

# **APPENDIX K**

## **Wetland Delineation Report**

## Minnesota Wetland Conservation Act Notice of Decision

<b>Local Government Unit:</b> Castle Rock Township	<b>County:</b> Dakota
<b>Applicant Name:</b> Castle Rock Solar LLC, Derek Hasek	
<b>Applicant Representative:</b> Stantec, Jennifer Kamm	
<b>Project Name:</b> Castle Rock Solar	<b>LGU Project No. (if any):</b> SWCD #24-CAS-141
<b>Date Complete Application Received by LGU:</b> 08/28/24	
<b>Date of LGU Decision:</b> 12/26/24	
<b>Date this Notice was Sent:</b> 12/26/24	

**WCA Decision Type - check all that apply**

<input checked="" type="checkbox"/> Wetland Boundary/Type	<input type="checkbox"/> Sequencing	<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Bank Plan (not credit purchase)
<input type="checkbox"/> No-Loss (8420.0415)	<input type="checkbox"/> Exemption (8420.0420)		
Part: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H		Subpart: <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9	

**Replacement Plan Impacts (replacement plan decisions only)**

Total WCA Wetland Impact Area:
Wetland Replacement Type: <input type="checkbox"/> Project Specific Credits: <input type="checkbox"/> Bank Credits:
Bank Account Number(s):

**Technical Evaluation Panel Findings and Recommendations (attach if any)**

<input type="checkbox"/> Approve <input type="checkbox"/> Approve w/Conditions <input type="checkbox"/> Deny <input checked="" type="checkbox"/> No TEP Recommendation
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**LGU Decision**

<input checked="" type="checkbox"/> Approved with Conditions (specify below) <sup>1</sup> <input type="checkbox"/> Approved <sup>1</sup> <input type="checkbox"/> Denied List Conditions: The area for AWS-40 was removed from this decision boundary approval as wetland status cannot be confirmed outside the growing season during frozen conditions.
<b>Decision-Maker for this Application:</b> <input checked="" type="checkbox"/> Staff <input type="checkbox"/> Governing Board/Council <input type="checkbox"/> Other:
<b>Decision is valid for:</b> <input checked="" type="checkbox"/> 5 years (default) <input type="checkbox"/> Other (specify):

<sup>1</sup> *Wetland Replacement Plan approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project-specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid.*

**LGU Findings – Attach document(s) and/or insert narrative providing the basis for the LGU decision<sup>1</sup>.**

<input type="checkbox"/> Attachment(s) (specify): <input checked="" type="checkbox"/> Summary: The Notice of Application was sent out August 28, 2024 and the decision was due October 27. An extension was issued to allow additional time to complete the field review and revised delineation report and the comment period ended on September 27, 2024. No written comments were received. The SWCD, BWSR, DNR and VRWJPO conducted a field review of the project area on October 2 and December 18, 2024 and verified the boundary and type of 22 wetlands (see Table 3) and 6 waterways present in the project area (see Table 4). Waterway S1 is a DNR Public Water and the South Branch of the Vermillion River. Area AWS-40 was not included during the initial off-site review and later submitted after the growing season with the offsite results determining a field review was required to confirm wetland status. The area for AWS-40 was removed
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**WETLAND DELINEATION REPORT**

Castle Rock Solar Project  
 Results  
 November 2024

**Table 3. Summary of Wetlands Identified within the Study Area**

Wetland ID	Wetland Type*	Adjacent Surface Waters	Area in Study Area (acres)	Latitude	Longitude
W1	Degraded Wet Meadow	KH-ES2, KH-W5	0.61	44.616053	-93.102030
W2	Hardwood Swamp, Farmed Wetland, Degraded Wet Meadow, Sedge Meadow, Shrub-Carr	Vermillion River, South Branch (M-049-005)	42.06	44.61319	-93.102333
W3	Degraded Wet Meadow	---	0.50	44.614192	-93.099512
W4	Degraded Wet Meadow	---	0.64	44.603061	-93.102429
W5	Farmed Wetland, Degraded Wet Meadow	---	0.02	44.616016	-93.089334
W6	Farmed Wetland, Degraded Wet Meadow	S2	0.31	44.61807	-93.087626
W7	Hardwood Swamp, Degraded Wet Meadow	S2	1.15	44.616523	-93.086045
W8	Hardwood Swamp, Farmed Wetland, Degraded Wet Meadow	S3, S4	13.61	44.607854	-93.111032
W9	Hardwood Swamp, Floodplain Forest, Degraded Wet Meadow, Sedge Meadow, Shallow Marsh, Shrub-Carr	Vermillion River, South Branch (M-049-005)	39.31	44.608531	-93.093644
W10	Hardwood Swamp, Farmed Wetland, Degraded Wet Meadow, Shrub-Carr	---	4.99	44.614164	-93.092036
W11	Farmed Wetland	---	0.86	44.616328	-93.091237
W15	Floodplain Forest, Shrub-Carr	Vermillion River, South Branch (M-049-005)	14.84	44.616897	-93.063227
W16	Degraded Wet Meadow	OW1	1.47	44.622384	-93.063439

## WETLAND DELINEATION REPORT

Castle Rock Solar Project  
Results  
November 2024

Wetland ID	Wetland Type*	Adjacent Surface Waters	Area in Study Area (acres)	Latitude	Longitude
W18	Floodplain Forest, Farmed Wetland, Wet Meadow	---	3.32	44.625181	-93.06566
KH-W1	Degraded Wet Meadow, Shallow Marsh	Vermillion River, South Branch (M-049-005)	4.60	44.61641	-93.114541
KH-W2	Farmed Wetland	---	0.24	44.617363	-93.106975
KH-W3	Degraded Wet Meadow, Shallow Marsh, Shrub Swamp	KH-ES1, KH-ES2	1.54	44.617137	-93.105185
KH-W4	Farmed Wetland	---	0.60	44.616557	-93.103640
KH-W5	Degraded Wet Meadow, Shrub Swamp	---	4.04	44.616778	-93.098866
KH-W6	Farmed Wetland	---	0.44	44.619886	-93.106784
KH-W7	Farmed Wetland	---	1.32	44.622956	-93.110839
KH-W8	Farmed Wetland	---	0.64	44.621017	-93.109584
		<b>TOTAL</b>	<b>137.10 acres</b>		

\*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

#### Hardwood Swamp

Five hardwood swamp wetland communities (W2, W7, W8, W9, W10) were delineated within the Study Area during the field surveys. Dominant species included silver maple (*Acer saccharinum*, FACW), boxelder (*Acer negundo*, FAC), red maple (*Acer rubrum*, FAC), and eastern cottonwood (*Populus deltoides*, FAC) in the overstory, and dominant shrub and herbaceous species included red-osier dogwood (*Cornus sericea*, FACW), common buckthorn (*Rhamnus cathartica*, FAC), sandbar willow (*Salix interior*, FACW), stinging nettle (*Urtica dioica*, FACW) and reed canary grass (*Phalaris arundinacea*, FACW).

Kimley-Horn did not delineate any wetlands with hardwood swamp wetland communities.

## WETLAND DELINEATION REPORT

Castle Rock Solar Project  
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November 2024

**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)
S1	Vermillion River, South Branch (M-049-005)	Perennial	18 ft, 3 ft	20 ft, 1-2 ft	5,948
S2	--	Perennial	4 ft, 3 ft	10 ft, 4 ft	643
S3	--	Perennial	3.5 ft, 0.60 ft	5 ft, 4 ft	3,442
S4	--	Perennial	2.5 ft, 0.75 ft	10 ft, 5 ft	1,485
KH-ES1	--	Ephemeral	2 ft, 1 ft	--	597
KH-ES2	--	Ephemeral	2 ft, 1 ft	--	154
				<b>Total</b>	<b>12,269</b>

### 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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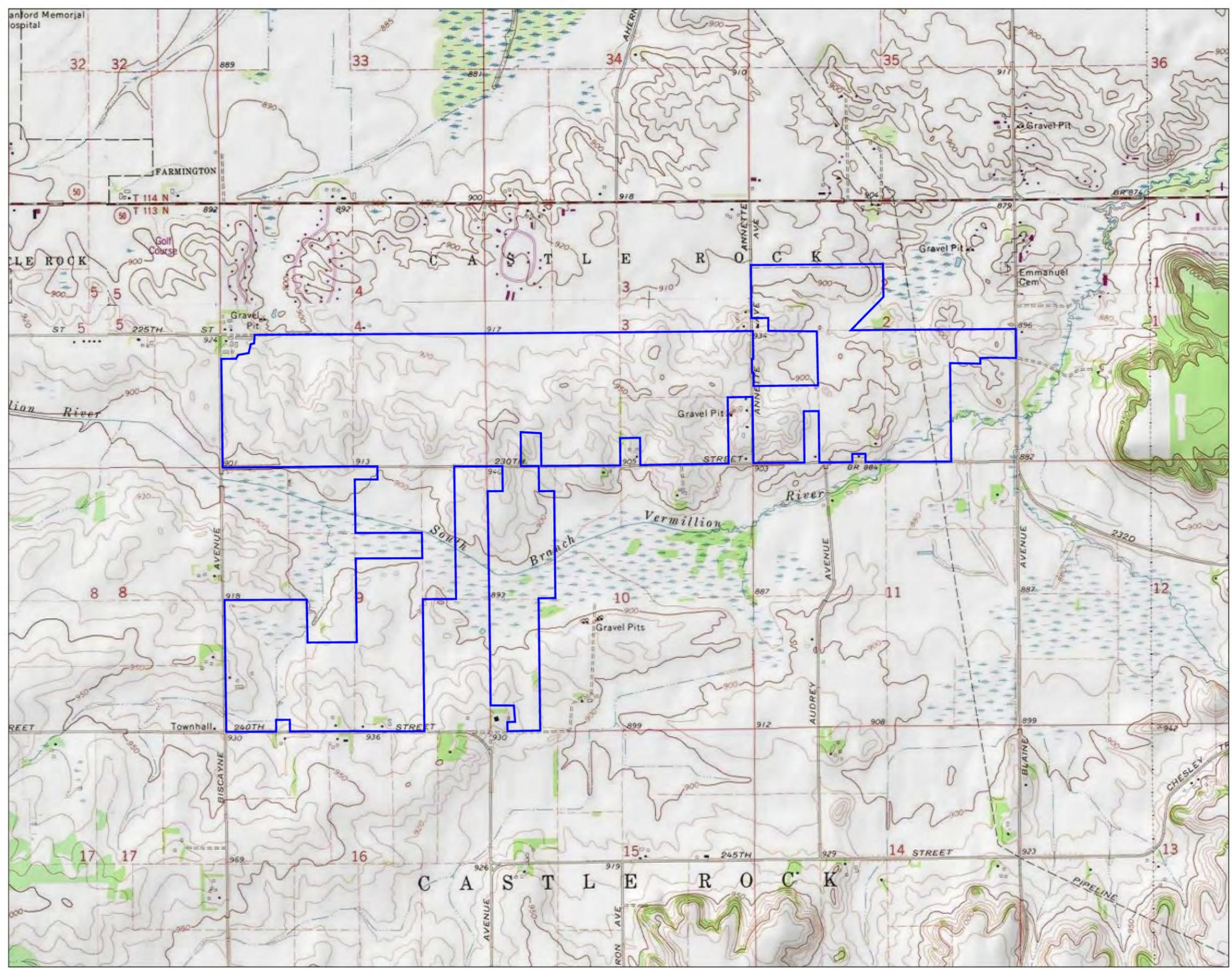


Figure No.

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

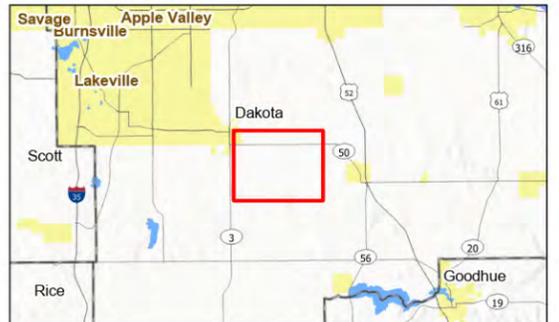
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TR by SP on 2024-01-30  
IR by JK on 2024-03-18



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Legend

 Project Boundary



- 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



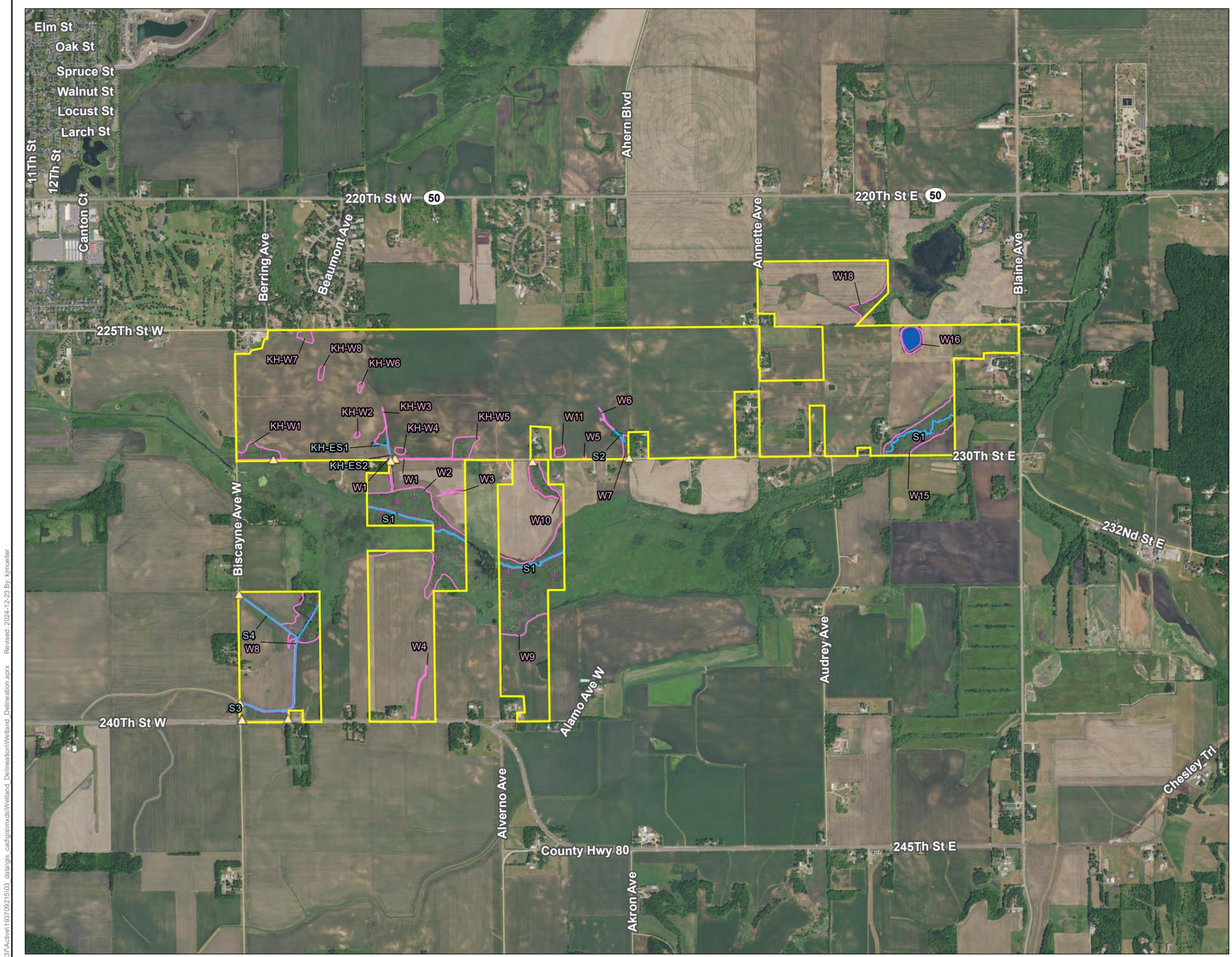
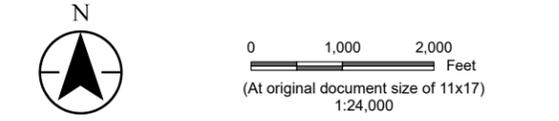


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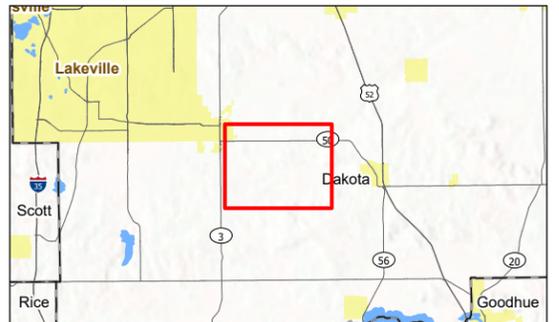
Client/Project **Castle Rock Solar LLC** 193709215  
**Castle Rock Solar Project**

Project Location **T. of Castle Rock, Dakota Co., MN** Prepared by KJM on 2024-10-23  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



- Legend**
- Project Boundary
  - Culvert
  - Field Delineated Waterway
  - Field Delineated Open Water Area
  - Field Delineated Wetland Area

\*No features within data frame



- Notes**
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  3. Background: NAIP 2021



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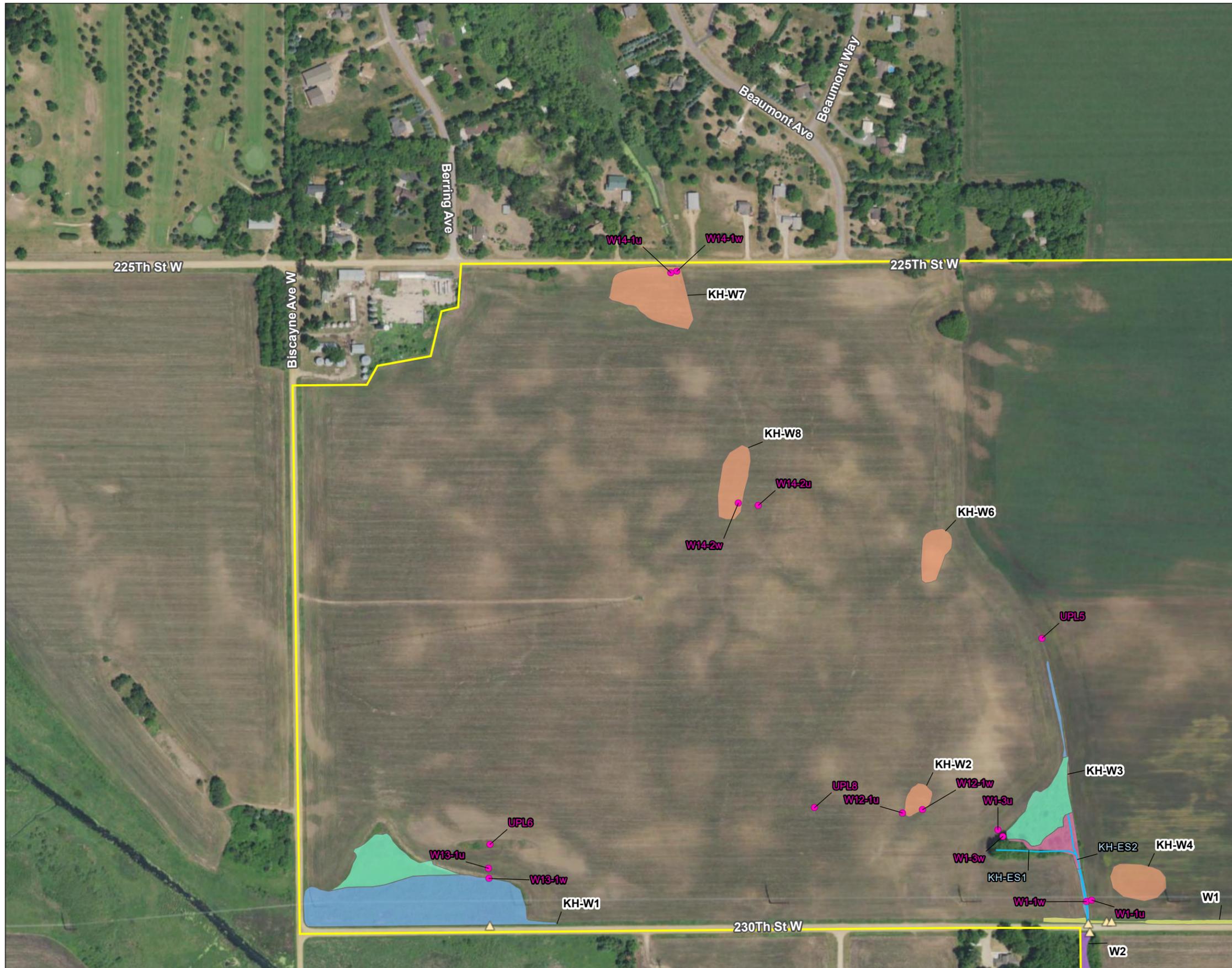


Figure No.

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Title

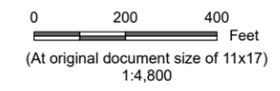
**Field Collected Data**

Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project

193709215

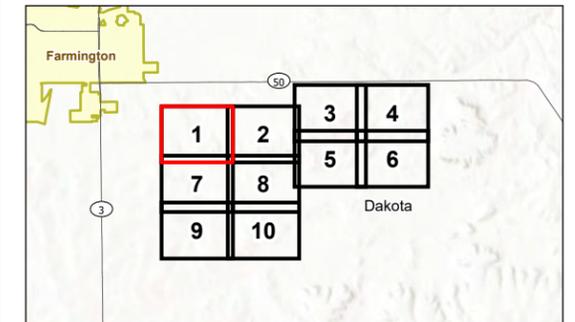
Project Location  
 T. of Castle Rock  
 Dakota Co., MN

Prepared by JDS on 2024-01-29  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



Legend

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Notes  
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 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
 3. Background: NAIP 2021





Figure No.

**6**

Title

**Field Collected Data**

Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project

193709215

Project Location  
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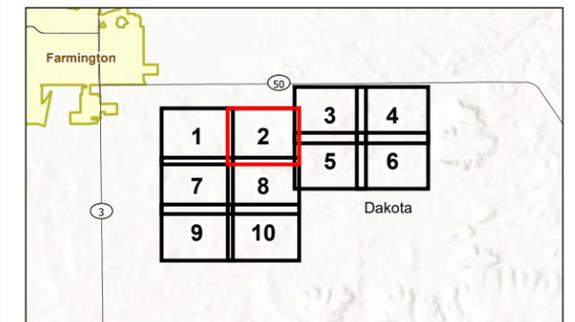
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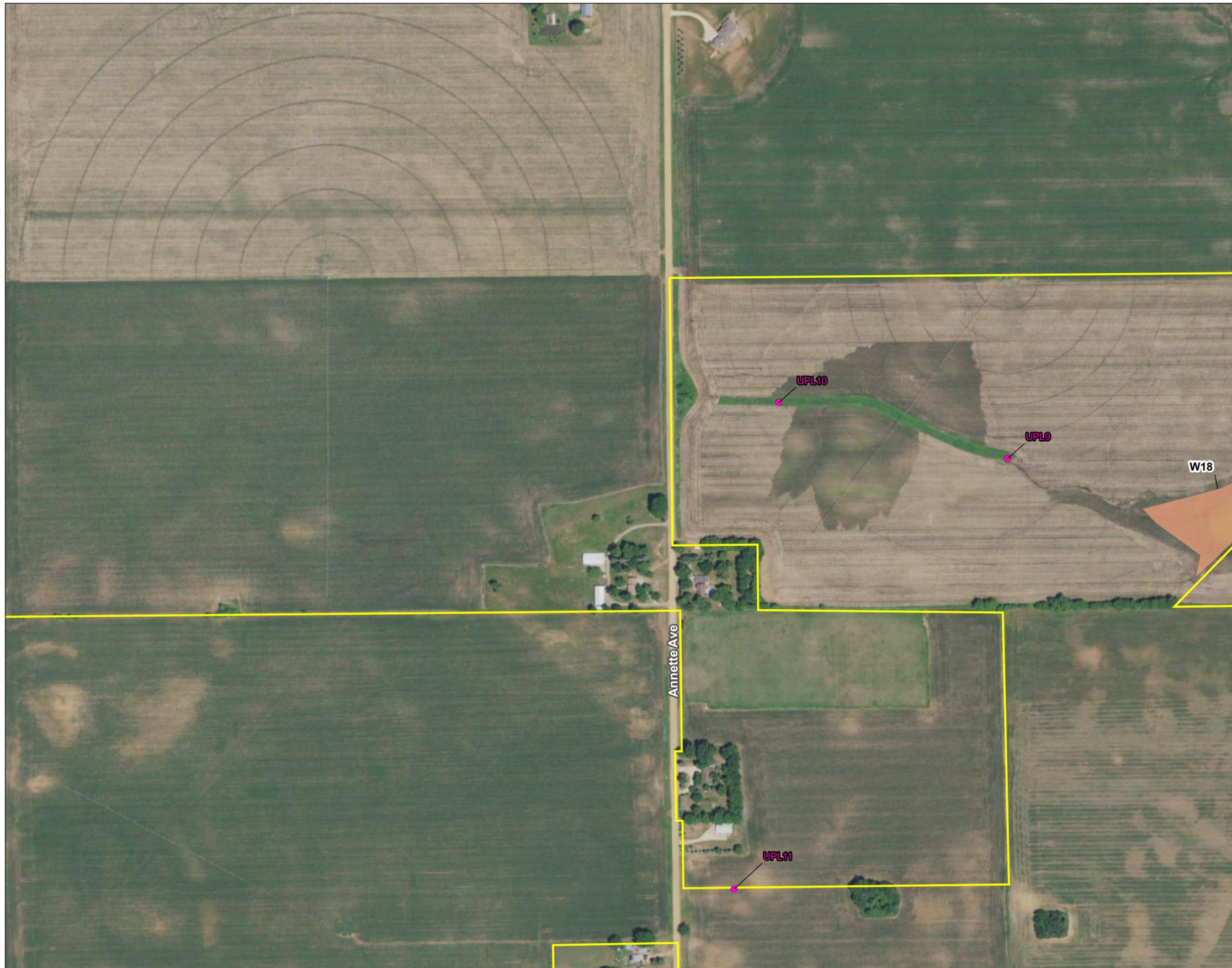


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193709215

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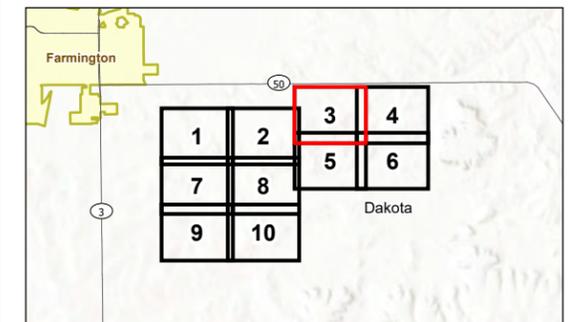
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IR by JK on 2024-03-18



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 Castle Rock Solar Project

193709215

Project Location  
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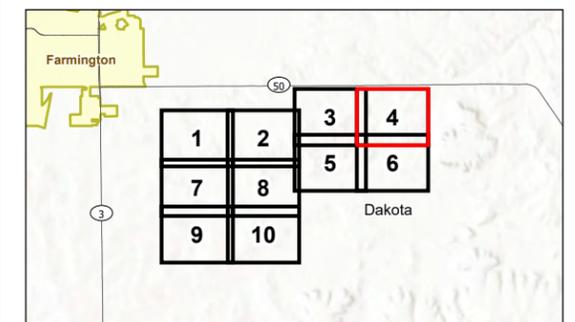
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193709215

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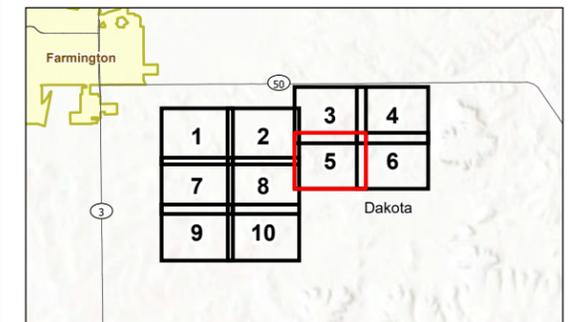
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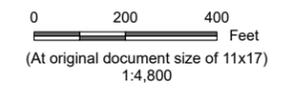
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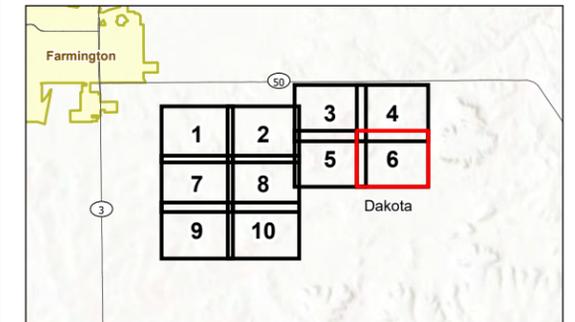
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- Area not field verified by TEP



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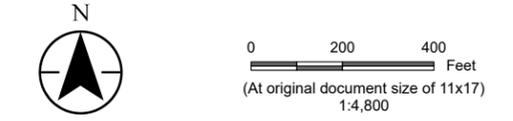
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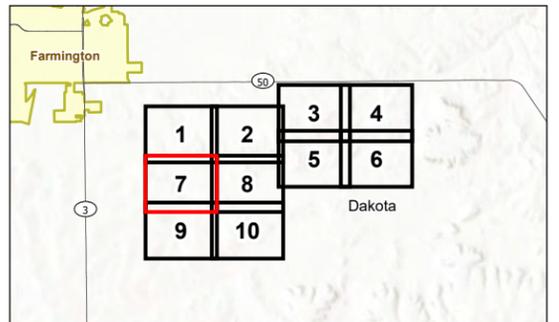
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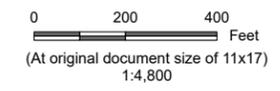
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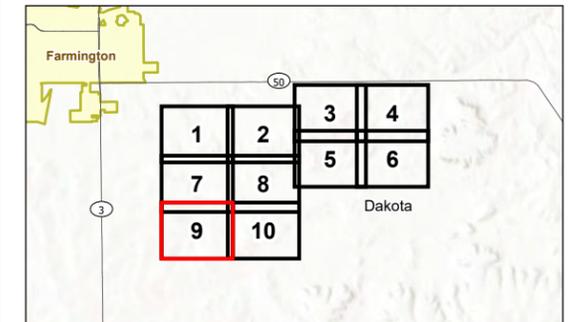
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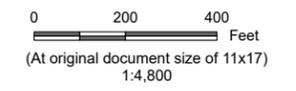
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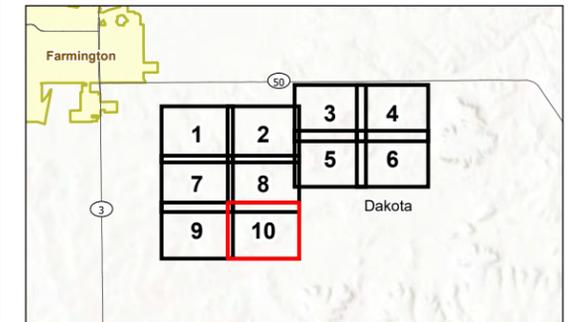
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- Floodplain Forest
- Hardwood Swamp
- Sedge Meadow
- Shallow Marsh
- Shrub-Carr
- Wet Meadow



**Notes**  
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet  
 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
 3. Background: NAIP 2021





## Wetland Delineation Report

Castle Rock Solar Project

Dakota County, MN

Stantec Project #:193709215

December 23, 2024

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# WETLAND DELINEATION REPORT

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## 1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) performed a wetland and waterway determination and delineation of the proposed Castle Rock Solar Project (the “Study Area”) on behalf of Castle Rock Solar LLC. The Castle Rock Solar Project is a proposed development of a 150-megawatt solar energy generation facility. The Study Area is approximately 1,314.7 acres in size and located in Castle Rock Township in Dakota County, Minnesota (**Table 1**). The Study Area is located southeast of the City of Farmington and west of the City of Hampton. The Study Area is west of U.S. Highway 52 and bisected by 230<sup>th</sup> St (**Appendix A, Figure 1**).

**Table 1. Townships, Ranges, and Sections Intersected by the Study Area**

Township Name	Township, Range	Sections
Castle Rock	T113N, R19W	2-4, 9,10

The purpose and objective of this field effort was to identify the extent and spatial arrangement of wetlands and waterways within the Study Area. The field investigations were performed October 17-21, 2022, and October 11-12, 2023.

The northwest corner of the Study Area has a previously approved wetland delineation which was completed by Kimley-Horn and Associates in October 2023. The Notice of Decision (NOD) was issued for the delineation of 314 acres of Section 4 in Township 113 North, Range 19 West by the Local Government Unit (LGU) on February 23, 2024. The NOD and associated wetland figures are included in **Appendix F**.

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 U.S. Army Corps of Engineers (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 Wetland Conservation Act Rules Chapter 8420 and administered by an LGU. LGUs can be a City, County, Watershed District or Soil and Water Conservation District (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 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). The tool compares 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. However, review of waterway characteristics and determination of navigability and jurisdiction was beyond the scope of the investigation.

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### 3.0 RESULTS

#### 3.1 SITE DESCRIPTION

The Study Area is comprised primarily of active agricultural fields, one prairie, several wetlands, and a few small, forested areas. The Study Area also contains one named waterway and three tributaries which function as agricultural ditches. The Study Area is used primarily for agriculture; agricultural land in the Study Area was planted with field corn and soybeans. The Study Area is relatively flat and generally averaged between 876 and 960 feet above mean sea level (msl) with occasional gently rolling terrain. An existing transmission line exists just south of the Study Area.

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 clayey soils, particularly in the farmed areas.

**Table 2. Summary of Soils Identified within the Study Area**

Soil Symbol	Soil Unit Name	Acreage	% of Study Area	Hydric Soil Rating
39B	Wadena loam, 2 to 6 percent slopes	242.82	18.47%	0
378	Maxfield silty clay loam	120.99	9.20%	95
611C	Hawick gravelly sandy loam, 6 to 12 percent slopes	114.76	8.73%	0
2B	Ostrander loam, 1 to 6 percent slopes	101.59	7.73%	0
213B	Klinger silt loam, 1 to 5 percent slopes	81.71	6.22%	5
415B	Kanaranzi loam, 2 to 6 percent slopes	87.76	6.68%	0
411B	Waukegan silt loam, 1 to 6 percent slopes	77.09	5.86%	0
1896B	Ostrander-Carmi loams, 2 to 6 percent slopes	67.77	5.16%	0
539	Klossner muck, 0 to 1 percent slopes	56.59	4.30%	100
301B	Lindstrom silt loam, 1 to 4 percent slopes	46.11	3.51%	0
41B	Estherville sandy loam, 2 to 6 percent slopes	30.91	2.35%	1
129	Cylinder loam, 0 to 2 percent slopes	28.25	2.15%	15
2C	Ostrander loam, 6 to 12 percent slopes	28.21	2.15%	0
1894B	Winnebago loam, 2 to 6 percent slopes	26.45	2.01%	0
81C	Boone loamy fine sand, 6 to 12 percent slopes	24.85	1.89%	0

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Soil Symbol	Soil Unit Name	Acreage	% of Study Area	Hydric Soil Rating
1055	Aquolls and Histosols, ponded	24.43	1.86%	100
98	Colo silt loam, occasionally flooded	17.33	1.32%	95
27B	Dickinson sandy loam, 2 to 6 percent slopes	15.76	1.20%	0
611D	Hawick gravelly sandy loam, 12 to 20 percent slopes	13.57	1.03%	0
409B	Etter fine sandy loam, 2 to 6 percent slopes	13.01	0.99%	0
495	Zumbro fine sandy loam	9.86	0.75%	0
81B	Boone loamy fine sand, 2 to 6 percent slopes	7.99	0.61%	0
1895B	Carmi loam, 2 to 8 percent slopes	7.10	0.54%	5
151D	Burkhardt sandy loam, 12 to 18 percent slopes	7.06	0.54%	0
151C	Burkhardt sandy loam, 6 to 12 percent slopes	6.54	0.50%	0
252	Marshan silty clay loam	6.25	0.48%	90
409C	Etter fine sandy loam, 6 to 12 percent slopes	6.02	0.46%	0
250	Kennebec silt loam	5.94	0.45%	0
208	Kato silty clay loam	5.59	0.43%	95
299B	Rockton loam, 2 to 6 percent slopes	5.54	0.42%	0
283B	Plainfield loamy sand, 2 to 6 percent slopes	4.86	0.37%	0
39C	Wadena loam, 6 to 12 percent slopes	4.80	0.37%	0
313	Spillville loam, 0 to 2 percent slopes, occasionally flooded	4.61	0.35%	10
415C	Kanaranzi loam, 6 to 12 percent slopes	3.22	0.24%	0
283A	Plainfield loamy sand, 0 to 2 percent slopes	2.67	0.20%	0
411C	Waukegan silt loam, 6 to 12 percent slopes	2.40	0.18%	0
W	Water	1.91	0.15%	0
1078	Anthropotic Udorthents, 2 to 9 percent slopes	1.70	0.13%	0
176	Garwin silty clay loam	0.56	0.04%	95

The MNDNR Protected/Public Waters map identified one DNR protected watercourse, Vermillion River South Branch (M-049-005), within the Study Area (**Appendix A, Figure 3**). The Vermillion River South Branch generally flows west to northeast through the entire Study Area.

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The National Wetland Inventory (NWI) map identified a number of wetlands and wetland complexes within the Study Area, as shown in **Appendix A, Figure 4**. Wetlands identified by the NWI include emergent, forested/shrub, riverine, and freshwater pond wetlands.

### 3.2 CLIMATIC CONDITIONS

Precipitation was analyzed for October 17-21, 2022, and October 11-12, 2023, each day field surveys were conducted, using the USACE APT which compares precipitation totals from the three months prior to the date of the survey with 30-year normal amounts, calculating a weighted multi-month score and determining the climate conditions (dry, normal, wet), as described in Section 2.1. Antecedent precipitation conditions were considered *drier than normal* prior to the site visits conducted October 17-21, 2022, and were considered *normal* prior to the site visits conducted October 11-12, 2023, as shown in the APT figures and tables in **Appendix D**.

### 3.3 WETLANDS

Fourteen wetlands 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, Figures 5-6**.

Eight wetlands were delineated by Kimley-Horn in the northwest portion of the Study Area in 2023 and approved by the LGU. These wetlands are denoted by the KH prefix in **Table 3** and shown in **Appendix A, Figures 5-6**. More detail regarding the Kimley-Horn delineation is provided in **Appendix F**.

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**Table 3. Summary of Wetlands Identified within the Study Area**

Wetland ID	Wetland Type*	Adjacent Surface Waters	Area in Study Area (acres)	Latitude	Longitude
W1	Degraded Wet Meadow	KH-ES2, KH-W5	0.61	44.616053	-93.102030
W2	Hardwood Swamp, Farmed Wetland, Degraded Wet Meadow, Sedge Meadow, Shrub-Carr	Vermillion River, South Branch (M-049-005)	42.06	44.61319	-93.102333
W3	Degraded Wet Meadow	---	0.50	44.614192	-93.099512
W4	Degraded Wet Meadow	---	0.64	44.603061	-93.102429
W5	Farmed Wetland, Degraded Wet Meadow	---	0.02	44.616016	-93.089334
W6	Farmed Wetland, Degraded Wet Meadow	S2	0.31	44.61807	-93.087626
W7	Hardwood Swamp, Degraded Wet Meadow	S2	1.15	44.616523	-93.086045
W8	Hardwood Swamp, Farmed Wetland, Degraded Wet Meadow	S3, S4	13.61	44.607854	-93.111032
W9	Hardwood Swamp, Floodplain Forest, Degraded Wet Meadow, Sedge Meadow, Shallow Marsh, Shrub-Carr	Vermillion River, South Branch (M-049-005)	39.31	44.608531	-93.093644
W10	Hardwood Swamp, Farmed Wetland, Degraded Wet Meadow, Shrub-Carr	---	4.99	44.614164	-93.092036
W11	Farmed Wetland	---	0.86	44.616328	-93.091237
W15	Floodplain Forest, Shrub-Carr	Vermillion River, South Branch (M-049-005)	14.84	44.616897	-93.063227
W16	Degraded Wet Meadow	OW1	1.47	44.622384	-93.063439

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Wetland ID	Wetland Type*	Adjacent Surface Waters	Area in Study Area (acres)	Latitude	Longitude
W18	Floodplain Forest, Farmed Wetland, Wet Meadow	---	3.32	44.625181	-93.06566
KH-W1	Degraded Wet Meadow, Shallow Marsh	Vermillion River, South Branch (M-049-005)	4.60	44.61641	-93.114541
KH-W2	Farmed Wetland	---	0.24	44.617363	-93.106975
KH-W3	Degraded Wet Meadow, Shallow Marsh, Shrub-Carr	KH-ES1, KH-ES2	1.54	44.617137	-93.105185
KH-W4	Farmed Wetland	---	0.60	44.616557	-93.103640
KH-W5	Degraded Wet Meadow, Shrub-Carr	---	4.04	44.616778	-93.098866
KH-W6	Farmed Wetland	---	0.44	44.619886	-93.106784
KH-W7	Farmed Wetland	---	1.32	44.622956	-93.110839
KH-W8	Farmed Wetland	---	0.64	44.621017	-93.109584
		<b>TOTAL</b>	<b>137.10 acres</b>		

\*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

#### Hardwood Swamp

Five hardwood swamp wetland communities (W2, W7, W8, W9, W10) were delineated within the Study Area during the field surveys. Dominant species included silver maple (*Acer saccharinum*, FACW), boxelder (*Acer negundo*, FAC), red maple (*Acer rubrum*, FAC), and eastern cottonwood (*Populus deltoides*, FAC) in the overstory, and dominant shrub and herbaceous species included red-osier dogwood (*Cornus sericea*, FACW), common buckthorn (*Rhamnus cathartica*, FAC), sandbar willow (*Salix interior*, FACW), stinging nettle (*Urtica dioica*, FACW) and reed canary grass (*Phalaris arundinacea*, FACW).

Kimley-Horn did not delineate any wetlands with hardwood swamp wetland communities.

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### Floodplain Forest

Three floodplain forest wetland communities (W9, W15, W18) were delineated within the Study Area during the field surveys. Dominant species included silver maple, boxelder, and eastern cottonwood in the overstory, and dominant shrub and herbaceous species included black willow (*Salix nigra*, OBL), sandbar willow, red-osier dogwood, common buckthorn, reed canary grass, and wild red raspberry (*Rubus idaeus*, FACU).

Kimley-Horn did not delineate any wetlands with floodplain forest wetland communities.

### Farmed Wetland

Seven farmed wetland communities (W2, W5, W6, W8, W10, W11, W18) were delineated within the Study Area during the field surveys. The vegetation in these wetlands was typically disturbed by row cropping with corn or soybeans. Of the volunteer vegetation present, it was often dominated by reed canary grass, fall panic grass (*Panicum dichotomiflorum*, FACW), witchgrass (*Panicum capillare*, FAC), and yellow nutsedge (*Cyperus esculentus*, FACW).

Kimley-Horn delineated five wetlands (KH-W2, KH-W4, KH-W6, KH-W7, KH-W8) with farmed (seasonally flooded basin) wetland communities.

### Degraded Wet Meadow

Eleven degraded wet meadow wetland communities (W1-W10, W16) were delineated within the Study Area during the field survey. The vegetation in these wetlands was typically disturbed and dominated by the invasive reed canary grass. Other present vegetation included yellow nutsedge and hybrid cattail (*Typha x glauca*, OBL).

Kimley-Horn delineated three wetlands (KH-W1, KH-W3, KH-W5) with degraded wetland communities.

### Wet Meadow

One wet meadow wetland community (W18) was delineated within the Study Area during the field survey. Dominant species included the following species in the herbaceous layer: reed canary grass, fall panic grass, and stinging nettle. In the shrub layer red-osier dogwood was present in lesser amounts (less than 50%).

Kimley-Horn did not delineate any wetlands with degraded wet meadow wetland communities.

### Sedge Meadow

Two sedge meadow wetland communities (W2, W9) were delineated within the Study Area during the field survey. Dominant species included tussock sedge (*Carex stricta*, OBL), lake sedge (*Carex lacustris*, OBL), and Canada bluejoint (*Calamagrostis canadensis*, OBL).

Kimley-Horn did not delineate any wetlands with sedge meadow wetland communities.

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### Shallow Marsh

One shallow marsh wetland community (W9) was delineated within the Study Area during the field survey. Dominant species include hybrid cattail and American reed manna grass (*Glyceria grandis*, OBL).

Kimley-Horn delineated two wetlands (KH-W1, KH-W3) with shallow marsh wetland communities.

### Shrub-Carr

Four shrub-carr wetland communities (W2, W9, W10, W15) were delineated within the Study Area during the field surveys. Dominant species in the shrub layer included red-osier dogwood, common buckthorn, and sandbar willow, and herbaceous layer species included giant goldenrod (*Solidago gigantea*, FACW), stinging nettle, tussock sedge, reed canary grass, and hybrid cattail.

Kimley-Horn delineated two wetlands (KH-W3, KH-W5) with degraded wetland communities.

### 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), Thick Dark Surface (A12), and Other.

### 3.3.3 Hydrology

A variety of wetland hydrology indicators were observed at wetlands within the Study Area. Primary indicators of hydrology included Saturation (A3). Secondary indicators of hydrology observed at the wetlands were Geomorphic Position (D2), a positive FAC-Neutral Test (D5), Saturation Visible on Aerial Imagery (C9), Drainage Patterns (B10), Dry-Season Water Table (C2), and Surface Soil Cracks (B6). 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

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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 July 2008, July 2010, September 2015, August 2017, and July 2019 were taken under “normal” precipitation conditions. The historical precipitation analysis is documented in **Appendix E**. An additional four normal year photos (Spring 2016, Spring 2017, October 2018, and September 2021) from the Dakota County historical aerial photographs were reviewed for nine specific areas of concern (AWS-31 through AWS-39) at the request of the Technical Evaluation Panel (TEP). The historical precipitation analysis for the additional aerial photos is documented in **Appendix E2**.

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. Seventeen areas had a wetland signature in at least one out of five normal years and are identified on the aerial photos (**Figures 7-13**) in **Appendix E** as Areas AWS-1 through AWS-10, AWS-12, AWS-13, AWS-25, AWS-26, and AWS-28 through AWS-30. Of these seventeen areas, fourteen were located within mapped hydric soil units and nine were identified within mapped NWI wetlands.

In the nine additional areas of review, seven areas had a wetland signature in at least one of the six normal years and are identified on the aerial photos (**Figures 14-21**) in **Appendix E2** as Areas AWS-31 through AWS-33, AWS-36 through AWS-39). Based on offsite aerial review, one area was determined to be not wetland, and eight 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 each original offsite evaluation area 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 E2** 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. These areas generally had hydric soils, but no hydrophytic vegetation or hydrology indicators. Many of the areas had tile inlets present in the lowest area of the area of interest, indicating that the areas are effectively drained. During the field investigation, wetlands were determined to be present in locations within fourteen of the evaluation areas. When field verified, areas AWS-2 and AWS-29 did not meet hydric soil or hydrology indicators and AWS-30 did not meet hydrology indicators, therefore, these areas were determined to be upland for not meeting all three wetland criteria. **Figures 7-13**, located in **Appendix E**, illustrate the evaluation areas overlaid on each year of imagery reviewed.

During the TEP field reviews on October 2 and 29, 2024, the nine additional areas were field verified with the presence of the TEP members. Wetlands were determined to be present in six of the areas of interest. Areas AWS-33, AWS-34, and AWS-39 were determined to be upland for the areas did not meet hydrology or hydric soil indicators. Field verification for areas AWS-35, AWS-36, and AWS-39 were completed along

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with TEP members. Soil samples were taken in each of the areas of interest. At areas AWS-35 and AWS-36 wetland hydrology was determined to be met based on the presence of secondary hydrology indicators Surface Soil Cracks (B6) and Geomorphic Position (D2). Hydrophytic vegetation at the two areas included blue monkeyflower (*Mimulus ringens*, OBL), bog yellow cress (*Rorippa palustris*, OBL), and witchgrass (*Panicum capillare*, FAC). Area AWS-39 was determined to be a hay crop field that did not meet hydrophytic vegetation or hydrology indicators and was therefore not considered wetland.

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 drown 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, prairie, grassland, and upland forest. Agricultural crops planted within the Study Area included field corn and soybeans.

Tree species in upland areas were dominated by jack pine (*Pinus banksiana*, FACU), black cherry (*Prunus serotina*, FACU), eastern cottonwood, Siberian elm (*Ulmus pumila*, UPL), boxelder, silver maple, red maple, and white pine (*Pinus strobus*, FACU). Shrubs in upland areas included Tartarian honeysuckle (*Lonicera tatarica*, FACU), smooth sumac (*Rhus glabra*, UPL), and common buckthorn. Herbaceous vegetation found in uplands within the Study Area included smooth brome (*Bromus inermis*, UPL), Kentucky bluegrass (*Poa pratensis*, FAC), orchard grass (*Dactylis glomerata*, FACU), Canada goldenrod (*Solidago canadensis*, FACU), Canada thistle (*Cirsium arvense*, FACU), wild bergamot (*Monarda fistulosa*, FACU), black-eyed Susan (*Rudbeckia hirta*, FACU), yellow foxtail (*Setaria pumila*, FAC), common burdock (*Arctium minus*, FACU), fall panic grass, white sweet clover (*Melilotus alba*, UPL), Canada wild rye (*Elymus canadensis*, FACU), white snakeroot (*Ageratina altissima*, FACU), and alfalfa (*Medicago sativa*, FACU).

### 3.5 WATERWAYS AND WATERBODIES

A total of four waterways and one waterbody were identified and delineated within the Study Area by Stantec. The MNDNR Protected/Public Waters Inventory (PWI) includes one DNR protected watercourse, South Branch Vermillion River (M-049-005), within the Study Area (**Appendix A, Figure 3**), which corresponds with the field delineated Waterway S1, and generally crosses west to northeast through the Study Area. Waterway S3, which corresponds with Tributary No. 5 to South Branch Vermillion River, flows from the south and crosses through the southwestern portion of the Study Area before joining with the Vermillion River South Branch. Waterways S2 and S4 are currently utilized as agricultural ditches. Waterway S4 has been channelized to connect with S3. The one waterbody (OW1) is an open water feature totaling 3.25 acres. W16 forms a wetland fringe around the edge of OW1.

Two ephemeral waterways were delineated by Kimley-Horn in 2023. Both KH-ES1 and KH-ES2 are associated with KH-W3.

The waterways are summarized in **Table 4** below. Locations of the waterways and waterbody are shown in **Appendix A, Figure 5-6**. Representative photographs are included in **Appendix C**.

## WETLAND DELINEATION REPORT

Castle Rock Solar Project  
Results  
December 2024

**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)
S1	Vermillion River, South Branch (M-049-005)	Perennial	18 ft, 3 ft	20 ft, 1-2 ft	5,948
S2	--	Perennial	4 ft, 3 ft	10 ft, 4 ft	643
S3	--	Perennial	3.5 ft, 0.60 ft	5 ft, 4 ft	3,442
S4	--	Perennial	2.5 ft, 0.75 ft	10 ft, 5 ft	1,485
KH-ES1	--	Ephemeral	2 ft, 1 ft	--	597
KH-ES2	--	Ephemeral	2 ft, 1 ft	--	154
				<b>Total</b>	<b>12,269</b>

### 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.

## WETLAND DELINEATION REPORT

Castle Rock Solar Project  
Conclusion  
December 2024

### 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. The Study Area is 1314.70 acres in size and located in Sections 2-4, 9, and 10, 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 **fourteen wetlands, four waterways, and one waterbody** 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 **123.70 acres** of wetlands, **11,518 linear feet** of waterways, and **3.25 acres** of a waterbody delineated within the Study Area by Stantec. Wetlands were composed of hardwood swamp, floodplain forest, farmed wetland, degraded wet meadow, wet meadow, sedge meadow, shallow marsh, and shrub-carr wetland communities. An additional eight wetlands and two waterways were previously delineated by Kimley-Horn (**Appendix F**). Uplands within the Study Area were primarily composed of cultivated cropland, with some grassland and upland forest also present.

The USACE has regulatory authority over Waters of the U.S. 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 the Wetland Conservation Act 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, 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 U.S. Army Corps of Engineers and the LGU administering the Wetland Conservation Act.

## WETLAND DELINEATION REPORT

Castle Rock Solar Project  
References  
December 2024

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## WETLAND DELINEATION REPORT

Castle Rock Solar Project  
References  
December 2024

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## WETLAND DELINEATION REPORT

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 Overview

Figure 6. Field Collected Data

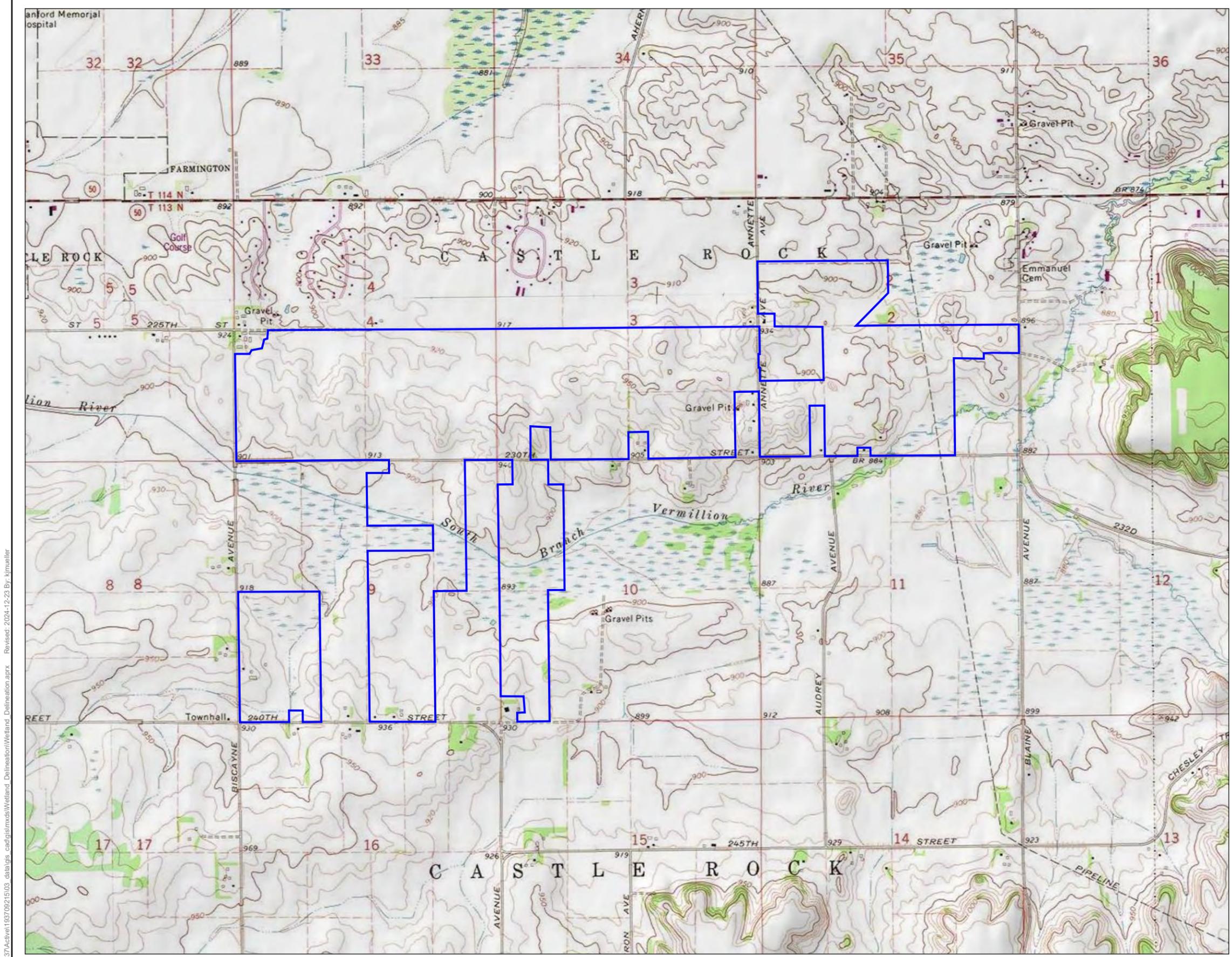


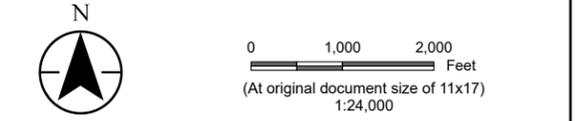
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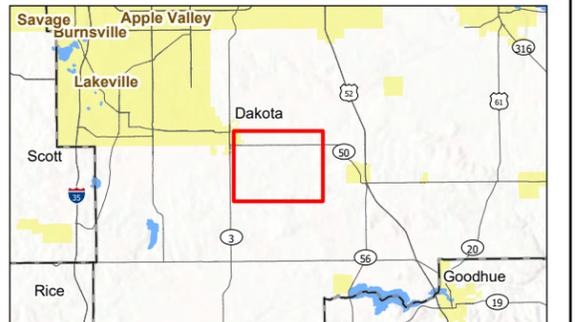
Client/Project  
Castle Rock Solar LLC  
Castle Rock Solar Project

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

Prepared by JDS on 2024-01-29  
TR by SP on 2024-01-30  
IR by JK on 2024-03-18



Legend  
 Project Boundary



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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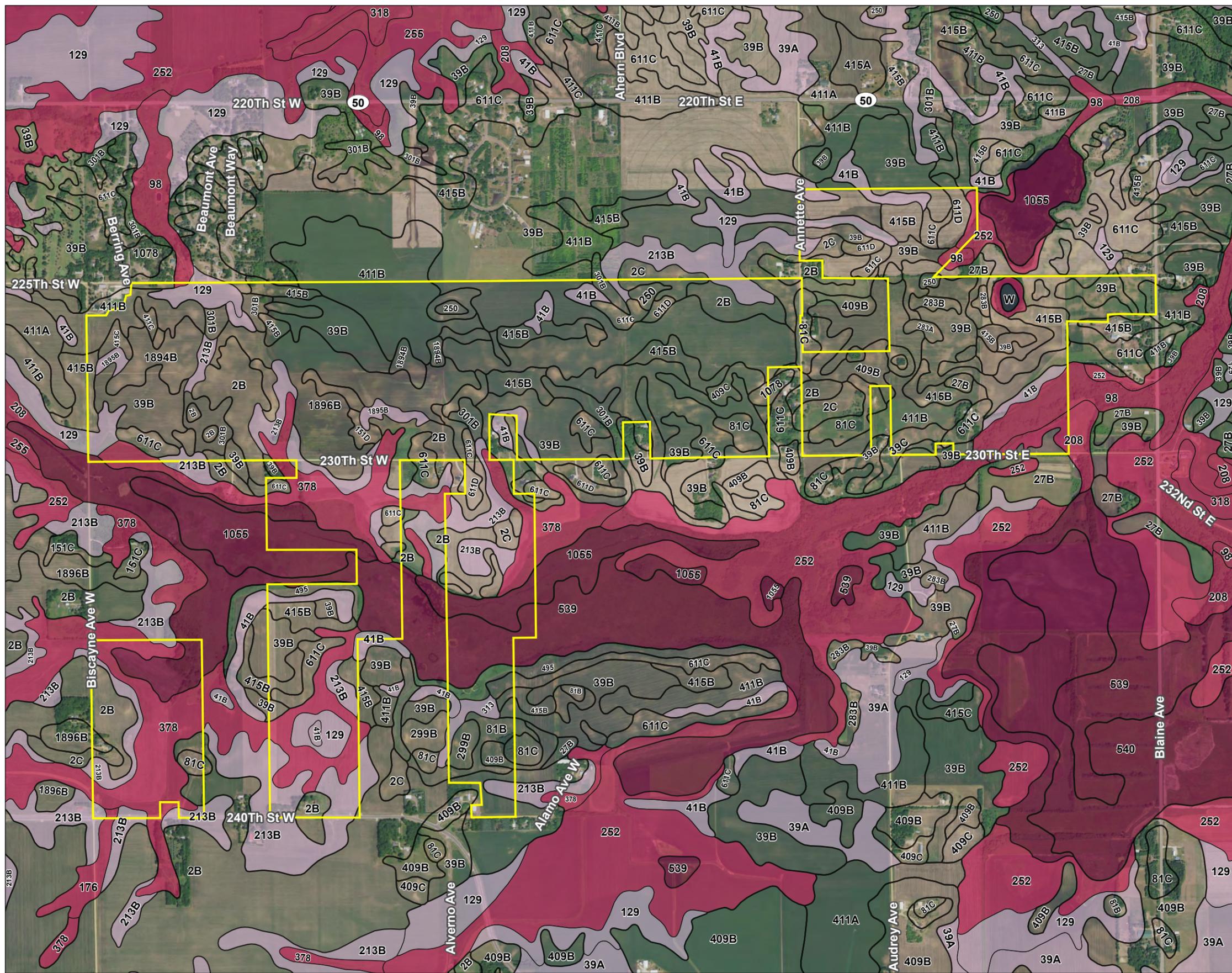
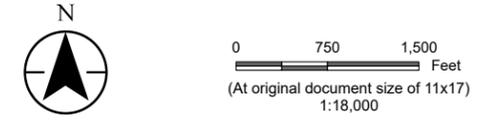


Figure No. **2**  
Title **NRCS Soil Survey Data Hydric Ratings**

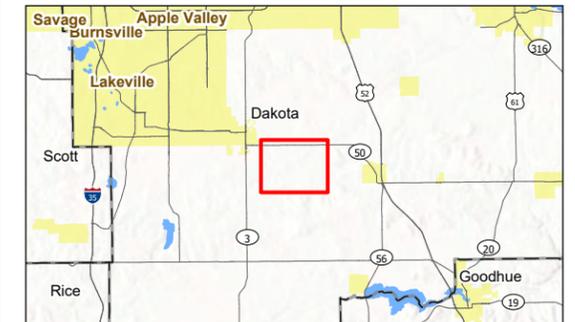
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Castle Rock Solar Project** 193709215

Project Location **T. of Castle Rock  
Dakota Co., MN** Prepared by JDS on 2024-01-29  
TR by SP on 2024-01-30  
IR by JK on 2024-03-18



- Legend
-  Project Boundary
  - 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, NADS, USGS, NRCS
  3. Background: NAIP 2021



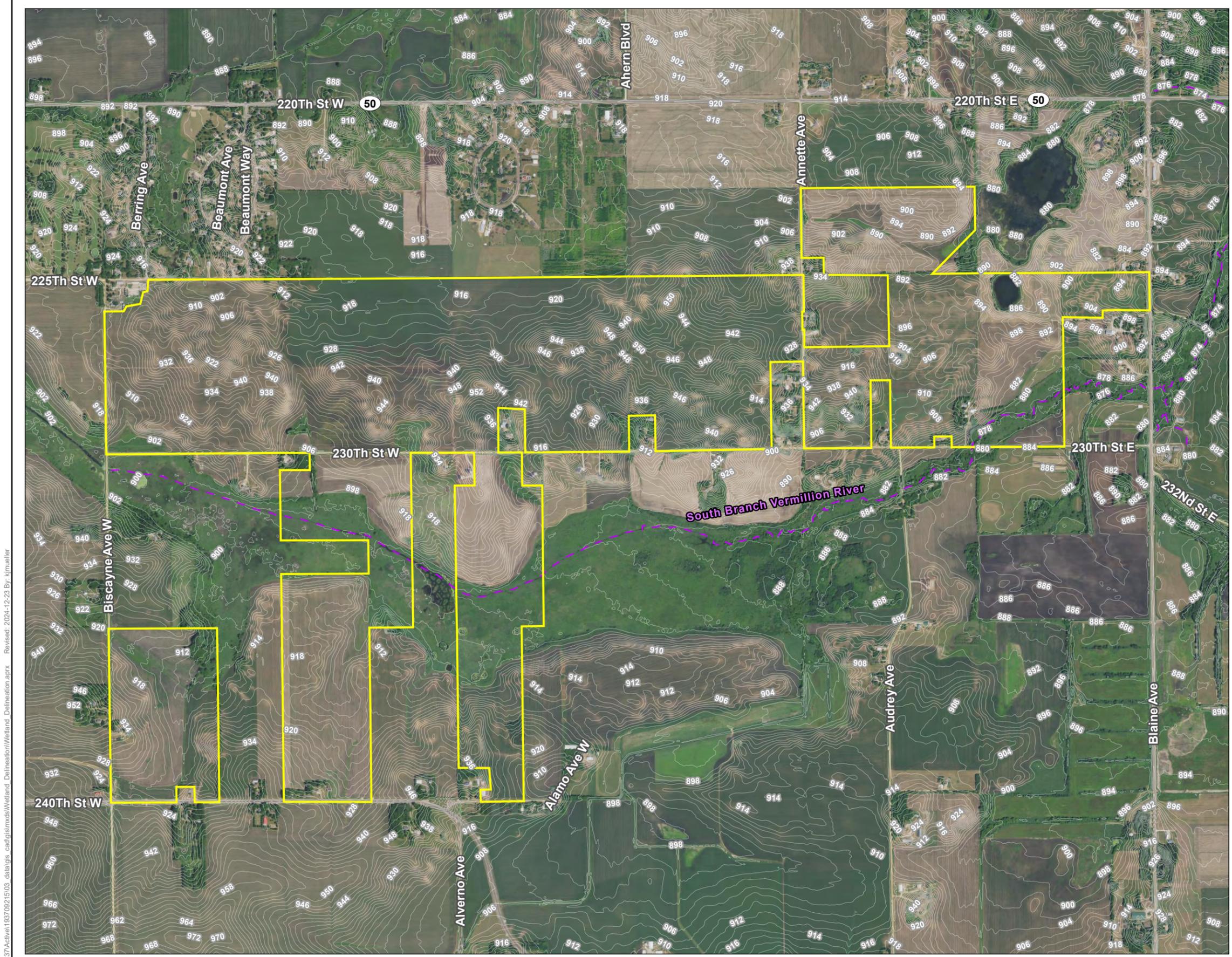
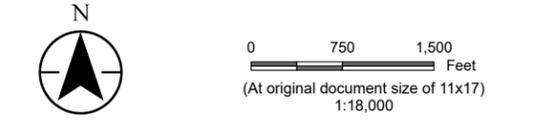


Figure No. **3**  
 Title **MN Protected/Public Waters Map**

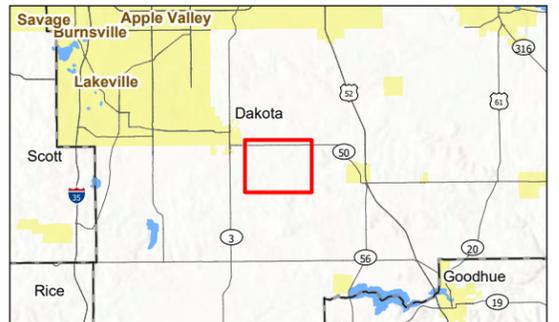
Client/Project **Castle Rock Solar LLC  
 Castle Rock Solar Project** 193709215

Project Location **T. of Castle Rock  
 Dakota Co., MN** Prepared by JDS on 2024-01-29  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



- Legend
- Project Boundary
  - 2 Ft Elevation Contour
  - MN DNR Protected Watercourse
  - MN DNR Protected Water\*
  - MN DNR Protected Wetland\*

\*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, NADS, USGS, MNDNR
  3. Background: NAIP 2021



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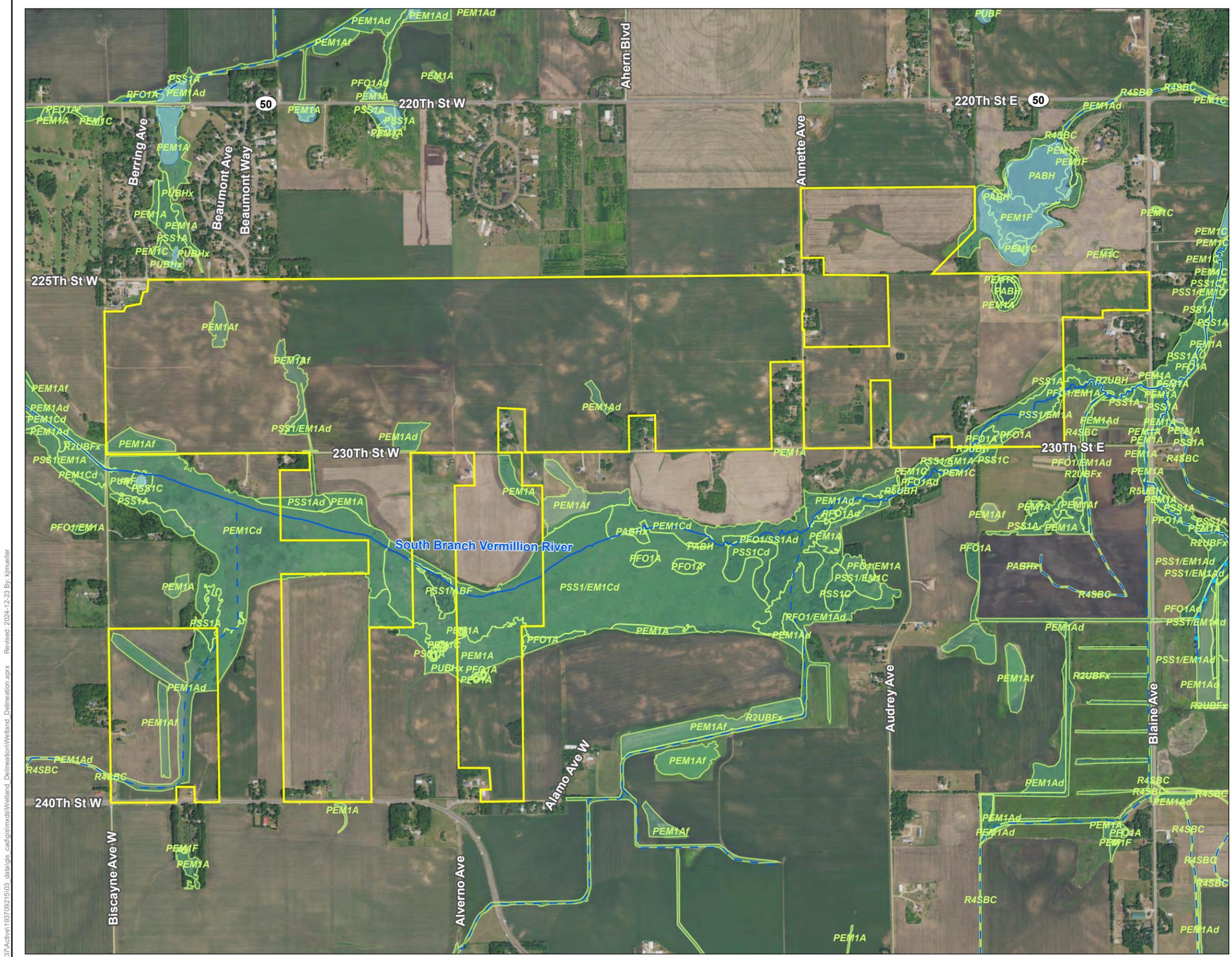


Figure No.

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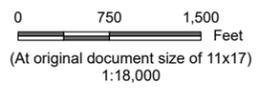
**NWI & NHD Map**

Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project

193709215

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

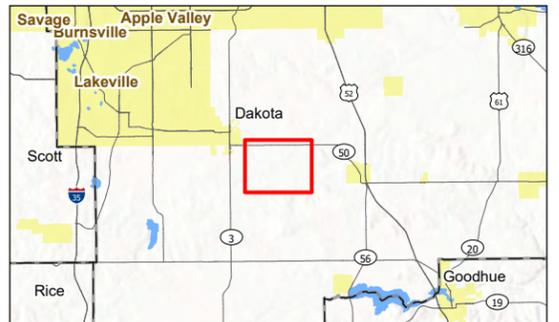
Prepared by JDS on 2024-01-29  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



**Legend**

- Project Boundary
- 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, NADS, USGS, USFWS
  3. Background: NAIP 2021



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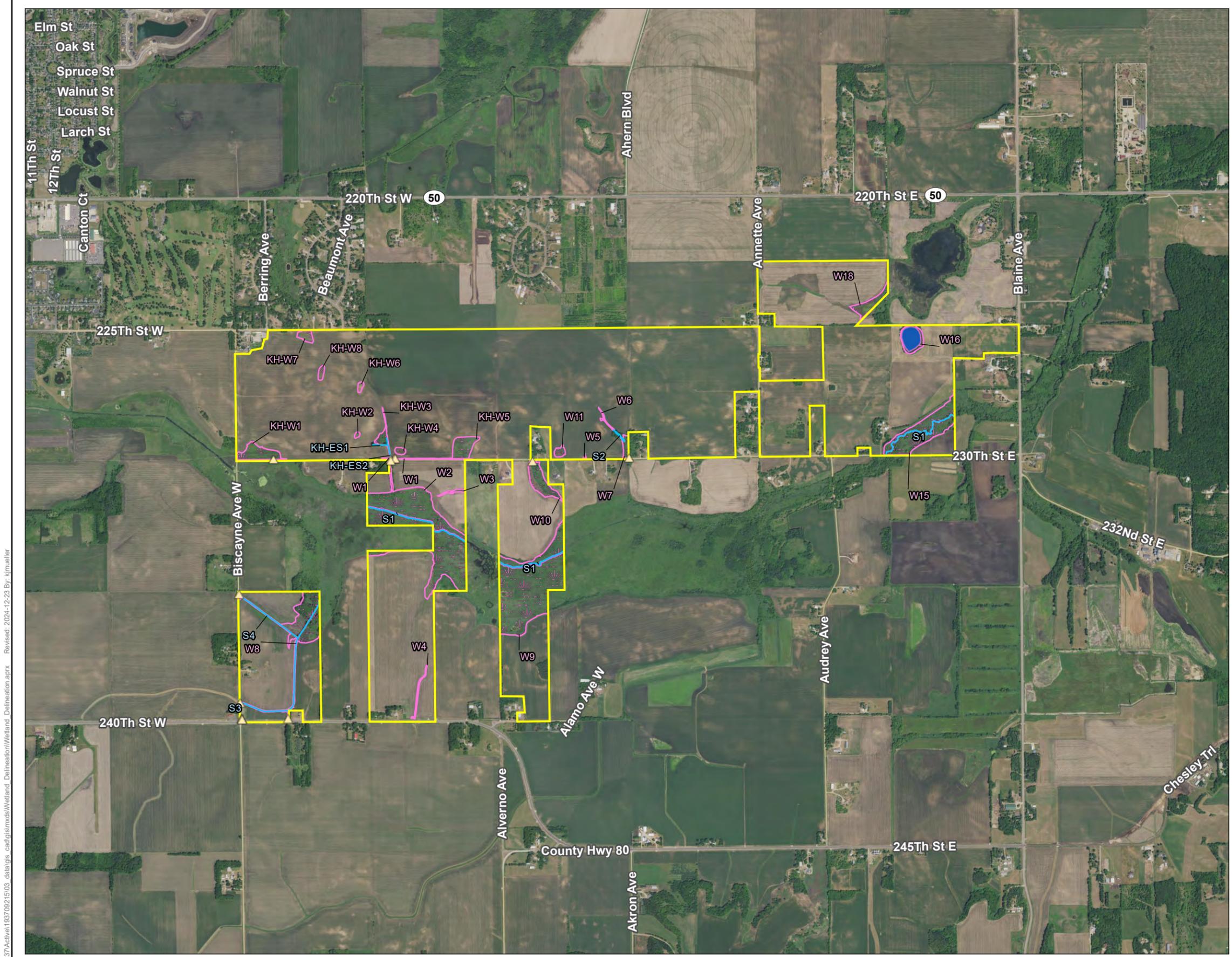
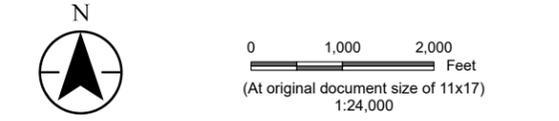


Figure No. **5**  
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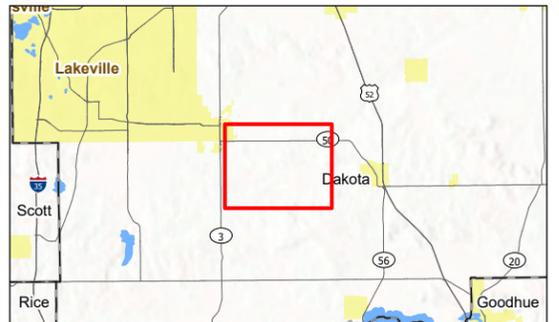
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**Castle Rock Solar Project**

Project Location **T. of Castle Rock, Dakota Co., MN** Prepared by KJM on 2024-10-23  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



- Legend**
- Project Boundary
  - Culvert
  - Field Delineated Waterway
  - Field Delineated Open Water Area
  - Field Delineated Wetland Area

\*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, NADS, USGS
  3. Background: NAIP 2021



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Figure No.

**6**

Title

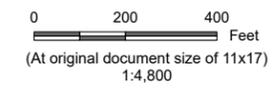
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Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project

193709215

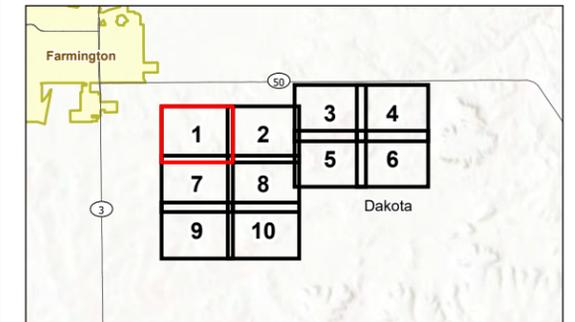
Project Location  
 T. of Castle Rock  
 Dakota Co., MN

Prepared by JDS on 2024-01-29  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



Legend

- Project Boundary
- Culvert
- Sample Point
- ~ Field Delineated Waterway
- Field Delineated Waterway Area
- Field Delineated Open Water Area
- Field Delineated Wetland Area
- Wetland Community Type
- Degraded Wet Meadow
- Farmed Wetland
- Floodplain Forest
- Hardwood Swamp
- Sedge Meadow
- Shallow Marsh
- Shrub-Carr
- Wet Meadow



Notes  
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet  
 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
 3. Background: NAIP 2021





Figure No.

**6**

Title

**Field Collected Data**

Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project

193709215

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

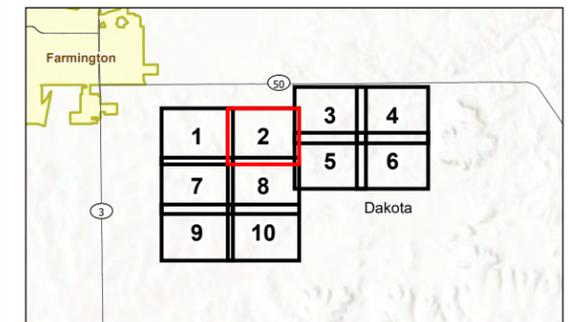
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 IR by JK on 2024-03-18



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Legend

- Project Boundary
- ▲ Culvert
- Sample Point
- ~ Field Delineated Waterway
- Field Delineated Waterway Area
- Field Delineated Open Water Area
- Field Delineated Wetland Area**
- Wetland Community Type**
- Degraded Wet Meadow
- Farmed Wetland
- Floodplain Forest
- Hardwood Swamp
- Sedge Meadow
- Shallow Marsh
- Shrub-Carr
- Wet Meadow



Notes  
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet  
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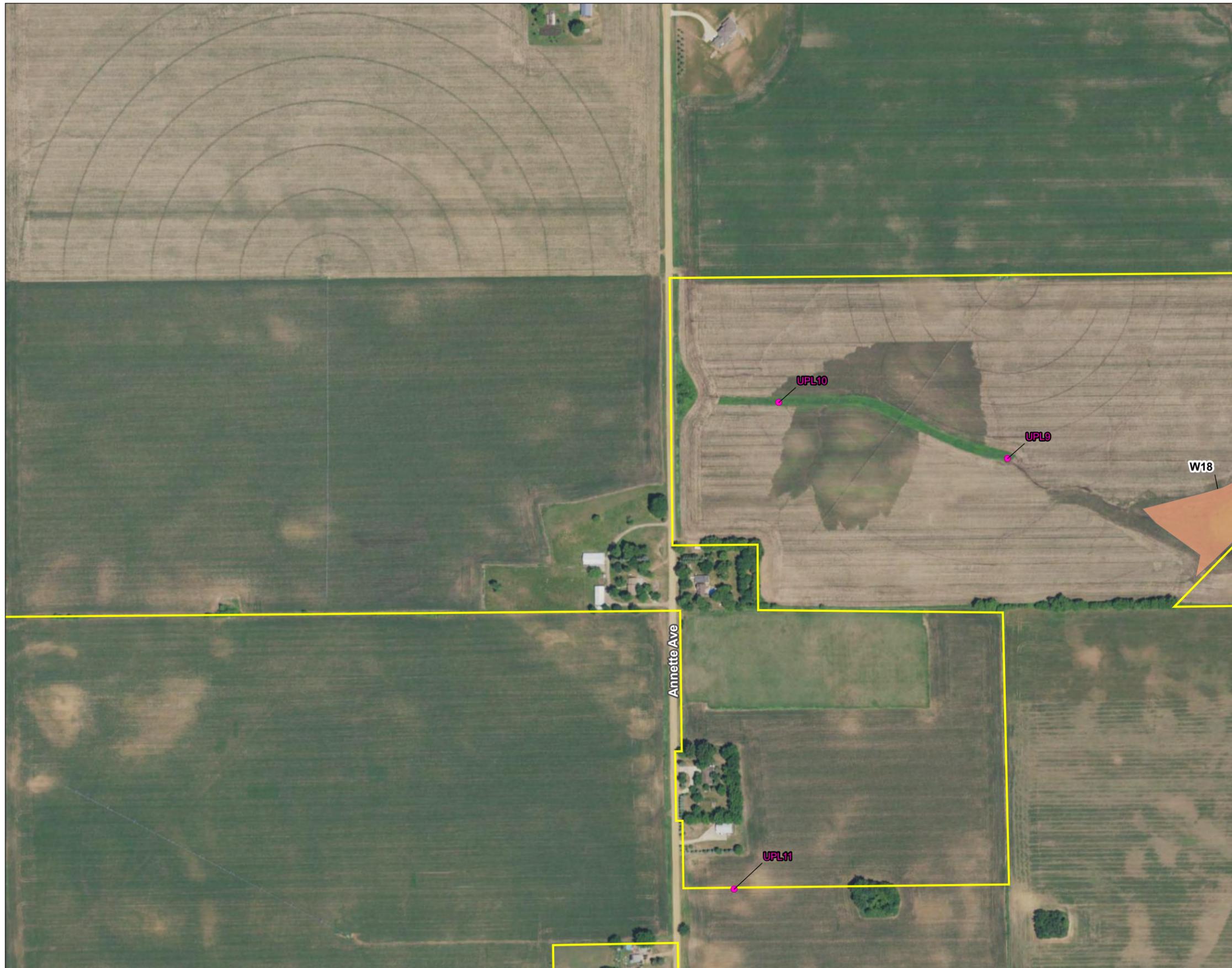


Figure No.

6

Title

Field Collected Data

Client/Project  
Castle Rock Solar LLC  
Castle Rock Solar Project

193709215

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

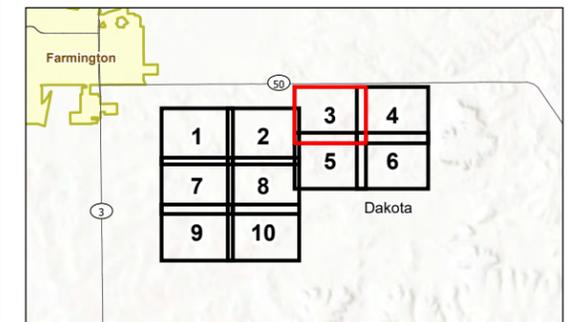
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IR by JK on 2024-03-18



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Feet  
(At original document size of 11x17)  
1:4,800

Legend

- Project Boundary
- Culvert
- Sample Point
- Field Delineated Waterway
- Field Delineated Waterway Area
- Field Delineated Open Water Area
- Field Delineated Wetland Area**
- Wetland Community Type**
- Degraded Wet Meadow
- Farmed Wetland
- Floodplain Forest
- Hardwood Swamp
- Sedge Meadow
- Shallow Marsh
- Shrub-Carr
- Wet Meadow



Notes  
1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet  
2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
3. Background: NAIP 2021



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Figure No.

**6**

Title

**Field Collected Data**

Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project

193709215

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

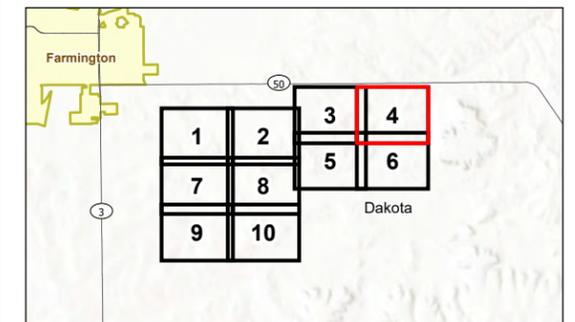
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 IR by JK on 2024-03-18



0 200 400 Feet  
 (At original document size of 11x17)  
 1:4,800

Legend

- Project Boundary
- Culvert
- Sample Point
- Field Delineated Waterway
- Field Delineated Waterway Area
- Field Delineated Open Water Area
- Field Delineated Wetland Area**
- Wetland Community Type**
- Degraded Wet Meadow
- Farmed Wetland
- Floodplain Forest
- Hardwood Swamp
- Sedge Meadow
- Shallow Marsh
- Shrub-Carr
- Wet Meadow



**Notes**  
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet  
 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
 3. Background: NAIP 2021





Figure No.

**6**

Title

**Field Collected Data**

Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project

193709215

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

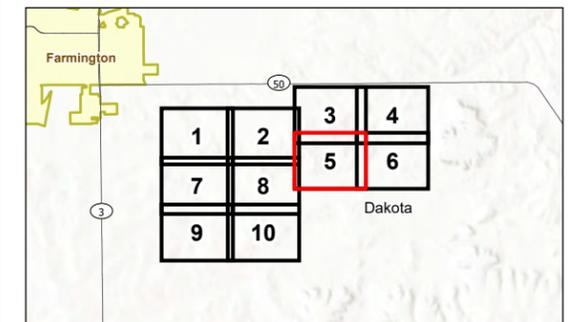
Prepared by JDS on 2024-01-29  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



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Legend

- Project Boundary
- Culvert
- Sample Point
- Field Delineated Waterway
- Field Delineated Waterway Area
- Field Delineated Open Water Area
- Field Delineated Wetland Area
- Wetland Community Type
- Degraded Wet Meadow
- Farmed Wetland
- Floodplain Forest
- Hardwood Swamp
- Sedge Meadow
- Shallow Marsh
- Shrub-Carr
- Wet Meadow



Notes  
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet  
 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
 3. Background: NAIP 2021



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Figure No.

**6**

Title

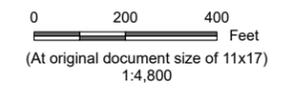
**Field Collected Data**

Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project

193709215

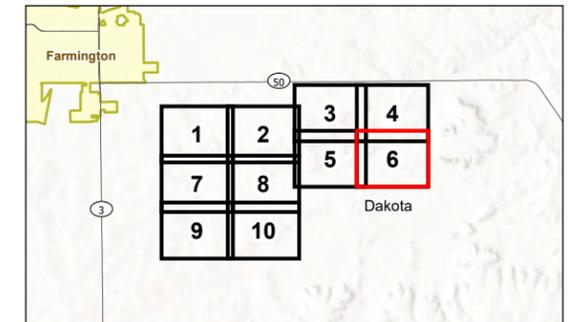
Project Location  
 T. of Castle Rock  
 Dakota Co., MN

Prepared by JDS on 2024-01-29  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



Legend

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- Hardwood Swamp
- Sedge Meadow
- Shallow Marsh
- Shrub-Carr
- Wet Meadow
- Area not field verified by TEP



Notes  
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet  
 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
 3. Background: NAIP 2021



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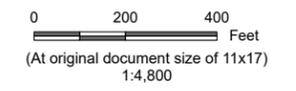
Figure No.

**6**

Title  
**Field Collected Data**

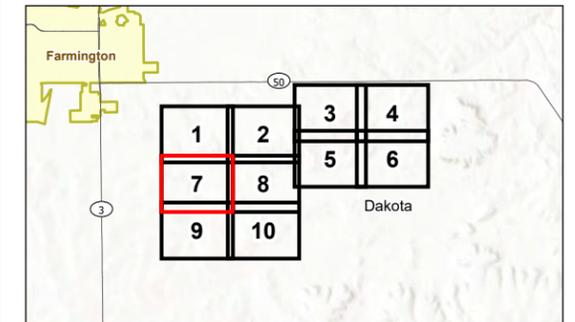
Client/Project  
Castle Rock Solar LLC  
Castle Rock Solar Project  
193709215

Project Location  
T. of Castle Rock  
Dakota Co., MN  
Prepared by JDS on 2024-01-29  
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Notes  
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 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
 3. Background: NAIP 2021





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Figure No.

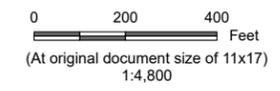
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Title

**Field Collected Data**

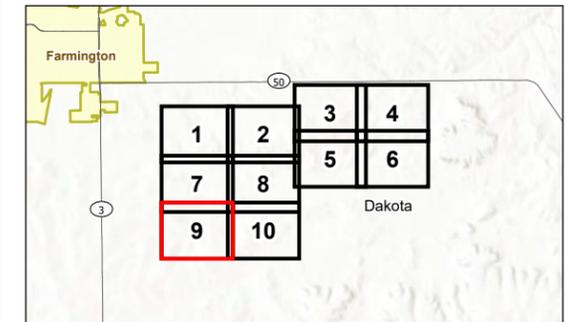
Client/Project  
 Castle Rock Solar LLC  
 Castle Rock Solar Project  
 193709215

Project Location  
 T. of Castle Rock  
 Dakota Co., MN  
 Prepared by JDS on 2024-01-29  
 TR by SP on 2024-01-30  
 IR by JK on 2024-03-18



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**Notes**  
 1. Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet  
 2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
 3. Background: NAIP 2021



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Figure No.

**6**

Title

**Field Collected Data**

Client/Project  
Castle Rock Solar LLC  
Castle Rock Solar Project

193709215

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

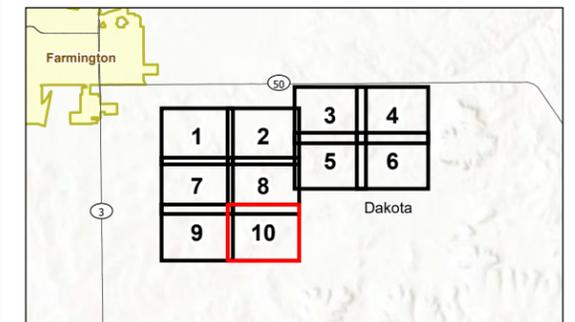
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**Notes**  
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2. Data Sources: Stantec, Castle Rock Solar LLC, NADS, USGS  
3. Background: NAIP 2021



**WETLAND DELINEATION REPORT**

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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL1  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-1  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.604667 Long: -93.101815 Datum: WGS84  
 Soil Map Unit Name: Cylinder loam, 0 to 2 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) A WETS analysis indicates antecedent hydrologic conditions were drier than normal. Hay field within aerial identified wet signature.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<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>Triticum aestivum</u>	<u>60</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Pheum pratense</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>120</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:		Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>	
FACW species <u>0</u>	x 2 =	<u>0</u>	
FAC species <u>0</u>	x 3 =	<u>0</u>	
FACU species <u>60</u>	x 4 =	<u>240</u>	
UPL species <u>60</u>	x 5 =	<u>300</u>	
Column Totals: <u>120</u> (A)		<u>540</u> (B)	
Prevalence Index = B/A =		<u>4.5</u>	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <u>X</u>
--	-----------	-------------

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

**SOIL**

Sampling Point: UPL1

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 <sup>1</sup>	Loc <sup>2</sup>			
0-8	10YR 2/2	100					Loam		
8-11	10YR 2/1	60		0			Silty Clay Loam		
8-11	10YR 4/2	38	10YR 4/6	2	C	M	Silty Clay Loam	Refusal at 11in because of rock.	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

Remarks:  
Refusal at 11" due to compaction.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <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 checked="" 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)

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL2  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Talf Local relief (concave, convex, none): Linear Slope %: 0-1  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.604952 Long: -93.113054 Datum: WGS84  
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: PEM1Af  
 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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Healthy cornfield on a flat landscape that has a very subtle slope down to S3 to the east. Drain tile outlet observed to the northeast at S3. Damaged drain tile observed to the north in W8. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				0 = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				0 = Total Cover
Herb Stratum (Plot size: <u>5 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
				0 = Total Cover
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
				0 = Total Cover

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (Include photo numbers here or on a separate sheet.)  
 No volunteer vegetation. Healthy corn has been planted.

**SOIL**

Sampling Point: UPL2

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/1	100					Silt Loam	
8-12	10YR 3/1	98	10YR 4/6	2	C	M	Silt Loam	
12-20	10YR 3/1	97	10YR 4/6	3	C	M	Silt Loam	
20-24	10YR 3/1	93	10YR 4/6	7	C	M	Silt Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

Remarks:  
Wetland determination based on the lack of hydrophytic vegetation and wetland hydrology indicators.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> 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:  
Hydrology disturbed by drain tile system.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota State: Min Sampling Date: 10/19/2022  
 Applicant/Owner: Stone Solar Sampling Point: UPL3  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Linear Slope %: 3-4  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.606032 Long: -93.115717 Datum: WGS84  
 Soil Map Unit Name: Ostrander loam, 1 to 6 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Planted corn field within aerial wetness signature. Healthy, unharvested corn. Climatic conditions are drier than normal.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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.)  
 75% cover of healthy corn and 25% cover of bare ground. No weedy vegetation observed.

**SOIL**

Sampling Point: UPL3

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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/2	100					Silty Clay Loam	
4-10	10YR 2/2	98	10YR 3/6	2	C	M	Silty Clay Loam	
10-19	10YR 3/1	90	10YR 3/6	10	C	M	Silty Clay Loam	
19-24	10YR 3/1	50	10YR 3/6	3	C	M	Silty Clay Loam	
19-24	10YR 4/4	45	10YR 3/6	2	C	M	Silty Clay Loam	

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

**Hydric Soil Indicators:**

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

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- 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 Soils<sup>3</sup>:**

- 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:

**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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL4  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616044 Long: -93.093609 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 X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Harvested soybean field within hydric soil unit. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Bromus arvensis</u>	50	Yes	FACU	
2. <u>Asclepias syriaca</u>	5	No	FACU	
3. <u>Leonurus cardiaca</u>	5	No	UPL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>55</u>	x 4 = <u>220</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>60</u> (A)	<u>245</u> (B)
Prevalence Index = B/A = <u>4.08</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <u>X</u>
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Remarks: (Include photo numbers here or on a separate sheet.)  
 40% bare ground and harvested soybean field.

**SOIL**

Sampling Point: UPL4

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 <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 2/2	100					Silt Loam	
9-20	10YR 3/2	80		0			Silty Clay Loam	
9-20	10YR 3/4	20		0			Silty Clay Loam	
20-24	10YR 4/3	60		0			Sandy Loam	
20-24	10YR 3/2	40		0			Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**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)	

<b>Field Observations:</b> Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL5  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Linear Slope %: 3-4  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.619144 Long: -93.105096 Datum: WGS84  
 Soil Map Unit Name: Klinger silt loam, 1 to 5 percent slopes NWI classification: PEM1Af  
 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.) X

### 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 type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Narrow, grass drainage swale within a successfully harvested corn field with a center pivot irrigation system. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>3</u> x 3 = <u>9</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>43</u> (A) <u>89</u> (B) Prevalence Index = B/A = <u>2.07</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Panicum dichotomiflorum</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Ambrosia trifida</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>43</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

Remarks: (Include photo numbers here or on a separate sheet.)  
 Successfully harvested corn next to grass drainage swale. Wetland determination based on the lack of hydric soil. Fall panicgrass is a common weedy species within agricultural lands and frequently tolerates drier, upland conditions.

**SOIL**

Sampling Point: UPL5

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 <sup>1</sup>	Loc <sup>2</sup>		
0-24	10YR 2/1	100					Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Surface Water Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present      Yes _____ 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 based on the lack of hydric soil.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL6  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Shoulder Local relief (concave, convex, none): Linear Slope %: 8-9  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616974 Long: -93.11353 Datum: WGS84  
 Soil Map Unit Name: Hawick gravelly sandy loam, 6 to 12 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Climatic conditions are drier than normal. Unplowed grassland community on a hillside shoulder, surrounded by a farmed agricultural field. Grassland community located in a field with a center pivot irrigation system.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>50</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>118</u> x 4 = <u>472</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>158</u> (A) <u>592</u> (B) Prevalence Index = B/A = <u>3.75</u>
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> - <u>1</u> - Rapid Test for Hydrophytic Vegetation - <u>2</u> - Dominance Test is >50% - <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> - <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) - <u>Problematic Hydrophytic Vegetation</u> <sup>1</sup> (Explain)
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				
0 = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
0 = Total Cover				

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

**SOIL**

Sampling Point: UPL6

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/3	100					Sandy Loam	70% gravel. Refusal at 10in due to gravel

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

<b>Restrictive Layer (if observed):</b> Type: <u>Gravel</u> Depth (inches): <u>10</u>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:

**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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL7  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Linear Slope %: 3-4  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.60477 Long: -93.105263 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 X (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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hay field. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Triticum aestivum</u>	100	Yes	UPL	
2. <u>Chenopodium album</u>	3	No	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>3</u>	x 4 = <u>12</u>
UPL species <u>100</u>	x 5 = <u>500</u>
Column Totals: <u>103</u> (A)	<u>512</u> (B)
Prevalence Index = B/A = <u>4.97</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <u>X</u>
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Remarks: (Include photo numbers here or on a separate sheet.)  
 Wheat appears to be volunteer following harvest so it is included in the herbaceous cover. Last seasons planted wheat crop was successfully harvested.

**SOIL**

Sampling Point: UPL7

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/3	100					Silt Loam	
10-17	10YR 3/3	50		0			Silt Loam	
10-17	10YR 4/4	50		0			Silt Loam	
17-24	10YR 5/4	100					Fine Sandy Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**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)	

<b>Field Observations:</b> Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL8  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.617334 Long: -93.108587 Datum: WGS84  
 Soil Map Unit Name: Lindstrom silt loam, 1 to 4 percent slopes NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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.) X

**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 <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Successfully harvested corn field with a center pivot irrigation system. Climatic conditions are drier than normal.	

**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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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.)  
 Successfully harvested corn field with no volunteer vegetation. Vegetation assumed to be non-hydrophytic due to the lack of hydric soil.

**SOIL**

Sampling Point: UPL8

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 <sup>1</sup>	Loc <sup>2</sup>			
0-16	10YR 2/1	100					Silty Clay Loam	3% gravel	
16-24	10YR 2/1	97	10YR 3/6	3	C	M	Silty Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <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 checked="" 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)

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

Remarks:  
Wetland determination based on the lack of hydrophytic vegetation and hydric soils.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/12/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL9  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Linear Slope %: 5-7  
 Subregion (LRR or MLRA): LRR M Lat: 44.624786 Long: -93.070583 Datum: WGS84  
 Soil Map Unit Name: Cylinder loam, 0 to 2 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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Vegetated swale with grasses and forbs	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Setaria pumila</u>	30	Yes	FAC	
2. <u>Setaria faberi</u>	30	Yes	FACU	
3. <u>Eriochloa villosa</u>	25	Yes	UPL	
4. <u>Chenopodium album</u>	10	No	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

**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 = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <u>X</u>
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Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: UPL9

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 <sup>1</sup>	Loc <sup>2</sup>		
0-21	10YR 3/2	100					Clay Loam	
21-25	10YR 4/2	98	2.5YR 4/4	2	C	M	Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**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)	

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

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: 10/12/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL10  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2  
 Subregion (LRR or MLRA): LRR M Lat: 44.625423 Long: -93.074056 Datum: WGS84  
 Soil Map Unit Name: Cylinder loam, 0 to 2 percent slopes 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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Vegetated swale	

### 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>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Setaria faberi</u>	45	Yes	FACU	
2. <u>Setaria pumila</u>	45	Yes	FAC	
3. <u>Urtica dioica</u>	10	No	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>100</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

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

**SOIL**

Sampling Point: UPL10

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 <sup>1</sup>	Loc <sup>2</sup>		
0-20	10YR 3/2	100					Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 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)	

<b>Field Observations:</b> Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ 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: 10/12/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: UPL11  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 5-7  
 Subregion (LRR or MLRA): LRR M Lat: 44.625423 Long: -93.074056 Datum: WGS84  
 Soil Map Unit Name: Cylinder loam, 0 to 2 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 _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Upland cornfield	

**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: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes _____ No <u>X</u>
--	-----------------------

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



## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/17/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W1-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope %: 0-1  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616296 Long: -93.104382 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 \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Successfully harvested corn field with a center pivot irrigation system and located east of W1. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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.)  
 Successfully harvested corn. No stunting observed. Vegetation assumed to be non-hydrophytic due to the lack of hydric soil indicators and wetland hydrology.

**SOIL**

Sampling Point: W1-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 2/2	100					Loam	
7-13	10YR 2/1	100					Loam	15% gravel compacted soil
13-20	10YR 2/1	80		0			Loam	
13-20	10YR 3/2	20		0			Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <input checked="" type="checkbox"/>
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Remarks:  
Refusal at 20 inches due to compaction.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present Yes _____ 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 State: Min Sampling Date: 10/17/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W1-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616282 Long: -93.104462 Datum: WGS84  
 Soil Map Unit Name: Klinger silt loam, 1 to 5 percent slopes NWI classification: PSS1/EM1Ad  
 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Degraded wet meadow in excavated ditch between two cornfields, both with a center pivot irrigation system. Climatic conditions are drier than typical.	

### 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>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				<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>113</u> x 2 = <u>226</u> FAC species <u>3</u> x 3 = <u>9</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>126</u> (A) <u>245</u> (B) Prevalence Index = B/A = <u>1.94</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. <u>Cornus alba</u>	8	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>8</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Phalaris arundinacea</u>	90	Yes	FACW	
2. <u>Typha latifolia</u>	10	No	OBL	
3. <u>Bidens frondosa</u>	10	No	FACW	
4. <u>Urtica dioica</u>	5	No	FACW	
5. <u>Solanum dulcamara</u>	3	No	FAC	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>118</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

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

**SOIL**

Sampling Point: W1-1w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-3	10YR 2/2	90	10YR 4/6	10	C	M	Clay Loam		
3-18	10YR 2/1	50		0			Clay Loam		
3-18	10YR 4/1	20	10YR 4/6	30	C	M	Clay Loam		
18-24	10YR 2/1	40		0			Silty Clay		
18-24	10YR 6/2	20	10YR 6/6	40	C	M	Silty Clay		

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

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- 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 Soils<sup>3</sup>:**

- 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:**

Significantly disturbed soils due to the excavation of the drainage ditch containing W1. The soil profile almost meets the conditions of Redox Dark Surface (F6) despite the disturbance. Redox concentrations within a depleted matrix are a significant component of the second soil profile but does not meet the conditions of Depleted Matrix (F3) due to soil mixing. The soil profile is assumed to meet the conditions of hydric soil in the absence of disturbance.

**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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W1-2u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope %: 3-5  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616875 Long: -93.097878 Datum: WGS84  
 Soil Map Unit Name: Hawick gravelly sandy loam, 6 to 12 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Harvested corn field with a center pivot irrigation system, located on the slope east of wetland W1. Climatic conditions are drier than normal.	

**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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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 volunteer vegetation. Fragments of healthy corn from recent harvest.

**SOIL**

Sampling Point: W1-2u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/3	100					Sandy Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <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 checked="" 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)

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W1-2w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616926 Long: -93.097943 Datum: WGS84  
 Soil Map Unit Name: Ostrander loam, 1 to 6 percent slopes NWI classification: PEM1Ad  
 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Shrub-carr community north of 230th Street and within an agricultural field with a center pivot irrigation system. Connected to the wetland community on the west side of the agricultural field by a mowed and maintained wet meadow community in the ditch north of 230th Street. Climatic conditions are drier than normal.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				0 = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>Salix interior</u>	25	Yes	FACW	
2. <u>Salix discolor</u>	5	No	FACW	
3. <u>Cornus alba</u>	3	No	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				33 = Total Cover
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	
2. <u>Solidago gigantea</u>	3	No	FACW	
3. <u>Rumex crispus</u>	2	No	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
				105 = Total Cover
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
				0 = Total Cover

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>136</u>	x 2 = <u>272</u>
FAC species <u>2</u>	x 3 = <u>6</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>138</u> (A)	<u>278</u> (B)
Prevalence Index = B/A = <u>2.01</u>	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W1-2w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-4	10YR 3/1	97	10YR 4/6	3	C	M		Sandy Loam		
4-10	10YR 3/1	92	10YR 4/6	8	C	M		Sandy Loam		
10-24	10YR 3/1	53	10YR 3/4	7	C	M		Sandy Loam		
10-24	10YR 4/2	40		0				Sandy Loam		

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

**Hydric Soil Indicators:**

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

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- 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 Soils<sup>3</sup>:**

- 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W1-3u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.61707 Long: -93.105799 Datum: WGS84  
 Soil Map Unit Name: Klinger silt loam, 1 to 5 percent slopes NWI classification: PEM1Af  
 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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Successfully harvested corn field with a center pivot irrigation system. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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Remarks: (Include photo numbers here or on a separate sheet.)  
 Debris from harvested corn. No volunteer vegetation. Vegetation assumed to be non-hydrophytic due to the lack of wetland hydrology.

**SOIL**

Sampling Point: W1-3u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/2	100					Silty Clay Loam	
8-10	10YR 3/1	98	10YR 3/6	2	C	M	Silty Clay Loam	
10-16	10YR 2/1	90	10YR 3/6	10	C	M	Silty Clay Loam	
16-24	10YR 3/1	85	10YR 3/6	15	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:  
Wetland determination based on the lack of hydrophytic vegetation and wetland hydrology indicators.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W1-3w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.617 Long: -93.105724 Datum: WGS84  
 Soil Map Unit Name: Klinger silt loam, 1 to 5 percent slopes NWI classification: PSS1/EM1Ad  
 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Hardwood swamp community surrounded by a harvested corn field with center pivot irrigation systems. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Acer saccharinum</u>	50	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</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>100</u> (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
<u>50</u> = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )					
1. <u>Cornus alba</u>	15	Yes	FACW	<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>148</u> x 2 = <u>296</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>28</u> x 4 = <u>112</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>178</u> (A) <u>414</u> (B) Prevalence Index = B/A = <u>2.33</u>	
2. <u>Lonicera x bella</u>	5	No	FACU		
3. _____					
4. _____					
5. _____					
<u>20</u> = Total Cover					
Herb Stratum (Plot size: <u>5 ft</u> )					
1. <u>Phalaris arundinacea</u>	80	Yes	FACW		<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Bromus inermis</u>	20	No	FACU		
3. <u>Solidago gigantea</u>	3	No	FACW		
4. <u>Sonchus oleraceus</u>	3	No	FACU		
5. <u>Rumex crispus</u>	2	No	FAC		
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
<u>108</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>30 ft</u> )					
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____					
<u>0</u> = Total Cover					

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

**SOIL**

Sampling Point: W1-3w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-7	10YR 2/1	98	5YR 3/4	2	C	M		Silty Clay Loam		
7-15	10YR 2/1	68	5YR 3/4	2	C	M		Silty Clay Loam		
7-15	10YR 3/2	30		0				Silty Clay Loam		
15-24	10YR 2/1	92	5YR 3/4	8	C	M		Silty Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**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 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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/17/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Linear Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.615281 Long: -93.104223 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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Upland sample point east of W2 within harvested corn field.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No

Remarks: (Include photo numbers here or on a separate sheet.)  
 Corn debris from a successful harvest. No volunteer vegetation within and no indications of stunted or stressed corn observed. Vegetation assumed to be non-hydrophytic due to the lack of wetland hydrology indicators.

**SOIL**

Sampling Point: W2-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 2/1	100					Silty Clay Loam	
9-15	10YR 4/2	80	10YR 4/6	8	C	M	Clay Loam	
9-15	10YR 2/1	12		0			Clay Loam	
15-24	10YR 4/2	75	10YR 3/6	25	C	M	Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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 checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" 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)

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:  
Wetland determination based on the lack of hydrophytic vegetation and wetland hydrology indicators.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> 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: 10/17/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.615264 Long: -93.104409 Datum: WGS84  
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: PSS1Ad  
 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Man made ditch between corn fields. Forested wetland community connected to a large wetland complex. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Acer saccharinum</u>	18	Yes	FACW	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
2. <u>Ulmus pumila</u>	10	No	UPL	
3. _____				
4. _____				
5. _____				
	<u>28</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>Cornus alba</u>	20	Yes	FACW	<b>Prevalence Index worksheet:</b>  Total % Cover of: Multiply by:  OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>123</u> x 2 = <u>246</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>10</u> x 5 = <u>50</u> Column Totals: <u>138</u> (A) <u>301</u> (B) Prevalence Index = B/A = <u>2.18</u>
2. _____				
3. _____				
4. _____				
5. _____				
	<u>20</u>	= Total Cover		
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Phalaris arundinacea</u>	80	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b>  <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Acer saccharinum</u>	5	No	FACW	
3. <u>Equisetum fluviatile</u>	5	No	OBL	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	<u>90</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
	<u>0</u>	= Total Cover		

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

**SOIL**

Sampling Point: W2-1w

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 <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100					Loam	
2-4	10YR 4/2	50	10YR 4/6	20	C	M	Loam	
2-4	10YR 5/2	40		0			Loam	
4-7	5YR 3/1	75	5YR 5/3	25	C	M	Sandy Loam	
7-24	10YR 2/1	70	10YR 4/6	10	C	M	Sandy Loam	
7-24	10YR 2/1		10YR 6/1	20	D	M	Sandy Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/17/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-2u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.613125 Long: -93.100717 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 X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Successfully harvested corn field north of wetland W2. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> 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				<b>Prevalence Index worksheet:</b> 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>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>25</u> (A) <u>50</u> (B) Prevalence Index = B/A = <u>2</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				<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (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				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 Harvested corn debris with no indications of stunting or stress in last season's crop. Wetland determination made based on lack of hydrology indicators.

**SOIL**

Sampling Point: W2-2u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/1	100					Sandy Loam	
8-16	10YR 2/1	97	10YR 4/6	3	C	M	Silty Clay Loam	
16-24	10YR 2/1	100					Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:  
Wetland determination made based on lack of hydrology indicators.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> 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 State: Min Sampling Date: 10/17/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-2w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.613005 Long: -93.100858 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 X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Degraded wet meadow community within a large wetland complex south of corn field. Climatic conditions are drier than normal.	

### 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. _____	_____	_____	_____	
0 = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>105</u> x 2 = <u>210</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>125</u> (A) <u>240</u> (B) Prevalence Index = B/A = <u>1.92</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Phalaris arundinacea</u>	90	Yes	FACW	
2. <u>Typha latifolia</u>	15	No	OBL	
3. <u>Salix interior</u>	10	No	FACW	
4. <u>Rumex crispus</u>	5	No	FAC	
5. <u>Symphotrichum lateriflorum</u>	5	No	FACW	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
125 = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0 = Total Cover				

**Hydrophytic Vegetation Indicators:**  
X 1 - Rapid Test for Hydrophytic Vegetation  
X 2 - Dominance Test is >50%  
X 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_\_\_ 4 - Morphological Adaptations<sup>1</sup>  
 (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators 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: W2-2w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-8	10YR 3/2	100					Loam		
8-24	10YR 2/1	95	10YR 4/6	5	C	M	Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-3u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope %: 3-4  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.609305 Long: -93.101592 Datum: WGS84  
 Soil Map Unit Name: Kanaranzi loam, 2 to 6 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hay field west of wetland, approximately 1 foot above wetland sample point. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Dominance Test worksheet:</b>				
Number of Dominant Species That Are OBL, FACW, or FAC:				_____ (A)
Total Number of Dominant Species Across All Strata:				_____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:				_____ (A/B)
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Dactylis glomerata</u>	100	Yes	FACU	
2. <u>Capsella bursa-pastoris</u>	3	No	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
<b>Prevalence Index worksheet:</b>				
Total % Cover of:		Multiply by:		
OBL species	_____	x 1 =	_____	
FACW species	_____	x 2 =	_____	
FAC species	_____	x 3 =	_____	
FACU species	103	x 4 =	412	
UPL species	_____	x 5 =	_____	
Column Totals:	103 (A)		412 (B)	
Prevalence Index = B/A =		_____		
<b>Hydrophytic Vegetation Indicators:</b>				
- 1 - Rapid Test for Hydrophytic Vegetation				
- 2 - Dominance Test is >50%				
- 3 - Prevalence Index is ≤3.0 <sup>1</sup>				
- 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)				
- Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>				

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

**SOIL**

Sampling Point: W2-3u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/2	100					Silt Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <input checked="" type="checkbox"/>
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Remarks:  
Refusal at 4 inches due to rock.

**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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present      Yes _____ 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 State: Min Sampling Date: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W2-3w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.609319 Long: -93.1014 Datum: WGS84  
 Soil Map Unit Name: Kanaranzi loam, 2 to 6 percent slopes NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Small shallow marsh community within a large wetland complex east of an agricultural field. Climatic conditions are drier than normal.	

### 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>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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>100</u> x 1 = <u>100</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>150</u> (A) <u>210</u> (B) Prevalence Index = B/A = <u>1.4</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Typha x glauca</u>	50	Yes	OBL	
2. <u>Glyceria grandis</u>	50	Yes	OBL	
3. <u>Phalaris arundinacea</u>	15	No	FACW	
4. <u>Rumex crispus</u>	10	No	FAC	
5. <u>Verbena hastata</u>	10	No	FACW	
6. <u>Echinochloa crus-galli</u>	10	No	FACW	
7. <u>Urtica dioica</u>	5	No	FACW	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>150</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

**Hydrophytic Vegetation Indicators:**  
X 1 - Rapid Test for Hydrophytic Vegetation  
X 2 - Dominance Test is >50%  
X 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_\_\_ 4 - Morphological Adaptations<sup>1</sup>  
 (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators 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: W2-3w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-9	10YR 2/1	95	10YR 4/6	5	C	M	Silty Clay Loam			
9-24	10YR 2/1	85	10YR 4/6	15	C	M	Silty Clay Loam			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

Remarks:

**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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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: 10/17/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W3-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.614248 Long: -93.100138 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 X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Upland point taken in a harvested corn field. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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.)  
 Harvested corn debris with some bare ground. There was no indication of stunting or stress in last season's crop. No volunteer vegetation.

**SOIL**

Sampling Point: W3-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 2/1	100					Sandy Loam	
3-5	10YR 2/1	97	10YR 4/6	3	C	M		
5-18	10YR 2/1	100					Clay Loam	
18-24	10YR 4/2	90	7.5YR 5/8	10	C	M	Clay	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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 State: Min Sampling Date: 10/17/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W3-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.614214 Long: -93.100108 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 X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Degraded wet meadow community in a mowed drainage swale. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>120</u> x 2 = <u>240</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>120</u> (A) <u>240</u> (B) Prevalence Index = B/A = <u>2</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	
2. <u>Panicum dichotomiflorum</u>	15	No	FACW	
3. <u>Cornus alba</u>	5	No	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>120</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 Area was rough mowed.

**SOIL**

Sampling Point: W3-1w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-4	10YR 2/1	95	10YR 4/6	5	C	M	Sandy Loam			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

<b>Restrictive Layer (if observed):</b> Type: <u>Rock</u> Depth (inches): <u>4</u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:  
Refusal at 4 inches due to rock.

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <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 checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W4-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Linear Slope %: 2-3  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.601635 Long: -93.102663 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 \_\_\_\_\_ No X (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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Upland meadow community located north of 240th Street and east of wetland W4. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				0 = Total Cover
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				0 = Total Cover
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Dactylis glomerata</u>	60	Yes	FACU	
2. <u>Setaria pumila</u>	40	Yes	FAC	
3. <u>Trifolium repens</u>	15	No	FACU	
4. <u>Ambrosia artemisiifolia</u>	10	No	FACU	
5. <u>Taraxacum officinale</u>	5	No	FACU	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
				130 = Total Cover
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
				0 = Total Cover

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:		Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>	
FACW species <u>0</u>	x 2 =	<u>0</u>	
FAC species <u>40</u>	x 3 =	<u>120</u>	
FACU species <u>90</u>	x 4 =	<u>360</u>	
UPL species <u>0</u>	x 5 =	<u>0</u>	
Column Totals: <u>130</u> (A)		<u>480</u> (B)	
Prevalence Index = B/A =		<u>3.69</u>	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation

- 2 - Dominance Test is >50%

- 3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <u>X</u>
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Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W4-1u

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 <sup>1</sup>	Loc <sup>2</sup>				
0-2	10YR 2/1	100						Loam		
2-12	10YR 2/1	80		0				Loam		
2-12	10YR 4/2	18	10YR 4/6	2	C	M		Loam	10% gravel	
12-24	10YR 2/1	50		0						
12-24	10YR 4/2	50		0						

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present      Yes _____ 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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W4-1w  
 Investigator(s): SK, MV, DH Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-1  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.601687 Long: -93.102747 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 \_\_\_\_\_ No X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Infrequently mowed degraded wet meadow community in a drainage swale of a hay field. Climatic conditions are drier than normal.	

### 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>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				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Glyceria grandis</u>	80	Yes	OBL	
2. <u>Phalaris arundinacea</u>	20	Yes	FACW	
3. <u>Taraxacum officinale</u>	3	No	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>103</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% - 3 - Prevalence Index is ≤3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____				

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

**SOIL**

Sampling Point: W4-1w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-4	10YR 2/1	100					Silty Clay Loam		
4-9	10YR 2/1	95	10YR 4/6	5	C	M	Silty Clay Loam	Gravel present 5%	
9-16	10YR 2/1	60	10YR 4/6	8	C	M	Silty Clay Loam		
9-16	10YR 4/2	32		0			Silty Clay Loam		
16-24	10YR 5/2	40	10YR 5/8	10	C	M	Clay		
16-24	N 5/	50		0			Clay		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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 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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W5-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616076 Long: -93.089385 Datum: WGS84  
 Soil Map Unit Name: Wadena loam, 2 to 6 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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 <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Soybean field with a center pivot irrigation system north of 230th Street. Upland sample point taken about one foot above wetland. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <u>X</u>
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Remarks: (Include photo numbers here or on a separate sheet.)  
 No volunteer vegetation. Healthy planted soybeans. Vegetation assumed to be non-hydrophytic due to the absence of hydric soil indicators.

**SOIL**

Sampling Point: W5-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/3	70		0			Silt Loam	
0-5	10YR 2/2	30		0			Silt Loam	
5-12	10YR 2/2	60		0			Silt Loam	
5-12	10YR 4/2	40		0			Silt Loam	
12-18	10YR 2/1	70		0			Loam	Refusal at 18 inches because of gravel and rock.
12-18	10YR 5/6	20		0			Sandy Loam	Gravelly soil profile with refusal at 18 inches because of gravel and rock
12-18	10YR 4/1	10		0			Silt Loam	Refusal at 18 inches because of gravel and rock.

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

<b>Restrictive Layer (if observed):</b> Type: <u>Rock</u> Depth (inches): <u>18</u>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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 checked="" 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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): _____	

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

Remarks:  
Wetland determination based on the lack of hydrophytic vegetation and hydric soils.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W5-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.61605 Long: -93.089349 Datum: WGS84  
 Soil Map Unit Name: Wadena loam, 2 to 6 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks.)  
 Are Vegetation X, 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.) X

### 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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Mostly bare depression north of the road and at the south edge of a soybean field with a center pivot irrigation system. Farmer avoided cropping within the wet depression. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>8</u> x 2 = <u>16</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>8</u> (A) <u>16</u> (B) Prevalence Index = B/A = <u>2</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				<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				
<u>8</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____

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

**SOIL**

Sampling Point: W5-1w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-6	10YR 2/1	98	10YR 4/4	2	C	M	Silt Loam			
6-18	10YR 2/1	95	10YR 4/6	5	C	M	Silt Loam			
18-24	10YR 2/1	85	10YR 4/1	10	D	M	Silt Loam	5% 4/6 concentrations		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	
<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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W6-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Shoulder Local relief (concave, convex, none): Linear Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.61846 Long: -93.087808 Datum: WGS84  
 Soil Map Unit Name: Lindstrom silt loam, 1 to 4 percent slopes NWI classification: PEM1Ad

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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Soybean field with a center pivot irrigation system above W6. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (Include photo numbers here or on a separate sheet.)  
 No volunteer vegetation. Healthy soybean crop. Vegetation assumed to be non-hydrophytic due to the presence of healthy soy bean crop and a lack of hydric soil and sufficient wetland hydrology indicators to meet wetland conditions.

**SOIL**

Sampling Point: W6-1u

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 <sup>1</sup>	Loc <sup>2</sup>			
0-12	10YR 2/2	97	10YR 3/6	3	C	M	Silt Loam		
12-18	10YR 3/1	92	10YR 3/6	8	C	M	Silt Loam		
18-	10YR 3/1	80	10YR 3/6	5	C	M	Silt Loam	15% 10YR 4/1 depletion	
18-			10YR 4/1	15	D	M			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present Yes _____ 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 State: Min Sampling Date: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W6-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.618463 Long: -93.087845 Datum: WGS84  
 Soil Map Unit Name: Lindstrom silt loam, 1 to 4 percent slopes NWI classification: PEM1Ad  
 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Degraded wet meadow community between an agricultural field with a center pivot irrigation system. Climatic conditions are drier than normal.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Phalaris arundinacea</u>	98	Yes	FACW	
2. <u>Ambrosia trifida</u>	5	No	FAC	
3. <u>Urtica dioica</u>	2	No	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>100</u>	x 2 = <u>200</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>215</u> (B)
Prevalence Index = B/A = <u>2.05</u>	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W6-1w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-10	10YR 3/1	98	10YR 5/6	2	C	M	Mucky Loam			
10-20	10YR 3/1	97	10YR 4/6	3	C	M	Loam			
20-24	10YR 3/1	75	10YR 4/6	3	C	M	Silt Loam			
20-24	10YR 4/1	22		0			Loam			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" type="checkbox"/> Saturation (A3)	<input checked="" 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 checked="" 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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u>	
Saturation Present Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W7-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616887 Long: -93.086416 Datum: WGS84  
 Soil Map Unit Name: Lindstrom silt loam, 1 to 4 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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.) X

**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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Unharvested soybean field with a center pivot irrigation system. Climatic conditions are drier than normal.	

**VEGETATION – Use scientific names of plants.**

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

**SOIL**

Sampling Point: W7-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 3/3	100					Silt Loam	
9-20	10YR 3/3	40		0			Sandy Loam	
9-20	10YR 2/1	60		0			Silty Clay Loam	
20-24	10YR 2/1	95	10YR 4/6	5	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b> Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ 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: 10/18/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W7-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-1  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616858 Long: -93.086184 Datum: WGS84  
 Soil Map Unit Name: Lindstrom silt loam, 1 to 4 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Degraded wet meadow community. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Acer saccharinum</u>	15	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Salix nigra</u>	5	Yes	OBL	
3. _____				
4. _____				
5. _____				
<u>20</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>Rhamnus cathartica</u>	15	Yes	FAC	<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>115</u> x 2 = <u>230</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>135</u> (A) <u>280</u> (B) Prevalence Index = B/A = <u>2.07</u>
2. _____				
3. _____				
4. _____				
5. _____				
<u>15</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> - <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 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____				
<u>0</u> = Total Cover				

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

**SOIL**

Sampling Point: W7-1w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-2	10YR 2/2	100					Silt Loam		
2-12	10YR 3/1	85	10YR 3/6	15	C	M	Silt Loam		
12-24	10YR 3/1	70	2.5YR 4/6	30	C	M	Silt Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0	

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

Remarks: Saturation is not checked because an associated water table was not found present.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W8-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Linear Slope %: 0-1  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.602261 Long: -93.115325 Datum: WGS84  
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: PEM1Ad

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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Harvested soybean field south of S3 and W8. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (Include photo numbers here or on a separate sheet.)  
 Harvested soybean debris. No volunteer vegetation observed. Vegetation assumed to be non-hydrophytic due to the lack of hydric soils and wetland hydrology.

**SOIL**

Sampling Point: W8-1u

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 <sup>1</sup>	Loc <sup>2</sup>			
0-13	10YR 2/1	100					Silt Loam	5% gravel.	
13-24	10YR 2/1	98	10YR 4/6	2	C	M	Silty Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present Yes _____ 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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W8-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Shoulder Local relief (concave, convex, none): Convex Slope %: 3-4  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.602347 Long: -93.115345 Datum: WGS84  
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: PEM1Ad

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Degraded wet meadow fringe along S3. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>110</u> x 2 = <u>220</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>240</u> (B) Prevalence Index = B/A = <u>2.09</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Phalaris arundinacea</u>	<u>100</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Urtica dioica</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
3. <u>Cirsium arvense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>115</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup>  
 (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: W8-1w

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/1	100					Loam	
8-24	10YR 2/1	95	10YR 4/6	5	C	M	Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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 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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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:  
Sample taken approximately 2 feet higher than waterway.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W8-2u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Linear Slope %: 1  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.605634 Long: -93.112589 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 X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Toe slope of a hill that slopes up to the southwest. Successfully cropped corn field. Broken drain tile and a drain tile outlet observed within W8. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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 volunteer vegetation. Healthy planted corn. Vegetation assumed to be non-hydrophytic due to the absence of hydric soil and sufficient wetland hydrology indicators to meet wetland conditions.

**SOIL**

Sampling Point: W8-2u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 2/1	100					Silt Loam	
16-30	10YR 3/1	100					Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <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 checked="" 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)

<b>Field Observations:</b> Surface Water Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ 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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W8-2w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 2  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.605686 Long: -93.112538 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 X (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, 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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Uncropped area in a cornfield located at the toe slope of a broad hill that slopes up to the southwest. Corn debris from previous years and review of aerial imagery suggest this area has been cropped in past years. Broken drain tile and a drain tile outlet was observed within W8. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Dominance Test worksheet:</b>				
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)
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Prevalence Index worksheet:</b>				
Total % Cover of:		Multiply by:		
OBL species	<u>0</u>	x 1 =	<u>0</u>	
FACW species	<u>3</u>	x 2 =	<u>6</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>3</u>	(A)	<u>6</u>	(B)
Prevalence Index = B/A =				<u>2</u>
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Cyperus esculentus</u>	<u>3</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b>				
<u>X</u> 1 - Rapid Test for Hydrophytic Vegetation				
<u>X</u> 2 - Dominance Test is >50%				
<u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>				
____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)				
____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____				

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

**SOIL**

Sampling Point: W8-2w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-14	10YR 2/1	100					Silt Loam		
14-24	10YR 3/1	98	10YR 4/4	2	C	M	Silty Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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 checked="" type="checkbox"/> Other (Explain in Remarks)

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: Does not meet the depth requirements of Redox Dark Surface (F6). May meet the requirements of Thick Dark Surface (A12) but the soil sample did not go beyond 24 inches. Assumed to lack hydric soil indicators due to the presence of drain tile within a frequently plowed agricultural field. The presence of broken drain tile has changed the hydrologic conditions within the farmed wetland community, which now supports hydrophytic vegetation and meets the conditions of wetland hydrology. It is assumed the farmed wetland community in W8 would develop hydric soil conditions given more time under the present conditions.

**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 checked="" 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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W8-3u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.606594 Long: -93.11089 Datum: WGS84  
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: PEM1Ad

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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Foot slope of a hill that slopes up to the south. Sample point located in a soybean field about 1 foot above W8. Climatic conditions are drier than normal. At the 10/02/2024 TEP meeting the sampled area was determined to have met hydrophytic veg criteria and hydrology. Sampled area is considered wetland.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>50</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
0 = Total Cover				<b>Prevalence Index worksheet:</b>  Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>1</u> x 3 = <u>3</u> FACU species <u>2</u> x 4 = <u>8</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>3</u> (A) <u>11</u> (B) Prevalence Index = B/A = <u>3.67</u>	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
0 = Total Cover					
Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Trifolium repens</u>	<u>2</u>	<u>Yes</u>	<u>FACU</u>		
2. <u>Potentilla norvegica</u>	<u>1</u>	<u>Yes</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
3 = Total Cover					
Woody Vine Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0 = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> - <u>1</u> - Rapid Test for Hydrophytic Vegetation - <u>2</u> - Dominance Test is >50% - <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> - <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) - <u>  </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (Include photo numbers here or on a separate sheet.)  
 Soybean debris from a successful harvest. At the TEP meeting yellow bog cress, blue monkey flower, and witchgrass were present within the sampled area and was determined to have met hydrophytic veg criteria.

**SOIL**

Sampling Point: W8-3u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/1	100					Silty Clay Loam	
8-18	10YR 2/1	97	10YR 3/6	3	C	M	Silty Clay Loam	
18-24	10YR 2/1	95	10YR 3/6	5	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> 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:  
At the TEP meeting sampled area was determined to have met secondary indicators Surface Soil Cracks (B6) and Geomorphic Position (D2).

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W8-3w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: 44.606703 Long: -93.110771 Datum: WGS84  
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: PEM1Ad

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Hardwood swamp community within a large wetland complex. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Ulmus pumila</u>	40	Yes	UPL	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
2. <u>Acer negundo</u>	30	Yes	FAC	
3. _____				
4. _____				
5. _____				
<u>70</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>Cornus alba</u>	20	Yes	FACW	<b>Prevalence Index worksheet:</b>  Total % Cover of: Multiply by:  OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>125</u> x 2 = <u>250</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>40</u> x 5 = <u>200</u> Column Totals: <u>195</u> (A) <u>540</u> (B)  Prevalence Index = B/A = <u>2.77</u>
2. _____				
3. _____				
4. _____				
5. _____				
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b>  <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Urtica dioica</u>	5	No	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>105</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				

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

**SOIL**

Sampling Point: W8-3w

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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/1	100					Loam	
4-24	10YR 2/1	95	10YR 4/6	5	C	M	Silt Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W9-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.606173 Long: -93.094903 Datum: WGS84  
 Soil Map Unit Name: Spillville loam, 0 to 2 percent slopes, occasionally flooded NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hay field south of wetland, W9. Climatic conditions are drier than normal.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Setaria viridis</u>	50	Yes	UPL	
2. <u>Medicago sativa</u>	40	Yes	FACU	
3. <u>Plantago major</u>	10	No	FAC	
4. <u>Ambrosia artemisiifolia</u>	5	No	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>50</u>	x 5 = <u>250</u>
Column Totals: <u>105</u> (A)	<u>460</u> (B)
Prevalence Index = B/A = <u>4.38</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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.)  
 50% planted oats.

**SOIL**

Sampling Point: W9-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-15	10YR 3/2	100					Silt Loam	
15-20	10YR 2/1	80	10YR 3/6	3	C	M	Silty Clay Loam	
15-20	10YR 3/2	17		0			Silt Loam	
20-24	10YR 2/1	20		0			Silty Clay Loam	
20-24	10YR 3/1	60	10YR 3/6	20	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present Yes _____ 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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W9-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.606275 Long: -93.094887 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 \_\_\_\_\_ No X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Shrub-carr community within large wetland complex north of hay field. Climatic conditions are drier than normal.	

### 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>3</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>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>3</u> x 1 = <u>3</u> FACW species <u>185</u> x 2 = <u>370</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>188</u> (A) <u>373</u> (B) Prevalence Index = B/A = <u>1.98</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. <u>Salix discolor</u>	50	Yes	FACW	
2. <u>Salix interior</u>	30	Yes	FACW	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>80</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	
2. <u>Symphytotrichum lateriflorum</u>	5	No	FACW	
3. <u>Scirpus atrovirens</u>	3	No	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>108</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____				

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

**SOIL**

Sampling Point: W9-1w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-7	10YR 2/1	85	10YR 3/6	15	C	M	Silt Loam			
7-15	10YR 2/1	75	10YR 3/6	25	C	M	Silt Loam			
15-24	10YR 2/1	65	10YR 3/6	25	C	M	Silt Loam	10YR 10% depletion		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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): _____	

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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W9-2u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Convex Slope %: 5-8  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.610324 Long: -93.094653 Datum: WGS84  
 Soil Map Unit Name: Aquolls and Histosols, ponded NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Upland forest edge on south side of a harvested corn field. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Acer negundo</u>	25	Yes	FAC	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
2. <u>Fraxinus pennsylvanica</u>	5	No	FACW	
3. _____				
4. _____				
5. _____				
<u>30</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>Rhamnus cathartica</u>	15	Yes	FAC	<b>Prevalence Index worksheet:</b>  Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>93</u> x 2 = <u>186</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>32</u> x 5 = <u>160</u> Column Totals: <u>170</u> (A) <u>486</u> (B) Prevalence Index = B/A = <u>2.86</u>
2. <u>Lonicera tatarica</u>	5	Yes	FACU	
3. _____				
4. _____				
5. _____				
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Phalaris arundinacea</u>	85	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b>  - <u>1</u> - Rapid Test for Hydrophytic Vegetation X <u>2</u> - Dominance Test is >50% X <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Rubus occidentalis</u>	30	No	UPL	
3. <u>Urtica dioica</u>	3	No	FACW	
4. <u>Ribes missouriense</u>	2	No	UPL	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>120</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____				
<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 Wetland determination based on the lack of hydric soil and wetland hydrology indicators.

**SOIL**

Sampling Point: W9-2u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-20	10YR 3/3	100					Silt Loam	
20-24	10YR 3/2	100					Silt Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present      Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present      Yes _____ 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 State: Min Sampling Date: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W9-2w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: 0  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.610216 Long: -93.09484 Datum: WGS84  
 Soil Map Unit Name: Aquolls and Histosols, ponded NWI classification: PSS1/EM1Cd

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Sedge meadow community south of harvested corn field. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Calamagrostis canadensis</u>	55	Yes	OBL	
2. <u>Phalaris arundinacea</u>	40	Yes	FACW	
3. <u>Carex lacustris</u>	20	No	OBL	
4. <u>Urtica dioica</u>	10	No	FACW	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
125 = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0 = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>75</u>	x 1 = <u>75</u>
FACW species <u>50</u>	x 2 = <u>100</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>125</u> (A)	<u>175</u> (B)
Prevalence Index = B/A = <u>1.4</u>	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W9-2w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-20	10YR 2/1	95	10YR 3/6	5	C		Mucky Loam		
20-24	10YR 2/1	95	10YR 3/6	5	C	M	Silty Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 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 checked="" 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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W10-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope %: 3-4  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.613811 Long: -93.09179 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 X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Harvested corn field south of wetland. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 Successfully harvest corn field. No volunteer vegetation observed.

**SOIL**

Sampling Point: W10-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 3/2	100					Sandy Loam	
9-16	10YR 2/1	50		0			Silt Loam	
9-16	10YR 3/2	50		0			Sandy Loam	
16-24	10YR 4/3	80		0			Sandy Loam	
16-24	10YR 2/1	20		0			Sandy Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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)	

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: 10/19/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W10-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.61388 Long: -93.091729 Datum: WGS84  
 Soil Map Unit Name: Maxfield silty clay loam NWI classification: PEM1A

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Hardwood swamp community. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Salix nigra</u>	40	Yes	OBL	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. <u>Salix discolor</u>	30	No	FACW		
3. _____					
4. _____					
5. _____					
	<u>70</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )					
1. <u>Salix nigra</u>	15	Yes	OBL	<b>Prevalence Index worksheet:</b>  Total % Cover of: <span style="float: right;">Multiply by:</span>  OBL species <u>55</u> x 1 = <u>55</u> FACW species <u>145</u> x 2 = <u>290</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>200</u> (A) <u>345</u> (B)  Prevalence Index = B/A = <u>1.73</u>	
2. <u>Salix discolor</u>	15	Yes	FACW		
3. <u>Cornus alba</u>	10	Yes	FACW		
4. _____					
5. _____					
	<u>40</u>	= Total Cover			
Herb Stratum (Plot size: <u>5 ft</u> )					
1. <u>Phalaris arundinacea</u>	80	Yes	FACW		
2. <u>Solidago gigantea</u>	10	No	FACW		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
	<u>90</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30 ft</u> )					
1. _____				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2. _____					
	<u>0</u>	= Total Cover			

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

**SOIL**

Sampling Point: W10-1w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-16	10YR 3/1		95	10YR 4/6	5	C	M	Sandy Loam		
16-24	10YR 4/1		90	10YR 5/6	10	C	M	Silty Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**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 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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W11-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope %: 2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616003 Long: -93.091334 Datum: WGS84  
 Soil Map Unit Name: Lindstrom silt loam, 1 to 4 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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.) X

**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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Upland meadow in roadside ditch south of soybean field that has a center pivot irrigation system. Climatic conditions are drier than normal.	

**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>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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>75</u> x 4 = <u>300</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>80</u> (A) <u>310</u> (B) Prevalence Index = B/A = <u>3.88</u>
<u>0</u> = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Bromus inermis</u>	<u>65</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Urtica dioica</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	
3. <u>Asclepias syriaca</u>	<u>4</u>	<u>No</u>	<u>FACU</u>	
4. <u>Cirsium arvense</u>	<u>4</u>	<u>No</u>	<u>FACU</u>	
5. <u>Sonchus oleraceus</u>	<u>2</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>80</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)  
 Debris from soybean harvest.

**SOIL**

Sampling Point: W11-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 2/2	100					Silty Clay Loam	
8-24	10YR 2/2	98	10YR 4/4	2	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <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)

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W11-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S03  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 3-4  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616228 Long: -93.091358 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 \_\_\_\_\_ No X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Partially harvested soybean field with a center pivot irrigation system. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

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

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

**SOIL**

Sampling Point: W11-1w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-12	10YR 2/1	93	5YR 3/4	7	C	M	Silty Clay Loam			
12-24	10YR 2/1	98	5YR 3/4	2	C	M	Silty Clay Loam			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W12-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Linear Slope %: 7-8  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.617265 Long: -93.107247 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 \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Successfully harvested corn field with a center pivot irrigation system. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes _____	No <u>X</u>
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Remarks: (Include photo numbers here or on a separate sheet.)  
 Successfully harvested corn field with no volunteer vegetation. No visible signs of stunted or stress corn crop.

**SOIL**

Sampling Point: W12-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 2/2	100					Silty Clay Loam	
14-24	10YR 2/2	98	10YR 3/4	2	C	M	Silty Clay Loam	

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

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- 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 Soils<sup>3</sup>:**

- 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:

**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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W12-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 3-4  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.617298 Long: -93.106945 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 \_\_\_\_\_ No X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Farmed wetland community with a center pivot irrigation system. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  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				<b>Prevalence Index worksheet:</b>  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>
<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				<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (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				
<u>0</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____

Remarks: (Include photo numbers here or on a separate sheet.)  
 Harvested corn does not appear stressed or stunted.

**SOIL**

Sampling Point: W12-1w

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 <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 2/1	100					Silty Clay Loam	
7-16	10YR 2/1	97	10YR 3/6	3	C	M	Silty Clay Loam	
16-24	10YR 2/1	82	10YR 3/6	3	C	M	Silty Clay Loam	
16-24	10YR 3/1	15		0			Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W13-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Linear Slope %: 4-5  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616714 Long: -93.113559 Datum: WGS84  
 Soil Map Unit Name: Hawick gravelly sandy loam, 6 to 12 percent slopes NWI classification: PEM1Af  
 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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Successfully harvested corn field with a center pivot irrigation system. Climatic conditions are drier than normal.	

### 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</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>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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Remarks: (Include photo numbers here or on a separate sheet.)  
 Harvested corn, no volunteer vegetation. Vegetation assumed to be non-hydrophytic due to the lack of hydric soil and wetland hydrology indicators.

**SOIL**

Sampling Point: W13-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/2	100					Sandy Clay Loam	
5-10	10YR 2/2	98	10YR 3/6	2	C	M	Sandy Clay Loam	
10-20	10YR 2/1	85	10YR 3/6	15	C	M	Sandy Clay Loam	10% gravel
20-24	10YR 2/1	100					Sandy Clay	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present Yes _____ 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: 10/20/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W13-1w  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.616604 Long: -93.113554 Datum: WGS84  
 Soil Map Unit Name: Hawick gravelly sandy loam, 6 to 12 percent slopes NWI classification: PEM1Af  
 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Recently rough mowed shrub-carr community located southwest of an agricultural field with a center pivot irrigation system. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Equisetum hyemale</u>	70	Yes	FACW	
2. <u>Typha x glauca</u>	50	Yes	OBL	
3. <u>Phalaris arundinacea</u>	40	Yes	FACW	
4. <u>Panicum dichotomiflorum</u>	30	No	FACW	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>50</u>	x 1 = <u>50</u>
FACW species <u>140</u>	x 2 = <u>280</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>190</u> (A)	<u>330</u> (B)
Prevalence Index = B/A = <u>1.74</u>	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

<b>Hydrophytic Vegetation Present?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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Remarks: (Include photo numbers here or on a separate sheet.)  
 Sandbar willow and red osier dogwood killed with herbicide.

**SOIL**

Sampling Point: W13-1w

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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/2	100					Sandy Loam	
4-15	10YR 2/1	95	10YR 3/6	5	C	M	Sandy Clay Loam	
15-24	10YR 2/1	85	10YR 3/6	15	C	M	Sandy Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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: 10/21/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W14-1u  
 Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Convex Slope %: 2-3  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.623151 Long: -93.110685 Datum: WGS84  
 Soil Map Unit Name: Cylinder loam, 0 to 2 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Cornfield with successfully harvested corn and a center pivot irrigation system, upslope from the farmed wetland swale and roadside ditch. Climatic conditions are drier than normal. However, when aerial photos were reviewed and area was delineated by Kimley-Horn in October 2023, area was determined to be wetland.	

### 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>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>3</u> x 4 = <u>12</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>3</u> (A) <u>12</u> (B) Prevalence Index = B/A = <u>4</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Cirsium arvense</u>	<u>3</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>3</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

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

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

**SOIL**

Sampling Point: W14-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/3		100					Silt Loam	
10-14	10YR 2/2		100					Silty Clay Loam	
14-24	10YR 2/2		98	10YR 3/6	2	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Surface Water Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present Yes _____ 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: 10/21/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W14-1w  
 Investigator(s): M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.623168 Long: -93.110593 Datum: WGS84  
 Soil Map Unit Name: Cylinder loam, 0 to 2 percent slopes NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: (Explain alternative procedures here or in a separate report.) Sample point located in a wet meadow community of a roadside ditch and farmed wetland swale south of a culvert inlet. Wetland W14 is located within an agricultural field with center pivot irrigation system. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> 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				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>59</u> x 2 = <u>118</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>61</u> (A) <u>124</u> (B) Prevalence Index = B/A = <u>2.03</u>
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Phalaris arundinacea</u>	45	Yes	FACW	
2. <u>Panicum dichotomiflorum</u>	10	No	FACW	
3. <u>Urtica dioica</u>	4	No	FACW	
4. <u>Apocynum cannabinum</u>	2	No	FAC	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>61</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				

**Hydrophytic Vegetation Indicators:**  
X 1 - Rapid Test for Hydrophytic Vegetation  
X 2 - Dominance Test is >50%  
X 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_\_\_ 4 - Morphological Adaptations<sup>1</sup>  
 (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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: W14-1w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-7	10YR 2/1	100					Silty Clay Loam		
7-20	10YR 2/1	93	5YR 3/4	7	C	M	Silty Clay Loam		
20-24	10YR 3/1	95	10YR 3/6	5	C	M	Silty Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" 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 checked="" 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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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): _____	

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: 10/21/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W14-2u  
 Investigator(s): M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope %: 5-6  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.620619 Long: -93.109392 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 \_\_\_\_\_ No X (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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Successfully harvested corn field with center pivot irrigation system, on a slope above W14. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

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

Remarks: (Include photo numbers here or on a separate sheet.)  
 Harvested corn field with corn debris from successful harvest. No volunteer vegetation. Vegetation assumed to be non-hydrophytic due to the lack of hydric soil and wetland hydrology indicators.

**SOIL**

Sampling Point: W14-2u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/3	100					Silt Loam	
10-18	10YR 2/2	98	10YR 3/6	2	C	M	Silty Clay Loam	
18-24	10YR 2/1	50	10YR 3/6	2	C	M	Silty Clay Loam	
18-24	10YR 3/1	48		0			Silty Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**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)	

<b>Field Observations:</b> Surface Water Present    Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present    Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present    Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ 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: 10/21/2022  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W14-2w  
 Investigator(s): M. Volbrecht, D. Hixon Section, Township, Range: T113N, R019W, S04  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 0-1  
 Subregion (LRR or MLRA): LRR\_K\_MLRA\_91 Lat: 44.620646 Long: -93.109697 Datum: WGS84  
 Soil Map Unit Name: Klinger silt loam, 1 to 5 percent slopes NWI classification: PEM1Af  
 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Farmed wetland community under a center pivot irrigation system. The farmed wetland community within W14 is a swale at the base of broad slopes to the east, west and south. Climatic conditions are drier than normal.	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
0 = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0 = Total Cover				

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 0 x 3 = 0

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 0 (A) 0 (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (Include photo numbers here or on a separate sheet.)  
 No volunteer vegetation. Harvested corn debris. Wetland determination based on the presence of hydric soil and wetland hydrology indicators.

**SOIL**

Sampling Point: W14-2w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-6	10YR 2/2	95	10YR 4/6	5	C	M		Silty Clay Loam		
6-24	10YR 2/1	95	10YR 3/6	5	C	M		Silty Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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 checked="" 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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: 10/11/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W15-1u  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Shoulder Local relief (concave, convex, none): Convex Slope %: 5-7  
 Subregion (LRR or MLRA): LRR M Lat: 44.616852 Long: -93.062172 Datum: WGS84  
 Soil Map Unit Name: Kato 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 _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Edge of garden plot and lightly traveled track.	

### 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>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. <u>Rhamnus cathartica</u>	40	Yes	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
40 = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Digitaria sanguinalis</u>	45	Yes	FACU	
2. <u>Setaria faberi</u>	30	Yes	FACU	
3. <u>Dioscorea villosa</u>	15	No	FAC	
4. <u>Taraxacum officinale</u>	10	No	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
100 = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0 = Total Cover				

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

**SOIL**

Sampling Point: W15-1u

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 <sup>1</sup>	Loc <sup>2</sup>		
0-11	10YR 2/1	100					Clay Loam	
11-24	10YR 2/1	97	2.5YR 4/4	3	C	M	Clay Loam	

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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: 10/11/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W15-1w  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-3  
 Subregion (LRR or MLRA): LRR M Lat: 44.616956 Long: -93.062265 Datum: WGS84  
 Soil Map Unit Name: Colo silt loam, occasionally flooded NWI classification: PSS1/EM1A

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland complex around S. Vermillion River with grasses and occasional trees and shrubs	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status	
1. <u>Salix nigra</u>	20	Yes	OBL	<b>Dominance Test worksheet:</b>  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>20</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. _____				<b>Prevalence Index worksheet:</b>  Total % Cover of: Multiply by: OBL species <u>25</u> x 1 = <u>25</u> FACW species <u>85</u> x 2 = <u>170</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>120</u> (A) <u>235</u> (B) Prevalence Index = B/A = <u>1.96</u>
2. _____				
3. _____				
4. _____				
5. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Phalaris arundinacea</u>	70	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b>  <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Solidago gigantea</u>	15	No	FACW	
3. <u>Hypericum perforatum</u>	10	No	FACU	
4. <u>Carex lacustris</u>	5	No	OBL	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 ft</u> )				
1. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				

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

**SOIL**

Sampling Point: W15-1w

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 <sup>1</sup>	Loc <sup>2</sup>			
0-24	10YR 2/1	96	2.5YR 4/4	4	C	M	Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u>	

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

Remarks:  
No water table after 15.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/11/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W15-2u  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Linear Slope %: 4-6  
 Subregion (LRR or MLRA): LRR M Lat: 44.617781 Long: -93.063198 Datum: WGS84  
 Soil Map Unit Name: Colo silt loam, occasionally flooded 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 _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>50</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover				<b>Prevalence Index worksheet:</b>  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>Trifolium repens</u>	<u>45</u>	<u>Yes</u>	<u>FACU</u>		
2. <u>Scirpus cyperinus</u>	<u>35</u>	<u>Yes</u>	<u>OBL</u>		
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.)

**Hydrophytic Vegetation Indicators:**  
 - 1 - Rapid Test for Hydrophytic Vegetation  
 - 2 - Dominance Test is >50%  
 - 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 - 4 - Morphological Adaptations<sup>1</sup>  
 (Provide supporting data in Remarks or on a separate sheet)  
 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

**SOIL**

Sampling Point: W15-2u

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 <sup>1</sup>	Loc <sup>2</sup>			
0-22	10YR 2/1	97	2.5YR 4/4	3	C	M	Clay Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> 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: 10/11/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W15-2w  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 3-5  
 Subregion (LRR or MLRA): LRR M Lat: 44.617721 Long: -93.063125 Datum: WGS84  
 Soil Map Unit Name: Colo silt loam, occasionally flooded NWI classification: PSS1/EM1A

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 <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: (Explain alternative procedures here or in a separate report.) Shrubby area with wetland veg understory	

### 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>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</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				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. <u>Cornus alba</u>	30	Yes	FACW	
2. <u>Salix interior</u>	30	Yes	FACW	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>60</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Scirpus cyperinus</u>	35	Yes	OBL	
2. <u>Solidago gigantea</u>	35	Yes	FACW	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>70</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>-</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>    </u>				

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

**SOIL**

Sampling Point: W15-2w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-22	10YR 2/1	96	2.5YR 4/6	4	C	M	Clay Loam			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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: 10/11/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W16-1u  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Linear Slope %: 5-7  
 Subregion (LRR or MLRA): LRR M Lat: 44.622115 Long: -93.062746 Datum: WGS84  
 Soil Map Unit Name: Hawick gravelly sandy loam, 6 to 12 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>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Alfalfa field	

### 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>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>0</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Medicago sativa</u>	85	Yes	FACU	
2. <u>Setaria faberi</u>	10	No	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>95</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup>  
(Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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.)

**SOIL**

Sampling Point: W16-1u

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 <sup>1</sup>	Loc <sup>2</sup>			
0-13	10YR 3/2		97	2.5YR 4/4	3	C	M	Loam		
13-23	10YR 2/2		97	2.5YR 4/4	3	C	M	Loam		

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> 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: 10/11/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W16-1w  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0-2  
 Subregion (LRR or MLRA): LRR M Lat: 44.622114 Long: -93.062883 Datum: WGS84  
 Soil Map Unit Name: Marshan 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.) Mown vegetation at toeslope in wet basin	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  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. _____	_____	_____	_____		
0 = Total Cover				<b>Prevalence Index worksheet:</b>  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. _____	_____	_____	_____		
0 = Total Cover					
Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Phalaris arundinacea</u>	<u>70</u>	<u>Yes</u>	<u>FACW</u>		
2. <u>Persicaria maculosa</u>	<u>15</u>	<u>No</u>	<u>FACW</u>		
3. <u>Trifolium repens</u>	<u>15</u>	<u>No</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
100 = Total Cover					
Woody Vine Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0 = Total Cover					

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup>  
 (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: W16-1w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-3	10YR 3/2	98	2.5YR 4/4	2	C	M	Loam			
3-22	10YR 2/1	95	2.5YR 4/6	5	C	M	Clay Loam			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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)	

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> 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:  
No water table after 15 minute wait time.

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/12/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W18-4u  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Backslope Local relief (concave, convex, none): Linear Slope %: 3-5  
 Subregion (LRR or MLRA): LRR M Lat: 44.62449 Long: -93.066766 Datum: WGS84  
 Soil Map Unit Name: Hawick gravelly sandy loam, 12 to 20 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 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 _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Healthy soil. At the 10/02/2024 TEP meeting the sampled area was determined to have met wetland hydrology criteria and is considered wetland.	

### 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. _____	_____	_____	_____	
0 = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0 = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Cyperus esculentus</u>	15	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
15 = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0 = Total Cover				

**Hydrophytic Vegetation Indicators:**  
X 1 - Rapid Test for Hydrophytic Vegetation  
X 2 - Dominance Test is >50%  
 - 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 - 4 - Morphological Adaptations<sup>1</sup>  
 (Provide supporting data in Remarks or on a separate sheet)  
 - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators 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: W18-4u

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 <sup>1</sup>	Loc <sup>2</sup>				
0-18	10YR 3/2	96	2.5YR 4/4	4	C	M	Clay Loam			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> 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:  
At TEP meeting sampled area was determined to meet indicators Surface Soil Cracks (B6) and Geomorphic Position (D2).

## WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/12/2023  
 Applicant/Owner: Stone Solar State: Min Sampling Point: W18-4w  
 Investigator(s): MB MS Section, Township, Range: T113N, R19W, S2  
 Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope %: 1-3  
 Subregion (LRR or MLRA): LRR M Lat: 44.624498 Long: -93.066561 Datum: WGS84  
 Soil Map Unit Name: Marshan silty clay loam NWI classification: PEM1C

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Explain alternative procedures here or in a separate report.)	

### 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>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</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				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. <u>Cornus alba</u>	15	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>15</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Phalaris arundinacea</u>	45	Yes	FACW	
2. <u>Urtica dioica</u>	25	Yes	FACW	
3. <u>Panicum virgatum</u>	25	Yes	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>95</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30 ft</u>)</b>				
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 ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup>  
 (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No

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

**SOIL**

Sampling Point: W18-4w

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 <sup>1</sup>	Loc <sup>2</sup>				
0-18	10YR 2/1	96	2.5YR 4/4	4	C	M	Clay Loam			

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

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)

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

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>	
<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 checked="" 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 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)	

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input 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:

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET – Midwest Region**  
 See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024  
 Requirement Control Symbol EXEMPT:  
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/29/2024  
 Applicant/Owner: Solar Stone State: MN Sampling Point: AWS-31-1  
 Investigator(s): JL, JK Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): linear Local relief (concave, convex, none): none  
 Slope (%): 0-1 Lat: 44.613790 Long: -93.101115 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 X (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 _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: At the time of the TEP review, climate conditons were drier than normal. Sampled area is likely distubred due to farming practices, but area was not planted with corn.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>15</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Herb Stratum	(Plot size: <u>5</u> )				
1.	<u>Panicum capillare</u>	<u>100</u>	<u>Yes</u>	<u>FAC</u>	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
=Total Cover					
Woody Vine Stratum	(Plot size: _____)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
=Total Cover					

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>100</u>	x 3 = <u>300</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>300</u> (B)
Prevalence Index = B/A = <u>3.00</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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: AWS-31-1

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/1	100					Loamy/Clayey	silt loam
10-14	10YR 3/1	98	7.5YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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

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

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Aquatic Fauna (B13)</p> <p><input type="checkbox"/> True Aquatic Plants (B14)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Gauge or Well Data (D9)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes <input type="checkbox"/>    No <input checked="" type="checkbox"/>    Depth (inches): _____</p> <p>Water Table Present?      Yes <input type="checkbox"/>      No <input checked="" type="checkbox"/>      Depth (inches): _____</p> <p>Saturation Present?        Yes <input type="checkbox"/>        No <input checked="" type="checkbox"/>        Depth (inches): _____</p> <p>(includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>    Yes <input type="checkbox"/>    No <input checked="" type="checkbox"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET – Midwest Region**  
 See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024  
 Requirement Control Symbol EXEMPT:  
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/29/2024  
 Applicant/Owner: Solar Stone State: MN Sampling Point: AWS-31-2  
 Investigator(s): JL, JK Section, Township, Range: T113N, R019W, S09  
 Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave  
 Slope (%): 1-2 Lat: 44.614476 Long: -93.102200 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 X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: At the time of the TEP review, climate conditons were drier than normal. Sampled area is likely distubred due to farming practices, but area was not planted with corn.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>15</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Herb Stratum	(Plot size: <u>5</u> )				
1.	<u>Panicum capillare</u>	<u>45</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Persicaria amphibia</u>	<u>10</u>	<u>No</u>	<u>OBL</u>	
3.	<u>Rorippa palustris</u>	<u>10</u>	<u>No</u>	<u>OBL</u>	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
<u>65</u> =Total Cover					
Woody Vine Stratum	(Plot size: _____)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
=Total Cover					

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**  

Total % Cover of:	Multiply by:
OBL species <u>20</u>	x 1 = <u>20</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>45</u>	x 3 = <u>135</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>65</u> (A)	<u>155</u> (B)
Prevalence Index = B/A = <u>2.38</u>	

**Hydrophytic Vegetation Indicators:**  
1 - Rapid Test for Hydrophytic Vegetation  
X 2 - Dominance Test is >50%  
X 3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____
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Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: AWS-31-2

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 <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 2/1	100	7.5YR 4/6	2	C	M	Loamy/Clayey	silty clay loam
18-24	10YR 4/1	90	7.5YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input checked="" 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)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <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)		
--	--	--	---	--	--	--	--	--

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <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)	<input checked="" 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)	

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

Remarks:

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET – Midwest Region**  
 See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024  
 Requirement Control Symbol EXEMPT:  
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/29/2024  
 Applicant/Owner: Solar Stone State: MN Sampling Point: AWS-32-1  
 Investigator(s): JL, JK Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave  
 Slope (%): 4-5 Lat: 44.614421 Long: -93.093136 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 \_\_\_\_\_ No X (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Remarks: At the time of the TEP review, climate conditions were drier than normal. Sampled area is farmed. Lat/Long are approximate due to a GPS issue while out in the field.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	<b>Dominance Test worksheet:</b> 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>100.0%</u> (A/B)
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
				=Total Cover	
Sapling/Shrub Stratum	(Plot size: <u>15</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of:      Multiply by: OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>60</u> x 3 = <u>180</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>80</u> (A) <u>220</u> (B) Prevalence Index = B/A = <u>2.75</u>
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
				=Total Cover	
Herb Stratum	(Plot size: <u>5</u> )				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<u>Panicum capillare</u>	55	Yes	FAC	
2.	<u>Rorippa palustris</u>	10	No	OBL	
3.	<u>Rumex crispus</u>	5	No	FAC	
4.	<u>Persicaria maculosa</u>	5	No	FACW	
5.	<u>Hypericum perforatum</u>	5	No	FACU	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
				80 =Total Cover	
Woody Vine Stratum	(Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
				=Total Cover	

Remarks: (Include photo numbers here or on a separate sheet.)  
 Farmed corn within sampled area.

**SOIL**

Sampling Point: AWS-32-1

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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/1	100					Loamy/Clayey	sandy loam
6-12	10YR 3/1	98	7.5YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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

Remarks:

**HYDROLOGY**

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

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

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

Remarks:

**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET – Midwest Region**  
 See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024  
 Requirement Control Symbol EXEMPT:  
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/29/2024  
 Applicant/Owner: Solar Stone State: MN Sampling Point: AWS-33-1  
 Investigator(s): JL, JK Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): linear Local relief (concave, convex, none): none  
 Slope (%): 0-1 Lat: 44.613031 Long: -93.091113 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 X (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 _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: At the time of the TEP review, climate conditions were drier than normal. Sampled area is farmed.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>15</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
=Total Cover					
Herb Stratum	(Plot size: <u>5</u> )				
1.	<u>Panicum capillare</u>	<u>80</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Taraxacum officinale</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
3.	<u>Ambrosia trifida</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
<u>88</u> =Total Cover					
Woody Vine Stratum	(Plot size: _____)				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
=Total Cover					

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>83</u>	x 3 = <u>249</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>88</u> (A)	<u>269</u> (B)
Prevalence Index = B/A = <u>3.06</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators 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.)  
 Farmed corn within sampled area.



**U.S. Army Corps of Engineers**  
**WETLAND DETERMINATION DATA SHEET – Midwest Region**  
 See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024  
 Requirement Control Symbol EXEMPT:  
 (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Castlerock City/County: Dakota Sampling Date: 10/29/2024  
 Applicant/Owner: Solar Stone State: MN Sampling Point: AWS-33-2  
 Investigator(s): JL, JK Section, Township, Range: T113N, R019W, S10  
 Landform (hillside, terrace, etc.): linear Local relief (concave, convex, none): none  
 Slope (%): 0-1 Lat: 44.611158 Long: -93.092282 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 X (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 _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Remarks: At the time of the TEP review, climate conditions were drier than normal. Sampled area is farmed.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.	_____	_____	_____	_____	<b>Dominance Test worksheet:</b> 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>100.0%</u> (A/B)
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
				=Total Cover	
Sapling/Shrub Stratum	(Plot size: <u>15</u> )				
1.	_____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of:      Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>10</u> (A) <u>30</u> (B) Prevalence Index = B/A = <u>3.00</u>
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
				=Total Cover	
Herb Stratum	(Plot size: <u>5</u> )				
1.	<u>Panicum capillare</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.	<u>Rumex crispus</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
				<u>10</u> =Total Cover	
Woody Vine Stratum	(Plot size: _____)				
1.	_____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2.	_____	_____	_____	_____	
				=Total Cover	

Remarks: (Include photo numbers here or on a separate sheet.)  
 Farmed corn within sampled area.

**SOIL**

Sampling Point: AWS-33-2

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/1	99	7.5YR 4/6	1	C	M	Loamy/Clayey	sandy loam
10-16	10YR 2/1	98	7.5YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<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)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:  
 The top inches of the soil had less than 1 percent of a redox a presence. Soil indicator F6 requires at least 2 percent of redox within the first 8 inches of the soil sample.

**HYDROLOGY**

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

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> Yes _____    No <u>X</u>
--	--

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

Remarks:

**WETLAND DELINEATION REPORT**

Castle Rock Solar Project  
Appendix C Site Photographs

**Appendix C SITE PHOTOGRAPHS**



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 1: W1 – View North, October 17, 2022



Photo Point 3: W1 – View East, October 17, 2022



Photo Point 2: W1 – View West, October 17, 2022



Photo Point 4: W2 – View West, October 17, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 5: W2 – View Northwest, October 17, 2022



Photo Point 7: W3 – View West, October 17, 2022



Photo Point 6: W2 – View East, October 18, 2022



Photo Point 8: W4 – View North, October 18, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 9: W5 – View Northeast, October 18, 2022



Photo Point 11: W7 – View North, October 18, 2022



Photo Point 10: W6 – View Southeast, October 18, 2022



Photo Point 12: W8 – View North, October 19, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 13: W8 – View North, October 19, 2022



Photo Point 15: W9 – View South, October 19, 2022



Photo Point 14: W8 – View North, October 19, 2022



Photo Point 16: W10 – View West, October 19, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 17: W11 – View South, October 20, 2022



Photo Point 19: W13 – View Northeast, October 20, 2022



Photo Point 18: W12 – View North, October 20, 2022



Photo Point 20: W14 – View North, October 21, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 21: W14 – View South, October 21, 2022



Photo Point 23: W16 – View East, October 11, 2023



Photo Point 22: W15 – View West, October 11, 2023



Photo Point 24: W18 – View East, October 12, 2023



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 25: S1 – View Southeast, October 18, 2022



Photo Point 27: S2 – View East, October 18, 2022



Photo Point 26: S1 – View West, October 19, 2022



Photo Point 28: S3 – View East, October 19, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 29: S4 – View Northwest, October 19, 2022



Photo Point 31: UPL1 – View North, October 18, 2022



Photo Point 30: OW1 – View Northwest, October 11, 2023



Photo Point 32: UPL2 – View North, October 19, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 33: UPL3 – View North, October 19, 2022



Photo Point 35: UPL5 – View South, October 20, 2022



Photo Point 34: UPL4 – View North, October 20, 2022



Photo Point 36: UPL6 – View West, October 20, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 37: UPL7 – View North, October 20, 2022



Photo Point 39: UPL9 – View East, October 12, 2023



Photo Point 38: UPL8 – View East, October 20, 2022



Photo Point 40: UPL10 – View West, October 12, 2023



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 41: UPL11 – View North, October 12, 2023



Photo Point 43: AWS-31-2 – View East, October 29, 2024



Photo Point 42: AWS-31-1 – View South, October 29, 2024



Photo Point 44: AWS-32-1 – View North, October 29, 2024



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 45: AWS-33-1 – View South, October 29, 2024



Photo Point 47: Upland Forest – View East, October 20, 2022



Photo Point 46: AWS-33-2 – View Northeast, October 29, 2024



Photo Point 48: General Landcover – View North, October 18, 2022



Client: Castle Rock Solar LLC  
Project: Castle Rock Solar Project

Project Number: 193709215  
Location: T. of Castle Rock  
Dakota Co., MN



Photo Point 49: Upland Forest – View West, October 19, 2022



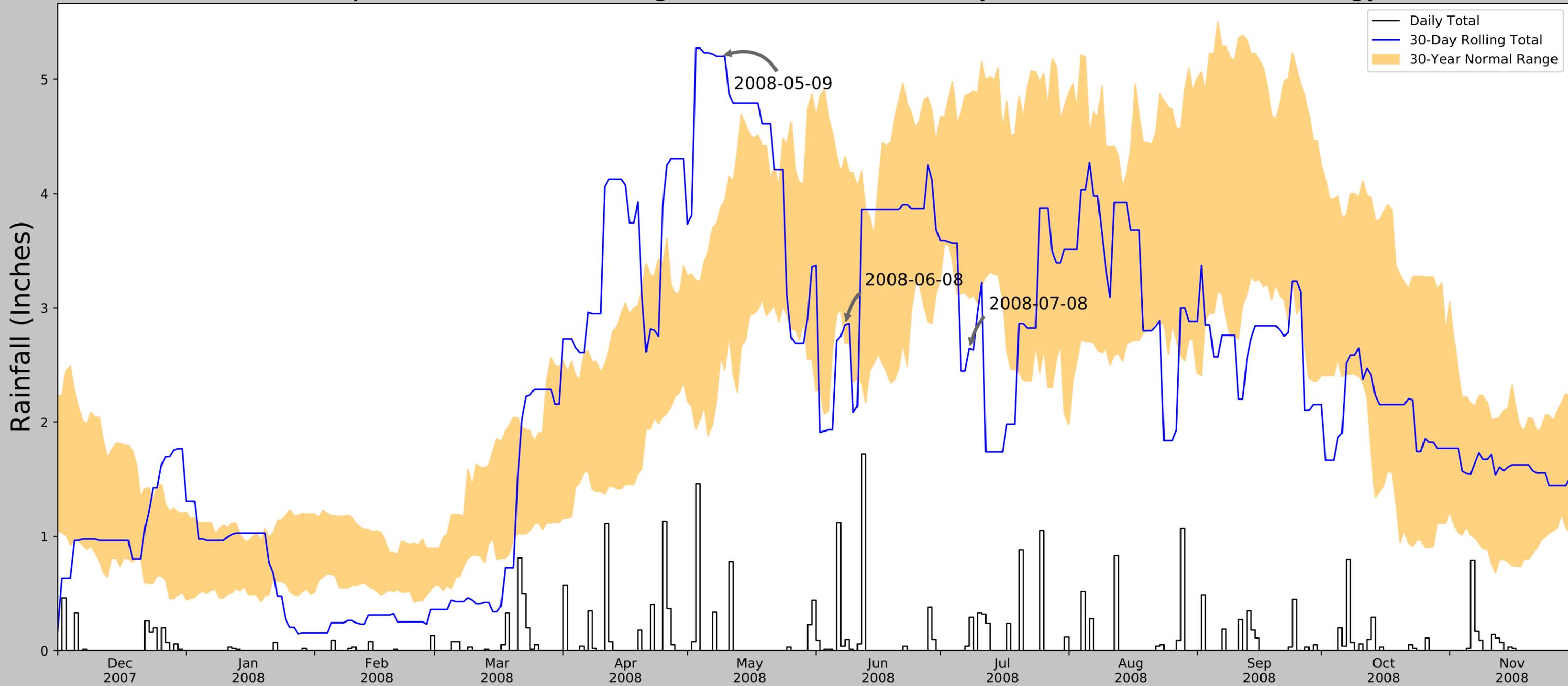
Photo Point 50: General Landcover – View Southeast, October 18, 2022

**WETLAND DELINEATION REPORT**

Castle Rock Solar Project  
Appendix D Precipitation Analysis

**Appendix D PRECIPITATION ANALYSIS**

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



Coordinates	44.607003, -93.098016
Observation Date	2008-07-08
Elevation (ft)	901.04
Drought Index (PDSI)	Normal
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2008-07-08	3.083465	4.870079	2.641732	Dry	1	3	3
2008-06-08	2.689764	4.323622	2.850394	Normal	2	2	4
2008-05-09	2.570473	3.876378	5.200788	Wet	3	1	3
Result							Normal Conditions - 10

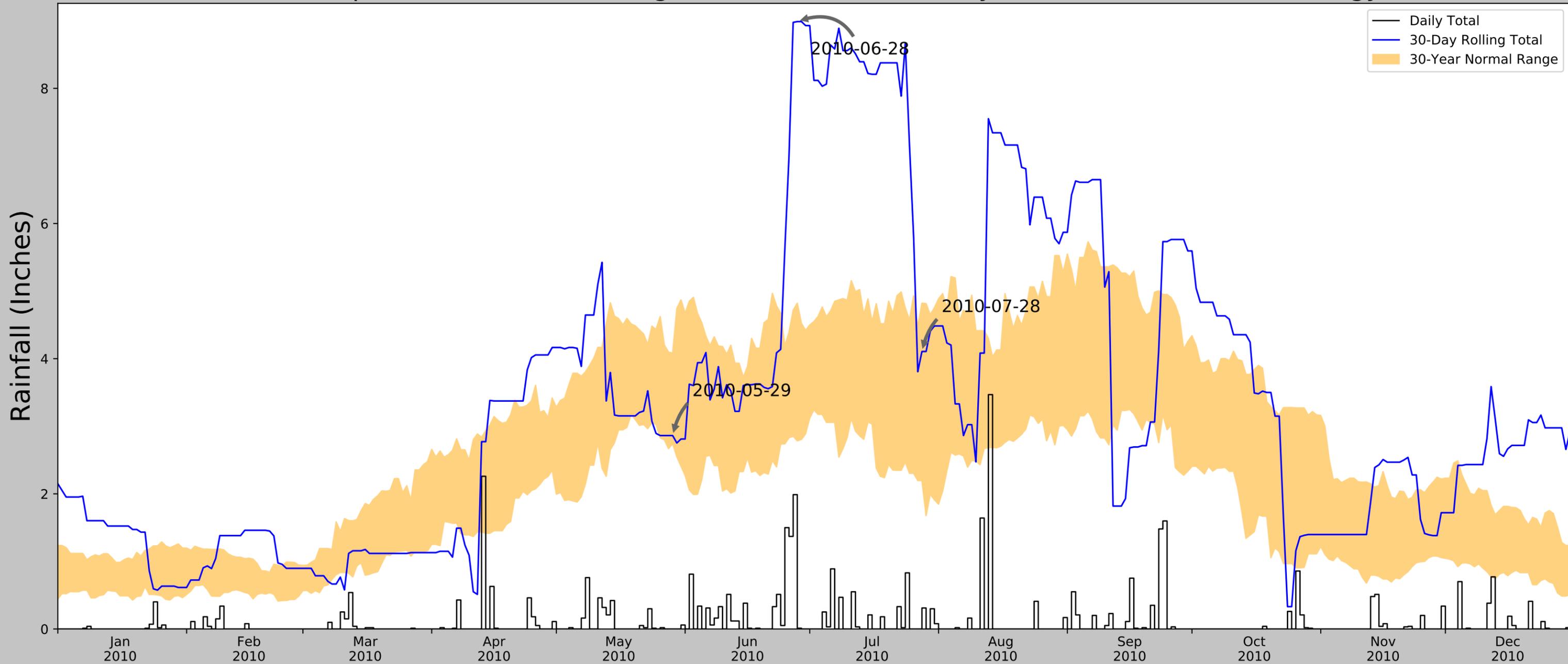


Figure and tables made by the  
**Antecedent Precipitation Tool**  
Version 1.0

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
RICHFIELD 1.2 WSW	44.8717, -93.3055	852.034	20.933	49.006	10.446	1	0
RIVER FALLS 0.4 E	44.8559, -92.6127	916.011	29.38	14.971	13.661	0	8
CHASKA 2NW	44.8131, -93.6311	922.9	29.799	21.86	14.061	1544	82
CHANHASSEN WSFO	44.8497, -93.5644	945.866	28.378	44.826	14.042	2745	0
FARIBAULT	44.3092, -93.2661	970.144	22.183	69.104	11.515	7034	0
CHASKA	44.8, -93.5833	720.144	27.309	180.896	17.229	28	0

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



Coordinates	44.607003, -93.098016
Observation Date	2010-07-28
Elevation (ft)	901.04
Drought Index (PDSI)	Mild wetness
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2010-07-28	2.195669	4.820866	4.106299	Normal	2	3	6
2010-06-28	2.783465	4.82126	8.988189	Wet	3	2	6
2010-05-29	2.741339	4.08504	2.862205	Normal	2	1	2
Result							Normal Conditions - 14

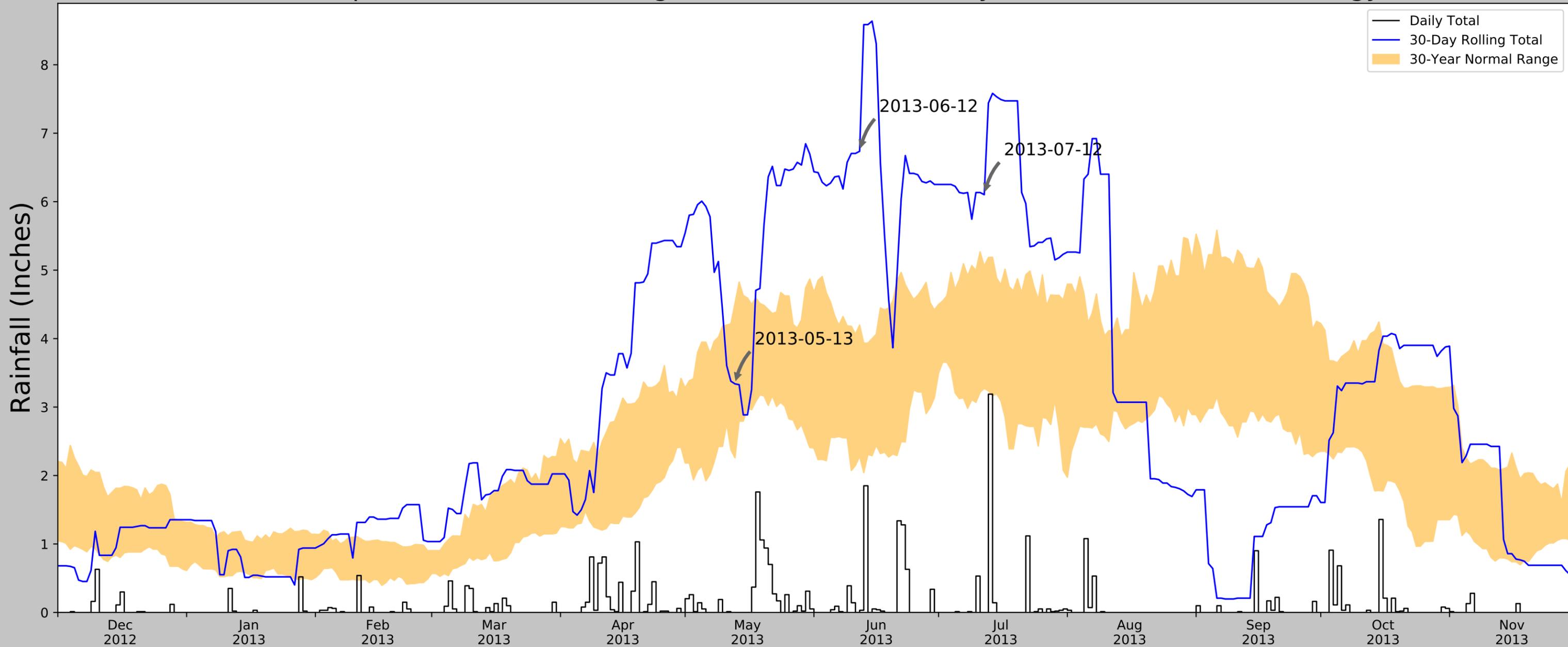


Figure and tables made by the  
**Antecedent Precipitation Tool**  
Version 1.0

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
CARVER 0.7 W	44.7573, -93.6416	847.113	28.652	53.927	14.439	0	49
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	14.761	59.176	7.516	0	2
BURNSVILLE 0.6 WNW	44.7674, -93.2919	904.856	14.613	3.816	6.632	0	37
EAGAN 1.7 W	44.815, -93.1981	875.0	15.188	26.04	7.23	0	2
RICHFIELD 1.2 WSW	44.8717, -93.3055	852.034	20.933	49.006	10.446	1	0
RIVER FALLS 0.4 E	44.8559, -92.6127	916.011	29.38	14.971	13.661	451	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
FARIBAULT	44.3092, -93.2661	970.144	22.183	69.104	11.515	6304	0
CHASKA	44.8, -93.5833	720.144	27.309	180.896	17.229	28	0

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



Coordinates	44.607003, -93.098016
Observation Date	2013-07-12
Elevation (ft)	901.04
Drought Index (PDSI)	Extreme wetness
WebWIMP H <sub>2</sub> O Balance	Dry Season

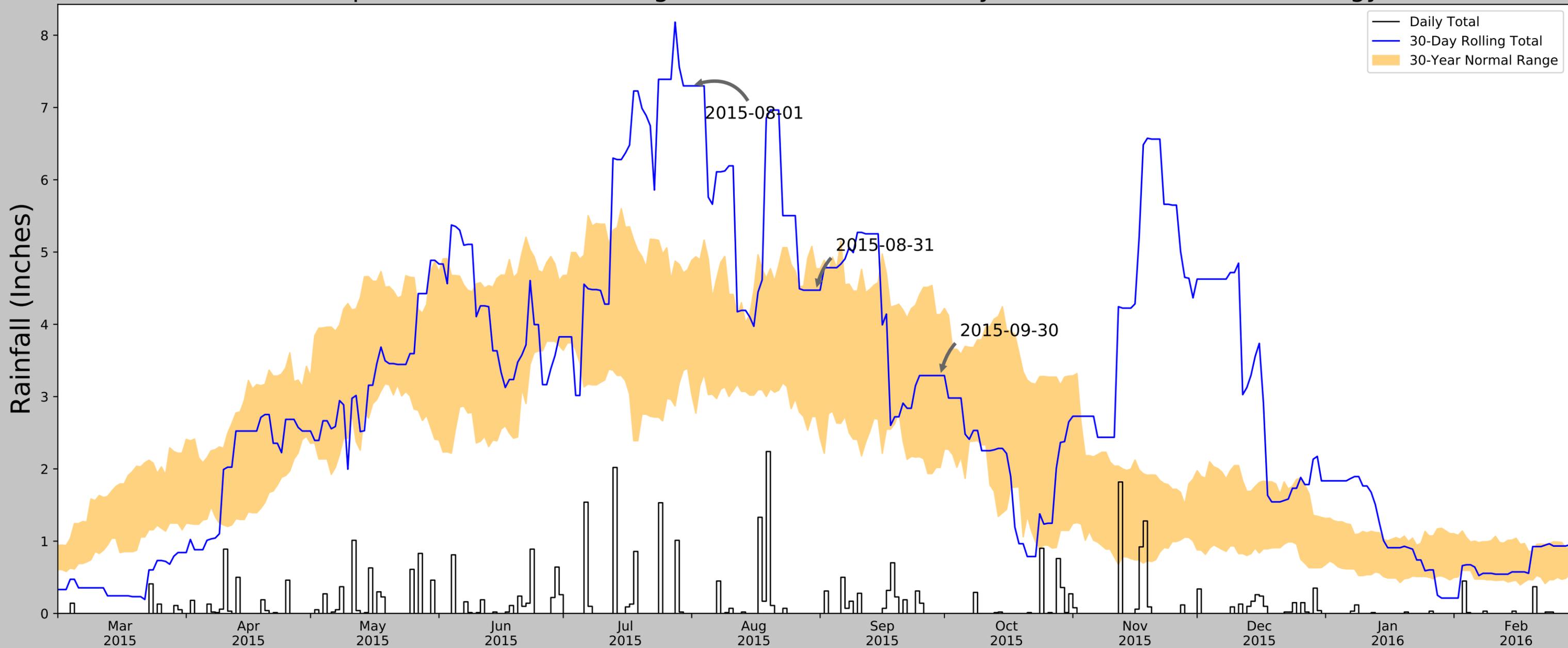
30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2013-07-12	3.272441	5.059055	6.102362	Wet	3	3	9
2013-06-12	2.282284	4.198819	6.736221	Wet	3	2	6
2013-05-12	2.259055	4.517222	2.228592	Normal	2	1	2

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHANHASSEN 1.2 W	44.8536, -93.5863	971.129	29.407	70.089	15.294	169	51
CHANHASSEN 1.0 ESE	44.8467, -93.5456	905.84	27.514	4.8	12.513	13	20
CARVER 0.7 W	44.7573, -93.6416	847.113	28.652	53.927	14.439	418	4
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	69	8
INVER GROVE HEIGHTS 2.1 N	44.8554, -93.0634	913.058	17.247	12.018	7.968	21	5
EAGAN 1.7 W	44.815, -93.1981	875.0	15.188	26.04	7.23	85	1
EAGAN 2.9 SW	44.7836, -93.2012	914.042	13.212	13.002	6.117	3	1
ROSEMOUNT 3.3 WNW	44.7608, -93.13	979.987	10.742	78.947	5.682	52	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
FARIBAULT	44.7892, -93.2661	936.144	23.182	69.104	11.515	5299	0

Figure and tables made by the  
**Antecedent Precipitation Tool**  
Version 1.0

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

# 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 <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %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  
**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:

**Tuesday, May 10, 2016**

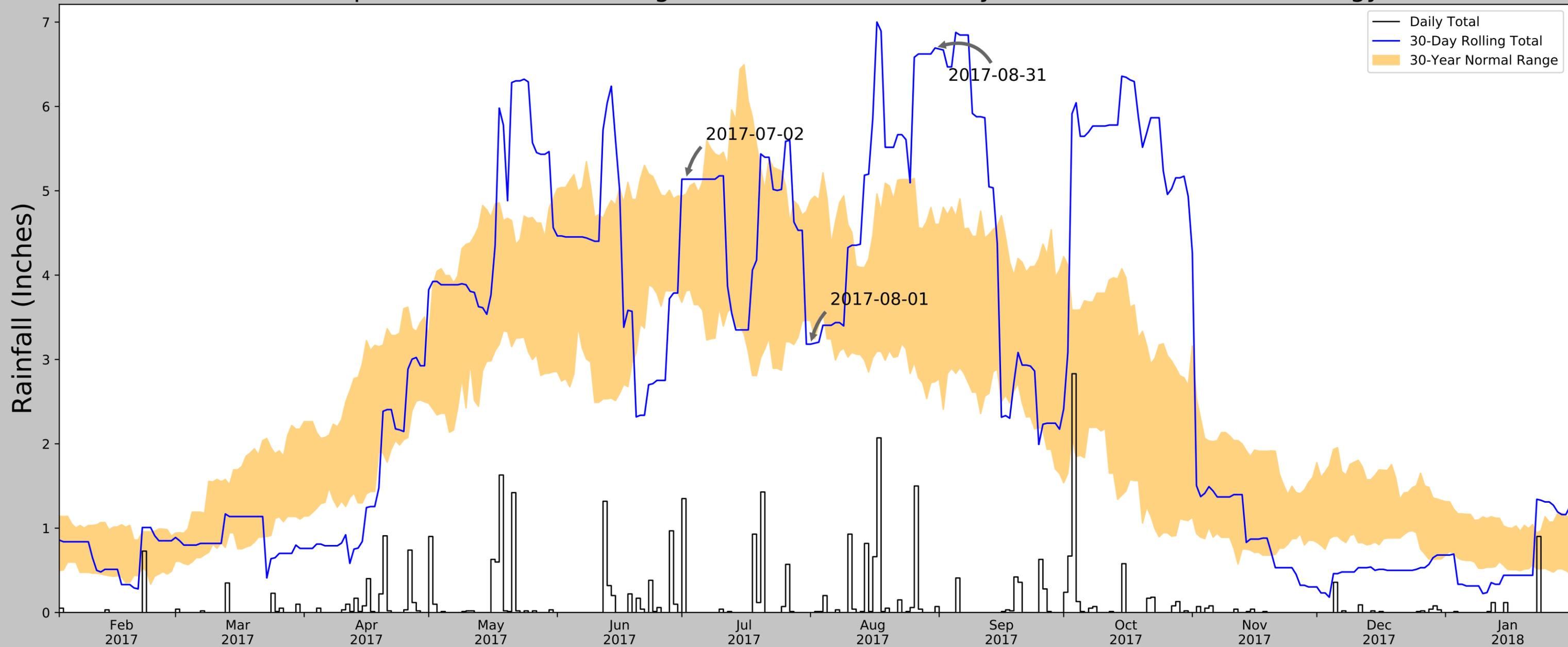
### Score using 1991-2020 normal period

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

### 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	2017-08-31
Elevation (ft)	901.04
Drought Index (PDSI)	Extreme wetness
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %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  
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, November 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: <b>October 2017</b>	second prior month: <b>September 2017</b>	third prior month: <b>August 2017</b>
<b>estimated precipitation total for this location:</b>	<b>3.98</b>	<b>1.87</b>	<b>5.93</b>
<b>there is a 30% chance this location will have less than:</b>	1.44	1.91	3.58
<b>there is a 30% chance this location will have more than:</b>	3.42	5.33	5.73
<b>type of month:</b> dry normal wet	<b>wet</b>	<b>dry</b>	<b>wet</b>
<b>monthly score</b>	<b>3 * 3 = 9</b>	<b>2 * 1 = 2</b>	<b>1 * 3 = 3</b>
<b>multi-month score:</b> 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	<b>14 (Normal)</b>		

### Other Resources:

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

# 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**

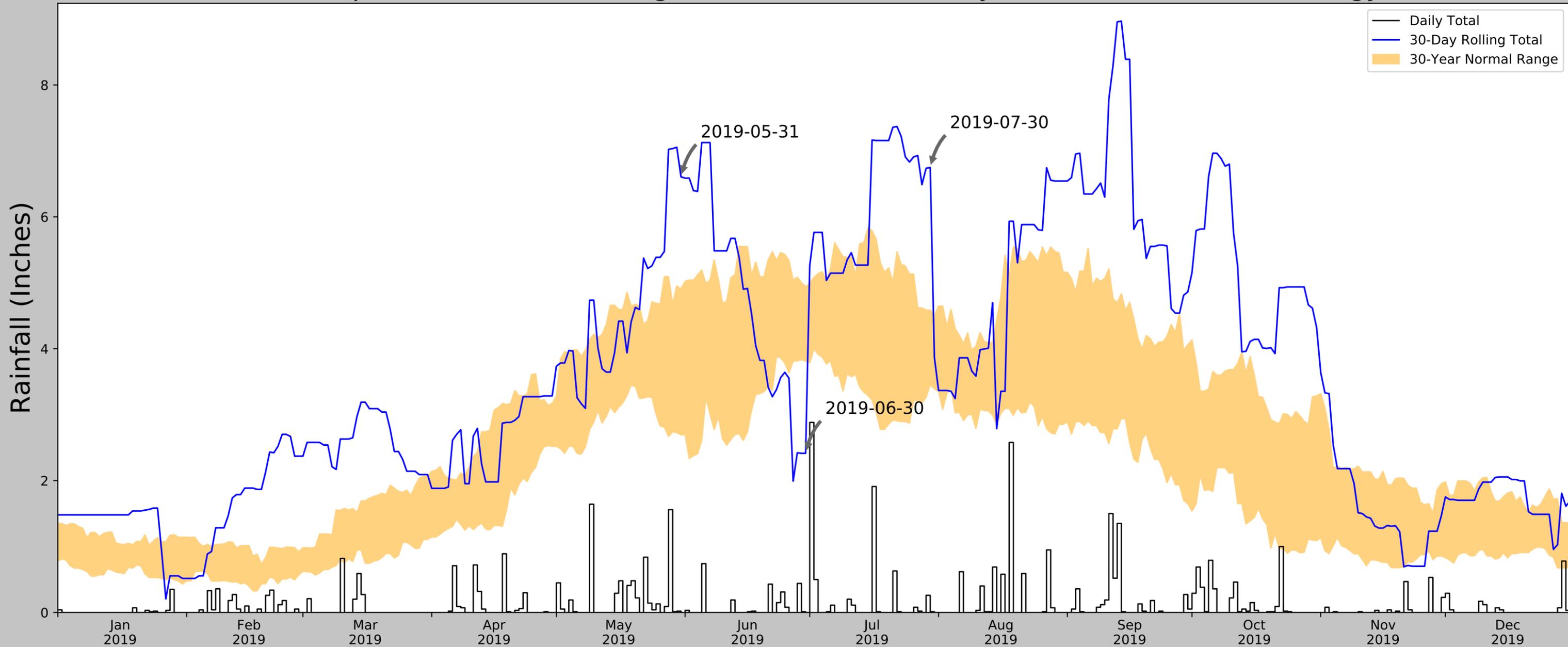
### Score using 1991-2020 normal period

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

### 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 <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %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

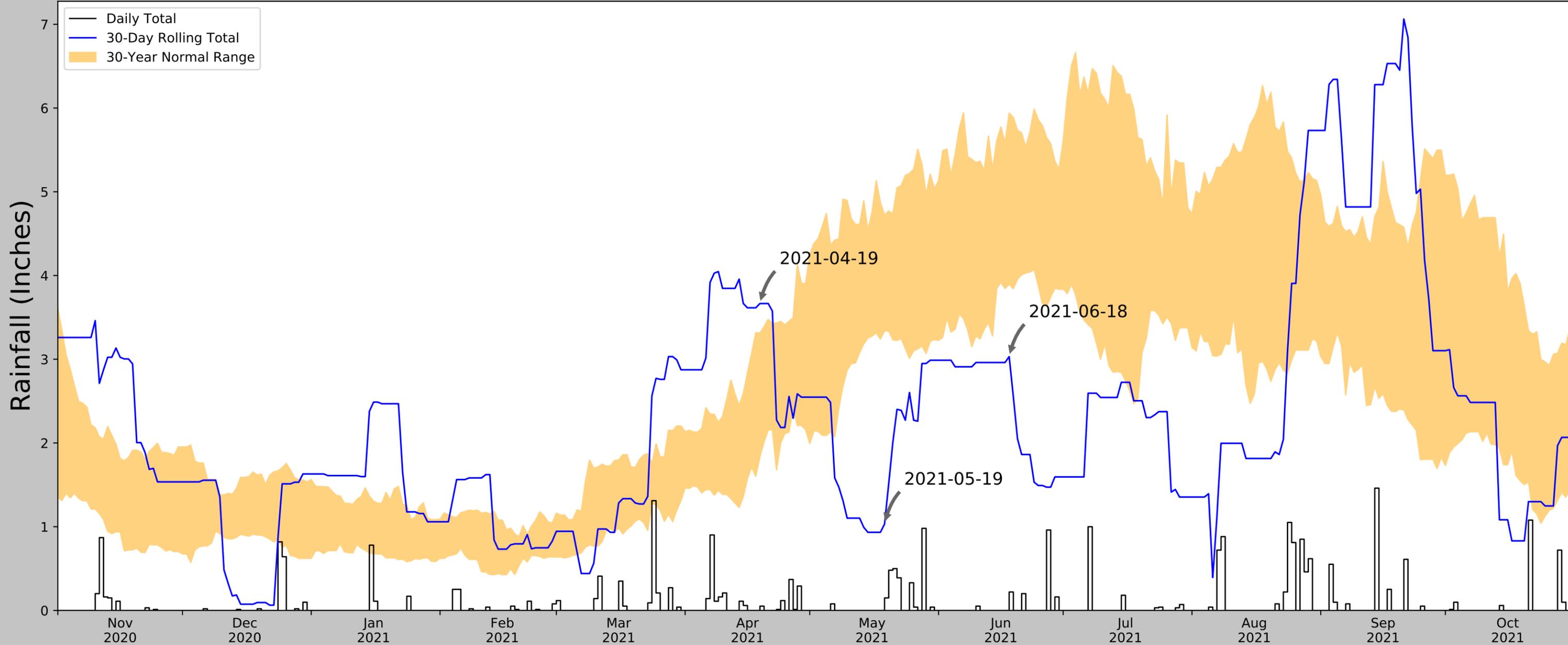
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHASKA 1.7 E	44.8147, -93.5752	902.887	27.476	1.847	12.415	579	76
CHANHASSEN 1.2 W	44.8536, -93.5863	971.129	29.407	70.089	15.294	903	14
CHANHASSEN 1.0 ESE	44.8467, -93.5456	905.84	27.514	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

# 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 <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %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**

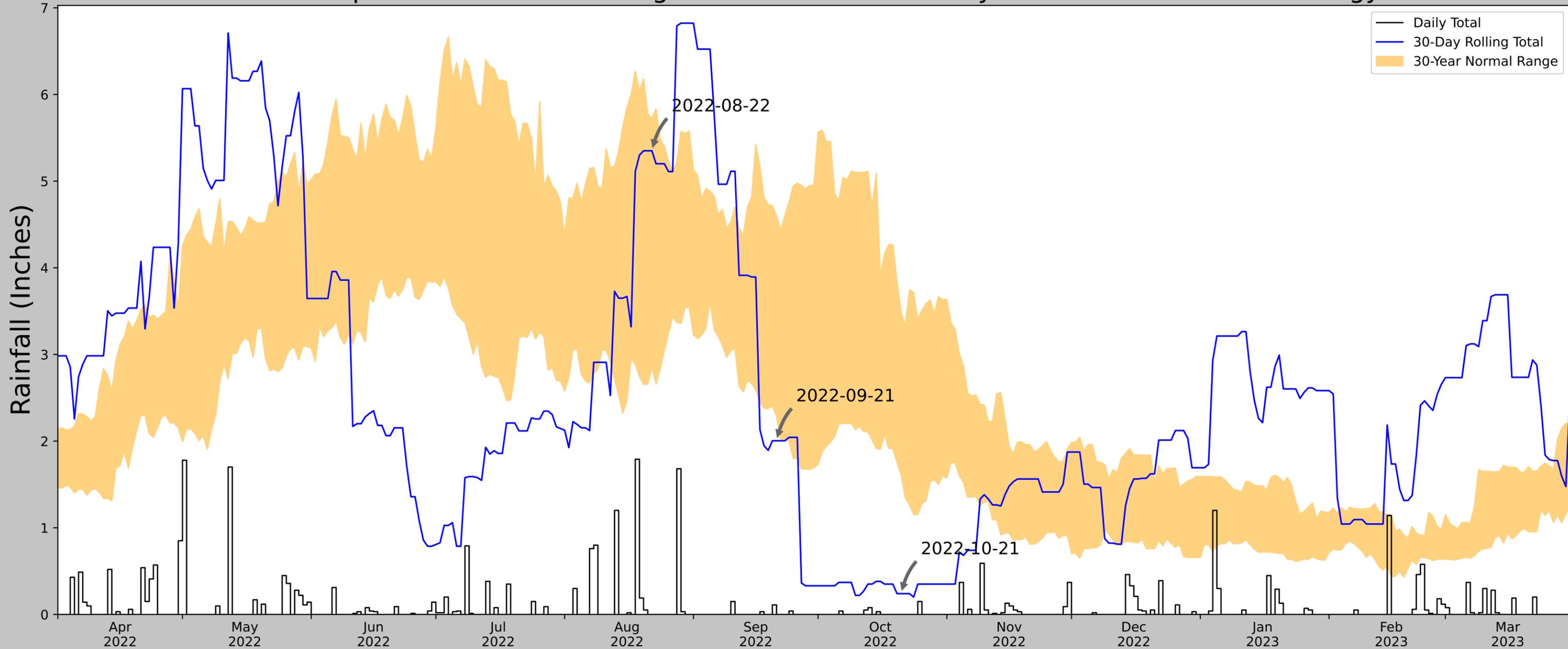
### Score using 1991-2020 normal period

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

### 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	44.61729, -93.104983
Observation Date	2022-10-21
Elevation (ft)	910.343
Drought Index (PDSI)	Mild drought
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-10-21	1.605118	3.478347	0.240157	Dry	1	3	3
2022-09-21	2.289764	4.598819	2.003937	Dry	1	2	2
2022-08-22	2.854331	5.722441	5.350394	Normal	2	1	2

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	6.877	34.539	3.332	9001	73
ROSEMOUNT 3.3 SW	44.7182, -93.121	951.116	1.129	6.234	0.515	591	14
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	431	3
ROSEMOUNT 3.9 W	44.7394, -93.1451	959.974	2.79	15.092	1.298	7	0
ROSEMOUNT 3.3 W	44.7506, -93.1326	978.018	2.89	33.136	1.396	15	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	425	0
FARMINGTON 3NW	44.6661, -93.1756	959.974	5.169	15.092	2.404	572	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
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	12.737	103.018	7.044	1	0
ST PAUL 3SW	44.9311, -93.1539	924.869	15.064	20.013	7.08	38	0
MINNEAPOLIS ST PAUL INTL AP	44.8852, -93.2314	934.974	12.257	100.000	7.470	217	0

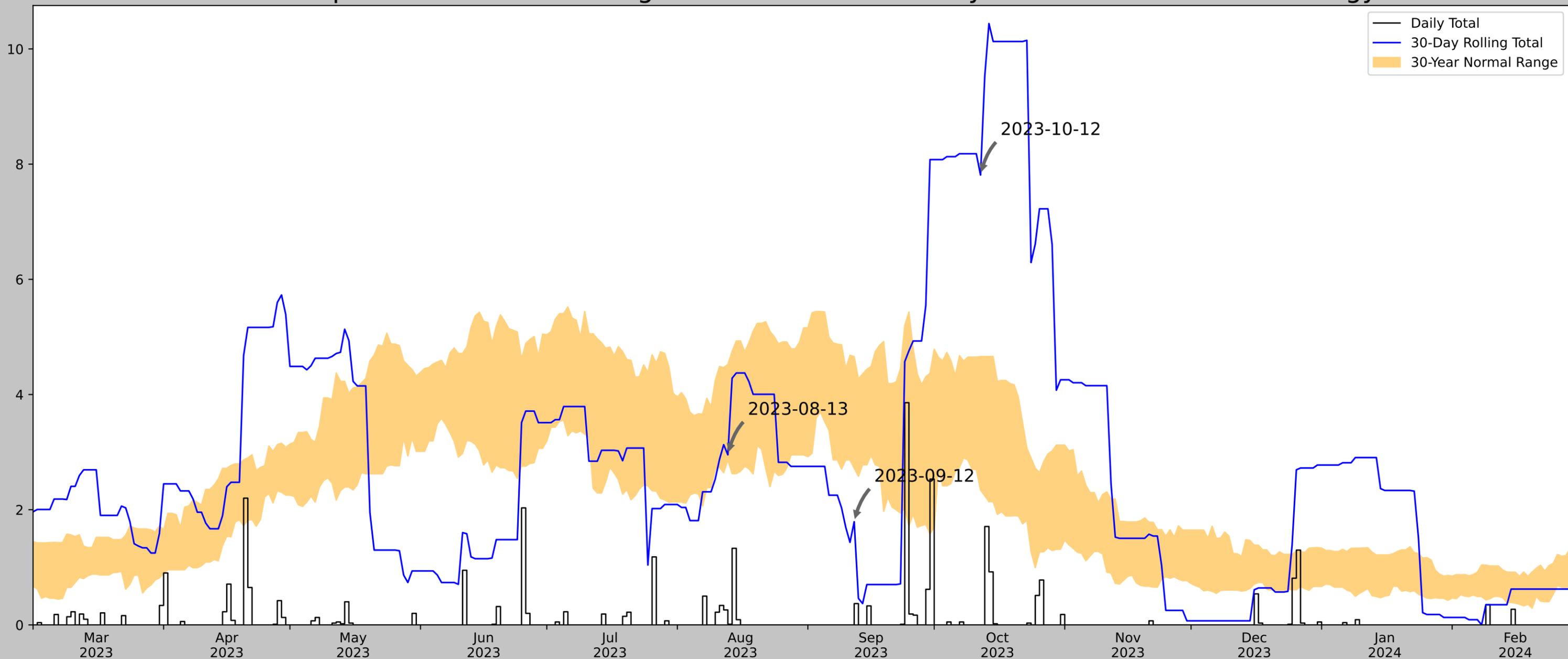


Figure and tables made by the  
**Antecedent Precipitation Tool**  
Version 1.0

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

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

Rainfall (Inches)



Coordinates	44.61729, -93.104983
Observation Date	2023-10-12
Elevation (ft)	910.343
Drought Index (PDSI)	Moderate drought
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-10-12	2.340945	4.660236	7.811024	Wet	3	3	9
2023-09-12	2.720079	4.658662	1.791339	Dry	1	2	2
2023-08-13	2.862599	4.522047	2.952756	Normal	2	1	2
Result							Normal Conditions - 13

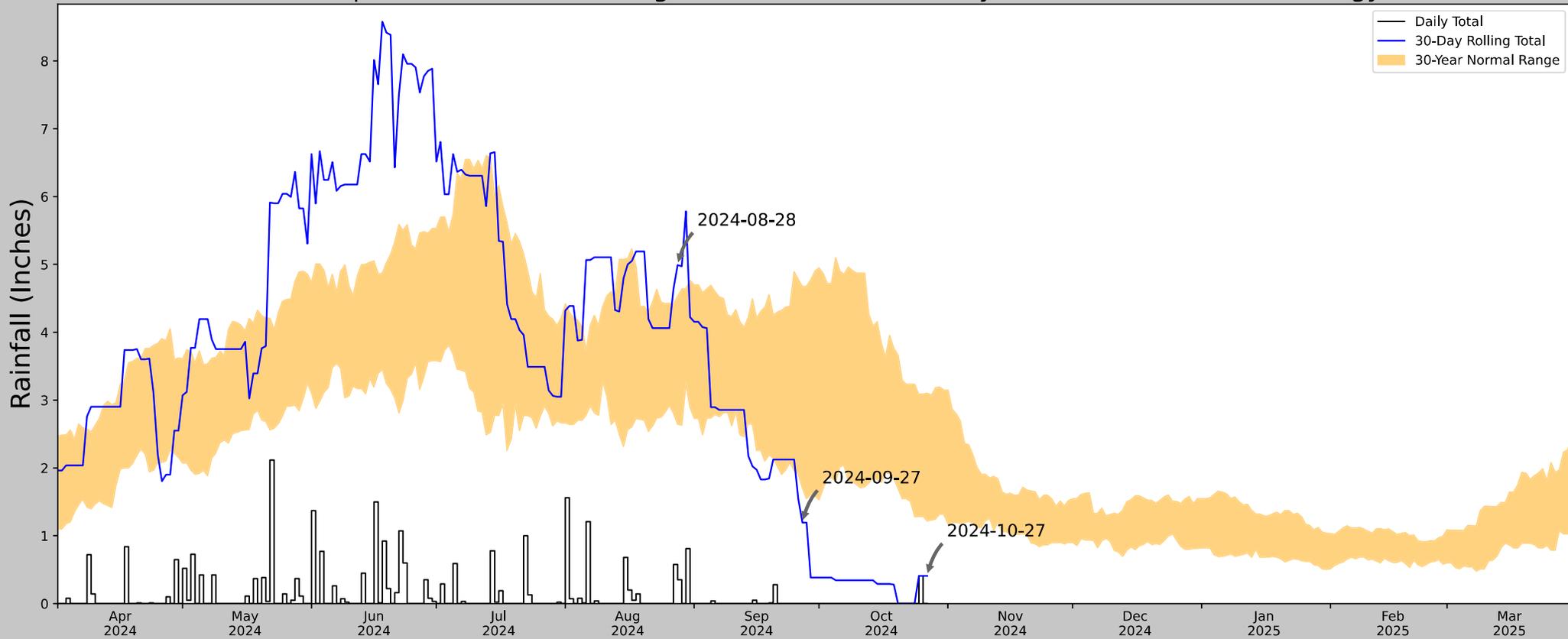
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DELANO	45.0469, -93.7772	975.066	44.34	64.723	22.823	9127	76
MAPLE PLAIN 4.2 W	45.01, -93.7468	1018.045	2.95	42.979	1.454	31	11
ROCKFORD 1.2 WNW	45.0969, -93.7636	981.955	3.518	6.889	1.607	24	0
ROCKFORD	45.0897, -93.74	950.131	3.47	24.935	1.648	1881	0
ROCKFORD 0.5 NE	45.093, -93.7359	972.113	3.769	2.953	1.707	2	0
ROCKFORD 0.6 NE	45.0944, -93.7345	1009.843	3.887	34.777	1.884	157	0
BUFFALO 7.7 SE	45.1054, -93.7474	961.942	4.296	13.124	1.99	44	3
ROCKFORD 1.0 NE	45.1031, -93.7337	1043.963	4.425	68.897	2.296	50	0
WATERTOWN 0.5 NNW	44.9663, -93.8489	970.144	6.579	4.922	2.993	1	0
MOUND	44.95, -93.65	935.039	9.135	40.027	4.476	27	0
SPRING PARK	44.9347, -93.6275	1016.076	10.659	41.01	5.234	2	0
CHANHASSEN WSFO	44.8497, -93.5644	945.866	17.144	29.2	8.215	6	0



Figure and tables made by the  
**Antecedent Precipitation Tool**  
Version 1.0

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

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



Coordinates	44.619684, -93.080731
Observation Date	2024-10-27
Elevation (ft)	943.343
Drought Index (PDSI)	Moderate wetness (2024-09)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-10-27	1.219291	3.101969	0.409449	Dry	1	3	3
2024-09-27	1.70748	4.675197	1.192913	Dry	1	2	2
2024-08-28	2.647638	4.529528	4.992126	Wet	3	1	3
Result							Drier than Normal - 8



Figures and tables made by the  
Antecedent Precipitation Tool  
Version 2.0

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



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
HASTINGS DAM 2	44.7597, -92.8689	680.118	14.208	263.225	10.133	11116	89
HASTINGS 1.0 NW	44.741, -92.8698	772.966	1.293	92.848	0.702	1	0
HASTINGS 1.6 NW	44.7446, -92.8804	855.971	1.186	175.853	0.742	17	1
HASTINGS 1.4 SSW	44.7124, -92.8618	818.898	3.287	138.78	1.935	4	0
HASTINGS 1.3 S	44.7129, -92.8573	820.866	3.283	140.748	1.939	3	0
PRESCOTT 0.6 NW	44.7564, -92.7997	800.853	3.403	120.735	1.942	12	0
PRESCOTT 0.7 NW	44.7585, -92.7996	805.118	3.401	125.0	1.956	1	0
HASTINGS 1.4 SSE	44.7148, -92.8387	841.864	3.438	161.746	2.103	1	0
PRESCOTT 0.5 NE	44.7551, -92.7826	896.982	4.246	216.864	2.832	1	0
COTTAGE GROVE 0.8 NW	44.8233, -92.9389	810.039	5.576	129.921	3.234	5	0
COTTAGE GROVE 1.6 NNW	44.8382, -92.9359	913.058	6.341	232.94	4.331	1	0
RED WING DAM 3	44.6097, -92.6097	683.071	16.418	2.953	7.437	160	0
ROSEMOUNT RSCH & OUTREACH CTR	44.7167, -93.0981	944.882	11.635	264.764	8.316	31	0

## WETLAND DELINEATION REPORT

Castle Rock Solar Project  
Appendix E Off-Site Aerial Imagery Analysis and Figures

# Appendix E OFF-SITE AERIAL IMAGERY ANALYSIS AND FIGURES

Figure 7. NAIP Imagery 2021

Figure 8. NAIP Imagery 2019

Figure 9. NAIP Imagery 2015

Figure 10. NAIP Imagery 2013

Figure 11. NAIP Imagery 2010

Figure 12. NAIP Imagery 2005

Figure 13. NAIP Imagery 2003

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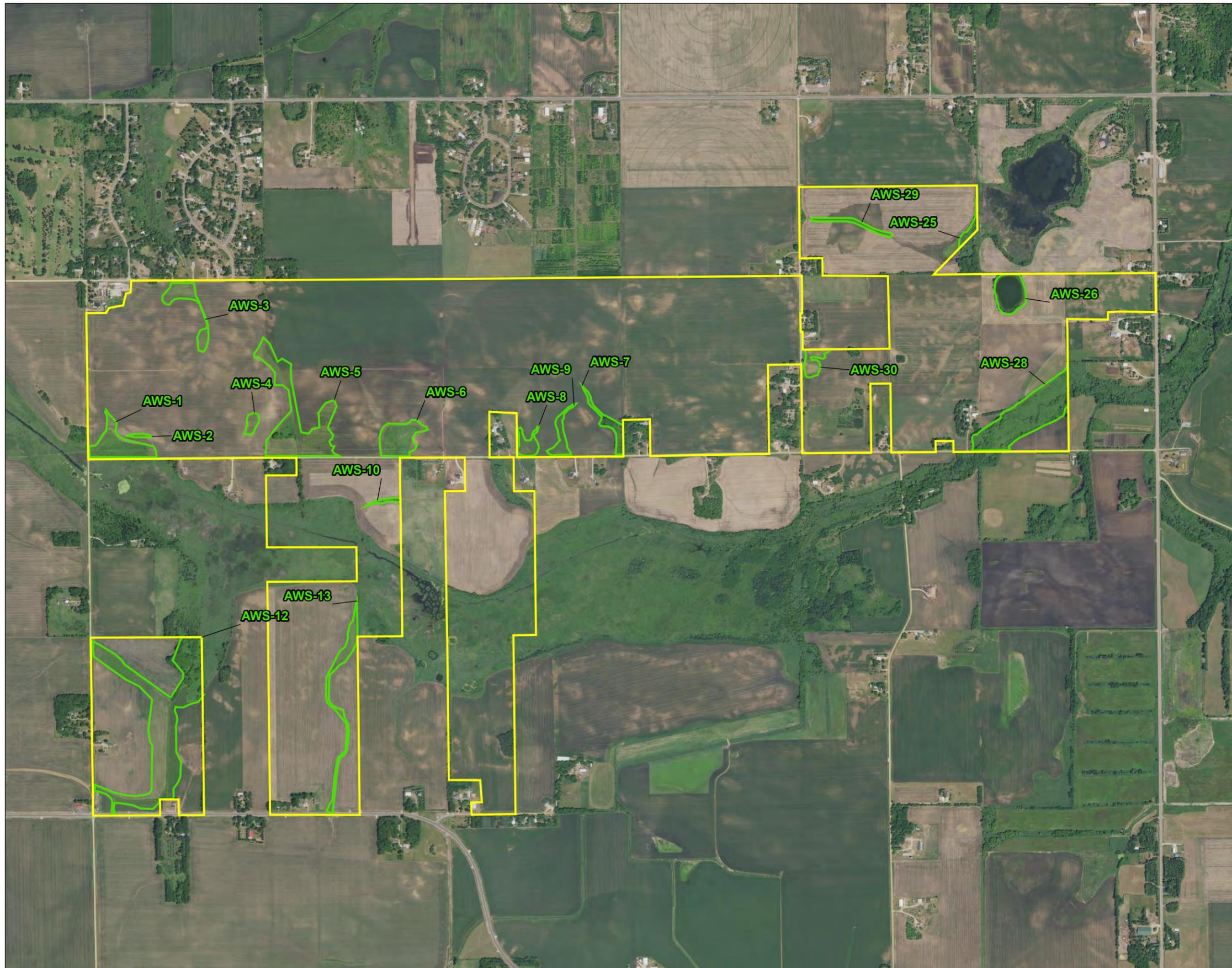


Figure No.

7

Title

**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 JDS on 2024-01-29  
TR by SP on 2024-01-30  
IR by JK on 2024-03-18



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(At original document size of 11x17)  
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Legend

-  Project Boundary
-  Aerial Wetness Signature Wetland



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



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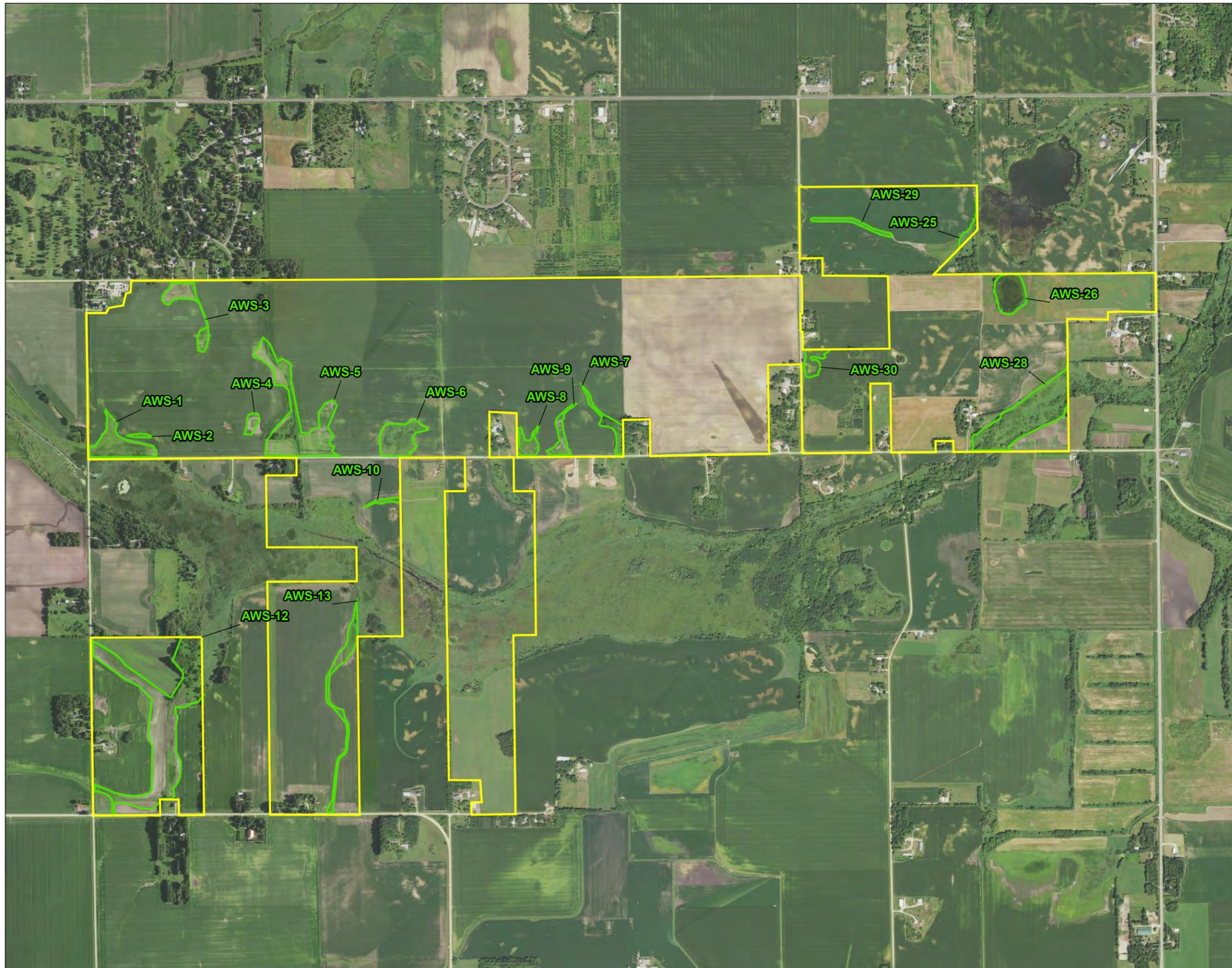


Figure No.  
**8**

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 JDS on 2024-01-29  
TR by SP on 2024-01-30  
IR by JK on 2024-03-18



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Legend

- Project Boundary
- Aerial Wetness Signature Wetland



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



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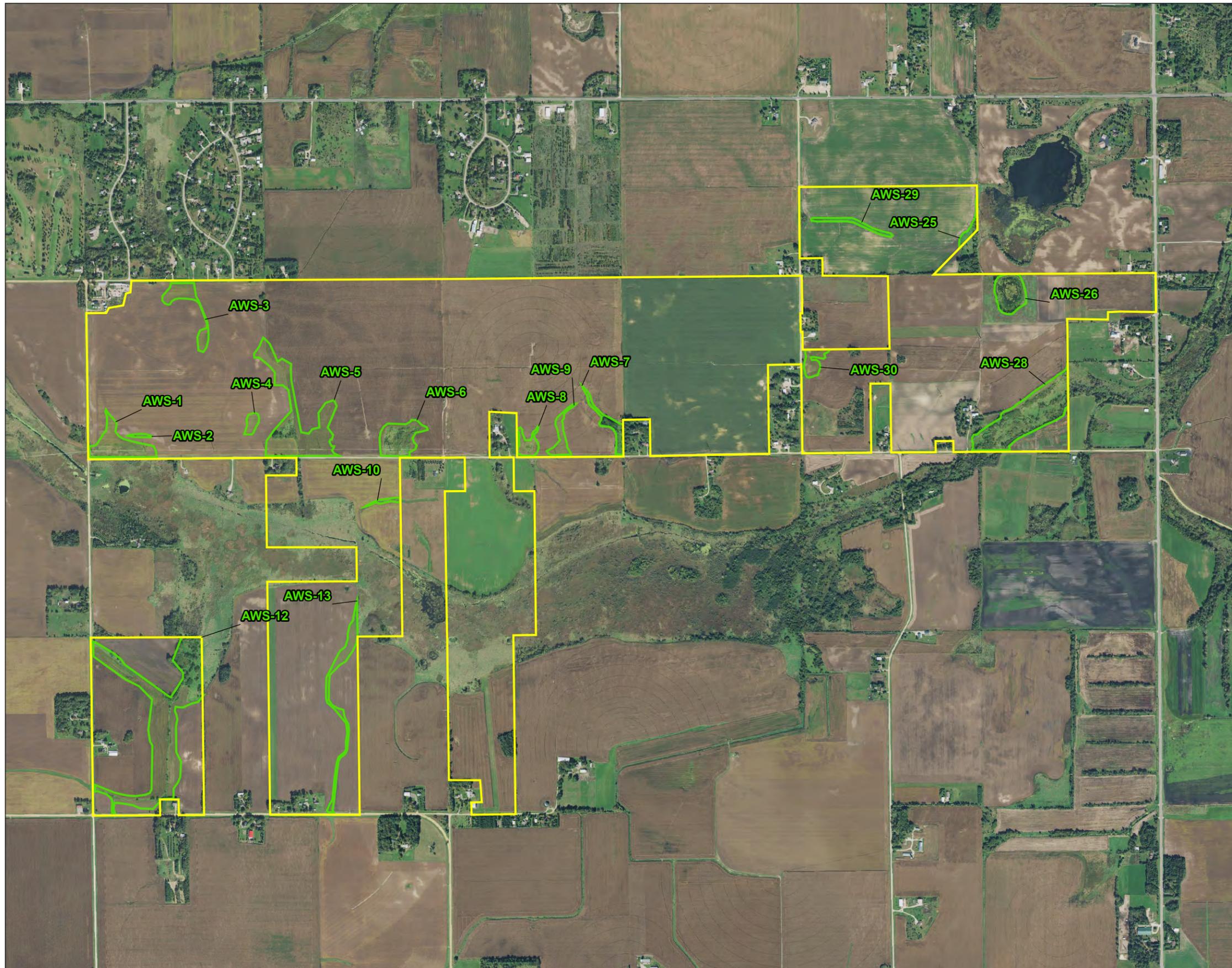


Figure No.

9

Title

**Off-Site Aerial Review  
(9/27/2015 NAIP Imagery)**

Client/Project  
Castle Rock Solar LLC  
Castle Rock Solar Project

193709215

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

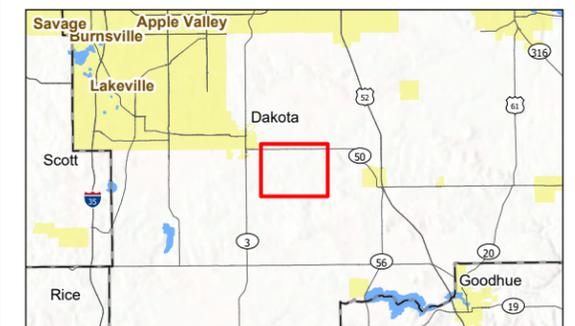
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TR by SP on 2024-01-30  
IR by JK on 2024-03-18



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(At original document size of 11x17)  
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Legend

-  Project Boundary
-  Aerial Wetness Signature Wetland



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



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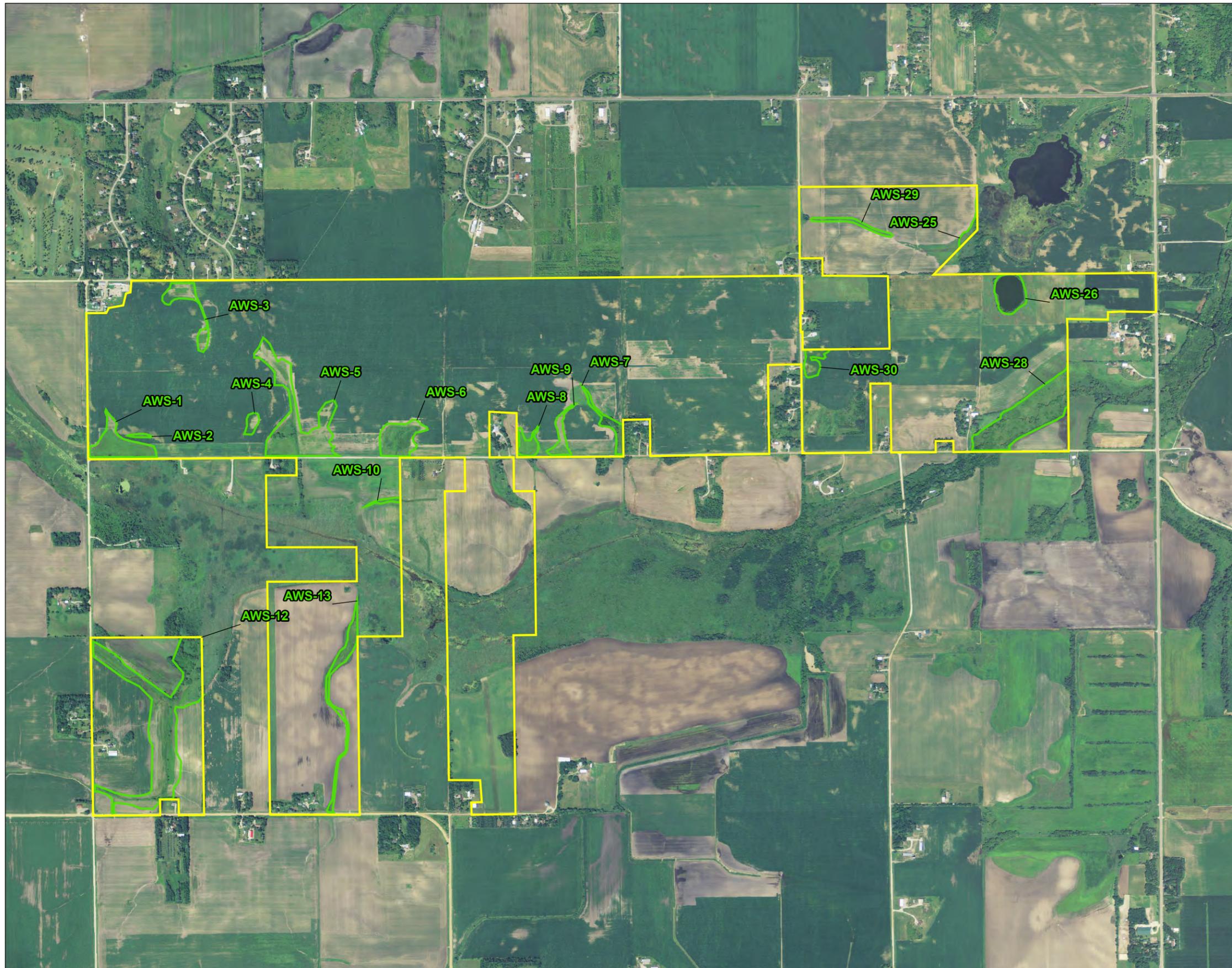
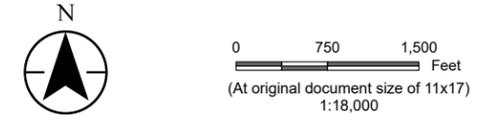


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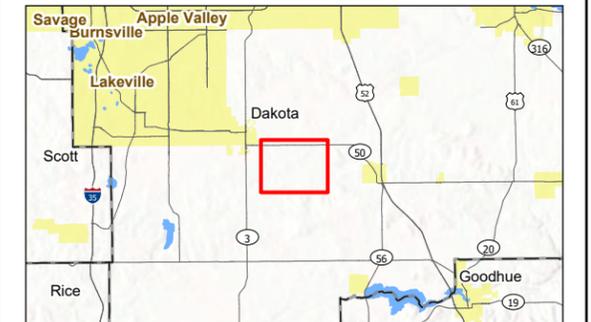
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**Off-Site Aerial Review  
(7/12/2013 NAIP Imagery)**

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

Project Location T. of Castle Rock, Dakota Co., MN Prepared by JDS on 2024-01-29, TR by SP on 2024-01-30, IR by JK on 2024-03-18



- Legend
- Project Boundary
  - Aerial Wetness Signature Wetland



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



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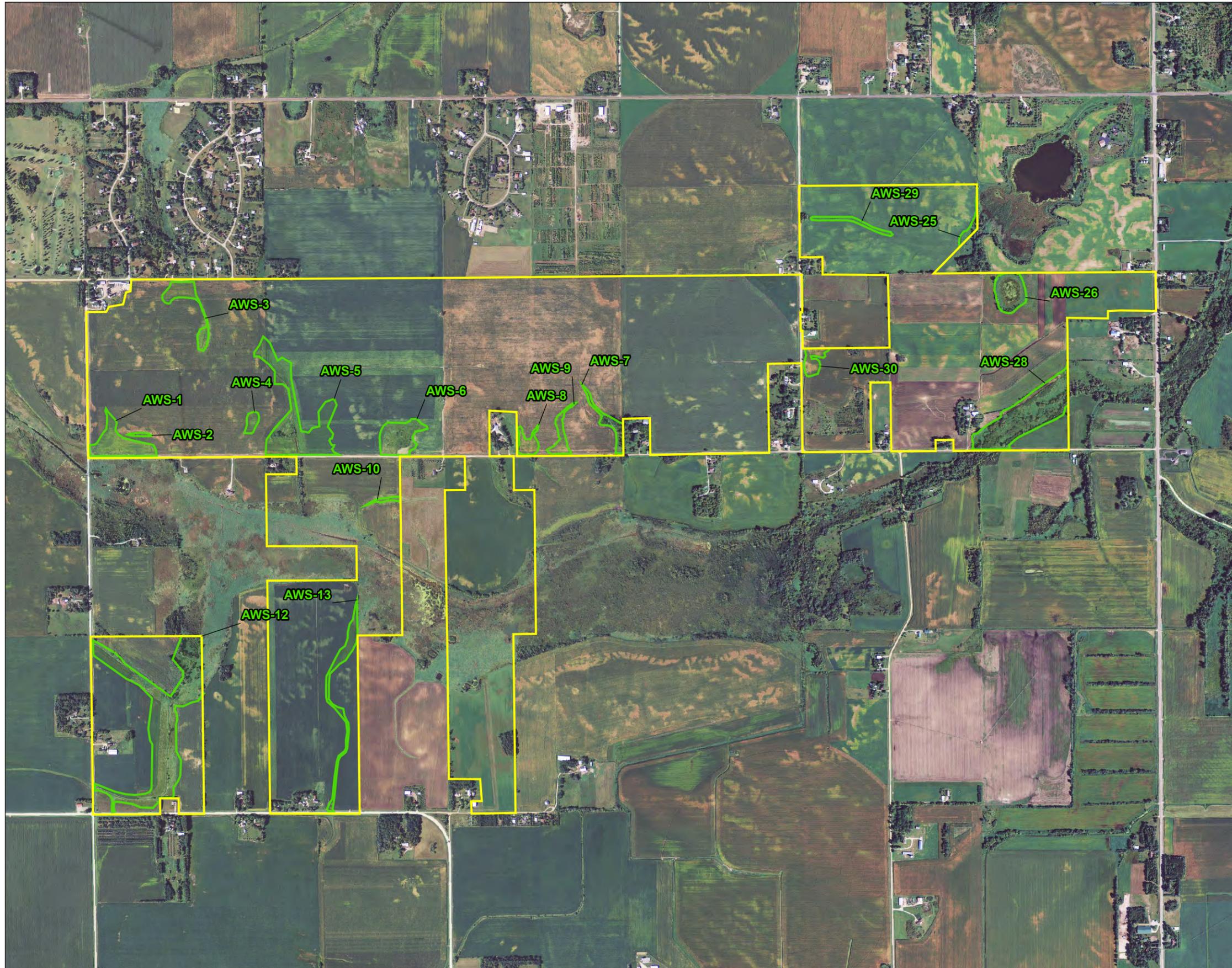


Figure No.  
**11**

Title  
**Off-Site Aerial Review  
(7/29/2010 NAIP Imagery)**

Client/Project  
Castle Rock Solar LLC  
Castle Rock Solar Project

193709215

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

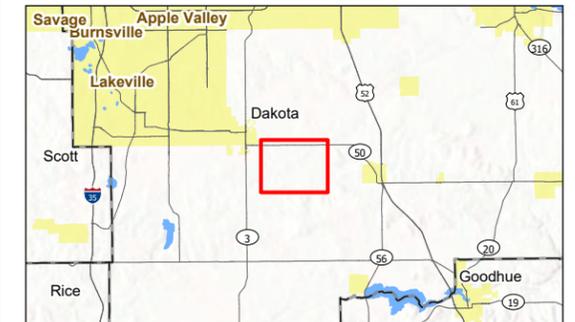
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TR by SP on 2024-01-30  
IR by JK on 2024-03-18



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Legend

- Project Boundary
- Aerial Wetness Signature Wetland



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



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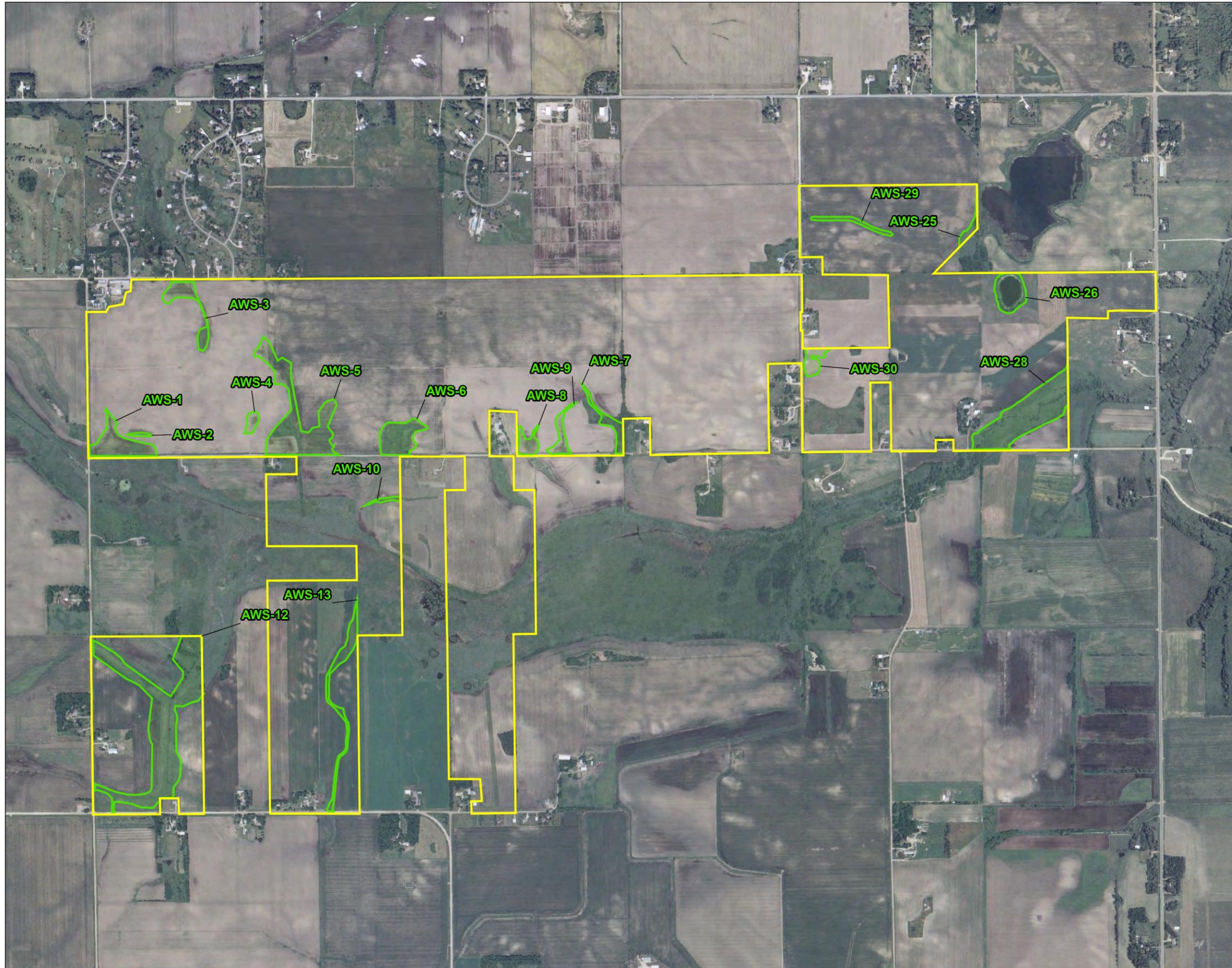


Figure No.  
**12**

Title  
**Off-Site Aerial Review  
(6/22/2005 NAIP Imagery)**

Client/Project  
Castle Rock Solar LLC  
Castle Rock Solar Project

193709215

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

Prepared by JDS on 2024-01-29  
TR by SP on 2024-01-30  
IR by JK on 2024-03-18



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Feet  
(At original document size of 11x17)  
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Legend

-  Project Boundary
-  Aerial Wetness Signature Wetland



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



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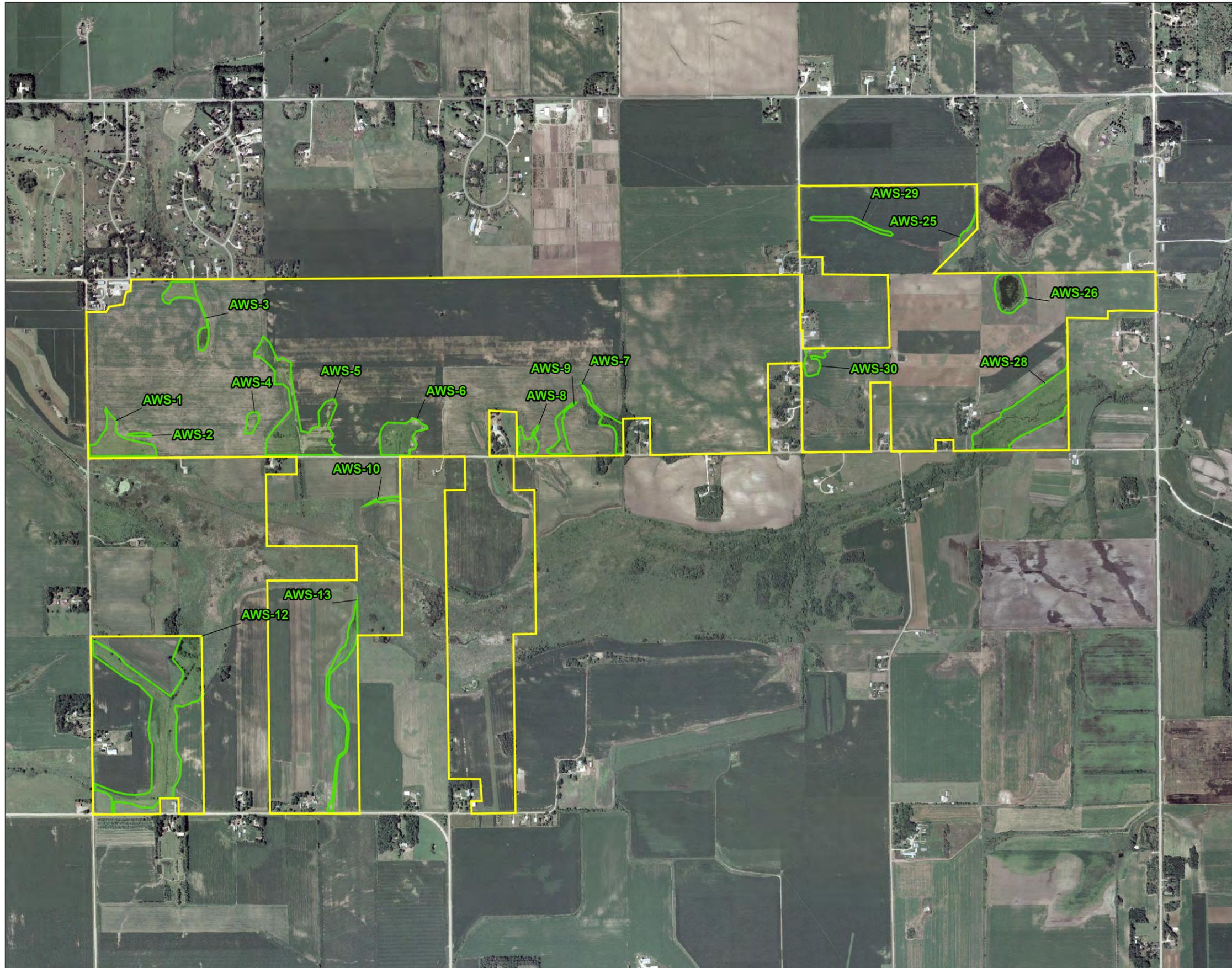


Figure No.

13

Title

**Off-Site Aerial Review  
(7/18/2003 NAIP Imagery)**

Client/Project  
Castle Rock Solar LLC  
Castle Rock Solar Project

193709215

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

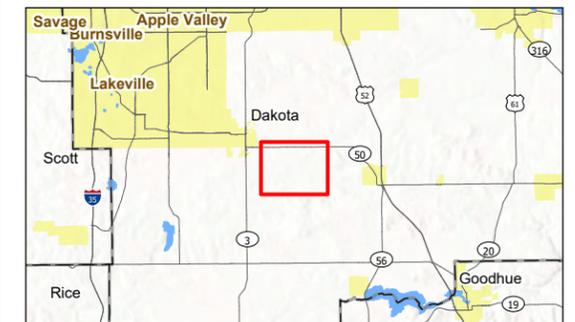
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TR by SP on 2024-01-30  
IR by JK on 2024-03-18



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Legend

-  Project Boundary
-  Aerial Wetness Signature Wetland



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



## WETLAND DELINEATION REPORT

Castle Rock Solar Project  
Appendix E2 Supplemental Off-Site Aerial Imagery Analysis and Figures

# Appendix E2 SUPPLEMENTAL OFF-SITE AERIAL IMAGERY ANALYSIS AND FIGURES

Figure 14. NAIP Imagery 2021

Figure 15. Dakota County Imagery 2021

Figure 16. NAIP Imagery 2019

Figure 17. Dakota County Imagery 2018

Figure 18. Dakota County Imagery 2017

Figure 19. NAIP Imagery 2017

Figure 20. Dakota County Imagery 2016

Figure 21. Dakota County Imagery 2015



Figure No.

**14**

Title

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

Client/Project

Castle Rock Solar LLC  
Castle Rock Solar Project

193709215

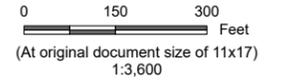
Project Location

T. of Castle Rock  
Dakota Co., MN

Prepared by KJM on 2024-10-28

TR by KM on 2024-10-28

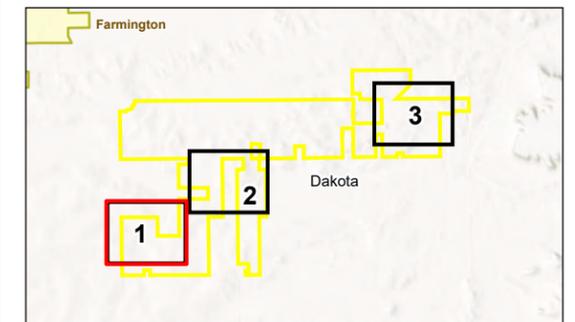
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Legend

Project Boundary

Aerial Wetness Signature Wetland



Notes

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



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Figure No.

14

Title

**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 2024-10-28

TR by KM on 2024-10-28

IR by JK on 2024-10-28

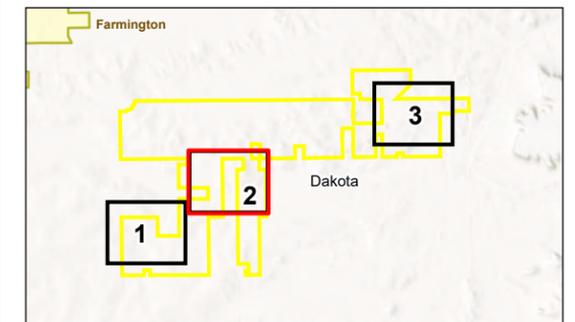


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Legend

Project Boundary

Aerial Wetness Signature Wetland



Notes

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





Figure No.

**14**

Title

**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

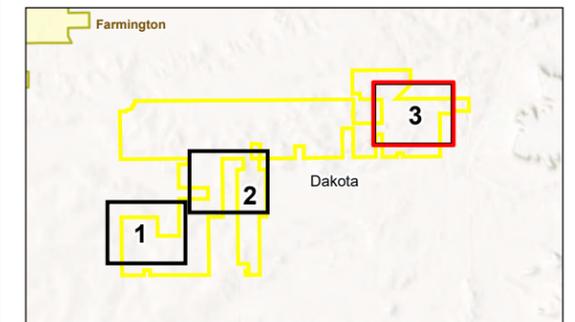
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Legend

- Project Boundary
- Aerial Wetness Signature Wetland



Notes

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

