3 WNW	44.7608, -93.13	979.987	10.742	78.947	5.682	129	0
INVER GROVE HEIGHTS 1.3 ENE	44.8344, -93.0358	918.963	16.006	17.923	7.49	2	0
RICHFIELD 1.2 WSW	44.8717, -93.3055	852.034	20.933	49.006	10.446	7	0
KOHLMAN PARK	45.0208, -93.0542	860.892	28.671	40.148	14.053	4	0
RIVER FALLS 0.4 E	44.8559, -92.6127	916.011	29.38	14.971	13.661	503	0
CHASKA 2NW	44.8131, -93.6311	922.9	29.799	21.86	14.061	1813	0
CHANHASSEN WCEO	44.8497, -93.5644	945.866	28.378	44.926	14.042	2756	0

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
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Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:

county: **Dakota** township number: **113N**
 township name: **Castle Rock** range number: **19W**
 nearest community: **Farmington** section number: **3**

Aerial photograph or site visit date:

Tuesday, May 10, 2016

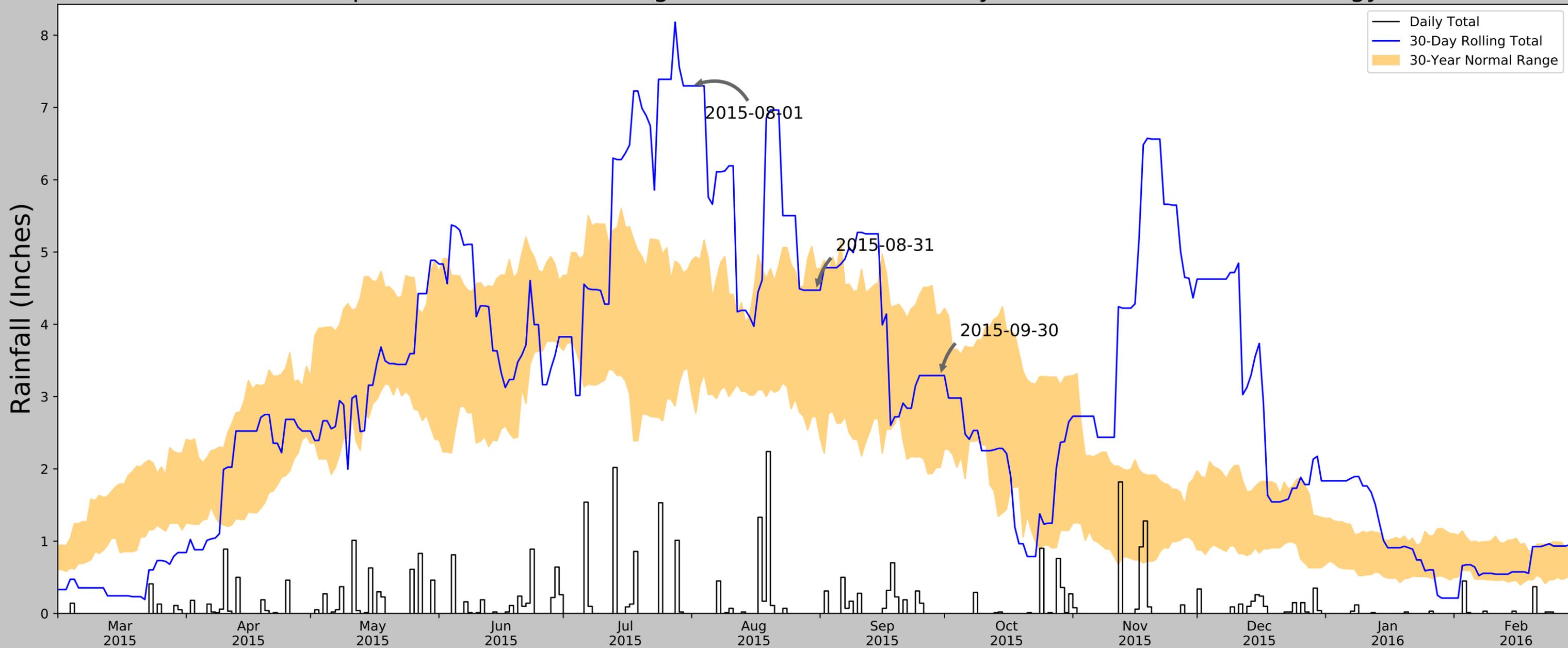
Score using 1991-2020 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: April 2016	second prior month: March 2016	third prior month: February 2016
estimated precipitation total for this location:	1.59	2.13	0.71
there is a 30% chance this location will have less than:	1.92	1.07	0.57
there is a 30% chance this location will have more than:	3.43	2.13	1.20
type of month: dry normal wet	dry	wet	normal
monthly score	3 * 1 = 3	2 * 3 = 6	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	11 (Normal)		

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



Coordinates	44.607003, -93.098016
Observation Date	2015-09-30
Elevation (ft)	901.04
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2015-09-30	2.018898	4.134252	3.291339	Normal	2	3	6
2015-08-31	2.724016	4.768898	4.472441	Normal	2	2	4

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHASKA 1.7 E	44.8147, -93.5752	902.887	27.476	1.847	12.415	0	67
CHANHASSEN 1.2 W	44.8536, -93.5863	971.129	29.407	70.089	15.294	561	18
CHANHASSEN 1.0 ESE	44.8467, -93.5456	905.84	27.514	4.8	12.513	113	1
CARVER 0.7 W	44.7573, -93.6416	847.113	28.652	53.927	14.439	485	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	14.761	59.176	7.516	202	0
BURNSVILLE 0.6 WNW	44.7674, -93.2919	904.856	14.613	3.816	6.632	77	0
INVER GROVE HEIGHTS 2.1 N	44.8554, -93.0634	913.058	17.247	12.018	7.968	40	0
EAGAN 1.7 W	44.815, -93.1981	875.0	15.188	26.04	7.23	87	0
EAGAN 2.9 SW	44.7836, -93.2012	914.042	13.212	13.002	6.117	120	4
ROSEMOUNT 3.3 WNW	44.7608, -93.13	979.987	10.742	78.947	5.682	77	0
INVER GROVE HEIGHTS 1.3 ENE	44.8344, -93.0358	918.963	16.006	17.923	7.49	2	0
RICHFIELD 1.2 WSW	44.8717, -93.3055	852.034	20.933	49.006	10.446	7	0
KOHLMAN PARK	45.0208, -93.0542	860.892	28.671	40.148	14.053	4	0
RIVER FALLS 0.4 E	44.8559, -92.6127	916.011	29.38	14.971	13.661	503	0
CHASKA 2NW	44.8131, -93.6311	922.9	29.799	21.86	14.061	1813	0
CHANHASSEN WSFO	44.8497, -93.5644	945.866	28.378	44.826	14.042	2756	0

Figure and tables made by the
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U.S. Army Corps of Engineers