# Appendix F Wetland Delineation Report



Wetland and Watercourse
Delineation Report

Red Rock Solar
Cottonwood County, Minnesota

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## **Document Review**

The dual signatory process is an integral part of Environmental Consulting & Technology, Inc.'s (ECT's) Document Review Policy No. 9.03. All ECT documents undergo technical/peer review prior to dispatching these documents to any outside entity.

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## List of Acronyms and Abbreviations

CWA Clean Water Act

ECT Environmental Consulting & Technology, Inc.

FAC Facultative

FACU facultative upland FACW facultative wetland

FEMA Federal Emergency Management Agency

FIRM Federal Insurance Rate Map
GPS global positioning system
HUC Hydrologic Unit Code
LGU Local Government Unit

MBWSR Minnesota Board of Water & Soil Resources
MNCWG Minnesota Climatology Working Group
MNDNR Minnesota Division of Natural Resources
MPCA Minnesota Pollution Control Agency

NHD National Hydrography Dataset

NRCS Natural Resources Conservation Service

NWI National Wetlands Inventory NWP USACE Nationwide Permit

NWPR Navigable Waters Protection Rule

OBL obligate wetland

OHWM ordinary high water mark
Project Red Rock Solar Project
PWI Public Waters Inventory

UPL obligate upland

USACE U.S. Army Corps of Engineers
USDA U.S. Department of Agriculture
USFWS U.S. Fish and Wildlife Service

USGS U.S. Geological Survey
WCA Wetland Conservation Act
WQC Water Quality Certification
WOTUS Waters of the United States



## **Executive Summary**

Red Rock Solar, LLC contracted Environmental Consulting & Technology, Inc. (ECT), to perform a wetland and watercourse delineation for the Red Rock Solar Project (Project). The proposed Project covers an area of approximately 792 acres located in Midway Township, Cottonwood County, Minnesota. The Project is also located within the Watonwan River watershed (Hydrologic Unit Code [HUC] 07020010).

The Project is located approximately four (4) miles northwest of Butterfield, four (4) miles northeast of Mountain Lake, and 2.5 miles southwest of Darfur, Minnesota (**Site Location Map in Appendix A**). The Project primarily has land cover of active agricultural fields and rural residential and agricultural developments. ECT conducted a field reconnaissance to identify, delineate, and characterize wetlands and watercourse features and assess their regulatory status on May 11 through 13, 2020.

Under Section 404 of the 1972 Clean Water Act (CWA), Waters of the United States (WOTUS) are regulated by the U.S. Army Corps of Engineers (USACE). These can include bodies of water such as lakes, ponds, rivers, tributaries, and wetlands. WOTUS are currently defined by the 1986/1988 definition and applicable guidance, court decisions, and agency practices. However, the Navigable Waters Protection Rule (NWPR) definition of WOTUS will become effective on June 22, 2020. Only USACE has the authority to verify jurisdiction and boundaries for WOTUS within Minnesota.

In Minnesota, surface waters are additionally regulated by the Minnesota Pollution Control Agency (MPCA), which administers Section 401 of the Clean Water Act; the Minnesota Department of Natural Resources (MNDNR), which administers the Public Waters Permit Program; and the Minnesota Board of Water and Soil Resources (MBWSR) and Local Government Units (LGU), which administer the state Wetland Conservation Act. The Cottonwood County Soil and Water Conservation District serves as the LGU for all of Cottonwood County. Activities that impact federal or state regulated wetlands, inland lakes and watercourses, floodplains, or the Great Lakes must be authorized by the appropriate regulatory agencies prior to Project activities taking place.



One (1) potentially jurisdictional wetland and one (1) potentially jurisdictional watercourse were identified within the Project area. ECT evaluated on-site water resources for potential jurisdictional status per both the Navigable Waters Protection Rule and the 1986/1988 WOTUS definition and associated judicial decisions and regulatory guidance. The identification of wetland and watercourse features herein is based on the condition of the Project at the time of the investigation. All wetland and watercourse boundaries and potential jurisdictional statuses are considered preliminary until confirmed by USACE during a jurisdictional determination.



## 1.0 Introduction

Red Rock Solar, LLC contracted Environmental Consulting & Technology, Inc. (ECT), to perform a wetland and watercourse delineation for the approximately 792-acre Red Rock Solar Project (Project) located in Midway Township, Cottonwood County, Minnesota. The Project is located approximately four (4) miles northwest of Butterfield, four (4) miles northeast of Mountain Lake, and 2.5 miles southwest of Darfur, Minnesota (**Site Location Map, Appendix A: Figure 1**) and is within Watonwan River watershed (Hydrologic Unit Code [HUC] 07020010). The Project area is dominated by active agricultural fields with areas of riparian corridors and rural residential properties interspersed throughout.

Under the 1972 Clean Water Act (CWA), Waters of the United States (WOTUS) are regulated by the U.S. Army Corps of Engineers (USACE) and are considered jurisdictional. These can include bodies of water such as lakes, ponds, rivers, tributaries, and wetlands. In Minnesota, surface waters are additionally regulated by the Minnesota Pollution Control Agency (MPCA), which administers Section 401 of the Clean Water Act; the Minnesota Department of Natural Resources(MNDNR), which administers the Public Waters Permit Program; and the Minnesota Board of Water and Soil Resources (MBWSR), which administers the state Wetland Conservation Act. In Minnesota, WOTUS are currently defined by the 1986/1988 regulatory definition and applicable guidance and judicial decisions. However, the Navigable Waters Protection Rule definition of WOTUS will become effective on June 22, 2020. Activities, including dredging or filling, that impact federal- or state-regulated wetlands, watercourses, or open water areas must be authorized by the appropriate regulatory agencies prior to project activities taking place. This report summarizes the surface water features identified within the Project boundary.



## 2.0 Preliminary Desktop Review

As part of standard Minnesota delineation practice, initial desktop wetland delineations were completed by ECT to identify the potential presence of wetlands and watercourses within the Project area. The results of the desktop reviews were used to focus the field delineation, particularly in agricultural areas. Methodologies for determining potential wetland areas followed MBWSR's/USACE's *Guidance for Offsite Hydrology/Wetland Determinations* (USACE and MBWSR 2016). Desktop assessments utilized public database resources and information including aerial photographs across multiple years, U.S. Department of Agriculture-Natural Resource Conservation Service (USDA-NRCS) soil survey maps, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Maps, MNDNR Minnesota Wetland Inventory, MNDNR Public Waters Inventory (PWI) Maps, U.S. Geological Survey (USGS) topographic maps, USGS National Hydrography Dataset (NHD), and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs).

ECT identified nine (9) potential wetland locations and one (1) potential watercourse feature requiring field verification. **Table 1** provides a summary of the aerial imagery review results from ECT's desktop delineations. A map depicting the results of both desktop reviews is included in **Appendix A: Figure 2.** Results of the on-site visit are described further below in *Section 3.0*.



Table 1. Aerial Imagery Review Results

Signature ID	1992	2003	2004	2006	2008	2009	2010	2012	2015	% Years with Wetland Hydrology Signature	Hydric Soils	NWI
Wetland 1	SS	CS/NV	CS/NV	CS	CS	CS/NV	NV	CS/NV	CS/NV	56	Yes	No
Wetland 2	SS	CS/NV	NV	CS/NC	CS/NC	DO	DO	CS	NV	77	Yes	Yes
Wetland 3	SS	CS/NC	NV	CS/NC	CS/NV /NC	NV	CS /NC	CS/NC	CS	77	Yes	No
Wetland 4	SS	NV/NC	NV	NC	CS/NC	NV/NC	NV/NC	CS/NC	NV	77	Yes	No
Wetland 5	SS	NC	WS	WS	WS	WS	WS	WS	WS	100	Yes	Yes
Wetland 6	SS	NV	CS	SS	NV	SS	SS	NV	NV	55	Yes	No
Wetland 7	SS	NV	CS	SS	NV/NC	NV/NC	SS	SS	NV/NC	77	Yes	No
Wetland 8	SS	CS	NV	NV	CS	NV	NV	NV	NV	30	Yes	No
Wetland 9	SS	CS	NV	NV	CS	NV	SS	AP/SS	CS	67	Yes	No

SS- Soil Wetness Signature

NC- No Crops CS- Crop Stress DO- Drowned Out

**AP- Altered Pattern** 

WS- Wetland Signature

NV- Normal Vegetation

Source: (ECT 2020, USACE and MBWSR 2016)



#### 2.1 Historical Climate Data

ECT reviewed climate data for the three months prior to the date of each aerial image reviewed as part of the desktop preview to determine precipitation conditions as above or below average precipitation rates as this may alter the presence of wetland signatures. For example, years with drier conditions may have fewer identified areas of wetland signatures, while years of wetter conditions will display a greater number of areas when compared to photography taken during normal precipitation years. ECT determined precipitation amounts using Minnesota Climatology Working Group (MNCWG) data, which provides an online calculator for precipitation scores. Precipitation scores can be assigned one of three categories: scores of 6-9 are considered 'Dry', meaning that precipitation levels are below average; scores of 10-14 are considered 'Normal', meaning that precipitation levels are within range of typical amounts; and scores of 15 to 18 are considered 'Wet', meaning that precipitation levels exceed normal averages.

The climate at the time of most aerial images was considered Normal. Scoring for the data of each aerial image is provided in **Table 2** below. Copies of MNCWG Precipitation Worksheets for historic aerial images are provided in **Appendix B**.

Table 2. Aerial Imagery Precipitation Scores

Date of Photo	Source of Photo	MNCWG Score	Conditions
April 26, 1992	Google Earth	12	Normal
May 31, 2003	Google Earth	12	Normal
August 2, 2004	Google Earth	14	Normal
May 31, 2006	Google Earth	14	Normal
May 21. 2008	Google Earth	11	Normal
June 2, 2009	Google Earth	7	Dry
April 23, 2011	Google Earth	15	Wet
October 12, 2012	Google Earth	6	Dry
July 22, 2015	Google Earth	13	Normal

Source: (Minnesota State Climatology Office 2020)

## 2.2 U.S. Geological Survey Topographic Map

The USGS Comfrey, Darfur, Mountain Lake, and Butterfield 7.5-minute quadrangle maps (2019) depict the elevation within the Project area at range 1,180 to 1,226 feet above mean sea level (USGS Topographic Map, Appendix A: Figure 3, (USGS 2019b; 2019c; 2019d; 2019a). The USGS map depicts two (2) watercourses and one (1) open water body occurring within the Project



area. The USGS map also depicts three (3) wetland areas within northeastern and southern portions of the Project area.

#### 2.3 NWI, PWI and NHD Map

The USFWS National Wetlands Inventory (NWI) mapping database, MNDNR Minnesota Wetland Inventory, and the USGS National Hydrography Dataset (NHD) were reviewed to determine the likely presence, location, size, and type of water resources that may be in the Project area (USFWS 2020; MNDNR 2017; USGS 2020). USFWS generates NWI maps using high altitude imagery. The MNDNR generates the Minnesota Wetland Inventory through an update of the NWI using modern technology and imagery. These maps were used for preliminary analysis only, as these maps may not accurately depict the extent or existence of wetland systems in a specific area, nor do these maps always correctly identify the types of wetlands present. Similarly, the USGS has developed the NHD that depicts features such as rivers, watercourses, and lakes based on available topographic maps. However, some topographic maps may not reflect the current topography of an area. Verification of all water resources within the Project area is necessary through on-site visits.

Public waters and public wetland waters are designated on Public Waters Inventory (PWI) maps developed by MNDNR. Public waters may include such features as meandered lakes, water basins, watercourses with a drainage area greater than two square miles, waters of the state determined to be navigable by a court of competent jurisdiction, and trout streams, per Minn. Stat. § 103G.005, subd. 15. Public waters and wetlands are defined in Minn. Stat. § 103G.005, subd. 15a to include inland shallow and fresh marshes and inland fresh open waters that are 10 or more acres in unincorporated areas and 2.5 or more acres in incorporated areas.

Review of NWI and NHD data indicate that two (2) unnamed watercourses flow through the Project area in the northeastern and southwestern portions of the Project. PWI did not indicate any public waters within the Project area, although the unnamed watercourse in the northeast becomes a public water east of Un Road, adjacent to the Project area. Additionally, NWI data and the NWI Update for Minnesota indicate two (2) wetlands within the Project area. One (1) wetland is located north of 330<sup>th</sup> Street along the southeastern Project boundary. The second wetland is located south of 330<sup>th</sup> Street along the eastern Project boundary and corresponds with the open water on the USGS topographic maps. No public water wetlands are mapped within the Project area (**Appendix A: Figures 4 and 5;** (USFWS 2020; USGS 2020; MNDNR 2017; 2018).



#### 2.4 USDA-NRCS Soils Map

ECT reviewed the USDA-NRCS soil data for hydric soils that may be present within the Project boundary. Hydric soils form under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil (USDA-NRCS 2017). A total of eight (8) soil map types are mapped within the Project boundary, five (5) of which are hydric soils: Mayer clay loam, depressional, 0 to 1 percent slopes; Canisteo clay loam, 0 to 2 percent slopes; Webster clay loam, 0 to 2 percent slopes; Glencoe clay loam, 0 to 1 percent slopes; and Nicollet clay loam, 1 to 3 percent slopes. **Appendix A: Figure 6**, presents a soils map showing the soil types and their boundaries within the Project area along with the total acreage of each soil type within the Project area.

#### 2.5 FEMA Floodplain Map

The MBWSR regulates development in Federal Emergency Management Agency (FEMA) identified floodways and floodplains, also called special flood hazard areas, under the Flood Control Act and Floodplain Management Rule. FEMA's Federal Insurance Rate Maps (FIRM's) delineate these special flood hazard areas and the risk premium zones applicable to the community (FEMA 2002). A review of the FIRMs indicated that no floodplains or floodways occur within the Project area. (FEMA Floodplain Map, **Appendix A: Figure 7**;(FEMA 2020).



## 3.0 Field Methodology

On May 11 through 13, 2020, ECT conducted field investigations to confirm, delineate, characterize, and determine the potential regulatory states of the water resources identified during the desktop assessment. ECT additionally reviewed the entirety of the Project area for potential wetland and watercourse features that may have not been apparent during the wetland desktop reviews.

Wetlands within the Project area were delineated following the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Army Corps of Engineers Wetland Delineation Manual: Midwest Region (USACE 2010) guidelines. The presence of wetlands is determined based on three parameters: the presence of hydric vegetation (hydrophytes), hydric soils, and wetland hydrology. Potentially jurisdictional wetland boundaries were mapped using a sub-meter GEO7X® series Trimble® global positioning system (GPS) unit and flagged in the field. Wetland data points and corresponding upland points were also mapped with the GEO7X® series Trimble® GPS unit. USACE regional determination forms were completed for each wetland and its corresponding upland point.

Vegetation was identified by flowers, leaves, bark, twigs, stems, reproductive structures, and/or persistent remains from the preceding growing season. The wetland indicator status for vegetation noted during the evaluation was obtained from the USACE Midwest 2016 Regional Wetland Plant List (Lichvar et al. 2016) and 2018 Update to the National Wetland Plant List (U.S. Army Corps of Engineers 2020). Soil was evaluated by digging test pits sufficient to document hydric indicators, up to 20 inches deep. Soil conditions were evaluated using criteria established by the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Field Indicators of Hydric Soils in the United States (USDA-NRCS 2018) and soil colors were evaluated using a Munsell® color chart. Hydrology was evaluated through direct observation of primary indicators (e.g., standing water and/or saturated soil) and indirectly through observation of secondary hydrology indications.

Potentially jurisdictional watercourses were identified based on the presence of morphological features such as a defined bed and banks, presence of an ordinary high water mark (OHWM), and evidence of water flow. Watercourses were separated into three flow regimes: perennial,



intermittent, and ephemeral. Perennial watercourses are classified as having regular water flow that can be seen year-round. Intermittent watercourses flow during certain times of the year; however, during dry periods they may not have any flowing surface water. Ephemeral watercourses have brief water flow typically exhibited during periods of rainfall in the immediate vicinity. Watercourses were also mapped using a sub-meter GEO7X® series Trimble® GPS unit.

#### 3.1 Current Precipitation Data

Because recent precipitation events can influence wetland identification by altering the presence of hydrology in the field, precipitation conditions three months prior to the time of the field visit were compared to long term precipitation averages.

Due to missing data for 2020 within the MNCWG system, a Wetland Climate Table (WETS table) was completed following guidelines of the WETS analysis as described in *Chapter 19: Hydrology Tool for Wetland Determination of the USDA-NRCS Engineering Field Handbook* (USDA-NRCS 1997). Conditions prior to May 2020 were Normal per the WETS analysis. The completed WETS table and supporting precipitation data for the climate at the time of the field assessment are provided in **Appendix B**.



## 4.0 Results

#### 4.1 Wetlands and Watercourses

#### 4.1.1 Wetlands

During the site reconnaissance, one (1) wetland (WL-1) was identified within the Project area as shown on the *Wetland and Watercourse Delineation Maps* (**Appendix A: Figure 8**). The wetland corresponds to wetland area 5 as identified during the preliminary desktop delineation (**Appendix A: Figure 2**). The remaining eight (8) potential wetlands identified during the desktop review did not meet USACE criteria to be considered a wetland. USACE Midwest Region wetland/upland data sheets are provided in **Appendix C**. The potentially jurisdictional wetlands identified had a predominance of hydrophytic vegetation, soils that exhibited reducing conditions, and observed hydrological characteristics.

For the wetland identified during field delineation, sufficient reducing characteristics were observed within the upper 10 inches of soils per guidelines set forth by the USDA-NRCS Field Indicators of Hydric Soils in the United States (USDA-NRCS 2018). Soil indicators found within Wetland 1 included depleted matrix (F3) and redox dark surface (F6).

Hydrology indicators found within the identified wetland included surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2), and FAC-neutral test (D5).

Typical vegetative conditions noted in wetland within the Project area are described in the following paragraphs. The scientific names and wetland indicator status of vegetation (obligate wetland, OBL; facultative wetland, FACW; facultative, FAC; facultative upland, FACU; and obligate upland, UPL) noted during the delineation follow the common name the first time each plant species is referenced. **Appendix D** presents copies of site photographs depicting conditions at the time of the site investigation. **Table 3** provides details on the identified wetland within the Project area.

WL-1 contained areas of forested and emergent vegetation communities. Forested areas were dominated by eastern cottonwood (*Populus deltoides*, FAC), shining willow (*Salix lucida*, FACW), and saltmarsh club-rush (*Schoenoplectus maritimus*, OBL). Emergent areas were dominated by saltmarsh club-rush and narrow leaf cattail (*Typha angustifolia*, OBL). WL-1 appears to be



hydrologically isolated per both the 1986/1988 definition of WOTUS and the Navigable Waters Protection Rule and is therefore unlikely to be subject to regulation under the Clean Water Act. However, this wetland likely falls under the regulation of MBWSR and the LGU per Minnesota's WCA. The LGU for Cottonwood County is the county Soil and Water Conservation District.

No wetland community identified within the Project area exhibited fen vegetation community types.



Table 3. Wetland Summary Data: Wetland Type and Potential Regulatory Status

Wetland ID	Lat/Long	Cowardin Classification	Circular 39 Classification	Eggers & Reed Classification	1986/1988 Potential Regulatory Status	NWPR <sup>5</sup> Potential Regulatory Status	Acres
WL-1	44.004489°, -94.869896°	PEM <sup>1</sup> / PFO <sup>2</sup>	Type 3 <sup>3</sup> / Type 1 <sup>4</sup>	Shallow Marsh / Seasonally Flooded Basin	Non-federal Regulated by MBWSR/LGU	Non-federal Regulated by MBWSR/LGU	3.87

Source: ECT, 2020.

<sup>&</sup>lt;sup>1</sup> Palustrine emergent <sup>2</sup> Palustrine forested

<sup>&</sup>lt;sup>3</sup> Shallow Marsh

<sup>&</sup>lt;sup>4</sup>Seasonally Flooded Basin or Floodplain <sup>5</sup>Navigable Waters Protection Rule

#### 4.1.2 Watercourses

The field reconnaissance completed by ECT confirmed the potential watercourse identified during desktop review in the southern portion of the Project area, as shown on the *Wetland and Watercourse Delineation Maps* as WC-1 (**Appendix A: Figure 8**). The potentially jurisdictional watercourse exhibited morphological features such as a defined bed and banks, OHWM, and evidence of water flow. **Appendix D** presents copies of photographs depicting the watercourse. **Table 4** provides the watercourse data. Watercourse WC-1 is an unnamed tributary that drains southeast through the Project and discharges to Butterfield Creek approximately 2.5 miles southeast of the Project area. The tributary is not a mapped MNDNR Public Waters Watercourse.

Table 4. Watercourse Summary Data: Flow Regime and Potential Regulatory Status

Watercourse ID	Associated Waterway	Flow Regime	1986/1988 Potential Regulatory Status		Ordinary High Water Mark Width (ft)	Linear Feet
WC-1		Perennial	Regulated-	Regulated-	13	1,538

Source: ECT, 2020.

#### 4.1.3 <u>Drainage Ditches</u>

No potentially jurisdictional drainage ditches were identified during field delineation of the Project area.

## 4.2 Upland Conditions

Upland areas throughout the majority of the site were dominated by agricultural fields. Uplands in agricultural fields were planted within corn (*Zea mays*, UPL) and soy (*Glycine max*, not rated).



#### 5.0 Conclusions

ECT conducted a wetland and watercourse delineation on a 792-acre site for the Red Rock Solar Project located within Cottonwood County, Minnesota. One (1) potentially jurisdictional wetland totaling 3.87 acres and one (1) potentially jurisdictional perennial watercourse totaling 1,538 linear feet were identified within the Project area. Project impacts to potentially regulated features and required permitting will be determined upon final project design.

Jurisdictional determinations are performed by the USACE. Preliminary regulatory determinations provided in this report are based on ECT's experience with wetland and watercourse permitting within Minnesota. The USACE St. Paul District Office should be contacted to perform an official jurisdictional determination for all water features identified within the Project area. Wetlands that do not fall under USACE jurisdiction are regulated by the LGU under the WCA. It is unlawful to deposit fill or dredge material, drain surface water, or construct a structure in a regulated water resource without a permit from USACE and/or the Cottonwood County Soil and Water Conservation District, which serves as the LGU and implements the WCA within Cottonwood County.

ECT's evaluation was performed in accordance with generally accepted procedures for conducting wetland and watercourse evaluations in Minnesota. ECT's conclusion reflects our professional opinion based on conditions present at the time of the evaluation.



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## **Common Wetland Definitions**

<u>Perennial Watercourse:</u> year-round streams, typically have water year-round. Water comes from upstream tributaries or headwaters as well as precipitation

<u>Intermittent Watercourse:</u> have water intermittently throughout the year when upstream waters or groundwater provide enough stream flow. May not have flowing surface water during dry times of the year

<u>100-year flood</u>: A flood with a magnitude that has a 1% chance of occurring or being exceeded in any given year.

*Floodplain:* The area of land adjoining a river or steam that will be inundated by a 100-year flood.

<u>Hydric soil</u>: Soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (1991 National Technical Committee on Hydric Soils definition).

<u>Hydrophytes:</u> Plant species that grows in water or on a substrate that is at least periodically deficient in oxygen because of excessive water content; plants typically found in wet habitats.

<u>Palustrine Emergent Wetland (PEM)</u>: Vegetative classification of a wetland system based on the dominant vegetation, consisting of rooted herbaceous (non-woody) plant species that have parts extending above a water surface with at least 30% aerial coverage

<u>Palustrine Scrub-Shrub Wetland (PSS)</u>: Vegetative classification of a wetland system based on the dominant vegetation consisting of woody plants less than 3 inches in diameter but greater than 3 ft but less than 20 ft in height OR where trees and shrubs combined have an aerial coverage no greater than 30%.



<u>Palustrine Forested Wetland (PFO)</u>: Vegetative classification of a wetland system based on the dominant vegetation consisting of woody plants 3 inches in diameter or greater regardless of height with at least 30% aerial coverage.

<u>Public Waters:</u> Public waters may include such features as meandered lakes, water basins, watercourses with a drainage area greater than two square miles, waters of the state determined to be navigable by a court of competent jurisdiction, and trout streams, per Minn. Stat. § 103G.005, subd. 15. Public waters wetlands are defined in Minn. Stat. § 103G.005, subd. 15a to include inland shallow and fresh marshes and inland fresh open waters that are 10 or more acres in unincorporated areas and 2.5 or more acres in incorporated areas.

<u>Traditional Navigable Water:</u> water body that is presently used or has been previously used in the past for transport by interstate or foreign commerce vessels

<u>Wetland</u>: Defined by USACE as "...areas that are inundated or saturated by surface or ground water...at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in soil conditions."

<u>Wetland hydrology</u>: Hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season.

#### **Wetland Indicator Status:**

*OBL:* Obligate wetland plant that occurs almost always, 99% of the time, in wetlands under natural conditions, but which rarely occur in non-wetlands.

*FACW:* Facultative wetland plant that occurs usually, 67% to 99% of the time, in wetlands, but also occurs 1% to 33% of the time in non-wetlands.

*FAC*: Facultative plant that occurs in both wetlands and non-wetlands 33% to 67% of the time.

*FACU:* Plant that occurs sometimes, 1% to 33% of the time, in wetlands but occurs more often, 67% to 99% of the time, in non-wetlands.

*UPL*: Upland plant that occurs very rarely in wetlands, less than 1% of the time



## Appendix A Background & Delineation Maps

Figure 1 Site Location Map

Figure 2 Aerial Imagery Review Map

Figure 3 USGS Topographic Map

Figure 4 PWI & NHD Features Map

Figure 5 Minnesota & National Wetland

Inventories Map

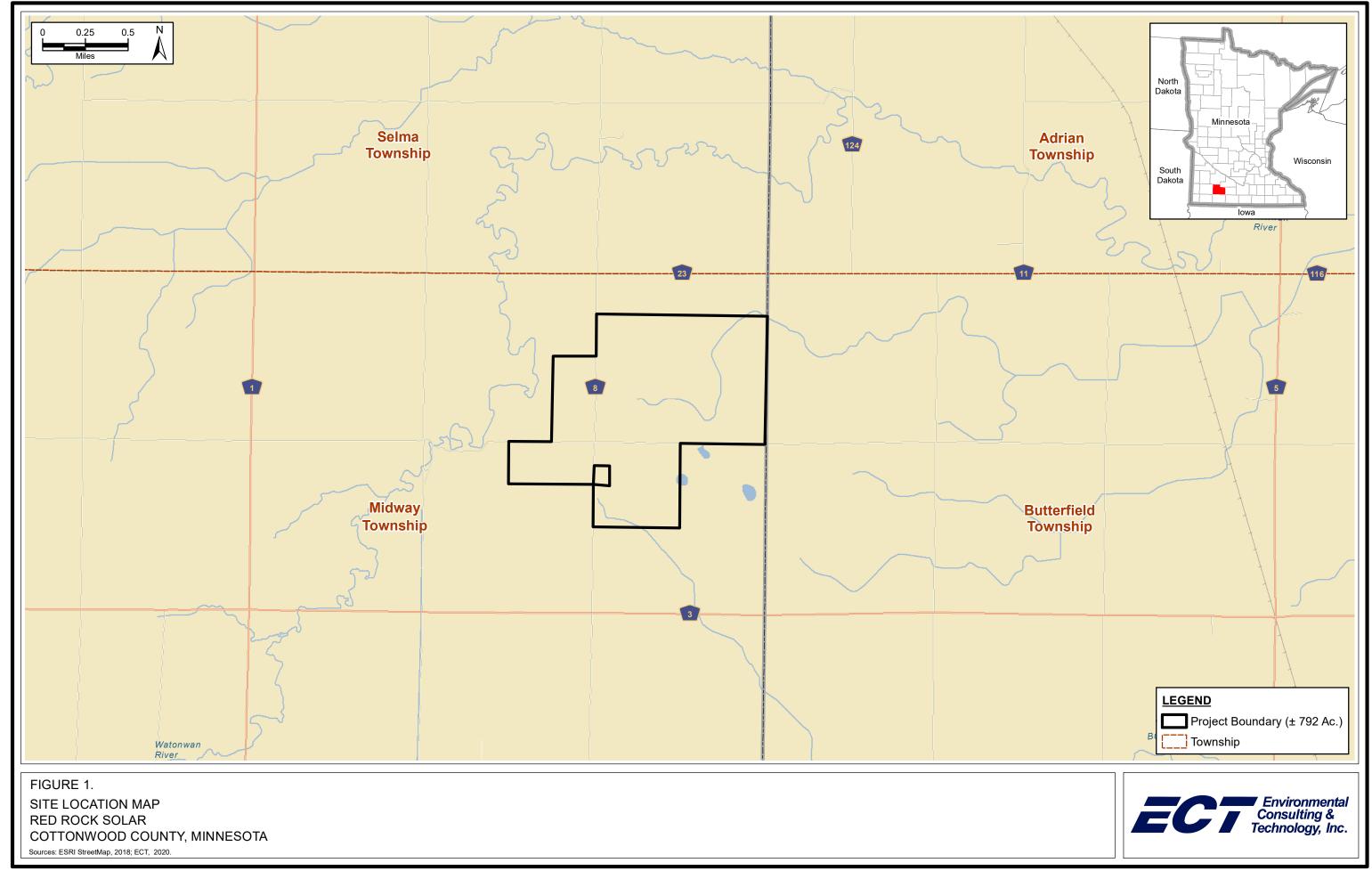
Figure 6 NRCS Soils Map

Figure 7 FEMA Floodplain Map

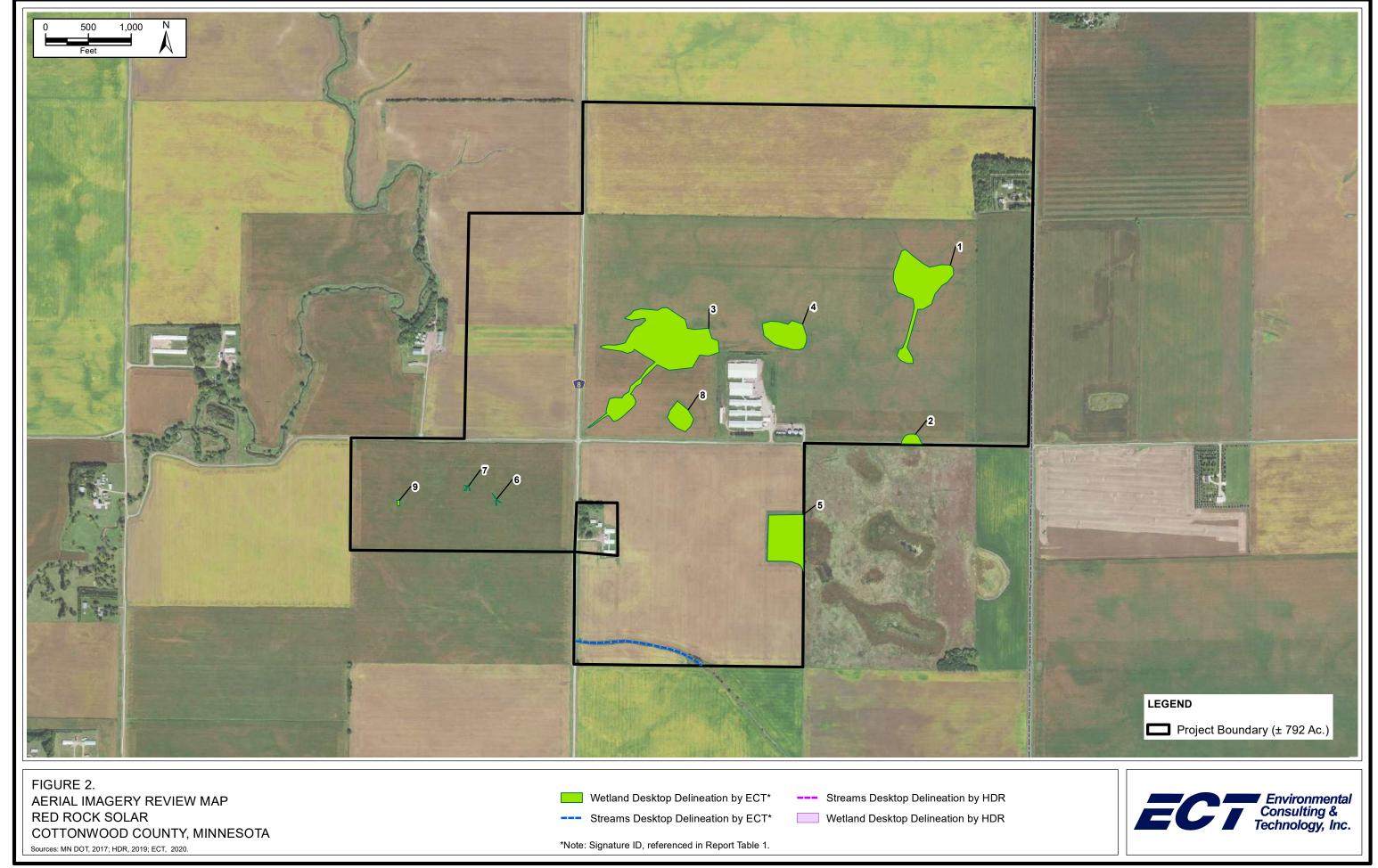
Figure 8 Wetland and Watercourse

**Delineation Maps** 

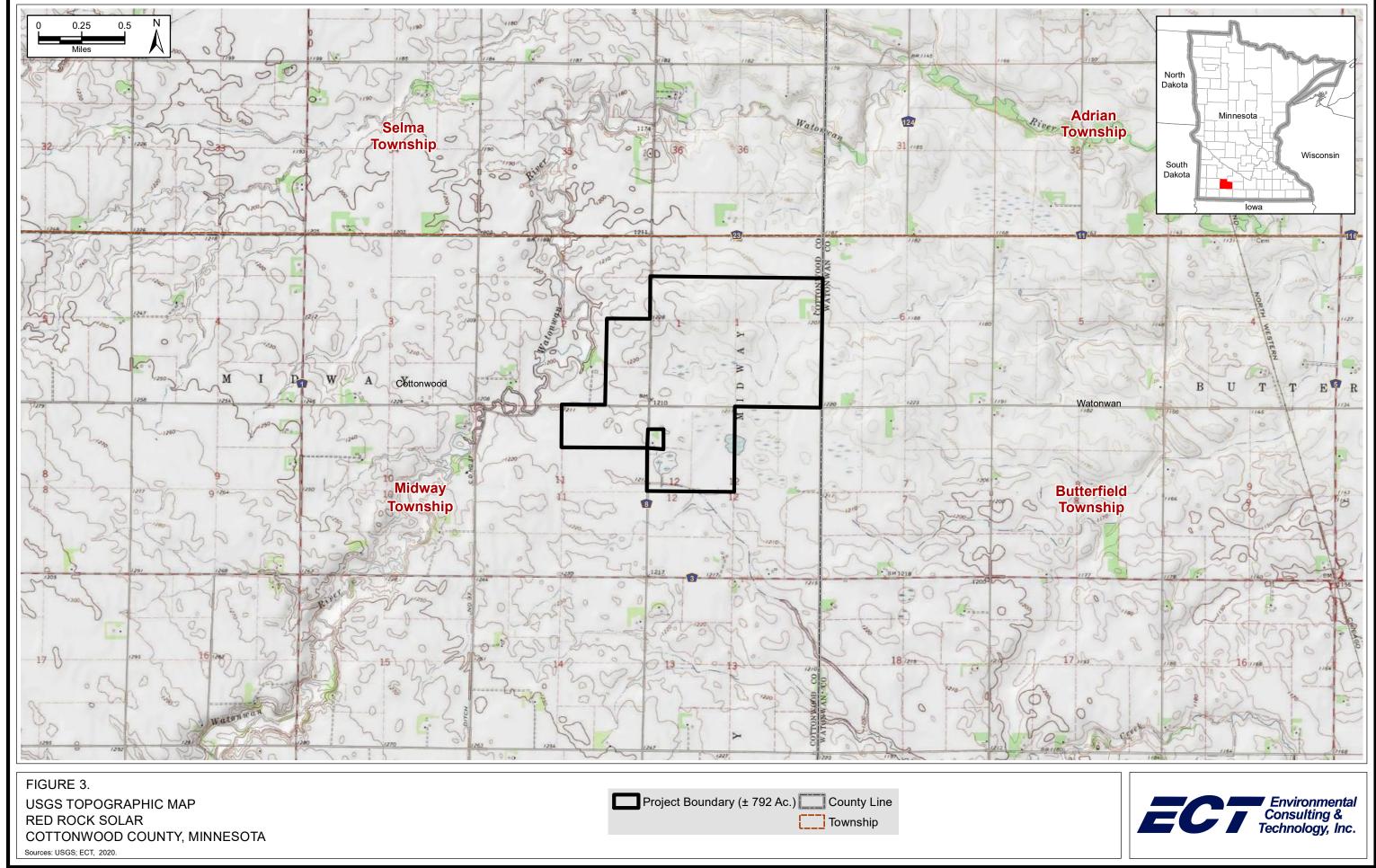




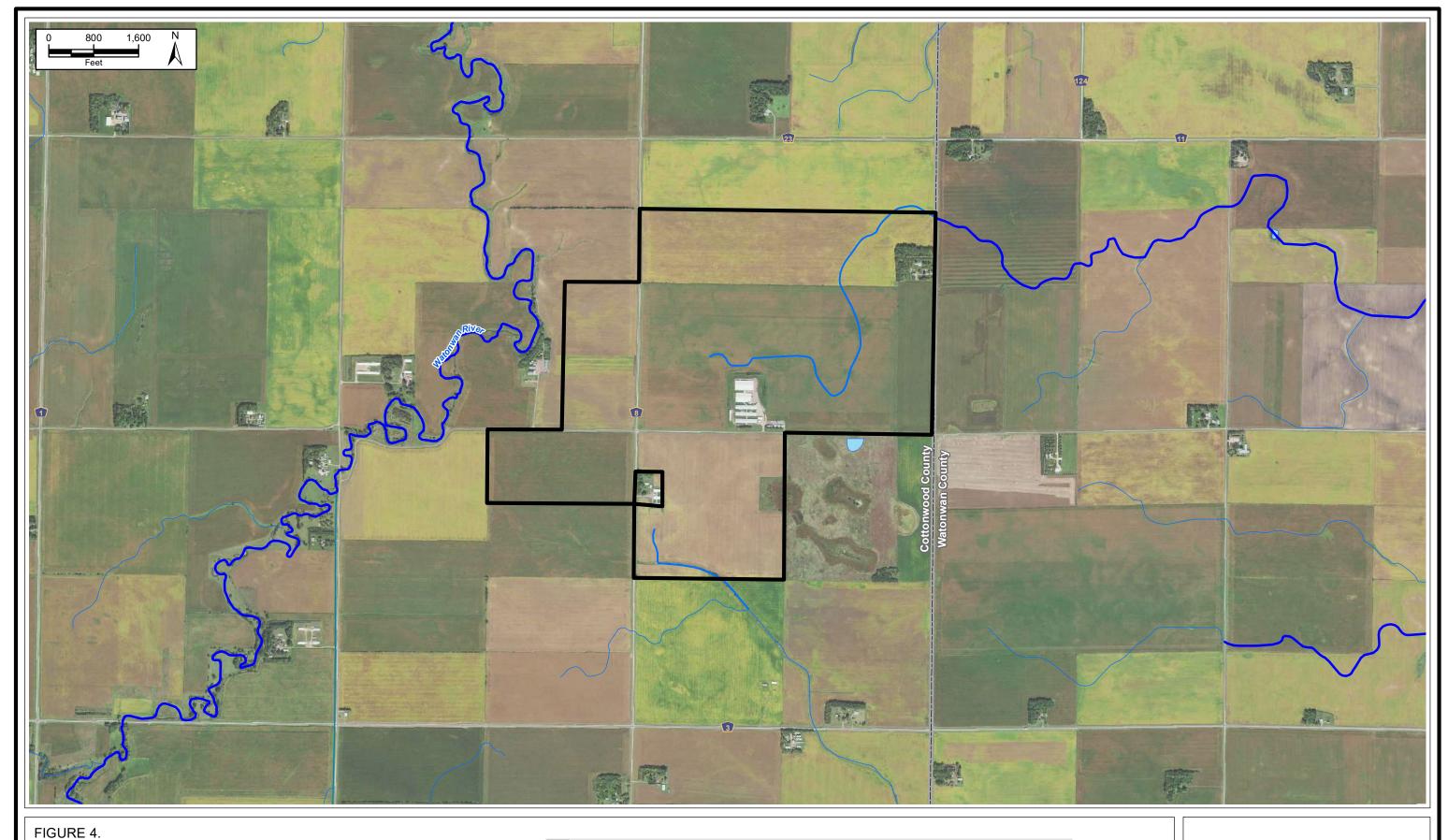
P:\\_cadgis\2019\190660\RedRockSolar\_Location\_2020415.mxd



P:\\_cadgis\2019\190660\RedRockSolar\_Aerial\_Review\_20200415.mxd



P:\\_cadgis\2019\190660\RedRockSolar\_Topo\_20200415.mxd



PWI & NHD FEATURES MAP RED ROCK SOLAR COTTONWOOD COUNTY, MINNESOTA Sources: USDA 2017 Imagery; USGS, 2019; MN DNR, 2020; ECT, 2020. Project Boundary (± 792 Ac.)
Waterbodies (NHD)

Watercourses (NHD)
Stream / River

Public WatercoursesPublic Water Watercourse



odices. 03DA 2017 Illiagely, 03G3, 2019, WIN DINIX, 2020, EG1, 202

P:\\_cadgis\2019\190660\RedRockSolar\_WaterResources\_20200415.mxd

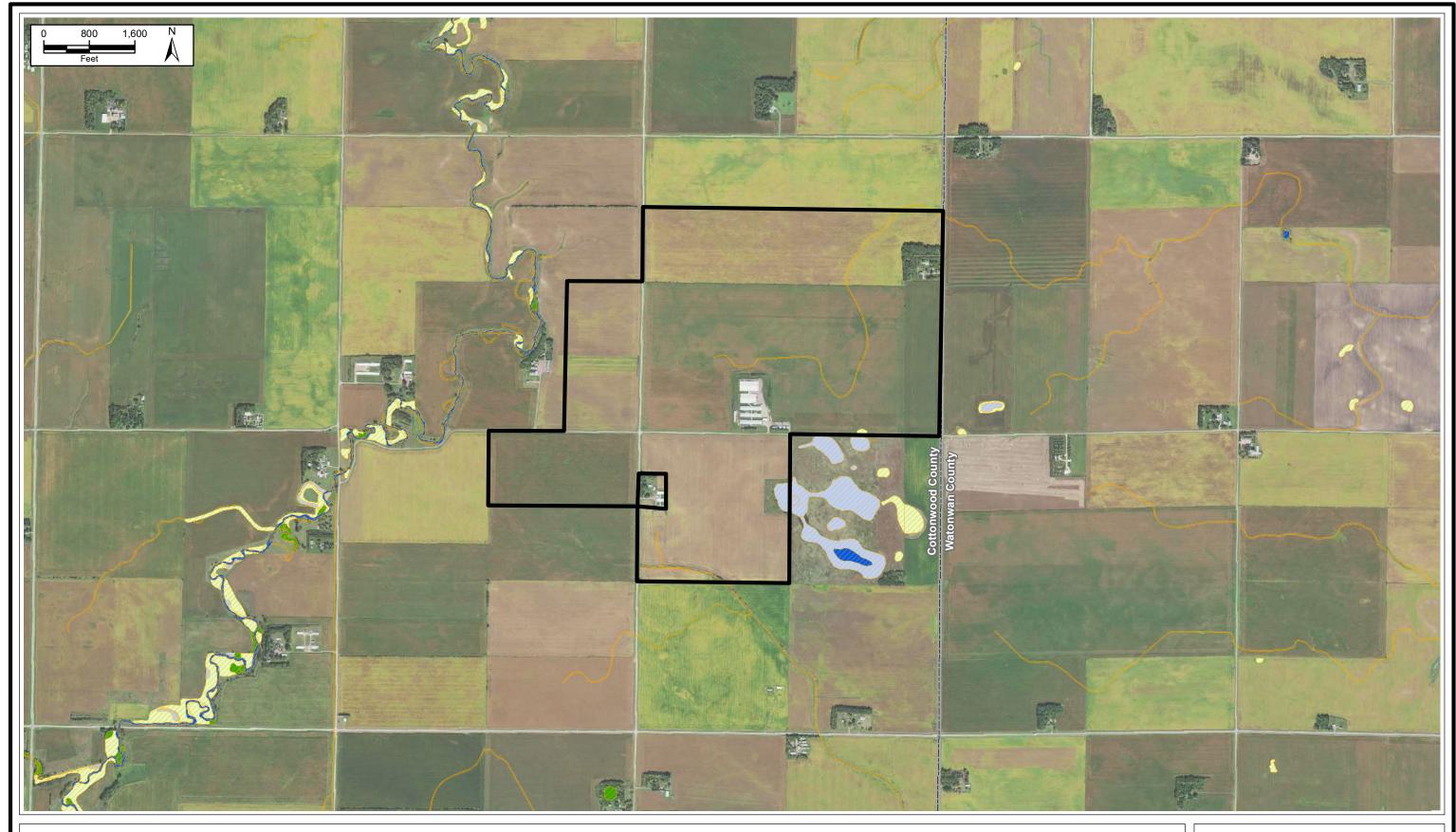


FIGURE 5.
MINNESOTA & NATIONAL WETLAND INVENTORIES
RED ROCK SOLAR
COTTONWOOD COUNTY, MINNESOTA

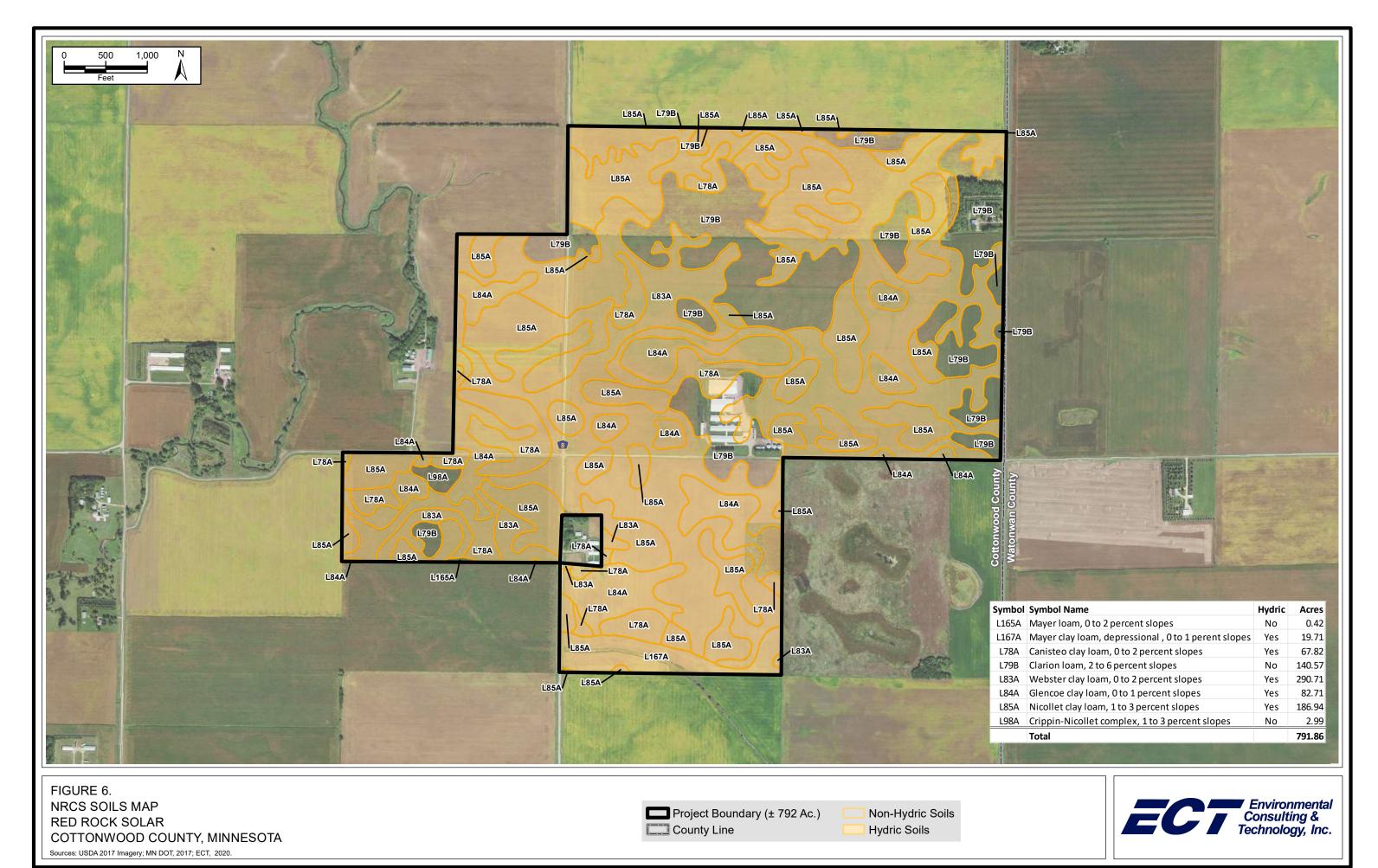
Project Boundary (± 792 Ac.)
Wetlands (NWI)

MN Wetland Inventory
Seasonally Flooded/Saturated Emergent Wetland
Shallow Marsh

Non-Vegetated Aquatic Community
Hardwood Wetland



Sources: USDA 2017 Imagery; USFWS, 2019; MN DNR, 2020; ECT, 2020.



P:\\_cadgis\2019\190660\RedRockSolar\_Soils\_20200415.mxd

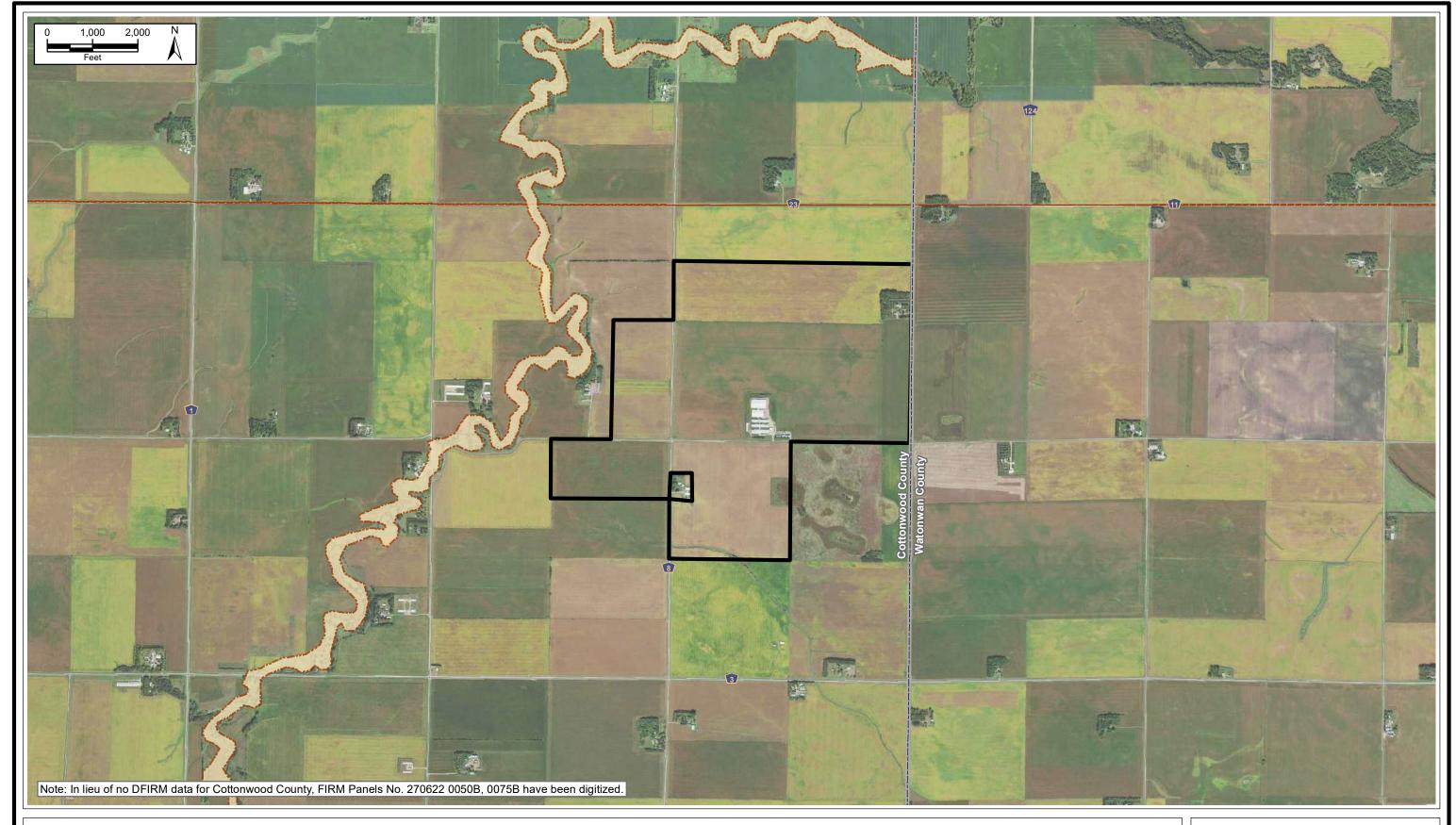


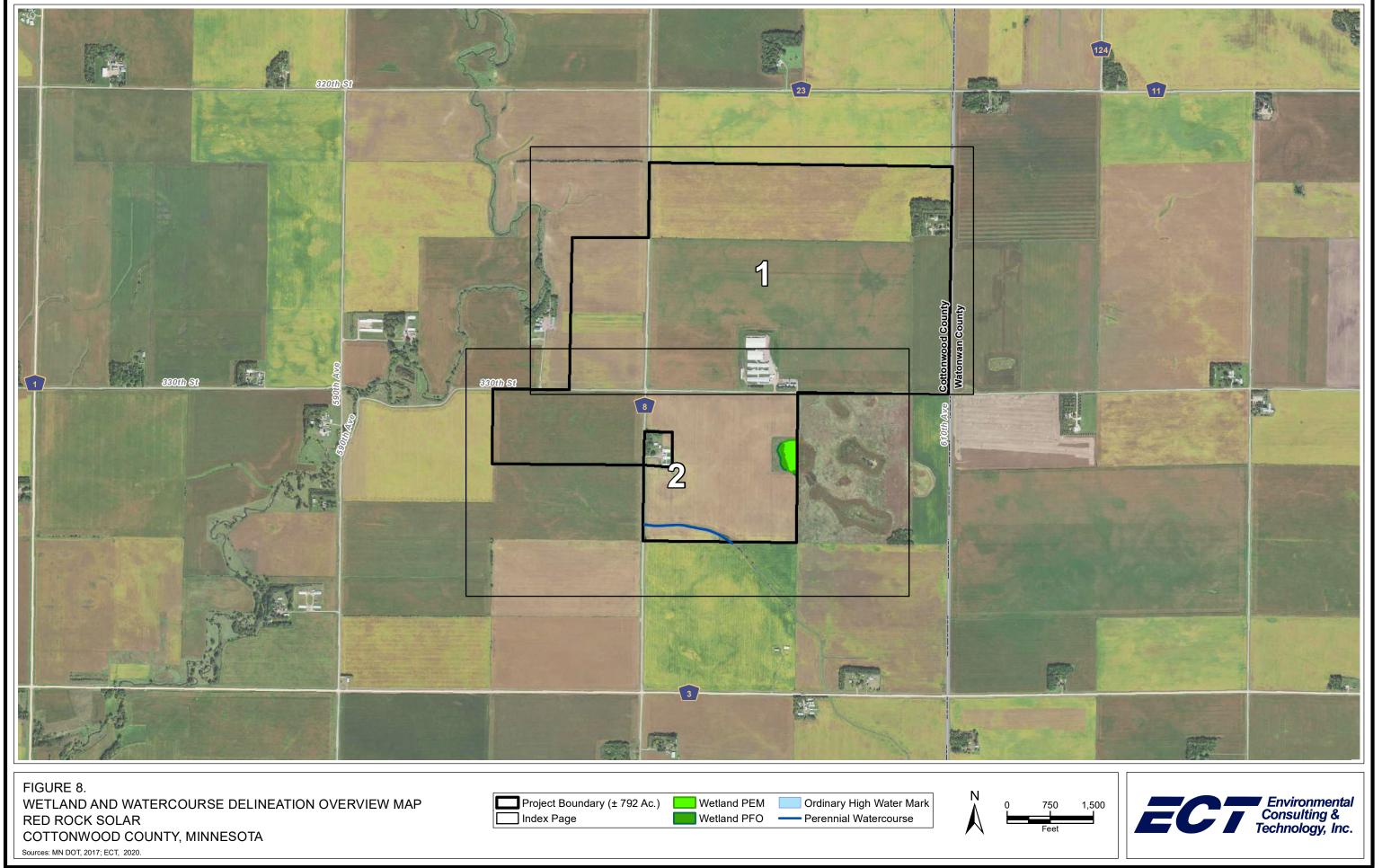
FIGURE 7.
FEMA FLOODPLAIN MAP
RED ROCK SOLAR
COTTONWOOD COUNTY, MINNESOTA

Project Boundary (± 792 Ac.)
A - 1% Annual Chance of Flooding

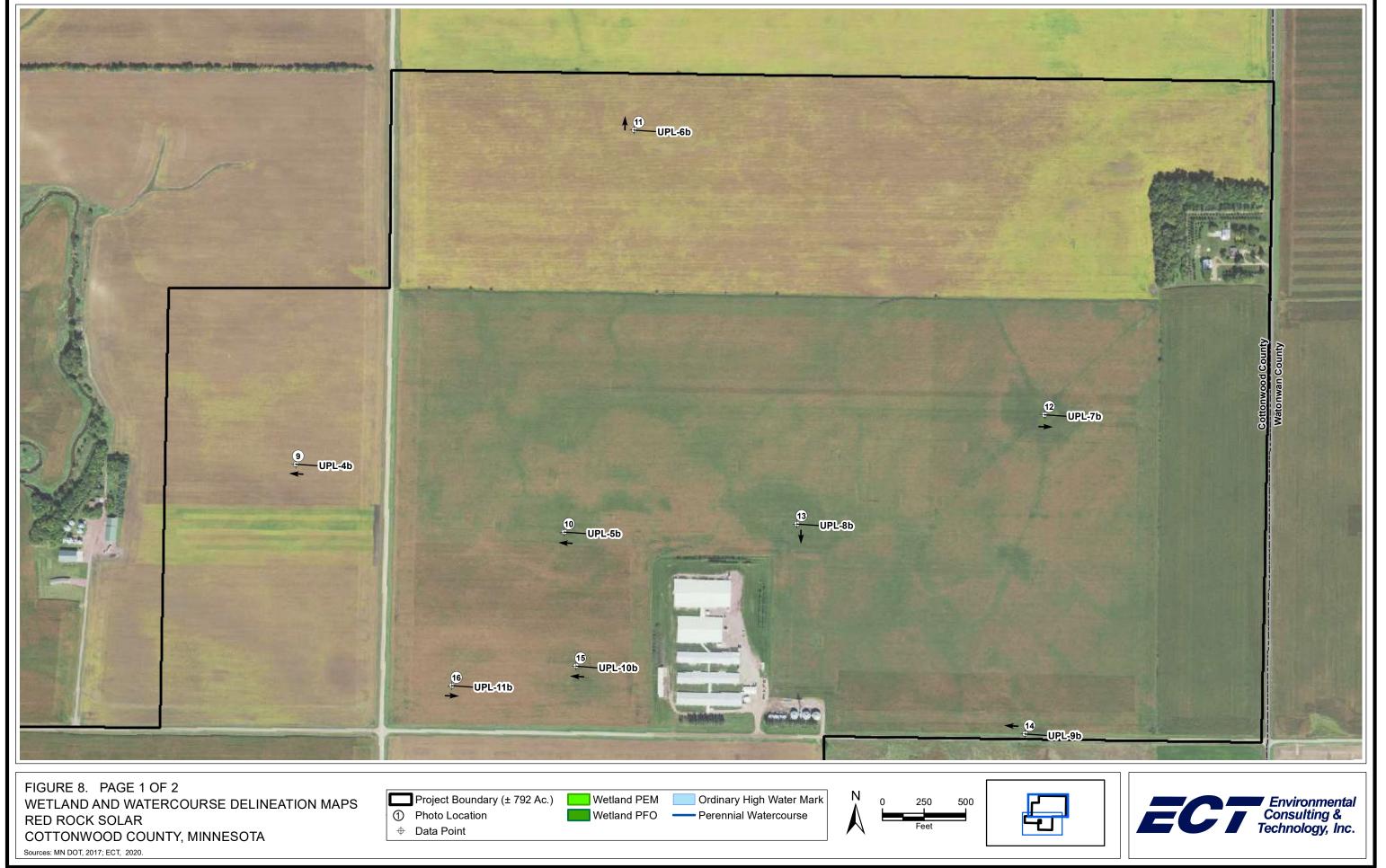


P:\\_cadgis\2019\190660\RedRockSolar\_Floodplain\_20200415.mxd

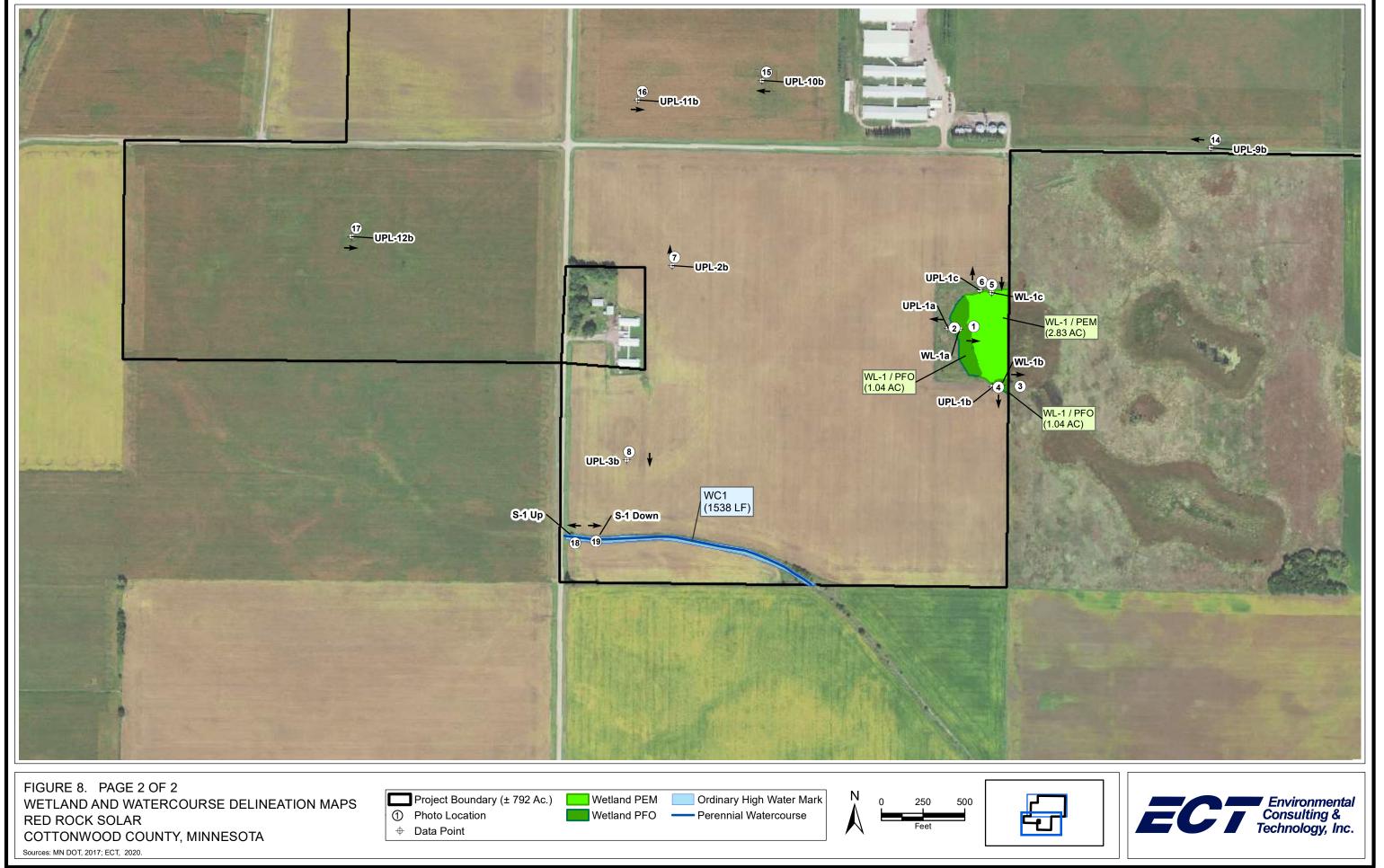
Sources: MN DOT, 2017; FEMA, 1981; ECT, 2020.



P:\\_cadgis\2019\190660\RedRockSolar\_Wetland\_delineation\_Overview\_20200415.mxd



P:\\_cadgis\2019\190660\RedRockSolar\_Wetland\_delineation\_20200415.mxd



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# Appendix B Precipitation Worksheets



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# Precipitation Worksheet Using Gridded Database

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

## Aerial photograph or site visit date:

**Sunday, April 26, 1992** 

#### Score using 1981-2010 normal period

multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18	(wet)		12 (Normal)	
monthly score		2 * 2 = 4	1 * 2 = 2	
type of month: dry normal wet		normal	normal	normal
there is a 30% chance this location will ha than:	ve more	2.26	0.90	1.11
there is a 30% chance this location will have	less than:	1.28	0.31	0.42
estimated precipitation total for this loc	ation:	1.84	0.75	0.94
derived from radar-based estimates.		1992	1992	1992
A 'R' following a monthly total indicates a provis derived from radar-based estimates.		March	February	January
values are in inches		first prior month:	second prior month:	third prior month:

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

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# **Precipitation Worksheet Using Gridded Database**

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

### Aerial photograph or site visit date:

**Saturday, May 31, 2003** 

#### Score using 1981-2010 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: April 2003	second prior month: March 2003	third prior month: February 2003
estimated precipitation total for this location:	2.02	1.53	0.76
there is a 30% chance this location will have less than:	1.92	1.28	0.31
there is a 30% chance this location will have more than:	3.40	2.26	0.90
type of month: dry normal wet	normal	normal	normal
monthly score	3 * 2 = 6	2 * 2 = 4	1 * 2 = 2
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		12 (Norma	al)

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

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# **Precipitation Worksheet Using Gridded Database**

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

## Aerial photograph or site visit date:

Monday, August 2, 2004

#### Score using 1981-2010 normal period

values are in inches	first prior month:	second prior month:	third prior month:	
A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	July	June	May	
denved nom radar-based estimates.	2004	2004	2004	
estimated precipitation total for this location:	6.30	2.55	5.23	
there is a 30% chance this location will have less than:	2.67	2.95	2.15	
there is a 30% chance this location will have more than:	4.16	4.97	4.11	
type of month: dry normal wet	wet	dry	wet	
monthly score	3 * <mark>3</mark> = 9	2 * 1 = 2	1 * 3 = 3	
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	14 (Normal)			

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

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# **Precipitation Worksheet Using Gridded Database**

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

### Aerial photograph or site visit date:

Wednesday, May 31, 2006

#### Score using 1981-2010 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: April 2006	second prior month: March 2006	third prior month: February 2006	
estimated precipitation total for this location:	5.42	1.86	0.30	
there is a 30% chance this location will have less than:	1.92	1.28	0.31	
there is a 30% chance this location will have more than:	3.40	2.26	0.90	
type of month: dry normal wet	wet	normal	dry	
monthly score	3 * <mark>3</mark> = 9	2 * 2 = 4	1 * 1 = 1	
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	14 (Normal)			

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

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# **Precipitation Worksheet Using Gridded Database**

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

### Aerial photograph or site visit date:

Wednesday, May 21, 2008

#### Score using 1981-2010 normal period

estimated precipitation total for this location: there is a 30% chance this location will have less than:	2008 3.17 1.92	2008 1.28	1.28 0.20
estimated precipitation total for this location:	2008 <b>3.17</b>	1.28	1.28 0.20 1.28 0.31
estimated precipitation total for this location:	2008 <b>3.17</b>	1.28	1.28 0.20
donvod nom radar sacca ostimates.	•	2008	2008
	April		2008
values are in inches	April   Marcii		

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

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# **Precipitation Worksheet Using Gridded Database**

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

#### Aerial photograph or site visit date:

Tuesday, June 2, 2009

#### Score using 1981-2010 normal period

values are in inches	first prior month:	second prior month:	third prior month:		
A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	May	April	March		
denved nom radar-based estimates.	2009	2009	2009		
estimated precipitation total for this location:	1.34	1.68	1.28		
there is a 30% chance this location will have less than:	2.15	1.92	1.28		
there is a 30% chance this location will have more than:	4.11	3.40	2.26		
type of month: dry normal wet	dry	dry	normal		
monthly score	3 * 1 = 3	2 * 1 = 2	1 * 2 = 2		
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	7 (Dry)				

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

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# Precipitation Worksheet Using Gridded Database

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

### Aerial photograph or site visit date:

Saturday, April 23, 2011

#### Score using 1981-2010 normal period

multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		15 (Wet)	
monthly score	3 * 2 = 6	2 * 3 = 6	1 * 3 = 3
type of month: dry normal wet	normal	wet	wet
there is a 30% chance this location will have more than:	2.26	0.90	1.11
there is a 30% chance this location will have less than:	1.28	0.31	0.42
estimated precipitation total for this location:	1.39	1.50	1.25
derived from radar-based estimates.	2011	2011	2011
A 'R' following a monthly total indicates a provisional value	March	February	January
values are in inches	first prior month:	second prior month:	third prior month:

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

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# **Precipitation Worksheet Using Gridded Database**

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

#### Aerial photograph or site visit date:

Friday, October 12, 2012

## Score using 1981-2010 normal period

values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: September 2012	second prior month: August 2012	third prior month: July 2012
estimated precipitation total for this location:	0.42	1.55	0.90
there is a 30% chance this location will have less than:	1.69	2.22	2.67
there is a 30% chance this location will have more than:	3.37	4.41	4.16
type of month: dry normal wet	dry	dry	dry
monthly score	3 * 1 = 3	2 * 1 = 2	1 * 1 = 1
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	6 (Dry)		

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

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# **Precipitation Worksheet Using Gridded Database**

#### Precipitation data for target wetland location:

county: Cottonwood township number: 106N township name: Midway range number: 34W nearest community: Darfur section number: 2

### Aerial photograph or site visit date:

Wednesday, July 22, 2015

#### Score using 1981-2010 normal period

values are in inches	first prior month:	second prior	third prior month:	
A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	June	month: May 2015	April	
denved nom radar-based estimates.	2015	Iviay 2015	2015	
estimated precipitation total for this location:	3.74	5.46	1.49	
there is a 30% chance this location will have less than:	2.95	2.15	1.92	
there is a 30% chance this location will have more than:	4.97	4.11	3.40	
type of month: dry normal wet	normal	wet	dry	
monthly score	3 * 2 = 6	2 * <mark>3</mark> = 6	1 * 1 = 1	
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)	13 (Normal)			

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

#### WETS WORKSHEET

Date: May 19, 2020

Weather Station: St. Jame's, MN Landowner: Red Rock Solar

County: Watonwan State: Minnesota

Soil name: Loamy & Clay Loam soils Growing Season: 4/20 - 10/14

Photo date: May 11, 2020

		Lo	ng-term rainfall reco	ords					
		3 yrs. In 10 less		3 yrs. In 10 more		Condition			Product of pervious
	Month	than	Normal	than	Rain fall	dry, wet, normal	Condition value	Month weight value	two columns
1st prior month*	April	2.01	2.98	3.56	1.32	Dry	1	3	3
2nd prior month*	March	0.82	1.65	1.99	2.72	Wet	3	2	6
3rd prior month*	February	0.3	0.7	0.81	1.26	Wet	3	1	3

\*Compared to photo data Sum 12

Note: If sum is

6-9 Then prior period has been drier than normal 10-14 Then prior period has been normal

15-18 Then prior period has been wetter than normal

Condition Value

Dry = 1 Normal = 2

Wet = 3

Conclusion: Year is Normal

WETS Station: ST. JAMES WWTP, MN													
Requested years: 1980 - 2020													
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0. 10 or more	Avg Snowfall					
Jan	24.3	6.1	15.2	0.75	0.28	0.86	2	10.2					
Feb	28.5	10.1	19.3	0.70	0.30	0.81	2	8.5					
Mar	40.6	22.6	31.6	1.65	0.82	1.99	3	8.0					
Apr	56.6	34.6	45.6	2.98	2.01	3.56	6	3.5					
May	70.3	47.6	58.9	4.17	2.89	4.96	8	0.0					
Jun	79.7	57.9	68.8	4.67	2.99	5.62	8	0.0					
Jul	83.3	61.6	72.5	4.05	2.62	4.87	7	0.0					
Aug	80.4	59.2	69.8	3.94	2.37	4.78	6	0.0					
Sep	73.9	50.1	62.0	3.30	1.63	4.03	5	0.0					
Oct	59.6	36.8	48.2	2.34	1.03	2.85	4	0.3					
Nov	42.5	24.3	33.4	1.22	0.62	1.45	3	5.5					
Dec	27.7	11.3	19.5	1.15	0.55	1.38	3	9.8					
Annual:	55.6	35.2	45.4	_	-	-		-					
Average Total	55.0	35.2	45.4	30.90	-	-	- 58	- 45.8					
TOTAL	-	-	-	30.90			50	45.0					
GROWING SEASON DATES													
Years with missing data:	24 deg = 8	28 deg = 7	32 deg = 7										
Years with no occurrence:	24 deg = 0	28 deg = 0	32 deg = 0										
Data years used:	24 deg = 33	28 deg = 34	32 deg = 34										
Probability	24 F or higher	28 F or higher	32 F or higher										
50 percent *	4/9 to 10/24: 198 days	4/20 to 10/14: 177 days	4/27 to 10/3: 159 days										
70 percent *	4/6 to 10/28: 205 days	4/17 to 10/18: 184 days	4/24 to 10/6: 165 days										
* Percent chance of the growing season occurring between the Beginning and Ending dates.													
STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1940					M2.03	6.50	0.71	6.45	0. 96		2.28	2.20	21. 13
1941	0.38	0.62	0.64	3.23	3.09	M7.86	2.32	1.99	4. 20	4. 19	1.40		30. 62
1942	0.40	0.18	2.65	0.85		4.94	3.26	3.31	7. 61	0. 47	0.25		24. 26
1943	2.69 0.74	1.98 M0.95	1.30 0.79	0.90 2.99	5.71 M8.58	5.12 4.79	4.68	6.18 5.01	3. 67	1. 70	0.65	0.00	34. 58
1944 1945	0.74	M1.35	1.65	2.99	3.32	5.55	M2.75 4.45	1.29	1. 77 5.	0. 25	1.65	0.07	30. 34 28.
1946	M0.53	M0.79	2.60		4.33	5.95	2.01	M2.79	26 7.	3.	M1.	0.52	57 31.
1947	0.47	1.63	M0.54	3.11	1.56	6.54	0.97	1.57	50 2.	1.	27 M2.	0.66	73 23.
1948	Т	1.41	0.36	3.38	1.84		2.45	3.90	44 2.	86	42 2.48	0.49	77 19.

17	0.07	0.00	,	86	0.54	4.00	2.40	2.50	0.70	2.00	0.00	1.04	1040
34		0.28	1. 61	2. 72	0.54	4.86	3.42	3.58	0.72	3.22	0.08	1.34	1949
40 22 84	0.40	0.86	1. 54	2. 59	1.60	3.60	3.80	4.18	1.81	1.52	0.40	0.54	1950
	M0. 89	1.02	2. 05	4. 57	4.11	1.50	5.51	3.74	1.90	3.83	1.13	0.26	1951
23 19 85	0.23	1.61	0. 00	0. 59	3.59	3.08	4.79	1.80	1.05	1.50	0.25	1.36	1952
30 35 10	1.30	2.11	0. 37	0. 47	2.69	4.18	8.53	7.28	4.94	1.51	1.03	0.69	1953
	0.08	0.19	1. 69	3. 06	4.67	3.29	4.42	2.73	2.37	1.95	0.98	0.04	1954
	0.49	0.19	1. 11	1. 12	4.97	3.50	3.27	0.89	2.32	0.24	0.76	0.20	1955
	0.31	2.12	0. 68	0. 60	3.90	3.55	4.76	3.81	2.38	1.51	0.39	0.16	1956
	0.18	1.35	1. 94	1. 39	5.23	5.26	7.47	3.53	0.79	2.03	0.28	Т	1957
05 16	0.05	1.02	0.	0.	1.34	4.73	1.89	M1.43	3.73	0.26	0.27	0.20	1958
	1.75	M0.	3.	99 3.	6.93	0.57	2.73	6.81	0.37	0.17	0.43	0.12	1959
	0.41	29 0.94	0.	5. 5.	5.93	5.38	3.16	5.56	4.68	0.67	0.16	0.44	1960
	0.53	0.62	1.	83	2.82	7.95	1.44	4.12	1.21	2.21	0.47	0.06	1961
	0.12	0.35	23 0.	1.	3.92	6.31	4.06	4.23		1.40	1.01	0.35	1962
45 14 25	0.14	0.01	85 1.	85 3.	1.96	8.92	4.02	2.16	2.37		0.44	0.32	1963
27 66 27	0.66	1.16	04	89 8.		4.07	2.00	6.13	4.10	0.81	0.07	0.16	1964
60	0.75	0.76	33 0.	11 5.	1.83	1.39	3.49	5.47	4.31	1.41	1.17	0.74	1965
85		0.19	73 2.	80 2.	5.67	4.83	4.37	1.17	1.29	0.84	0.87	0.56	1966
20	0.36		21	49	5.65	2.34	6.03	0.50	4.79	0.51	0.51	1.01	1967
27	1.34		05 5.	50 8.	2.29	8.21	4.76	2.03	3.86	0.05	0.01	0.41	1968
02			33	29									
04	1.77		1. 59	0. 72	1.90	4.57	4.70	3.04	2.61	1.02	1.16	1.72	1969
41		2.29	4. 92	5. 26	1.17	5.74	2.46	2.46	3.40	1.66	0.12	0.20	1970
73 24 83	0.73	2.24	4. 76	2. 16	1.23	1.02	5.52	2.89	1.12	0.77	1.93	0.46	1971
84 25 50	1.84	1.57	2. 02	2. 66	1.85	4.93	2.26	4.28	2.40	0.86	0.27	0.56	1972
03 24 50	1.03	3.33	0. 96	4. 42	1.33	3.01	1.55	3.75	2.09	1.85	0.45	0.73	1973
25 22 30	0.25	0.77	1. 46	0. 95	3.79	1.65	5.18	4.33	2.36	0.76	0.75	0.05	1974
58 26 31	0.58	4.40	0. 40	1. 82	3.60	0.75	5.70	1.73	2.73	2.93	0.34	1.33	1975
45 15 86	0.45	0.04	0. 79	2. 65	3.48	1.83	2.06	1.06	0.65	2.16	0.45	0.24	1976
98 37 54	0.98	2.39	3. 80	5. 69	2.80	3.37	5.74	4.97	2.60	4.21	0.73	0.26	1977
	0.48	1.45	0. 43	1. 40	3.64	4.02	3.83	2.58	2.80	0.70	0.48	0.29	1978
	0.04	1.76	4.	2. 28	6.35	3.03	6.26	2.99	1.63	3.45	0.79	1.57	1979
	0.19	0.09	0. 86	2. 75	6.50	0.40	1.72	5.52	1.15	0.80	0.70	0.37	1980
	0.66	0.94	2. 89	73	4.02	6.32	8.40	1.67	3.17	0.78	1.26	0.23	1981
	2.44	2.24	3.	4.	4.58	4.23	0.99	4.18	1.55	1.18	0.25	1.09	1982

1983	0.20	0.40	2.45	2 21	2.56	F 10	2.02	2 21	37	59	2.48	0.00	69
	0.29	0.40	2.45	2.31	3.56	5.10	2.02	3.31	2. 18	2. 05		0.90	27. 05
1984	0.81	0.49	1.01	3.19	1.98	5.65	2.04	2.17	3. 16	3. 62	0.68	1.56	26. 36
1985	0.37	0.06	4.27	3.48	3.55	2.14	2.07	5.45	5. 23	3. 19	1.41	0.82	32. 04
1986	1.12	0.24	1.72	5.81	3.30	6.14	8.93		6. 06		0.94	0.09	34. 35
1987	0.30	Т	0.84	0.69	3.00	1.76	5.15		1. 73	0. 25	1.76	1.49	16. 97
1988	M2.66	0.26	0.39	M2.94	1.65	1.02	1.40	4.17	2. 16	0. 06	2.14	MT	18. 85
1989		MT	2.92	3.39	1.62	3.27	3.73	2.81	1. 52	0. 18	0.86	0.27	20. 57
1990	T	0.50	4.18	1.97	3.52	4.89	7.46	0.89	0. 81	1. 37	M0. 33	MT	25. 92
1991	MT	MT	M0.10	6.43	5.58	8.68	3.75	3.16	6. 11	1. 25	M1. 60	M0. 50	37. 16
1992	M0.50	M0.00	M1.96	3.45	2.81	3.65	6.22	5.03	3. 02	2. 96	M0. 42	MT	30. 02
1993	M1.20	M0.00	M1.05	3.86	6.25	10.64	8.05	4.70	3. 60	M0. 35	M1. 06		40. 76
1994			M0.12	M4.67	2.13	4.64	4.18	4.06	3. 40	2.	M1.		26. 47
1995			M3.37	M2.92	4.91	2.26	6.74	2.78	40	19 M3. 87	08 M0. 71	M0. 00	27. 56
1996	M1.20	0.05	M0.50	M0.67	3.54	6.96	2.43	7.97	1.	3.	M2.	00	31.
1997	M0.54	M0.00	M1.75	M1.96	4.16	6.10	4.56	4.74	1.	28 1.	64 M0.	M7.	08 35.
1998	M0.50	M0.35	M2.89	3.34	M2.49	2.86	2.88	3.82	99	74 4.	26 M1.	35 M0.	15 26.
1999	M0.33	MT	M0.18	M5.15	3.69	M4.95	3.40	1.63	73 0.	64 0.	15 1.88	12 M0.	77 22.
2000	M0.00	M0.86	M1.07	M0.94	6.07	3.53	4.38	2.75	53 M0.	63 1.	M1.	01	38 24.
2001	M0.25	M0.25	MT	7.15	4.68	M4.49	5.32	1.53	98 2.	60 0.	86 M3.	MT	04 29.
2002	M0.00	MT	M1.02	M3.19	2.77	3.91	3.03	6.21	28 1.	69 M2.	30 M0.	M0.	94 24.
2003	M0.11	M0.22	M2.04	M1.30	5.26	5.29	4.92	2.05	84 2.	48 0.	00 M0.	16 M2.	61 26.
2004	M0.02	M0.08	1.36	1.64	5.87	2.94	4.31	2.90	32 8.	36 1.	58 1.13	34 0.21	79 30.
2005	M0.01	1.05	M0.47	4.61	M2.35	4.10	5.00	M4.79	57 8.	00 M0.	M1.	M0.	03 32.
2006	M0.04	M0.41	M1.97	M4.95	M1.63	M3.71	3.04	5.13	37 M2.	27	45 1.31	14	61 26.
2007	1.79	1.33	2.05	1.74	2.57	1.67	2.31	10.72	15	55 M4.	Т.	M0.	90
									26	53		35	32
2008	M0.42	M0.01	M1.62	3.91	6.30	4.69	2.31	0.96	M1. 99	3. 69	M1. 50	2.68	30. 08
2009	1.33	1.78	0.98	1.15	0.64	4.22	1.77	2.78	M0. 09	M7. 46	1.15	M1. 22	24. 57
2010	0.95	0.73	1.60	2.81	2.07	7.24	6.14	3.01	13. 66	1. 50		2.13	42. 72
2011	M0.24	1.02	2.34	3.04	4.51	4.33	4.77	0.08	1. 07	0. 26	0.07	1.03	22. 76
2012	0.38	2.04	1.42	2.99	10.11	0.97	1.86	1.57	0. 37	0. 94	0.71	1.07	24. 43
2013	0.98	0.91	3.39	M1.97	5.64	7.01	1.21	3.77	1. 14	2. 90	0.62	0.98	30. 52
2014	0.94	0.28	M0.50	3.66	1.97	10.46	1.06	6.14	1. 64	0. 94	0.97	0.88	29. 44
2015	0.42	0.53	0.36	1.84	4.60	3.48	2.88	3.88	3. 41	2. 83	4.21	2.75	31. 19
2016	0.27	M0.66	2.80	3.60	7.69	6.07	9.12	7.16	7.	4.	1.97	1.46	52.

									36	43			59
2017	0.83	0.43	1.84	2.42	5.36	2.98	2.82	3.83	2. 30	4. 95	0.08	0.59	28. 43
2018	1.08	1.18	2.87	3.36	6.17	10.66	4.97	5.50	5. 95	2. 83	1.39	2.47	48. 43
2019	1.70	1.84	3.12	4.31	7.08	2.21	4.62	3.97	4. 32	6. 02	2.49	1.10	42. 78
2020	1.85	1.26	2.72	1.32	M1.56								8.71

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2016-07-22

# Appendix C USACE Datasheets



Project/Site: Red Rock Solar		(	City/County	Cottonw	<u>rood</u>	Sampling Date: <u>5/11/2020</u>
Applicant/Owner: Red Rock Solar,	LLC				State: MN	Sampling Point: WL-1a
Investigator(s): R. Scott			Section, To	wnship, Ra	nge: T106N R34W S1	2
Landform (hillslope, terrace, etc.): To	e slope			Local relief	(concave, convex, none):	Concave
Slope (%): 0 Lat: _44.00			Long: <u>-94.</u>	870433°		Datum: NAD 83
Soil Map Unit Name: Glencoe clay	loam, 0 to 1 percer	nt slopes			NWI classific	ation: PFO/Type 1
Are climatic / hydrologic conditions on	the site typical for this	s time of yea	ar?Yes_	<u> </u>	(If no, explain in R	emarks.)
Are Vegetation, Soil,	r Hydrologys	ignificantly	disturbed?	Are "	"Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil,	r Hydrology n	aturally pro	blematic?	(If ne	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS -	Attach site map	showing	samplin	g point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes X N	0		NTIGOT-	87658	<u> </u>
Hydric Soil Present?		0	37750	e Sampled		
Wetland Hydrology Present?	Yes X N	o	with	in a Wetlar	nd? Yes X	No
Remarks:						
	40, 80% B3					
VEGETATION – Use scientific	names of plants.					
Tree Stratum (Plot size: 30ft.		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work	
1. Populus deltoides		30	Yes	FAC	Number of Dominant S That Are OBL, FACW,	
2		27	1011 - 10	d <u></u>	Total Number of Domin	ant
3					Species Across All Stra	27 2 20 20 20 20 20 20 20 20 20 20 20 20 2
4				3 <del>4 - 4</del>	Percent of Dominant Sp	pecies 400 00/
5			= Total Cov		That Are OBL, FACW,	or FAC: 100.0% (A/B)
Sapling/Shrub Stratum (Plot size:	15ft)	20	- Total Cov	/ei	Prevalence Index wor	ksheet:
l a Caliceleraida		50	Yes	FACW	Total % Cover of:	
2					OBL species 40	x = 1 = 40 $x = 100$
3					FACW species 30	x 2 = 100 x 3 = 90
5		5):2	-	12 <del>17 - 12</del>	TAO species	x 4 =
3000			= Total Cov	ver	Manager St. or St.	x 5 =
Herb Stratum (Plot size: 5ft.	)				Column Totals: 120	(A) 230 (B)
1. Schoenoplectus maritimus		40	Yes	OBL	Prevalence Index	- P/A - 1.92
2					Hydrophytic Vegetation	
3 4				-		Hydrophytic Vegetation
5.					× 2 - Dominance Tes	t is >50%
6					X 3 - Prevalence Inde	
7		//		: 1 <u>-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-</u>	4 - Morphological A	Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
8				ea <del>ra</del>	Anna Carlo C	phytic Vegetation <sup>1</sup> (Explain)
9				-		, ( <u></u> ,
10			= Total Cov			I and wetland hydrology must
Woody Vine Stratum (Plot size:	)	co <u> </u>	- Total Cov	761	be present, unless distu	urbed or problematic.
1		411		8-4	Hydrophytic	
2	-			D <del>O</del>	Vegetation Present? Ye	s_X No
Remarks: (Include photo numbers h	ore or on a concrete	_	= Total Cov	ver		
Remarks. (include prioto numbers n	ere or on a separate s	sileet.)				

SOIL Sampling Point: WL-1a

Depth	cription: (Describe Matrix	e to the dep		ument the dox Featur		or confirm	the absence of	indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 2/1	90	10YR 4/6	10	<u>C</u>	PL&M	SiL	
6-12	10YR 2/1	80	10YR 4/6	20	C	<u>M</u>	L	-
12-18	10YR 5/1	100					CL	
	<u>-</u>			1969				
	21		g	Wes .			N 10	
		477						
	oncentration, D=De	pletion, RM=	Reduced Matrix, I	MS=Maske	ed Sand Gr	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for	r Problematic Hydric Soils <sup>3</sup> :
Histosol				Gleyed M			(A	airie Redox (A16)
	oipedon (A2)			Redox (S			Dark Surf	
80 70	stic (A3)		C	ed Matrix (	S			ganese Masses (F12)
	en Sulfide (A4) d Layers (A5)			y Mucky M y Gleyed N				llow Dark Surface (TF12) plain in Remarks)
	ick (A10)			ted Matrix			Office (Ex	piairi iri Kernarks)
A STATE OF THE PARTY OF THE PAR	d Below Dark Surfa	ce (A11)		Dark Sur				
	ark Surface (A12)	00 (1117)		ted Dark S	네이 얼마하다 하다 하다 먹다니다.	)	3Indicators of	hydrophytic vegetation and
74 1750	Mucky Mineral (S1)		COCK 1 COCK	x Depressi		<b>*</b> :		ydrology must be present,
	icky Peat or Peat (	S3)					unless dis	sturbed or problematic.
Restrictive	Layer (if observed	):						
Type:	THE ACCUMULATION OF						Hydric Soil Pro	esent? Yes X No
Depth (in	ches):							
HYDROLO	GY							
Property and the Control of the Cont	drology Indicators						_	
100	cators (minimum of	one is requir	terminal in the	- 10 mm	/D0)			Indicators (minimum of two required)
	Water (A1)			tained Lea				e Soil Cracks (B6)
	ater Table (A2)			Fauna (B1				ge Patterns (B10)
X Saturation				uatic Plant				ason Water Table (C2)
	larks (B1)			n Sulfide C		D		h Burrows (C8)
	nt Deposits (B2)			e of Reduc		ing Roots		tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
	posits (B3)					ed Soils (C6		orphic Position (D2)
	at or Crust (B4) posits (B5)			ck Surface		d Solis (Co		eutral Test (D5)
	on Visible on Aeria	I Imagery (B)		or Well Data			<u>X</u> 170-11	edital Test (D3)
See and the control of the control o	Vegetated Conca			xplain in R				
Field Obser	10,000,000				omamo,			
Surface Wat		Yes I	No X Depth (	inches).				
Water Table		74.000.000		inches): 6		_		
Saturation P				inches): 0		—   Wetl:	and Hydrology P	resent? Yes X No
(includes cap	oillary fringe)	10 51	12 50 00	1004			1125 6781	103 NO
Describe Re	corded Data (strea	m gauge, mo	nitoring well, aeria	ıı photos, p	revious in	spections),	ır avaılable:	
Remarks:								

Project/Site: Red Rock Solar		(	City/Count	ty: Cottonw	/ood	Sampling Date: 5/11/2020
Applicant/Owner: Red Rock Sola	r, LLC				State: MN	Sampling Point: UPL-1a
Investigator(s): R. Scott		20.0	Section, T	ownship, Ra	nge: T106N R34W S1	2
Landform (hillslope, terrace, etc.):	oe slope			Local relief	(concave, convex, none):	Concave
Slope (%): 2 Lat: _44.0			Long: <u>-9</u> 4	1.870631°		Datum: NAD 83
Soil Map Unit Name: Webster cla	y loam, 0 to 2 per	cent slopes			NWI classific	cation: Upland
Are climatic / hydrologic conditions	on the site typical for	this time of yea	ar? Yes _	X_ No_	(If no, explain in R	emarks.)
Are Vegetation, Soil	, or Hydrology	_ significantly	disturbed?	Are *	"Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil	, or Hydrology	_ naturally pro	blematic?	(If ne	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS -	Attach site ma	p showing	samplii	ng point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes	No X		ANIATAPI-	5600	20 20 30
Hydric Soil Present?	Yes	No X	3773	the Sampled		1660 <b>V</b>
Wetland Hydrology Present?	Yes	No X	wit	hin a Wetlar	nd? Yes	No <u>X</u> _
Remarks:						
VEGETATION – Use scienti	ic names of plan	ts				
	*	Absolute	Dominar	nt Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30ft.		% Cover	65 5		Number of Dominant S That Are OBL, FACW,	
2			D.		Total Number of Domin	ant
3					Species Across All Stra	2 (B)
4					Percent of Dominant S	
5				over	That Are OBL, FACW,	or FAC: 50.0% (A/B)
Sapling/Shrub Stratum (Plot size	15ft. )	-	1010101		Prevalence Index wor	ksheet:
1					Total % Cover of:	
2			-		Manager 14	x 1 =
3.					FACW species 70	$\frac{x^2}{x^3} = \frac{210}{210}$
4 5				1075	FACU species 20	x 4 = 80
			10.00	over	UPL species	x 5 =
	)	70	Yes	FAC	Column Totals: 90	(A) <u>290</u> (B)
1. Poa pratensis 2. Taraxacum officinale		20	Yes	FACU	Prevalence Index	= R/A = 3.22
3 Bromus inermis		10	No	FACU	Hydrophytic Vegetation	1 5,000,00 107
4					1 - Rapid Test for H	Hydrophytic Vegetation
5					2 - Dominance Tes	st is >50%
6				- 3	3 - Prevalence Inde	
7						Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
8					A CONTROL OF THE PROPERTY OF THE CONTROL OF THE CON	phytic Vegetation <sup>1</sup> (Explain)
9						, ·
10						il and wetland hydrology must
Woody Vine Stratum (Plot size: _	)	10 <del></del>	- Total Co	ovei	be present, unless distr	urbed or problematic.
1				88 <del>8 8</del>	Hydrophytic	
2				-00 <del>0 10</del>	Vegetation Present? Ye	s No_X_
Remarks: (Include photo numbers	here or on a senara		= Total Co	over	arcesosessants WESA	eners to some to the source of
Tremarks: (melade priote hambers	nore or on a separa	to officer.				
I						

SOIL Sampling Point: UPL-1a

Profile Des Depth	Matrix		Pad	ox Featur	00			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup> _	Loc <sup>2</sup>	Texture	Remarks
0-10	10YR 2/1	100					SiL	
10-16	10YR 2/1	95	10YR 4/4	5	С	М	L St. Co.	12
 16-24	10YR 3/1	95	10YR 4/4	- <u> </u>	С	M	CL	
Hydric Soi Histoso	I Indicators:	pletion, RN			atrix (S4)	ains.	Indicators fo	PL=Pore Lining, M=Matrix.  r Problematic Hydric Soils <sup>3</sup> : airie Redox (A16)
	Histic (A3)			d Matrix	(35.5)		1.5	ganese Masses (F12)
Hydrog Stratifie 2 cm N	gen Sulfide (A4) ed Layers (A5) /luck (A10) ed Below Dark Surfa	ce (A11)	Loamy Loamy Deplete Redox	Mucky M Gleyed M ed Matrix Dark Sur	ineral (F1) fatrix (F2) (F3) face (F6)		Very Sha Other (Ex	llow Dark Surface (TF12) kplain in Remarks)
Sandy	Dark Surface (A12) Mucky Mineral (S1) ⁄lucky Peat or Peat (	S3)		ed Dark S Depressi	urface (F7) ons (F8)	)	wetland h	hydrophytic vegetation and hydrology must be present, sturbed or problematic.
Restrictive	Layer (if observed	):						1//
19-22							729 23 25 370	
Type:								
100000000000000000000000000000000000000	inches):		<u> </u>				Hydric Soil Pr	resent? Yes No _X_
Depth (i							Hydric Soil Pr	resent? Yes No _^_
Depth (ii	OGY						Hydric Soil Pr	resent? Yes No^_
Depth (ii	inches):	::						
Depth (i Remarks: IYDROLO Wetland H	OGY		uired; check all that a	pply)	NATION AND			Indicators (minimum of two required)
Depth (ii Remarks:  IYDROL( Wetland H Primary Ind Surface	OGY ydrology Indicators dicators (minimum of e Water (A1)		Water-Sta	ained Lea			Secondary Surfac	Indicators (minimum of two required) e Soil Cracks (B6)
Depth (ii Remarks:  IYDROL( Wetland H; Primary Ind Surface High W	OGY ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2)		Water-Sta Aquatic F	ained Lea auna (B1	3)		Secondary Surfac Draina	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Satura	OGY ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3)		Water-Sta Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3) s (B14)		Secondary Surfac Draina Dry-Se	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2)
Depth (ii Remarks:  IYDROLO Wetland H: Primary Ind Surface High W Satura Water	OGY Vydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1)		Water-Sta Aquatic F True Aqu Hydrogen	ained Lea auna (B1 atic Plant Sulfide (	3) s (B14) Odor (C1)	ing Roots	Secondary Surfac Draina Dry-Se Crayfis	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Saturat Water Sedime	OGY Vydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		<ul><li>Water-State</li><li>Aquatic F</li><li>True Aqu</li><li>Hydrogen</li><li>Oxidized</li></ul>	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1) eres on Liv		Secondary Surfac Draina Dry-Se Crayfis	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Saturar Water Sedime Drift De	OGY  ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-Sta Aquatic F True Aqu Hydrogen Oxidized Presence	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4	4)	Secondary Surfac Draina Dry-Se Crayfis (C3) Satura	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De	OGY Vydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		Water-Sta Aquatic F True Aqu Hydrogen Oxidized Presence Recent Iru	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille	4)	Secondary Surfac Draina Dry-Se Crayfis (C3) Satura Stunte G6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De	OGY  ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4)	one is requ	Water-Sta Aquatic F True Aqu Hydrogen Oxidized Presence Recent In	ained Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7)	4)	Secondary Surfac Draina Dry-Se Crayfis (C3) Satura Stunte G6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Satural Water Sedime Drift De Algal M Iron De Inunda	OGY  ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5)	one is requ	Water-Sta Aquatic F True Aqu Hydrogen Oxidized Presence Recent In Thin Muc	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	Secondary Surfac Draina Dry-Se Crayfis (C3) Satura Stunte G6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Satural Water Sedime Drift De Algal M Iron De Inunda	OGY Vydrology Indicators Vydro	one is requ	Water-Sta Aquatic F True Aqu Hydrogen Oxidized Presence Recent In Thin Muc	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9)	4)	Secondary Surfac Draina Dry-Se Crayfis (C3) Satura Stunte G6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa	OGY Vydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) attion Visible on Aeria ely Vegetated Conca	I Imagery (Ive Surface	Water-Sta  Aquatic F  True Aqu  Hydrogen  Oxidized  Presence  Recent Irr  Thin Muc  B7) Gauge or  (B8) Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary Surfac Draina Dry-Se Crayfis (C3) Satura Stunte G6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa	OGY  ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aerial ely Vegetated Conca	I Imagery (Ive Surface	Water-Sta	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) Odor (C1) eres on Liv red Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary Surfac Draina Dry-Se Crayfis (C3) Satura Stunte (6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
Depth (ii Remarks:  IYDROL( Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation	OGY  ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aerial ely Vegetated Conca	I Imagery (Ive Surface	Water-Sta  Aquatic F  True Aqu  Hydrogen  Oxidized  Presence  Recent Irr  Thin Muc  B7) Gauge or  (B8) Other (Ex	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R	3) s (B14) Odor (C1) eres on Liv red Iron (C4 tion in Tille (C7) a (D9) emarks)	4) d Soils (C	Secondary Surfac Draina Dry-Se Crayfis (C3) Satura Stunte (6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	OGY  ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aerial ely Vegetated Conca ervations: ater Present? Present? apillary fringe)	I Imagery (Ive Surface Yes Yes	Water-Sta	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R nches): nches): nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	d Soils (C	Secondary Surface Draina Dry-See Crayfis (C3) Satura Stunte (6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	OGY  ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aerial ely Vegetated Conca ervations: ater Present? Present? apillary fringe)	I Imagery (Ive Surface Yes Yes	Water-Sta  Aquatic F True Aqu Hydrogen Oxidized Presence Recent In Thin Muc B7) Gauge or (B8) Other (Ex  No X Depth (in No X Depth (in	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R nches): nches): nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	d Soils (C	Secondary Surface Draina Dry-See Crayfis (C3) Satura Stunte (6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
Depth (ii Remarks:  IYDROL( Wetland H; Primary Ind Surface High W Saturat Water Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca Describe R	OGY  ydrology Indicators dicators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aerial ely Vegetated Conca ervations: ater Present? Present? apillary fringe)	I Imagery (Ive Surface Yes Yes	Water-Sta  Aquatic F True Aqu Hydrogen Oxidized Presence Recent In Thin Muc B7) Gauge or (B8) Other (Ex  No X Depth (in No X Depth (in	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Dat plain in R nches): nches): nches):	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tille (C7) a (D9) emarks)	d Soils (C	Secondary Surface Draina Dry-See Crayfis (C3) Satura Stunte (6) Geome	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)

Project/Site: Red Rock Solar		City/County	Cottonw	ood	Sampling Date: <u>5/11/2020</u>
Applicant/Owner: Red Rock Solar, LLC				State: MN	Sampling Point: WL-1b
Investigator(s): R. Scott		Section, To	wnship, Rai	nge: T106N R34W S1	2
Landform (hillslope, terrace, etc.): Toe slope			Local relief	(concave, convex, none):	Concave
		Long: <u>-94.</u>	869545°		Datum: NAD 83
Soil Map Unit Name: Canisteo clay loam, 0 to 2 percer	nt slopes			NWI classific	ation: PFO/Type 1
Are climatic / hydrologic conditions on the site typical for this	time of year	ar? Yes Ż	<u> </u>	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology si	gnificantly o	disturbed?	Are "	'Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology na	aturally prol	blematic?	(If ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	showing	samplin	g point k	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes X No	)		IIII (A) Tele	4000	<u> </u>
Hydric Soil Present? Yes X		370000	e Sampled		
20 1000	·—	with	in a Wetlan	nd? Yes	No
Remarks:					
<b>VEGETATION</b> – Use scientific names of plants.					
Tree Stratum (Plot size: 30ft. )	Absolute % Cover	Dominant Species?		Dominance Test work	
1. Populus deltoides	30	Yes	FAC	Number of Dominant Sp That Are OBL, FACW, of	
2	7			Total Number of Domin	ant
3				Species Across All Stra	27 2 20 20 20 20 20 20 20 20 20 20 20 20 2
4			( <del>)</del>	Percent of Dominant Sp	pecies 400 00/
5				That Are OBL, FACW, o	or FAC: 100.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15ft. )		= Total Cov	ei	Prevalence Index work	ksheet:
1. Salix lucida	50	Yes	FACW_	Total % Cover of:	
2	·			OBL species 40	$x = \frac{40}{100}$
3				FACVI species	x = 2 = 100 $x = 3 = 90$
4	4	<del>,                                     </del>		TAC species	x 3 =
5		= Total Cov		Manager St. ov St.	x 5 =
Herb Stratum (Plot size: 5ft. )				Column Totals: 120	(A) 230 (B)
1. Schoenoplectus maritimus	40	Yes	OBL	02	
2				Prevalence Index	
3				Hydrophytic Vegetatio	Hydrophytic Vegetation
4		<del></del>		2 - Dominance Tes	t is >50%
5				3 - Prevalence Inde	ex is <3.01
6				1 <del>2 2</del> 2	Adaptations <sup>1</sup> (Provide supporting
7 8				data in Remarks	s or on a separate sheet)
9.			Let 150	Problematic Hydrop	phytic Vegetation¹ (Explain)
10.				<b>1</b>	
8		= Total Cov	rer	'Indicators of hydric soil be present, unless distu	I and wetland hydrology must urbed or problematic.
Woody Vine Stratum (Plot size:)					melle et Mante Santanet
1		<del></del>	2 <del>2</del> 2	Hydrophytic Vegetation	. ,
		= Total Cov	/er	Present? Yes	s_X No
Remarks: (Include photo numbers here or on a separate s	_	-		Is.	

SOIL Sampling Point: WL-1b

Depth	Matrix			dox Featur		12	T4	December
(inches) 0-6	Color (moist) 10YR 2/1	90	Color (moist) 10YR 4/6	<u>%</u> 10	<u>Type¹</u> C	Loc <sup>2</sup> PL&M	Texture SiL	Remarks
	-		8			70 ( 70		
6-12	10YR 2/1	80	10YR 4/6	20	C	M	L	
12-18	10YR 5/1	100					CL	
	-							
	2		-	118				
	÷		-	<u> </u>		- —		
1							2	
Type: C=C Hydric Soil		epletion, RM	I=Reduced Matrix,	MS=Maske	ed Sand G	rains.		PL=Pore Lining, M=Matrix.  r Problematic Hydric Soils <sup>3</sup> :
			Cana	v Claved N	latric (CA)			
— Histosol Histor Fr	pipedon (A2)		V	y Gleyed M y Redox (S			Coast Pra	airie Redox (A16) face (S7)
	istic (A3)			ed Matrix	120		1.5	ganese Masses (F12)
	en Sulfide (A4)			y Mucky M		)		llow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N				xplain in Remarks)
	uck (A10)			eted Matrix				
Deplete	d Below Dark Surf	ace (A11)	X Redo	x Dark Sur	face (F6)			
Thick Da	ark Surface (A12)		CONT. T. CONT.	eted Dark S		7)		hydrophytic vegetation and
	Mucky Mineral (S1)		Redo	x Depressi	ons (F8)			ydrology must be present,
	ucky Peat or Peat						unless di	sturbed or problematic.
	Layer (if observe	d):						
Type:							Hydric Soil Pr	resent? Yes X No
	PARTICIPATION CONT.						,	
Depth (in Remarks:	ches):							
Remarks:	Bigg							
Remarks:	o <b>G</b> Y							
Remarks:  IYDROLO  Wetland Hy	GY drology Indicator		uired: check all that	annivi			Secondary	Indicators (minimum of two required
Remarks:  IYDROLO  Wetland Hy  Primary India	OGY drology Indicator cators (minimum o		ired; check all that		over (BO)			Indicators (minimum of two required
IYDROLO Wetland Hy Primary India	OGY drology Indicator cators (minimum o Water (A1)		Water-S	Stained Lea			Surfac	e Soil Cracks (B6)
IYDROLO Wetland Hy Primary India Surface X High Wa	drology Indicator cators (minimum o Water (A1) ater Table (A2)		Water-S Aquatic	Stained Lea Fauna (B1	3)		Surfac Draina	e Soil Cracks (B6) ge Patterns (B10)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturati	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)		Water-8 Aquatic True Ad	Stained Lea Fauna (B1 uatic Plant	3) s (B14)		Surfac Draina Dry-Se	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) farks (B1)		Water-S Aquatic True Ad Hydrogo	Stained Lea Fauna (B1 Juatic Plant en Sulfide (	3) s (B14) Odor (C1)	vina Roots	Surfac Draina Dry-Se Crayfis	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimei	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2)		Water-S Aquatic True Ac Hydrogo Oxidize	Stained Lea Fauna (B1 juatic Plant en Sulfide ( d Rhizosph	3) s (B14) Odor (C1) eres on Li	ving Roots	Surfac Draina Dry-Se Crayfis (C3) Satura	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimel Drift De	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water-S Aquatic True Ac Hydrogo Oxidize Presence	Stained Lea Fauna (B1 Juatic Plant en Sulfide ( d Rhizosph ce of Reduc	3) s (B14) Odor (C1) eres on Li ced Iron (C	(4)	Surface Draina Dry-See Crayfis (C3) Satura Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturati Water M Sedimen Drift Dep Algal Ma	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc	3) s (B14) Odor (C1) eres on Li ced Iron (C		Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary Indie Surface X High Wa X Saturatie Water M Sedimen Drift Dep Algal Ma Iron Dep	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4)	f one is requ	Water-S Aquatic True Ac Hydroge Oxidize Presence Recent Thin Mo	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille	(4)	Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturati Water M Sedimel Drift Del Algal Ma Iron Del Inundati	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria	f one is requ al Imagery (E	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimen Drift Den Algal Ma Iron Den Inundatia	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria	f one is requ al Imagery (E	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturati Water M Sedimel Drift Del Algal Ma Iron Del Inundati	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeric y Vegetated Concervations:	f one is requ al Imagery (E ave Surface	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mc Gauge (B8) Other (6	Stained Lea Fauna (B1 juatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc lock Surface or Well Dat Explain in F	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary Indie Surface X High Wa X Saturatie Water M Sedimer Drift Der Algal Ma Iron Der Inundatie Sparsely Field Obser	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria by Vegetated Concarvations:	al Imagery (E ave Surface	Water-S Aquatic True Ac Hydroge Oxidize Presenc Recent Thin Mc 37) Gauge (B8) Other (B	Stained Lea Fauna (B1 juatic Plant en Sulfide ( d Rhizosph ee of Reduc Iron Reduc ick Surface or Well Dat Explain in F	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Remarks)	(4)	Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturati Water M Sedimel Drift Del Algal Ma Iron Dep Inundati Sparsely Field Obser Surface Wat	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concarvations: ter Present?	al Imagery (Eave Surface  Yes  Yes	Water-S Aquatic True Ac Hydroge Oxidize Presenc Recent Thin Mu Gauge (B8) Other (B No Depth No Depth	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat Explain in F (inches):	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Remarks)	(24) ed Soils (C6	Surface Draina Dry-Se Crayfis (C3) Satura Stunte Sty Geome X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimen Drift Den Algal Ma Iron Dep Inundatia Sparsely Field Obser Surface Water Table Saturation P (includes can	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concavations: ater Present? Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc lron Reduc ick Surface or Well Dat Explain in F (inches): (inches): (inches): (inches):	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Remarks)	(24) ed Soils (C6	Surface  Draina  Dry-See  Crayfise  (C3) Satura  Stunte  Sty Geome  X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimen Drift Den Algal Ma Iron Dep Inundatia Sparsely Field Obser Surface Water Table Saturation P (includes can	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concavations: ater Present? Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S Aquatic True Ac Hydroge Oxidize Presenc Recent Thin Mu Gauge (B8) Other (B No Depth No Depth	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc lron Reduc ick Surface or Well Dat Explain in F (inches): (inches): (inches): (inches):	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Remarks)	(24) ed Soils (C6	Surface  Draina  Dry-See  Crayfise  (C3) Satura  Stunte  Sty Geome  X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimen Drift Den Algal Ma Iron Den Inundatia Sparsely Field Obser Surface Water Table Saturation P (includes can Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concavations: ater Present? Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc lron Reduc ick Surface or Well Dat Explain in F (inches): (inches): (inches): (inches):	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Remarks)	(24) ed Soils (C6	Surface  Draina  Dry-See  Crayfise  (C3) Satura  Stunte  Sty Geome  X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimen Drift Den Algal Ma Iron Dep Inundatia Sparsely Field Obser Surface Water Table Saturation P (includes can	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at or Crust (B4) posits (B5) at or Crust (B4) posits (B5) ion Visible on Aerially Vegetated Concavations:  ter Present?  Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc lron Reduc ick Surface or Well Dat Explain in F (inches): (inches): (inches): (inches):	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Remarks)	(24) ed Soils (C6	Surface  Draina  Dry-See  Crayfise  (C3) Satura  Stunte  Sty Geome  X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
IYDROLO Wetland Hy Primary India Surface X High Wa X Saturatia Water M Sedimen Drift Den Algal Ma Iron Den Inundatia Sparsely Field Obser Surface Water Table Saturation P (includes can Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at or Crust (B4) posits (B5) at or Crust (B4) posits (B5) ion Visible on Aerially Vegetated Concavations:  ter Present?  Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc lron Reduc ick Surface or Well Dat Explain in F (inches): (inches): (inches): (inches):	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Remarks)	(24) ed Soils (C6	Surface  Draina  Dry-See  Crayfise  (C3) Satura  Stunte  Sty Geome  X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)

Project/Site: Red Rock Solar		Cit	y/County: Cottonw	/ood	Sampling Date: 5/11/2020
Applicant/Owner: Red Rock Sola	ır, LLC		1000	State: MN	Sampling Point: UPL-1b
Investigator(s): R. Scott		Se	ection, Township, Ra	nge: T106N R34W S1	2
Landform (hillslope, terrace, etc.): _				(concave, convex, none):	
Slope (%): 1 Lat: _44.		Lo	ng: <u>-94.869610°</u>		Datum: NAD 83
Soil Map Unit Name: Canisteo cla	ay loam, 0 to 2 perc	ent slopes		NWI classific	ation: Upland
Are climatic / hydrologic conditions Are Vegetation, Soil Are Vegetation, Soil	, or Hydrology	significantly dis	sturbed? Are		present? Yes X No
SUMMARY OF FINDINGS -	Attach site map	showing s	ampling point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks:	Yes N Yes N	No X	Is the Sampled within a Wetlan	I Area	NoX
VEGETATION - Use scienti	fic names of plants	S.,			
Tree Stratum (Plot size: 30ft. 1 2 3	- 100	<u>% Cover</u> <u>\$</u>	P 1 2	Dominance Test work Number of Dominant S That Are OBL, FACW, Total Number of Domin Species Across All Stra	pecies or FAC: (A) ant
4				Percent of Dominant Sp	
5					or FAC: (A/B)
Sapling/Shrub Stratum (Plot size   1.	)		Total Cover	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Index	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)(B)  = B/A =
3				Hydrophytic Vegetation	
4				2 - Dominance Tes 3 - Prevalence Indo 4 - Morphological A data in Remarks	
10				<sup>1</sup> Indicators of hydric soi be present, unless distr	l and wetland hydrology must urbed or problematic.
1				Hydrophytic Vegetation Present? Ye	s No_X_
Remarks: (Include photo number This data point was taken in a	and the second s	sheet.)		0% bare ground.	

SOIL Sampling Point: UPL-1b

Profile Des	scription: (Describe	to the depth	needed to docur	nent the i	ndicator	or confir	n the absence of	indicators.)
Depth	Matrix	9 9	Redo	x Feature				
(inches)	Color (moist)		Color (moist)	%	_Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 2/1	100						
12-18	10YR 2/1	100		5)69 C	on		L	- 19
18-24	10YR 3/2	100		9001			CL	- 132
8.5					3,		1 2 3	
	<u> </u>							
-	<u> </u>			W <u>2</u>				
	# <del>*</del>							
×		<u> </u>		. 10 <u>1</u>				
	Concentration, D=De	pletion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		L=Pore Lining, M=Matrix.
Hydric Soi	I Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histoso			7.5	Gleyed Ma			N	irie Redox (A16)
125	Epipedon (A2)		10 Table 1 Table 1	Redox (S5			Dark Surf	
	Histic (A3)		(4 <del>-3</del> -34)	Matrix (S	(A)			ganese Masses (F12)
_ , ,	gen Sulfide (A4) ed Layers (A5)			Mucky Mir Gleyed Ma				low Dark Surface (TF12) plain in Remarks)
	fluck (A10)			d Matrix (I			Office (Ex	piairi iri Kernarks)
	ed Below Dark Surfa	ce (A11)		Dark Surfa	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	Dark Surface (A12)	( ,			rface (F7)		3Indicators of	hydrophytic vegetation and
741750 711	Mucky Mineral (S1)		Unit 17 - 17 - 17 - 17 - 17 - 17 - 17 - 17	Depressio				ydrology must be present,
5 cm N	Mucky Peat or Peat (S	33)					unless dis	sturbed or problematic.
Restrictive	Layer (if observed	):						
Type:								esent? Yes No X
Depth (i	nches):		_				Hydric Soil Pro	esent? Yes No _X_
Remarks:							*	
HYDROLO	OGY							
Wetland H	ydrology Indicators	:						
Primary Ind	dicators (minimum of	one is require	d; check all that ap	ply)			Secondary	Indicators (minimum of two required)
Surface	e Water (A1)		Water-Sta	ined Leav	es (B9)		Surface	e Soil Cracks (B6)
High W	Vater Table (A2)		Aquatic Fa	una (B13	)		Drainag	ge Patterns (B10)
	tion (A3)		True Aqua					ason Water Table (C2)
Water	Marks (B1)		Hydrogen	Sulfide O	dor (C1)		Crayfis	h Burrows (C8)
Sedime	ent Deposits (B2)		Oxidized F	Rhizosphe	res on Livi	ing Roots		ion Visible on Aerial Imagery (C9)
Drift De	eposits (B3)		Presence	of Reduce	ed Iron (C4	4)	Stunted	d or Stressed Plants (D1)
Algal M	Mat or Crust (B4)		Recent Iro	n Reducti	on in Tilled	d Soils (C	6) Geomo	orphic Position (D2)
Iron De	eposits (B5)		Thin Muck	Surface (	C7)		FAC-N	eutral Test (D5)
Inunda	tion Visible on Aerial	Imagery (B7)	Gauge or	Well Data	(D9)			
Sparse	ely Vegetated Concav	e Surface (B	B) Other (Exp	olain in Re	emarks)			
Field Obse	ervations:							
Surface Wa	ater Present?	Yes No	o X Depth (in	ches):				
Water Table	e Present?	Yes No	o X Depth (in	ches):				
Saturation I	Present?	Yes No	o X Depth (in	ches):		Wet	land Hydrology P	resent? Yes No X
	apillary fringe)	AS 95		100			1/58 570	
Describe R	ecorded Data (strear	n gauge, mon	itoring well, aerial	photos, pr	evious ins	pections).	, if available:	
Remarks:								

Project/Site: Red Rock Solar		City/County: Cottonw	ood	Sampling Date: 5/11/2020
Applicant/Owner: Red Rock Solar, LLC			State: MN	Sampling Point: WL-1c
Investigator(s): R. Scott		Section, Township, Ra	nge: T106N R34W S12	*el
Landform (hillslope, terrace, etc.): Toe slope		Local relief	(concave, convex, none): _	Concave
		Long: <u>-94.869896°</u>		Datum: NAD 83
Soil Map Unit Name: Glencoe clay loam, 0 to 1 pe	rcent slopes		NWI classifica	tion: PEM/Type 3
Are climatic / hydrologic conditions on the site typical fo	r this time of ye	ar? Yes X No_	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed? Are	Normal Circumstances" pr	esent? Yes X No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic? (If ne	eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS - Attach site m	ap showing	sampling point le	ocations, transects,	important features, etc.
	No No	Is the Sampled within a Wetlan		No
Remarks:	-1-			
VEGETATION – Use scientific names of pla	Absolute	Deminant Indicator	Dominance Test works	hoot:
Tree Stratum (Plot size: 30ft. )	% Cover	Species? Status	Number of Dominant Sp That Are OBL, FACW, o	ecies
2 3			Total Number of Domina Species Across All Strata	2 200
4.			Percent of Dominant Spe	
5			That Are OBL, FACW, o	
Sapling/Shrub Stratum (Plot size: 15ft.  1			FACW species FAC species FACU species UPL species Column Totals: 90 Prevalence Index	
3			Hydrophytic Vegetation	
4			1 - Rapid Test for H	
5			X 2 - Dominance Test X 3 - Prevalence Index	
6		() <del>(                                  </del>		daptations <sup>1</sup> (Provide supporting
7 8			data in Remarks	or on a separate sheet)
9.			Problematic Hydrop	hytic Vegetation <sup>1</sup> (Explain)
10			<sup>1</sup> Indicators of hydric soil be present, unless distur	and wetland hydrology must
Woody Vine Stratum (Plot size:)  1			Hydrophytic	page 16 16 1847 Debit 1756
2			Vegetation Present? Yes	X No
Remarks: (Include photo numbers here or on a separ		= Total Cover	THE WAR STREET STREET, THE STREET	CO ENGLISES TO THE STATE OF THE
, , , , , , , , , , , , , , , , , , ,	Total Total Total Total			

SOIL Sampling Point: WL-1c

Depth	Matrix			dox Featur		12	T4	December
(inches) 0-8	Color (moist) 10YR 2/1	90	Color (moist) 10YR 4/6	<u>%</u> 10	<u>Type¹</u> C	Loc <sup>2</sup> PL&M	<u>Texture</u> _	Remarks
	-							
8-12	10YR 2/1	80	10YR 4/6	20	C	M	<u>L</u>	
12-18	10YR 5/1	100					CL	
	-							
				118				
	÷		-	<u> </u>		- —		
1							2	
Type: C=C  Hydric Soil		epletion, RM	1=Reduced Matrix,	MS=Maske	ed Sand G	rains.		PL=Pore Lining, M=Matrix.  r Problematic Hydric Soils <sup>3</sup> :
			Cana	v Claved N	latrix (CA)			
Histosol Histic F	pipedon (A2)		V	y Gleyed M y Redox (S			Coast Pro	airie Redox (A16) face (S7)
	istic (A3)			ed Matrix	100		1.5	ganese Masses (F12)
	en Sulfide (A4)			y Mucky M		)		llow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N				xplain in Remarks)
	uck (A10)			eted Matrix				
Deplete	d Below Dark Surf	ace (A11)	X Redo	x Dark Sur	face (F6)			
Thick D	ark Surface (A12)			eted Dark S		7)		hydrophytic vegetation and
	Mucky Mineral (S1)		Redo	x Depressi	ons (F8)			ydrology must be present,
	ucky Peat or Peat	<u> </u>					unless di	sturbed or problematic.
	Layer (if observe	d):						
Type:	Part 1473 billion No. 70		52				Hydric Soil Pr	resent? Yes X No
							,	
Depth (in Remarks:	ches):						1	
Remarks:	Bigg							
Remarks:	o <b>G</b> Y						Ţ	
Remarks:  IYDROLO  Wetland Hy	GY drology Indicator		uired: check all that	apply)			Secondary	Indicators (minimum of two required
Remarks:  IYDROLO  Wetland Hy  Primary India	OGY drology Indicator cators (minimum o		uired; check all that		was (B9)			Indicators (minimum of two required
IYDROLO Wetland Hy Primary India Surface	OGY drology Indicator cators (minimum o Water (A1)		Water-S	Stained Lea			Surfac	e Soil Cracks (B6)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa	OGY drology Indicator cators (minimum o Water (A1) ater Table (A2)		Water-S Aquatic	Stained Lea Fauna (B1	3)		Surfac Draina	e Soil Cracks (B6) ge Patterns (B10)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)		Water-8 Aquatic True Ad	Stained Lea Fauna (B1 uatic Plant	3) s (B14)		Surfac Draina Dry-Se	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2)
IYDROLO Wetland Hy Primary Indio X Surface X High Wa X Saturati Water M	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) farks (B1)		Water-S Aquatic True Ad Hydrogo	Stained Lea Fauna (B1 Juatic Plant en Sulfide (	3) s (B14) Odor (C1)	vina Roots	Surfac Draina Dry-Se Crayfis	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Water M Sedime	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2)		Water-S Aquatic True Ac Hydrogo Oxidize	Stained Lea Fauna (B1 juatic Plant en Sulfide ( d Rhizosph	3) s (B14) Odor (C1) eres on Li	ving Roots	Surfac Draina Dry-Se Crayfis (C3) Satura	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Water M Sedimee Drift De	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water-S Aquatic True Ac Hydrogo Oxidize Presence	Stained Lea Fauna (B1 Juatic Plant en Sulfide ( d Rhizosph ce of Reduc	3) s (B14) Odor (C1) eres on Li ced Iron (C	(4)	Surfac Draina Dry-Se Crayfis (C3) Satura Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Water M Sedimel Drift De Algal Ma	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-S Aquatic True Ac Hydrogo Oxidize Presenc	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc	3) s (B14) Odor (C1) eres on Li ced Iron (C		Surfac Draina Dry-Se Crayfis (C3) Satura Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Water M Sedime Drift De Algal Ma Iron De	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4)	f one is requ	Water-S Aquatic True Ac Hydroge Oxidize Presence Recent Thin Mo	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7)	(4)	Surfac Draina Dry-Se Crayfis (C3) Satura Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Water M Sedime Drift De Algal Ma Iron De Inundati	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria	f one is requ al Imagery (E	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu	Stained Lea Fauna (B1 uatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	Surfac Draina Dry-Se Crayfis (C3) Satura Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary Indie X Surface X High Wa X Saturati Water M Sedimee Drift De Algal Ma Iron Dep Inundati Sparsel	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria	f one is requ al Imagery (E	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	Surfac Draina Dry-Se Crayfis (C3) Satura Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary India X Surface X High Wa X Saturati Water M Sedime Drift De Algal Ma Iron De Inundati Sparse	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concarvations:	f one is requ al Imagery (E	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu 37) Gauge (B8) Other (6	Stained Lea Fauna (B1 juatic Plant en Sulfide ( d Rhizosph ce of Reduct Iron Reduct lock Surface or Well Dat Explain in F	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	Surfac Draina Dry-Se Crayfis (C3) Satura Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Water M Sedime Drift De Algal Ma Iron De Inundati Sparsel Field Obser	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria by Vegetated Concarvations:	al Imagery (E ave Surface	Water-S Aquatic True Ac Hydroge Oxidize Presenc Recent Thin Mc 37) Gauge (B8) Other (B	Stained Lea Fauna (B1 juatic Plant en Sulfide ( d Rhizosph ee of Reduc Iron Reduc ick Surface or Well Dat Explain in F	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	Surfac Draina Dry-Se Crayfis (C3) Satura Stunte	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Remarks:  IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Use Note of the open of the o	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concarvations: ter Present?	al Imagery (Eave Surface  Yes  Yes	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu 37) Gauge (B8) Other (B	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat Explain in F (inches): 1	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) demarks)	C4) ed Soils (C6	Surfac  Draina  Dry-Se  Crayfis  (C3) Satura  Stunte  X Geome	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
Remarks:  IYDROLO  Wetland Hy Primary Indi X Surface X High Wa X Saturati User M Sedime Drift De Algal Ma Iron De Inundati Sparsel Field Obser Surface Wat Water Table Saturation P	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concarvations: ter Present?	al Imagery (Eave Surface  Yes  Yes	Water-S Aquatic True Ac Hydroge Oxidize Presenc Recent Thin Mc 37) Gauge (B8) Other (B	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat Explain in F (inches): 1	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) demarks)	C4) ed Soils (C6	Surfac  Draina  Dry-Se  Crayfis  (C3) Satura  Stunte  X Geome	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Water M Sedime Drift De Iron De Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes ca	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concavations: ater Present? Present? Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S Aquatic True Ac Hydrogo Oxidize Presenc Recent Thin Mu 37) Gauge (B8) Other (B	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat Explain in F (inches): 1 (inches): 2	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Lemarks)	C4) ed Soils (C6	Surface Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte X Geome X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
IYDROLO Wetland Hy Primary Indi X Surface X High Wa X Saturati Water M Sedime Drift De Iron De Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes ca	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concavations: ater Present? Present? Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S Aquatic True Ac Hydroge Oxidize Presenc Recent Thin Mo Gauge (B8) Other (B No Depth No Depth Depth	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat Explain in F (inches): 1 (inches): 2	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Lemarks)	C4) ed Soils (C6	Surface Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte X Geome X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
IYDROLO Wetland Hy Primary Indie X Surface X High Wa X Saturati Water M Sedime Drift De Algal Ma Iron De Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes ca) Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concavations: ater Present? Present? Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S Aquatic True Ac Hydroge Oxidize Presenc Recent Thin Mo Gauge (B8) Other (B No Depth No Depth Depth	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat Explain in F (inches): 1 (inches): 2	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Lemarks)	C4) ed Soils (C6	Surface Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte X Geome X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)
IYDROLO Wetland Hy Primary Indie X Surface X High Wa X Saturati Water M Sedime Drift De Algal Ma Iron De Inundati Sparsel Field Obser Surface Wat Water Table Saturation P (includes ca) Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Concavations: ater Present? Present? Present?	al Imagery (Eave Surface  Yes Yes X Yes X	Water-S Aquatic True Ac Hydroge Oxidize Presenc Recent Thin Mo Gauge (B8) Other (B No Depth No Depth Depth	Stained Lea Fauna (B1 uuatic Plant en Sulfide ( d Rhizosph ce of Reduc Iron Reduc ick Surface or Well Dat Explain in F (inches): 1 (inches): 2	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9) Lemarks)	C4) ed Soils (C6	Surface Surface Draina Dry-See Crayfis (C3) Satura Stunte Stunte X Geome X FAC-N	e Soil Cracks (B6) ge Patterns (B10) eason Water Table (C2) sh Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) leutral Test (D5)

Applicant/Owner: Red Rock Solar, LLC  Investigator(s): R. Scott  Section, Township, Range: T106N R34W S12  Landform (hillslope, terrace, etc.): Toe slope  Local relief (concave, convex, none): Convex  Slope (%): 1	
Landform (hillslope, terrace, etc.): Toe slope  Local relief (concave, convex, none): Convex  Slope (%): 1  Lat: 44.004544°  Long: -94.869922°  Datum: NAD 83  Soil Map Unit Name: Glencoe clay loam, 0 to 1 percent slopes  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  Hydrophytic Vegetation Present? Yes No X Is the Sampled Area  Wetland Hydrology Present? Yes No X within a Wetland? Yes No X No X Within a Wetland?	
Landform (hillslope, terrace, etc.): Toe slope  Local relief (concave, convex, none): Convex  Slope (%): 1 Lat: 44.004544°  Long: -94.869922°  Datum: NAD 83  Soil Map Unit Name: Glencoe clay loam, 0 to 1 percent slopes  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  Hydrophytic Vegetation Present? Yes No X Is the Sampled Area  Wetland Hydrology Present? Yes No X within a Wetland? Yes No X Wetland?	
Soil Map Unit Name: Glencoe clay loam, 0 to 1 percent slopes  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 (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features   Hydrophytic Vegetation Present? Yes No   Hydric Soil Present? Yes No   Wetland Hydrology Present? Yes No within a Wetland? Yes No   Wetland? Yes No   Wetland? Yes No   No No   Wetland? Yes No   No   No   Wetland? Yes No   No   No   No   No   No   Wetland? Yes No   No   No	
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 , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features  Hydrophytic Vegetation Present? Yes No X Is the Sampled Area Wetland Hydrology Present? Yes No X within a Wetland? Yes No X	
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  Hydrophytic Vegetation Present? Yes No Is the Sampled Area  Wetland Hydrology Present? Yes No within a Wetland? 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  Hydrophytic Vegetation Present? Yes No Is the Sampled Area  Wetland Hydrology Present? Yes No within a Wetland? 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  Hydrophytic Vegetation Present? Yes No Is the Sampled Area  Wetland Hydrology Present? Yes No within a Wetland? Yes No	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features    Hydrophytic Vegetation Present?	, etc.
Hydric Soil Present?  Wetland Hydrology Present?  Yes No _X	
Hydric Soil Present?  Wetland Hydrology Present?  Yes No _X	-
7	
Remarks:	
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size: 30ft. ) Absolute Dominant Indicator Dominance Test worksheet:    Dominance Test worksheet:   Dominance Test worksheet	
Tree Stratum (Plot size: Suit. )	<b>(\\</b> )
2	(^)
Total Number of Dominant	(B)
4.	(5)
5. Percent of Dominant Species That Are OBL, FACW, or FAC:	(A/B)
- Total Cover	Name and
Sapling/Shrub Stratum (Plot size: 15ft. )  Prevalence Index worksheet:  Total % Cover of: Multiply by:	
1.	
3. FACW species x 2 =	
4 FAC species x 3 =	
5 FACU species x 4 =	
= Total Cover UPL species x 5 =	) (4
Herb Stratum (Plot size: 5ft. ) Column Totals: (A)	(B)
1 Prevalence Index = B/A =	
2. Prevalence Index = B/A =	
4 1 - Rapid Test for Hydrophytic Vegetation	
5 2 - Dominance Test is >50%	
6 3 - Prevalence Index is ≤3.0¹	
7 4 - Morphological Adaptations <sup>1</sup> (Provide sup	orting
g data in Remarks or on a separate sheet)	
9 Problematic Hydrophytic Vegetation¹ (Explai	,
10 1Indicators of hydric soil and wetland hydrology n	ust
Woody Vine Stratum (Plot size:) = Total Cover be present, unless disturbed or problematic.	Jot
1	
Vegetation	
= Total Cover Present? Yes NoX	
Remarks: (Include photo numbers here or on a separate sheet.)	
This data point was taken in a cultivated corn field that was recently planted. 100% bare ground.	

SOIL Sampling Point: UPL-1c

Depth	cription: (Describe Matrix			x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 2/1	100					L	
12-18	10YR 2/1	100	257	- Was	53.1	10	L State	
18-24	10YR 3/2	100		826:			CL	
	Concentration, D=De	pletion, RM:	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.		_=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy	Gleyed Ma	atrix (S4)			rie Redox (A16)
_	pipedon (A2)		7.5	Redox (S5			Dark Surfa	
	listic (A3)		Strippe	d Matrix (S	36)		Iron-Manga	anese Masses (F12)
Hydrog	en Sulfide (A4)		Loamy	Mucky Mi	neral (F1)		Very Shall	ow Dark Surface (TF12)
	ed Layers (A5)			Gleyed M			Other (Exp	lain in Remarks)
	luck (A10)	#4505508		ed Matrix (	Name of the second			
	ed Below Dark Surface	e (A11)		Dark Surfa	리 발전 전기 (14 개) 본 기계 (15 m)		3,	
Nation 211	Oark Surface (A12) Mucky Mineral (S1)			ed Dark St Depressio	urface (F7)	ķ.		nydrophytic vegetation and drology must be present,
	lucky Peat or Peat (S	(3)	Redux	Depressio	113 (10)			urbed or problematic.
	Layer (if observed)	2.5						arzed or problematic.
	5) ((5))							
Type:								sent? Yes No _X
Type:	nches).						Hydric Soil Pre	sentr res No
10.000	nches):		_				Hydric Soil Pre	sent? TesNo/\
Depth (ii							Hydric Soil Pre	sent? TesNo/\
Depth (ii	nches):						Hydric Soil Pre	sent? TesNo/\
Depth (ii	nches):						Hydric Soil Pre	sent? TesNo/\
Depth (ii Remarks: IYDROLO Wetland Hy	DGY	:	red; check all that a	pply)				ndicators (minimum of two required
Depth (ii Remarks: IYDROLO Wetland Hy Primary Ind	OGY ydrology Indicators	:	remarkation (Colonia)	pply) nined Leav	ves (B9)		Secondary In	
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface	OGY vdrology Indicators icators (minimum of	:	remarkation (Colonia)	ined Leav			Secondary II	ndicators (minimum of two required
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W	OGY vdrology Indicators icators (minimum of the Water (A1)	:	Water-Sta Aquatic F	ined Leav	3)		Secondary II Surface Drainag	ndicators (minimum of two required Soil Cracks (B6)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat	OGY ydrology Indicators icators (minimum of e Water (A1) /ater Table (A2)	:	Water-Sta Aquatic F	ained Leav auna (B13 atic Plants	3) (B14)		Secondary II Surface Drainag Dry-Sea	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY vdrology Indicators icators (minimum of e Water (A1) vater Table (A2) icion (A3) Marks (B1) ent Deposits (B2)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O	3) (B14)	ing Roots	Secondary II  Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY vdrology Indicators icators (minimum of e Water (A1) vater Table (A2) ion (A3) Marks (B1)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	B) (B14) dor (C1) eres on Liv		Secondary II  Surface Drainag Dry-Sea Crayfish (C3) Saturation	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M	orches):	:	<ul><li>Water-Sta</li><li>Aquatic F</li><li>True Aqua</li><li>Hydrogen</li><li>Oxidized</li></ul>	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	(B14) dor (C1) eres on Livied Iron (C4	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal N Iron De	orches):	: one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Reduction	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7)	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda	orches):	: one is requir	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 7) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti on Reducti c Surface ( Well Data	(B14) dor (C1) eres on Livi ed Iron (C4) ion in Tilled (C7) (C9)	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse	orches):	: one is requir	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 7) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti on Reducti c Surface ( Well Data	(B14) dor (C1) eres on Livi ed Iron (C4) ion in Tilled (C7) (C9)	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	podey  ydrology Indicators icators (minimum of ele water (A1) /ater Table (A2) /ater Table (A2) /ater Table (A2) /ater Table (B2) /ater Table (B3) /ater Table (B3) /ater Table (B3) /ater Table (B4) /ater Table	: one is requi Imagery (B: re Surface (I	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 7) Gauge or B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti on Reducti k Surface ( Well Data plain in Re	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) i (D9) emarks)	l) d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	orches):	: one is requii Imagery (B' re Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Mucl Gauge or B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti on Reducti x Surface ( Well Data plain in Re	(B14) (B14) (dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	t) d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
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Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I	orches):	: one is requii Imagery (B: re Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Mucl Gauge or B8) Other (Ex	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reducti & Surface ( Well Data plain in Res aches):	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	t) d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	orches):	: one is requir Imagery (B: re Surface (I Yes Yes	Water-Sta Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No Depth (ir No Depth (ir No Depth (ir	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction Red	(B14) dor (C1) deres on Livited Iron (C4) dion in Tilled (C7) (D9) demarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca Describe Re	orches):	: one is requir Imagery (B: re Surface (I Yes Yes	Water-Sta Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No Depth (ir No Depth (ir No Depth (ir	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction Red	(B14) dor (C1) deres on Livited Iron (C4) dion in Tilled (C7) (D9) demarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	orches):	: one is requir Imagery (B: re Surface (I Yes Yes	Water-Sta Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No Depth (ir No Depth (ir No Depth (ir	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction Red	(B14) dor (C1) deres on Livited Iron (C4) dion in Tilled (C7) (D9) demarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

Project/Site: Red Rock Solar		Ci	ty/County: Cottonw	ood	_ Sampling Date: <u>5/12/2020</u>
Applicant/Owner: Red Rock Sola	ar, LLC			State: MN	Sampling Point: UPL-2b
Investigator(s): R. Scott		Se	ection, Township, Ra	nge: T106N R34W S	12
Landform (hillslope, terrace, etc.):	Vlidslope		Local relief	(concave, convex, none)	None
Slope (%): 1 Lat: _44.			ong: <u>-94.876923°</u>		Datum: NAD 83
Soil Map Unit Name: Webster cla	y loam, 0 to 2 perc	ent slopes		NWI classifi	cation: Upland
Are climatic / hydrologic conditions Are Vegetation, Soil Are Vegetation, Soil	, or Hydrology , or Hydrology	_ significantly di _ naturally probl	sturbed? Are ematic? (If ne	"Normal Circumstances" eeded, explain any answ	present? Yes X No No
SUMMARY OF FINDINGS -		5.0	ampling point i	ocations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks:	Yes Yes Yes	No X	Is the Sampled within a Wetlan		No_X
VEGETATION – Use scienti	fic names of plant	's			
<u>Tree Stratum</u> (Plot size: <u>30ft.</u> 1	)	Absolute % Cover			Species or FAC: (A)
3				Total Number of Domi Species Across All Str	707 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
5				Percent of Dominant S That Are OBL, FACW,	Species or FAC: (A/B)
Sapling/Shrub Stratum (Plot size   1   2   3.	)		Total Cover	OBL species FACW species FAC species FACU species UPL species Column Totals: Prevalence Inde	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =  (A)(B)
3				2 - Dominance Te 3 - Prevalence Inc 4 - Morphological data in Remark Problematic Hydro	Hydrophytic Vegetation set is >50% dex is ≤3.0¹ Adaptations¹ (Provide supporting as or on a separate sheet) ophytic Vegetation¹ (Explain) bil and wetland hydrology must
Woody Vine Stratum (Plot size: 1				Hydrophytic Vegetation Present?	es No _X_
Remarks: (Include photo number	s hara or an a sana		Total Cover	Williams distribution and with the second	
This data point was taken in a			cently planted. 10	0% bare ground.	

SOIL Sampling Point: UPL-2b

Depth	cription: (Describe Matrix			x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 2/1	100					L	
12-18	10YR 2/1	100	257	- Was	53.1	10	L State	
18-24	10YR 3/2	100		826:			CL	
	Concentration, D=De	pletion, RM:	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.		_=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy	Gleyed Ma	atrix (S4)			rie Redox (A16)
_	pipedon (A2)		7.5	Redox (S5			Dark Surfa	
	listic (A3)		Strippe	d Matrix (S	36)		Iron-Manga	anese Masses (F12)
Hydrog	en Sulfide (A4)		Loamy	Mucky Mi	neral (F1)		Very Shall	ow Dark Surface (TF12)
	ed Layers (A5)			Gleyed M			Other (Exp	lain in Remarks)
	luck (A10)	#4505508		ed Matrix (	Name of the second			
	ed Below Dark Surface	e (A11)		Dark Surfa	리 발전 전기 (14 개) 본 기계 (15 m)		3,	
Nation 211	Oark Surface (A12) Mucky Mineral (S1)			ed Dark St Depressio	urface (F7)	ķ.		nydrophytic vegetation and drology must be present,
	lucky Peat or Peat (S	(3)	Kedox	Depressio	113 (10)			urbed or problematic.
	Layer (if observed)	2.5						arzed or problematic.
	5) ((5))							
Type:								sent? Yes No _X
Type:	nches).						Hydric Soil Pre	sentr res No
10.000	nches):		_				Hydric Soil Pre	sent? TesNo/\
Depth (ii							Hydric Soil Pre	sent? TesNo/\
Depth (ii	nches):						Hydric Soil Pre	sent? TesNo/\
Depth (ii	nches):						Hydric Soil Pre	sent? TesNo/\
Depth (ii Remarks: IYDROLO Wetland Hy	DGY	:	red; check all that a	pply)				ndicators (minimum of two required
Depth (ii Remarks: IYDROLO Wetland Hy Primary Ind	OGY ydrology Indicators	:	remarkation (Colonia)	pply) nined Leav	ves (B9)		Secondary In	
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface	OGY vdrology Indicators icators (minimum of	:	remarkation (Colonia)	ined Leav			Secondary II	ndicators (minimum of two required
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W	OGY vdrology Indicators icators (minimum of the Water (A1)	:	Water-Sta Aquatic F	ined Leav	3)		Secondary II Surface Drainag	ndicators (minimum of two required Soil Cracks (B6)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat	OGY ydrology Indicators icators (minimum of e Water (A1) /ater Table (A2)	:	Water-Sta Aquatic F	ained Leav auna (B13 atic Plants	3) (B14)		Secondary II Surface Drainag Dry-Sea	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY vdrology Indicators icators (minimum of e Water (A1) vater Table (A2) icion (A3) Marks (B1) ent Deposits (B2)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O	3) (B14)	ing Roots	Secondary II  Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY vdrology Indicators icators (minimum of e Water (A1) vater Table (A2) ion (A3) Marks (B1)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	B) (B14) dor (C1) eres on Liv		Secondary II  Surface Drainag Dry-Sea Crayfish (C3) Saturation	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M	orches):	:	<ul><li>Water-Sta</li><li>Aquatic F</li><li>True Aqua</li><li>Hydrogen</li><li>Oxidized</li></ul>	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	(B14) dor (C1) eres on Livied Iron (C4	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal N Iron De	orches):	: one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduction Reduction	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7)	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
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Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse	orches):	: one is requir	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 7) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti on Reducti c Surface ( Well Data	(B14) dor (C1) eres on Livi ed Iron (C4) ion in Tilled (C7) (C9)	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	podey  ydrology Indicators icators (minimum of ele water (A1) /ater Table (A2) /ater Table (A2) /ater Table (A2) /ater Table (B2) /ater Table (B3) /ater Table (B3) /ater Table (B3) /ater Table (B4) /ater Table	: one is requi Imagery (B: re Surface (I	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 7) Gauge or B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti on Reducti k Surface ( Well Data plain in Re	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) i (D9) emarks)	l) d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	orches):	: one is requii Imagery (B' re Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Mucl Gauge or B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti on Reducti x Surface ( Well Data plain in Re	(B14) (B14) (dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	t) d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	orches):	: one is requii Imagery (B: re Surface (I	Water-Sta Aquatic F True Aquatic F Hydrogen	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction):	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	t) d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I	orches):	: one is requii Imagery (B: re Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Mucl Gauge or B8) Other (Ex	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction):	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	t) d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
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Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca Describe Re	orches):	: one is requir Imagery (B: re Surface (I Yes Yes	Water-Sta Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No Depth (ir No Depth (ir No Depth (ir	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction Red	(B14) dor (C1) deres on Livited Iron (C4) dion in Tilled (C7) (D9) demarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	orches):	: one is requir Imagery (B: re Surface (I Yes Yes	Water-Sta Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No Depth (ir No Depth (ir No Depth (ir	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction Red	(B14) dor (C1) deres on Livited Iron (C4) dion in Tilled (C7) (D9) demarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

Project/Site: Red Rock Solar		C	ity/County: Cot	ttonwood	Sampling Date: <u>5/12/2020</u>
Applicant/Owner: Red Rock Sola	r, LLC			State: MN	Sampling Point: UPL-3b
Investigator(s): R. Scott		s	ection, Townshi	ip, Range: <u>T106N R34W S1</u>	2
Landform (hillslope, terrace, etc.):	oe slope		Local	relief (concave, convex, none):	None
Slope (%): 1 Lat: _44.0			ong: <u>-</u> 94.8779	112°	Datum: NAD 83
Soil Map Unit Name: Glencoe cla	y loam, 0 to 1 perce	nt slopes		NWI classific	ation: Upland
Are climatic / hydrologic conditions	on the site typical for thi	s time of year	? Yes <u>X</u>	No (If no, explain in R	emarks.)
Are Vegetation, Soil	, or Hydrology :	significantly di	isturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil	, or Hydrology	naturally prob	lematic?	(If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS -	Attach site map	showing s	sampling po	int locations, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes N	10 X	TO ATTORN	WCA	
Hydric Soil Present?	Yes N	10 <u>X</u>	2000-0000 0000	mpled Area	1660 <b>V</b>
Wetland Hydrology Present?	Yes N	10 <u>X</u>	within a V	Vetland? Yes	No <u>X</u> _
Remarks:					
	E00 & ADA 83				
VEGETATION – Use scientif	fic names of plants				
Tree Stratum (Plot size: 30ft.	)		Dominant Indic Species? Sta	otuo I	
1				- Number of Dominant S	pecies or FAC: (A)
2				Total Number of Domir	ant
3					
4				Percent of Dominant S	pecies
5			Total Cover	That Are OBL, FACW,	or FAC: (A/B)
Sapling/Shrub Stratum (Plot size	15ft. )		Total Cover	Prevalence Index wor	ksheet:
1					Multiply by:
2		- N-		The second second second	x 1 =
3					x 2 = x 3 =
4 5				Mary Mary Control Control	x 4 =
			Total Cover		x 5 =
Herb Stratum (Plot size: 5ft.	)	75			(A) (B)
1				Prevalence Index	= B/A =
2				Hydrophytic Vegetation	27888 A
3 4				1 - Rapid Test for	
5				2 - Dominance Tes	et is >50%
6				3 - Prevalence Ind	
7				4 - Morphological /	Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
8			10-10	Comment of the Commen	phytic Vegetation <sup>1</sup> (Explain)
9					p.,,
10					l and wetland hydrology must
Woody Vine Stratum (Plot size:	)	·	Total Cover	be present, unless dist	urbed or problematic.
1			10.5	Hydrophytic	
2				Vegetation Present? Ye	s No_X_
Remarks: (Include photo numbers	horo or on a concrete		Total Cover		8. <del>- 1</del> 8 M.S. <del>- 1</del> 8
This data point was taken in a			ecently plante	d. 100% bare ground.	

SOIL Sampling Point: UPL-3b

Profile Des	cription: (Describe	to the dep	oth needed to docum	hent the i	illuloutor .		ii tiic absciice oi	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %		Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 2/1	100	Color (moist)		_туре		SiL	Remarks
			8	Was .	-		10 10 10	
8-14	10YR 3/1	100		92-5	::		L	· · ·
14-24	10YR 3/2	_ 100					CL	,
17							21 0001000	N - Poss Lining Maddatair
	Indicators:	pielion, Kivi	=Reduced Matrix, MS	3-Masket	ı Sanu Gra	all is.		PL=Pore Lining, M=Matrix.  r Problematic Hydric Soils <sup>3</sup> :
Histoso	ol (A1)			Gleyed Ma			Coast Pra	airie Redox (A16)
	Epipedon (A2)			Redox (S5			Dark Surf	8 8
	listic (A3) en Sulfide (A4)		(4 <del>-3</del> -34)	d Matrix (S	neral (F1)			ganese Masses (F12) llow Dark Surface (TF12)
_ , ,	ed Layers (A5)			Gleyed Ma				plain in Remarks)
_	luck (A10)			d Matrix (			011101 (EX	plan in ternamo)
Deplete	ed Below Dark Surfa	ce (A11)		Dark Surfa				
Thick D	ark Surface (A12)		Deplete	d Dark Su	urface (F7)		3Indicators of	hydrophytic vegetation and
	Mucky Mineral (S1)		Redox [	Depressio	ns (F8)			ydrology must be present,
	lucky Peat or Peat (S						unless dis	sturbed or problematic.
Restrictive	Layer (if observed)	j:						
Typo							Hydric Soil Pr	esent? Yes No X
Type:								
108/0/10/00	nches):						Tigane Son Ti	
Depth (ii	nches):						Tryanc South	
Depth (ii							Tryanc con Tr	
Depth (ii Remarks:		:					Tryanc South	
Depth (in Remarks:	DGY ydrology Indicators		ired; check all that ap	ply)				Indicators (minimum of two required)
Depth (ii Remarks: HYDROLO Wetland Hy Primary Ind	DGY ydrology Indicators		ired: check all that ap Water-Stai	Short	es (B9)		Secondary	
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface	DGY ydrology Indicators icators (minimum of		the state of the s	ined Leav			Secondary Surface	Indicators (minimum of two required)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W	OGY ydrology Indicators icators (minimum of e Water (A1)		Water-Stai	ined Leav una (B13	)		Secondary Surface Draina	Indicators (minimum of two required) e Soil Cracks (B6)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I	OGY ydrology Indicators icators (minimum of wwater (A1) fater Table (A2) ion (A3) Warks (B1)		Water-Stai Aquatic Fa True Aqua Hydrogen	ined Leav auna (B13 tic Plants Sulfide O	(B14) dor (C1)		Secondary Surface Drainae Dry-Se Crayfis	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	ogy ydrology Indicators icators (minimum of water (A1) fater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)		<ul><li>Water-Stai</li><li>Aquatic Fa</li><li>True Aqua</li><li>Hydrogen</li><li>Oxidized Fa</li></ul>	ined Leav nuna (B13 itic Plants Sulfide Oo Rhizosphe	(B14) dor (C1) eres on Liv		Secondary Surface Drainae Dry-Se Crayfis (C3) Saturat	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	ody ydrology Indicators icators (minimum of water (A1) /ater Table (A2) cion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F	ined Leav auna (B13 tic Plants Sulfide O Rhizosphe of Reduce	(B14) (B14) dor (C1) eres on Livied Iron (C4	<b>l)</b>	Secondary Surface Drainag Dry-Se Crayfis (C3) Saturat	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal N	ydrology Indicators icators (minimum of e Water (A1) /ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)		Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro	ined Leav auna (B13 tic Plants Sulfide Oo Rhizosphe of Reduce n Reducti	(B14) (B14) dor (C1) eres on Livied Iron (C4) on in Tilled	<b>l)</b>	Secondary Surface Drainae Dry-Se Crayfis (C3) Saturat Stuntee G Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De	ody ydrology Indicators icators (minimum of e Water (A1) /ater Table (A2) icion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5)	one is requi	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck	ined Leav nuna (B13 tic Plants Sulfide O Rhizosphe of Reduce n Reducti Surface (	(B14) dor (C1) eres on Livi ed Iron (C4 ion in Tilled	<b>l)</b>	Secondary Surface Drainae Dry-Se Crayfis (C3) Saturat Stuntee G Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundar	oddy ydrology Indicators icators (minimum of e Water (A1) /ater Table (A2) icion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial	one is requi	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck Gauge or V	ined Leavenuna (B13 stic Plants Sulfide Oc Rhizosphe of Reduce n Reducti Surface ( Well Data	(B14) dor (C1) eres on Livi ed Iron (C4 ion in Tilled (C7) (D9)	<b>l)</b>	Secondary Surface Drainae Dry-Se Crayfis (C3) Saturat Stuntee G Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse	pody ydrology Indicators icators (minimum of wwater (A1) dater Table (A2) icion (A3) Warks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial ly Vegetated Concav	one is requi	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck Gauge or V	ined Leavenuna (B13 stic Plants Sulfide Oc Rhizosphe of Reduce n Reducti Surface ( Well Data	(B14) dor (C1) eres on Livi ed Iron (C4 ion in Tilled (C7) (D9)	<b>l)</b>	Secondary Surface Drainae Dry-Se Crayfis (C3) Saturat Stuntee G Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	ydrology Indicators icators (minimum of wwater (A1) dater Table (A2) icion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial ly Vegetated Concav rvations:	one is requi Imagery (B ve Surface (	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence of Recent Iro Thin Muck Fr Gauge or N (B8) Other (Exp	ined Leav auna (B13 stic Plants Sulfide Or Rhizosphe of Reduce n Reducti Surface ( Well Data blain in Re	(B14) (B14) dor (C1) eres on Livied Iron (C4 ion in Tilled (C7) (D9) emarks)	l) d Soils (Co	Secondary Surface Drainae Dry-Se Crayfis (C3) Saturat Stuntee G Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa	ydrology Indicators icators (minimum of wwater (A1) fater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial ly Vegetated Concav rvations:	one is requi	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N (B8) Other (Exp	ined Leav auna (B13 atic Plants Sulfide Or Rhizosphe of Reduce n Reducti Surface ( Well Data plain in Re	(B14) (B14) dor (C1) eres on Lived Iron (C4) don in Tilled (C7) (D9) emarks)	d Soils (Co	Secondary Surface Drainae Dry-Se Crayfis (C3) Saturat Stuntee G Geomo	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat Sparse Field Obse Surface Water Table	ydrology Indicators icators (minimum of water (A1) rater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) rater or Crust (B4) eposits (B5) tion Visible on Aerial rater Present? e Present?	Imagery (B ve Surface ( Yes	Water-Stair	ined Leavarana (B13 stic Plants Sulfide Ochricosphe of Reduce in Reducti Surface (Well Data blain in Reducti ches):ches):ches):ches):ches):ches	(B14) (B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	d Soils (Co	Secondary Surface Drainae Dry-Se Crayfis (C3) Saturae Stuntee  FAC-N	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I	order vertical services of the present?	Imagery (B ve Surface ( Yes	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Thin Muck Gauge or N (B8) Other (Exp	ined Leavarana (B13 stic Plants Sulfide Ochricosphe of Reduce in Reducti Surface (Well Data blain in Reducti ches):ches):ches):ches):ches):ches	(B14) (B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	d Soils (Co	Secondary Surface Drainae Dry-Se Crayfis (C3) Saturae Stuntee  FAC-N	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	ydrology Indicators icators (minimum of water (A1) rater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) rater or Crust (B4) eposits (B5) tion Visible on Aerial rater Present? eresent?	Imagery (B ve Surface ( Yes Yes	Water-Stair	ined Leavarana (B13 stic Plants Sulfide Ochricosphe of Reduce in Reducti Surface (Well Data blain in Reducti ches):ches):ches):ches):ches):ches):ches	(B14) (B14) dor (C1) eres on Livi ed Iron (C4) don in Tilled (C7) (D9) emarks)	d Soils (Co	Secondary Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Hand Hydrology P	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	ydrology Indicators icators (minimum of water (A1) rater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) rater or Crust (B4) eposits (B5) tion Visible on Aerial rater Present? eresent?	Imagery (B ve Surface ( Yes Yes	Water-Stai  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence of Recent Iro  Thin Muck  Gauge or V  (B8)  Other (Exp  No X  Depth (inc  No X  Depth (inc	ined Leavarana (B13 stic Plants Sulfide Ochricosphe of Reduce in Reducti Surface (Well Data blain in Reducti ches):ches):ches):ches):ches):ches):ches	(B14) (B14) dor (C1) eres on Livide Iron (C4) don in Tilled (C7) (D9) emarks)	d Soils (Co	Secondary Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Hand Hydrology P	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation Scincludes ca Describe Re	ydrology Indicators icators (minimum of water (A1) rater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) rater or Crust (B4) eposits (B5) tion Visible on Aerial rater Present? eresent?	Imagery (B ve Surface ( Yes Yes	Water-Stai  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence of Recent Iro  Thin Muck  Gauge or V  (B8)  Other (Exp  No X  Depth (inc  No X  Depth (inc	ined Leavarana (B13 stic Plants Sulfide Ochricosphe of Reduce in Reducti Surface (Well Data blain in Reducti ches):ches):ches):ches):ches):ches):ches	(B14) (B14) dor (C1) eres on Livide Iron (C4) don in Tilled (C7) (D9) emarks)	d Soils (Co	Secondary Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Hand Hydrology P	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
Depth (ii Remarks:  HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation Scincludes ca Describe Re	ydrology Indicators icators (minimum of water (A1) rater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) rater or Crust (B4) eposits (B5) tion Visible on Aerial rater Present? eresent?	Imagery (B ve Surface ( Yes Yes	Water-Stai  Aquatic Fa  True Aqua  Hydrogen  Oxidized Fa  Presence of Recent Iro  Thin Muck  Gauge or V  (B8)  Other (Exp  No X  Depth (inc  No X  Depth (inc	ined Leavarana (B13 stic Plants Sulfide Ochricosphe of Reduce in Reducti Surface (Well Data blain in Reducti ches):ches):ches):ches):ches):ches):ches	(B14) (B14) dor (C1) eres on Livide Iron (C4) don in Tilled (C7) (D9) emarks)	d Soils (Co	Secondary Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Hand Hydrology P	Indicators (minimum of two required) e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)

Project/Site: Red Rock Solar		c	ity/County: Co	ottonwood	Sampling Date: <u>5/12/2020</u>
Applicant/Owner: Red Rock Sola	r, LLC			State: MN	Sampling Point: UPL-4b
Investigator(s): R. Scott		s	Section, Townsh	nip, Range: <u>T106N R34W S2</u>	
Landform (hillslope, terrace, etc.):	1idslope		Loca	l relief (concave, convex, none):	Convex
Slope (%): 1 Lat: _44.0			ong: <u>-</u> 94.881;	356°	Datum: NAD 83
Soil Map Unit Name: Nicollet clay	loam, 1 to 3 percen	nt slopes		NWI classific	ation: Upland
Are climatic / hydrologic conditions of	on the site typical for thi	is time of year	r? Yes X	No (If no, explain in R	emarks.)
Are Vegetation, Soil	or Hydrologys	significantly d	isturbed?	Are "Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil	or Hydrologyr	naturally prob	lematic?	(If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS -	Attach site map	showings	sampling po	oint locations, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes N	10 X	The Additional	WCA.	<u> </u>
Hydric Soil Present?	Yes N	10 X	300000000 00	mpled Area	1660 <b>V</b>
Wetland Hydrology Present?	Yes N	10 <u>X</u>	within a	Wetland? Yes	No <u>X</u> _
Remarks:					
	500 NO 800 NO 100				
VEGETATION – Use scientif	ic names of plants				
Tree Stratum (Plot size: 30ft.	)	100 U.S. 650 E-050 CO.S.	Dominant Indi- Species? St	rotue	
1				Number of Dominant S	pecies or FAC: (A)
2				Total Number of Domin	
3					
4				Percent of Dominant S	oecies
5					or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:	15ft.		Total Cover	Prevalence Index wor	ksheet:
1				Total % Cover of:	Multiply by:
2				OBL species	x 1 =
3					x 2 =
4				The strainer of the strainer	x 3 = x 4 =
5			Total Cover		x 4 = x 5 =
Herb Stratum (Plot size: 5ft.	)		- Total Cover		(A) (B)
1		40-10			
2					= B/A =
3				Hydrophytic Vegetation 1 - Rapid Test for H	
4					
5 6					
7.				4 - Morphological A	Adaptations <sup>1</sup> (Provide supporting
8.					s or on a separate sheet)
9		28		Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)
10				Indicators of hydric soi	l and wetland hydrology must
Woody Vine Stratum (Plot size: _	Š		Total Cover	be present, unless distr	
1.				Hydrophytic	
2.				Vegetation	🗸
III (70%)		=	Total Cover	Present? Ye	s No_X_
Remarks: (Include photo numbers					
This data point was taken in a	cultivated corn field	I that was re	ecently plante	ed. 100% bare ground.	

SOIL Sampling Point: UPL-4b

Deptition   Matrix   Redox Peatures   Color (moist)   % Color (moist)   % Type   Loc   Texture   Remarks	Profile Descri	iption: (Describe	to the de	oth needed to docur	ment the	indicator	or confirr	n the absence of	indicators.)
0-7	MARKET SOUTH LONG		0/.				1.002	Toyturo	Domarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.   Tocation: PL=Pore Lining, M=Matrix			1000 1000	Color (moist)				in constant to the	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.   Tuocation: PL=Pore Lining, M=Matrix.					V/ <del>0</del>				9
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Thydric Soil Indicators:  Indicators for Pt=Pore Lining, M=Matrix.  Indicators for Pt=Pore Lining Advance (FT)  Indicators for Pt=Pore Lining, M=Matrix.  Indicators for P			-0.07	2	-0.00				
Hydric Soil Indicators:  Histosci (A1)	16-24	10YR 3/2	_ 100		-			<u>CL</u>	
Histosol (A1) Histosol (A2) Sandy Redox (S5) Dark Surface (S7) Black Histic (A3) Sardy Redox (S5) Dark Surface (S7) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Depleted Augric (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F2) Depleted Dark Surface (F6) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Redox Dark Surface (F7) Redox Depressions (F8)  Wetland Hydrology must be present, unless disturbed or problematic.  Restrictive Layer (If observed): Type: Depth (inches):  Hydric Soil Present? Yes No Secondary Indicators (minimum of two required) Surface Water (A11) Water-Stained Leaves (B9) Surface Water (A1) Water-Stained Leaves (B9) Saturation (A3) True Aquatic Plants (B14) Darinage Patterns (B10) Darinage Patterns (B10) Darinage Patterns (B10) Dirth Deposits (B2) Dorith Deposits (B2) Dirth Deposits (B3) Presence of Reduced Iron (C4) Span Water Marks (B1) Recent Iron Reduction in Titled Soils (C6) Inundation Visible on Aerial Imagery (B7) Spansely Vegetated Concave Surface (B8) Other (Explain in Remarks)  Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology P			pletion, RM	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.		
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Loamy Mucky Mineral (F1)  Stripped Matrix (F2)  Jen Muck (A10)  Depleted Below Dark Surface (A11)  Depleted Matrix (F2)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (F1)  Sandy Mucky Mineral (F1)  Depleted Below Dark Surface (A12)  Depleted Dark Surface (F7)  Thick Dark Surface (A12)  Depleted Dark Surface (F7)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sem Mucky Peat or Peat (S3)  Restrictive Layer (if observed):  Type:  Depth (inches):  Depth (inches):  Primary Indicators (minimum of one is required: check all that apply)  Secondary Indicators (minimum of two required):  Hydric Soil Present? Yes No  Water A10  Hydric Soil Cracks (B6)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Dry-Season Wa				Sandy (	Gleved Ma	atrix (S4)			
Stripped Matrix (S6)		and the second						11. Table 11. V 11	and the second s
Stratified Layers (A5)						254		1.5	
2 cm Muck (A10)	Hydrogen	Sulfide (A4)		Loamy	Mucky Mi	neral (F1)		Very Shal	low Dark Surface (TF12)
Depleted Below Dark Surface (A11)								Other (Ex	plain in Remarks)
			11 11 11			(Carterine)			
Sandy Mucky Mineral (S1) Redox Depressions (F8) wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed): Type:			ce (A11)			리 발전 전기 (14 개) 본 기계 (15 m)		3Indicators of	hydrophytic vogotation and
	7. Sept. 10 (1971)	이번 하는데 없었다면 어디어 바다 살았다면 했다.							the state of the s
Restrictive Layer (if observed): Type:			33)	//cdox /	Бергесск	110 (1 0)			[1] [1] [1] [2] [2] [2] [2] [2] [2] [2] [2] [2] [2
Pepth (inches):		-17	- 1						•
Remarks:    Alta   Comparison	Type:	#3: 8000 30	0						<b>~</b>
AYDROLOGY	Depth (inch	nes):						Hydric Soil Pro	esent? Yes No^_
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)	Remarks:	80,9							
Primary Indicators (minimum of one is required: check all that apply)  Secondary Indicators (minimum of two required)  Surface Water (A1)  High Water Table (A2)  Aquatic Fauna (B13)  Saturation (A3)  True Aquatic Plants (B14)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Fresence of Reduced Iron (C4)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Gauge or Well Data (D9)  Sparsely Vegetated Concave Surface (B8)  Other (Explain in Remarks)  Field Observations:  Surface Water Many Indicators (minimum of two required)  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Drainage Patterns (B10)  Drainage	Remarks:	- No.						Ţ	
Surface Water (A1)		GY.							
High Water Table (A2)	HYDROLOG	1000 0000							
Saturation (A3)	HYDROLOG Wetland Hydr	rology Indicators		ired: check all that ap	oply)			Secondary	Indicators (minimum of two required)
Water Marks (B1)	HYDROLOG Wetland Hydr Primary Indica	rology Indicators stors (minimum of o		Water-Sta	ined Leav			Surface	e Soil Cracks (B6)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Water Present? Yes NoX Depth (inches): Water Table Present? Yes NoX Depth (inches): Wetland Hydrology Present? Yes NoX Depth (inches): Wetland Hydrology Present? Yes No X Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLOG Wetland Hydr Primary Indica Surface W High Wate	rology Indicators: stors (minimum of o Vater (A1) er Table (A2)		Water-Sta Aquatic Fa	ined Leav auna (B13	3)		Surface Drainag	e Soil Cracks (B6) ge Patterns (B10)
Drift Deposits (B3)	HYDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation	rology Indicators ators (minimum of o Vater (A1) er Table (A2) n (A3)		Water-Sta Aquatic Fa	ined Leav auna (B13 atic Plants	3) (B14)		Surface Drainaç Dry-Se	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2)
Algal Mat or Crust (B4)	HYDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai	rology Indicators stors (minimum of o Vater (A1) er Table (A2) n (A3) rks (B1)		Water-Sta Aquatic Fa True Aqua Hydrogen	ined Leav auna (B13 atic Plants Sulfide O	B) (B14) dor (C1)		Surface Drainag Dry-Se Crayfis	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
Iron Deposits (B5)	HYDROLOG Wetland Hydr Primary Indica Surface W High Wate Saturation Water Mai	rology Indicators: stors (minimum of of Vater (A1) er Table (A2) in (A3) rks (B1) Deposits (B2)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Leav auna (B13 atic Plants Sulfide O Rhizosphe	B) (B14) dor (C1) eres on Liv		Surface Drainag Dry-Se Crayfis (C3) Saturat	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturation  Water Mai  Sediment  Drift Depo	rology Indicators:  tors (minimum of of Vater (A1)  er Table (A2)  n (A3)  rks (B1)  Deposits (B2)  osits (B3)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	B) (B14) dor (C1) eres on Livied Iron (C4	<b>l)</b>	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1)
Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Water  Saturation  Water Man  Sediment  Drift Depo  Algal Mat	rology Indicators: stors (minimum of of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Leavanna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct	B) (B14) dor (C1) eres on Live ed Iron (C4) ion in Tille	l)	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): Wetland Hydrology Present? Yes No _X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLOG  Wetland Hydre  Primary Indica  Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo	rology Indicators: stors (minimum of of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) ssits (B5)	one is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7)	l)	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): Wetland Hydrology Present? Yes No _X Depth (inches):	HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundation	rology Indicators:  ators (minimum of or  vater (A1)  er Table (A2)  n (A3)  rks (B1)  Deposits (B2)  osits (B3)  or Crust (B4)  esits (B5)  n Visible on Aerial	one is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct & Surface Well Data	(B14) dor (C1) eres on Livi ed Iron (C4) ion in Tilled (C7) (C9)	l)	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Saturation Present? Yes No _X _ Depth (inches): Wetland Hydrology Present? Yes No _X (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLOG  Wetland Hydr  Primary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely V	rology Indicators:  ators (minimum of of Vater (A1)  er Table (A2)  n (A3)  rks (B1)  Deposits (B2)  osits (B3)  or Crust (B4)  sits (B5)  n Visible on Aerial Vegetated Concav	one is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct & Surface Well Data	(B14) dor (C1) eres on Livi ed Iron (C4) ion in Tilled (C7) (C9)	l)	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Man Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely W	rology Indicators:  ators (minimum of or  Vater (A1)  er Table (A2)  n (A3)  rks (B1)  Deposits (B2)  posits (B3)  or Crust (B4)  sits (B5)  n Visible on Aerial  Vegetated Concaverations:	one is requ Imagery (E re Surface (	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck Thin Muck Grip Gauge or (B8) Other (Exp	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct a Surface Well Data plain in Re	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) i (D9) emarks)	l) d Soils (Co	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation  Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely \ Field Observa Surface Water	rology Indicators:  stors (minimum of or  vater (A1)  er Table (A2)  n (A3)  rks (B1)  Deposits (B2)  sits (B3)  or Crust (B4)  sits (B5)  n Visible on Aerial  Vegetated Concav  ations:	Imagery (E e Surface (	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck Gr) Gauge or (B8) Other (Exp	ined Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct Surface Well Data plain in Re	(B14) dor (C1) eres on Lived Iron (C4) ion in Tilled (C7) i (D9) emarks)	d Soils (Co	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2)
Remarks:	HYDROLOG  Wetland Hydre  Primary Indica  Surface W High Water Saturation  Water Mai  Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely Water Water Table P Saturation Pre	rology Indicators: stors (minimum of or Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) sits (B5) n Visible on Aerial Vegetated Concav ations: Present?	Imagery (E	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized Fa Presence Recent Iro Thin Muck 87) Gauge or (B8) Other (Exp No X Depth (in No X Depth (in pertical part)	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct & Surface Well Data plain in Reduction Redu	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) i (D9) emarks)	d Soils (Co	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted 6) Geomo	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
	HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely With Surface Water Water Table P Saturation Pre (includes capil	rology Indicators: stors (minimum of or Vater (A1) er Table (A2) er (A3) rks (B1) Deposits (B2) erits (B3) er Crust (B4) erits (B5) er Visible on Aerial Vegetated Concaverations: er Present? ersent? ersent? ersent?	Imagery (E	Water-Sta	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct & Surface Well Data plain in Reches): ches): ches	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	d Soils (Co	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted 6) Geomo FAC-No	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
	HYDROLOG  Wetland Hydr  Primary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely V  Field Observa  Surface Water Water Table P  Saturation Pre (includes capil	rology Indicators: stors (minimum of or Vater (A1) er Table (A2) er (A3) rks (B1) Deposits (B2) erits (B3) er Crust (B4) erits (B5) er Visible on Aerial Vegetated Concaverations: er Present? ersent? ersent? ersent?	Imagery (E	Water-Sta	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct & Surface Well Data plain in Reches): ches): ches	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	d Soils (Co	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted 6) Geomo FAC-No	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)
	HYDROLOG  Wetland Hydr  Primary Indica Surface W High Water Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depo Inundatior Sparsely V  Field Observa  Surface Water Water Table P  Saturation Pre (includes capil	rology Indicators: stors (minimum of or Vater (A1) er Table (A2) er (A3) rks (B1) Deposits (B2) erits (B3) er Crust (B4) erits (B5) er Visible on Aerial Vegetated Concaverations: er Present? ersent? ersent? ersent?	Imagery (E	Water-Sta	ined Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct & Surface Well Data plain in Reches): ches): ches	(B14) dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	d Soils (Co	Surface Drainag Dry-Se Crayfis (C3) Saturat Stunted 6) Geomo FAC-No	e Soil Cracks (B6) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) d or Stressed Plants (D1) orphic Position (D2) eutral Test (D5)

Project/Site: Red Rock Solar			City/County:	Cottonwo	boc	Sampling Date: 5/12	2/2020
Applicant/Owner: Red Rock Solar	r, LLC				State: MN	Sampling Point: UPI	L-5b
Investigator(s): R. Scott			Section, Tov	wnship, Ran	nge: T106N R34W S1	Vi) 564 147	
Landform (hillslope, terrace, etc.): N	1id slope		ι	ocal relief (	concave, convex, none):	Concave	
Slope (%): 1 Lat: _44.0			_ong:94.8	375229°		Datum: NAD 83	
Soil Map Unit Name: Glencoe clay	y loam, 0 to 1 perce	ent slopes			NWI classific	ation: Upland	
Are climatic / hydrologic conditions of			r? Yes _>	No	(If no, explain in R	emarks.)	
Are Vegetation, Soil,	or Hydrology	significantly of	disturbed?	Are "I	Normal Circumstances" p	resent? Yes X	No
Are Vegetation, Soil,	or Hydrology	naturally prob	blematic?		eded, explain any answe		
SUMMARY OF FINDINGS -				g point lo	ocations, transects	, important featu	ıres, etc.
Hydrophytic Vegetation Present?	Yes	No X	19 10 10 10 10		Tutorite de la companie de la compa		
Hydric Soil Present?	Yes I	No X	3775577	e Sampled		*** <b>Y</b>	
Wetland Hydrology Present?	Yes 1	No _X	withi	n a Wetlan	d? Yes	No _X	
Remarks:							
VEGETATION - Use scientif	ic names of plants	S.					
Tree Stratum (Plot size: 30ft.	- 700			Status	Dominance Test work  Number of Dominant S  That Are OBL, FACW, o	pecies	(A)
2					Total Number of Domin Species Across All Stra	ant	(B)
4						SOME S	(5)
5					Percent of Dominant Sp That Are OBL, FACW, of		(A/B)
Sapling/Shrub Stratum (Plot size: 1 2 3.		-			Prevalence Index work  Total % Cover of:  OBL species  FACW species	Multiply by	<del></del>
4					FAC species	x 3 =	
5					FACU species	x 4 =	
	)		= Total Cov	er	UPL species		
1. 2.					Prevalence Index	= B/A =	
3					Hydrophytic Vegetation	on Indicators:	
4					1 - Rapid Test for H	Hydrophytic Vegetation	า
5.					2 - Dominance Tes	t is >50%	
6.					3 - Prevalence Inde		
7					4 - Morphological A	daptations <sup>1</sup> (Provide s	supporting
8					Problematic Hydrop	s or on a separate she	
9		-20		<u> </u>	Problematic Hydrop	mytic vegetation (Ex	piairi)
10				 er	<sup>1</sup> Indicators of hydric soi be present, unless distu	l and wetland hydrolog urbed or problematic.	gy must
1					Hydrophytic		
2.				100	Hydrophytic Vegetation		
0.597-2			= Total Cov	er	Present? Yes	s No_X	-0
Remarks: (Include photo numbers	here or on a separate				100		
This data point was taken in a	cultivated soybean	field that w	as recent	ly planted	. 100% bare ground.		

SOIL Sampling Point: UPL-5b

Depth	cription: (Describe Matrix			x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 2/1	100					L	
12-18	10YR 2/1	100	257	- Was	53.1	10	L State	
18-24	10YR 3/2	100		826:			CL	
	Concentration, D=De	pletion, RM:	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.		_=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy	Gleyed Ma	atrix (S4)			rie Redox (A16)
_	pipedon (A2)		7.5	Redox (S5			Dark Surfa	
	listic (A3)		Strippe	d Matrix (S	36)		Iron-Manga	anese Masses (F12)
Hydrog	en Sulfide (A4)		Loamy	Mucky Mi	neral (F1)		Very Shall	ow Dark Surface (TF12)
	ed Layers (A5)			Gleyed M			Other (Exp	lain in Remarks)
	luck (A10)	#4505508		ed Matrix (	Name of the second			
	ed Below Dark Surface	e (A11)		Dark Surfa	리 발전 전기 (14 개) 본 기계 (15 m)		3,	
Nation 211	Oark Surface (A12) Mucky Mineral (S1)			ed Dark St Depressio	urface (F7)	ķ.		nydrophytic vegetation and drology must be present,
	lucky Peat or Peat (S	(3)	Kedox	Depressio	113 (10)			urbed or problematic.
	Layer (if observed)	2.5						arzed or problematic.
	5) ((5))							
Type:								sent? Yes No _X
Type:	nches).						Hydric Soil Pre	sentr res No
10.000	nches):		_				Hydric Soil Pre	sent? TesNo/\
Depth (ii							Hydric Soil Pre	sent? TesNo/\
Depth (ii	nches):						Hydric Soil Pre	sent? TesNo/\
Depth (ii	nches):						Hydric Soil Pre	sent? TesNo/\
Depth (ii Remarks: IYDROLO Wetland Hy	DGY	:	red; check all that a	pply)				ndicators (minimum of two required
Depth (ii Remarks: IYDROLO Wetland Hy Primary Ind	OGY ydrology Indicators	:	remarkation (Colonia)	pply) nined Leav	ves (B9)		Secondary In	
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface	OGY vdrology Indicators icators (minimum of	:	remarkation (Colonia)	ined Leav			Secondary II	ndicators (minimum of two required
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W	OGY vdrology Indicators icators (minimum of the Water (A1)	:	Water-Sta Aquatic F	ined Leav	3)		Secondary II Surface Drainag	ndicators (minimum of two required Soil Cracks (B6)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat	OGY ydrology Indicators icators (minimum of e Water (A1) /ater Table (A2)	:	Water-Sta Aquatic F	ained Leav auna (B13 atic Plants	3) (B14)		Secondary II Surface Drainag Dry-Sea	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY vdrology Indicators icators (minimum of e Water (A1) vater Table (A2) icion (A3) Marks (B1) ent Deposits (B2)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O	3) (B14)	ing Roots	Secondary II  Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY vdrology Indicators icators (minimum of e Water (A1) vater Table (A2) ion (A3) Marks (B1)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	B) (B14) dor (C1) eres on Liv		Secondary II  Surface Drainag Dry-Sea Crayfish (C3) Saturation	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M	orches):	:	<ul><li>Water-Sta</li><li>Aquatic F</li><li>True Aqua</li><li>Hydrogen</li><li>Oxidized</li></ul>	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	(B14) dor (C1) eres on Livied Iron (C4	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
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Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	orches):	: one is requii Imagery (B' re Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Mucl Gauge or B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reducti on Reducti x Surface ( Well Data plain in Re	(B14) (B14) (dor (C1) eres on Livied Iron (C4) ion in Tilled (C7) (D9) emarks)	t) d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
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Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca Describe Re	orches):	: one is requir Imagery (B: re Surface (I Yes Yes	Water-Sta Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No Depth (ir No Depth (ir No Depth (ir	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction Red	(B14) dor (C1) deres on Livited Iron (C4) dion in Tilled (C7) (D9) demarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	orches):	: one is requir Imagery (B: re Surface (I Yes Yes	Water-Sta Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No Depth (ir No Depth (ir No Depth (ir	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduction Sulface (Well Data plain in Reduction Reduction Sulface (Well Data plain in Reduction Red	(B14) dor (C1) deres on Livited Iron (C4) dion in Tilled (C7) (D9) demarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

Project/Site: Red Rock Solar		c	_ City/County: Cottonwood Sampling Date: 5/12			
Applicant/Owner: Red Rock Sola	ır, LLC			State: MN	Sampling Point: UPL-6b	
Investigator(s): R. Scott		s	ection, Township, Ra	nge: T106N R34W S	1	
Landform (hillslope, terrace, etc.):	√lidslope		Local relief	(concave, convex, none)	None	
Slope (%): 1 Lat: _44.0			ong: <u>-94.873736°</u>		Datum: NAD 83	
Soil Map Unit Name: Webster cla	y loam, 0 to 2 per	rcent slopes		NWI classifi	cation: Upland	
Are climatic / hydrologic conditions	on the site typical for	this time of year	? Yes <u>X</u> No _	(If no, explain in I	Remarks.)	
Are Vegetation, Soil	, or Hydrology	significantly di	sturbed? Are	"Normal Circumstances"	present? Yes X No	
Are Vegetation, Soil	, or Hydrology	_ naturally prob	ematic? (If ne	eeded, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS -	Attach site ma	ap showing s	sampling point I	ocations, transects	s, important features, etc.	
Hydrophytic Vegetation Present?	Yes	No X	00100.000	Ø1-24		
Hydric Soil Present?	Yes	No X	Is the Sampled		1668 <b>V</b>	
Wetland Hydrology Present?	Yes	No _X	within a Wetla	nd? Yes	No _X	
Remarks:						
VECETATION						
VEGETATION – Use scienti	ic names of plar		Dominant Indicator	Dominance Test wor	kshoot	
Tree Stratum (Plot size: 30ft.	)		Species? Status	Number of Dominant S		
1	15:				or FAC: (A)	
2				Total Number of Domi	nant	
3				Species Across All Str	ata: (B)	
4				Percent of Dominant S		
5			Total Cover	That Are OBL, FACW,	or FAC: (A/B)	
Sapling/Shrub Stratum (Plot size	15ft.	)		Prevalence Index wo		
1				to the total of th	Multiply by:	
2				management to the	x1=	
3. 4.				1	x 2 = x 3 =	
5					x 4 =	
			Total Cover	AMERICAN NO. 100	x 5 =	
Herb Stratum (Plot size: 5ft.	)			Column Totals:	(A) (B)	
1		10102		Prevalence Inde	x = B/A =	
3				Hydrophytic Vegetati	N 20000 A	
4				1 - Rapid Test for	Hydrophytic Vegetation	
5				2 - Dominance Te		
6				3 - Prevalence Inc		
7				4 - Morphological data in Remark	Adaptations <sup>1</sup> (Provide supporting as or on a separate sheet)	
8				CAMADAMATRI DI MESARA MENANCO	ophytic Vegetation¹ (Explain)	
9				158		
10			Total Cover		oil and wetland hydrology must	
Woody Vine Stratum (Plot size: _	)	() <del></del>	rotal cover	be present, unless dist	turbed or problematic.	
1				Hydrophytic		
2				Vegetation Present? Yes	es No _X_	
Remarks: (Include photo numbers	s here or on a senar		Total Cover	With		
This data point was taken in a	•		cently planted 10	00% bare ground		
			, p	J		

SOIL Sampling Point: UPL-6b

	cription. (Describe	to the depth i			a commi	the absence of in	aloutors.)
Depth (inches)	Matrix			Features Type <sup>1</sup>	Loc <sup>2</sup>	Toytura	Demorks
(inches) 0-14	Color (moist) 10YR 2/1		Color (moist)	%Type <sup>1</sup>	LOC	Texture SiL	Remarks
e <del></del>				J <del>an ta </del>		C 50 00	
14-24	10YR 2/1	100				CL	
8	3 5-			(Z			-
<u> </u>	-					2 0 72 m	-
	* *					<u> </u>	
×	R <del>a</del>					· · · · · · · · · · · · · · · · · · ·	
				200			
¹Type: C=C	Concentration, D=Dep	letion, RM=Re	educed Matrix, MS	=Masked Sand Gra	ins.	<sup>2</sup> Location: PL	=Pore Lining, M=Matrix.
Hydric Soil	Indicators:					Indicators for F	Problematic Hydric Soils <sup>3</sup> :
Histoso	l (A1)		Sandy G	leyed Matrix (S4)		Coast Prair	e Redox (A16)
Histic E	pipedon (A2)		Sandy R	edox (S5)		Dark Surface	- N - N
80 TO	listic (A3)		O-3	Matrix (S6)		- 10 To 10 T	nese Masses (F12)
	en Sulfide (A4)			Mucky Mineral (F1)			w Dark Surface (TF12)
	ed Layers (A5)			Bleyed Matrix (F2)		Other (Expl	ain in Remarks)
702	uck (A10)	(8.44)		d Matrix (F3)			
	ed Below Dark Surfac	e (A11)		ark Surface (F6)		31-4	deservation and
	Park Surface (A12) Mucky Mineral (S1)			Dark Surface (F7) Depressions (F8)			ydrophytic vegetation and rology must be present,
	ucky Peat or Peat (S	3)		repressions (1 0)			rbed or problematic.
	Layer (if observed):					unicos diste	indea of problematic.
Type:							
***************************************			<u></u>			Hydric Soil Pres	ent? Yes No _X
Remarks:	nches):		<u>—8</u>				
HYDROLO	OGY						
Wetland Hy	drology Indicators:						
Primary Indi	icators (minimum of o	ne is required	; check all that ap	ply)			
Surface	Water (A1)					Secondary In	dicators (minimum of two required)
High W			Water-Stair	ned Leaves (B9)			dicators (minimum of two required) Soil Cracks (B6)
	ater Table (A2)			: 12 - 12 - 12 - 12 - 12 - 12 - 12 - 12		Surface S	Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa	una (B13)		Surface S	50 Julianski (K. 1944)6407
Saturati	ion (A3)		Aquatic Fa True Aquat	una (B13) ic Plants (B14)		Surface S Drainage Dry-Seas	Soil Cracks (B6) Patterns (B10) son Water Table (C2)
Saturati			Aquatic Fa True Aquat Hydrogen S	una (B13)	ng Roots (	Surface S Drainage Dry-Seas Crayfish	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8)
Saturati Water M	ion (A3) Marks (B1) ent Deposits (B2)		Aquatic Fa True Aquat Hydrogen S Oxidized R	una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livir		Surface S Drainage Dry-Seas Crayfish Saturatio	Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
Saturati Water M Sedime Drift De	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c	una (B13) iic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4)	)	Surface S Drainage Dry-Seas Crayfish C3) Saturatio	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1)
Saturati Water M Sedime Drift De Algal M	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)		Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror	una (B13) iic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled	)	Surface S Drainage Dry-Seas Crayfish C3) Saturatio Stunted of Geomorp	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) Shic Position (D2)
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Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) lion Visible on Aerial I ly Vegetated Concave rvations:	e Surface (B8)	Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck Gauge or V Other (Exp	una (B13) ic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) lain in Remarks)	) I Soils (C6	Surface S Drainage Dry-Seas Crayfish C3) Saturatio Stunted of Geomorp	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) Shic Position (D2)
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Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Field Obset Surface Water Table	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) lion Visible on Aerial I ly Vegetated Concave rvations: ter Present? Y	e Surface (B8)  'es No 'es No	Aquatic Fa True Aquat Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Gauge or V Other (Exp	una (B13) icic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) lain in Remarks) hes):	)   Soils (C6)	Surface S Drainage Dry-Seas Crayfish C3) Saturatio Stunted of Geomory FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
Saturation F	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) lion Visible on Aerial I ly Vegetated Concave rvations: eter Present? Present? Y	e Surface (B8)  'es No 'es No	Aquatic Fa True Aquat Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Gauge or V Other (Exp	una (B13) icic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) lain in Remarks)	)   Soils (C6)	Surface S Drainage Dry-Seas Crayfish C3) Saturatio Stunted of Geomory FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) Shic Position (D2)
Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Field Obser Surface War Water Table Saturation F (includes ca	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) lion Visible on Aerial I ly Vegetated Concave rvations: ter Present? Y	e Surface (B8)  /es No /es No /es No	Aquatic Fa True Aquat Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Gauge or V Other (Exp X Depth (inc	una (B13) icic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) lain in Remarks) hes): hes):	)   Soils (C6	Surface S  Drainage  Dry-Seas  Crayfish  C3) Saturatio  Stunted of  Geomory  FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Field Obsel Surface Water Table Saturation F (includes call Describe Re	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) lion Visible on Aerial I ly Vegetated Concave rvations: eter Present? Present? Y Present? Y epillary fringe)	e Surface (B8)  /es No /es No /es No	Aquatic Fa True Aquat Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Gauge or V Other (Exp X Depth (inc	una (B13) icic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) lain in Remarks) hes): hes):	)   Soils (C6	Surface S  Drainage  Dry-Seas  Crayfish  C3) Saturatio  Stunted of  Geomory  FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Field Obser Surface War Water Table Saturation F (includes ca	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) lion Visible on Aerial I ly Vegetated Concave rvations: eter Present? Present? Y Present? Y epillary fringe)	e Surface (B8)  /es No /es No /es No	Aquatic Fa True Aquat Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Gauge or V Other (Exp X Depth (inc	una (B13) icic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) lain in Remarks) hes): hes):	)   Soils (C6	Surface S  Drainage  Dry-Seas  Crayfish  C3) Saturatio  Stunted of  Geomory  FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Field Obsel Surface Water Table Saturation F (includes call Describe Re	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) lion Visible on Aerial I ly Vegetated Concave rvations: eter Present? Present? Y Present? Y epillary fringe)	e Surface (B8)  /es No /es No /es No	Aquatic Fa True Aquat Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Gauge or V Other (Exp X Depth (inc	una (B13) icic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) lain in Remarks) hes): hes):	)   Soils (C6	Surface S  Drainage  Dry-Seas  Crayfish  C3) Saturatio  Stunted of  Geomory  FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)
Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Field Obser Surface Water Table Saturation F (includes car Describe Re	ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) lion Visible on Aerial I ly Vegetated Concave rvations: eter Present? Present? Y Present? Y epillary fringe)	e Surface (B8)  /es No /es No /es No	Aquatic Fa True Aquat Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Gauge or V Other (Exp X Depth (inc	una (B13) icic Plants (B14) Sulfide Odor (C1) hizospheres on Livir of Reduced Iron (C4) n Reduction in Tilled Surface (C7) Vell Data (D9) lain in Remarks) hes): hes):	)   Soils (C6	Surface S  Drainage  Dry-Seas  Crayfish  C3) Saturatio  Stunted of  Geomory  FAC-Neu	Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Itral Test (D5)

Project/Site: Red Rock Solar	0	City/County: Cottonwood Sampling Date: 5/1				13/2020	
Applicant/Owner: Red Rock Sola	r, LLC				State: MN	Sampling Point: U	PL-7b
Investigator(s): R. Scott			Section, Town	ship, Ran	ge: T106N R34W S1	5- 45g 66c 14 F	
Landform (hillslope, terrace, etc.): N	1idslope		Loc	cal relief (	concave, convex, none):	None	
Slope (%): 1 Lat: _44.0			ong: <u>-94.86</u>	4325°	-	Datum: NAD 83	
Soil Map Unit Name: Glencoe cla	y loam, 0 to 1 perc	ent slopes			NWI classific	cation: Upland	
Are climatic / hydrologic conditions of							
Are Vegetation, Soil,					Normal Circumstances"	AND CONTRACT CONTRACTOR	No
Are Vegetation, Soil,	Marin Children and Antonia and Later				eded, explain any answe		1,02000
SUMMARY OF FINDINGS -							tures, etc.
Hydrophytic Vegetation Present?	Yes	No X	- Section Control Control				
Hydric Soil Present?	Yes	No X	200000000	Sampled		1000 <b>V</b>	
Wetland Hydrology Present?	Yes	No _X	within	a Wetlan	d? Yes	No_X_	
Remarks:							
VEGETATION - Use scientif	ic names of plant	s.					
Tree Stratum (Plot size: 30ft.			Dominant In Species?	Status	Dominance Test work Number of Dominant S That Are OBL, FACW,	species	(A)
2					Total Number of Domin	nant	
3 4					Species Across All Stra	ıta:	(B)
5					Percent of Dominant S That Are OBL, FACW,		(A/B)
		33	= Total Cover		2011/2017/00/2016 10:40:00 (20:00 for 12:00 fo	CHRISTANIA DORRO LO	(٨/٥)
Sapling/Shrub Stratum (Plot size:					Prevalence Index wor	rksheet:Multiply i	bur
1				200	OBL species		
2. 3.			-	<del></del>	FACW species		
4		201 19		- 2	FAC species		
5				127	FACU species		
			= Total Cover		UPL species		
	)				Column Totals:	(A)	(B)
1. 2.					Prevalence Index	c = B/A =	
3					Hydrophytic Vegetation	on Indicators:	7.
4				<del></del>	1 - Rapid Test for I	Hydrophytic Vegetati	ion
5.					2 - Dominance Tes	st is >50%	
6					3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
7					4 - Morphological A	Adaptations <sup>1</sup> (Provide	e supporting
8						s or on a separate sl	
9		<u></u> 11	<u> </u>	20	Problematic Hydro	pnytic vegetation (t	explain)
10					<sup>1</sup> Indicators of hydric so	il and wetland hydro	logy must
Woody Vine Stratum (Plot size: _	)		= Total Cover		be present, unless distr	urbed or problematic	c.
1				72	Hydrophytic		
2					Vegetation Present? Ye	s No_X	
Demontos (lastida at at			= Total Cover				C.S
Remarks: (Include photo numbers This data point was taken in a	•		as recently	planted.	. 100% bare ground.		

SOIL Sampling Point: UPL-7b

Profile Des Depth	Matrix			x Feature	s			
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	_Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 2/1	100					SiL	
12-18	10YR 2/1	100	<u> </u>	- V. (4)	55.H <del>- 5</del> 3.		L State	
18-24	10YR 3/2	100		884			CL	
				192				
Hydric Soi	Concentration, D=De	pletion, RM	23			ains.	Indicators for	_=Pore Lining, M=Matrix. Problematic Hydric Soils³:
Histoso	Epipedon (A2)		7.5	Gleyed Ma Redox (St			Coast Prai	rie Redox (A16)
	Histic (A3)			d Matrix (S			1,500	anese Masses (F12)
700	gen Sulfide (A4)				neral (F1)			ow Dark Surface (TF12)
	ed Layers (A5)		Loamy	Gleyed M	atrix (F2)		Other (Exp	olain in Remarks)
	luck (A10)	2011222		ed Matrix (	Name of the second			
	ed Below Dark Surfa Dark Surface (A12)	ce (A11)		Dark Surfa	ace (F6) urface (F7)		3Indicators of h	nydrophytic vegetation and
741750	Mucky Mineral (S1)			Depressio	and the second s			drology must be present,
	lucky Peat or Peat (S	33)			()			urbed or problematic.
Restrictive	Layer (if observed	):						ří k
								1969 2002 V
Type: _	n: 5000						11 11 0 11 0	
10.000	nches):						Hydric Soil Pre	sent? YesNo_X
Depth (i							Hydric Soil Pre	sent? Yes No^_
Depth (ii	nches):						Hydric Soil Pre	sent? Yes NoX
Depth (ii Remarks:	OGY ydrology Indicators							
Depth (i Remarks: IYDROL( Wetland H	OGY ydrology Indicators		remarkation (Colonia)	7.6%			Secondary In	ndicators (minimum of two required
Depth (ii Remarks:  IYDROL( Wetland H Primary Ind Surface	DGY ydrology Indicators licators (minimum of e Water (A1)		Water-Sta	ined Leav			Secondary II	ndicators (minimum of two required Soil Cracks (B6)
Depth (ii Remarks:  IYDROL( Wetland H; Primary Ind Surface High W	OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2)		Water-Sta Aquatic F	ained Leav auna (B13	3)		Secondary II  Surface Drainag	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10)
Depth (ii Remarks:  IYDROLO Wetland Hi Primary Ind Surface High W Satura	OGY ydrology Indicators licators (minimum of e Water (A1) //ater Table (A2) tion (A3)		Water-Sta Aquatic F True Aqua	ained Leav auna (B13 atic Plants	3) (B14)		Secondary II Surface Drainag Dry-Sea	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2)
Depth (ii Remarks:  IYDROLO Wetland Hi Primary Ind Surface High W Satura Water	OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1)		Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O	B) (B14) dor (C1)	ing Roots	Secondary II  Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2)
Depth (ii Remarks:  IYDROLO Wetland H: Primary Ind Surface High W Saturat Water Sedime	OGY ydrology Indicators dicators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		<ul><li>Water-Sta</li><li>Aquatic F</li><li>True Aqua</li><li>Hydrogen</li><li>Oxidized</li></ul>	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	3) (B14) dor (C1) eres on Liv		Secondary II  Surface Drainag Dry-Sea Crayfish (C3) Saturation	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Saturar Water Sedime Drift De	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	(B14) dor (C1) eres on Lived Iron (C4	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M	OGY ydrology Indicators dicators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct	B) (B14) dor (C1) eres on Liv ed Iron (C4) ion in Tille	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9)
Depth (ii Remarks:  IYDROL( Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4)	: one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct & Surface	(B14) dor (C1) eres on Lived Iron (C4) ion in Tilled (C7)	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water Sedime Drift De Algal M Iron De Inunda	DGY ydrology Indicators licators (minimum of e Water (A1) //ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5)	: one is requir	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 7) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct & Surface Well Data	dor (C1) eres on Liv ed Iron (C4) ion in Tilled (C7)	1)	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water Sedime Drift De Algal M Iron De Inunda	pody ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concaveryations:	: one is requi one is requi Imagery (B: re Surface (I	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 7) Gauge or B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data plain in Re	(B14) dor (C1) eres on Liv ed Iron (C4) ion in Tilled (C7) i (D9) emarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura' Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	DGY ydrology Indicators dicators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concavervations: ater Present?	: one is requii Imagery (B' ve Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Mucl Gauge or B8) Other (Ex	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct x Surface Well Data plain in Re	(B14) (B14) (dor (C1) eres on Liv ed Iron (C4) ion in Tilled (C7) (D9) emarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturatio Stunted G) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura' Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concavery exter Present? e Present?	: one is requii Imagery (B: ve Surface (I	Water-Sta Aquatic F True Aquatic F Hydrogen	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct & Surface Well Data plain in Reduches): aches):	(B14) dor (C1) eres on Liv ed Iron (C4) ion in Tillee (C7) (D9) emarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concaverations: ater Present? Present?	: one is requii Imagery (B: ve Surface (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Mucl Gauge or B8) Other (Ex	ained Leave auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct & Surface Well Data plain in Reduches): aches):	(B14) dor (C1) eres on Liv ed Iron (C4) ion in Tillee (C7) (D9) emarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) iphic Position (D2)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concavery exter Present? e Present?	: one is requii Imagery (B: ve Surface (I Yes Yes	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No X Depth (ir No X Depth (ir	ained Leavauna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct of Surface Well Data plain in Re aches): aches): aches):	(B14) dor (C1) eres on Liv ed Iron (C4) ion in Tiller (C7) (D9) emarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland Hi Primary Ind Surface High W Saturat Water Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca Describe R	pogy ydrology Indicators licators (minimum of e Water (A1) //ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concavery ervations: ater Present? e Present? papillary fringe)	: one is requii Imagery (B: ve Surface (I Yes Yes	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No X Depth (ir No X Depth (ir	ained Leavauna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct of Surface Well Data plain in Re aches): aches): aches):	(B14) dor (C1) eres on Liv ed Iron (C4) ion in Tiller (C7) (D9) emarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Depth (ii Remarks:  IYDROLO Wetland H Primary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	pogy ydrology Indicators licators (minimum of e Water (A1) //ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concavery ervations: ater Present? e Present? papillary fringe)	: one is requii Imagery (B: ve Surface (I Yes Yes	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ird Thin Muci 7) Gauge or B8) Other (Ex No X Depth (ir No X Depth (ir	ained Leavauna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct of Surface Well Data plain in Re aches): aches): aches):	(B14) dor (C1) eres on Liv ed Iron (C4) ion in Tiller (C7) (D9) emarks)	d Soils (C	Secondary II Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted 6) Geomor FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) is Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

Project/Site: Red Rock Solar	City	y/County: Cottonw	/ood	Sampling Date: 5/13/2020
Applicant/Owner: Red Rock Solar, LLC			State: MN	Sampling Point: UPL-8b
Investigator(s): R. Scott	Se	ction, Township, Ra	inge: T106N R34W S1	
Landform (hillslope, terrace, etc.): Toe slope		Local relief	(concave, convex, none):	Concave
		ng: <u>-94.869938°</u>		Datum: NAD 83
Soil Map Unit Name: Glencoe clay loam, 0 to	o 1 percent slopes		NWI classific	ation: Upland
Are climatic / hydrologic conditions on the site ty	pical for this time of year?	Yes X No_	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrolog	y significantly dis	turbed? Are	"Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrolog	yy naturally proble	ematic? (If ne	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach	ite map showing s	ampling point I	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes	No X	AND	60.A	
Hydric Soil Present? Yes	No X	Is the Sampleo		100 <b>V</b>
22	No X	within a Wetla	nd? Yes	No _X
Remarks:				
VEGETATION – Use scientific names	of plants.			
30ft	Absolute D	Dominant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30ft. )		Species? Status	Number of Dominant S	
1 2			That Are OBL, FACW,	or FAC: (A)
3			Total Number of Domin Species Across All Stra	(2) SEEKE
4				
5			Percent of Dominant Sp That Are OBL, FACW,	pecies or FAC: (A/B)
15ft	=	Total Cover	7 m 200 m 200 m 10 m 200 m	Secondariones 5
	)		Prevalence Index wor	Ksneet:  Multiply by:
1 2				x 1 =
2			The second of the second	x 2 =
4				x 3 =
5			FACU species	x 4 =
5ft	=	Total Cover	1	x 5 =
Herb Stratum (Plot size: 5ft. )			Column Totals:	(A) (B)
1 2	40 10		Prevalence Index	= B/A =
3			Hydrophytic Vegetation	20,0000 00 00
4.			1 - Rapid Test for H	Hydrophytic Vegetation
5			2 - Dominance Tes	
6			3 - Prevalence Inde	
7				Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
8			CANADO PLANTE DE LOS COMOS NOCAMOS COM	phytic Vegetation <sup>1</sup> (Explain)
9				priyate regetation (Explain)
10			<sup>1</sup> Indicators of hydric soi	l and wetland hydrology must
Woody Vine Stratum (Plot size:	= -	Total Cover	be present, unless distu	urbed or problematic.
1		10.55 JA	Hydrophytic	
2		537	Vegetation Present? Ye	s No_X_
Dansada (Inglista abilita abil		Total Cover		
Remarks: (Include photo numbers here or on This data point was taken in a cultivated		s recently planted	d. 100% bare ground.	

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SOIL Sampling Point: UPL-8b

Profile Des	cription: (Describ	e to the dept	h needed to docu	nent the	indicator	or confirm	n the absence of in	ndicators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup> _	Texture	Remarks
0-8	10YR 2/1	_ 100	5	Wa			L	
8-16	10YR 2/1	100		55.5			<u>L</u>	
16-24	10YR 2/1	100					CL	
	-			-				
/								0)
·				200				122
×	· -			171 <u>22</u>	·			
	Concentration, D=De	pletion, RM=	Reduced Matrix, M	S=Masked	d Sand Gra	ains.		=Pore Lining, M=Matrix.
(*************************************	Indicators:		<b>2</b> .00001000					Problematic Hydric Soils <sup>3</sup> :
Histoso			7.5	Gleyed Ma Redox (S5			Coast Prair Dark Surface	ie Redox (A16)
100	Epipedon (A2) Histic (A3)		10 Table 12	d Matrix (S	3.0		1.5	nese Masses (F12)
80 70	en Sulfide (A4)		(4 <del>-3</del> -34)		neral (F1)			w Dark Surface (TF12)
	ed Layers (A5)			Gleyed M				lain in Remarks)
	luck (A10)			d Matrix (				Control of
Deplete	ed Below Dark Surfa	ce (A11)	Redox	Dark Surfa	ace (F6)			
Thick D	ark Surface (A12)		Deplete	d Dark St	urface (F7)	ĺ	3Indicators of h	ydrophytic vegetation and
Sandy	Mucky Mineral (S1)		Redox	Depressio	ns (F8)			frology must be present,
100	lucky Peat or Peat (	- 53					unless distu	urbed or problematic.
1900	Layer (if observed							
Type:	AND						Hydric Soil Pres	sent? Yes No _X_
Depth (ir	nches):		_				injunio com i roc	
HYDROLO	OGY							
Wetland Hy	drology Indicators	<b>5</b> :						
Primary Ind	icators (minimum of	one is require	ed; check all that ap	oply)			Secondary In	dicators (minimum of two required)
Surface	e Water (A1)		Water-Sta	ined Leav	res (B9)		Surface	Soil Cracks (B6)
High W	ater Table (A2)		Aquatic Fa	auna (B13	3)		Drainage	Patterns (B10)
Saturat	tion (A3)		True Aqua	itic Plants	(B14)		Dry-Seas	son Water Table (C2)
Water I	Marks (B1)		Hydrogen	Sulfide O	dor (C1)		Crayfish	Burrows (C8)
Sedime	ent Deposits (B2)		Oxidized I	Rhizosphe	eres on Liv	ing Roots	(C3) Saturation	on Visible on Aerial Imagery (C9)
Drift De	eposits (B3)		Presence	of Reduce	ed Iron (C4	1)	Stunted	or Stressed Plants (D1)
Algal M	lat or Crust (B4)		Recent Iro	n Reduct	ion in Tille	d Soils (Ce	Geomorp	ohic Position (D2)
Iron De	posits (B5)		Thin Muck	Surface	(C7)		FAC-Net	utral Test (D5)
Inundat	tion Visible on Aeria	I Imagery (B7	) Gauge or	Well Data	(D9)			
Sparse	ly Vegetated Conca	ve Surface (B	8) Other (Ex	olain in Re	emarks)			
Field Obse								
Surface Wa			lo X Depth (in					
Water Table			lo 🔀 Depth (in					
Saturation F		Yes N	lo X Depth (in	ches):		_ Wetl	and Hydrology Pre	esent? Yes No _X_
	apillary fringe) ecorded Data (strea	m gauge, moi	nitoring well, aerial	photos pi	revious ins	pections).	if available:	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	gg.,				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Remarks:								

Project/Site: Red Rock Solar		Cit	y/County: Cottonw	<u>/ood</u>	Sampling Date: 5/13/2020
Applicant/Owner: Red Rock Sola	r, LLC			State: MN	Sampling Point: UPL-9b
Investigator(s): R. Scott		Se	ection, Township, Ra	nge: <u>T106N R34W S1</u>	
Landform (hillslope, terrace, etc.):	oe slope		Local relief	(concave, convex, none):	Concave
Slope (%): 1 Lat: _44.0			ng: <u>-94.864696°</u>		Datum: NAD 83
Soil Map Unit Name: Glencoe cla	y loam, 0 to 1 perc	ent slopes		NWI classific	ation: Upland
Are climatic / hydrologic conditions of	on the site typical for the	nis time of year?	Yes X No_	(If no, explain in R	emarks.)
Are Vegetation, Soil	or Hydrology	significantly dis	sturbed? Are	"Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil	or Hydrology	naturally proble	ematic? (If ne	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS -	Attach site map	showing s	ampling point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes	No X	T ATTORN	2003.	98 07 N
Hydric Soil Present?	Yes	No X	Is the Sampled		
Wetland Hydrology Present?	Yes	No <u>X</u>	within a Wetlan	nd? Yes	No <u>X</u> _
Remarks:					
	506 ME 3/04 M				
VEGETATION – Use scientif	ic names of plant				
Tree Stratum (Plot size: 30ft.	)		Dominant Indicator Species? Status	Dominance Test work	
1				Number of Dominant S That Are OBL, FACW,	or FAC: (A)
2				Total Number of Domin	ant
3				Species Across All Stra	57 T T SEE SEE SEE SEE SEE SEE SEE SEE SEE
4				Percent of Dominant S	pecies
5				That Are OBL, FACW,	or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:		=	Total Cover	Prevalence Index wor	ksheet:
1.				Total % Cover of:	Multiply by:
2		<del>-</del>	2007	OBL species	x 1 =
3		<u>-201 1864 </u>			x 2 =
4					x 3 =
5				Manager W W.	x 4 =
Herb Stratum (Plot size: 5ft.	)	=	Total Cover		x 5 = (A) (B)
1		577 1145	P.No. 22	Column Totals.	(A) (B)
2				Prevalence Index	= B/A =
3				Hydrophytic Vegetation	on Indicators:
4			200 9	<del>                                  </del>	Hydrophytic Vegetation
5				2 - Dominance Tes	
6				3 - Prevalence Inde	
7					Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
8				CAMAD-91/21/21/21/20/20/21/20/29/20/20/20/20/20/20/20/20/20/20/20/20/20/	phytic Vegetation <sup>1</sup> (Explain)
9				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
10					I and wetland hydrology must
Woody Vine Stratum (Plot size: _	)	·	Total Covel	be present, unless distr	urbed or problematic.
1				Hydrophytic	
2				Vegetation Present? Ye	s No_X_
5			Total Cover	. resent: Te	<u> </u>
Remarks: (Include photo numbers This data point was taken in a	•	•	s recently planted	d. 100% bare ground.	

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SOIL Sampling Point: UPL-9b

Profile Des	scription: (Describe	e to the de	pth needed to docu	mone and	maioator	20/222000	iii tiic abscilec ol	
Depth (inches)	Matrix	%		ox Featur		Loc <sup>2</sup>	Touture	Damada
(inches) 0-10	Color (moist) 10YR 2/1	<del>%</del>	Color (moist)	%_	_Type <sup>1</sup> _	Loc	Texture	Remarks
			1 <del>1</del> 10 10 111	V/40			- <del>L</del>	
10-18	10YR 2/1	97	10YR 4/4	_ 3	_ <u>C</u>		L	- 17
18-24	10YR 3/2	100	10YR 4/4	_ 3	_ <u>C</u>	<u>M</u>	CL	
	M		# E	1000				
			•					
				-88-81				
1T C=0		mistion DA		C-Masks	4 Cond Co	·	21	DI - Dava Linina M-Matrix
	I Indicators:	pletion, Ki	M=Reduced Matrix, M	IS-Waske	u Sanu Gr	airis.		PL=Pore Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy	Gleved M	atrix (S4)			airie Redox (A16)
	Epipedon (A2)		7.5	Redox (S			10 To	face (S7)
	Histic (A3)			d Matrix (	100		1,5	ganese Masses (F12)
-	gen Sulfide (A4)		0 <del>-2</del> 199		ineral (F1)			allow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loamy	Gleyed N	latrix (F2)		Other (E	xplain in Remarks)
2 cm M	luck (A10)		Deplete	ed Matrix	(F3)			
	ed Below Dark Surfa	ce (A11)		Dark Sur	17 (1878) B.		•	
	Dark Surface (A12)				urface (F7)	)		f hydrophytic vegetation and
	Mucky Mineral (S1)	00)	Redox	Depressi	ons (F8)			nydrology must be present,
	lucky Peat or Peat (						unless di	sturbed or problematic.
	Layer (if observed	);						
Type:							Hydric Soil P	resent? Yes No X
10-20-00-00-00-00-00-00-00-00-00-00-00-00	A STATE OF A CONTRACTOR AND A CONTRACTOR							
Depth (in Remarks:	nches):							0 10000
	nches):						1,4.10.55	0. 10000
							1,7.1.0.5	
Remarks:		1:						
Remarks:	DGY ydrology Indicators		uired; check all that a	pply)				Indicators (minimum of two required)
HYDROLO Wetland Hy	DGY ydrology Indicators		uired; check all that a	See See	ves (B9)		Secondary	Indicators (minimum of two required) se Soil Cracks (B6)
HYDROLO Wetland Hy Primary Ind Surface	DGY ydrology Indicators licators (minimum of		55 45 5 THE TOTAL	ained Lea			Secondary Surface	Tarrica and the company of the Compa
HYDROLO Wetland Hy Primary Ind Surface High W	OGY ydrology Indicators licators (minimum of e Water (A1)		Water-Sta	ained Lea auna (B1	3)		Secondary Surfac Draina	e Soil Cracks (B6)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat	OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2)		Water-Sta Aquatic F	ained Lea auna (B1 atic Plant	3) s (B14)		Secondary Surface Draina	ee Soil Cracks (B6) age Patterns (B10)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3)		Water-Sta Aquatic F True Aqua Hydrogen	ained Lea auna (B1 atic Plant Sulfide C	3) s (B14)	ing Roots	Secondary Surface Draina Dry-Se	ne Soil Cracks (B6) age Patterns (B10) eason Water Table (C2)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	DGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1)		<ul><li>Water-State</li><li>Aquatic F</li><li>True Aquatic F</li><li>Hydrogen</li><li>Oxidized</li></ul>	ained Lea auna (B1 atic Plant Sulfide ( Rhizosph	3) s (B14) Odor (C1)		Secondary Surfac Draina Dry-Se Crayfis S (C3) Satura	ne Soil Cracks (B6) nge Patterns (B10) ngeason Water Table (C2) nsh Burrows (C8)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	ogy ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc	3) s (B14) Odor (C1) eres on Liv	1)	Secondary Surfac Draina Dry-Sc Crayfic S (C3) Satura	ee Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9)
HYDROLO Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De	pdrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reducton Reducton	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tille	1)	Secondary Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom	te Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) and or Stressed Plants (D1)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4)	one is requ	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7)	1)	Secondary Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom	the Soil Cracks (B6) age Patterns (B10) the son Water Table (C2) the Burrows (C8) thion Visible on Aerial Imagery (C9) the or Stressed Plants (D1) torphic Position (D2)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda	ydrology Indicators licators (minimum of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) tent Deposits (B2) teposits (B3) flat or Crust (B4) teposits (B5)	one is requ	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface Well Data	3) s (B14) odor (C1) eres on Liv ed Iron (C4) tion in Tiller (C7) a (D9)	1)	Secondary Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom	the Soil Cracks (B6) age Patterns (B10) the son Water Table (C2) the Burrows (C8) thion Visible on Aerial Imagery (C9) the or Stressed Plants (D1) torphic Position (D2)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda	pdy ydrology Indicators (minimum of e Water (A1) //ater Table (A2) //tion (A3) //marks (B1) //ent Deposits (B2) //eposits (B3) ///at or Crust (B4) //eposits (B5) //tion Visible on Aerial //ely Vegetated Concar	one is requ	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface Well Data	3) s (B14) odor (C1) eres on Liv ed Iron (C4) tion in Tiller (C7) a (D9)	1)	Secondary Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom	the Soil Cracks (B6) age Patterns (B10) the son Water Table (C2) the Burrows (C8) thion Visible on Aerial Imagery (C9) the or Stressed Plants (D1) torphic Position (D2)
HYDROLO Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	pogy ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concar	I Imagery (I	Water-Sta Aquatic F Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface Well Data plain in R	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7) a (D9) emarks)	4) d Soils (C	Secondary Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom	the Soil Cracks (B6) age Patterns (B10) the son Water Table (C2) the Burrows (C8) thion Visible on Aerial Imagery (C9) the or Stressed Plants (D1) torphic Position (D2)
HYDROLO Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	pdy ydrology Indicators (minimum of e Water (A1) // (Ater Table (A2) // (A3) // (A3) // (A4) /	I Imagery (I	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ind Thin Mucl B7) Gauge or (B8) Other (Ex	ained Lea auna (B1 atic Plants Sulfide ( Rhizosph of Reduc on Reduc k Surface Well Data plain in R	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7) a (D9) emarks)	t) d Soils (C	Secondary Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom	the Soil Cracks (B6) age Patterns (B10) the son Water Table (C2) the Burrows (C8) thion Visible on Aerial Imagery (C9) the or Stressed Plants (D1) torphic Position (D2)
HYDROLO Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse	ydrology Indicators licators (minimum of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) tent Deposits (B2) teposits (B3) flat or Crust (B4) teposits (B5) tion Visible on Aerial tely Vegetated Concar tervations: ater Present? te Present?	I Imagery (Ive Surface	Water-State Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ind Thin Muci Thin Muci Gauge or (B8) Other (Ext No Depth (in No Depth (in Depth (in Depth (in	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduct on Reduct k Surface Well Data plain in R	3) s (B14) Odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7) a (D9) emarks)	4) d Soils (C	Secondary Surfac Surfac Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ad or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concar ervations: ater Present? e Present? present? apillary fringe)	I Imagery (I ve Surface Yes Yes Yes	Water-Sta  Aquatic F  True Aqua  Hydrogen  Oxidized  Presence  Recent In  Thin Muci  B7) Gauge or  (B8) Other (Ex  No X Depth (in  No X Depth (in	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduct on Reduct K Surface Well Date plain in R aches): aches): aches): aches): aches):	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7) a (D9) emarks)	d Soils (C	Secondary Surfac Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom FAC-N	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ad or Stressed Plants (D1) porphic Position (D2) Reutral Test (D5)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concar ervations: ater Present? e Present? present? apillary fringe)	I Imagery (I ve Surface Yes Yes Yes	Water-State Aquatic F True Aquatic F Hydrogen Oxidized Presence Recent Ind Thin Muci Thin Muci Gauge or (B8) Other (Ext No Depth (in No Depth (in Depth (in Depth (in	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduct on Reduct K Surface Well Date plain in R aches): aches): aches): aches): aches):	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7) a (D9) emarks)	d Soils (C	Secondary Surfac Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom FAC-N	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ad or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concar ervations: ater Present? e Present? present? apillary fringe)	I Imagery (I ve Surface Yes Yes Yes	Water-Sta  Aquatic F  True Aqua  Hydrogen  Oxidized  Presence  Recent In  Thin Muci  B7) Gauge or  (B8) Other (Ex  No X Depth (in  No X Depth (in	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduct on Reduct K Surface Well Date plain in R aches): aches): aches): aches): aches):	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7) a (D9) emarks)	d Soils (C	Secondary Surfac Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom FAC-N	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ad or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca Describe Re	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concar ervations: ater Present? e Present? present? apillary fringe)	I Imagery (I ve Surface Yes Yes Yes	Water-Sta  Aquatic F  True Aqua  Hydrogen  Oxidized  Presence  Recent In  Thin Muci  B7) Gauge or  (B8) Other (Ex  No X Depth (in  No X Depth (in	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduct on Reduct K Surface Well Date plain in R aches): aches): aches): aches): aches):	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7) a (D9) emarks)	d Soils (C	Secondary Surfac Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom FAC-N	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ad or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)
HYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inunda Sparse Field Obse Surface Wa Water Table Saturation I (includes ca Describe Re	ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) tion Visible on Aerial ely Vegetated Concar ervations: ater Present? e Present? present? apillary fringe)	I Imagery (I ve Surface Yes Yes Yes	Water-Sta  Aquatic F  True Aqua  Hydrogen  Oxidized  Presence  Recent In  Thin Muci  B7) Gauge or  (B8) Other (Ex  No X Depth (in  No X Depth (in	ained Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduct on Reduct K Surface Well Date plain in R aches): aches): aches): aches): aches):	3) s (B14) odor (C1) eres on Liv ed Iron (C4 tion in Tiller (C7) a (D9) emarks)	d Soils (C	Secondary Surfac Surfac Draina Dry-Sc Crayfic S (C3) Satura Stunte C6) Geom FAC-N	pe Soil Cracks (B6) age Patterns (B10) peason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ad or Stressed Plants (D1) orphic Position (D2) Neutral Test (D5)

Project/Site: Red Rock Solar		Cit	_ City/County: Cottonwood Sampling Date: 5/13/			
Applicant/Owner: Red Rock Sola	ar, LLC			State: MN	Sampling Point: UPL-10b	
Investigator(s): R. Scott		Se	ction, Township, Ra	nge: T106N R34W S1	D 697 16*	
Landform (hillslope, terrace, etc.): _				(concave, convex, none)		
Slope (%): 1 Lat: _44.	007948°		ng: <u>-94.874930°</u>		Datum: NAD 83	
Soil Map Unit Name: Glencoe cla	y loam, 0 to 1 perce	ent slopes		NWI classific	cation: Upland	
Are climatic / hydrologic conditions Are Vegetation, Soil	on the site typical for th	is time of year?	Yes X No_	(If no, explain in R		
Are Vegetation, Soil				eeded, explain any answe		
SUMMARY OF FINDINGS -						
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks:	Yes	40 <u>X</u>	Is the Sampled within a Wetlan		NoX	
VEGETATION - Use scienti	fic names of plants	<b>5.</b>				
Tree Stratum (Plot size: 30ft.		% Cover S	Dominant Indicator Species? Status	Dominance Test work Number of Dominant S That Are OBL, FACW,		
2 3		3.07		Total Number of Domir Species Across All Stra	50,000	
4 5				Percent of Dominant S That Are OBL, FACW,	pecies or FAC: (A/B)	
Sapling/Shrub Stratum (Plot size  1 2 3 4 5  Herb Stratum (Plot size: 5ft.				OBL species FACW species FAC species FACU species UPL species	Multiply by:  x 1 =  x 2 =  x 3 =  x 4 =  x 5 =	
1	38.01			Prevalence Index		
3				2 - Dominance Tes 3 - Prevalence Ind 4 - Morphological / data in Remark Problematic Hydro	Hydrophytic Vegetation st is >50% ex is ≤3.0¹ Adaptations¹ (Provide supporting s or on a separate sheet) phytic Vegetation¹ (Explain)	
Woody Vine Stratum (Plot size:	)	=	Total Cover	be present, unless dist	il and wetland hydrology must urbed or problematic.	
1 2				Hydrophytic Vegetation		
<u></u>		=		Present? Ye	s No_X	
Remarks: (Include photo number This data point was taken in a		sheet.)		d. 100% bare ground.		

Soll Sampling Point: UPL-1

Profile Des	cription: (Describe	to the depth	needed to docu	nent the	indicator	or confirn	the absence of in	dicators.)
Depth	Matrix			x Feature			19 <u>11</u> 0.0000 000	<u> </u>
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup> _	Texture	Remarks
0-12	10YR 2/1	_ 100 _		w <del>a</del>	55 <del>7</del>	-	L 3: 4	
12-18	10YR 2/1	100					<u>L</u>	
18-24	10YR 3/2	100					CL	
	-			-				
-	-							
·	-			200				
	· -			101 <del>2</del>				
	Concentration, D=De	pletion, RM=F	Reduced Matrix, M	S=Maske	d Sand Gra	ains.		=Pore Lining, M=Matrix.
CONTRACTOR SERVICE	Indicators:							Problematic Hydric Soils <sup>3</sup> :
Histoso			7.0	Gleyed Ma Redox (St			Coast Prair	ie Redox (A16)
100 100 100 100 100 100 100 100 100 100	pipedon (A2) listic (A3)		10 Table 1 15 Table 1	d Matrix (			1,500	nese Masses (F12)
80 70	en Sulfide (A4)		0 <del>-2</del> 890		neral (F1)			w Dark Surface (TF12)
	d Layers (A5)			Gleyed M				ain in Remarks)
	uck (A10)			d Matrix (				•
Deplete	ed Below Dark Surfa	ce (A11)	Redox	Dark Surfa	ace (F6)			
Thick D	ark Surface (A12)		Deplete	d Dark Si	urface (F7)	ĺ	3Indicators of h	ydrophytic vegetation and
Sandy	Mucky Mineral (S1)		Redox	Depression	ns (F8)			Irology must be present,
	ucky Peat or Peat (						unless distu	urbed or problematic.
1500	Layer (if observed	33						
Type:	Schrode Colonia Colonia		<u> </u>				Hydric Soil Pres	sent? Yes No_X_
Depth (ir	nches):		_				11,941.10 00.11 1100	
HYDROLO	OGY							
	drology Indicators	i!						
	icators (minimum of		ed: check all that a	(ylac			Secondary In	dicators (minimum of two required)
0000 38	Water (A1)		Water-Sta	West State	res (B9)			Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa					Patterns (B10)
	ion (A3)		True Aqua					son Water Table (C2)
	Marks (B1)		Hydrogen					Burrows (C8)
	ent Deposits (B2)		Oxidized I			ina Roots		on Visible on Aerial Imagery (C9)
	eposits (B3)		Presence					or Stressed Plants (D1)
700	at or Crust (B4)		Recent Iro					phic Position (D2)
Service and the service of the	posits (B5)		Thin Muck					utral Test (D5)
	ion Visible on Aeria	Imagery (B7)			Programme and the second			
Sparse	ly Vegetated Conca	ve Surface (B			7/3/COC-C-E			
Field Obse	rvations:							
Surface Wa	ter Present?	Yes N	o X Depth (in	ches):				
Water Table			o X Depth (in					
Saturation F			o X Depth (in				and Hydrology Pre	esent? Yes No _X_
(includes ca	pillary fringe)	AS +A	166 242 603 639				155 859	
Describe Re	ecorded Data (strea	m gauge, mor	itoring well, aerial	photos, p	revious ins	pections),	if available:	
Domarke:								
Remarks:								

Project/Site: Red Rock Solar	(	City/County: Cottonwood Sampling Date:				3/2020	
Applicant/Owner: Red Rock Solar	·, LLC				State: MN	Sampling Point: UP	L-11b
Investigator(s): R. Scott			Section, Town	ship, Ran	nge: T106N R34W S1	· 447 666 44°	
Landform (hillslope, terrace, etc.): T	oe slope		Loc	cal relief (	concave, convex, none):	Concave	
Slope (%): 1 Lat: _44.0			_ong:94.87	7753°	-	Datum: NAD 83	
Soil Map Unit Name: Glencoe clay	/ loam, 0 to 1 perc	ent slopes			NWI classific	cation: Upland	
Are climatic / hydrologic conditions of							
Are Vegetation, Soil,					Normal Circumstances" p	A CONTRACT CONTRACT	No
Are Vegetation, Soil,	aran ang katapatan mang				eded, explain any answe		
SUMMARY OF FINDINGS -							ıres, etc.
Hydrophytic Vegetation Present?	Yes	No. X			Part May also		
Hydric Soil Present?	Yes	No X	2005-000	Sampled .		2002	
Wetland Hydrology Present?	Yes	No X	within	a Wetlan	d? Yes	No_X_	
Remarks:							
VEGETATION – Use scientif	c names of plant	ts.					
Tree Stratum (Plot size: 30ft.		3	Dominant In Species?	Status	Dominance Test work  Number of Dominant S That Are OBL, FACW, o	pecies	(A)
2. 3.					Total Number of Domin Species Across All Stra	nant	(B)
4					Percent of Dominant Sp	1857 N. D. 1857	
5					That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: 1 2					Prevalence Index work	Multiply by	
3.					FACW species		
4					FAC species	x 3 =	
5					FACU species	x 4 =	
Herb Stratum (Plot size: 5ft.	)		= Total Cover		UPL species		
1	845.0				Column Totals:	(A)	(B)
2.					Prevalence Index	= B/A =	
3.					Hydrophytic Vegetation	on Indicators:	
4.					1 - Rapid Test for H	Hydrophytic Vegetatio	n
5					2 - Dominance Tes	st is >50%	
6					3 - Prevalence Inde		
7					4 - Morphological A	Adaptations <sup>1</sup> (Provide s or on a separate she	supporting
8					Problematic Hydro		
9		-27			Problematic Hydrol	phytic vegetation (Ex	(piairi)
10.				100	<sup>1</sup> Indicators of hydric soi be present, unless distu	il and wetland hydrolo urbed or problematic.	gy must
Woody Vine Stratum (Plot size:				ŀ		mese er dister Steichill	
1				72	Hydrophytic Vegetation		
2			= Total Cover		Present? Yes	s No_X	<b>—</b>
Remarks: (Include photo numbers	here or on a separat		. 5.61 56761		16		
This data point was taken in a	•		as recently	planted.	. 100% bare ground.		

SOIL Sampling Point: UPL-1

Profile Desc	cription: (Describe	to the depth	needed to document the indicator o	r confirm	n the absence of indicators.)
Depth	Matrix		Redox Features		
(inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
0-10	10YR 2/1	100			SiL
10-16	10YR 2/1	100		EØ.	L
16-24	10YR 3/2	100		72.	CL
	-			- 13	
·——	<u> </u>				<u>2</u> <u>2</u> 2
	-				
es	· =	47)			2 2
<sup>1</sup> Type: C=C	oncentration, D=Dep	oletion, RM=R	Reduced Matrix, MS=Masked Sand Grai	ns.	<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:				Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Gleyed Matrix (S4)		Coast Prairie Redox (A16)
Histic E	pipedon (A2)		Sandy Redox (S5)		Dark Surface (S7)
Black H	istic (A3)		Stripped Matrix (S6)		Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)		Loamy Mucky Mineral (F1)		Very Shallow Dark Surface (TF12)
	d Layers (A5)		Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
7,53,500	uck (A10)		Depleted Matrix (F3)		
	d Below Dark Surfac	e (A11)	Redox Dark Surface (F6)		
	ark Surface (A12)		Depleted Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)	MONOR!	Redox Depressions (F8)		wetland hydrology must be present,
	ucky Peat or Peat (S	- 53			unless disturbed or problematic.
Date	Layer (if observed)	:			
Type:			<u></u>		Hydric Soil Present? Yes No _X
Depth (in	ches):		_		riyuric 30ii Present? Tes No
Remarks:					· ·
HYDROLO	GY				
production of the second	drology Indicators:	,			
Part to the same taken to the same			di shask all that apply)		Secondary Indicators (minimum of two required)
0020 53	specific Parameter	one is required	d; check all that apply)		ent at 1 tent page 10 courant
	Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	ater Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
Saturati	on (A3)		True Aquatic Plants (B14)		Dry-Season Water Table (C2)
Water M	farks (B1)		Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sedime	nt Deposits (B2)		Oxidized Rhizospheres on Living	g Roots	(C3) Saturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Presence of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)		Recent Iron Reduction in Tilled	Soils (C6	6) Geomorphic Position (D2)
Iron Dep	posits (B5)		Thin Muck Surface (C7)		FAC-Neutral Test (D5)
Inundati	on Visible on Aerial	Imagery (B7)	Gauge or Well Data (D9)		
Sparsel	y Vegetated Concav	e Surface (B8	Other (Explain in Remarks)		
Field Obser	vations:				
Surface Wat	er Present?	es No	Depth (inches):		
Water Table			Depth (inches):		
Saturation P			Depth (inches):		and Hydrology Present? Yes No _X
	pillary fringe)			-	
Describe Re	corded Data (stream	n gauge, moni	itoring well, aerial photos, previous insp	ections),	if available:
Remarks:					

Project/Site: Red Rock Solar		c	city/County:	Cottonwo	ood	Sampling Date: 5/1	2/2020
Applicant/Owner: Red Rock Solar	r, LLC				State: MN	Sampling Point: UF	PL-12b
Investigator(s): R. Scott		8	Section, Tow	nship, Ran	ge: T106N R34W S1	1	
Landform (hillslope, terrace, etc.): T	oe slope		L	ocal relief (	concave, convex, none):	Concave	
Slope (%): 1 Lat: _44.0			.ong: <u>-94.8</u>	84230°		Datum: NAD 83	
Soil Map Unit Name: Glencoe clay	y loam, 0 to 1 perce	nt slopes			NWI classific	ation: Upland	
Are climatic / hydrologic conditions of				•			
Are Vegetation, Soil,					Normal Circumstances" p		No
Are Vegetation, Soil,	A-M GRAN SANGANAN TANG				eded, explain any answe		
SUMMARY OF FINDINGS -							ures, etc.
Hydrophytic Vegetation Present?	Yes	10 X		e palaines construentes successos su	otress acco		
Hydric Soil Present?	Yes N	10 <u>X</u>	37755553	Sampled A		2000	
Wetland Hydrology Present?	Yes N	10 <u>X</u>	withi	n a Wetland	d? Yes	No_X_	
Remarks:							
VEGETATION - Use scientif	ic names of plants						
Tree Stratum (Plot size: 30ft.	- 700	Absolute % Cover		Status	Dominance Test work Number of Dominant Sp That Are OBL, FACW, of	pecies	(A)
2				<u> </u>	Total Number of Domini Species Across All Stra	ant	(B)
4						52546.5 AST	(5)
5					Percent of Dominant Sp That Are OBL, FACW, of		(A/B)
Sapling/Shrub Stratum (Plot size: 1 2 3 4					OBL species FACW species FAC species	Multiply b x 1 = x 2 = x 3 =	
5					FACU species		
Herb Stratum (Plot size: 5ft.	)		= Total Cove	er	UPL species  Column Totals:		
2.					Prevalence Index	= B/A =	
3				[	Hydrophytic Vegetation		notes.
4				<u> </u>	1 - Rapid Test for H		on
5					2 - Dominance Tes		
6					3 - Prevalence Inde		
7					4 - Morphological A	daptations (Provide s or on a separate sh	supporting eet)
8					Problematic Hydrop		
9				<u> </u>			
10			= Total Cove	er	<sup>1</sup> Indicators of hydric soil be present, unless distu	l and wetland hydrolo irbed or problematic.	ogy must
1					Hydrophytic		
2				- 22	Vegetation	🗸	
			= Total Cove	er	Present? Yes	s No_X	<u> </u>
Remarks: (Include photo numbers This data point was taken in a	•		ecently pla	anted. 100	% bare ground.		

SOIL Sampling Point: UPL12b

Depth	cription: (Describe Matrix			ox Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	_Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 2/1	100						
12-24	10YR 2/1	100		-View	70.		CL	
12 2 1	1011(2/1	100	23	-1000				
	g <u>c</u>	202	8	_112			<u> </u>	
	-			-0.00				
·						ri	-	
	Concentration, D=Dep	oletion, RM	=Reduced Matrix, M	S=Masked	d Sand Gra	ains.		L=Pore Lining, M=Matrix.
	Indicators:		400000000000000000000000000000000000000		450940009400940			Problematic Hydric Soils <sup>3</sup> :
Histoso			7.0	Gleyed Ma			(1)	irie Redox (A16)
_	pipedon (A2)			Redox (St			Dark Surfa	
	listic (A3) en Sulfide (A4)			d Matrix (S Mucky Mi	(5)			anese Masses (F12) ow Dark Surface (TF12)
	ed Layers (A5)			Gleyed M	The state of the s			plain in Remarks)
	uck (A10)			ed Matrix (			0.1101 (EX	sian in remaine)
	ed Below Dark Surface	ce (A11)		Dark Surfa	N. C.			
	ark Surface (A12)		Deplete	ed Dark Su	ırface (F7)		3Indicators of I	hydrophytic vegetation and
Sandy	Mucky Mineral (S1)		Redox	Depressio	ns (F8)		wetland hy	drology must be present,
	ucky Peat or Peat (S	- 2.5					unless dist	turbed or problematic.
Restrictive	Layer (if observed)	:						
								esent? Yes No _X_
Type:								
100000000000000000000000000000000000000	nches):						Hydric Soil Pre	163 NO
Depth (ir							Hydric Soil Pre	NO
Depth (ir	nches):						Hydric Soil Pre	NO
Depth (in Remarks:  YDROLO Wetland Hy	OGY vdrology Indicators:	:						
Depth (in Remarks:  YDROLO Wetland Hy	OGY	:	red; check all that a	pply)				ndicators (minimum of two required
Depth (in Remarks:  YDROLO Wetland Hy Primary Ind Surface	OGY /drology Indicators	:	Water-Sta	ained Leav			Secondary I Surface	ndicators (minimum of two required) Soil Cracks (B6)
Depth (in Remarks:  YDROLO Wetland Hy Primary Ind Surface High W	OGY  vdrology Indicators: icators (minimum of ce Water (A1) ater Table (A2)	:	Water-Sta	Salara Salara			Secondary I Surface Drainag	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10)
Depth (in Remarks:  YDROLO Wetland Hy Primary Ind Surface High W	OGY /drology Indicators	:	Water-Sta Aquatic F	ained Leav	)		Secondary I Surface Drainag	ndicators (minimum of two required) Soil Cracks (B6)
Depth (in Remarks:  YDROLO  Wetland Hy Primary Ind Surface High W Saturat	OGY  vdrology Indicators: icators (minimum of ce Water (A1) ater Table (A2)	:	Water-Sta Aquatic F	ained Leav auna (B13 atic Plants	) (B14)		Secondary I  Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two required Soil Cracks (B6) le Patterns (B10) ason Water Table (C2) in Burrows (C8)
Primary Ind Surface High W Saturat Water I Sedime	OGY  rdrology Indicators: icators (minimum of of the Water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2)	:	<ul><li>Water-Sta</li><li>Aquatic F</li><li>True Aqua</li><li>Hydrogen</li><li>Oxidized</li></ul>	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	(B14) dor (C1) eres on Liv		Secondary I  Surface Drainag Dry-Sea Crayfish (C3) Saturati	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ason Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9)
Primary Ind Surface High W Saturat Water I Sedime	OGY rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1)	:	Water-Sta Aquatic F True Aqua Hydrogen	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	(B14) dor (C1) eres on Liv		Secondary I  Surface Drainag Dry-Sea Crayfish (C3) Saturati	ndicators (minimum of two required Soil Cracks (B6) le Patterns (B10) ason Water Table (C2) in Burrows (C8)
Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M	orches):	:	<ul><li>Water-Sta</li><li>Aquatic F</li><li>True Aqua</li><li>Hydrogen</li><li>Oxidized</li></ul>	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce	(B14) (B14) dor (C1) eres on Livied Iron (C4	1)	Secondary I Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted G) Geomo	ndicators (minimum of two required Soil Cracks (B6) de Patterns (B10) deson Water Table (C2) de Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De	orches):	: one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Iru	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct k Surface	(B14) dor (C1) eres on Livi ed Iron (C4 ion in Tilled	1)	Secondary I Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted G) Geomo	ndicators (minimum of two required Soil Cracks (B6) le Patterns (B10) ason Water Table (C2) in Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De	orches):	: one is requi	Water-Sta Aquatic F True Aqua Hydrogen Oxidized Presence Recent Ira Thin Mucl 7) Gauge or	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data	(B14) dor (C1) eres on Livi ed Iron (C4 don in Tilled (C7) (D9)	1)	Secondary I Surface Drainag Dry-Sea Crayfish (C3) Saturati Stunted G) Geomo	ndicators (minimum of two required Soil Cracks (B6) de Patterns (B10) deson Water Table (C2) de Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) rphic Position (D2)
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Appendix D Photographic Log

