Appendix H Wetland Delineation

Wetlands and Waters Survey

Elk Creek Solar Rock County, Minnesota



August 14, 2023

PRESENTED TO

Elk Creek Solar, LLC 8400 Normandale Blvd, Suite 1200 Bloomington, Minnesota 55437

PRESENTED BY

Tetra Tech, Inc. 2001 Killebrew Drive, Suite 141 Bloomington, Minnesota 55425 (612) 643-2200

Kathy Bellrichard Certified Minnesota Wetland Professional #1320

EXECUTIVE SUMMARY

This report presents the findings of a Wetlands and Waters Survey completed on behalf of Elk Creek Solar, LLC, for the proposed Elk Creek Solar project in Rock County, Minnesota (the Project). The Project Area includes approximately 1,673 acres of land where solar energy facilities may be developed. Wetland delineation surveys were previously completed by HDR, Inc. (HDR) for 1,593 acres of the Project Area in 2019 (HDR Survey Area). The remaining 80 acres have subsequently been added to the Project Area (Expansion Area).

The field surveys completed for the Project identified 10 wetland and water features totaling approximately 33 acres within the Project Area. Six of the wetlands in the Project Area were previously delineated by HDR and Tetra Tech verified their boundaries during the field survey. Each of the identified wetlands and waters in the Project Area was reviewed for potential jurisdiction with one or more of the following regulating entities:

- U.S. Army Corps of Engineers (USACE) waters of the U.S. (WOTUS) under Section 404 of the Clean Water Act (CWA).
- The Minnesota Wetland Conservation Act (WCA) administered locally by Rock County.
- Mapped resources in the Public Waters Inventory (PWI) regulated by the Minnesota Department of Natural Resources (MN DNR) under the Public Waters Work Program.

Table ES-1 summarizes the identified wetland and water resources and their recommended jurisdictional status. However, only the USACE, Rock County, and MN DNR can make the final determination on the regulatory jurisdiction of wetlands and waters

Table ES-1: Summary of Wetlands and Waters in the Project Area and Probable Regulatory Jurisdiction

	Cowardin Classification	Proje	ct Area	MN	E and WCA diction		WCA diction	US <i>!</i> Jurisd	ACE liction		lot ictional
Aquatic Resource	Code(s) ¹	Count	Acres	Count	Acres	Count	Acres	Count	Acres	Count	Acres
Seasonally Flooded Basin Wetland	PEMAf	1	0.355	0	0	1	0.355	0	0	0	0
Wet Meadow Wetland	PEMB, PEMBf, PEMBx	6	30.203	3	26.665	2	3.137	0	0	1	0.401
ν	Vetlands Subtotal	7	30.558	3	26.665	3	3.492	0	0	1	0.401
Perennial Stream	R2UBF, R2UBFx	2	2.174	0	0	0	0	2	2.174	0	0
Intermittent Stream	R4SBC	1	0.336	0	0	0	0	1	0.336	0	0
Streams Subtotal		3	2.510	0	0	0	0	3	2.510	0	0
Total of All A	quatic Resources	10	33.068	3	26.665	3	3.492	3	2.510	1	0.401

¹ Cowardin wetland classification codes are defined in Appendix D of the report.

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Purpose	1
1.2 Site Location and Environmental Setting	
1.3 Regulatory Framework	
1.3.1 U.S. Army Corps of Engineers	
1.3.2 Minnesota Wetland Conservation Act	
1.3.3 Minnesota Department of Natural Resources	
1.3.4 Minnesota Pollution Control Agency	
1.3.5 Rock County	
2.0 METHODS	
2.1 Existing Information Review	4
2.2 Desktop Wetlands and Waters Mapping	
2.3 Wetlands and Waters Survey	
2.3.1 Field Survey	
2.3.2 Offsite Hydrology Assessment of Non-Wetland Areas	
3.0 RESULTS	
3.1 Existing Information Review and Desktop Mapping	6
3.1.1 National Wetlands Inventory (NWI)	
3.1.2 National Hydrography Dataset (NHD)	
3.1.3 Public Waters Inventory (PWI)	
3.1.4 Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) and Flo Insurance Rate Map (FIRM)	od
3.1.5 Soil Survey Geographic (SSURGO) Soils	7
3.1.6 Previous Reports	8
3.1.7 Desktop Wetlands and Waters Mapping	8
3.2 Wetlands and Waters Survey	8
3.2.1 Wetlands	9
3.2.2 Streams	10
3.2.3 Non-Wetland Areas	11
3.3 Regulatory Review	12
3.3.1 U.S. Army Corps of Engineers	12
3.3.2 Minnesota Wetland Conservation Act	12
3.3.3 Minnesota Department of Natural Resources	12
A O REFERENCES	13

LIST OF TABLES

Table 1. Aerial Photograph Wetland Signature Codes	4
Table 2. Antecedent Precipitation Analysis	9
Table 3. Delineated Wetlands in the Project Area	
Table 4. Delineated Streams in the Project Area	
Table 5. Observed Wetland Signatures in Non-Wetland Areas in Normal Years	

APPENDICES

APPENDIX A: FIGURES

Figure 1 – Project Area Location

Figure 2 - Desktop Wetland and Waters Mapping

Figure 3 – SSURGO Soils

Figure 4 – Wetlands and Waters Survey Results

Figure 5 – Wetlands and Waters Jurisdiction

APPENDIX B: WETLAND DETERMINATION DATA FORMS AND PHOTOGRAPHS

APPENDIX C: OFFSITE HYDROLOGY REVIEW OF NON-WETLAND AREAS

APPENDIX D: WETLAND CLASSIFICATION KEY

1.0 INTRODUCTION

1.1 PURPOSE

Elk Creek Solar, LLC proposes to develop the Elk Creek Solar project (the Project) in Rock County, Minnesota. The Project Area includes approximately 1,673 acres of land where solar energy facilities may be developed. Wetland delineation surveys were previously completed by HDR, Inc. (HDR) for 1,593 acres of the Project Area in 2019 (HDR Survey Area) (HDR 2019a, HDR 2019b), and the remaining 80 acres have subsequently been added to the Project Area (Expansion Area) (Appendix A: Figure 1).

Tetra Tech, Inc. (Tetra Tech) has completed surveys to identify and delineate wetlands and waters in the Project Expansion Area and reverify the boundaries of the wetlands previously surveyed by HDR. The wetlands and waters survey included desktop and field investigations of the Project Area to verify the presence and location of wetlands and other surface waters and determine which, if any, may be subject to U.S. Army Corps of Engineers (USACE) jurisdiction, Minnesota Department of Natural Resources (MN DNR) jurisdiction, or regulated locally under the Minnesota Wetland Conservation Act (WCA). This report describes the Project Area, regulatory framework, methods, survey results and conclusions, and references used to support the conclusions. Appendices include figures illustrating the Project Area, select reviewed reference materials, survey results, wetland determination data forms, and photographs.

1.2 SITE LOCATION AND ENVIRONMENTAL SETTING

The Project Area includes approximately 1,673 acres of land where the proposed solar energy facilities may be developed (Appendix A: Figure 1). The Project Area is located approximately 1 mile north of the town of Magnolia in Rock County, Minnesota and encompasses portions of Sections 27, 34, and 35 in Vienna Township (Township 103 North, Range 44 West) and Section 3 in Magnolia Township (Township 102 North, Range 33 West).

The landscape surrounding the Project Area includes gently rolling topography dissected by numerous waterways that drain generally southwest to the Big Sioux River (USDA 1988). The Project Area lies within the Champepadan Creek-Rock River watershed. Most of the Project Areas drains generally southeast toward Elk Creek, which is located near the southeast corner of the Project Area. The northern-most part of the Project Area drains north toward Champepadan Creek, located 0.5 mile north of the Project Area, or west toward the Rock River.

1.3 REGULATORY FRAMEWORK

1.3.1 U.S. Army Corps of Engineers

The USACE has regulatory jurisdiction over waters of the U.S. (WOTUS) under Section 404 of the Clean Water Act (CWA) as defined by 33 CFR Part 328. The extent of the USACE regulatory jurisdiction over WOTUS was defined by the USACE and U.S. Environmental Protection Agency (EPA) in a final rule published in the Federal Register on January 18, 2023, which became effective on March 20, 2023 (88 FR 3004, January 18, 2023). However, the

U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. EPA*, 598 U.S. ____ (2023) found that only wetlands with a continuous surface connection to bodies that are WOTUS in their own right are WOTUS. As of May 26, 2023, USACE has indicated that they will be interpreting the definition of WOTUS consistent with the Supreme Court's decision (USACE 2023a). USACE and EPA are developing a rule to amend the 2023 definition of WOTUS consistent with the Supreme Court's decision that is expected to be issued by September 1, 2023 (USACE 2023b).

The 2023 definition of WOTUS as interpreted consistent with the *Sackett* decision indicates that the USACE has regulatory jurisdiction over traditional navigable waters; tributaries of traditional navigable waters that are relatively permanent; and wetlands adjacent to another jurisdictional water such that the wetland is an indistinguishable part of the jurisdictional water. Relatively permanent tributaries have flowing or standing water year-round or continuously during certain times of the year. Relatively permanent waters do not include surface waters with flowing or standing water for only a short duration in direct response to precipitation.

The USACE is the sole authority in determining whether federal jurisdiction extends to specific wetlands or waters. Suggestions regarding the USACE jurisdiction of wetlands and waters in this report are preliminary and based on Tetra Tech's interpretation of the guidance issued by the USACE and EPA, review of available desktop data, and evidence observed in the field. There are two types of jurisdictional determinations (JDs) that can be requested from USACE to determine the jurisdiction of wetlands and waters. A preliminary JD (PJD) is a nonbinding written indication that for purposes of calculating impacts and determining compensatory mitigation requirements all waters and wetlands in the review area are treated as jurisdictional WOTUS. An approved JD (AJD) is an official USACE determination that jurisdictional WOTUS are either present or absent in the review area. An AJD precisely identifies the limits of those wetlands and waters determined to be jurisdictional under the CWA.

The USACE authorizes certain activities in navigable waters and WOTUS with pre-issued Nationwide Permits (NWPs) or Regional General Permits (RGPs). Impacts of up to 0.5 acre for utility projects such as solar energy facilities may be authorized by the USACE St. Paul District Utility RGP or NWP 51 for Land-Based Renewable Energy Generation Facilities with mitigation and a Pre-Construction Notification (PCN) usually being required if impacts exceed 0.1 acre of WOTUS. In order to use a NWP or RGP, all general and regional conditions must be met. A certification from the state is required under Section 401 of the CWA for all NWPs and RGPs. The Minnesota Pollution Control Agency (MPCA) is responsible for issuing 401 Water Quality Certifications in Minnesota (see Section 1.3.4). The USACE St. Paul District has regulatory jurisdiction over the Project Area.

1.3.2 Minnesota Wetland Conservation Act

The State of Minnesota regulates wetlands under the Minnesota Wetland Conservation Act (WCA) of 1991, currently implemented under MN Rules Chapter 8420. The WCA does not apply to public waters and public waters wetlands that have been inventoried by the Minnesota Department of Natural Resources (MN DNR) (see Section 1.3.3) or to "incidental wetlands", which are wetlands created in non-wetland areas by actions that were not intended to create the wetland such as certain ditches or other excavations.

The WCA requires anyone proposing to drain, fill, or excavate a wetland first to try to avoid disturbing the wetland; second, to try to minimize any impact on the wetland; and, finally, to replace any lost wetland acres, functions, and values. The WCA also establishes eight exempt activities that do not require wetland replacement. One of these exemptions is the "de minimis" exemption for minor wetland impacts. The de minimis exemption threshold ranges from 20 square-feet to 10,000 square-feet depending on the impacted wetland's location in the state, the type of wetland, and location inside or outside of a shoreland wetland protection zone (see Section 1.3.5). Impacts below the relevant threshold do not require wetland replacement. The WCA is administered by Local Government Units (LGU). Rock County is the LGU responsible for administering the WCA for the Project.

1.3.3 Minnesota Department of Natural Resources

The MN DNR Public Waters Work Permit Program applies to those lakes, wetlands, and streams identified on MN DNR Public Water Inventory maps. Proposed projects affecting the course, current, or cross-section of these water bodies may require a Public Waters Work Permit from the MN DNR. There are two types of Public Waters Work Permits available from the MN DNR: general and individual permits. General permits are "pre-issued" permits issued on a statewide or county level. If work proposed in public waters or public waters wetlands meets the requirements of a specific general permit, an individual permit is not required. There are also several categories of projects that are excluded from the Public Waters Work Permit requirement; however, these exclusions would not typically apply to solar energy projects.

1.3.4 Minnesota Pollution Control Agency

Section 401 of the CWA requires certification from the state that any discharge authorized by an NWP or RGP does not violate state water quality standards. The MPCA issues 401 Water Quality Certifications for NWPs and RGPs in Minnesota. The MPCA granted water quality certification with conditions for NWP 51 in a letter dated December 21, 2020, and for the Utility RGP in a letter dated January 13, 2023.

1.3.5 Rock County

Minnesota Regulations, Parts 6120.2500 - 6120.3900 provide minimum standards and criteria to be incorporated into local government shoreland management controls that apply to shorelands of public waters of the state (see Section 1.3.3) that are subject to local government land use controls. Each local government is responsible for the administration and enforcement of its shoreland management controls adopted in compliance with these standards and criteria. Rock County defines their shoreland districts as including the area within 1,000 feet of the normal highwater mark of a lake, pond, or flowage; and 300 feet from a river or stream, or the landward extent of a floodplain, whichever is greater (Rock County 2000). The WCA de minimis exemption thresholds for wetlands within the shoreland zone are less than those outside the shoreland zone (see Section 1.3.2).

2.0 METHODS

2.1 EXISTING INFORMATION REVIEW

Tetra Tech reviewed available information to identify potential wetlands and waters areas within the Project Area. The following data sources were reviewed:

- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS 2022);
- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) (USGS 2022);
- MN DNR Public Waters Inventory (PWI) (MN DNR 2020);
- Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) (FEMA 2023);
- FEMA Flood Insurance Rate Map (FIRM) Panel 270642B (FEMA 1988);
- Natural Resources Conservation Service (NRCS) Soil Survey Geographic (gSSURGO) Soils (NRCS 2022);
- MN DNR 2-foot elevation contours (MN DNR 2011);
- Aerial photography from 2008, 2015, 2017, 2019, and 2021 from U.S. Department of Agriculture (USDA)
 Farm Service Agency (FSA) National Agricultural Imagery Program (NAIP);
- Historical precipitation data from the Minnesota State Climatology Office (Minnesota State Climatology Office 2023); and
- HDR 2019 Wetland Delineation Reports (HDR 2019a, HDR 2019b).

2.2 DESKTOP WETLANDS AND WATERS MAPPING

Tetra Tech reviewed previous wetland delineation reports, aerial photographs, elevation data, NWI, NHD, PWI, and SSURGO soils data to identify potential wetlands and waters within the Project Area. Using methods described by USACE and the Minnesota Board of Water and Soil Resources (BWSR) (USACE and BWSR 2016), the aerial photographs were reviewed for wetland signatures, and antecedent precipitation was evaluated to determine if the conditions preceding each photograph were normal, wet, or dry. Signatures at locations of potential wetlands and waters on aerial photographs were classified using eight codes (Table 1). The locations of desktop wetlands and waters were digitized using ArcGIS mapping software.

Table 2. Aerial Photograph Wetland Signature Codes

Code	Classification	Implication	Code	Classification	Implication
CS	Crop Stress	Wetland	WS	Wetland Signature	Wetland
DO	Drowned Out	Wetland	AP	Altered Pattern	Wetland
NC	Not Cropped	Wetland	SS	Soil Wetness Signature	Wetland
SW	Standing Water	Wetland	NV/NSS	Normal Vegetative Cover/ No Soil Wetness	Non-wetland

2.3 WETLANDS AND WATERS SURVEY

The wetlands and waters survey included field investigations of all areas of the Project Area and offsite hydrology review using aerial photography to verify the presence or absence of wetlands and other surface waters in the Project Area.

2.3.1 Field Survey

Wetlands were delineated in the Project Area using the level two on-site routine determination method set forth in the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, Version 2.0 (USACE 2010). Potential wetlands were identified based on the review of existing data and observations made at the time of the survey. A transect was established in a representative transition zone of each potential wetland. The transect consisted of one sample point in the potential wetland, and if wetland criteria were met, one point in non-wetland. Vegetation, soil, and hydrology data was recorded on electronic data forms. Plant species dominance at sample points was based on the percent cover visually estimated within a 5-foot radius of the sample point for the herbaceous layer, a 15-foot radius for the shrub layer, and a 30-foot radius for tree and vine layers. Wetland indicator status for all plant species followed the National Wetland Plant List, Version 3.5 (USACE 2020). The wetland/non-wetland boundary was established based on the recorded sample point information. If a potential wetland did not meet all three wetland delineation criteria (hydrophytic vegetation, hydric soils, and hydrology) based on observations made at the time of the field visit it was determined to be non-wetland.

The previously delineated wetlands in the HDR Survey Area were reviewed to verify there were no significant changes to the boundaries. The wetland boundaries were verified based on general observations of select wetland indicators including vegetation, hydrology, topography, and/or soils as needed in the professional judgement of the wetland specialist conducting the survey. Paired sample points were not documented on wetland determination data forms if the wetland boundary appeared unchanged. Field observations and photographs of the verified wetland boundaries were documented.

Boundaries for non-wetland waters (i.e., ponds and streams) were established based on observations of the ordinary high water mark (OHWM), which is defined as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (51 FR 41251, November 13, 1986).

Wetlands and waters boundaries were generally established only within the Project Area. If the boundary extended outside of the Project Area and was not mapped, observations regarding that portion of the feature extending outside of the Project Area were recorded. Wetlands and waters were classified according to Circular 39 (Shaw and Fredine 1971), Cowardin (Federal Geographic Data Committee [FGDC] 2013), and plant community (Eggers and Reed 2015) methods.

An Arrow 100 GPS receiver with sub-meter accuracy paired with a tablet running ESRI's Survey123 for ArcGIS application was used in the field to survey the locations of sample points, the wetland/non-wetland boundaries, and

OHWM boundaries. Upon completion of the survey, the wetland specialist who captured the field data conducted a quality control review to ensure the spatial and attribute data of the features collected correspond with field observations.

2.3.2 Offsite Hydrology Assessment of Non-Wetland Areas

Historical precipitation records and aerial photography were used to evaluate the long-term history of wetland hydrology in accordance with the USACE and BWSR guidance concerning offsite wetland mapping conventions for agricultural land (USACE and BWSR 2016) for those desktop wetlands and waters within the Project Area that were determined to be non-wetlands during the field survey. Antecedent precipitation conditions were evaluated for readily available aerial photographs of the Project Area to determine which aerial photographs were taken following periods of normal precipitation. Antecedent precipitation was classified as normal, wet, or dry by comparing the precipitation during the three months preceding aerial photography dates to the 30-year average using the Minnesota Climatology Office tool (Minnesota State Climatology Office 2023).

The offsite hydrology assessment method generally applies a wetland determination when wetland signatures appear in at least 50 percent of aerial photographs from normal years, and a non-wetland determination when wetland signatures are lacking in more than 70 percent of aerial photographs from those years. The desktop wetlands and waters with a non-wetland field survey determination were reviewed in each of the available aerial photographs with normal antecedent precipitation for wetland signatures as described above in Section 2.2 to verify that wetland hydrology is absent at those locations (i.e., wetland signatures observed in less than 50 percent of aerial photographs). If aerial photography from at least five normal years was not available, equal numbers of aerial photographs from wet and dry years were selected so that aerial photography from at least five years was reviewed.

The review of historical precipitation records and aerial photography to evaluate the long-term history of wetland hydrology is most effective in agricultural fields planted with annual row crops. Therefore, the assessment was conducted with caution for any areas that did not appear to be planted with annual row crops in one or more of the reviewed aerial photographs.

3.0 RESULTS

3.1 EXISTING INFORMATION REVIEW AND DESKTOP MAPPING

3.1.1 National Wetlands Inventory (NWI)

There are 29 NWI mapped wetlands in the Project Area totaling approximately 33.8 acres (Appendix A: Figure 2). The mapped wetlands include 16 freshwater emergent wetlands (PEM1A, PEM1Af, PEM1B, PEM1C, PEM1F) totaling approximately 24.7 acres, and 13 riverine wetlands (R4SBC, R4SBCx, R5UBH) totaling approximately 9.1 acres. The mapped wetlands are primarily located along drainages throughout the Project Area.

3.1.2 National Hydrography Dataset (NHD)

There are 10 NHD-mapped stream or artificial path segments totaling approximately 4.2 miles, and one NHD-mapped waterbody that is 0.4 acre in the Project Area (Appendix A: Figure 2). The waterbody is located in the northern part of the Project Area and is classified as a perennial pond. The streams are mapped throughout the Project Area and generally align with the riverine wetlands in the NWI (see Section 3.1.1). The streams are all unnamed and are classified as intermittent except for an approximately 140-foot artificial path through the pond.

3.1.3 Public Waters Inventory (PWI)

There are no Public Waters mapped in the Project Area (Appendix A: Figure 2). Elk Creek is mapped immediately to the southeast of the Project Area, and Champeadan Creek is mapped approximately 0.5 mile north of the Project Area.

The approximate shoreland wetland protection zone for the public waters was determined based on the areas defined in ordinance by Rock County (see Section 1.3.5). A 300-foot buffer around the PWI watercourses was applied in the vicinity of the Project Area. Approximately 3.4 acres of the approximate shoreland wetland protection zone are located within the Project Area (Appendix A: Figure 2).

3.1.4 Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) and Flood Insurance Rate Map (FIRM)

FEMA NFHL data was not available for the Project Area (FEMA 2023). FEMA FIRM, Map Number 270642B, effective July 1, 1988, was reviewed and compared to the Project Area. Based on a review of the FIRM, approximately 18 acres of 100-year floodplain associated with Elk Creek is located in the southeast corner of the Project Area.

3.1.5 Soil Survey Geographic (SSURGO) Soils

Soils data for the Project Area were obtained from the USDA NRCS (NRCS 2022). This information was used to study the distribution of hydric soils within the Project Area. Soils were categorized according to the five hydric classes listed below based on the hydric rating of the soil series.

- Non-hydric all soils series components rated as non-hydric
- Predominantly non-hydric minority of soil components that are considered hydric accounting for 1 to 32 percent of the series
- Partially hydric a mix of hydric and non-hydric soil components with hydric components accounting for 33 to 65 percent of the series
- Predominantly hydric majority of soil components that are considered hydric accounting for 66 to 99 percent of the series
- Hydric all soils series components rated as hydric

The soils in the Project Area are classified as non-hydric (42 percent of the Project Area), predominantly non-hydric (28 percent of the Project Area), predominantly hydric (23 percent of the Project Area), and hydric (7 percent of the

Project Area) (Appendix A: Figure 3). The hydric and predominantly hydric soils are generally found along the drainages in the Project Area.

3.1.6 Previous Reports

Two previous wetland delineation surveys have been completed for portions of the Project Area. HDR completed surveys in 2019 for the Elk Creek Solar Project, which included approximately 1,080 acres in the northwestern part of the current Project Area (HDR 2019a), and for the Elk Creek Solar 2 Project, which included approximately 513 acres in the southwestern part of the current Project Area (HDR 2019b). The HDR surveys identified 7 wetlands in the current Project Area and investigated an additional 50 locations that were determined to be non-wetlands.

The HDR Wetland Delineation Reports were submitted to the USACE and Rock County for boundary review. The USACE responses dated January 27, 2020 and June 3, 2020 state that they generally concur that the limits of aquatic resources were accurately identified and that those boundaries would generally be sufficient for permitting. Rock County also issued wetland boundary concurrence decisions for the reports on July 9, 2019 and August 21, 2019. The boundaries reviewed by USACE and LGU can generally be considered valid for five years.

3.1.7 Desktop Wetlands and Waters Mapping

Aerial photographs in combination with antecedent precipitation data from the Minnesota State Climatology Office (2023), MN DNR 2-foot elevation contours (MN DNR 2011), the NWI, and the Wetland Delineation Reports completed by HDR (HDR 2019a, HDR 2019b) were reviewed to identify potential wetlands and waters in the Project Area. Reviewed aerial photographs included images from July 4, 2008 (USDA FSA APFO 2008), September 13, 2015 (USDA FSA APFO 2015), September 29, 2017 (USDA FSA APFO 2017), July 11, 2019 (USDA FSA APFO 2019), and August 21, 2021 (USDA FSA APFO 2021). The antecedent precipitation review showed that all of the reviewed aerial photographs were taken during periods with normal antecedent precipitation.

The desktop data review found 19 potential wetlands and waters in the Project Area, totaling approximately 44 acres (Appendix A: Figure 2). Two of the potential wetlands and waters were identified in the Expansion Area that was not previously surveyed by HDR. The 17 remaining potential wetlands and waters were identified in the HDR Survey Area including 10 locations that HDR investigated and determined were not wetlands, and 7 locations that were delineated as wetlands by HDR.

3.2 WETLANDS AND WATERS SURVEY

The wetlands and waters field survey of the Project Area was conducted April 27 and 28, 2023, during a period with normal antecedent precipitation based on methods described in technical guidance (USACE and BWSR 2016) and data from the Minnesota State Climatology Office (2023). Antecedent precipitation data are presented in Table 2.

Each of the 19 desktop potential wetland and water areas in the Project Area were reviewed during the site visit. The seven wetlands delineated by HDR were reviewed and the boundaries were confirmed to be consistent with those mapped by HDR. Additionally, three streams were mapped within three of the wetlands previously delineated by HDR. One new wetland was also delineated in the Expansion Area at the location of the two desktop potential

wetland and waters areas. The ten remaining desktop potential wetlands and waters were verified to be non-wetlands as previously determined by HDR. A total of seven wetlands and three stream segments were identified and delineated in the Project Area at the completion of the field surveys. The delineated resources are described in detail in the following sections, and are depicted on Figure 4 in Appendix A.

Table 3. Antecedent Precipitation Analysis

Precipitation data for target wetland location:					
County: Rock Township Numb		ber: 103N	Site visit dates:		
Township Name: Vienna	Range Numbe	r: 44W			
Nearest Community: Magnolia	Section Number	er: 34	April 27-28, 2023	3	
Score using 1991-2020 normal per					
Values are in inches. A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.		first prior month: April 2023	second prior month: March 2023	third prior month: February 2023	
estimated precipitation total for thi	s location:	1.21R	1.41R	0.98R	
there is a 30% chance this location will	have less than:	2.27	0.87	0.50	
there is a 30% chance this location will I	nave more than:	3.02	1.62	0.95	
type of month: dry normal wet		dry	normal	wet	
monthly score		3 * <mark>1</mark> = 3	2 * 2 = 4	1 * <mark>3</mark> = 3	
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		10 (Normal)			

3.2.1 Wetlands

The wetlands delineated in the Project Area include one Type 1, seasonally flooded basin wetland (PEMAf¹), and six Type 2, wet meadow wetlands (PEMB, PEMBf, PEMBx) (Table 3).

Wetland WA004 was delineated within a drainage swale in the Expansion Area. The wetland had been cultivated the previous season and no vegetation was present at the time of the survey. One hydric soil indicator (A12: Thick Dark Surface), and three secondary wetland hydrology indicators (B6: Surface Soil Cracks, C9: Saturation Visible on Aerial Imagery, and D2: Geomorphic Position) were observed at wetland sample point WA004A. No hydric soil indicators and only one secondary wetland hydrology indicator (D2: Geomorphic Position) were observed at upland sample point WA004B. Wetland determination data forms and photographs are provided in Appendix B

Wetlands WA001, WA005, WA009, and WA013 were observed in uncultivated drainageways, and the dominant vegetation was reed canary grass (*Phalaris arundinacea*). Wetland WA011 was observed to be a broad depression in a cultivated field with no vegetation present at the time of the survey. Wetland WA012 was observed in a roadside ditch and the dominant vegetation was reed canary grass. New wetland determination data forms were not recorded for the wetlands previously identified by HDR (WA001, WA005, WA009, WA011, WA012, and WA013) because these boundaries have been reviewed and approved by USACE and Rock County (see Section 3.1.6), but photographs of these wetlands are provided in Appendix B.

9

¹ A key to the Cowardin wetland classification systems is provided in Appendix D.



Table 4. Delineated Wetlands in the Project Area

	Wetland Classification ²		A #0.0	Reg	Figure 4		
Wetland ID ¹	Circular 39	Cowardin Class	Area (acres)	USACE	MN WCA	MN Public Water	Figure 4 Grid ID
WA001 (Wetland 5)	Type 2	PEMB	3.373	Yes	Yes	No	D
WA004	Type 1	PEMAf	0.355	No	Yes	No	D
WA005 (Wetland 3)	Type 2	PEMB	16.553	Yes	Yes	No	D
WA009 (Wetland 1)	Type 2	PEMB	6.739	Yes	Yes	No	В
WA011 (Wetland 2)	Type 2	PEMBf	1.223	No	Yes	No	В
WA012 (Wetland 4)	Type 2	PEMBx	0.401	No	No	No	С
WA013 (Wetland 1, Wetland 6)	Type 2	PEMBx	1.914	No	Yes	No	С

¹ HDR report ID in parenthesis.

3.2.2 Streams

Three stream segments were documented in the Project Area including one segment of intermittent stream (R4SBC) and two segments of perennial stream (R2UBF, R2UBFx) (Table 4). Stream segment SA001 was delineated in wetland WA001 in the southwestern part of the Project Area. This stream is an unnamed tributary to Elk Creek and was classified as intermittent. Stream segments SA002 and SA003 were delineated in wetlands WA005 and WA009, respectively, in the south-central part of the Project Area. These stream segments are an unnamed tributary to Elk Creek and were classified as perennial. Stream data forms and photographs are provided in Appendix B.

Table 5. Delineated Streams in the Project Area

Stream	Flow	Cowardin	Stream	Average Width	Surveyed Surveyed Length Area		_	ulatory sdiction
ID	Regime	Class ¹	Name	1 - 1		(acres)	USACE	MN Public Water
SA001	Intermittent	R4SBC		7-10	1,745	0.336	Yes	No
SA002	Perennial	R2UBF		9	6,557	1.558	Yes	No
SA003	Perennial	R2UBFx		9	2,824	0.616	Yes	No

10

² See Appendix D for a key to the Circular 39 and Cowardin wetland classification system.

3.2.3 Non-Wetland Areas

During the field surveys nine sample points that did not meet wetland determination criteria were recorded at desktop potential wetlands and waters locations. The nine non-wetland features were reviewed for wetland signatures in each of the aerial photographs from the following five years with normal antecedent precipitation: July 4, 2008 (USDA FSA APFO 2008), September 13, 2015 (USDA FSA APFO 2015), September 29, 2017 (USDA FSA APFO 2017), July 11, 2019 (USDA FSA APFO 2019), and August 21, 2021 (USDA FSA APFO 2021). The locations of non-wetland sample points are included in Appendix A, Figure 4, and the results of the aerial photograph review are summarized in Table 5. Wetland determination data forms, reviewed historical aerial photographs with antecedent precipitation worksheets, and site visit photographs for non-wetland sample points are provided in Appendix C.

Sample points NWA003A, NWA006A, NWA007A, NWA015A, and NWA016A exhibited a wetland signature in less than 50 percent of the reviewed aerial photographs, which supports the field determination that wetland hydrology is not present in most normal years at these locations. The four remaining areas exhibited a wetland signature in more than 50 percent of reviewed aerial photographs, but field observations did not support a wetland determination at these locations. Sample points NWA002A, NWA014A, and NWA017A each exhibited a wetland signature in 3 of the 5 reviewed historical aerial photographs, but no hydric soil indicators were observed at any of these locations during the field survey. Sample points NWA014A and NWA017A did meet the wetland hydrology indicator with two secondary indicators (saturation visible on aerial imagery [C9] and geomorphic position [D2]). Based on the field observations, the signatures observed in the aerial photographs are likely the result of conditions other than prolonged soil saturation such as erosion. Sample point NWA010A was not cropped in any of the reviewed aerial photographs. At the time of the site visit the vegetation at this location was dominated by hairy crab grass (*Digitaria sanguinalis*) and flat-stem blue grass (*Poa compressa*). Based on the prevalence of upland vegetation, soils were not observed at this location.

Table 6. Observed Wetland Signatures in Non-Wetland Areas in Normal Years

		Photo	# of Years	% of Years			
Non-Wetland Sample Point	July 4, 2008	September 13, 2015	September 29, 2017	July 11, 2019	August 21, 2021	with Wet Signatures	with Wet Signatures ²
NWA002A	NV	DO	CS	NV	CS	3	60%
NWA003A	NV	NV	CS	SS	NV	2	40%
NWA006A	SS	NV	NV	SS	NV	2	40%
NWA007A	NV	NV	NV	SS	NV	1	20%
NWA010A	NC	NC	NC	NC	NC	5	100%
NWA014A	CS	NV	CS	CS	NV	3	60%
NWA015A	NV	NV	CS	NV	NV	1	20%
NWA016A	CS	NV	NV	NV	NV	1	20%
NWA017A	NV	CS	CS	SS	NV	3	60%

3.3 REGULATORY REVIEW

3.3.1 U.S. Army Corps of Engineers

Each of the identified wetlands and waters in the Project Area was reviewed for potential USACE jurisdiction and an initial jurisdictional determination was recommended (Table 3 and Table 4). An assessment of WOTUS criteria and potential USACE jurisdiction under Section 404 of the CWA found that streams SA001, SA002, and SA003 are relatively permanent tributaries. Therefore, these streams and their abutting wetlands WA001, WA005, and WA009 are likely WOTUS. Wetlands WA004, WA011, WA012, and WA013 do not appear to have a continuous surface connection to a regulated waterway, so they may not be considered WOTUS. Only the USACE can make the final determination on their regulatory jurisdiction of wetlands and waters. The USACE jurisdictional recommendations for each feature are depicted on Figure 5 in Appendix A.

3.3.2 Minnesota Wetland Conservation Act

Six of the seven wetlands identified in the Project Area would likely be regulated under the WCA (Table 3 and Table 4). Project activities affecting these wetlands would require approval from the LGU. Wetland WA012 appears to be an "incidental wetland" within a roadside ditch excavated in uplands, which is a category of wetlands that are not regulated under the WCA. The WCA jurisdictional recommendations for each feature are depicted on Figure 5 in Appendix A.

Certain activities are exempt from the wetland replacement provisions of WCA. Tetra Tech reviewed the WCA de minimis exemption standards (MN Rules 8420.0420, Subp. 8) and found that up to 2,000 square-feet of Type 1 or Type 2 wetland outside of the shoreland zone may be permanently impacted by the Project to qualify for the de minimis exemption and would not require a replacement plan for wetlands.

A portion of wetland WA005 lies within the floodplain of Elk Creek; therefore, this area may be considered to be within the shoreland zone. In the shoreland zone the de minimis exemption for permanent impacts to Type 1 and Type 2 wetlands is reduced to 400 square feet. The de minimis exemption amount is determined by considering all wetland impacts associated with a project. If the impacted wetlands have more than one de minimis amount, the exemption amount for the entire project is the smallest of the applicable thresholds. If the total project impacts exceed the relevant de minimis exemption amount, the exemption is no longer applicable, and all wetland impacts associated with the project are subject to the replacement plan provisions of WCA (8420.0500 to 8420.0630).

3.3.3 Minnesota Department of Natural Resources

None of the delineated wetlands in the Project Area align with Public Waters identified in the PWI (Section 3.1.3). Therefore, the Project will not require a Public Waters Work Permit from the MN DNR.

4.0 REFERENCES

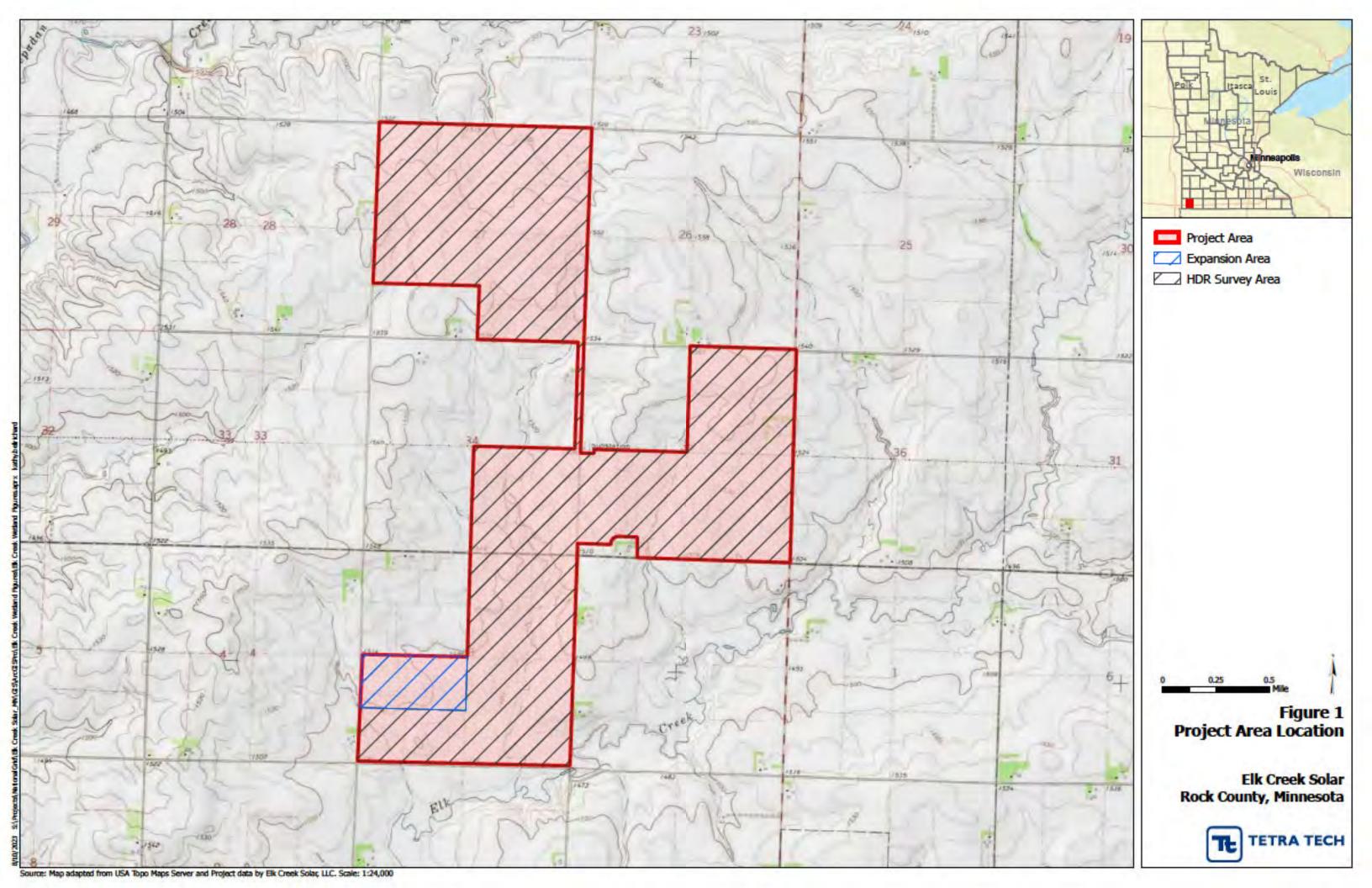
- Eggers, S.D., and D.M. Reed. 2015. Wetland plants and communities of Minnesota and Wisconsin; Version 3.2. U.S. Army Corps of Engineers, St. Paul District. 485pp.
- FEMA. 1988. Flood Hazard Boundary Map H 01-28. Rock County, MN Unincorporated Areas. Community Number 270642B. Effective Date July 1, 1988.
- FEMA. 2023. National Flood Hazard Layer (NFHL). Minnesota. Vector Digital Data. Published May 5, 2023.
- FGDC. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- HDR. 2019a. Wetland Delineation Report. Elk Creek Solar Project. May 28.
- HDR. 2019b. Wetland Delineation Report. Elk Creek Solar 2 Project. June 21.
- Minnesota State Climatology Office. 2023. Wetland Delineation Precipitation Data Retrieval from a Gridded Database. Accessed April 2023 from http://climate.umn.edu/gridded_data/precip/wetland/wetland.asp
- MN DNR. 2011. MN River Basin LiDAR 2010. Raster Digital Data. Accessed April 24, 2023. http://www.dnr.state.mn.us/maps/mntopo/index.html
- MN DNR. 2020. Public Waters Basin and Watercourse Delineations. Vector Digital Data. Published June 10, 2020.
- NRCS. 2022. Gridded Soil Survey Geographic (gSSURGO) Database for Minnesota. Vector Digital Data. Published September 7, 2022 (202210 official release).
- Rock County. 2000. Rock County Planning and Zoning Ordinance. Adopted August 22, 2000.
- Shaw, S.P. and C.G. Fredine. 1971. Wetlands of the United States. U.S. Fish and Wildlife Circular 39. U.S. Department of the Interior, Washington, D.C. 67 pp.
- USACE. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, Environmental Laboratory, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). ERDC/EL TR-10-16, Environmental Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- USACE. 2020. National Wetland Plant List, Version 3.5. Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH. http://wetland_plants.usace.army.mil/.
- USACE. 2023a. 26 May 2023 Supreme Court Ruling in Sackett v. Environmental Protection Agency.

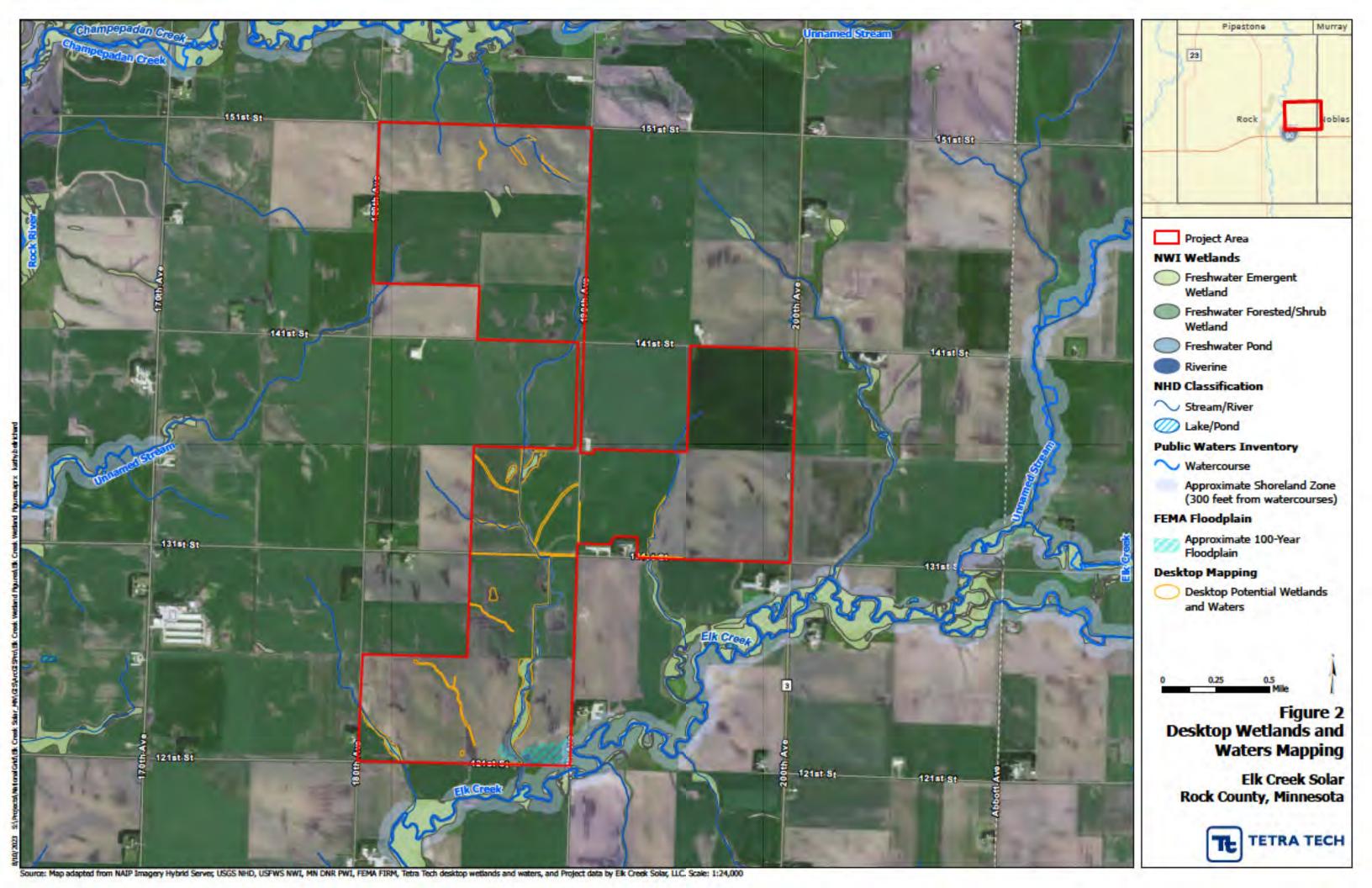
 https://www.usace.army.mil/Media/Announcements/Article/3409141/26-may-2023-supreme-court-ruling-in-sackett-v-environmental-protection-agency/

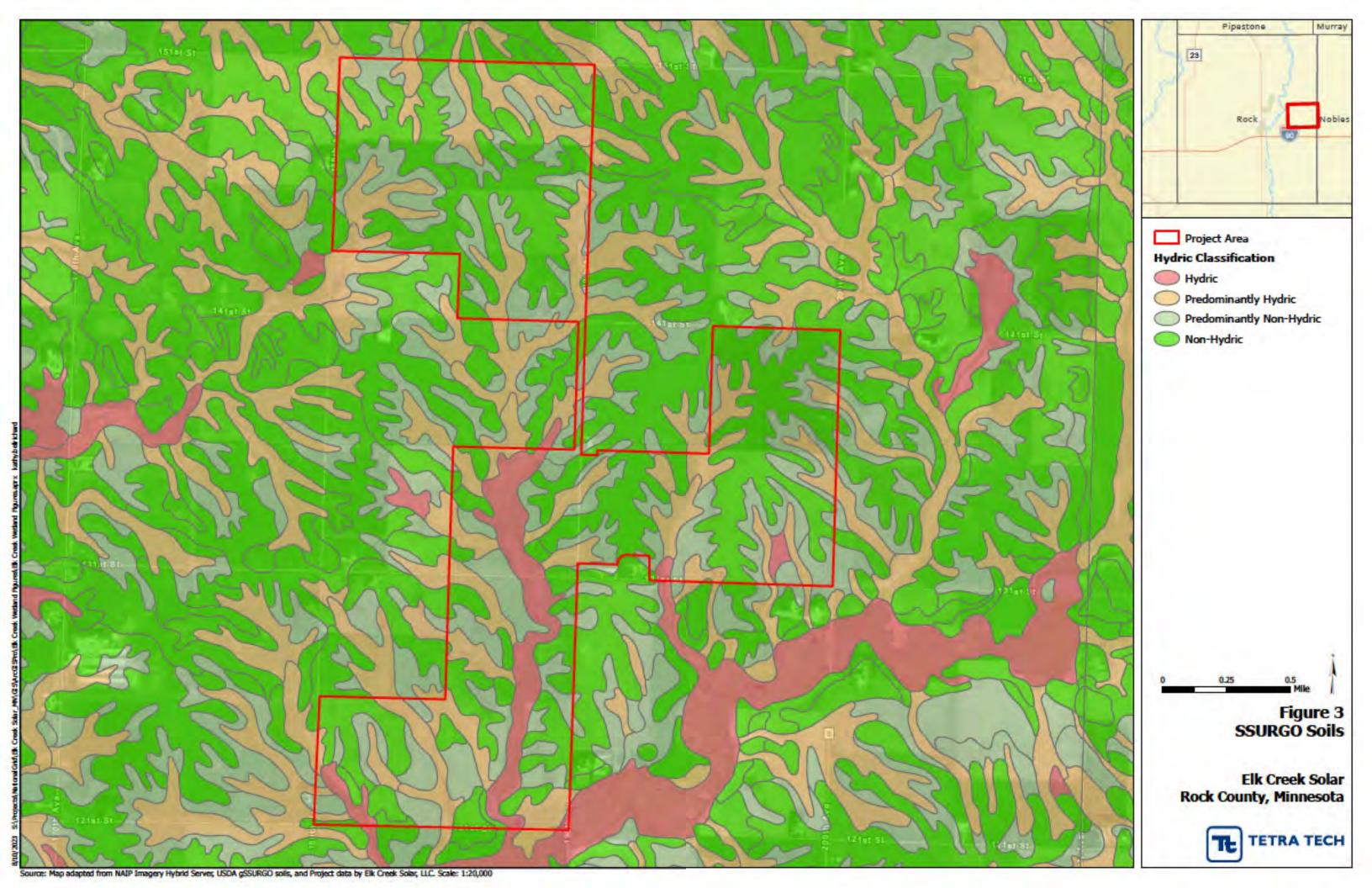
- USACE. 2023b. 27 June 2023 UPDATE Supreme Court Ruling in Sackett v. Environmental Protection Agency. https://www.usace.army.mil/Media/Announcements/Article/3440421/27-june-2023-update-supreme-court-ruling-in-sackett-v-environmental-protection/
- USACE and BWSR. 2016. Guidance for Offsite Hydrology/Wetland Determinations.

 http://www.bwsr.state.mn.us/wetlands/delineation/Guidance_for_Offsite_Hydrology_and_Wetland_Determinations.pdf
- USDA. 1988. Soil Survey of Rock County, Minnesota. U.S. Department of Agriculture Soil Conservation Service.
- USDA FSA APFO. NAIP digital ortho imagery. Raster Digital Data
 - 2008. Nobles County, Minnesota. ortho 1-1 1n s mn105 2008 1
 - 2015. Nobles County, Minnesota. ortho_1-1_1n_s_mn105_2015_1
 - 2017. Nobles County, Minnesota. ortho 1-1 1n s mn105 2017 1
 - 2019. Nobles County, Minnesota. ortho 1-1 hn s mn105 2019 1
 - 2021. Nobles County, Minnesota. ortho_1-1_hn_s_mn105_2021_1
- USFWS. 2022. National Wetlands Inventory. Vector Digital Data. Published May 13, 2022.
- USGS. 2022. National Hydrography Dataset for Minnesota State. Vector Digital Data. Published September 12, 2022.

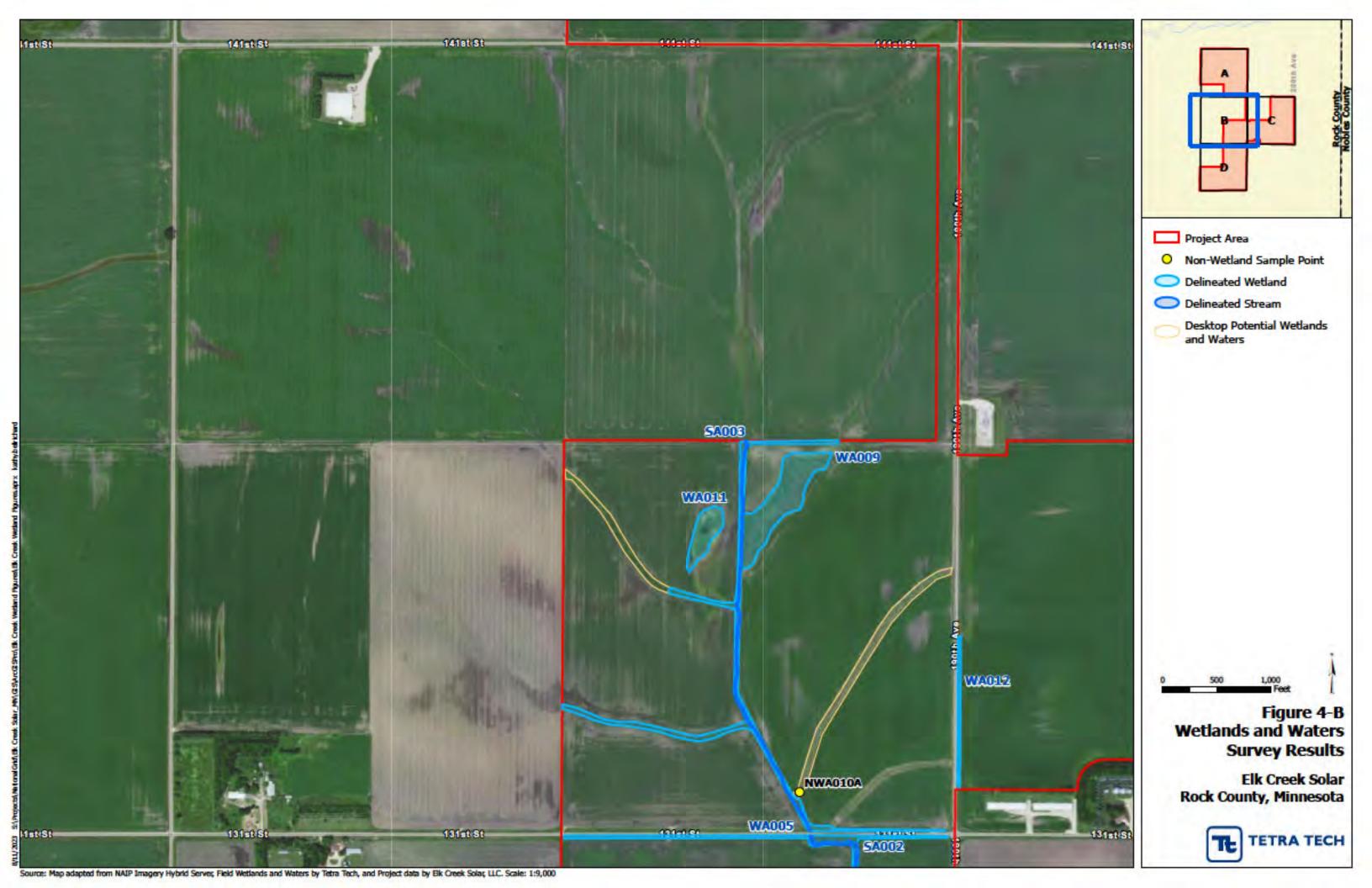
APPENDIX A: FIGURES 1 – 5



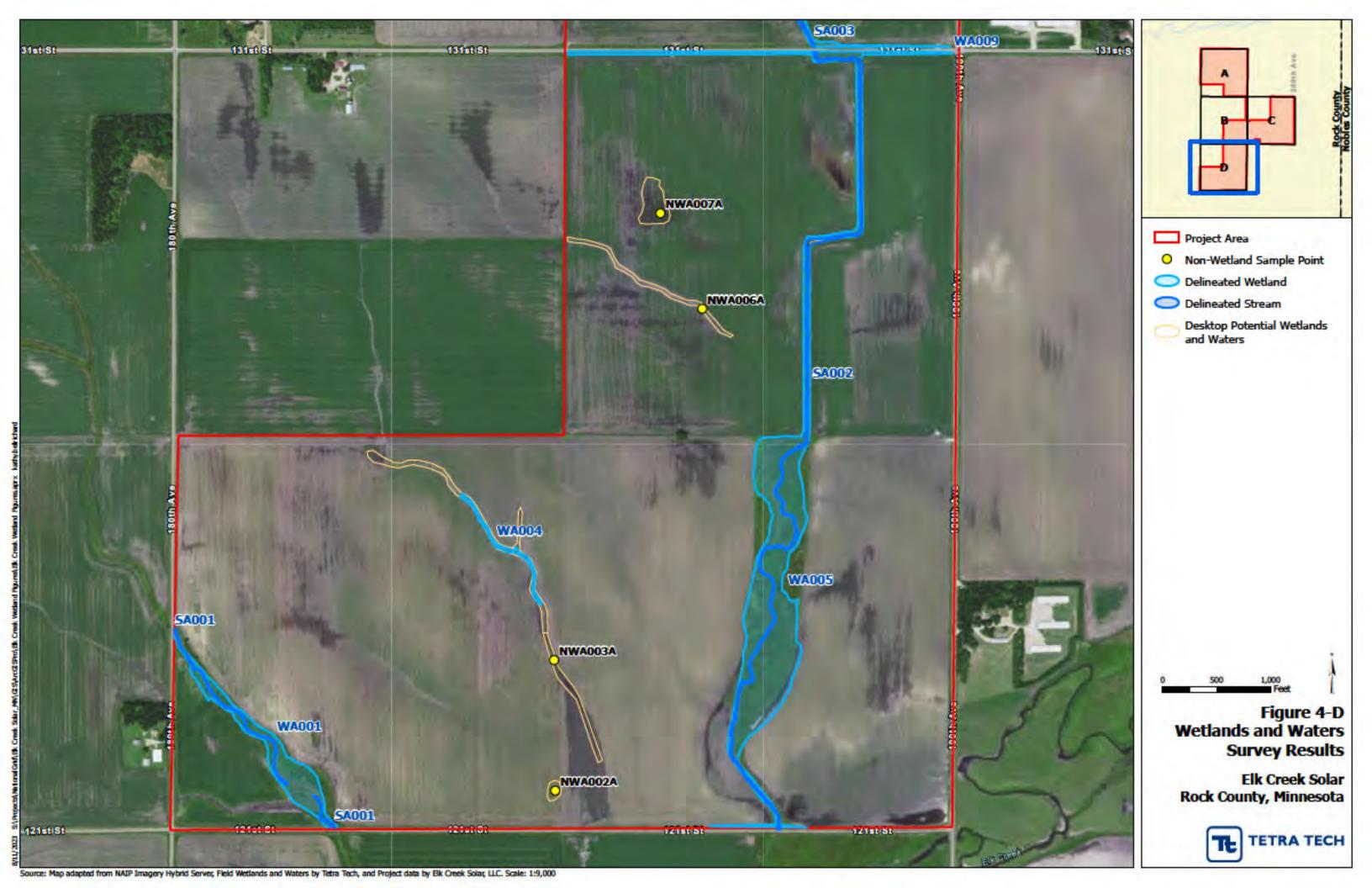


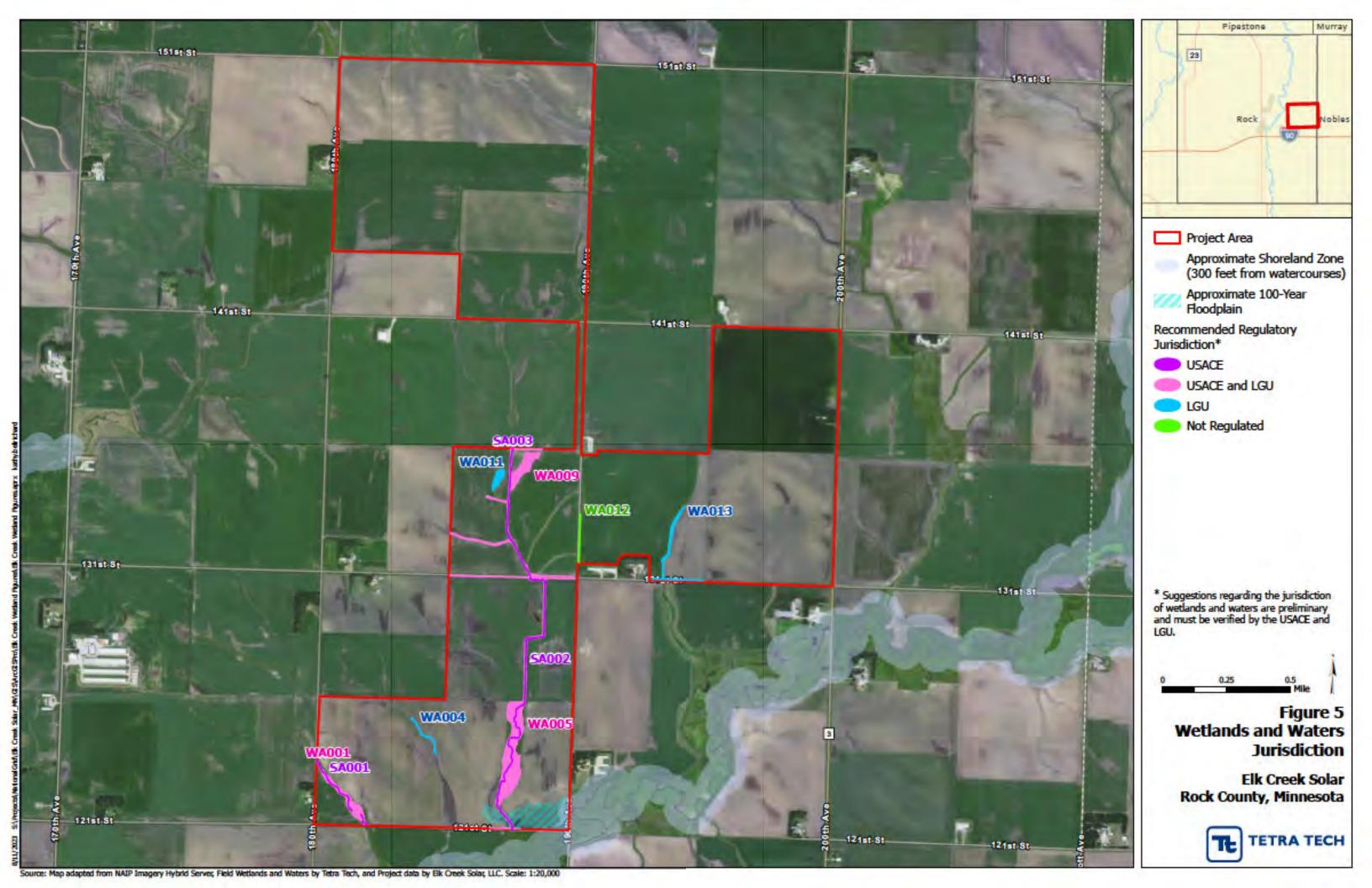










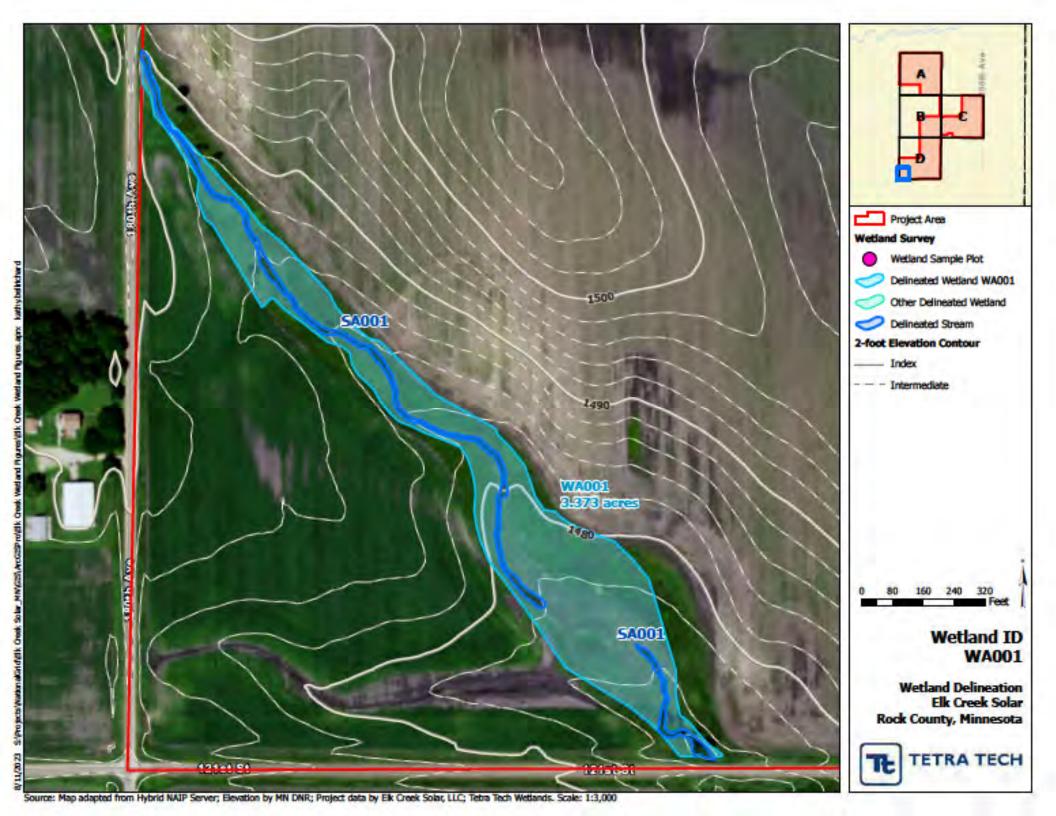


APPENDIX B:	WETLAND DETERMINATION DATA FORMS AND PHOTOGRAPHS

Wetland ID WA001

Stream ID SA001

Project Name:	Survey Date:		Stream ID:
Elk Creek Solar	04/27/2023		SA001
Stream Classification:	Stream Flow R	ate:	Stream Water Clarity:
R4SBC	Low		Clear
Average Width from Top of Bank:	Average Depth	from Top of Bank:	Average Water Depth:
7-10 feet	4 feet		12 Inches
Stream Inorganic Substrate Component	ts:	Stream Organic Sub	strate Components:
☑ Clay		☑ Detritus (sticks, sticks, sticks	wood, coarse plant material)
☑ Silt		☑ Muck-Mud (very)	fine organic, black)
☑ Sand		☑ Marl (grey, shell	fragments)
☑ Gravel (0.1"-2.5")			
☑ Cobble (2.5"-10")			
☐ Boulder (>10")			
☐ Bedrock			
☐ Riprap/Concrete			
Stream Characteristics Observed:			
☑ Bed			
☑ Bank			
☐ Natural line impressed on the bank			
☑ Shelving			
☐ Changes in the character of soil			
☑ Destruction of terrestrial vegetation	1		
☐ Presence of litter and debris	_		
☑ Vegetation matted down, bent, or a			
☐ Leaf litter disturbed or washed away	У		
Sediment deposition			
☐ Water staining ☐ Presence of wrack line			
☑ Sediment sorting			
□ Scour			
☑ Abrupt change in plant community			
☐ Fish			
☐ Crayfish or Crayfish Burrows			
☐ Tadpoles			
-			





	Overview of wetland WA001 and stream SA001.	
Direction: Southeast	Photo ID: f_photo-20230427-183819.jpg	Date: 04/27/2023
Project Name: Elk Creek Solar		Feature ID: WA001



Overview of wetland WA001.				
Direction: Southeast	Photo ID: f_photo-20230427-190436.jpg	Date: 04/27/2023		
Project Name: Elk Creek Solar	7	Feature ID: WA001		



Overview of wetland WA001.				
Direction: Northwest	Photo ID: f_photo-20230427-190503.jpg	Date: 04/27/2023		
Project Name: Elk Creek Solar		Feature ID: WA001		



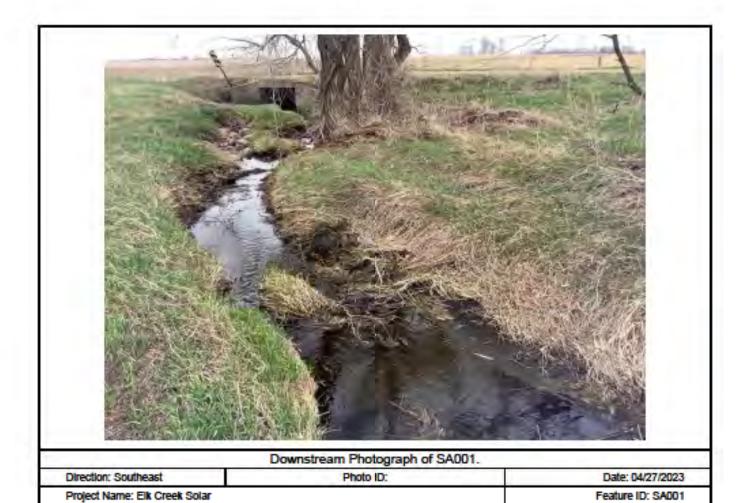
Upstream Photograph of SA001.			
Direction: Northwest	Photo ID:	Date: 04/27/2023	
Project Name: Elk Creek Solar		Feature ID: SA001	



Downstream Photograph of SA001.				
Direction: Southeast	Photo ID:	Date: 04/27/2023		
Project Name: Elik Creek Solar		Feature ID: SA001		



Upstream Photograph of SA001.			
Direction: North	Photo ID:	Date: 04/27/2023	
Project Name: Elk Creek Solar		Feature ID: SA001	



WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/27/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: WADD4A Section, Township, Range: Sec.3 T102N, R33W Kathy Belirichard Investigator(s): Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave 2 Lat 43.6642 Long: -96.10382 Datum: WGS84 Soil Map Unit Name: NWI Classification: Whitewood sity day loam, 0 to 2 percent slopes Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) Significantly disturbed? Are "normal circumstances present? , or hydrology , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes is the sampled area within a wetland? Yes Wetland Hydrology Present? If yes, optional wetland site ID: WAD04 Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot stze: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence Index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover X (explain) Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

-Total Cover

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

Harvested agricultural field. Bare ground: 100% Open water: 0%

Hydrophytic

Vegetation Present?

Depth	<u>Matrix</u>			Redox Features			Land Comment	- June 2
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-25	10YR 2/1	100			- "	1	Clay	
25-33	25Y 5/2	93	2.5Y 5/6	7	С	PUM	Bandy Clay Loam	Prominent
	100		-				77.7	
	-		-					-1
								T (1)
			7		200			
	-	-	\leftarrow	-	-			+ + + + + + + + + + + + + + + + + + + +
								1111
			A			1-1		
*Type: C =	Concentration, D	- Depk	etion, RM - Redu	iced Mat	rix, MS -	Masked S	and Grains. "Li	ocation: PL - Pore Lining, M - Matri
Hydric Soli	Indicators:	-					Indicators for P	roblematic Hydric Solls*:
	stosol (A1)		Sa	ndy Gley	ed Matrix	(\$4)	Coast Prain	le Redax (A16) (LRR K, L, R)
His	stic Epipedon (A2)		Sar	ndy Red	ox (S5)		Dark Surfac	se (S7) (LRR K, L)
	ack Histic (A3)				atrix (S6)			nese Masses (F12) (LRR K, L, R)
	drogen Suffide (A	43			ky Miner			w Dark Surface (TF12)
	ratified Layers (A5		_		yed Matri			ain in remarks)
	m Muck (A10)			market and an	latrix (F3)		cuies (expi	and the second
	pleted Below Dari	Contract			Surface			
	ick Dark Surface (ark Surfa		NAME AND DESCRIPTION OF THE PERSON OF THE PE	TO A STATE OF THE STATE OF THE STATE OF
						100	"Indicators of hy	drophytic vegetation and webland
	ndy Mucky Minera		_	dox Dep	ressions	(F8)	problematic	be present, unless disturbed or
50	m Mucky Peat or	Peat (S	3)				productions	
estrictive I								
	ayer (if odserved							
	ayer (If observed	ı):					Hydric Soil Pr	resent7 Yes
ype: Jepth (Inches	St. St. Combon	ı)r					Hydric Soli Pr	resent? Yes
ype: Jepth (inches temarks:	s):	ır.					Hydric Soli Pr	resent? Yes
ype: epth (inches temarks:	GY						Hydric Soli Pr	resent? Yes
ype: epth (inches temarks: HYDROLO Vetland Hyd	GY frology Indicators	B.						
ype:	GY irology Indicators alors (minimum of	B.	required: check a				Secondary	ndicators (minimum of two required
ype:	GY frology Indicators	B.	required: check a		coly) : Fauna (E	313)	Secondary	
ype: lepth (inches temarks: IYDROLO Vettand Hyd drimary indica Surfac	GY irology Indicators alors (minimum of	B.	required: check a	Aquatic	Fauna (E	313) nts (B14)	Secondary X Sur	ndicators (minimum of two required
ype: lepth (inches ternarks: EYDROLO Vettand Hyd trimary indica Surfac High W	GY irology Indicators ators (minimum of e Water (A1)	B.	required: check a	Aquatic True Ac	Fauna (E quatic Pla		Secondary X Sur	ndicators (minimum of two required face Soil Cracks (B6)
ype: Pepth (Inches Pernarks: PYDROLO Vetland Hyd Primary Indica Surfac High W Satura	GY irology Indicators ators (minimum of e Water (A1) Valer Table (A2)	B.	required: check a	Aquatic True Ac Hydrog	Fauna (E quatic Pla en Suffide	nts (B14)	Secondary X Sur Dra	indicators (minimum of two required face Soll Cracks (B6) linage Patterns (B10)
ype: yepth (inches emarks: YDROLO Vetland Hyd rimary indic Surfac High W Satura Water	GY irology Indicators alors (minimum of e Water (A1) /ater Table (A2) tion (A3)	B.	required: check a	Aquatic True Ac Hydrog	Fauna (E quatic Pla en Suffici d Rhizos)	nts (B14) Odor (C1	Secondary X Sur Dra Dry Living Cra	ndicators (minimum of two required face Soll Cracks (B6) linage Patterns (B10) -Season Water Table (C2)
ype: yepth (inches ternarks: YDROLO Wetland Hyd rimary indica Surfac High W Satura Water Sedime	GY irology Indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1)	B.	required: check a	Aquatic True Ad Hydrog Oxidize Roots (Fauna (E quatic Pla en Suffici d Rhizos C3)	nts (B14) Odor (C1	Secondary	ndicators (minimum of two required face Soli Cracks (B6) linage Patterns (B10) -Season Water Table (C2) lyfish Burrows (C8)
ype: lepth (inches lemarks: IYDROLO Vetland Hyd irimary indica Surfac High W Satura Water Sedim Drift D	GY irology indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	B.	required: check a	Aquatic True Ac Hydrog Oxidize Roots (Present	Fauna (E quatic Pia en Sutfide d Rhizos (C3) ce of Red	nts (B14) e Odor (C1 oheres on uced Iron	Secondary X Sur Dra Dry Living	ndicators (minimum of two required face Soli Cracks (B6) linage Patterns (B10) -Season Water Table (C2) lyfish Burrows (C8) uration Visible on Aertal Imagery (C
ype: Depth (Inches Remarks: RYDROLO Wetland Hyd Firmary Indica Surfac High W Satura Water Sedim Orift Do Algal M	GY irology Indicators alors (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	B.	required: check a	Aquatic True Ac Hydrog Oxidize Roots (Present	Fauna (E quatic Pia en Sutfide d Rhizos (C3) ce of Red	nts (B14) e Odor (C1 oheres on uced Iron	Secondary X Sur Dra Dry Living Cra X Sat Stu (C4) Stu Stu Ger	ndicators (minimum of two required face Soli Cracks (B6) linage Patterns (B10) -Season Water Table (C2) lyfish Burrows (C8) uraffon Visible on Aerial Imagery (C nted or Stressed Plants (D1)
ype: Depth (Inches Remarks: RYDROLO Vetland Hyd Primary Indica Surfac High W Satura Water Sedim Drift Do Algal M	GY irology Indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4)	a: one is		Aquatic True Ad Hydrog Oxidize Roots (Present (C6)	Fauna (E quatic Pia en Sutfide d Rhizos (C3) ce of Red	nts (B14) e Odor (Ct oheres on uced iron uction in T	Secondary X Sur Dra Dry Living Cra X Sat Stu (C4) Stu Stu Ger	indicators (minimum of two required face Soli Cracks (B6) ilnage Patterns (B10)Season Water Table (C2) infish Burrows (C8) uration Visible on Aerial Imagery (Cinted or Stressed Plants (D1) omorphic Position (D2)
ype: Depth (Inches Remarks: RYDROLO Vettand Hyd Primary Indica Surface High W Satura Water Sedim Drift De Algal M Iron De Inunda	GY irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5)	a: one is i	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mu	Fauna (E quatic Pia en Suffide d Rhizos (C3) ce of Red Iron Red	onts (B14) e Odor (Ct otheres on nuced iron nuction in T oe (C7)	Secondary X Sur Dra Dry Living Cra X Sat Stu (C4) Stu Stu Ger	indicators (minimum of two required face Soli Cracks (B6) ilnage Patterns (B10)Season Water Table (C2) infish Burrows (C8) uration Visible on Aerial Imagery (Cinted or Stressed Plants (D1) omorphic Position (D2)
ype: lepth (Inches lemanks: IYDROLO Vettand Hyd Irmary Indica Surfac High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse	GY Irology Indicators ators (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 Ae	a: one is i	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Sufflos d Rhizos C3) ce of Red iron Red uck Surfa or Well D	onts (B14) e Odor (Ct otheres on nuced iron nuction in T oe (C7)	Secondary X Sur	indicators (minimum of two required face Soil Cracks (B6) ilnage Patterns (B10)Season Water Table (C2) syfish Burrows (C8) curation Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2)
ype: Depth (Inches Remarks: Remarks: RYDROLO Wetland Hyd Satura Water Sedim Ontt Do Algal M Iron De Inunda Sparse Water-	GY irology Indicators ators (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 Ae ely Vegetated Con Stained Leaves (B	a: one is i	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Sufflos d Rhizos C3) ce of Red iron Red uck Surfa or Well D	nts (B14) e Odor (Ct otheres on uced Iron uction in T be (C7) ata (D9)	Secondary X Sur	indicators (minimum of two required face Soil Cracks (B6) ilnage Patterns (B10)Season Water Table (C2) syfish Burrows (C8) curation Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2)
ype: Depth (Inches Remarks: Remarks: RYDROLO Vettand Hyd Primary Indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- Reid Observ	GY fology Indicators ators (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 Ae ely Vegetated Con Stained Leaves (Eatlons:	a: one is i	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Sufflos d Rhizos C3) ce of Red iron Red uck Surfa or Well D	nts (B14) e Odor (Ctoheres on uced iron uction in T be (C7) ata (D9) Remarks	Secondary X Sur	ndicators (minimum of two required face Soil Cracks (B6) linage Patterns (B10)Season Water Table (C2) syfish Burrows (C8) suration Visible on Aerial Imagery (Cinted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
ype: Depth (Inches Remarks: Remarks: RYDROLO Vettand Hyd Sturfac High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- Reld Observ Surface Water-	GY Irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) tion Visible on Ae ely Vegetated Con Stained Leaves (Enations: or Present?	a: one is i rtal Ima cave Si	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (i	Fauna (E quatic Pia en Suffice of Rhizos C3) ce of Red iron Red uck Surfa or Well D Explain in	nts (B14) e Odor (Ctoheres on uced Iron uction in Toe (C7) ata (D9) Remarks	Secondary X Sur	ndicators (minimum of two required face Soil Cracks (B6) ilnage Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
Pype: Depth (Inches Remarks: Remarks: Remarks: RYDROLO Wetland Hyd Primary Indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse	GY Irology Indicators ators (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 Ae ely Vegetated Con Stained Leaves (Entresent? Present?	rtal Ima cave Si	gery (B7) urface (B8)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (i	Fauna (E quatic Pia en Suffice of Rhizos (C3) ce of Red iron Red uck Surfa or Well D Explain in	nts (B14) e Odor (Ctoheres on uced Iron uction in Toe (C7) ata (D9) Remarks nches):nches):	Secondary X Sur	ndicators (minimum of two required face Soil Cracks (B6) linage Patterns (B10)Season Water Table (C2) syfish Burrows (C8) suration Visible on Aerial Imagery (Cinted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)
ype: yepth (Inches temarks: IYDROLO vettand Hyd rimary indica Surface High W Satura Water Sedim Drift De Algal M Iron De Inunda Sparse Water- deld Observ surface Water variace Water staturation Pre	GY Irology Indicators ators (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 Ae ely Vegetated Con Stained Leaves (E rations: r Present? Present?	rtal Ima cave Si 39)	gery (B7) Inface (B8) No	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I	Fauna (E quatic Pia en Suffice of Rhizos (C3) ce of Red fron Red uck Surfa or Well D Explain in Depth (I	nts (B14) e Odor (Ctoheres on uced Iron uction in Toe (C7) ata (D9) Remarks nches):nches):	Secondary X Sur	ndicators (minimum of two required face Soil Cracks (B6) ilnage Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) uration Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5) Wetland Hydrology Present?
Pype: Depth (Inches Remarks: Remark	GY Irology Indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) Aut or Crust (B4) eposits (B5) tion Visible on Ae ely Vegetated Con Stained Leaves (Bations: r Present? Present? esent?	rtal Ima cave Si 99) Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffice of Rhizos C3) ce of Red iron Red uck Surfa or Well D Explain in Depth (I Depth (I	nts (B14) e Odor (Ctoheres on uced Iron uction in Tope (C7) ata (D9) Remarks nches): nches):	Secondary X Sur	ndicators (minimum of two required face Soil Cracks (B6) image Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5) Wetland Hydrology Present? Yes
ype: epth (Inches emarks: IYDROLO lettand Hyd rimary indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- letd Observ urface Water laturation Pre ncludes capi	GY Irology Indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) Aut or Crust (B4) eposits (B5) tion Visible on Ae ely Vegetated Con Stained Leaves (Bations: r Present? Present? esent?	rtal Ima cave Si 99) Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffice of Rhizos C3) ce of Red iron Red uck Surfa or Well D Explain in Depth (I Depth (I	nts (B14) e Odor (Ctoheres on uced Iron uction in Tope (C7) ata (D9) Remarks nches): nches):	Secondary I X Sur Dra Dry Living Cra X Sati (C4) Stur Illed Solls X Ger FAC	ndicators (minimum of two required face Soil Cracks (B6) image Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5) Wetland Hydrology Present? Yes
ype: yepth (Inches temarks: IYDROLO yettand Hyd trmary indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- deld Observ turface Water saturation Proncludes cap	GY Irology Indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) Aut or Crust (B4) eposits (B5) tion Visible on Ae ely Vegetated Con Stained Leaves (Bations: r Present? Present? esent?	rtal Ima cave Si 99) Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffice of Rhizos C3) ce of Red iron Red uck Surfa or Well D Explain in Depth (I Depth (I	nts (B14) e Odor (Ctoheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches):nches):inches):	Secondary I X Sur Dra Dry Living Cra X Sati (C4) Stur Illed Solls X Ger FAC	ndicators (minimum of two required face Soil Cracks (B6) image Patterns (B10) -Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (Conted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5) Wetland Hydrology Present? Yes

WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/27/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: WADD4B Section, Township, Range: Kathy Belirichard Sec.3 T102N, R33W Investigator(s): Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave 2 Lat 43.66411 Long: -96.10372 Datum: WGS84 Whitewood sitty day loam, 0 to 2 percent slopes NWI Classification: Soil Map Unit Name: Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) , or hydrology Significantly disturbed? Are "normal circumstances present? No , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? No Hydric Soil Present? No is the sampled area within a wetland? No Wetland Hydrology Present? If yes, optional wetland site ID: WAD04 Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot size: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic

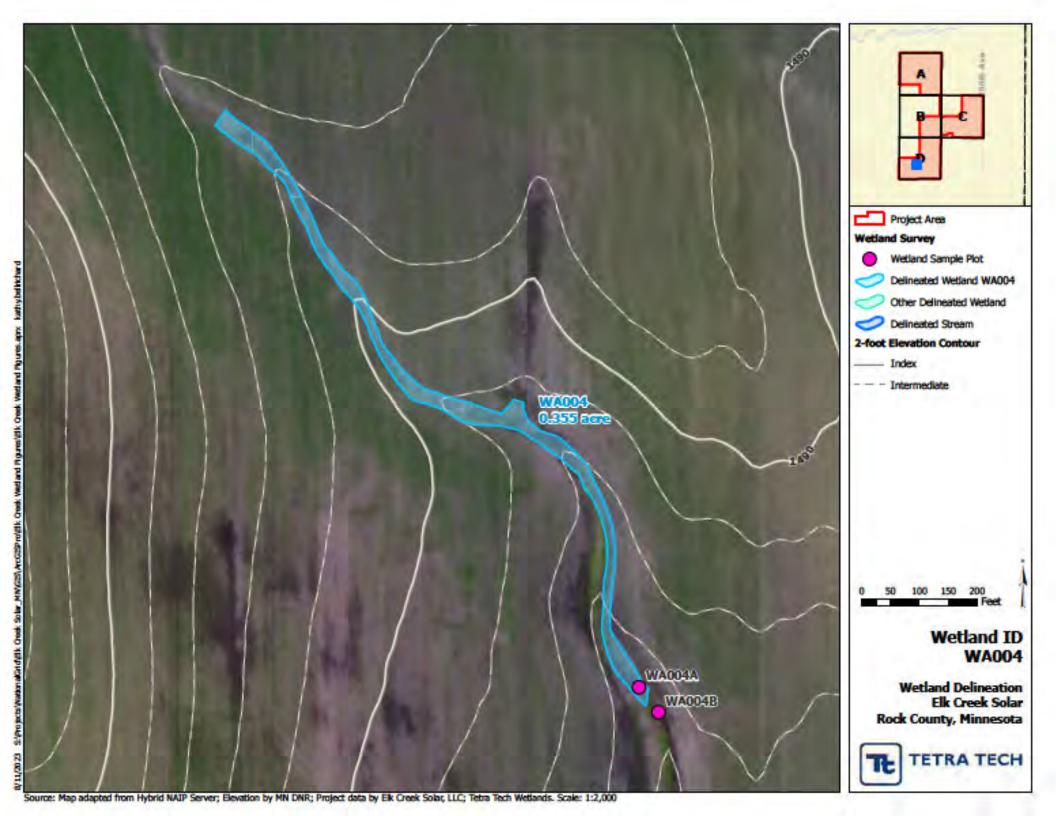
-Total Cover

Vegetation Present?

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

Harvested agricultural field. Bare ground: 100% Open water: 0%

Depth	Matrix		Re	dox Fea	tures		the second	* 1
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc"	Texture	Remarks
0-26	10YR 2/1	100	1		- "-"	(Clay	
26-32	25Y 4/4	90	2.5Y 5/1	8	D	M	Clay Some Gravel	
		-	10YR 4/6	2	С	PL.		Distinct
			IUIN 40	- 4		n.		District
	25		7		100			
			F					
	1							
			7		-			
Time: 0	Consciolation D	Donle	Hon Did Dod		dr. 140	Markadi	and Color 191	series Di - Descriptor M - Mate
	Concentration, D	- Depik	non, row - reedu	ceu ma	IIX, Mo =	Maskeu :		cation: PL - Pore Lining, M - Matrix
	Indicators: stosol (A1)		-	atu Clas	and Strategy	ven.		roblematic Hydric Solls*:
					yed Matrix	(34)	A CONTRACT OF STREET OF	e Redax (A16) (LRR K, L, R)
	stic Epipedon (A2)				lox (S5) atrix (S6)			e (S7) (LRR K, L)
	ack Histic (A3)					N/Est		nese Masses (F12) (LRR K, L, R)
	drogen Suifide (A			-	cky Minera			v Dark Surface (TF12)
	ratified Layers (A5 cm Muck (A10)	,		-	yed Matro latrix (F3)		Outer (expla	in in remarks)
	The same of the same of	Curto			k Surface			
	epieted Below Dan						5-40-m A-6	CONTRACTOR CONTRACTOR CONTRACTOR
	lick Dank Surface (ark Surfa	1/2	"Indicators of hy	drophytic vegetation and wetland be present, unless disturbed or
	andy Mucky Minera		_	ox Dep	ressions	(10)	problematic	be present, unless disturbed or
	cm Mucky Peat or	Peat (5	3)				110000	
testrictive I	the same of the same of the same of							
	ayer (If observed	1				-		7-14
ype:):					Hydric Soll Pr	ssent7 No
Type: Depth (Inches		1					Hydric Soli Pr	esent? <u>No</u>
ype: Depth (Inchesternanks: HYDROLO Vettand Hyd Surfac High V	5):	r	required: check a	Aquato True A	colv) : Fauna (E quatic Pia en Sutfloe	nts (B14)	Secondary I	ndicators (minimum of two required) face Soil Cracks (B6) inage Patterns (B10) Season Water Table (C2)
Proper Depth (Inches Remarks: HYDROLO Wetland Hydrogen Surface High Water Water	GY irology Indicators ators (minimum of se Water (A1) Vater Table (A2) ition (A3) Marks (B1)	r	required: check a	Aquation True Ar Hydrog Oxidize	Fauna (E quatic Pla en Suffici d Rhizos	nts (B14) Odor (C	Secondary I Sur Dra 1) Dry Living Cra	ndicators (minimum of two required) face Soli Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8)
Type: Depth (Inches Remarks: HYDROLO Wetland Hyd Surfac High V Satura Water Sedim	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2)	r	required: check a	Aquation True Ar Hydrog Oxidize Roots (Fauna (E quatic Pla en Sufficie d Rhizos; C3)	nts (B14) Odor (C oheres on	Secondary Sur Sur Dra Dry Cra Sat	ndicators (minimum of two required) face Soil Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uraffon Visible on Aerial Imagery (C
Pype: Depth (inches Remarks: HYDROLO Wetland Hyd Surfac High V Satura Water Sedim Orift D	GY irology indicators ators (minimum of se Water (A1) Vater Table (A2) itton (A3) Marks (B1) ent Deposits (B2) eposits (B3)	r	required: check a	Aquation True Ar Hydrog Oxidize Roots (Presen	Fauna (E quatic Pla en Suffici of Rhizos (C3) ce of Red	nts (B14) Odor (C oheres on uced Iron	Secondary Sur Dra Dra Dry Cra Sat (C4)	ndicators (minimum of two required) face Soli Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Cs nted or Stressed Plants (D1)
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Surfac High V Satura Water Sedim Orift D Algal I	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) Itton (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4)	r	required: check a	Aquation True Ar Hydrog Oxidize Roots (Present Recent	Fauna (E quatic Pla en Suffici of Rhizos (C3) ce of Red	nts (B14) Odor (C oheres on uced Iron	Secondary Sur Dra Dry Living	ndicators (minimum of two required) face Soli Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Cinted or Stressed Plants (D1) proorphic Position (D2)
Type: Depth (Inches Remarks: HYDROLO Wetland Hyd Surfac High V Satura Water Sedim Drift D Algal I Iron D	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Atton (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5)	i: one is		Aquation True Ar Hydrog Oxidize Roots (Present Recent (C6)	Fauna (E quatic Pia en Suffide d Rhizos; C3) ce of Red iron Redi	nts (B14) Odor (C oheres on uced Iron uction in T	Secondary Sur Dra Dry Living	ndicators (minimum of two required) face Soli Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Cinted or Stressed Plants (D1)
Type: Depth (Inches Remarks: HYDROLO Wetland Hyd Surfac High V Satura Water Sedim Drift D Algal I Iron D Inunda	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) vat or Crust (B4) eposits (B5) ition Visible on Ae	c one is i	gery (B7)	Aquation True Ar Hydrog Oxidize Roots (Presen Recent (C6) Thin Mi	Fauna (E quatic Pia en Suffice of Rhizoso (C3) ce of Red Iron Redi	onts (B14) odor (C otheres on nucled from nuclion in T oe (C7)	Secondary Sur Dra Dry Living	ndicators (minimum of two required) face Soli Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Cinted or Stressed Plants (D1) proorphic Position (D2)
Pype: Depth (Inchesternants: IYDROLO Vettand Hyd Primary India Surface High V Satura Water Sedim Orift D Algal II Iron D Inunda Sparse	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Atton (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5)	cone is i	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Presen Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Suffide d Rhizos; C3) ce of Red iron Redi	onts (B14) e Odor (C otheres on uced Iron uction in T be (C7) ata (D9)	Secondary Sur Dra Dry Dry Cra Sat (C4) Stur EAC EAC	ndicators (minimum of two required) face Soli Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Cinted or Stressed Plants (D1) proorphic Position (D2)
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Surfac High V Satura Water Sedim Orift D Algal I Iron D Inunda Sparse Water	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Ae ely Vegetated Con Stained Leaves (B	cone is i	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Presen Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Sutfloe of Rhizosp C3) ce of Red iron Red uck Surfac or Well D	onts (B14) e Odor (C otheres on uced Iron uction in T be (C7) ata (D9)	Secondary Sur Dra Dry Dry Cra Sat (C4) Stur EAC EAC	ndicators (minimum of two required) face Soli Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (Cinted or Stressed Plants (D1) proorphic Position (D2)
Pype: Depth (Inches Remarks: IYDROLO Vetland Hyd Surfac High V Satura Water Sedim Drift D Algal I Iron D Inunda Sparse Water	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) ation Visible on Ae ely Vegetated Con Stained Leaves (E	cone is i	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Presen Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Sutfloe of Rhizosp C3) ce of Red iron Red uck Surfac or Well D	nts (B14) e Odor (Coheres on uced Iron uction in Tope (C7) ata (D9) Remarks	Secondary Sur Dra Dry Dry Cra Sat (C4) Stur EAC EAC	ndicators (minimum of two required) face Soll Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C5) inted or Stressed Plants (D1) imorphic Position (D2) c-Neutral Test (D5)
Type: Depth (Inches Remarks: HYDROLO Wetland Hyd Surfac High V Satura Water Sedim Drift D Algai I Iron D Inunda Sparse Water Surface Water	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Irology Indicators Water (A1) Vater Table (A2) Irology Indicators (B3) Marks (B1) eposits (B3) Vat or Crust (B4) eposits (B5) ation Visible on Aer ely Vegetated Con Stained Leaves (B1) or Present?	tal Ima cave Si	gery (B7)	Aquation True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (Fauna (E quatic Pia en Suffice of Rhizos C3) ce of Red Iron Red uck Surfa or Well D Explain in	nts (B14) e Odor (Coheres on uced Iron uction in Toe (C7) ata (D9) Remarks	Secondary Sur Dra Dry Dry Cra Sat (C4) Stur EAC EAC	ndicators (minimum of two required) face Soll Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C3 inted or Stressed Plants (D1) imorphic Position (D2) C-Neutral Test (D5) Wetland Hydrology
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Surfac High V Satura Water Sedim Orift D Algal I Iron D Inunda Sparse	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (E Ir Present? Present?	tal Imacave St	gery (B7)	Aquation True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (Fauna (E quatic Pia en Suffice of Rhizoso (C3) ce of Red iron Red uck Surfac or Well D Explain in	ntis (B14) e Odor (Coheres on uced Iron uction in Toe (C7) ata (D9) Remarks nches):nches):	Secondary Sur Dra Dry Dry Cra Sat (C4) Stur EAC EAC	ndicators (minimum of two required) face Soll Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C5) inted or Stressed Plants (D1) imorphic Position (D2) c-Neutral Test (D5)
Pype: Depth (Inches Remarks: IYDROLO Vetland Hyd Primary India Surfac High V Satura Water Sedim Drift D Iron D Inunda Sparse Water Relid Observ Surface Water Saturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (B Vations: er Present? Present? Hary fringe)	tal Ima cave Si Yes Yes Yes	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (X X	Fauna (E quatic Pia en Suffice of Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	ntis (B14) Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches): nches):	Secondary Sur	ndicators (minimum of two required) face Soil Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) urafton Visible on Aerial Imagery (C) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5) Wetland Hydrology Present? No
Pope: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary India Surfac High V Satura Water Sedim Drift D Iron D Inunda Sparse Water Relid Observ Surface Water Saturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (B Vations: er Present? Present? Hary fringe)	tal Ima cave Si Yes Yes Yes	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (X X	Fauna (E quatic Pia en Suffice of Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	ntis (B14) Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches): nches):	Secondary Sur Dra Dry Dry Cra Sat (C4) Stur EAC EAC	ndicators (minimum of two required) face Soil Cracks (B6) inage Patterns (B10) Season Water Table (C2) yfish Burrows (C8) urafton Visible on Aerial Imagery (C) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5) Wetland Hydrology Present? No
Pope: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary India Surfac High V Satura Water Sedim Drift D Iron D Inunda Sparse Water Relid Observ Surface Water Saturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (B Vations: er Present? Present? Hary fringe)	tal Ima cave Si Yes Yes Yes	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (X X	Fauna (E quatic Pia en Suffice of Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	ntis (B14) Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches): nches):	Secondary Sur	ndicators (minimum of two required face Soil Cracks (B6) inage Patterns (B10) Season Water Table (C2) yrish Burrows (C8) urafton Visible on Aerial Imagery (Cated or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5) Wetland Hydrology Present?





	Overview of wetland sample point WA004A.				
Direction: Northwest	Photo ID: delin_photo-20230427-213510.jpg	Date: 04/27/2023			
Project Name: Elk Creek Sola		Feature ID: WA004			

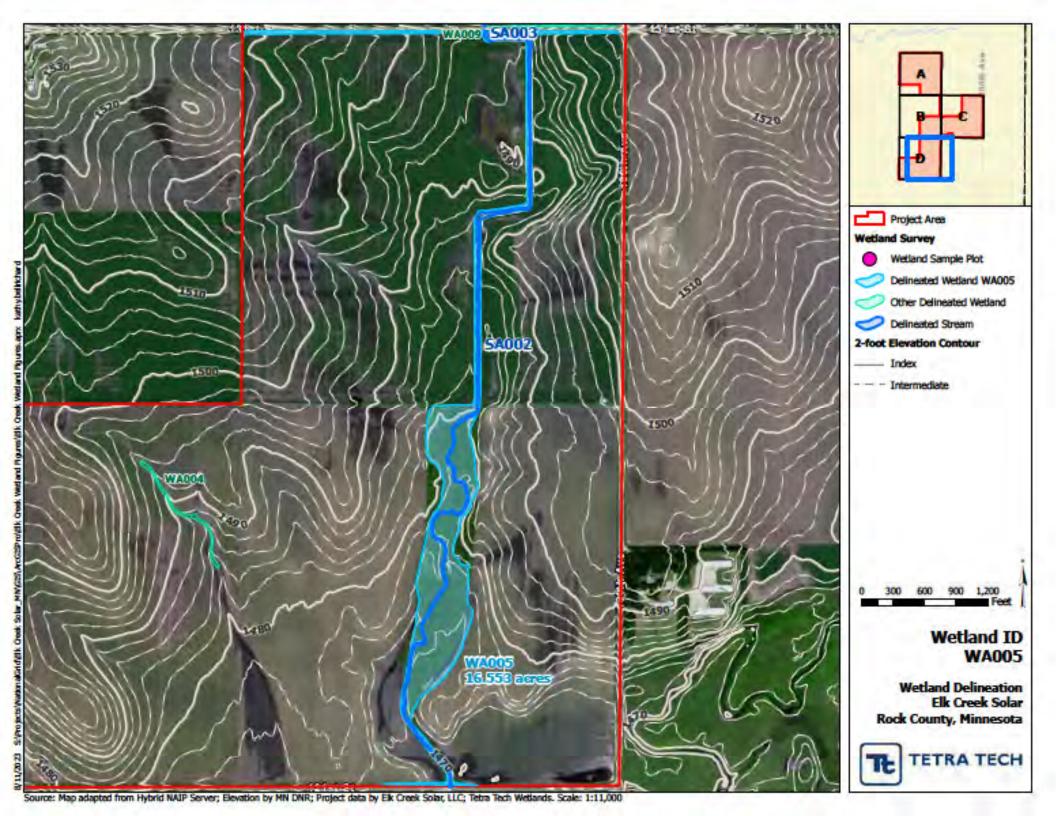


Overview of upland sample point WA004B.				
Direction: Southeast	Photo ID: delin_photo-20230427-212351.jpg	Date: 04/27/2023		
Project Name: Elk Creek Solar		Feature ID: WA004		



Stream ID SA002

Project Name:	Survey Date:	Stream ID:		
Elk Creek Solar	04/27/2023	SA002		
Stream Classification:	Stream Flow Rate:	Stream Water Clarity:		
R2UBF	Moderate	Clear		
Average Width from Top of Bank:	Average Depth from Top of	Bank: Average Water Depth:		
9 feet	3 feet	18 Inches		
Stream Inorganic Substrate Compone	nts: Stream Organ	nic Substrate Components:		
☐ Clay	☑ Detritus (s	sticks, wood, coarse plant mater	rial)	
☑ Silt	☑ Muck-Mu	d (very fine organic, black)		
☑ Sand	☐ Marl (grey	y, shell fragments)		
☑ Gravel (0.1"-2.5")	111111111111111111111111111111111111111			
☐ Cobble (2.5"-10")				
☐ Boulder (>10")				
☐ Bedrock				
☐ Riprap/Concrete				
Stream Characteristics Observed:	1			
☑ Bed				
☑ Bank				
Natural line impressed on the ban	k			
☐ Shelving				
☐ Changes in the character of soil				
Destruction of terrestrial vegetation	on			
☐ Presence of litter and debris				
 Vegetation matted down, bent, or 				
☐ Leaf litter disturbed or washed aw	ay			
☐ Sediment deposition				
☐ Water staining				
Presence of wrack line				
☑ Sediment sorting				
Scour				
☐ Abrupt change in plant communit	y			
☐ Fish				
☐ Crayfish or Crayfish Burrows				
☐ Tadpoles				





	Overview of wetland WA005.				
Direction: South	Photo ID: f_photo-20230427-224901.jpg	Date: 04/27/2023			
Project Name: Elk Creek Sol.	ar	Feature ID: WA005			



Overview of wetland WA005.				
Direction: North	Photo ID: f_photo-20230427-224922.jpg	Date: 04/27/2023		
Project Name: Elk Creek Sola		Feature ID: WA005		



	Overview of wetland WA005 and stream SA002.				
Direction: South	Photo ID: f_photo-20230427-225058.jpg	Date: 04/27/2023			
Project Name: Elk Creek Sola	ar .	Feature ID: WA005			



Overview of wetland WA005.				
Direction: Northeast	Photo ID: f_photo-20230427-225959.jpg	Date: 04/27/2023		
Project Name: Elk Creek Solar		Feature ID: WA005		



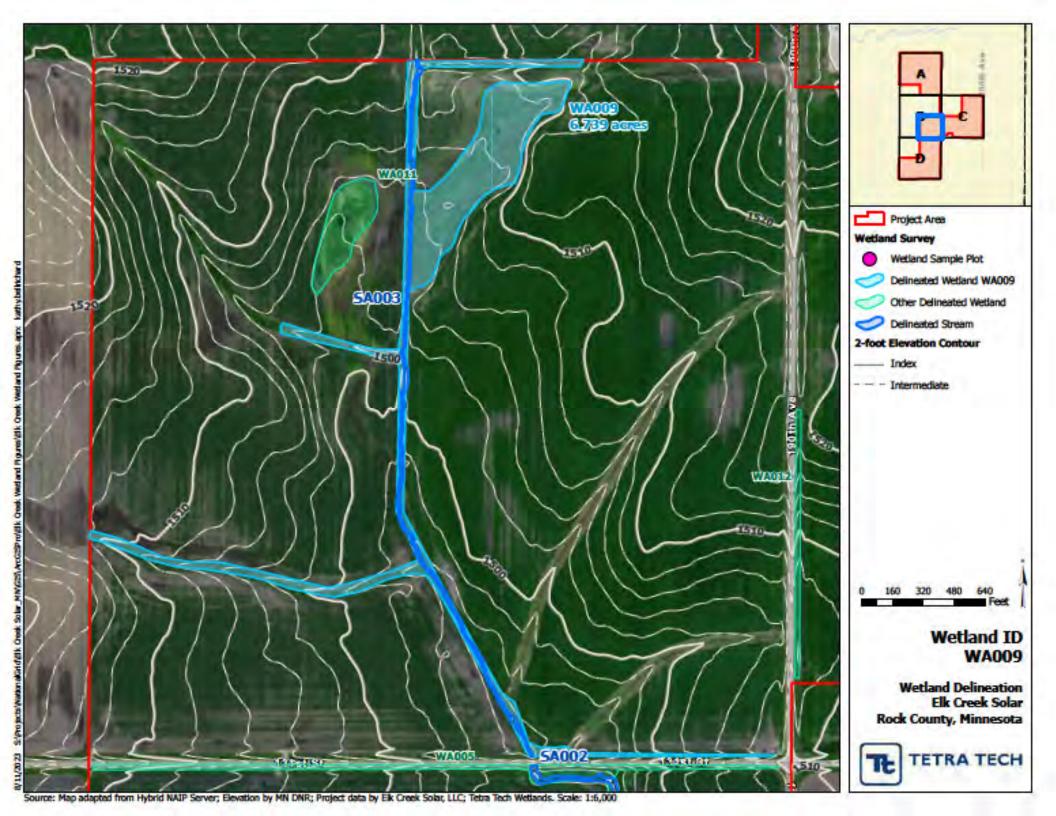
	Upstream Photograph of SA002.					
Direction: Northeast	Photo ID:	Date: 04/27/2023				
Project Name: Elk Creek Solar		Feature ID: SA002				



Downstream Photograph of SA002.				
Direction: Southwest	Photo ID:	Date: 04/27/2023		
Project Name: Elk Creek Solar		Feature ID: SA002		

Stream ID SA003

Project Name:	Survey Date:		Stream ID:	
Elk Creek Solar	04/28/2023		SA003	
Stream Classification:	Stream Flow Rate:		Stream Water Clarity:	
R2UBFx	Low		Clear	
Average Width from Top of Bank:	Average Depth fr	om Top of Bank:	Average Water Depth:	
9 feet	3 feet		18 Inches	
Stream Inorganic Substrate Compone	ents: St	ream Organic Sub	strate Components:	
☐ Clay		Detritus (sticks,	wood, coarse plant material)	
☑ Silt		Muck-Mud (very	fine organic, black)	
☑ Sand		Marl (grey, shell	fragments)	
☑ Gravel (0.1"-2.5")				
☐ Cobble (2.5"-10")				
☐ Boulder (>10")				
☐ Bedrock				
☐ Riprap/Concrete				
Stream Characteristics Observed:	- 4			
☑ Bed				
☑ Bank				
☐ Natural line impressed on the ban	nk			
☐ Shelving				
☐ Changes in the character of soil				
☐ Destruction of terrestrial vegetation	on			
☐ Presence of litter and debris				
 Vegetation matted down, bent, or 				
☐ Leaf litter disturbed or washed av	vay			
☑ Sediment deposition				
☐ Water staining				
Presence of wrack line				
☑ Sediment sorting				
Scour				
☐ Abrupt change in plant communit	y			
☐ Fish				
☐ Crayfish or Crayfish Burrows				
☐ Tadpoles				





Overview of wetland WA009 and stream SA003.		
Direction: North	Photo ID: f_photo-20230428-123918.jpg	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: WA009



Overview of wetland WA009.		
Direction: West	Photo ID: f_photo-20230428-125606.jpg	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: WA009



Overview of wetland WA009.		
Direction: West	Photo ID: f_photo-20230428-130804.jpg	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: WA009



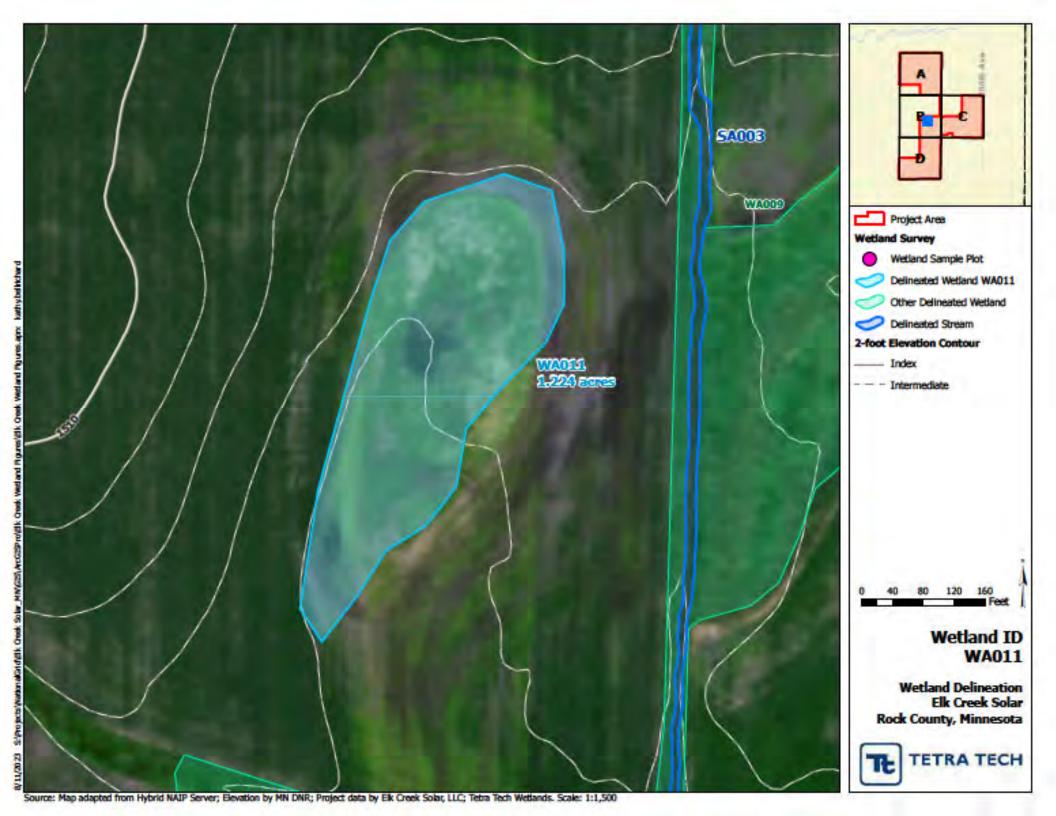
Overview of wetland WA009.		
Direction: Northeast	Photo ID: f_photo-20230428-131402.jpg	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: WA009



Upstream Photograph of SA003.		
Direction: North	Photo ID:	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: SA003



Downstream Photograph of SA003.		
Direction: Southeast	Photo ID:	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: SA003





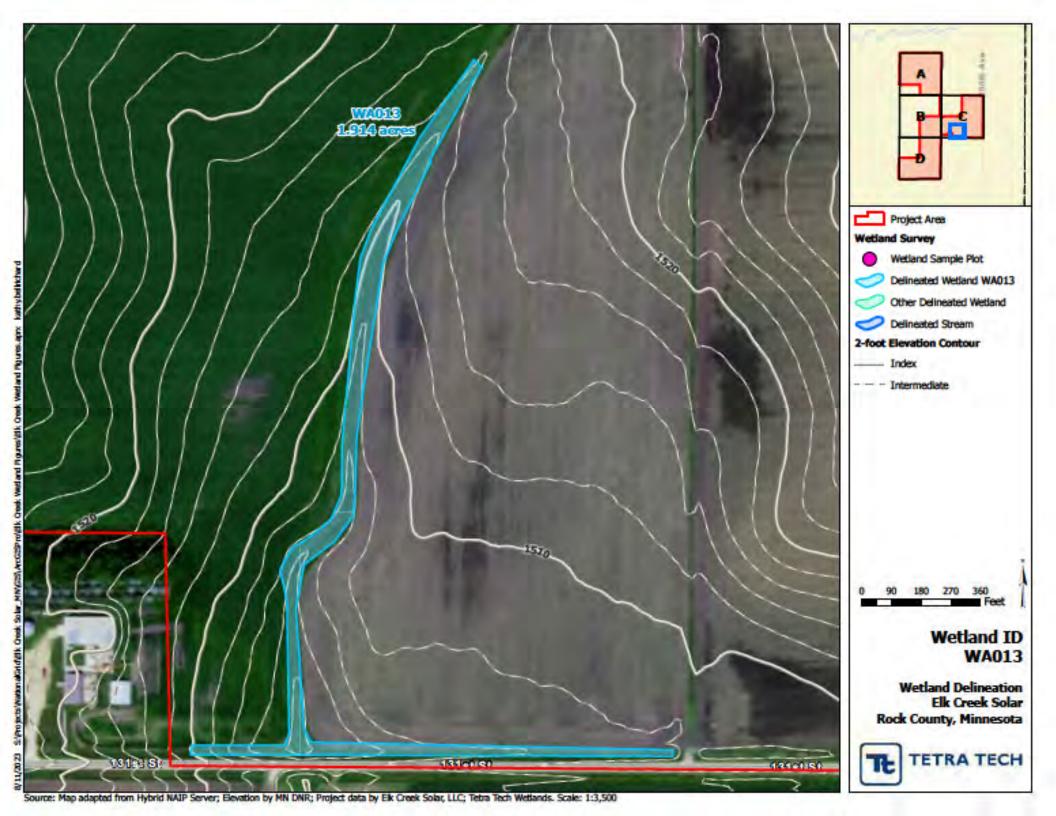




Overview of wetland WA012.		
Direction: North	Photo ID: f_photo-20230428-140653.jpg	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: WA012



Overview of wetland WA012.		
Direction: South	Photo ID: f_photo-20230428-140708.jpg	Date: 04/28/2023
Project Name: Elk Creek Sola		Feature ID: WA012





Overview of wetland WAD13.		
Direction: North	Photo ID: f_photo-20230428-143434.jpg	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: WA013



Overview of wetland WA013.		
Direction: East	Photo ID: f_photo-20230428-143912.jpg	Date: 04/28/2023
Project Name: Elk Creek Solar		Feature ID: WAD13

APPENDIX C:	OFFSITE HYDROLOGY REVIEW OF NON-WETLAND AREAS

Non-Wetland ID NWA002

WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/27/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: NWAD02A Section, Township, Range: Kathy Belirichard Sec.3 T102N, R44W Investigator(s): Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None 0 Lat 43.66072 Long: -96.10342 Datum: WGS84 Soil Map Unit Name: NWI Classification: N/A Graceville sity day loam, 0 to 2 percent slopes Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) X , soil , or hydrology Significantly disturbed? Are "normal circumstances present? No , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? No Hydric Soil Present? No is the sampled area within a wetland? No No Wetland Hydrology Present? If yes, optional wetland site ID: Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot size: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic

-Total Cover

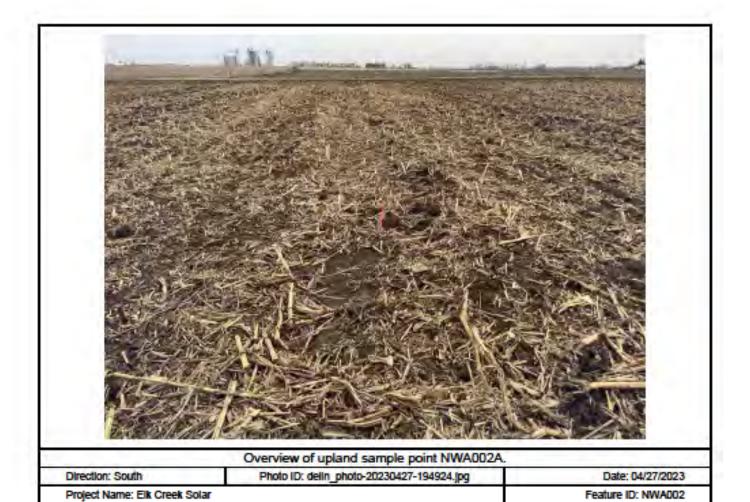
Vegetation Present?

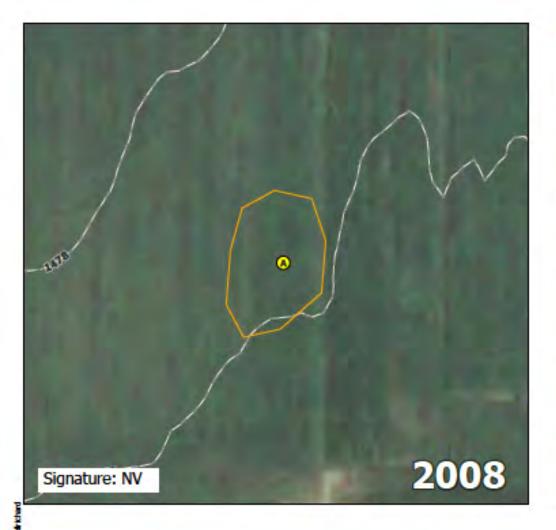
Remarks: (Include photo numbers here or on a separate sheet)

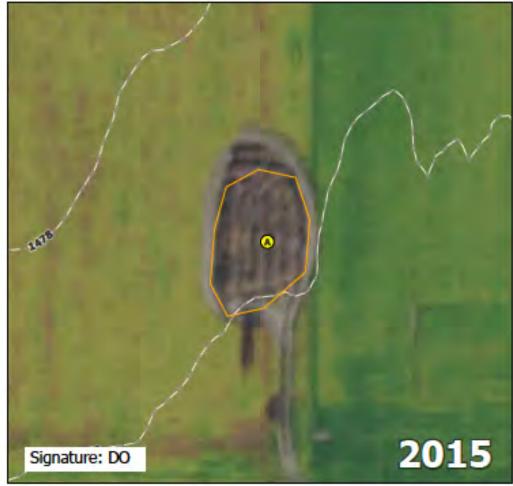
Harvested agricultural field. Bare ground: 100% Open water: 0%

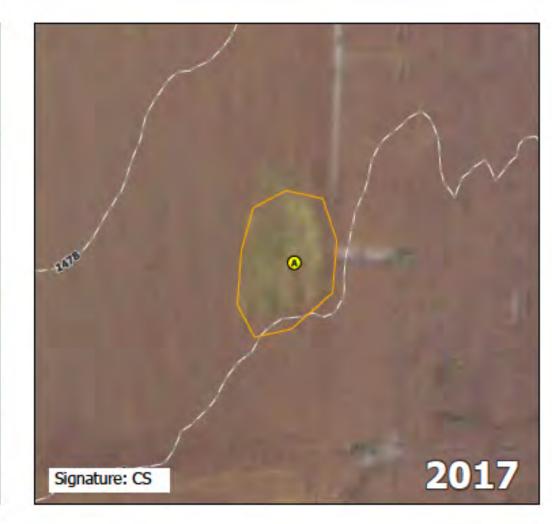
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

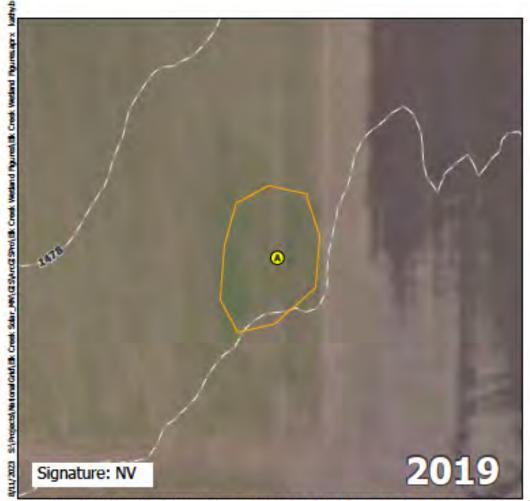
Remarks:

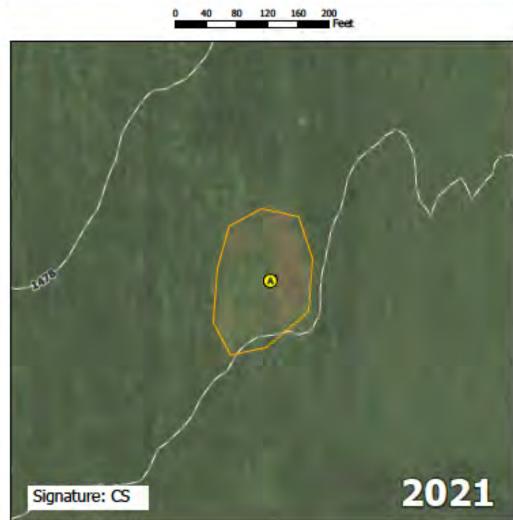


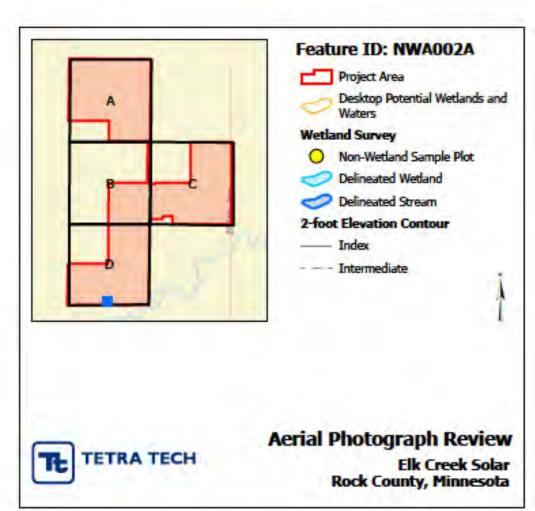












Source: Map adapted from NAIP air photos; desktop wetlands by Tetra Tech; 2-foot contours by MN DNR; Project Data by Summit Lake Solar, LLC. Scale: 1:1,500

WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/27/2023 Sampling Point: Applicant/Owner: Elk Creek Solar, LLC NWAD03A Section, Township, Range: Kathy Belirichard Sec.3 T102N, R33W Investigator(s): Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): Concave 1 Lat 43.66312 Long: -96.10344 Datum: WGS84 Whitewood sity clay loam, 0 to 2 percent slopes NWI Classification: Soil Map Unit Name: Are climatic/hydrologic conditions of the site typical for this time of the year? No (If no, explain in remarks) , or hydrology Significantly disturbed? Are "normal circumstances present? No , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? No Hydric Soil Present? is the sampled area within a wetland? No Wetland Hydrology Present? No If yes, optional wetland site ID: Remarks: Climate conditions wet. Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot stze: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence Index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

-Total Cover

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

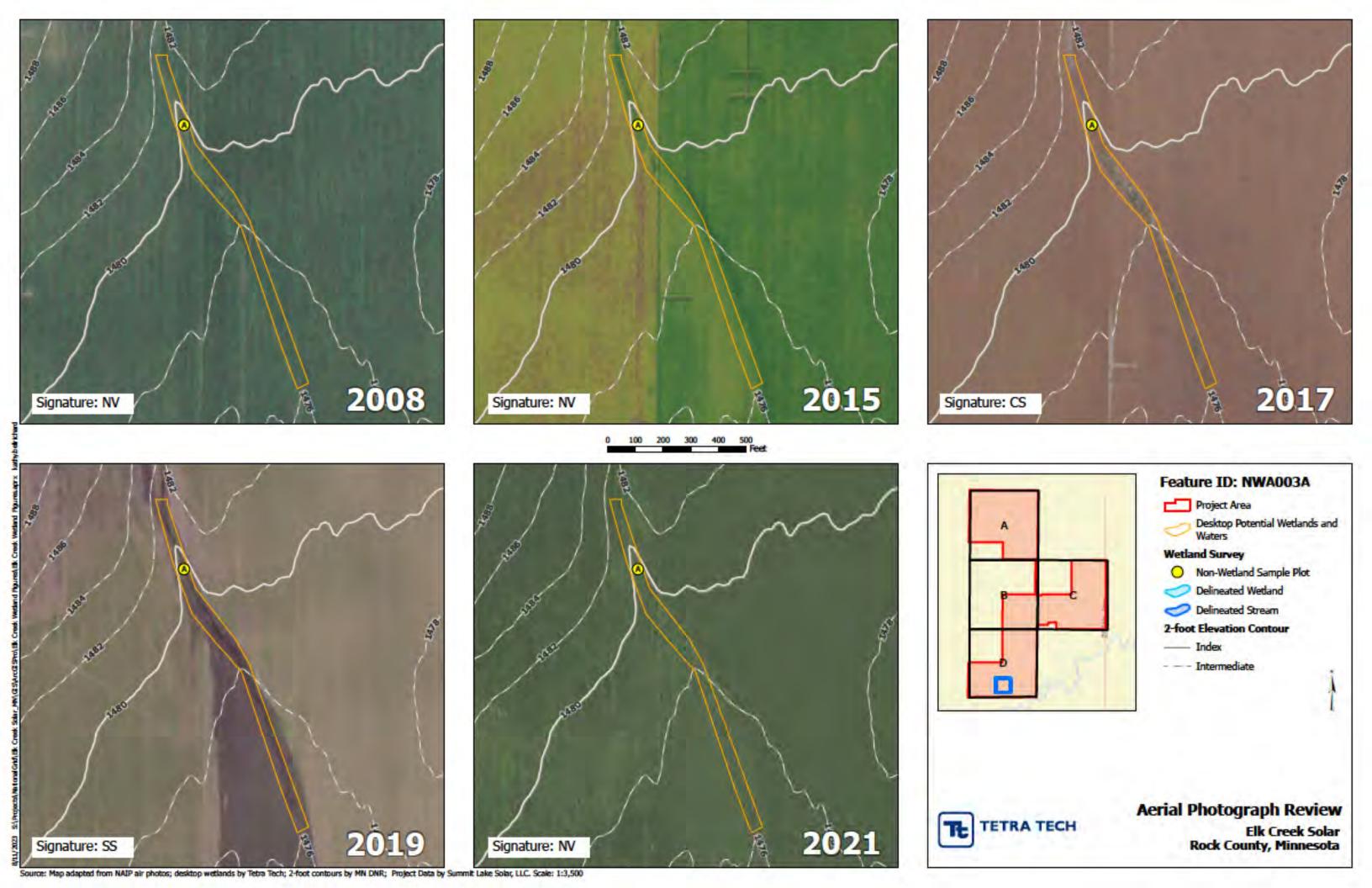
Harvested agricultural field. Bare ground: 100% Open water: 0%

Hydrophytic

Vegetation Present?

Wetland Hydrology Indicato		1.700	V. N.			
Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2		ed: check	Aquab True A Hydrox	c Fauna (B13) quatic Plants (B14) gen Sutfide Odor (C1) ed Rhizospheres on Living	Secon	dary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Algai Mat or Crust (B4 Iron Deposits (B5) Inundation Visible on A Sparsely Vegetated Co Water-Stained Leaves) Aertal Imagery (I oncave Surface		Preser Recen (C6) Thin M Gauge	nce of Reduced Iron (C4) t Iron Reduction in Tilled Sol luck Surface (C7) or Well Data (D9) (Explain in Remarks)	is X	Stunted or Stressed Plants (D1)
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes Yes Yes	No No No	х	Depth (Inches): Depth (Inches): Depth (Inches):	=	Wetland Hydrology Present?
Describe Recorded Data (stre Remarks:	eam gauge, mor	nitoring we	il, aertai	photos, previous inspection	s), If a	valiable:





WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/27/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: NWADD6A Section, Township, Range: Kathy Belirichard Sec.3 T102N, R44W Investigator(s): Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Long: -96.09967 Datum: 2 Lat 43.66959 WGS84 NWI Classification: Soil Map Unit Name: Marcus sity day loam, 0 to 2 percent slopes Are climatic hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) , or hydrology Are "normal circumstances present? No Significantly disturbed? , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes Hydric Soil Present? No is the sampled area within a wetland? No No Wetland Hydrology Present? If yes, optional wetland site ID: Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot size: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence Index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover X (explain) Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic

-Total Cover

Vegetation Present?

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

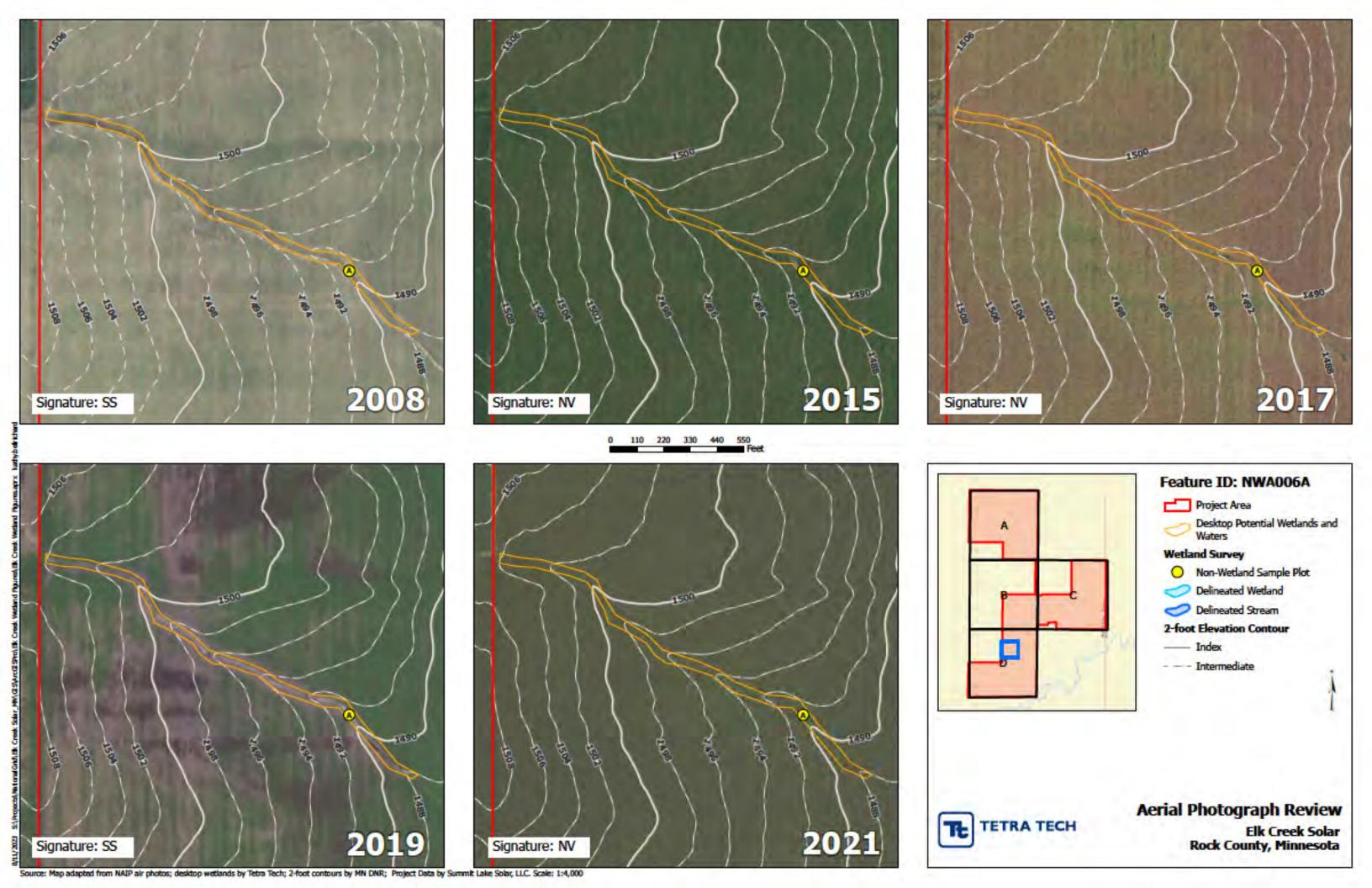
Harvested agricultural field. Bare ground: 100% Open water: 0%

Sampling Point:

NWADD6A

Depth	Matrix			dox Fea				7.1	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-6	10YR 2/1	100			1.79		Clay		
6-20	5Y 5/3	99	2.5Y 5/6	1.1	С	PL	Clay		Prominent
	-20 ST 5/3 99		-		-	-			
	-								
	-	-	1		200				
								- *	
				_					
					-	1		- 10	
"Type: C =	Concentration, D	- Denk	tion RM - Red	red Mat	dy MS -	Masked 9	and Grains	"I ocation	PL - Pore Lining, M - Matri
		Depi	coon, run - racus	ocu ma	and the	INGONESI C			tic Hydric Soils*:
The second second	Indicators:		00	ndu Clas	ed Matrix	(CA)			
_	stosol (A1)					(34)	A STATE OF THE PARTY OF THE PAR		(A16) (LRR K, L, R)
	stic Epipedon (A2)	_	ndy Red	-			urface (S7) (and the second s
	ack Histic (A3)				atrix (S6)			-	6566 (F12) (LRR K, L, R)
Hy	drogen Suffide (A	4)			ky Minera		Very Sh	nallow Dark S	Surface (TF12)
Str	ratified Layers (A5	i)	Lo	army Gle	yed Matro	(F2)	Other (e	explain in rer	marks)
20	m Muck (A10)		De	pleted M	latrix (F3)				
De	epieted Below Dan	k Surfac	æ (A11) Re	dox Dari	Surface	(F6)			
Th	ick Dark Surface	(A12)	De	pleted D	ark Surfa	ce (F7)	"Indicators o	f hydrochuti	c vegetation and webland
	andy Mucky Miner				ressions (1/2	hydrology m	ust be prese	ent, unless disturbed or
_	m Mucky Peat or			our Dep		()	problematic		A STATE OF THE PARTY OF THE PAR
	7-10-6		4			_			
estrictive L	gyer (If observer								
	ayor his opening	-						na - in	
ype:	20 30 00000	1					Hydric Soi	II Present?	No
ype: epth (inches	20 30 00000	1)-			C		Hydric Sol	ii Present?	No .
ype: epth (inches emarks: YDROLO	GY Irology Indicator	8:					Hydric Sol	II Present?	No _
ype: epth (inches emarks: YDROLO	s): 	8:	required: check a	il that ar	zoly)				No
ype: epth (Inches emarks: YDROLO retland Hyd rimary Indica	GY Irology Indicator	8:	required: check a		colv) Fauna (E	313)		ary Indicator	
ype: epth (inches emarks: YDROLO lettand Hyd firmary indica Surfac	GY Irology Indicators ators (minimum of se Water (A1)	8:	required: check a	Aquatic	Fauna (E	the state of the state of		ary indicator Surface So	s (minimum of two required Il Cracks (B6)
ype: epth (Inches emarks: YDROLO retland Hyd fimary Indica Surface High W	GY Irology Indicators alors (minimum of the Water (A1) Vater Table (A2)	8:	required: check a	Aquatic True Ac	Fauna (E quatic Pla	nts (B14)	Seconda	ary Indicator Surface Soi Drainage P	s (minimum of two required I Cracks (B6) attems (B10)
ype: epth (Inches emarks: YDROLO lettand Hyd firmary Indica Surfac High W Satura	GY Irology Indicators alors (minimum of the Water (A1) Vater Table (A2) tion (A3)	8:	required: check a	Aquatic True Ac Hydrog	Fauna (E quatic Pla en Sufficie	nts (B14) Odor (C	Second	ary Indicator Surface Soi Drainage Po Dry-Seasor	s (minimum of two required II Cracks (B6) attems (B10) II Water Table (C2)
ype: epth (Inches emarks: YDROLO letiand Hyd fimary Indica Surfac High W Satura Water	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) tton (A3) Marks (B1)	s: (one is)	required: check a	Aquatic True Ac Hydrog Oxidize	Fauna (E quatic Pla en Sutfloe d Rhizosp	nts (B14)	Second	ary Indicator Surface Soi Drainage P Dry-Seasor Crayfish Bu	s (minimum of two required) Il Cracks (B6) attems (B10) Il Water Table (C2) Imows (C8)
ype: epth (Inches emarks: YDROLO etland Hyd fmary Indic Surfac High W Satura Water Sedim	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itton (A3) Marks (B1) ent Deposits (B2)	s: (one is)	required: check a	Aquatic True Ad Hydrog Oxidize Roots (Fauna (E quatic Pla en Suffide d Rhizosp C3)	nts (B14) Odor (C	Second:	ary indicator Surface Soi Drainage P Dry-Seasor Crayfish Bu Saturation V	s (minimum of two required) Il Cracks (B6) attems (B10) Il Water Table (C2) Irrows (C8) Visible on Aertal Imagery (C
ype: epth (Inches emarks: YDROLO etland Hyd fmary India Surfac High W Satura Water Sedim Drift Di	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) tton (A3) Marks (B1)	s: (one is)	required: check a	Aquatic True Ad Hydrog Oxidize Roots (Present	Fauna (E quatic Pla en Suffice of Rhizoso C3) ce of Red	onts (B14) Odor (Co otheres on uced Iron	Second:	arv Indicator Surface Soi Drainage Pi Dry-Seasor Crayfish Bu Saturation V Stunted or S	s (minimum of two required) Il Cracks (B6) attems (B10) Il Water Table (C2) Imows (C8)
ype: epth (Inches emarks: YDROLO retland Hyd fimary Indica Surfac High W Satura Water Sedim Drift Do Algal M	GY irology Indicators ators (minimum of the Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4)	s: (one is)	required: check a	Aquatic True Ad Hydrog Oxidize Roots (Present Recent	Fauna (E quatic Pla en Suffice of Rhizoso C3) ce of Red	onts (B14) Odor (Co otheres on uced Iron	Second: I) Living (C4) Illed Solls X	arv Indicator Surface Sol Drainage Po Dry-Seasor Crayfish Bu Saturation V Stunted or S	s (minimum of two required) Il Cracks (B6) atterns (B10) Il Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C) Stressed Plants (D1) In Position (D2)
ype: epth (Inches emarks: YDROLO retland Hyd fimary Indica Surfac High W Satura Water Sedim Drift Do Algal M Iron De	GY irology Indicators ators (minimum of the Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5)	s: one is		Aquatic True Ad Hydrog Oxidize Roots (Present (C6)	Fauna (E quatic Pia en Suffide d Rhizos C3) ce of Red iron Red	nts (B14) e Odor (C oheres on uced iron uction in T	Second: I) Living (C4) Illed Solls X	arv Indicator Surface Soi Drainage Pi Dry-Seasor Crayfish Bu Saturation V Stunted or S	s (minimum of two required il Cracks (B6) atterns (B10) il Water Table (C2) irrows (C8) visible on Aerial Imagery (C Stressed Plants (D1) ic Position (D2)
ype: epth (Inches emarks: YDROLO retiand Hyd rmary indica Surfac High W Satura Water Sedim Drift De Algal M Iron De	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) Marks (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae	s: one is	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C5) Thin Ma	Fauna (E quatic Pia en Suffide d Rhizosp (C3) ce of Red iron Redu uck Surfac	onts (B14) e Odor (Co otheres on uced Iron uction in T ose (C7)	Second: I) Living (C4) Illed Solls X	arv Indicator Surface Sol Drainage Po Dry-Seasor Crayfish Bu Saturation V Stunted or S	s (minimum of two required) Il Cracks (B6) atterns (B10) Il Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C) Stressed Plants (D1) In Position (D2)
pe: epth (Inches emarks: YDROLO etland Hyd fmarv Indica Surfac High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Itlon Visible on Ae ely Vegetated Con	s: rone is	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pla en Suffice d Rhizosp C3) ce of Red tron Redu uck Surfac or Well D	onts (B14) e Odor (Co otheres on uced Iron uction in T be (C7) ata (D9)	Seconda I) Living (C4) Illed Solls X	arv Indicator Surface Sol Drainage Po Dry-Seasor Crayfish Bu Saturation V Stunted or S	s (minimum of two required il Cracks (B6) atterns (B10) il Water Table (C2) irrows (C8) visible on Aerial Imagery (C Stressed Plants (D1) ic Position (D2)
ype: epth (Inches emarks: YDROLO letland Hyd frany Indica Surfac High W Satura Water Sedim Drift D Algal M Iron De Inunda Sparse Water-	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Ae ely Vegetated Con- Stalned Leaves (I	s: rone is	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pla en Suffice d Rhizosp C3) ce of Red tron Redu uck Surfac or Well D	onts (B14) e Odor (Co otheres on uced Iron uction in T ose (C7)	Seconda I) Living (C4) Illed Solls X	arv Indicator Surface Sol Drainage Po Dry-Seasor Crayfish Bu Saturation V Stunted or S	s (minimum of two required il Cracks (B6) atterns (B10) il Water Table (C2) irrows (C8) visible on Aerial Imagery (C Stressed Plants (D1) ic Position (D2)
ype: epth (Inches emarks: YDROLO lettand Hyd fimary Indica Surfac High W Satura Water Sedim Drift Do Algal M Iron Do Inunda Sparse Water- letd Observ	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) tion (A3) Marks (B1) ten Deposits (B2) teposits (B3) viat or Crust (B4) teposits (B5) tion Visible on Ae tely Vegetated Con Stained Leaves (I	s: one is rial ima cave Si 89)	gery (B7) urface (B8)	Aquatic True Ad Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (i	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red iron Red uck Surfac or Well D Explain in	nts (B14) e Odor (Croheres on uced iron uction in Toe (C7) ata (D9) Remarks	Seconda I) Living (C4) Illed Solls X	ary Indicator Surface Sol Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S Geomorphic FAC-Neutra	s (minimum of two required) I Cracks (B6) attems (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C) Stressed Plants (D1) C Position (D2) al Test (D5)
ype: epth (Inches emarks: YDROLO retland Hyd rmary Indics Surfac High W Satura Water Sedim Drift Do Algal M Iron Do Inunda Sparse Water- leid Observ urface Water	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) tion (A3) Marks (B1) ten Deposits (B2) teposits (B3) vat or Crust (B4) teposits (B5) tion Visible on Ae tely Vegetated Con Stained Leaves (It vations: ter Present?	rial Ima cave Si 199)	gery (B7) urface (B8)	Aquatic True Ac Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I	Fauna (E quatic Pia en Suffide d Rhizosp (C3) ce of Red iron Red uck Surfac or Well Do Explain in	onts (B14) c Odor (Croheres on uced Iron uction in Toe (C7) ata (D9) Remarks	Seconda I) Living (C4) Illed Solls X	ary Indicator Surface Sol Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S Geomorphic FAC-Neutra	s (minimum of two required) I Cracks (B6) attems (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C) Stressed Plants (D1) C Position (D2) al Test (D5)
ype: epth (Inches emarks: YDROLO retiand Hyd rmary indica Surface High W Satura Water Sedim Drift De Algal M Iron De Inunda Sparse Water- retiated Observ urface Water rable if	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I Irations: Er Present?	rial Ima cave Si 89)	gery (B7) urface (B8) No	Aquatic True Ac Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I	nts (B14) Odor (Croheres on uced Iron uction in Toe (C7) ata (D9) Remarks nches):nches):	Seconda I) Living (C4) Illed Solls X	ary Indicator Surface Sol Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S Geomorphic FAC-Neutra	s (minimum of two required) I Cracks (B6) attems (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C) Stressed Plants (D1) I Position (D2) I Test (D5) Ind Hydrology Present?
ype: epth (Inches emarks: IYDROLO retiand Hyd rimary indica Surface High W Satura Water Sedim Drift De Algal M Iron De Inunda Sparse Water- leid Observ urface Water rable F aturation Pre	GY Irology Indicators alors (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I Irations: er Present? Present?	rial Ima cave Si 199)	gery (B7) urface (B8)	Aquatic True Ac Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I	Fauna (E quatic Pia en Suffide d Rhizosp (C3) ce of Red iron Red uck Surfac or Well Do Explain in	nts (B14) Odor (Croheres on uced Iron uction in Toe (C7) ata (D9) Remarks nches):nches):	Seconda I) Living (C4) Illed Solls X	ary Indicator Surface Sol Drainage P Dry-Seasor Crayfish Bu Saturation V Stunted or S Geomorphic FAC-Neutra	s (minimum of two required) I Cracks (B6) attems (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C) Stressed Plants (D1) C Position (D2) al Test (D5)
ype: epth (Inches emarks: PYDROLO retiand Hyd rimary indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- leid Observ urface Water rable F aturation Pre ncludes cap	GY Irology Indicators alors (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I Vations: er Present? Present? esent?	etal Ima cave Si 99) Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ac Hydrog Oxidize Roots (Present (C5) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red fron Redk uck Surfax or Well D Explain in Depth (I Depth (I	nts (B14) Odor (Croheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches): _nches): _nches): _	Seconda (C4) Illed Solls X	ary Indicator Surface Sol Drainage Pory-Seasor Crayfish But Saturation V Saturation V Geomorphic FAC-Neutra	s (minimum of two required) I Cracks (B6) attems (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C) Stressed Plants (D1) I Position (D2) I Test (D5) Ind Hydrology Present?
ype: epth (Inches emarks: PYDROLO retiand Hyd rimary indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- leid Observ urface Water rable F aturation Pre ncludes cap	GY Irology Indicators alors (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I Irations: er Present? Present?	etal Ima cave Si 99) Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ac Hydrog Oxidize Roots (Present (C5) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red fron Redk uck Surfax or Well D Explain in Depth (I Depth (I	nts (B14) Odor (Croheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches): _nches): _nches): _	Seconda (C4) Illed Solls X	ary Indicator Surface Sol Drainage Pory-Seasor Crayfish But Saturation V Saturation V Geomorphic FAC-Neutra	s (minimum of two required) I Cracks (B6) attems (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C) Stressed Plants (D1) I Position (D2) I Test (D5) Ind Hydrology Present?
ype: epth (Inches emarks: YDROLO ettand Hyd fmary Indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- eld Observ urface Water fater Table F alturation Pro includes capi	GY Irology Indicators alors (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I Vations: er Present? Present? esent?	etal Ima cave Si 99) Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ac Hydrog Oxidize Roots (Present (C5) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red fron Redk uck Surfax or Well D Explain in Depth (I Depth (I	nts (B14) Odor (Croheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches): _nches): _nches): _	Seconda (C4) Illed Solls X	ary Indicator Surface Sol Drainage Pory-Seasor Crayfish But Saturation V Saturation V Geomorphic FAC-Neutra	s (minimum of two required I Cracks (B6) attems (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C Stressed Plants (D1) I Position (D2) I Test (D5)
ype: epth (Inches emarks: YDROLO lettand Hyd fmary Indica Surfac High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- letd Observ urface Water laturation Princludes capi	GY Irology Indicators alors (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I Vations: er Present? Present? esent?	etal Ima cave Si 99) Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ac Hydrog Oxidize Roots (Present (C5) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red fron Redk uck Surfax or Well D Explain in Depth (I Depth (I	nts (B14) Odor (Croheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches): _nches): _nches): _	Seconda (C4) Illed Solls X	ary Indicator Surface Sol Drainage Pory-Seasor Crayfish But Saturation V Saturation V Geomorphic FAC-Neutra	s (minimum of two required I Cracks (B6) attems (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imagery (C Stressed Plants (D1) I Position (D2) I Test (D5)





WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/27/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: NWAD07A Section, Township, Range: Kathy Belirichard Sec.3 T102N, R44W Investigator(s): Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): None 0 43.67134 Long: -96.10074 Datum: WGS84 Soil Map Unit Name: NWI Classification: N/A Primghar sity clay loam, 1 to 3 percent slopes Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) , or hydrology Significantly disturbed? Are "normal circumstances present? No , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes Hydric Soil Present? No is the sampled area within a wetland? No No Wetland Hydrology Present? If yes, optional wetland site ID: Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot size: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence Index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover X (explain) Woody Vine Stratum

-Total Cover

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

Harvested agricultural field. Bare ground: 100% Open water: 0%

indicators of hydric soil and wetland hydrology must be

present, unless disturbed or problematic

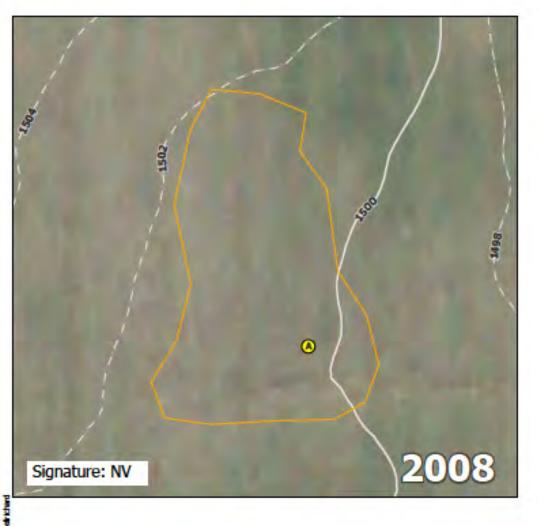
Hydrophytic

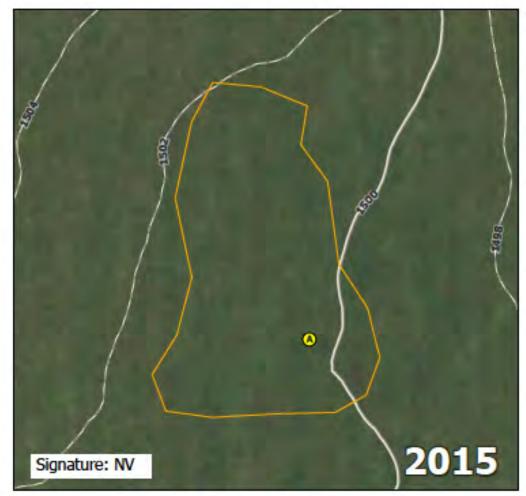
Vegetation Present?

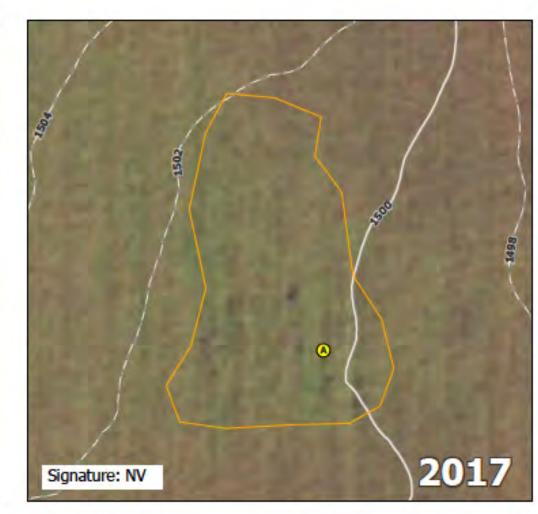
NWADO7A

Depth	Matrix			dox Fea				7.1	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks
0-29	10YR 2/1	100			1.00		Clay		
29-36	25Y 4/2	99	2.5Y 5/6	1.1	С	PL	Clay		Prominent
	-				-		_		2000
			-	_					
	1		7		100				
								- 10	
	G	-			-			**	
			A			1			
"Type: C -	Concentration, D	- Depk	etion, RM - Redu	iced Mat	rtx, MS -	Masked S	Sand Grains.	"Location: PL	 Pore Lining, M - Matrix
Hydric Soli	Indicators:						Indicators fo	r Problematic	Hydric Soils*:
His	stosol (A1)		Sa	ndy Gley	ed Matrix	(\$4)	Coast P	rairie Redox (A	16) (LRR K, L, R)
His	stic Epipedon (A2))	Sa	ndy Red	OK (S5)		Dark Su	rface (S7) (LRF	RK, L)
Bla	ack Histic (A3)		Str	tpped Ma	atrix (S6)		Iron-Mar	nganese Masse	6 (F12) (LRR K, L, R)
Hy	drogen Suffide (A	4)	Los	army Muc	ky Minera	af (F1)	Very Sh	allow Dark Surf	tace (TF12)
St	ratified Layers (A5	i)	Los	army Gle	yed Matro	(F2)	Other (e	xplain in remar	ks)
20	em Muck (A10)			market and an	latrix (F3)				
	epleted Below Dan	k Surfac			Surface				
Th	ick Dark Surface	(A12)			ark Surfa		"Indicators of	hurimohulio si	egetation and wetland
	andy Mucky Miner				ressions	1			unless disturbed or
_	cm Mucky Peat or		_			()	problematic		C Constitution of the
	7-10-6		7			_			
cetrictive L									
	ayer (If observed	1):					10		0
ype:		1):					Hydric Sol	Present?	No
ype: lepth (inches lemarks:	5):	ı):					Hydric Sol	Present?	No:
ype: lepth (inches lemarks: IYDROLO Vetland Hyd rimary indic Surfac High V Satura Water Sedim Orift D Algal II	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) itton (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4)	s: (one is)	required: check a	Aquatic True Ad Hydrog Oxidize Roots (Present Recent	Fauna (E quatic Pla en Suffice of Rhizoso C3) ce of Red	nts (B14) Odor (Ct oheres on uced Iron	Seconda I) Living (C4)	ry indicators in Surface Soil Co Drainage Patte Dry-Season W Crayfish Burro Saturation Visil Stunted or Stre Geomorphic Po	ninimum of two required) racks (B6) ems (B10) aler Table (C2) ws (C8) ble on Aerial Imagery (Csessed Plants (D1) osition (D2)
ype: lepth (inches lemarks: IYDROLO Vetland Hyd rimary indic Surfac High V Satura Water Sedim Drift D Algal II	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2) eposits (B3)	s: one is		Aquatic True Ad Hydrog Oxidize Roots (Present (C6)	Fauna (E quatic Pla en Suffice of Rhizoso C3) ce of Red	nts (B14) e Odor (Ct oheres on uced Iron uction in T	Seconda I) Living (C4)	ry Indicators in Surface Soil Cr Drainage Patte Dry-Season W Crayfish Burro Saturation Visil Stunted or Stre	ninimum of two required racks (B6) ems (B10) after Table (C2) ws (C8) ble on Aerial Imagery (Cs essed Plants (D1) osition (D2)
ype: lepth (inches lemarks: IYDROLO Vettand Hyd rimary indic Surfac High V Satura Water Sedim Drift D Algal M Iron Do Inunda	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) atton (A3) Marks (B1) ent Deposits (B2) eposits (B3) vat or Crust (B4) eposits (B5)	s: one is i	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mu	Fauna (E quatic Pia en Suffide d Rhizos; C3) ce of Red iron Redi	onts (B14) e Odor (Ct oheres on uced iron uction in T oe (C7)	Seconda I) Living (C4)	ry indicators in Surface Soil Co Drainage Patte Dry-Season W Crayfish Burro Saturation Visil Stunted or Stre Geomorphic Pr	ninimum of two required racks (B6) ems (B10) after Table (C2) ws (C8) ble on Aerial Imagery (Cs essed Plants (D1) osition (D2)
ype: epth (Inches emarks: PYDROLO letland Hyd fimary India Surfac High V Satura Water Sedim Drift D Algal M Iron Do Inunda Sparse	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) vat or Crust (B4) eposits (B5) ation Visible on Ae	s: fone is i	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Suffice d Rhizos C3) ce of Red tron Red uck Surfac or Well D	onts (B14) e Odor (Ct oheres on uced iron uction in T oe (C7)	Seconda I) Living (C4) Illed Solls	ry indicators in Surface Soil Co Drainage Patte Dry-Season W Crayfish Burro Saturation Visil Stunted or Stre Geomorphic Pr	ninimum of two required racks (B6) ems (B10) after Table (C2) ws (C8) ble on Aerial Imagery (Cs essed Plants (D1) osition (D2)
ype: epth (inches temarks: IYDROLO Vetland Hyd fimary indic Surfac High V Satura Water Sedim Drift D Algal II Iron D Inunda Sparse Water-	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Ae ely Vegetated Con Stained Leaves (B	s: fone is i	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Suffice d Rhizos C3) ce of Red tron Red uck Surfac or Well D	nts (B14) e Odor (Ctoheres on uced Iron uction in T be (C7) ata (D9)	Seconda I) Living (C4) Illed Solls	ry indicators in Surface Soil Co Drainage Patte Dry-Season W Crayfish Burro Saturation Visil Stunted or Stre Geomorphic Pr	ninimum of two required) racks (B6) ems (B10) aler Table (C2) ws (C8) ble on Aerial Imagery (C3) sissed Plants (D1) osition (D2)
ype: epth (inches emarks: IYDROLO Vetland Hyd rimary indic Surfac High V Satura Water Sedim Drift D Algal M Iron D Inunda Sparse Water- leid Observ	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B3) Wat or Crust (B4) eposits (B5) ation Visible on Ae ely Vegetated Con Stained Leaves (I	s: fone is i	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Suffice of Rhizoso ce of Red iron Redi uck Surfac or Well D Explain in	nts (B14) e Odor (Cro otheres on uced iron uction in T oe (C7) ata (D9) Remarks	Seconda I) Living (C4) Illed Solls	ry Indicators in Surface Soil Cr Drainage Patte Dry-Season Wi Crayfish Burro Saturation Visil Stunted or Stre Geomorphic Po FAC-Neutral To	ninimum of two required) racks (B6) ems (B10) after Table (C2) ws (C8) ble on Aerial Imagery (C5) essed Plants (D1) osition (D2) est (D5)
ype: lepth (Inches lemarks: IYDROLO Vetland Hyd rimary India Surfac High V Satura Water Sedir Drift D Algal M Iron Do Inunda Sparse Water- leid Observ urface Water	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) ent Deposits (B2) eposits (B3) vat or Crust (B4) eposits (B5) ation Visible on Ae ely Vegetated Con Stained Leaves (Bater) ations: er Present?	s: one is i rial ima cave Si 89)	gery (B7) urface (B8)	Aquatic True Ad Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (i	Fauna (E quatic Pia en Suffice d Rhizos C3) ce of Red tron Red uck Surfac or Well D	nts (B14) e Odor (Cro otheres on uced iron uction in T oe (C7) ata (D9) Remarks	Seconda I) Living (C4) Illed Solls	ory Indicators in Surface Soil Co Drainage Patte Dry-Season Wi Crayfish Burro Saturation Visit Stunted or Stre Geomorphic Po FAC-Neutral To Wettand	ninimum of two required) racks (B6) ems (B10) ater Table (C2) ws (C8) ble on Aerial Imagery (C5) essed Plants (D1) est (D5)
ype: lepth (Inches lemarks: IYDROLO Vetland Hyd Ifmary Indic Surfac High V Satura Water Sedim Drift D Algal M Iron De Inunda	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (B4) Irological Con Ir	rial Ima cave Si 199)	gery (B7) urface (B8)	Aquatic True Ad Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (i	Fauna (E quatic Pia en Suffice of Rhizoso (C3) ce of Red fron Red uck Surfac or Well D Explain in	nts (B14) e Odor (Crotheres on uced Iron uction in Toe (C7) ata (D9) Remarks nches):nches):nches):	Seconda I) Living (C4) Illed Solls	ory Indicators in Surface Soil Co Drainage Patte Dry-Season Wi Crayfish Burro Saturation Visit Stunted or Stre Geomorphic Po FAC-Neutral To Wettand	ninimum of two required) racks (B6) ems (B10) after Table (C2) ws (C8) ble on Aerial Imagery (C5) essed Plants (D1) osition (D2) est (D5)
ype: lepth (Inches lemarks: IYDROLO Vettand Hyd rimary indic Surfac High V Satura Water Sedim Drift D Algal M Iron De Inunda Sparse Water- leid Observ surface Water Valer Table I	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (Bater) Vations: er Present? Present?	rial Ima cave Si 99)	gery (B7) urface (B8)	Aquatic True Ac Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X	Fauna (E quatic Pia en Suffice of Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I	nts (B14) e Odor (Crotheres on uced Iron uction in Toe (C7) ata (D9) Remarks nches):nches):nches):	Seconda I) Living (C4) Illed Solls	ory Indicators in Surface Soil Co Drainage Patte Dry-Season Wi Crayfish Burro Saturation Visit Stunted or Stre Geomorphic Po FAC-Neutral To Wettand	ninimum of two required racks (B6) ems (B10) alter Table (C2) ws (C8) ble on Aerial Imagery (C) essed Plants (D1) est (D5) Hydrology sent?
ype: epth (Inches emarks: IYDROLO Netland Hyd rimary India Surfac High V Satura Water Sedim Drift D Algal M Iron Do Inunda Sparse Water- Ield Observ urface Water aturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (Bater) Vations: er Present? Present?	erial Ima cave Si 99) Yes Yes Yes	gery (B7) urface (B8) No No No	Aquatic True Ac Hydrog Oxidize Roots (Present (C5) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffice d Rhizos C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	nts (B14) Odor (Ctoheres on uced Iron uction in Tope (C7) ata (D9) Remarks nches): _nches): _nches): _	Seconds) Living (C4) lied Solis	Invindicators in Surface Soil Co Drainage Patte Dry-Season Wi Crayfish Burro Saturation Visit Stunted or Stre Geomorphic Po FAC-Neutral To Wettand	ninimum of two required racks (B6) ems (B10) alter Table (C2) ws (C8) ble on Aerial Imagery (C) essed Plants (D1) est (D5) Hydrology sent?
ype: epth (Inches emarks: YDROLO lettand Hyd imary India Surfac High V Satura Water Sedim Jiron Do Inunda Sparse Water- letd Observ urface Water aturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (Bater) Vations: er Present? Present? Hary fringe)	erial Ima cave Si 99) Yes Yes Yes	gery (B7) urface (B8) No No No	Aquatic True Ac Hydrog Oxidize Roots (Present (C5) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffice d Rhizos C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	nts (B14) Odor (Ctoheres on uced Iron uction in Tope (C7) ata (D9) Remarks nches): _nches): _nches): _	Seconds) Living (C4) lied Solis	Invindicators in Surface Soil Co Drainage Patte Dry-Season Wi Crayfish Burro Saturation Visit Stunted or Stre Geomorphic Po FAC-Neutral To Wettand	ninimum of two required racks (B6) ems (B10) alter Table (C2) ws (C8) ble on Aerial Imagery (C) essed Plants (D1) est (D5) Hydrology sent?
ype: epth (Inches emarks: YDROLO lettand Hyd imary India Surfac High V Satura Water Sedim Jiron Do Inunda Sparse Water- letd Observ urface Water aturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (Bater) Vations: er Present? Present? Hary fringe)	erial Ima cave Si 99) Yes Yes Yes	gery (B7) urface (B8) No No No	Aquatic True Ac Hydrog Oxidize Roots (Present (C5) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffice d Rhizos C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	nts (B14) Odor (Ctoheres on uced Iron uction in Tope (C7) ata (D9) Remarks nches): _nches): _nches): _	Seconds) Living (C4) lied Solis	Invindicators in Surface Soil Co Drainage Patte Dry-Season Wi Crayfish Burro Saturation Visit Stunted or Stre Geomorphic Po FAC-Neutral To Wettand	ninimum of two required racks (B6) ems (B10) alter Table (C2) ws (C8) ble on Aerial Imagery (C) essed Plants (D1) est (D5) Hydrology sent?

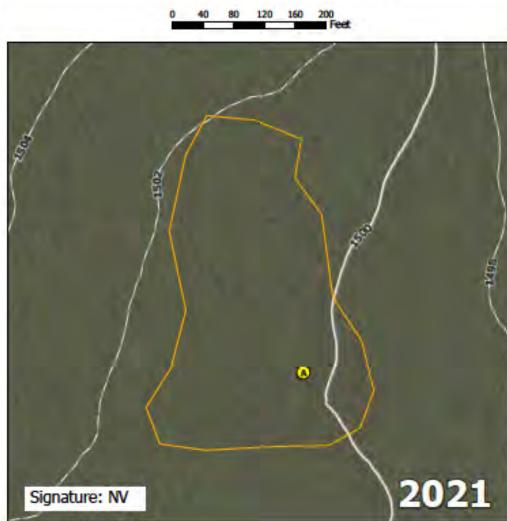


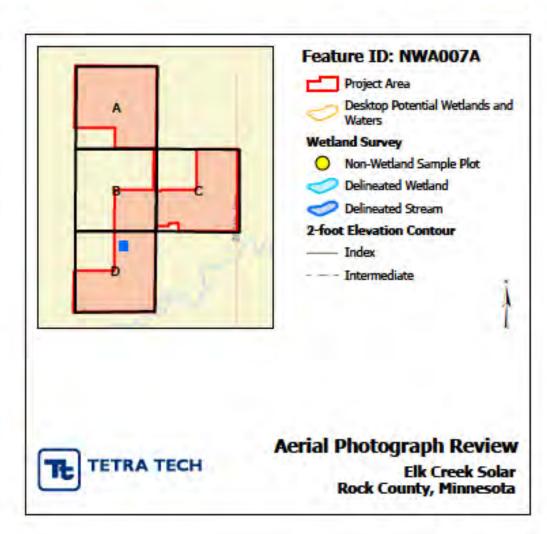












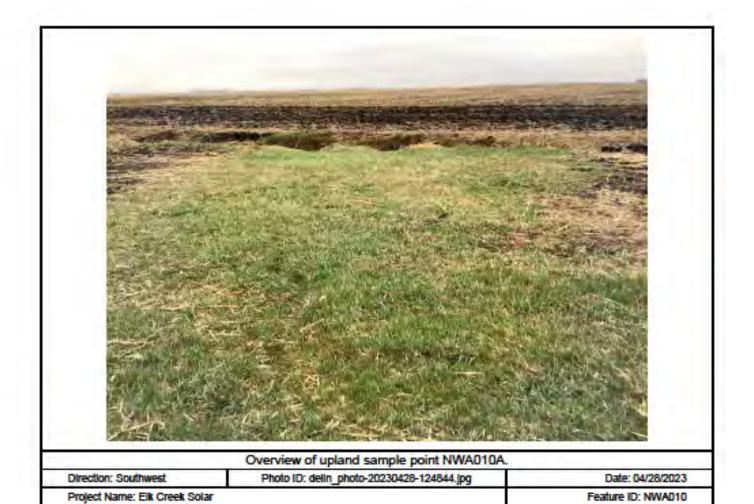
Source: Map adapted from NAIP air photos; desktop wetlands by Tetra Tech; 2-foot contours by MN DNR; Project Data by Summit Lake Solar, LLC. Scale: 1:1,500

WETLAND DETERMINATION DATA FORM - Midwest Region

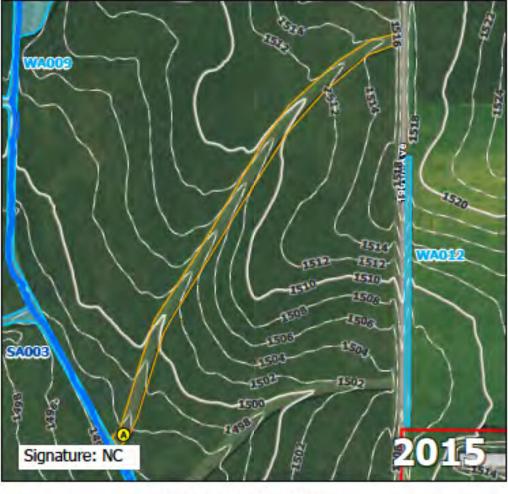
roject/Site:	Elk Cree	k Solar	City/Co	unty:	Rock	sasa	mpling Date: 04/28/2023
pplicant/Owner:		Elk Creek Solar,	LLC	S	tate:	MN Sa	mpling Point: NWA010A
vestigator(s):	K	athy Belirichard		Section,	Township	p, Range:	Sec.34 T103N, R44W
andform (hillslope, terr	ace, etc.):	Swale		Local reli	ef (concav	ve, convex, no	one): Concave
lope (%): 2	Lat	43.67511		Long:	-96.09	71 Da	atum: WGS84
oil Map Unit Name:	Havelock of flooded	day loam, 0 to 2 pe	rcent slope	s, frequently	NW	Classificatio	n: N/A
re climatic/hydrologic o		the site typical for the	nis time of t	he year?	Yes (lf no, explain	in remarks)
re vegetation	, soll	, or hydrology	Si	gnificantly di	sturbed?	Are "non	mai circumstances present? Y
re vegetation	, soll	, or hydrology	na	turally probl	ematic?	(If needs	ed, explain any answers in rema
UMMARY OF FIN	IDINGS						
Hydrophytic Veget	ation Present	? No				e Tile	
Hydric Soil Present	17	-		is the sam	pled area	within a we	tland? No
Wetland Hydrology	Present?	No		If yes, option	onal wetia	nd site ID:	
emarks:							
EGETATION - U	3	A	bsolute Do		ndicator Status	Dominan	ce Test Worksheet
t.	(Piot size:	30)	6 Cover S	peties	Status		Dominant Species BL, FACW, or FAC: 0 (A)
2. 3.							ber of Dominant
4						Species A	cross All Strata: 2 (B)
5.							Dominant Species BL, FACW, or FAC: 0% (A/B
			-	otal Cover	-	10000	
saoling/Shrub Stratum 1. 2.	(Plot size:					Total % C OBL spec FACW sp	cles 0 x1- 0 pedes 0 x2- 0
4						FAC spec	
5.			- 25	Total Cover	_	FACU sp UPL spec	
lerb Stratum	(Plot size:	5)	_	otal Cove		A Section of the second section of	otals 102 (A) 408 (1
Poa compressa	(Flot size.		50	Y	FACU		ce Index = B/A = 4
Digitaria sanguinal	Is		50	Y	FACU	-	
3. Taraxacum officina			2	N	FACU	Hydroph	ytic Vegetation Indicators:
4.							old test for hydrophytic vegetation
5.						Dor	minance test is >50%
e							valence Index is ≤3.0°
						_	rphological adaptations' (provide
7.							porting data in Remarks or on a
7. 8.						Sec	arate sheet)
7. 8. 9.							arate sheet) blematic hydrophytic vegetation*
			102 -7	Total Cover		Pro	arate sheet) blematic hydrophytic vegetation* piain)
7. 8. 9.	(Plot size:	15)	102 -7	otal Cover	h	Pro (ex	blematic hydrophytic vegetation*

inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Gauge or Well Data (D9) Water-Stained Leaves (B9) Other (Explain in Remarks) Fleid Observations: Surface Water Present? No Depth (Inches): Wetland Hydrology Water Table Present? Yes No Depth (Inches): Present? Saturation Present? Yes No Depth (Inches): No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

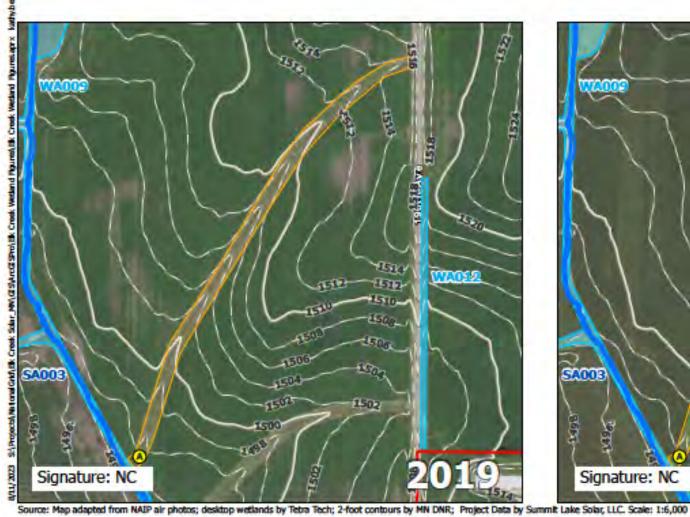
Remarks:



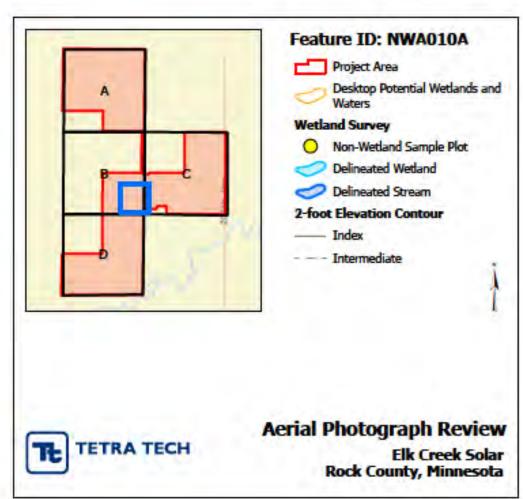












WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/28/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: NWAD14A Section, Township, Range: Kathy Belirichard Sec.27 T103N, R44W Investigator(s): Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave 0 Lat 43.70261 Long: -96.09853 Datum: WGS84 Soil Map Unit Name: Rushmore slity clay loam, 0 to 2 percent slopes NWI Classification: R5UBH Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) , or hydrology Significantly disturbed? Are "normal circumstances present? No , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? No Hydric Soil Present? No is the sampled area within a wetland? No Wetland Hydrology Present? Yes If yes, optional wetland site ID: Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot size: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic

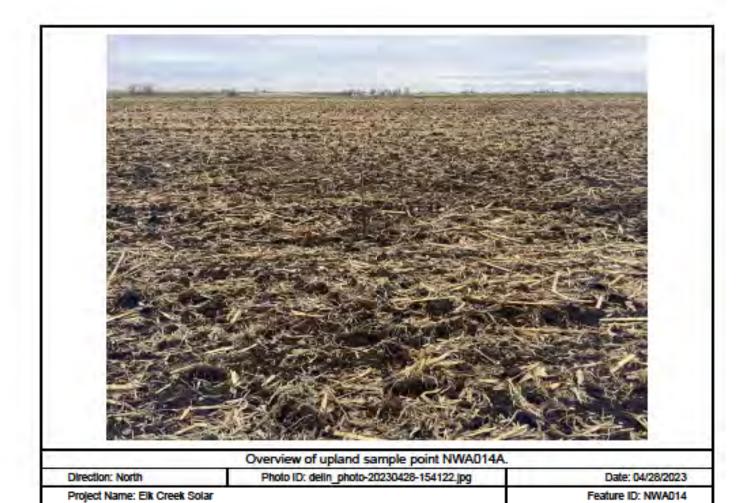
-Total Cover

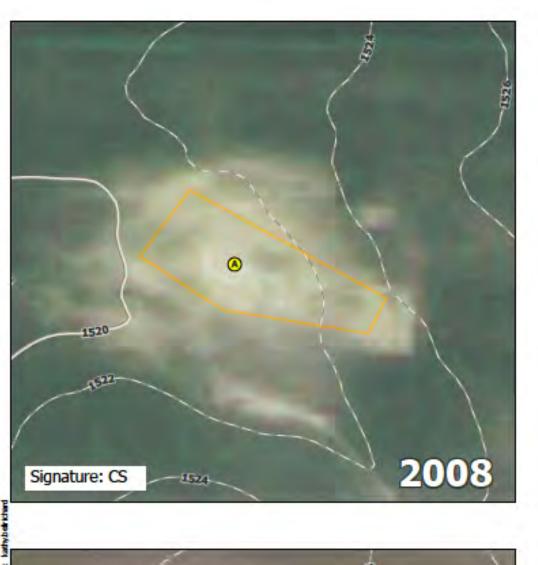
Vegetation Present?

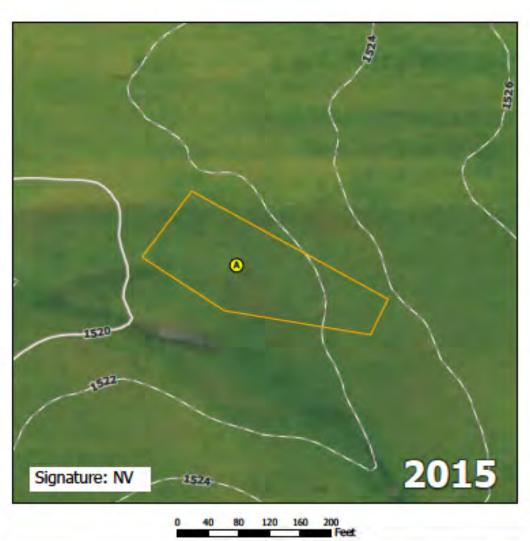
Remarks: (Include photo numbers here or on a separate sheet)

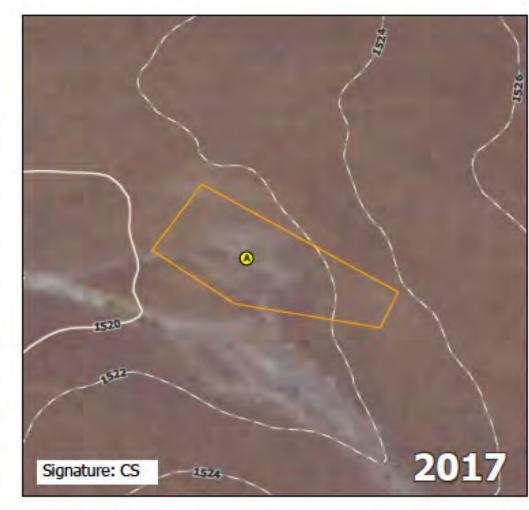
Harvested agricultural field. Bare ground: 100% Open water: 0%

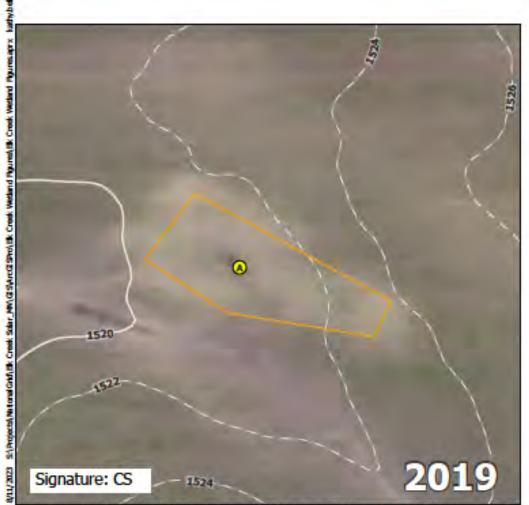
Depth	Matrix		Re	dox Fea	tures		1		
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Textu	re	Remarks
0-14	10YR 2/1	100		1 = 4		1	Clay	- 1	
14-26	10YR 2/1	98	10YR 4/6	2	С	M	Clay		Prominent
26-30	25Y 4/3	95	2.5Y 5/6	5	c	M	Clas		Distinct
26-30	251 43	35	2,515/6	2		M	Cay		Disanci
-			1		200				
			+			-			
*Type: C =	Concentration, D	- Depk	etion, RM - Redu	ced Mai	rtx, MS -	Masked :	Sand Grains.	"Locato	n: PL - Pore Lining, M - Matri
Hydric Soil	Indicators:						Indicators	for Proble	matic Hydric Solls*:
H	stosol (A1)		San	ndy Gley	yed Matrix	(\$4)	Coast	Prairie Rec	tox (A16) (LRR K, L, R)
H	stic Epipedon (A2)		Sar	ndy Red	ox (S5)		Dark S	Surface (S7	(LRR K, L)
Bi	ack Histic (A3)		Stri	pped M	atrix (S6)		Iron-M	langanese l	Masses (F12) (LRR K, L, R)
- Hh	drogen Suffide (A	4)	Loa	my Muc	ky Minera	af (F1)			k Surface (TF12)
	ratified Layers (A5		_		yed Matro			(explain in	
	cm Muck (A10)				latrix (F3)		_		3.3104
	epieted Below Dari	Surfac			k Surface				
							2-12-7		ALCO DE CONTROL VIDA
	lick Dark Surface (ark Surfa		"Indicators	of hydroph	ytic vegetation and wetland
_	andy Mucky Minera			ox Dep	ressions ((18)	problemati		sent, unless disturbed or
5	cm Mucky Peat or	Peat (S	3)				production		
testrictive L	ayer (If observed	II.				-	1000.00		100
ype:								The second	n No
.,							Hydric S	oli Preseni	NO.
Depth (Inches Remarks:	5):						Hydric S	oli Preseni	- NO.
temarks:					-0		Hyune s	oli Preseni	Y
temarks:	GY	32			-0-		Hydne s	oli Preseni	Y NO.
Remarks:	GY Irology Indicators		required; check a	I that ar	ooly)				
TYDROLO Vetland Hyd	GY Irology Indicators ators (minimum of		required: check a		200	113)		dary indical	tors (minimum of two required
YDROLO Vettand Hyd rimary indic	GY frology Indicators ators (minimum of se Water (A1)		required: check a	Aquatic	Fauna (E		Secon	dary indica Surface S	tors (minimum of two required Soll Cracks (86)
YDROLO Vetland Hyd rimary India Surfac High V	GY irology indicators ators (minimum of se Water (A1) Vater Table (A2)		required: check a	Aquato True Ac	Fauna (E quatic Pla	nts (B14)	Secon	dary indica Surface S Drainage	tors (minimum of two required Soll Cracks (86) Pattems (810)
YDROLO Vetland Hyd Surfac High V Satura	GY irology Indicators ators (minimum of se Water (A1) Vater Table (A2) itton (A3)		required: check a	Aquatic True Ac Hydrog	Fauna (E quatic Pla en Suffide	nts (B14) Odor (C	Secon	dary indica Surface s Drainage Dry-Seas	tors (minimum of two required Soil Cracks (B6) Patterns (B10) Son Water Table (C2)
YDROLO Vetland Hyd Surfac High V Satura Water	GY irology indicators ators (minimum of se Water (A1) Vater Table (A2) itton (A3) Marks (B1)	one is	required: check a	Aquation True Ac Hydrog Oxidize	Fauna (E quatic Pla en Suffide ed Rhizosp	nts (B14) Odor (C	Secon	Surface S Drainage Dry-Seas Crayfish	tors (minimum of two required Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8)
YDROLO Vettand Hyd Imary India Surfac High V Satura Water Sedim	GY irology Indicators ators (minimum of the Water (A1) Vater Table (A2) itton (A3) Marks (B1) ent Deposits (B2)	one is	required: check a	Aquation True And Hydrog Oxidize Roots (Fauna (E quatic Pla en Sufficie d Rhizosp C3)	nts (B14) Odor (C oheres on	Secon 1) Living	dary Indica Surface s Drainage Dry-Seas Crayfish	tors (minimum of two required Soil Cracks (B6) Pattems (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C
YDROLO Vettand Hyd Infrary Indic Surfac High V Satura Water Sedim Orift D	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) atton (A3) Marks (B1) ent Deposits (B2) eposits (B3)	one is	required: check a	Aquation True Ad Hydrog Oxidize Roots (Presen	Fauna (E quatic Pla en Suffice of Rhizosp C3) ce of Red	nts (B14) Odor (C oheres on uced Iron	Secon 1) Living	dary Indica Surface S Drainage Dry-Seas Crayfish C Saturatio Stunted C	tors (minimum of two required Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C or Stressed Plants (D1)
YDROLO Vettand Hyd rimary indic Surfac High V Satura Water Sedim Drift D Algal I	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4)	one is	required: check a	Aquation True And Hydrog Oxidize Roots (Present Recent	Fauna (E quatic Pla en Suffice of Rhizosp C3) ce of Red	nts (B14) Odor (C oheres on uced Iron	Secon 1) Living	dary indical Surface S Drainage Dry-Seas Crayfish C Saturatio Stunted C	tors (minimum of two required Soll Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C or Stressed Plants (D1)
YDROLO Vettand Hyd Surfac High V Satura Water Sedim Drift D Iron D	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) vat or Crust (B4) eposits (B5)	one is		Aquation True And Hydrog Oxidize Roots (Present Recent (C6)	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red iron Red	nts (B14) Odor (C oheres on uced Iron uction in 1	Secon 1) Living	dary indical Surface S Drainage Dry-Seas Crayfish C Saturatio Stunted C	tors (minimum of two required Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (Cor Stressed Plants (D1)
YDROLO Vettand Hyd Surfac High V Satura Water Sedim Drift D Iron Do Inunda	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Itlon Visible on Ae	one is	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present Recent (C6) Thin Mi	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red iron Redu	onts (B14) e Odor (C otheres on uced from uction in 1 oe (C7)	Secon 1) Living	dary indical Surface S Drainage Dry-Seas Crayfish C Saturatio Stunted C	tors (minimum of two required Soll Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C or Stressed Plants (D1)
Vertand Hyderimary India Surface High V Satura Water Sedim Drift D Algal M Iron D Inunda Sparse	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) tent Deposits (B2) teposits (B3) Mat or Crust (B4) teposits (B5) ation Visible on Aetery Vegetated Con	one is	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Sulfide d Rhizosp C3) ce of Red iron Red uck Surfac or Well D	onts (B14) e Odor (C otheres on uced Iron uction in 1 de (C7) ata (D9)	Secon 1) Living (C4) Clied Solis	dary indical Surface S Drainage Dry-Seas Crayfish C Saturatio Stunted C	tors (minimum of two required Soll Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C or Stressed Plants (D1)
YDROLO Vettand Hyd Imary India Surfac High V Satura Water Sedim Drift D Inunda Sparse Water	GY Irology Indicators ators (minimum of se Water (A1) Vater Table (A2) ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) vat or Crust (B4) eposits (B5) ation Visible on Ae ely Vegetated Con Stained Leaves (B	one is	gery (B7)	Aquatic True Ad Hydrog Oxidize Roots (Present Recent (C6) Thin Mi Gauge	Fauna (E quatic Pia en Suffide d Rhizosp C3) ce of Red iron Redu	onts (B14) e Odor (C otheres on uced Iron uction in 1 de (C7) ata (D9)	Secon 1) Living (C4) Clied Solis	dary indical Surface S Drainage Dry-Seas Crayfish C Saturatio Stunted C	tors (minimum of two required Soll Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C or Stressed Plants (D1)
YDROLO Vettand Hyd Irmary India Surface High V Satura Water Sedim Drit D Inunda Sparse Water- Held Observ	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) ation Visible on Ae ely Vegetated Con Stained Leaves (B vations:	rtal Ima cave Si 39)	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (i	Fauna (E quatic Pia en Suffide of Rhizosp C3) ce of Red iron Red uck Surfac or Well Do Explain in	nts (B14) e Odor (C oheres on uced Iron uction in 1 be (C7) ata (D9) Remarks	Secon 1) Living (C4) Clied Solis	dary indical Surface S Drainage Dry-Seas Crayfish C Saturatio Stunted C	tors (minimum of two required Soll Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C or Stressed Plants (D1)
VETTANDERS EVENTANDERS VETTANDERS VETTA	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Itlon Visible on Aerely Vegetated Con Stained Leaves (Batations: er Present?	rtal Ima cave Si 39)	gery (B7)	Aquation True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (X	Fauna (E quatic Pia en Suffide d Rhizosp (C3) ce of Red iron Red uck Surfac or Well D Explain in	nts (B14) e Odor (Coheres on uced Iron uction in 1 ce (C7) ata (D9) Remarks	Secon 1) Living (C4) Clied Solis	dary Indica Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	tors (minimum of two required Soll Cracks (B6) Pattems (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (Cor Stressed Plants (D1) ihic Position (D2) trail Test (D5)
VPDROLO Vettand Hyd Surface High V Satura Water Sedim Drift D Algal II Iron Do Inunda Sparse Water Surface Water Vater Table	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Itlon Visible on Ae ely Vegetated Con Stained Leaves (B Irations: Er Present?	rtal Ima cave Si 39) Yes Yes	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I	Fauna (E quatic Pia en Suffide d Rhizosp (C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I	ntis (B14) e Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches):	Secon 1) Living (C4) Clied Solis	dary Indica Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	tors (minimum of two required Soil Cracks (B6) Pattems (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (Cor or Stressed Plants (D1) into Position (D2) thal Test (D5)
AYDROLO Wetland Hyd Irmary India Surface High V Satura Water Sedim Orift D Algal II Iron D Inunda Sparse Water Surface Water Variace Water Saturation Pri	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) tent Deposits (B2) teposits (B3) Mat Crust (B4) teposits (B5) ation Visible on Ae tely Vegetated Con Stained Leaves (B1) ter Present? Present?	rtal Ima cave Si 39)	gery (B7)	Aquation True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (X	Fauna (E quatic Pia en Suffide d Rhizosp (C3) ce of Red iron Red uck Surfac or Well D Explain in	ntis (B14) e Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches):	Secon 1) Living (C4) Clied Solis	dary Indica Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	tors (minimum of two required Soll Cracks (B6) Pattems (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (Cor Stressed Plants (D1) ihic Position (D2) trail Test (D5)
AYDROLO Wetland Hyd Irmary India Surfac High V Satura Water Sedim Orift D Algal II Iron D Inunda Sparse Water Surface Water Vater Table I Saturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) tent Deposits (B2) teposits (B3) Mat (B4) teposits (B5) to Visible on Ae tely Vegetated Con Stained Leaves (B4) ter Present? Present? tesent?	rial Ima cave Si 39) Yes Yes Yes	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffide of Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	ntis (B14) Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches): nches):	Secon 1) Living (C4) Diled Solis	dary Indica Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	tors /minimum of two required Soli Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (Cor or Stressed Plants (D1) whice Position (D2) drail Test (D5)
AYDROLO Wetland Hyd Irmary India Surfac High V Satura Water Sedim Orift D Algal II Iron D Inunda Sparse Water Surface Water Vater Table I Saturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) tent Deposits (B2) teposits (B3) Mat Crust (B4) teposits (B5) ation Visible on Ae tely Vegetated Con Stained Leaves (B1) ter Present? Present?	rial Ima cave Si 39) Yes Yes Yes	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffide of Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	ntis (B14) Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches): nches):	Secon 1) Living (C4) Diled Solis	dary Indica Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	tors (minimum of two required Soil Cracks (B6) Pattems (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (Cor or Stressed Plants (D1) into Position (D2) trail Test (D5)
AYDROLO Wetland Hyd Irmary India Surfac High V Satura Water Sedim Orift D Algal II Iron D Inunda Sparse Water Surface Water Vater Table I Saturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) tent Deposits (B2) teposits (B3) Mat (B4) teposits (B5) to Visible on Ae tely Vegetated Con Stained Leaves (B4) ter Present? Present? tesent?	rial Ima cave Si 39) Yes Yes Yes	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffide of Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	ntis (B14) Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches): nches):	Secon 1) Living (C4) Diled Solis	dary Indica Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	tors /minimum of two required Soli Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (Cor or Stressed Plants (D1) whice Position (D2) drail Test (D5)
AYDROLO Wetland Hyd Irmary India Surfac High V Satura Water Sedim Orift D Algal II Iron D Inunda Sparse Water Surface Water Vater Table I Saturation Princludes cap	GY Irology Indicators ators (minimum of the Water (A1) Vater Table (A2) Itlon (A3) Marks (B1) tent Deposits (B2) teposits (B3) Mat (B4) teposits (B5) to Visible on Ae tely Vegetated Con Stained Leaves (B4) ter Present? Present? tesent?	rial Ima cave Si 39) Yes Yes Yes	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (I X X	Fauna (E quatic Pia en Suffide of Rhizosp C3) ce of Red fron Red uck Surfac or Well D Explain in Depth (I Depth (I	ntis (B14) Odor (Coheres on uced Iron uction in 1 oe (C7) ata (D9) Remarks nches): nches):	Secon 1) Living (C4) Diled Solis	dary Indica Surface S Drainage Dry-Seas Crayfish Saturatio Stunted of Geomorp FAC-Neu	tors /minimum of two required Soll Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (Cor or Stressed Plants (D1) whice Position (D2) drail Test (D5)



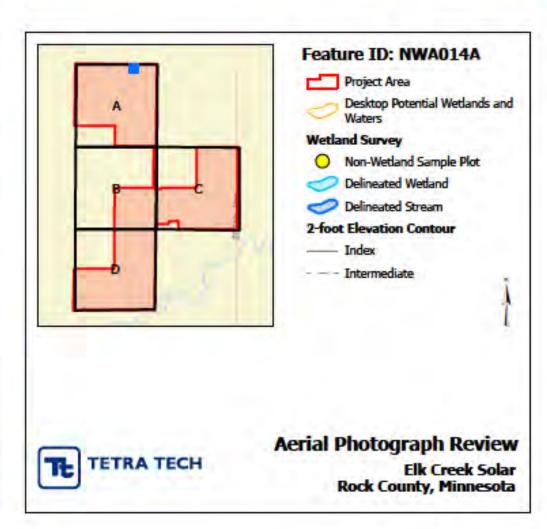












Source: Man adapted from NAIP air photos: designo wetlands by Tetra Tech: 2-foot contours by MN DNR: Project Data by Summit Lake Solar, U.C. Scale: 1:

WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/28/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: NWA015A Section, Township, Range: Kathy Belirichard Sec.27 T103N, R44W Investigator(s): Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): Concave 1 Lat 43,70075 Long: -96.09683 Datum: WGS84 Rushmore slity clay loam, 0 to 2 percent slopes NWI Classification: R4SBC Soil Map Unit Name: Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) , or hydrology Significantly disturbed? Are "normal circumstances present? No , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? No Hydric Soil Present? No is the sampled area within a wetland? No No Wetland Hydrology Present? If yes, optional wetland site ID: Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot size: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic

-Total Cover

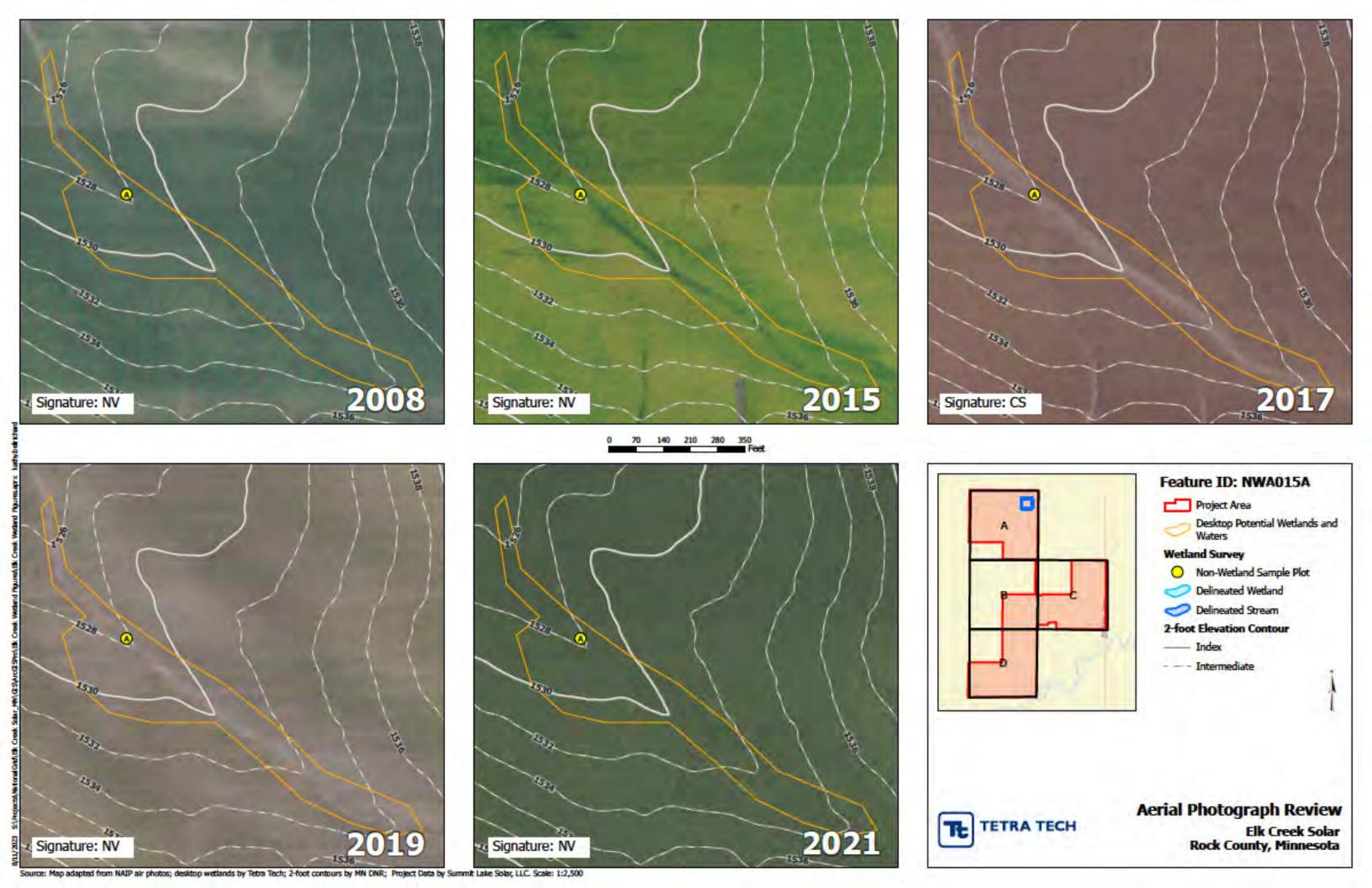
Vegetation Present?

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

Harvested agricultural field. Bare ground: 100% Open water: 0%

Depth	Matrix		Re	dox Fea	tures					
(Inches)	Color (moist)	or (moist) % Color (moist) % Type' Loc				Loc**	Textu	re	Remarks	
0-24	10YR 2/1	100		-	- Ar-		Clay	- 1		
		400	-	-			-			_
24-30	25Y 4H	100					Clay			
					EE 24					
			-				7			
			-							_
_				_		-		-		_
			-							
"Type: C =	Concentration, D	- Denk	tion RM - Redu	red Ma	hty MS	Macked 5	Cand Crains	"I neating	n: PL - Pore Lining, M - N	Latri
Hydric Soil	the same of the sa	- nehit	non, row - recou	ueu ma	uix, ma -	IMODREU C				laut
			620	ndu Clar	und Malety	(24)			matic Hydric Solls*:	
	stosol (A1)				yed Matrix	(54)			ax (A16) (LRR K, L, R)	
	stic Epipedon (A2)				lox (S5)				(LRR K, L)	
	ack Histic (A3)				atrix (S6)			-	Masses (F12) (LRR K, L,	9
	drogen Suffide (A			-	cky Minera				k Surface (TF12)	
	ratified Layers (A5)			yed Matrix		Other	(explain in r	remarks)	
	m Muck (A10)		The second second second		latrix (F3)					
De	pleted Below Dan	k Surfac			k Surface					
Th	ick Dark Surface	(A12)	Dep	oleted D	ark Surfac	æ (F7)	"Indicators	of hydrophy	ytic vegetation and wetan	d
Sa	ndy Mucky Miner	al (S1)	Rec	lox Dep	ressions (F8)	hydrology	must be pre	sent, unless disturbed or	
50	m Mucky Peat or	Peat (S	3)				problemati	C		
		et.								_
	ayer (If observed	I):		-			Uherlein D.	- II Connect		
ype:		ı):					Hydric S	oli Present	7 No	
		ı):					Hydric S	oli Present	7 <u>No</u>	
Type: Depth (Inches Remarks:	i):	ı):					Hydric S	oli Present	7 <u>No</u>	
Type: Depth (Inches Remarks:	i):	n):					Hydric S	oli Present	7 <u>No</u>	
Type: Depth (Inches Remarks:	i):						Hydric S	oli Present	7 <u>No</u>	
Type: Depth (Inches Remarks: HYDROLO Wetland Hyd	GY	8:	required: check a	i that a	solv)				7 <u>No</u>	red)
Type: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indic	GY irology Indicator	8:	required: check a			(13)		dary indicat	ors (minimum of two reco	red)
Oppe: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surface	GY irology Indicators ators (minimum of e Water (A1)	8:	required: check a	Aquato	Fauna (B			dary Indicat Surface S	ors (minimum of two requisoil Cracks (B6)	redi
Oype: Depth (Inches Remarks: HYDROLO Vettand Hyd Surfac High W	GY irology indicators alors (minimum of e Water (A1) Valer Table (A2)	8:	required: check a	Aquation True A	Fauna (B quatic Plan	nts (B14)	Secon	darv Indicat Surface S Drainage	iors (minimum of two regul coll Cracks (B6) Patterns (B10)	red)
Oppe: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surfac High W Satura	GY irology Indicators alors (minimum of e Water (A1) /ater Table (A2) tion (A3)	8:	required: check a	Aquato True A Hydrog	Fauna (B quatic Plar en Suffide	nts (B14) Odor (C1	Secon	darv Indicat Surface S Drainage Dry-Seas	ors (minimum of two reco coll Cracks (B6) Patterns (B10) on Water Table (C2)	(red)
Primary indication of the second seco	GY irology Indicators alors (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1)	a: one is r	required: check a	Aquation True Ar Hydrog Oxidize	Fauna (B quatic Plar jen Suffide ed Rhizosp	nts (B14) Odor (C1	Secon	Surface S Drainage Dry-Seas Crayfish B	ors (minimum of two requisoli Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)	
ype: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surfac High W Satura Water Sedime	GY irology Indicators alors (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	a: one is r	required: check a	Aquation True Ar Hydrog Oxidize Roots (Fauna (B quatic Plar jen Suffice ed Rhizosp (C3)	nts (B14) Odor (C1 oheres on	Secon	darv Indicat Surface S Drainage Dry-Seas Crayfish E Saturation	ors (minimum of two reco coll Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager	
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surfac High W Satura Water Sedim Drift D	GY irology indicators alors (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	a: one is r	required: check a	Aquation True Ar Hydrog Oxidize Roots (Presen	Fauna (B quatic Plan en Suffice ed Rhizosp (C3) ce of Redi	nts (B14) Odor (Ct oheres on uced Iron	Secon	dary Indicat Surface S Drainage Dry-Seas Crayfish E Saturation	ors (minimum of two requised) Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1)	
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surface High W Satura Water Sedim Drift Do Algal M	GY irology Indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4)	a: one is r	required: check a	Aquation True Ar Hydrog Oxidize Roots (Present Recent	Fauna (B quatic Plan en Suffice ed Rhizosp (C3) ce of Redi	nts (B14) Odor (Ct oheres on uced Iron	Secon I) Living (C4)	dary indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted o	ors (minimum of two requisol Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2)	
Oppe: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indics Surface High W Satura Water Sedim Drift Do Algal M Iron De	GY Irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5)	s: one is r		Aquation True Ar Hydrog Oxidize Roots (Present Recent (C6)	Fauna (B quatic Piar en Suffide ed Rhizosp (C3) ce of Redi i Iron Redu	nts (B14) Odor (Ct oheres on uced Iron uction in T	Secon I) Living (C4)	dary indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted o	ors (minimum of two requised) Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1)	
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surface High W Satura Water Sedim Drift De Algal M Iron De Inunda	GY Irology Indicators ators (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 Ae	a: rone is r	gery (B7)	Aquatic True A Hydrog Oxidize Roots (Presen Recent (C6) Thin M	c Fauna (B quatic Piar jen Suffide ed Rhizosp (C3) ce of Redi i Iron Redu uck Surfac	otheres on uced Iron action in T	Secon I) Living (C4)	dary indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted o	ors (minimum of two requisol Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2)	
Pype: Depth (Inches Remarks: Remarks: Remarks: Remarks: RYDROLO Vettand Hyd Primary Indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse	GY Irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) viat or Crust (B4) eposits (B5) tion Visible on Ae	s: one is r	gery (B7)	Aquatic True Ai Hydrog Oxidize Roots (Presen Recent (C6) Thin Mi Gauge	c Fauna (B quatic Piar ien Suffide ed Rhizosp (C3) ce of Redi i fron Redi uck Surfac or Well Da	nts (B14) Odor (Ctoheres on uced Iron uction in T ce (C7) ata (D9)	Secon I) Living (C4) liled Solis X	dary indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted o	ors (minimum of two requisol Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2)	
Oype: Depth (Inches Remarks: IYDROLO Wetland Hyd Primary Indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water-	GY Irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) tion Visible on Ae ely Vegetated Con Stalned Leaves (I	s: one is r	gery (B7)	Aquatic True Ai Hydrog Oxidize Roots (Presen Recent (C6) Thin Mi Gauge	c Fauna (B quatic Piar jen Suffide ed Rhizosp (C3) ce of Redi i Iron Redu uck Surfac	nts (B14) Odor (Ctoheres on uced Iron uction in T ce (C7) ata (D9)	Secon I) Living (C4) liled Solis X	dary indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted o	ors (minimum of two requisol Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2)	
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Firmary Indics Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- Held Observ	GY Irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) tion Visible on Ae ely Vegetated Con Stained Leaves (I	s: one is r rfal Ima cave Si 89)	gery (B7)	Aquatic True A Hydrog Oxidize Roots (Present (C6) Thin M Gauge Other (c Fauna (B quatic Piar jen Suffide ed Rhizosp (C3) ce of Redi i Iron Redu uck Surfac or Well Da Explain in	nts (B14) Odor (C1 otheres on uced from uction in T oe (C7) ata (D9) Remarks	Secon I) Living (C4) liled Solis X	dary indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted o	ors (minimum of two requisol Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2)	
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indic Surfac High W Satura Water Sedim Drift D Algal M Iron De Inunda Sparse Water- Field Observ Surface Water	GY Irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) tion Visible on Ae ely Vegetated Con Stained Leaves (Institute of Institute of Instit	rtal Ima cave St 199)	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin M Gauge Other (c Fauna (B quatic Piar jen Suffide ed Rhizosp (C3) ce of Redi i Iron Redu uck Surfac or Well Di Explain in	nts (B14) Odor (Cro otheres on uced iron uction in T oe (C7) ata (D9) Remarks	Secon I) Living (C4) liled Solis X	dary Indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted of Geomorpi FAC-Neur	ors (minimum of two requisol Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2)	
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surface High W Satura Water Sedim Drift De Algal M Iron De Inunda Sparse Water- Reld Observ Surface Water Vater Table (GY Irology Indicators ators (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 Ae ely Vegetated Con Stained Leaves (Entresent? Present?	rtal Ima cave Si 99)	gery (B7)	Aquatic True A Hydrog Oxidize Roots (Present (C6) Thin M Gauge Other (X	c Fauna (B quatic Piar len Suffide ed Rhizosp (C3) ce of Redi i Iron Redu uck Surfac or Well Di Explain in Depth (II	nts (B14) Odor (Cro otheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches):nches):nches):	Secon I) Living (C4) liled Solis X	dary Indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted of Geomorpi FAC-Neur	ors (minimum of two requision Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2) trai Test (D5)	y (Cs
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surface High W Satura Water Sedimo Algal M Iron De Inunda Sparse Water- Pield Observ Surface Water Saturation Pre	GY Irology Indicators ators (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 Ae ely Vegetated Con Stained Leaves (Exations: r Present? Present?	rtal Ima cave St 199)	gery (B7)	Aquatic True Ar Hydrog Oxidize Roots (Present (C6) Thin M Gauge Other (c Fauna (B quatic Piar jen Suffide ed Rhizosp (C3) ce of Redi i Iron Redu uck Surfac or Well Di Explain in	nts (B14) Odor (Cro otheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches):nches):nches):	Secon I) Living (C4) liled Solis X	dary Indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted of Geomorpi FAC-Neur	cots (minimum of two requisions (minimum of two requisions) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2) trai Test (D5)	y (Cs
Type: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surface High W Satura Water Sedim Drift De Algal M Iron De Inunda Sparse Water- Pleid Observ Surface Water Ration Pre Includes capi	GY Irology Indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5) fion Visible on Ae ely Vegetated Con Stained Leaves (E r Present? esent? esent? eliary fringe)	rial Ima cave Si 99) Yes Yes Yes	gery (B7)	Aquatic True Ai Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (X X	c Fauna (B quatic Piar len Suffide ed Rhizosp (C3) ce of Redi le fron Redi uck Surfac or Well Da Explain in Depth (II Depth (II	nts (B14) Odor (Ctoheres on uced Iron uction in Total (D9) Remarks Inches):nches):nches):nches):	Secon Living (C4) Illed Solls X	dary Indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted of Geomorpi FAC-Neur	ors (minimum of two requision Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2) trai Test (D5)	y (Cs
Pype: Depth (Inches Remarks: HYDROLO Wetland Hyd Primary Indica Surface High W Satura Water Sedim Drift De Algal M Iron De Inunda Sparse Water- Reid Observ Surface Water Varier Table F Saturation Pre Includes cap	GY Irology Indicators ators (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 Ae ely Vegetated Con Stained Leaves (Exations: r Present? Present?	rial Ima cave Si 99) Yes Yes Yes	gery (B7)	Aquatic True Ai Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (X X	c Fauna (B quatic Piar len Suffide ed Rhizosp (C3) ce of Redi le fron Redi uck Surfac or Well Da Explain in Depth (II Depth (II	nts (B14) Odor (Ctoheres on uced Iron uction in Total (D9) Remarks Inches):nches):nches):nches):	Secon Living (C4) Illed Solls X	dary Indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted of Geomorpi FAC-Neur	ors (minimum of two requision Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2) trai Test (D5)	y (C:
lype: Depth (Inches Remarks: Remarks: RYDROLO Vettand Hyd Primary Indica Surface High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- Reld Observ Surface Water Reld Observ Surface Water Reld Observe Includes cap	GY Irology Indicators ators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5) fion Visible on Ae ely Vegetated Con Stained Leaves (E r Present? esent? esent? eliary fringe)	rial Ima cave Si 99) Yes Yes Yes	gery (B7)	Aquatic True Ai Hydrog Oxidize Roots (Present (C6) Thin Mi Gauge Other (X X	c Fauna (B quatic Piar len Suffide ed Rhizosp (C3) ce of Redi le fron Redi uck Surfac or Well Da Explain in Depth (II Depth (II	nts (B14) Odor (Ctoheres on uced Iron uction in Total (D9) Remarks Inches):nches):nches):nches):	Secon Living (C4) Illed Solls X	dary Indicat Surface S Drainage Dry-Seas Crayfish B Saturation Stunted of Geomorpi FAC-Neur	ors (minimum of two requision Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imager or Stressed Plants (D1) hic Position (D2) trai Test (D5)	y (C





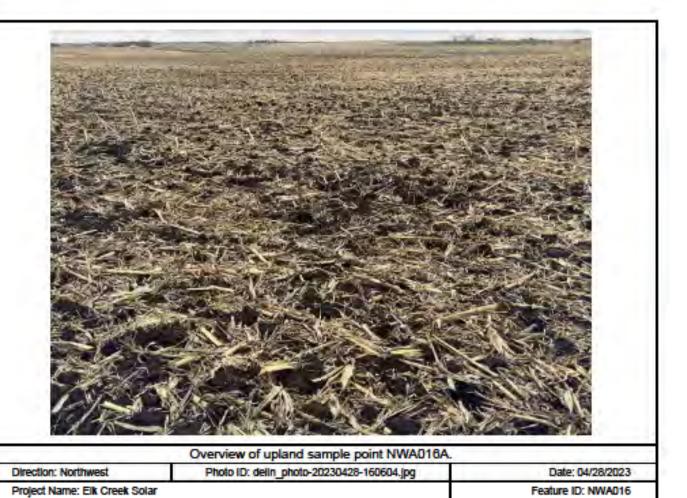
WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/28/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: NWAD16A Section, Township, Range: Kathy Belirichard Sec.27 T103N, R44W Investigator(s): Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave 2 Lat 43,7014 Long: -96.09956 Datum: WGS84 Soil Map Unit Name: Wilmonton sity clay loam, 1 to 3 percent slopes NWI Classification: Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) , or hydrology Significantly disturbed? Are "normal circumstances present? No , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? No Hydric Soil Present? No is the sampled area within a wetland? No No Wetland Hydrology Present? If yes, optional wetland site ID: Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot stze: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x4--Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic -Total Cover Vegetation

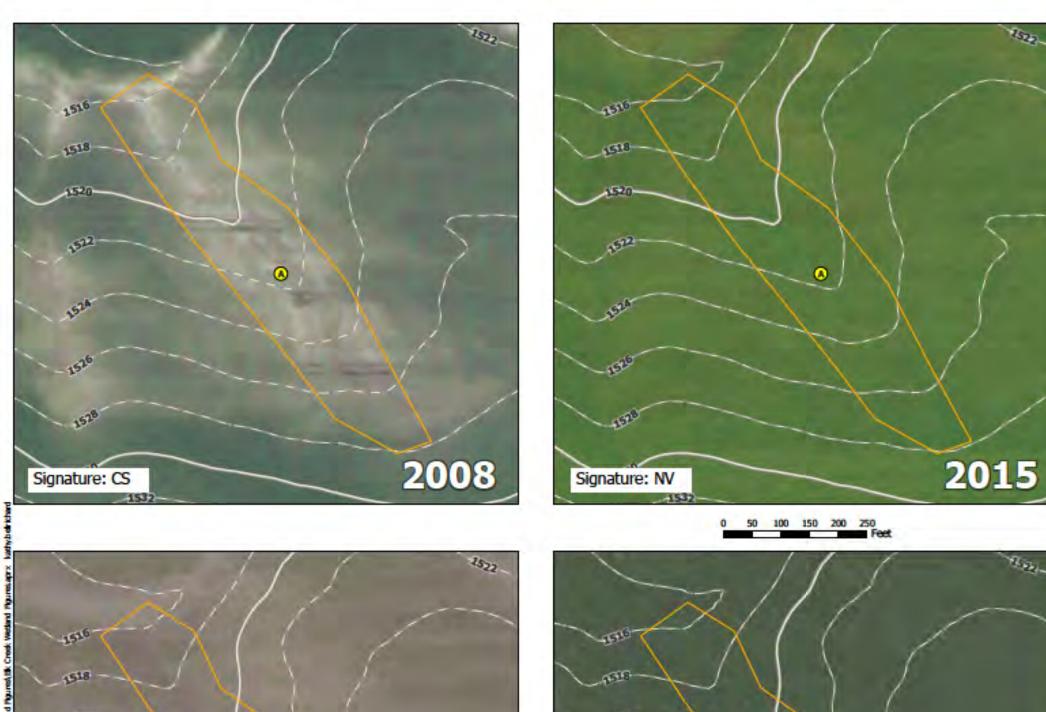
Remarks: (Include photo numbers here or on a separate sheet)

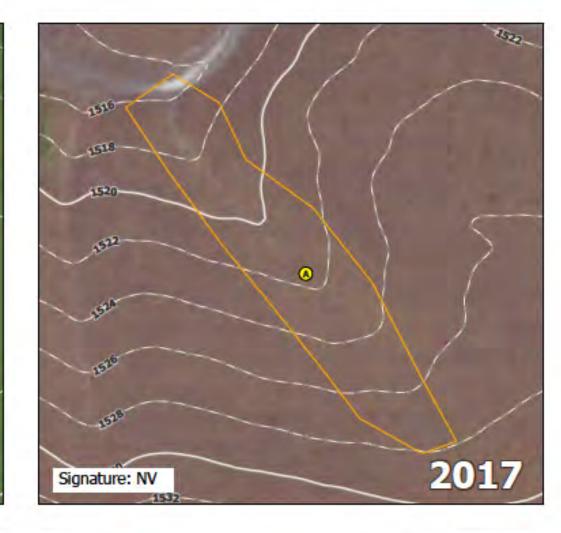
Harvested agricultural field. Bare ground: 100% Open water: 0%

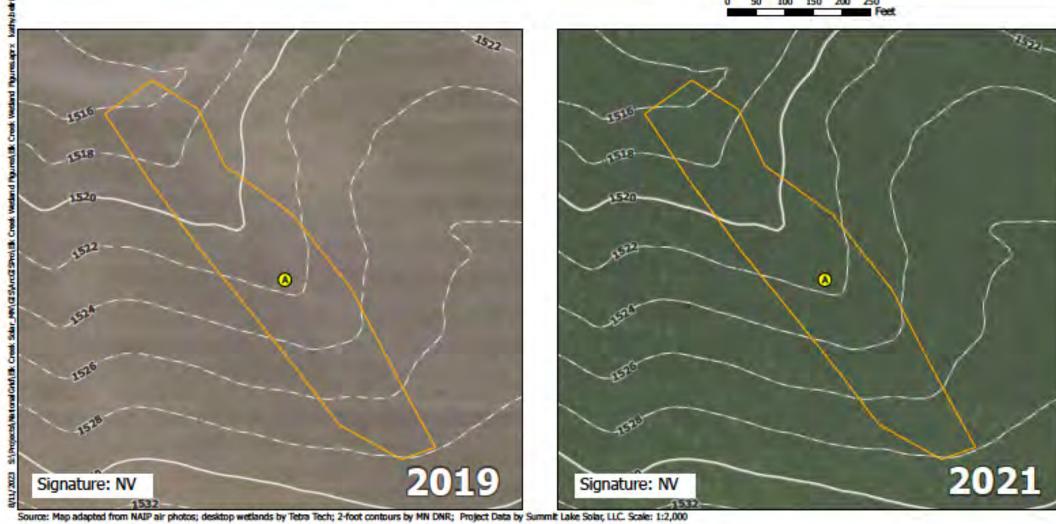
Present?

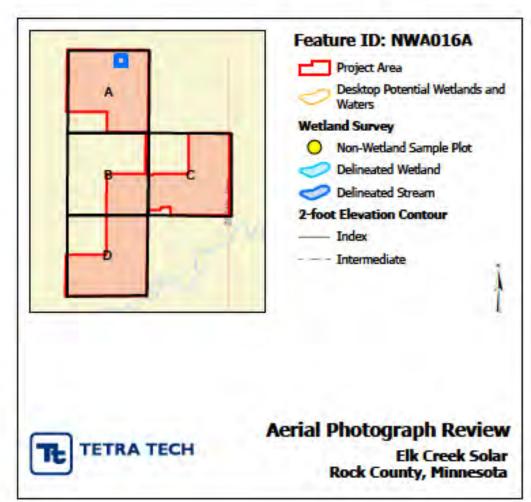
(Inches) 0-18 18-26 26-30	Color (moist)	_		dox Fea				
18-26		%	Color (moist)	%	Type*	Loc"	Texture	Remarks
	10YR 2/1	100			-	100	Clay	
26-30	2.5Y 3/1	100					Clay	
	25Y 4/1	100			-		Clay	
		100		_			- Suly	
			7					41014
	Service House S.		W 711 7-4					
		- Depk	etion, RM - Redu	iced Mai	mx, MS =	Masked :		"Location: PL - Pore Lining, M - Matri
Hydric Soil In								r Problematic Hydric Solls*:
	tosol (A1)				ed Matrix	c (S4)	A CONTRACT OF SHARE	airle Redox (A16) (LRR K, L, R)
	ic Epipedon (A2))	_	ndy Red				face (S7) (LRR K, L)
	ck Histic (A3)				atrix (S6)			ganese Masses (F12) (LRR K, L, R)
	lrogen Suffide (A				ky Miner			allow Dark Surface (TF12)
	itified Layers (A5)		manager and the second	yed Matro		Other (ex	(plain in remarks)
	m Muck (A10)				latrix (F3)			
	leted Below Dar				Surface			
Thic	A Dark Surface	(A12)	De	pleted D	ark Surfa	ce (F7)	"Indicators of	hydrophytic vegetation and wetland
San	dy Mucky Minera	al (S1)	Re	dox Dep	ressions	(F8)	hydrology mu	st be present, unless disturbed or
5 cm	n Mucky Peat or	Peat (S	3)				problematic	
estrictive La	yer (If observed	n-						
ype:	Jul In opposition	-					Hydric Soll	Present? No
epth (Inches):					-			110001117
WEDO! OF								
YDROLOG								
	ology indicators		The state of the	100			41	The second secon
		one is	required; check a					v indicators (minimum of two required
	Water (A1)				Fauna (E			Surface Soll Cracks (B6)
	ater Table (A2)					nts (B14)	_	Oralnage Patterns (B10)
Saturation	on (A3)			Hydrog	en Suffici	Odor (C	1)(Ory-Season Water Table (C2)
	Marks (B1)			Oxidize	d Rhizos	pheres on		Crayfish Burrows (C8)
	nt Deposits (B2)		4	Roots (-10		Saturation Visible on Aerial Imagery (C
	posits (B3)		-	A STATE OF THE PARTY OF THE PAR		luced Iron		Stunted or Stressed Plants (D1)
_	at or Crust (B4)			1000	fron Red	uction in 1		Geomorphic Position (D2)
	positis (B5)			(C6)				FAC-Neutral Test (D5)
	on Visible on Ae				uck Surfa	-		
	y Vegetated Con		urface (B8)		or Well D		2	
water-S	italned Leaves (E	99)		Otner (Explain in	Remarks	5)	
	- delice -	41-0	- 57	- 52	2-67			
		Yes	No	X	Depth (_		Wetland Hydrology
urface Water		Yes	No No	X		inches):	-	Present?
urface Water Vater Table Pr		Yes	NO		Depth (inches).		No
Surface Water Vater Table Pr Saturation Pres								
Held Observa Surface Water Vater Table Pr Saturation Pres Includes capilla Describe Record	ary fringe)	m narro	e monitorios uni	Landal	nhotor o	routous lo	continue) # acri	Table:
urface Water Vater Table Pr aturation Pres ncludes capili	ary fringe)	m gaug	e, monitoring wel	l, aertal	photos, p	revious in	spections), if avai	lable:
urface Water Vater Table Pr aturation Pres ncludes capili	ary fringe)	m gaug	e, monitoring wei	i, aertai	photos, p	revious in	spections), if avai	lable:











WETLAND DETERMINATION DATA FORM - Midwest Region City/County: Project/Site: Elk Creek Solar Rock Sampling Date: 04/28/2023 Applicant/Owner: Elk Creek Solar, LLC Sampling Point: NWAD17A Section, Township, Range: Kathy Belirichard Sec.27 T103N, R44W Investigator(s): Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave 1 Lat 43,70111 Long: -96.1031 Datum: WGS84 Wilmonton sity clay loam, 1 to 3 percent slopes NWI Classification: Soil Map Unit Name: Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks) Significantly disturbed? Are "normal circumstances present? No , or hydrology , soll Are vegetation , or hydrology naturally problematic? (If needed, explain any answers in remarks.) SUMMARY OF FINDINGS Hydrophytic Vegetation Present? No Hydric Soil Present? No is the sampled area within a wetland? No Wetland Hydrology Present? Yes If yes, optional wetland site ID: Remarks: Recently harvested agricultural field. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test Worksheet Tree Stratum (Plot size: % Cover Species Status Number of Dominant Species 0 (A) that are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species % (A/B) that are OBL, FACW, or FAC: -Total Cover Prevalence Index Worksheet Sapling/Shrub Stratum (Plot size: Total % Cover of: Muttiply by: OBL species £1-FACW species FAC species x3-FACU species x 4 --Total Cover x5-UPL species Herb Stratum Column totals Prevalence Index - B/A -Hydrophytic Vegetation Indicators: Rapid test for hydrophytic vegetation Dominance test is >50% Prevalence index is <3.0" Morphological adaptations' (provide supporting data in Remarks or on a 8 separate sheet) Problematic hydrophytic vegetation* Total Cover Woody Vine Stratum indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic -Total Cover Vegetation

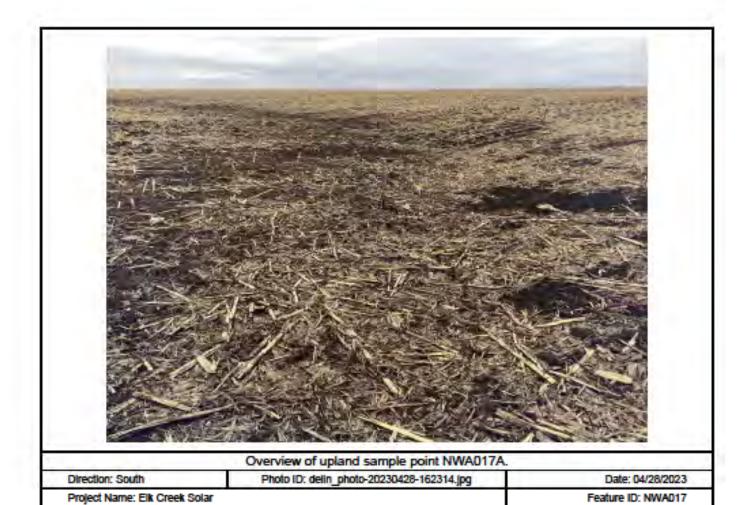
Remarks: (Include photo numbers here or on a separate sheet)

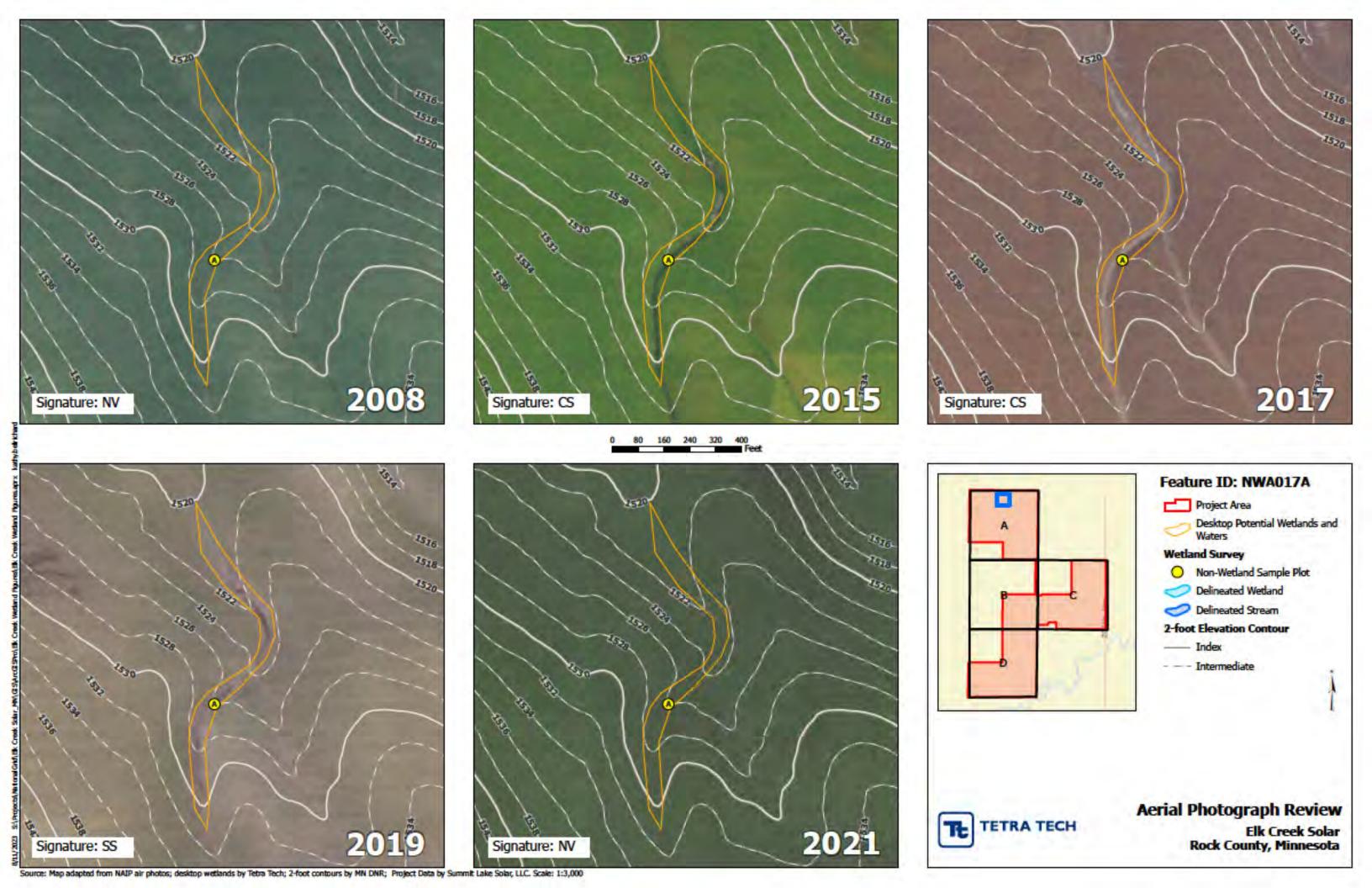
Harvested agricultural field. Bare ground: 100% Open water: 0%

Present?

NWAD17A

(Inches)	Matrix			dox Fea	_	1			- Augusta
	Color (moist)	%	Color (moist)	%	Type*	Loc"	Textu		Remarks
0-12	10YR 2/1	100				1	Clay		
12-29	2.5Y 3/1	100					Clay		
29-34	2.5Y 4/2	99	2.5Y 4/4	1.	C	M	Sandy L	ORM .	Distinct
*Type: C =	Concentration, D	- Deple	tion, RM - Red	uced Ma	trix, MS -	Masked S	and Grains.	"Location	: PL - Pore Lining, M - Matr
His	Indicators: stosoi (A1) stic Epipedon (A2) ack Histic (A3) drogen Suifide (A ratified Layers (A5 cm Muck (A10) epieted Below Dari ick Dark Surface (andy Mucky Minera cm Mucky Peat or	4) i) k Surfac (A12) al (S1)	Sa Lo Lo De Re	indy Red ripped M army Muc army Gle epieted M edox Dari epieted D	yed Matrix flox (SS) latrix (S6) cky Minera lyed Matrix Matrix (F3) k Surface lark Surface lyessions ((F2) (F6) (ce (F7)	Coasi Dark : iron-N Very : Other	Prairie Redi Surface (S7) langanese M Shallow Dank (explain in re of hydrophy must be pre	Masses (F12) (LRR K, L, R) Surface (TF12)
_	7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		-,		_		* * * * * * * * * * * * * * * * * * * *		
	ayer (ii observed								
	ayer (If observed	ı).					Hydric 8	oll Present	7 No
ype: epth (inches		ıŗ.					Hydric S	oli Present	7 <u>No</u>
ype: epth (inches emarks:	5):	ıjr.			-		Hydric S	oli Present	7 <u>No</u>
ype: epth (inches emarks:	GY				-		Hydric S	oli Present	7 <u>No</u>
ype: epth (Inches emarks: YDROLO letland Hyd	GY irology Indicator	8:	required: check :	all that a	poly)				
ype: epth (Inches emarks: YDROLO etland Hyd fmary Indica	GY irology Indicators alors (minimum of	8:	required: check :			1(3)		dary indicat	ors (minimum of two required
ype: epth (Inches emarks: YDROLO etland Hyd firmary Indica Surfac	GY irology Indicators ators (minimum of e Water (A1)	8:	required: check a	Aquatio	Fauna (E			dary Indicato	ors (minimum of two required oli Cracks (B6)
ype: epth (inches emarks: YDROLO /etland Hyd fimary indica Surface High W	GY Irology Indicators alors (minimum of e Water (A1) Valer Table (A2)	8:	required: check ;	Aquato True A	Fauna (E quatic Pla	nts (B14)	Secon	darv Indicate Surface S Orainage	ors (minimum of two required oil Cracks (B6) Patterns (B10)
ype: epth (Inches emarks: YDROLO letland Hyd fmary Indica Surfac High W Satura	GY irology Indicators alors (minimum of e Water (A1) Vater Table (A2) tion (A3)	8:	required: check a	Aquato True A Hydrog	Fauna (E quatic Pla jen Suffide	nts (B14) Odor (C1	Secon	dary Indicate Surface S Drainage Dry-Seaso	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2)
ype: epth (Inches emarks: YDROLO letland Hyd fmary Indica Surfac High W Satura Water	GY irology Indicators alors (minimum of e Water (A1) Vater Table (A2) tton (A3) Marks (B1)	s: one is r	required: check :	Aquation True Ar Hydrog Coddize	Fauna (E quatic Pla jen Suffide ed Rhizosp	nts (B14) Odor (C1	Secon	Surface S Drainage Dry-Seaso Crayfish E	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8)
ype: epth (Inches emarks: YDROLO letland Hyd fimary Indica Surfac High W Satura Water Sedime	GY irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tton (A3) Marks (B1) ent Deposits (B2)	s: one is r	required: check :	Aquation True Av Hydrog Oxidize Roots (Fauna (E quatic Pla jen Suffice ed Rhizosp (C3)	nts (B14) Odor (C1 oheres on	Secon	Surface S Orainage Dry-Seaso Crayfish E	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8)
ype: epth (Inches emarks: YDROLO /etland Hyd fmary Indica Surfac High W Satural Water Sedime Drift Do	GY irology Indicators alors (minimum of e Water (A1) Vater Table (A2) tton (A3) Marks (B1) ent Deposits (B2) eposits (B3)	s: one is r	required: check :	Aquation True Av Hydrog Oxidize Roots (Presen	c Fauna (E quatic Pla gen Suffice ed Rhizosp (C3) ce of Red	nts (B14) Odor (C1 oheres on uced Iron	Secon	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C r Stressed Plants (D1)
ype: epth (Inches emarks: YDROLO retland Hyd rimary Indica Surfac High W Satura Water Sedim Oritt Do Algal M	GY irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4)	s: one is r	required: check :	Aquation True Ar Hydrog Oxidize Roots (Present Recent	c Fauna (E quatic Pla gen Suffice ed Rhizosp (C3) ce of Red	nts (B14) Odor (C1 oheres on uced Iron	Secon	Drainage Ony-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C r Stressed Plants (D1) Ilc Position (D2)
ype: epth (Inches emarks: YDROLO /etland Hyd rimary Indica Surfac High W Satura Water Sedimo Drift Do Algal M Iron De	GY irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5)	s: one is r		Aquation True Ai Hydrog Oxidize Roots (Present (C5)	c Fauna (E quatic Pia gen Suffide ed Rhizosp (C3) ce of Red tiron Red	nts (B14) e Odor (C1 oheres on uced iron uction in T	Secon	Drainage Ony-Sease Crayfish E Saturation Stunted o	ors (minimum of two reculred oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C r Stressed Plants (D1)
ype: epth (Inches emarks: YDROLOG letland Hyd fmary Indica Surface High W Satura Water Sedimo Algal M Iron De Inunda	GY Irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tton (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) tton Visible on Ae	a: one is r	gery (B7)	Aquation True Ar Hydrog Cooldize Roots (Present (C6) Thin Mi	c Fauna (E quatic Pia jen Suffide ed Rhizoss (C3) ce of Red i Iron Redi	nts (B14) e Odor (C1 oheres on uced iron uction in T	Secon	Drainage Ony-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C r Stressed Plants (D1) Ilc Position (D2)
ype: epth (Inches emarks: YDROLOG ettand Hyd fmary Indica Surfac High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse	GY irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5)	s: one is r	gery (B7)	Aquatic True Ai Hydrog Oxidize Roots (Presen Recent (C6) Thin Mi Gauge	c Fauna (E quatic Pia gen Suffide ed Rhizosp (C3) ce of Red tiron Red	onts (B14) e Odor (C1 otheres on uced Iron uction in T be (C7) ata (D9)	Secon I) Living (C4) liled Solis	Drainage Ony-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C r Stressed Plants (D1) Ilc Position (D2)
ype: epth (Inches emarks: YDROLO etland Hyd trany Indics Surfac High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water-	GY irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) ition Visible on Ae ely Vegetated Con Stalned Leaves (I	s: one is r	gery (B7)	Aquatic True Ai Hydrog Oxidize Roots (Presen Recent (C6) Thin Mi Gauge	c Fauna (E quatic Pia jen Suiffde ed Rhizosp (C3) ce of Red t Iron Red uck Surfac or Well D	onts (B14) e Odor (C1 otheres on uced Iron uction in T be (C7) ata (D9)	Secon I) Living (C4) liled Solis	Drainage Ony-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C r Stressed Plants (D1) Ilc Position (D2)
ype: epth (Inches emarks: YDROLO lettand Hyd fmary Indics Surfac High W Satura Water Sedim Drift Do Algal M Iron De Inunda Sparse Water- letd Observ	GY irology Indicators ators (minimum of e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) ition Visible on Ae ely Vegetated Con Stained Leaves (E	s: one is r rfal Ima cave Si 89)	gery (B7)	Aquatic True A Hydrog Cxidize Roots (Present (C6) Thin M Gauge Other (c Fauna (E quatic Pia jen Suffice ed Rhizoss (C3) ce of Red tiron Red uck Surfac or Well Do Explain in	nts (B14) e Odor (C1 oheres on ucted Iron uction in T be (C7) ata (D9) Remarks	Secon I) Living (C4) liled Solis	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C r Stressed Plants (D1) nic Position (D2) rai Test (D5)
ype: epth (Inches emarks: IYDROLO retland Hyd rimary Indics Surfac High W Satura Water Sedimo Algal M Iron De Inunda Sparse Water- leid Observ urface Water	GY Irology Indicators ators (minimum of a Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (Institute) Ir Present?	rtal Ima cave St 199)	gery (B7)	Aquatic True A Hydrog Coolis (Presen Recent (C6) Thin M Gauge Other (c Fauna (E quatic Pia jen Suffice ed Rhizoss (C3) ce of Red i Iron Redi uck Surfac or Well D Explain in	nts (B14) e Odor (C1 otheres on uced Iron uction in T oe (C7) ata (D9) Remarks;	Secon I) Living (C4) liled Solis	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (Cr Stressed Plants (D1) Ilic Position (D2) rai Test (D5)
ype: epth (Inches emarks: YDROLOG fetiand Hyd fmarv indica Surface High W Satura Water Sedimo Algal M Iron De Inunda Sparse Water- leid Observ urface Water fater Table F	GY Irology Indicators ators (minimum of a Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) tion Visible on Ae ely Vegetated Con Stained Leaves (Exations: ar Present?	rtal Ima cave Si 99)	gery (B7) Inface (B8) No	Aquatic True Ar Hydrog Coolis (Present (C6) Thin M Gauge Other (X	c Fauna (E quatic Pia jen Suffide ed Rhizosp (C3) ce of Red i Iron Red uck Surfac or Well D Explain in Depth (I	nts (B14) e Odor (C1 otheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches): nches):	Secon I) Living (C4) liled Solis	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (Cracksed Plants (D1) Inic Position (D2) Tai Test (D5) and Hydrology Present?
ype: yepth (inches temarks: IYDROLOG Vettand Hyd ormary indica Surface High W Satura Water Sedimo Algal M Iron De Inunda Sparse Water- Table F Saturation Pre	GY Irology Indicators alors (minimum of e Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vator Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I rations: er Present? Present?	rtal Ima cave St 199)	gery (B7)	Aquatic True A Hydrog Coolis (Presen Recent (C6) Thin M Gauge Other (c Fauna (E quatic Pia jen Suffice ed Rhizoss (C3) ce of Red i Iron Redi uck Surfac or Well D Explain in	nts (B14) e Odor (C1 otheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches): nches):	Secon I) Living (C4) liled Solis	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted o	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (Cr Stressed Plants (D1) Ilic Position (D2) rai Test (D5)
Pype: Depth (Inches Remarks: Remark	GY Irology Indicators alors (minimum of e Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vator Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I rations: er Present? Present?	rtal Ima cave Si 99) Yes Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ai Hydrog Cividize Roots (Present (C6) Thin Mi Gauge Other (X X	c Fauna (E quatic Pia jen Suffide ed Rhizosp (C3) ce of Red i Iron Red uck Surfac or Well D Explain in Depth (I Depth (I	nts (B14) c Odor (C1 otheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches):nches):nches):nches):	Secon Living (C4)	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aertal Imagery (C r Stressed Plants (D1) nic Position (D2) rai Test (D5)
ype: Depth (Inches Remarks: Remarks: RYDROLOG Vettand Hyd Primary Indica Surface High W Satura Water Sedimo Algal M Iron De Inunda Sparse Water- Reld Observ Surface Water Reld Observ Surface Water Reld Observe	GY Irology Indicators ators (minimum of e Water (A1) Vater Table (A2) Ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) Ition Visible on Ae ely Vegetated Con Stained Leaves (I rations: r Present? esent? esent?	rtal Ima cave Si 99) Yes Yes Yes	gery (B7) Inface (B8) No No No	Aquatic True Ai Hydrog Cividize Roots (Present (C6) Thin Mi Gauge Other (X X	c Fauna (E quatic Pia jen Suffide ed Rhizosp (C3) ce of Red i Iron Red uck Surfac or Well D Explain in Depth (I Depth (I	nts (B14) c Odor (C1 otheres on uced Iron uction in T oe (C7) ata (D9) Remarks nches):nches):nches):nches):	Secon Living (C4)	Surface S Drainage Dry-Sease Crayfish E Saturation Stunted or Geomorph FAC-Neut	ors (minimum of two required oil Cracks (B6) Patterns (B10) on Water Table (C2) Surrows (C8) I Visible on Aerial Imagery (C r Stressed Plants (D1) nic Position (D2) rai Test (D5)





Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:					
county: Rock	township number: 103N				
township name: Vienna	range number: 44W				
nearest community: Magnolia	section number: 34				

Aerial photograph or site visit date: Saturday, August 21, 2021

Score using 1991-2020 normal period

values are in inohes A.R. following a monthly total indicates a provisional value derived from replacebased estimates	the second secon	second prior month June 2021	third prior month May 2021
estimated precipitation total for this location:	3.76	1.97	3.17
there is a 30% chance this location will have less than: there is a 30% chance this location will have more than: type of month: dry normal wet	1.43 4.09 normal	3.80 5.60 dry	2.77 4.77 normal
monthly soure	3*2=6	2*1=2	1*2=2
multi-month score: 5 to 9 (dry) 16 to 14 (normal) 15 to 18 (wet)	1 = -	10 (Normal)	

Aerial photograph or site visit date: Thursday, July 11, 2019

Score using 1991-2020 normal period

values are in Inohes A R' following a monthly total indicates a provisional value derived from radar-based estimates		second prior month: May 2019	April 2019
estimated precipitation total for this location:	3.79	6.15	5.33
there is a 30% chance this location will have less than:	3.80	2.77	2.27
there is a 30% chance this location will have more than:	5.60	4.77	3.02
type of month: dry normal wet	dry	wet	wet
monthly score	3*1=3	2*3=6	1*3=3
6 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet).		12 (Normal)	

Aerial photograph or site visit date: Friday, September 29, 2017

Score using 1991-2020 normal period

values are in inohes A.R. following a monthly total indicates a provisional value derived from radar-based	first prior month: August 2017	second prior month: July 2017	third prior month: June 2017
estimated precipitation total for this location:	5.10	0.97	4.00
there is a \$0% chance this location will have less than:	2.32	1.43	3.80
there is a 30% chance this location will have more than:	4.16	4.09	5.60
type of month: dry normal wet	wet	dry	normal
monthly soure	3*3=9	2*1=2	1*2=2
multi-month score: 5 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		13 (Normal)	

Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:		
county: Rock	township number: 103N	
township name: Vienna	range number: 44W	
nearest community: Magnolia	section number: 34	

Aerial photograph or site visit date: Sunday, September 13, 2015

Score using 1991-2020 normal period

values are in inohes A 'R' following a monthly total indicates a provisional value derived from radar-based estimates.	first prior month: August 2015	second prior month: July 2015	third prior month: June 2015
estimated precipitation total for this location:	5.68	3.76	3.42
there is a 30% chance this location will have less than:	2.32	1.43	3.80
there is a 30% chance this location will have more than:	4,16	4.09	5.60
type of month: dry normal wet	wet	normal	dry
monthly soore	3 * 3 = 9	2*2=4	1*1=1
multi-month score: 5 to 9 (dry) 10 to 14 (normal) 15 to 18 (wet)		14 (Normal)	

Aerial photograph or site visit date: Friday, July 4, 2008

Score using 1991-2020 normal period

values are in Inohes	The second secon	second prior month	The second secon
A 'R' following a monthly total indicates a provisional value derived from public based estimate	June 2008	May 2008	April 2008
estimated precipitation total for this location:	5.33	4.99	2.33
there is a 30% chance this location will have less than:	3.80	2.77	2.27
there is a 30% chance this jocation will have more than:	5.60	4.77	3.02
type of month: dry normal wet	normal	wet	normal
monthly soore	3*2=6	2*3=6	1*2=2
multi-month socre: 6 to 9 idn/1 (E to 14 (normal) 15 to 18 (wet)		14 (Normal)	

APPENDIX D:	WETLAND CLASSIFICATION KEY

Cowardin Wetland Classification System

Systems	Subsystems	System Specific Classes
L - Lacustrine	(1) Limnetic (2) Littoral	RB, UB, AB, RS, US, EM,
P - Palustrine	None	RB, UB, AB, US, ML, EM, SS, FO
R - Riverine	(1) Tidal (2) Lower Perennial (3) Upper Perennial (4) Intermittent	RB, UB, SB, AB, RS, US, EM
Classes	Water Regimes	Special Modifiers
RB - Rock Bottom UB - Unconsolidated Bottom SB - Streambed AB - Aquatic Bed RS - Rocky Shore US - Unconsolidated Shore EM - Emergent ML - Moss Lichen SS - Scrub Shrub	A – Temporarily flooded B – Seasonally saturated C – Seasonally flooded D – Continuously saturated E – Seasonally flooded/saturated F – Semi-permanently flooded G – Intermittently exposed H – Permanently flooded J – Intermittently flooded	b - Beaver d - Partly drained/ditched f - Farmed m - Managed h - Diked/impounded r - Artificial substrate s - Spoil x - Excavated

Source: Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC. (FGDC 2013)

Circular 39 Wetland Classification System

Type and Definition	Approximate Cowardin Equivalents	
Type 1: Seasonally flooded basin	PEMA, PFOA	
Type 2: Meadow	PEMB	
Type 3: Shallow marsh	PEMC, PEMF, PSSH, PUBA, PUBC	
Type 4: Deep marsh	PEMF, PEMG, PEMH, PUBB, PUBF, PABF, PABG, L2US, L2EMF, L2EMG, L2ABF	
Type 5: Shallow open water	L2ABG, L2ABH, L2EMA, L2EMB, L2EMH, L2RS, L2UB PABH, PUBG, PUBH	
Type 6: Shrub swamp	PSSA, PSSC, PSSF, PSSG, PSS1B, PSS5B, PSS6B	
Type 7: Wooded swamp	PFO1B, PFO5B, PFO6B, PFOC, PFOF	
Type 8: Bog	PF02B, PF04B, PF07B, PSS2B, PSS3B, PSS4B, PSS7B	

Source: Wetlands in Minnesota, Minnesota Board of Water and Soil Resources (BWSR n.d.)