Appendix K

Wetland Delineation Report & Agency Review

Hayward Solar LLC Docket No. IP-7053/GS-21-113 May 2021

Bellrichard, Kathy

From:	Bellrichard, Kathy
Sent:	Monday, August 17, 2020 11:11 AM
То:	rachel.wehner@co.freeborn.mn.us
Cc:	Roth, Michael; Finocchiaro, Joseph; Holven, Adam
Subject:	Hayward Solar Pre-Application Meeting
Attachments:	Hayward_Wetlands_LGU_080620.pdf

Ms. Wehner,

Midwest Solar is developing the Hayward Solar utility-scale solar energy facility in Freeborn County. Tetra Tech has been contracted to conduct the wetland delineation survey and wetland permitting for the project. The wetland delineation field survey was completed earlier this spring and site plans are currently in development. A map showing the project location and wetland survey results is attached.

Midwest Solar would like to request a pre-application conference call to discuss the project, survey activities completed to date, and anticipated potential impacts to identify any concerns in advance of the Joint Application submission. Is there a time this week that you would be available for a call? Please let us know what dates/times would be best for you.

And if you have any questions or need anything else in the meantime, please let me know.

Thank you,

Kathy Bellrichard | Wetland Specialist

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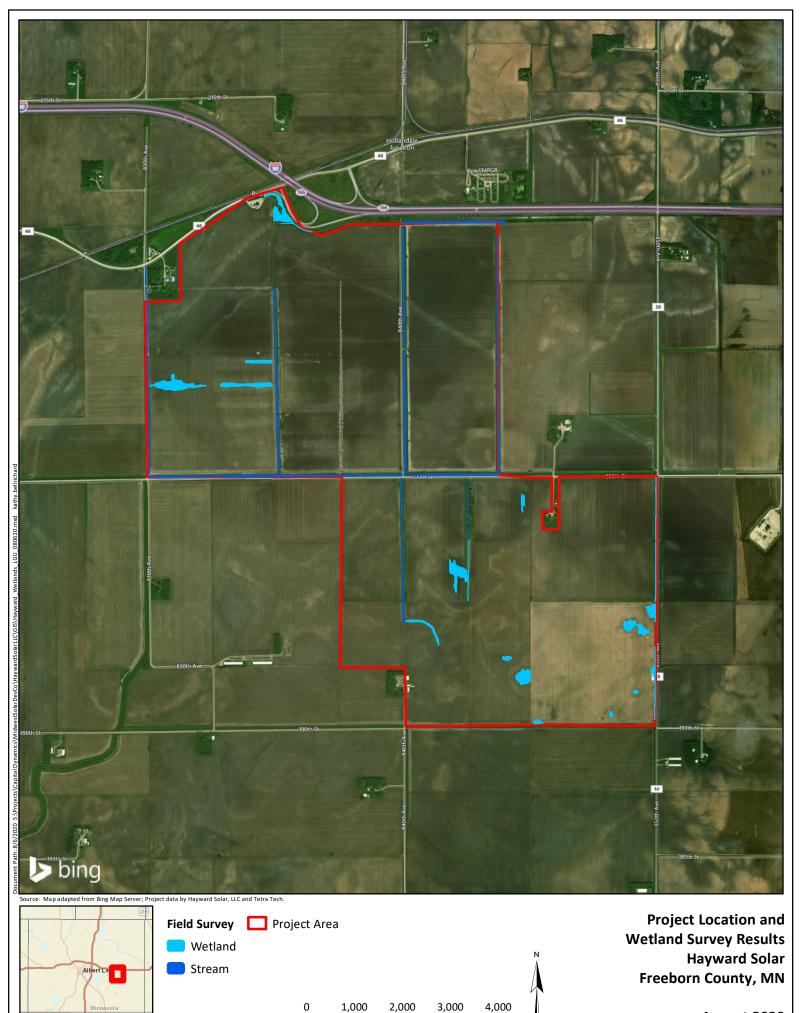
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⊐ Feet

Hayward Solar

Freeborn County Pre-Application Meeting Agenda

8/19/2020 10:00 AM

Attendees: Freeborn County – Rachel Wehner Midwest Solar/Tenaska – Mike Roth, Joe Finocchiaro Tetra Tech – Kathy Bellrichard, Adam Holven

1) Project Introduction (Mike/Joe)

- a) 1,611-acre Project Area
- b) Site plans in development
- c) 150 MW

2) Wetlands and Waters Survey (Kathy)

- a) Field surveys conducted April 27-30, 2020
- b) 17 wetlands, 6 intermittent streams, and 2 perennial streams identified in the Project Area

3) Application Status

- a) Boundary and type application anticipated early September 2020
- b) TEP field review?

Wetlands and Waters Survey, and Natural Resources Inventory

Hayward Solar County Highway 30 and 200th Street Freeborn County, Minnesota



September 18, 2020

PRESENTED TO

Midwest Solar DevCo CEI, LLC Hayward Solar LLC 10 East 53rd Street, 17th Floor

New York, NY 10022

PRESENTED BY

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EXECUTIVE SUMMARY

This report presents the findings of a Wetlands and Waters Survey and Natural Resources Inventory completed for the proposed Hayward Solar site (the Project) located 2 miles east of the city of Hayward in Freeborn County, Minnesota. At this location, Midwest Solar DevCo CEI, LLC (Midwest Solar) and Hayward Solar LLC (Hayward) propose to develop a 150-megawatt (MW) solar facility on an approximately 1,611-acre site (Project Area).

A total of 25 wetland and water features were identified during the field survey for the Project. Tetra Tech surveyed 17 wetlands (PEMA, PEMAf, PEMAx, PEMB, PEMC, PEMCx), 6 intermittent streams (R4SBAx, R4SBCx), and 2 perennial stream (R2UBHx) within the Project Area.

An assessment of waters of the U.S. (WOTUS) criteria and potential U.S. Army Corps of Engineers (USACE) jurisdiction in accordance with USACE and U.S. Environmental Protection Agency (EPA) guidance for the inventoried wetland and water features found that 9 of the 17 surveyed wetlands and all 8 surveyed streams appear to meet the criteria to be considered a WOTUS. However, only the USACE can make the final determination on the jurisdiction of wetlands and waters. A pre-construction notification (PCN) and permit authorization from the USACE to use a nationwide permit (NWP) or regional general permit (RGP) will likely be required if Project development will cause permanent impacts that exceed 0.1 acre, or temporary impacts that exceed 0.5 acre or will be in place for greater than 90 days between May 15 and November 15.

All 17 delineated wetlands are also regulated under the Minnesota Wetland Conservation Act (WCA), which is locally administered by Freeborn County. Up to 2,000 square-feet of Type 1 wetland or up to 100 square feet of Type 3 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.

The Project Area was observed to be primarily cultivated cropland with grassy buffer strips. Three natural resource communities were identified within the Project Area. These communities consisted of approximately 84.6 acres of grassland/herbaceous, 3.4 acres of deciduous forest, and 2.6 acres of emergent herbaceous wetland.

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1.0 INTRODUCTION

1.1 PURPOSE

Midwest Solar DevCo CEI, LLC (Midwest Solar) and Hayward Solar LLC (Hayward) propose to develop the 150megawatt (MW) Hayward Solar facility on an approximately 1,611-acre site located in Freeborn County, Minnesota (Project Area). Midwest Solar and Hayward have contracted with Tetra Tech, Inc., (Tetra Tech) to identify and delineate wetlands and waters and inventory natural resource communities within the Project Area. This report describes the Project Area, methods used, survey results and conclusions, and references used to support the conclusions. Appendices include figures illustrating the Project Area and survey results, select reviewed reference materials, and Project Area photographs.

1.2 SITE LOCATION AND ENVIRONMENTAL SETTING

The Project Area consists of approximately 1,611 acres of land and is located west of the intersection of County Highway 30 and 200th Street, approximately 2 miles east of the city of Hayward in Freeborn County, Minnesota (Appendix A: Figure 1). The Project Area is located in portions of Sections 11 through 14 in Township 102 North, Range 20 west.

The landscape in the vicinity of the Project Area is relatively flat to gently rolling agricultural land, with drainage facilitated by agricultural ditches and field tiles. The majority of the Project Area appears to be located within the interior of a large, shallow depression in the location of a former wetland, as depicted on the 1854 General Land Office (GLO) plats (U.S. Department of the Interior [USDOI] GLO 1854a and 1854b) and the 1874 A.T. Andreas atlas (Andreas 1874). The historic wetland appears to have been drained in the late 1800's. Drainages located within the Project Area generally flow from north to south or south to north toward County Ditch Number Twelve, which flows west through the center of the Project Area, then flows southwest and ultimately drains to Peter Lund Creek located approximately 1.5 miles southwest of the Project Area. Peter Lund Creek has been channelized but appears to have served as the original drainage of the historic wetland, connecting it to Lake Albert Lea approximately 3.2 miles west of the Project Area.

1.3 REGULATORY FRAMEWORK

1.3.1 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) has regulatory jurisdiction over waters of the U.S. (WOTUS) under the Clean Water Act (CWA) as defined by 33 CFR Part 328. The extent of the USACE regulatory jurisdiction over WOTUS was further refined by the USACE and U.S. Environmental Protection Agency (EPA) in a final rule defining the scope of waters protected under the CWA published in the Federal Register on May 14, 2020, which became effective as of June 22, 2020 (85 FR 22250). Under this rule, the USACE has regulatory jurisdiction over navigable waters; tributaries, lakes, and ponds that contribute surface water flow to navigable waters; and wetlands adjacent to these waters.

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.

The USACE determines the type of permit, if any, that may be required under the CWA for projects that affect WOTUS. The USACE authorizes certain activities in WOTUS under pre-issued Nationwide Permits (NWPs) and Regional General Permits (RGPs). Permanent impacts of up to 0.5 acre for utility projects such as solar facilities are typically authorized by the Utility RGP or NWP 51 in Minnesota. 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 all projects in Minnesota.

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 generally does not apply to public waters and public waters wetlands that have been inventoried by the Minnesota Department of Natural Resources (MN DNR) 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. Unless the activity qualifies for a no-loss or an exemption decision, 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 is administered by Local Government Units (LGU). Freeborn County is the LGU responsible for administering the WCA for the Project Area.

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 March 29, 2017 and for the Utility RGP in a letter dated February 13, 2018 (MPCA 2017 and MPCA 2018.)

2.0 METHODS

2.1 EXISTING INFORMATION REVIEW

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

- National Wetlands Inventory (NWI) (US Fish and Wildlife Service [USFWS] 2020);
- National Hydrography Dataset (NHD) (United States Geological Survey [USGS] 2019a);
- MN DNR Public Waters Inventory (PWI) (MN DNR 2019);
- Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) for Freeborn County, Minnesota (FEMA 2019);
- Natural Resources Conservation Service (NRCS) Soil Survey Geographic (gSSURGO) Soils (NRCS 2020a);
- MN DNR 2-foot elevation contours (MN DNR 2020);
- Aerial photography from 2005, 2008, 2010, 2015, and 2019 from U.S. Department of Agriculture (USDA) Farm Service Agency (FSA) National Agricultural Imagery Program (NAIP);
- Aerial photography from 2013, 2015, and 2017 from Minnesota Geospatial Commons (Minnesota Geospatial Commons 2019);
- Historical precipitation data from the Minnesota State Climatology Office (Minnesota State Climatology Office 2020); and
- 2016 National Land Cover Database (NLCD) (USGS 2019b).

2.2 DESKTOP WETLANDS AND WATERS MAPPING

Prior to and during the wetlands and waters field survey, available information was reviewed to identify areas that may exhibit wetland and other surface water characteristics. These data layers were evaluated to make probable wetland and waters determinations.

Aerial photographs from the USDA FSA Aerial Photography Field Office (APFO) NAIP were reviewed in combination with the NWI, NHD, PWI, SSURGO soils, elevation data, and climate data to identify potential wetlands and waters (desktop wetlands and waters) within the Project Area. Using methods described by USACE and BWSR (2016), the aerial photographs were reviewed for wetland signatures, and antecedent precipitation was evaluated to determine if the antecedent precipitation was 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.

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

Table 1. Aerial Photograph Wetland Signature Codes

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

All desktop wetlands and waters within the Project Area were investigated as well as any other potential wetlands or waters observed during the survey that were not identified during the desktop data review. 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). 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, soils, and hydrology data was recorded on 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 3.4 (USACE 2018). 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.

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 established only within the Project Area. If the boundary extended outside of the Project Area, only that portion of the boundary within the Project Area was delineated, and observations regarding that portion of the feature extending outside of the Project Area were recorded. Tetra Tech photographed

each wetland and classified it 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-wetland 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 2020).

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 (Table 1) 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.

2.4 NATURAL RESOURCES INVENTORY

Tetra Tech reviewed the Project Area to identify any natural resource communities, defined as any parts of the Project Area that are not cultivated cropland or with otherwise human manipulated vegetation. Roadside ditches and other minor vegetated areas (e.g. swales) were not considered to represent natural resource communities. Natural resource communities were identified by reviewing a recent aerial photograph and conducting a pedestrian survey of the Project Area. The natural resource communities identified in the Project Area were classified

according to the predominant vegetation present. Natural resource communities were only mapped within the Project Area.

3.0 RESULTS

3.1 EXISTING INFORMATION REVIEW AND DESKTOP MAPPING

3.1.1 National Wetlands Inventory (NWI) and National Hydrography Dataset (NHD)

There are eight NWI mapped wetlands and 13 NHD mapped streams within the Project Area (Appendix A: Figure 2). The NWI mapped features in the Project Area include seven PEM1Af¹ freshwater emergent wetlands, and one R5UBFx riverine wetland. The seven mapped PEM1Af wetlands are between 0.6 acre and 3.1 acres in size and are generally located in the southeastern corner of the Project Area. The mapped R5UBFx riverine wetland corresponds to numerous interconnected excavated ditches located throughout the Project Area.

The NHD mapped streams include seven segments of unnamed ditches, one segment of County Ditch Number Fortyseven, and five segments of County Ditch Number Twelve. County Ditch Number Fortyseven is located along the southern boundary of the Project Area. County Ditch Number Twelve flows west through the central portion of the Project Area. The NHD-mapped ditches align approximately with the R5UBFx NWI mapped riverine wetland. There are no NHD mapped waterbodies mapped within the Project Area.

3.1.2 Public Waters Inventory (PWI)

There are no Public Waters, Public Waters Wetlands, or Public Watercourses mapped within the Project Area; however, there are mapped waters in the surrounding area (Appendix A: Figure 2). The PWI shows that the closest public water is an unnamed stream located approximately 0.5 mile southwest of the Project Area.

3.1.3 Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL)

Flood hazard data for the Project Area were obtained from FEMA (FEMA 2019). The Project Area is located outside of mapped flood zones (FEMA 2019).

3.1.4 Soil Survey Geographic (SSURGO) Soils

Soils data for the Project Area were obtained from the USDA NRCS (NRCS 2020a). 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 on the National List of Hydric Soils (NRCS 2020b).

• Non-hydric – all soils series components rated as non-hydric

¹ See Appendix E for definitions of Cowardin wetland classification codes

- 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 majority of the soils in the Project Area are classified as hydric (80.3 percent of the Project Area) or predominantly hydric (16 percent of the Project Area); the remaining soils are classified as predominantly non-hydric (3.7 percent of the Project Area) (Appendix A: Figure 3). The predominantly non-hydric soils are limited to the southern half of the Project Area, primarily in the southwest corner of the Project Area.

3.1.5 Desktop Wetlands and Waters Mapping

Aerial photographs in combination with antecedent precipitation data from the Minnesota Climatology Office tool (Minnesota State Climatology Office 2020), MN DNR 2-foot elevation contours (MN DNR 2020), and the NWI were reviewed to identify potential wetlands and waters (desktop wetlands and waters) in the Project Area. The reviewed aerial photographs included images from July 2013, October 2015, and September 2017 (Minnesota Geospatial Commons 2019). Aerial photographs from 2013 had wet antecedent precipitation, aerial photographs from 2015 had normal antecedent precipitation, and aerial photographs from September 2017 had dry antecedent precipitation. Antecedent precipitation worksheets for the reviewed aerial photographs are included as Appendix D.

The desktop data review found 32 desktop wetlands and waters within the Project Area totaling approximately 121.2 acres (Appendix A: Figure 4). Just under half (13) of the desktop wetlands and waters aligned with resources mapped in the NWI or NHD. The remaining 19 desktop wetlands and waters were identified based only on the aerial photograph review.

3.1.6 National Land Cover Database (NLCD)

According to the 2016 National Land Cover Dataset (NLCD) (USGS 2019b), land cover in the Project Area is dominated by cultivated crops (96 percent of the Project Area). A review of the June 2017 aerial photograph confirmed that the Project Area is primarily agricultural cropland with developed, open space and residences (USDA FSA APFO 2017).

3.2 WETLANDS AND WATERS SURVEY

The wetlands and waters field survey was conducted from April 27 to 30, 2020, 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 (2020). Antecedent precipitation data are presented in Table 2.

Precipitation data for target wetlan	d location:					
County: Freeborn Township Numb		ber: 102N	Site visit date:			
Township Name: Hayward	Range Numbe	r: 20W				
Nearest Community: Holland Junctn	Section Number	Section Number: 13		April 27-April 30, 2020		
Score using 1981-2010 normal per	iod					
Values are in inches A 'R' following a monthly total indicates a provisional value derived from radar-based estimates		first prior month: April 2020	second prior month: March 2020	third prior month: February 2020		
estimated precipitation total for thi	1.49R	2.64R	1.19R			
there is a 30% chance this location will	have less than:	2.29	1.28	0.51		
there is a 30% chance this location will h	4.32 2.32 1.15					
type of month: dry normal v	dry	wet	wet			
monthly score	3 * <mark>1</mark> = 3	2 * <mark>3</mark> = 6	1 * <mark>3</mark> = 3			
multi-month score: 6 to 9 (dry) 10 to 14 (normal) 15 to	18 (wet)	12 (Normal)				

Tetra Tech identified a total of 17 wetlands, 6 intermittent streams, and 2 perennial streams in the Project Area during the field survey. These resources are described in detail below and in Appendix B and are depicted on Figure 4 (Appendix A). Wetland determination data forms and photographs for delineated wetlands and non-wetland areas are provided in Appendix C. A key to the Cowardin and Circular 39 wetland classification systems is included in Appendix E. Photographs for surveyed streams are included in Appendix F.

All 32 desktop wetlands and waters areas in the Project Area were reviewed during the April 2020 site visit. Wetlands or waters were confirmed to be present at 18 of the 32 reviewed desktop wetlands and waters locations in the field and were delineated based on the observations made at the time of the field survey. The 14 remaining field-checked desktop wetlands and waters were determined to be non-wetlands within the Project Area. Some desktop wetlands and waters were mapped as multiple features, while others were combined into a single feature, so the 18 field-confirmed desktop wetland and waters areas were delineated as 16 wetlands, 6 intermittent streams, and 2 perennial streams. Five additional areas were investigated during the field survey because they exhibited wetland hydrology; however, only one of the five was determined to be wetland. The one additional wetland was located within a roadside ditch.

3.2.1 Wetlands

Fourteen of the 17 wetlands delineated during the field survey were farmed or excavated Type 1, Seasonally Flooded Basins (PEMAf, PEMAx). Two wetlands delineated during the survey (WA013 and WA015) were observed to be a combination of Type 1, Seasonally Flooded Basin and Type 3, Shallow Marsh (PEMAf/PEMAx/PEMCx). The shallow marsh (Type 3, PEMCx) components of these wetlands were associated with excavated ditches. One wetland delineated during the survey (WA039) was observed to be a combination of Type 1, Seasonally Flooded Basin, Type 3, Shallow Marsh, and Type 2, Wet Meadow (PEMA/PEMC/PEMB/PEMCx). This wetland was located in an uncultivated area in the northwest corner of the Project Area and extended into an excavated ditch along the

highway. Some linear, excavated drainages observed in the Project Area lacked bed and/or bank characteristics, which precluded them from being streams but did meet the criteria to be considered wetlands.

General observations of wetland vegetation, soils, and hydrology conditions recorded during the field surveys are summarized below.

3.2.1.1 Vegetation

Vegetation in the majority of wetlands was observed to be disturbed and unvegetated due to annual agricultural cultivation. Natural and weedy vegetation commonly observed in seasonally flooded wetlands not disturbed by agriculture consisted of grasses including reed canary grass (*Phalaris arundinacea*) and various forbs including stinging nettle (*Urtica dioica*), wild cucumber (*Echinocystis lobata*), and sticky-willy (*Galium aparine*). Vegetation in the shallow marsh wetlands was dominated by cat-tails (*Typhus* spp.) with lesser amounts of bulrushes (*Scirpus* spp.) also observed. Vegetation observed in the wet meadow wetland included rushes (*Juncus* spp.), sedges (*Carex* spp.), and foxtail barley grass (*Hordeum jubatum*).

Uplands observed near wetlands within the Project Area were predominantly harvested agricultural fields previously cultivated with corn (*Zea mays*) and soybeans (*Glycine max*). In areas that were not cultivated or harvested, upland vegetation was typically dominated by grasses primarily including smooth brome (*Bromus inermis*).

3.2.1.2 Soils

Soils observed within the Project Area were typically loamy or clayey with textures ranging from silt loam to clay, but some areas with sandy soil were also encountered, particularly in the northeast quarter of Section 13. A very thick (15 to 40 or more inches), black (10YR 2/1) A horizon was observed in most locations. As a result, the thick dark surface (A12) hydric soil indicator was documented the most often at wetland sample plots.

3.2.1.3 Hydrology

Primary wetland hydrology indicators were not frequently observed; however, those that were documented include high water table (A2), saturation (A3), drift deposits (B3), and sparsely vegetated concave surface (B8). Hydrology criteria were most often established based on observations of secondary wetland hydrology indicators. Secondary hydrology indicators that were documented most frequently include geomorphic position (D2), saturation visible on aerial imagery (C9), stunted or stressed vegetation (C9), and surface soil cracks (B6).

3.2.2 Streams

The surface water drainage system in the Project Area was primarily observed to consist of linear, excavated ditches, including all eight of the surveyed streams. Stream SA009 flows west through the central part of the Project Area on the north side of 200th Street and was classified as perennial (R2UBHx). The stream generally aligns with the NHD-mapped County Ditch Number Twelve. At the time of the field survey, approximately one foot of moderate

velocity flowing water was observed, and the substrate consisted of sand, cobble, fine sediments (silt and clay), and muck. All the other streams surveyed in the Project Area drain to SA009.

Streams SA008, SA012, SA042, and SA050 were classified as intermittent (R4SBCx) and flow south to discharge into SA009. Streams SA013 and SA053 were also classified as intermittent (R4SBAx and R4SBCx) and flow north to discharge into SA009. These streams all generally align with NHD-mapped unnamed intermittent streams. Water depths observed at these streams at the time of the field survey generally ranged from 8 to 12 inches and flow was low velocity or stagnant, with the exception of SA013 that had a water depth of 3 inches and moderate flow velocity. The substrate of these streams typically consisted of fine sediments (silt and clay) and muck, with sand, cobble, gravel, and detritus also present in some locations.

Stream SA049 flows west along the northern Project Area boundary and discharges into SA012. This stream was classified as perennial (R2UBHx) and generally aligns with an NHD-mapped unnamed intermittent stream. Approximately 2 feet of low velocity flowing water was observed at the time of the field survey, and the substrate consisted of fine sediments (silt and clay), and muck.

3.2.3 Non-Wetland Areas

Fifteen desktop wetlands and waters locations were determined to be non-wetland in the Project Area during the field survey. Five additional wetlands and waters locations that were not identified during desktop review were also investigated during the field survey, four of which were determined to be non-wetland in the Project Area. The 19 non-wetland features were reviewed for wetland signatures in each of the aerial photographs from the following five years with normal antecedent precipitation: June 2005 (USDA FSA APFO 2005), August 2008 (USDA FSA APFO 2008), July 2010 (USDA FSA APFO 2010), October 2015 (USDA FSA APFO 2015), and August 2019 (USDA FSA APFO 2019). The results are summarized in Table 3. Aerial photographs and antecedent precipitation worksheets are included in Appendix D.

Nine of the 19 reviewed non-wetland areas exhibited a wetland signature in less than 50 percent of reviewed aerial photographs, which supports the field observations that wetland hydrology is not present at these locations. The 10 remaining non-wetland areas exhibited a wetland signature in more than 50 percent of reviewed aerial photographs. However, field observations did not support a wetland determination at these locations. All 10 non-wetland areas were located in agricultural fields. Six of the non-wetland areas (NWA026, NWA027, NWA028, NWA029, NWA030, and NWA031) were located in the northwest quarter of Section 13 and did not meet hydrology or hydric soils criteria. Soils observed at these locations were typically loamy to clayey soils at the surface with sandy soils beginning at a depth of 8 to 12 inches. The presence of these shallow sandy soils may increase drainage at these locations, resulting in the crop stress aerial photograph signatures observed. The remaining four non-wetland areas (NWA018, NWA023, NWA024, and NWA044) were observed to meet hydrology criteria but failed to meet any hydric soils criteria.

Non-		Interpretation ²			% of Years		
Wetland Area ¹	June 22, 2005	August 1, 2008	July 2, 2010	October 1, 2015	August 1, 2019	# of Years with Wet Signatures	with Wet Signatures ³
NWA004	NV	CS	NV	NV	NV	1	20%
NWA017	NV	NV	NV	NV	DO	1	20%
NWA018	NV	CS	CS	NV	CS	3	60%
NWA020	CS	CS	NV	NV	NV	2	40%
NWA022	NV	NV	NV	NV	DO	1	20%
NWA023	CS	CS	NV	NV	DO	3	60%
NWA024	CS	CS	NV	NV	CS/DO	3	60%
NWA026	NV	CS	NV	NV	CS	3	60%
NWA027	CS	CS	NV	NV	CS	3	60%
NWA028	CS	NV	NV	CS	CS	3	60%
NWA029	CS	NV	NV	CS	CS	3	60%
NWA030	CS	NV	NV	CS	CS	3	60%
NWA031	CS	NV	NV	CS	CS	3	60%
NWA032	NV	NV	NV	CS	NV	1	20%
NWA034	NV	CS	NV	CS	NV	2	40%
NWA041	NV	NV	NV	NV	NV	0	0%
NWA043	NV	NV	NV	CS	CS	2	40%
NWA044	NV	NV	CS	CS	DO	3	60%
NWA052	NV	NV	NV	NV	NV	0	0%

Table 3. Observed Wetland Signatures in Non-Wetland Areas in Normal Years

¹ Non-wetland areas NWA017, NWA018, NWA022, and NWA023 were not identified during the initial desktop review.

²Photo Interpretation codes are provided in Table 1. Desktop wetland review areas and sample points are depicted on aerial photographs in Appendix D.

³Wetland signature in more than 50% of reviewed normal years are **bold**.

3.3 REGULATORY IMPLICATIONS

3.3.1 U.S. Army Corps of Engineers

Each of the identified wetlands and waters was reviewed for potential USACE jurisdiction as described in Section 1.3.1 of this report, and a preliminary jurisdictional determination was recommended for each. Of the wetlands and waters located in the Project Area, 9 wetlands, 6 intermittent streams, and 2 perennial streams identified during the survey may be considered WOTUS due to a potential hydrologic connection to the Mississippi River. Therefore, these wetlands and waters would likely be subject to USACE regulatory jurisdiction. Only the USACE can make the final determination on the jurisdiction of wetlands and other waters. A pre-construction notification (PCN) and permit authorization from the USACE to use NWP 51 or the Utility RGP will likely be required if Project development will cause permanent impacts that exceed 0.1 acre, or temporary impacts that exceed 0.5 acre or will be in place for greater than 90 days between May 15 and November 15.

3.3.2 Minnesota Wetland Conservation Act

All 17 delineated wetlands are regulated under the WCA. Certain wetland activities are exempt from the WCA, allowing projects with minimal impact or projects located on land where certain pre-established land uses are present to proceed without regulation. 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 wetland or up to 100 square feet of Type 3 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.

3.3.3 Minnesota Department of Natural Resources

There are no public waters or public waters wetlands located within the Project Area (Section 3.1.2). The proposed Project would not require a Public Waters Work Permit from the DNR.

3.4 NATURAL RESOURCES INVENTORY

The site visit conducted from April 27 to 30, 2020 (see Section 3.2) identified three natural resource communities in the Project Area (Appendix A: Figure 5). The grassland/herbaceous community totaled approximately 84.6 acres and was primarily observed to be grassy buffer strips located along most of the excavated streams and wetlands in the Project Area. The grassland/herbaceous community was dominated by smooth brome and reed canary grass with stinging nettle and common milkweed (*Asclepias syriaca*) also observed. The deciduous forest community was observed to typically be clusters of trees along field edges that encompassed approximately 3.4 acres. The deciduous forest community. The emergent herbaceous wetland community corresponds with wetland WA039 (2.6 acres) and is located in the northwestern corner of the Project Area. Dominate vegetation observed included reed canary grass, cat-tails (*Typha* spp.), sedges (*Carex* spp.), and rushes (*Juncus* spp.). Representative natural resource area photographs are included in Appendix G.

4.0 CONCLUSIONS

A total of 25 wetland and water features were identified during the field survey for the Project. Tetra Tech surveyed 17 wetlands (PEMA, PEMAf, PEMAx, PEMB, PEMC, PEMCx), 6 intermittent streams (R4SBAx, R4SBCx), and 2 perennial stream (R2UBHx) within the Project Area.

An assessment of WOTUS criteria and potential USACE jurisdiction in accordance with USACE and USEPA guidance for the inventoried wetland and water features found that 9 of the 17 surveyed wetlands and all 8 surveyed streams appear to meet the criteria to be considered a WOTUS. However, only the USACE can make the final determination on the jurisdiction of wetlands and waters. A PCN and permit authorization from the USACE to use a NWP or RGP will likely be required if Project development will cause permanent impacts that exceed 0.1 acre, or temporary impacts that exceed 0.5 acre or will be in place for greater than 90 days between May 15 and November 15.

All 17 delineated wetlands are also regulated under the WCA, which is locally administered by Freeborn County. Up to 2,000 square-feet of Type 1 wetland or up to 100 square feet of Type 3 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.

The Project Area was observed to be primarily cultivated cropland with grassy buffer strips. Three natural resource communities were identified within the Project Area. These communities consisted of approximately 84.6 acres of grassland/herbaceous, 3.4 acres of deciduous forest, and 2.6 acres of emergent herbaceous wetland.

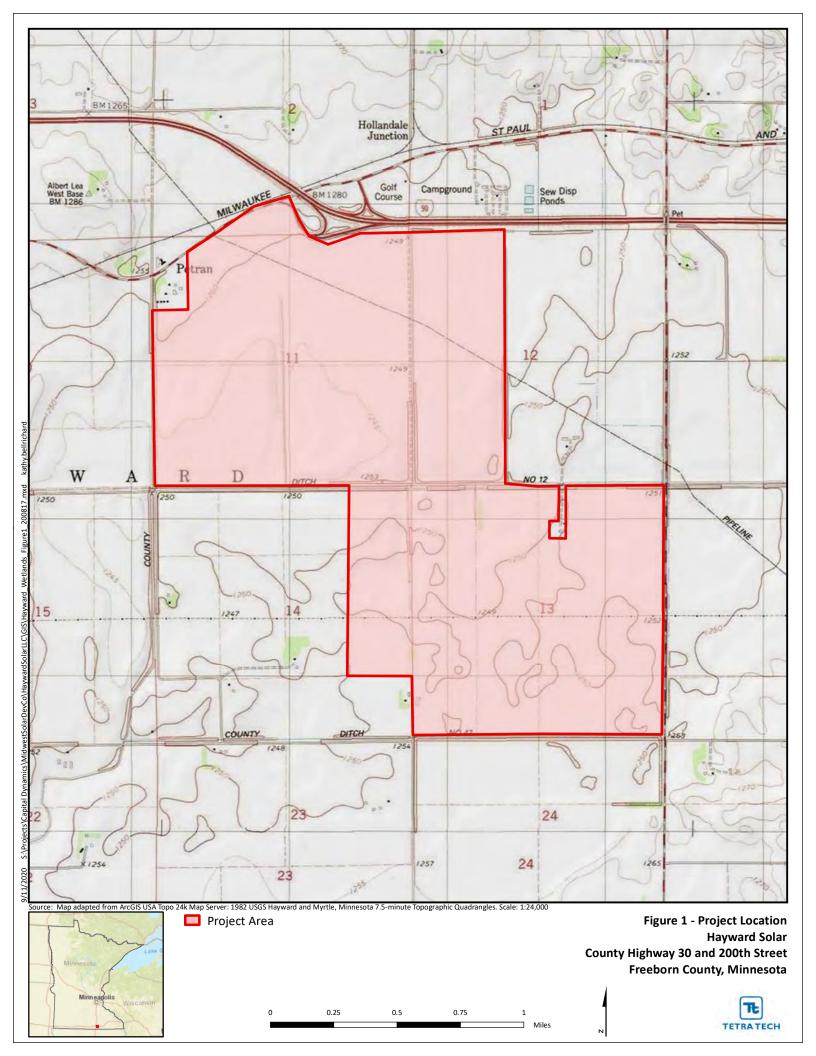
5.0 REFERENCES

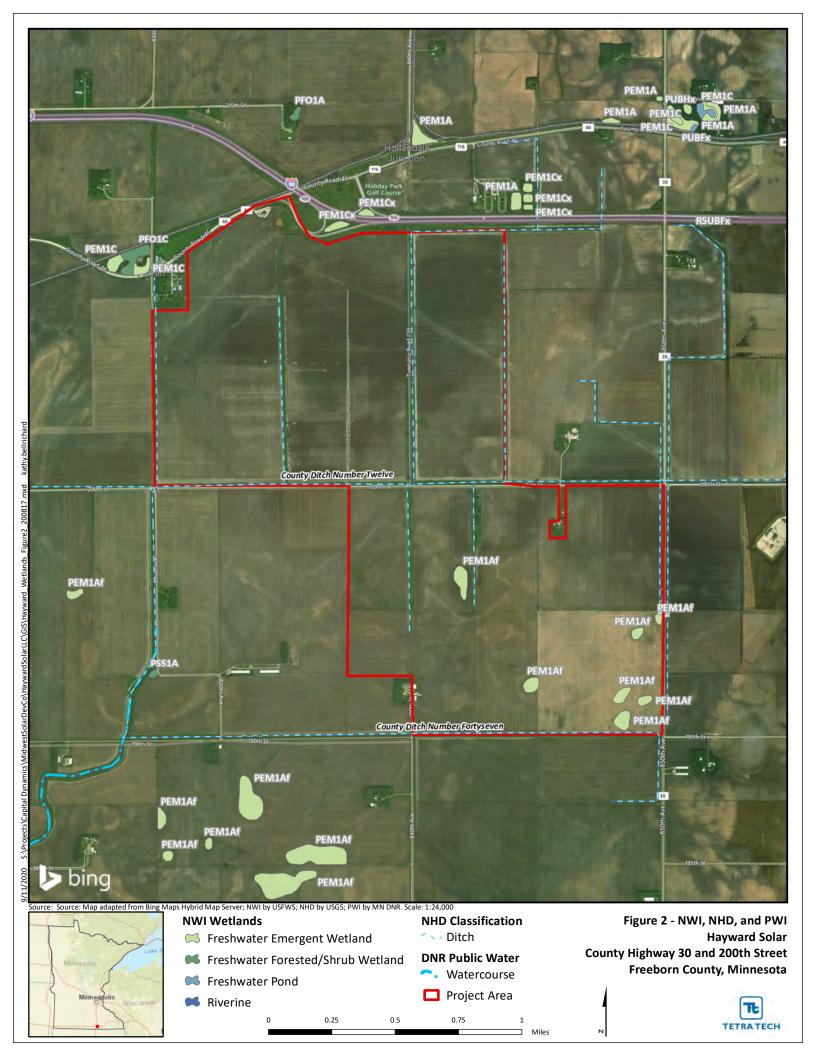
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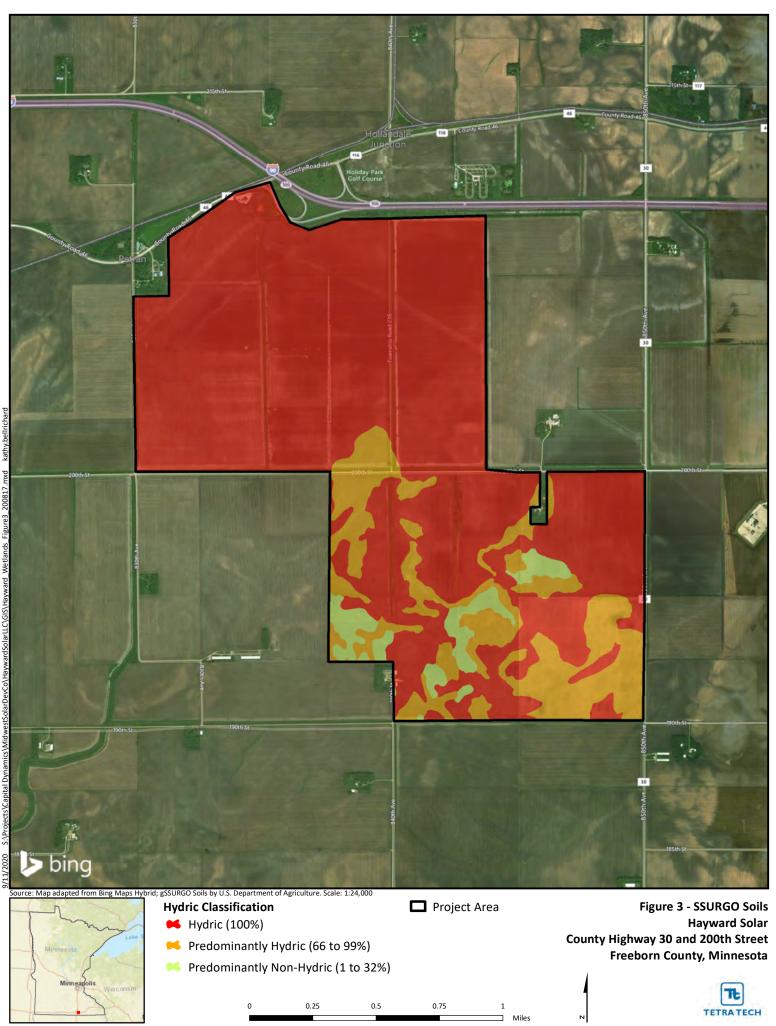
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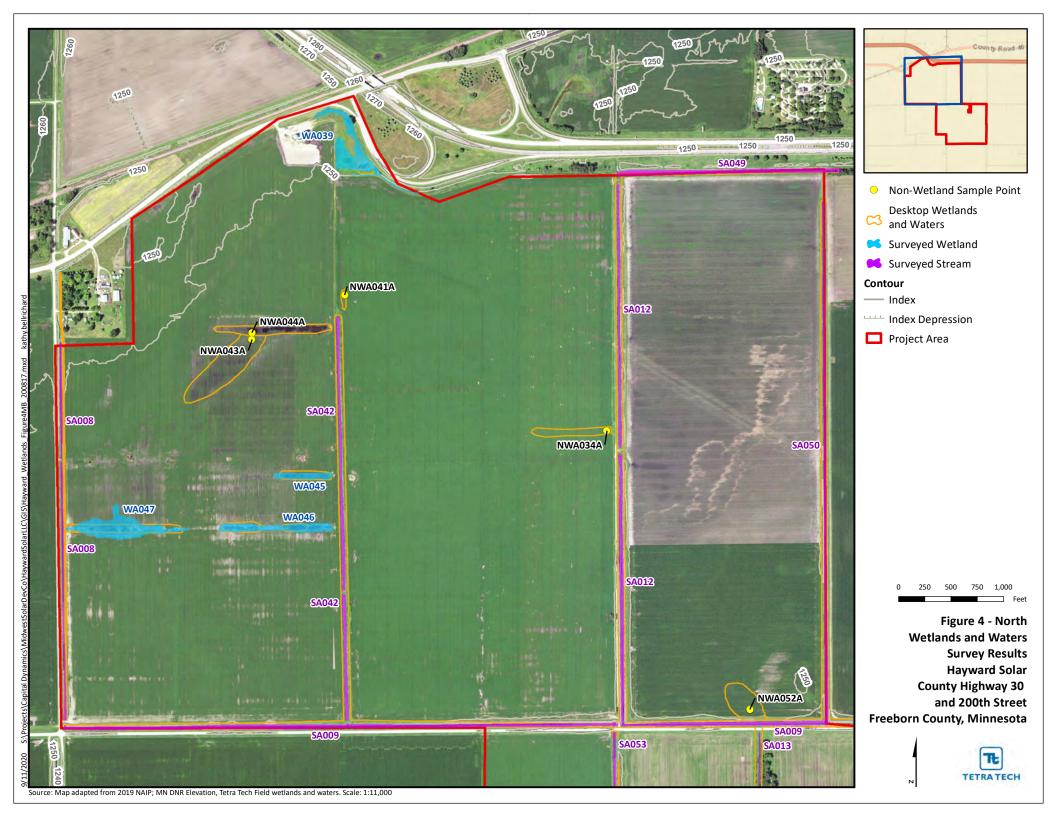
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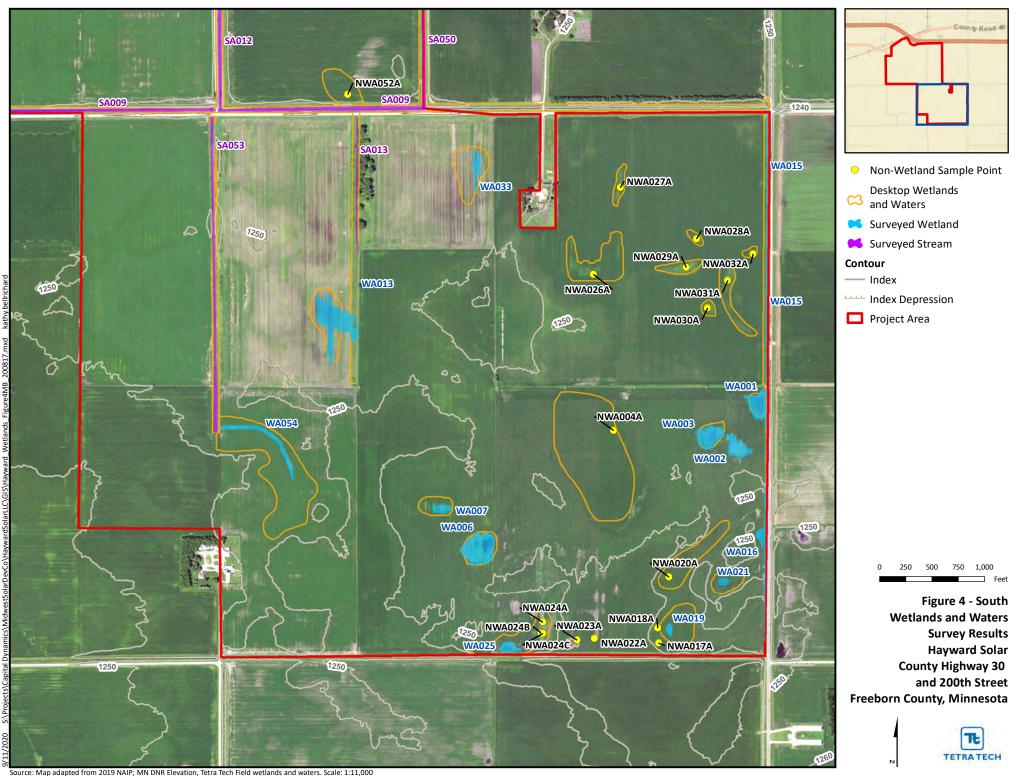
APPENDIX A: FIGURES 1 – 5

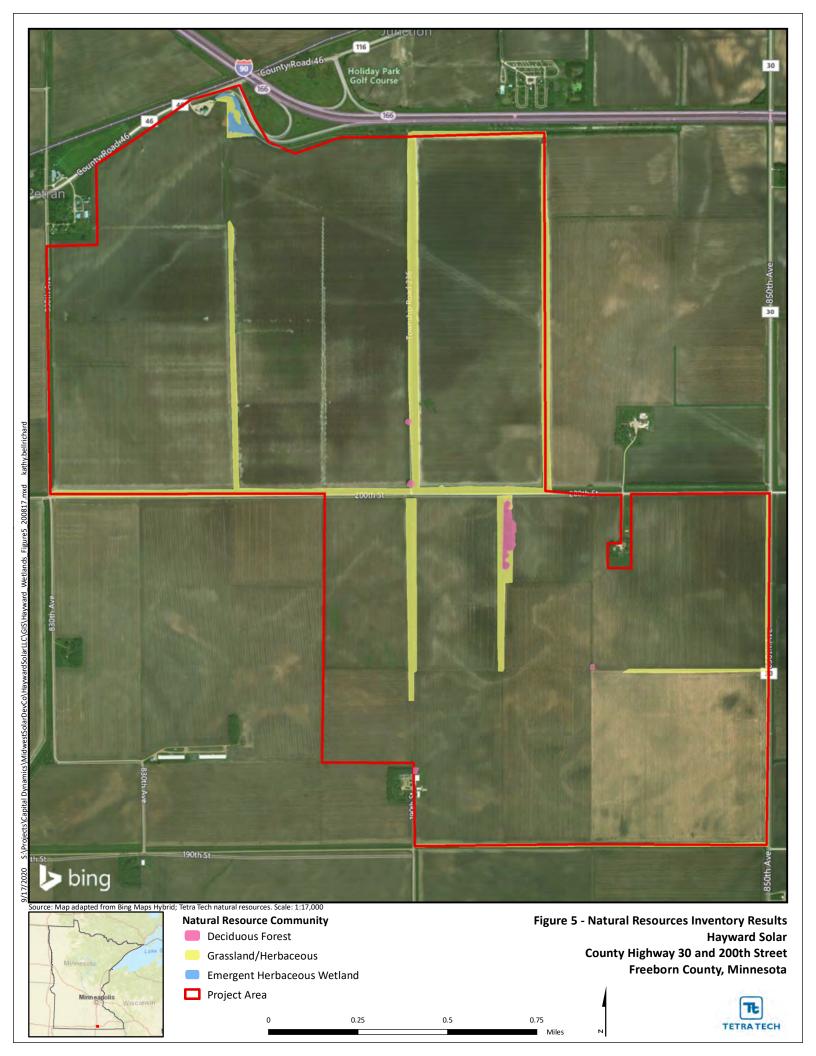












APPENDIX B: SURVEYED WETLANDS AND WATERS

Table B-1: Surveyed Streams Stream Average Surveyed Surveyed ID Stream Cowardin Stream Width Length Area USACE Figure 4 Class¹ Grid ID Туре Name (feet) (feet) (acres) Jurisdiction SA008 Intermittent R4SBCx 15 3,600 1.12 North -Yes County Ditch North SA009 Perennial R2UBHx Number 12 28 7,270 5.00 Yes SA012 Intermittent R4SBCx 30 5,200 2.83 Yes North _ SA013 Intermittent R4SBAx -5 1,300 0.15 Yes South SA042 Intermittent R4SBCx 20 3,825 2.06 Yes North _ SA049 Perennial R2UBHx 35 2,130 1.72 Yes North _ SA050 Intermittent R4SBCx 18 4,995 1.91 Yes North -SA053 Intermittent R4SBCx 18 3,015 1.26 Yes South _

Table B-2: Surveyed Wetlands

	Wetland Classification	on ¹	Surveyed	USACE	Figure 4	
Wetland ID	Circular 39	Cowardin	Area (acres)	Jurisdiction	Grid ID	
WA001	Type 1	PEMAf	0.97	No	South	
WA002	Type 1	PEMAf	0.77	No	South	
WA003	Type 1	PEMAf	1.01	No	South	
WA006	Type 1	PEMAf	1.75	No	South	
WA007	Type 1	PEMAf	0.31	No	South	
WA013	Туре 1/Туре 3	PEMAf/PEMAx/PEMCx	2.69	Yes	South	
WA015	Туре 1/Туре 3	PEMAx/PEMCx	0.77	Yes	South	
WA016	Type 1	PEMAx	0.72	Yes	South	
WA019	Type 1	PEMAf	0.15	No	South	
WA021	Type 1	PEMAf	0.15	No	South	
WA025	Type 1	PEMAf	0.35	Yes	South	
WA033	Type 1	PEMAf	0.43	No	South	
WA039	Туре 1/Туре 3/Туре 2	PEMA/PEMC/PEMB/PEMCx	2.63	Yes	North	
WA045	Type 1	PEMAf	0.75	Yes	North	
WA046	Type 1	PEMAf	1.77	Yes	North	
WA047	Type 1	PEMAf	3.26	Yes	North	
WA054	Type 1	PEMAf	0.89	Yes	South	

¹ See Appendix E for a key to the Circular 39 and Cowardin wetland classification systems.

APPENDIX C: WETLAND DETERMINATION DATA FORMS

WA001

		U	4/07/0000
	ty/County: Freeborn Co	<u> </u>	4/27/2020
Applicant/Owner: Hayward Solar LLC	State: Minnesc	1 0	WA001A
Investigator(s): Apryl Jennrich	Section, Township		N R20W S13
Landform (hillslope, terrace, etc.): Depression		ive, convex, none):	Concave
Slope (%): 1 Lat: 43° 38' 13.19"	Long: -93° 10' 1		WGS84
Soil Map Unit Name: Kossner muck			PEM1Af
Are climatic/hydrologic conditions of the site typical for this time	· · · · · · · · · · · · · · · · · · ·	(If no, explain in remarks)	
Are vegetation X , soil , or hydrology	significantly disturbed?		- · · ·
Are vegetation, soil, or hydrology SUMMARY OF FINDINGS	naturally problematic?	(If needed, explain any a	present? <u>No</u> nswers in remarks.)
Hydrophytic vegetation present? Y			
Hydric soil present? Y	Is the sampled area v	vithin a wetland?	Y
Indicators of wetland hydrology present? Y	If yes, optional wetlar	nd site ID:	
Remarks: (Explain alternative procedures here or in a separate VEGETATION Use scientific names of plants.	report.)		
Absolut	e Dominant Indicator	Dominance Test Works	sheet
Tree Stratum (Plot size:) % Cove		Number of Dominant Spe	
1 , , , , , , , , , , , , , , , , , , ,		that are OBL, FACW, or F	
2		Total Number of Domir	nant
3		Species Across all Str	ata: <u>0 (</u> B)
4		Percent of Dominant Spe	
5	- Total Cover	that are OBL, FACW, or F	AC: 0.00% (A/B)
<u>Sapling/Shrub stratum</u> (Plot size:)	= Total Cover	Prevalence Index Work	shoot
1		Total % Cover of:	Sheet
2		-	x 1 = 0
3		FACW species 0	x 2 = 0
4		· · ·	x 3 = 0
5		· · · · · · · · · · · · · · · · · · ·	x 4 = 0
	= Total Cover	· · · · · · · · · · · · · · · · · · ·	x 5 = 0
Herb stratum (Plot size:)			(A) <u>0</u> (B)
1		Prevalence Index = B/A	=
2		Hydrophytic Vegetation	n Indicators:
4		Rapid test for hydro	
5		Dominance test is >	
6		Prevalence index is	
7		Morphogical adaptat	ions* (provide
8		supporting data in R	
9		separate sheet)	
10	= Total Cover	Problematic hydroph X (explain)	ytic vegetation*
Woody vine stratum (Plot size:) 1		*Indicators of hydric soil and present, unless distu	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
2		Hydrophytic vegetation	
0	= Total Cover	present?	/
Remarks: (Include photo numbers here or on a separate sheet Ag field, 90% bare ground with corn chaff)		

SOIL

Profile Dese	cription: (Descr	ibe to th	e depth n	eeded	to docu	ment the	e indicat	or or confirm th	ne absence	of indicators.)	
Depth	<u>Matrix</u>			Re	dox Feat						
(Inches)	Color (moist)	%	Color (r	or (moist) % Type* Loc** Texture		Remarks					
0-19	10YR 2/1	100						Silt loam		organic rich	
19-22	10YR 2/1	100					Silty clay				
22-30	5Y 5/2	95	10YR	4/6	5	С	PL	Clay			
22-00	01 0/2	50	10111	01	0	<u> </u>		Oldy			
*Type: C = (Concentration, D	= Depleti	on RM =	Reduce	ed Matrix	MS = N	lasked S	and Grains	**Location	: PL = Pore Lining, M = Matrix	
	bil Indicators:	Dopiot		Tiouuo		, wie ii				matic Hydric Soils:	
•	tisol (A1)			Sar	ndy Gleye	ed Matrix	(S4)			ox (A16) (LRR K, L, R)	
	tic Epipedon (A2)		_		ndy Redo		(01)			(LRR K, L)	
	ck Histic (A3)		-		pped Ma					Masses (F12) (LRR K, L, R)	
	drogen Sulfide (A4	4)	-		amy Mucl	. ,	al (F1)		-	Surface (TF12)	
	atified Layers (A5		-		amy Gley				explain in re		
	m Muck (A10)	/	-		pleted Ma			(
	pleted Below Dark	Surface	e (A11)		dox Dark						
	ck Dark Surface (· / -		pleted Da		· · ·	*Indicato	rs of hvdro	phytic vegetation and weltand	
Sar	ndy Mucky Minera	í (S1)	-		dox Depr					present, unless disturbed or	
5 cr	m Mucky Peat or	Peat (S3	s) <u> </u>				. ,	, , ,	••	roblematic	
Restrictive	Layer (if observe	ed).	-				1				
Туре:		cuj.						Hydric so	oil present	? Y	
Depth (inche	<i>se).</i>					-		injuno se		·	
Remarks:						-					
HYDROLO	OGY										
Wetland Hy	drology Indicate	ors:									
Primary Indi	<u>cators (minimum</u>	of one is	required;	check	all that a	<u>pply)</u>		Seco	ndary Indic	ators (minimum of two requir	
	Water (A1)					Fauna (B	13)			oil Cracks (B6)	
High Wa	ater Table (A2)					uatic Plar				Patterns (B10)	
Saturatio							Odor (C			on Water Table (C2)	
	larks (B1)					d Rhizosp	heres on	Living Roots		urrows (C8)	
	nt Deposits (B2)				(C3)	(Visible on Aerial Imagery (C9)	
	posits (B3)				-		uced Iron			Stressed Plants (D1)	
-	at or Crust (B4) posits (B5)				(C6)	Iron Real	ICTION IN 1	illed Soils X		nic Position (D2) ral Test (D5)	
	on Visible on Aeria	al Imager	v (B7)		. ,	ck Surfac	e (C7)			lai Test (D3)	
	Vegetated Conca	0.	, , ,			or Well Da	. ,				
	tained Leaves (B9		(-)		_		Remarks)			
Field Obser	,	-			- `	•			1		
Surface wat		Yes		No	Х	Depth (i	inches):				
Water table	•	Yes		No	Х	Depth (i			Indi	cators of wetland	
Saturation p		Yes	Х	No		Depth (i		27	hyc	Irology present? Y	
(includes ca	pillary fringe)										
Describe red	corded data (strea	am gaug	e, monitori	ing wel	l, aerial p	hotos, p	revious ir	nspections), if av	ailable:		
		-									
Remarks:											
Remarks:											
Remarks:											

	WETLAND D	ETERMINATI	ON DATA	FORM - Mid	lwest Region	
Project/Site:	Hayward Solar	City/	County: F	reeborn Count	ty Sampling Da	ate: 4/27/2020
Applicant/Owner: Haywa	ard Solar LLC		State:	Minnesota	Sampling Po	oint: WA001B
Investigator(s): Apryl Jenn	rich		Sectio	n, Township, I	Range:	T102N R20W S13
Landform (hillslope, terrace	e, etc.):	Plain	Local r	elief (concave	, convex, none):	Concave
Slope (%): 1	Lat: 43° 38	' 13.13"	Long:	-93° 10' 11.6	7" Datum:	WGS84
Soil Map Unit Name:	Klo	ossner muck		NWI Cla	ssification:	N/A
Are climatic/hydrologic con	ditions of the site typi	cal for this time o	of the year?	Y (If	no, explain in rema	rks)
Are vegetation X , s	oil , or l	nydrology	significantly	/ disturbed?	Are "norm	al circumstances"
Are vegetation , s	oil , or l	nydrology	naturally pr	present? No		
SUMMARY OF FINDIN	IGS				(If needed, explain	any answers in remarks.)
Hydrophytic vegetation	present?	Ν				
Hydric soil present?		Y	Is the sam	pled area wit	hin a wetland?	Ν
Indicators of wetland h	ydrology present?	N	lf yes, opt	ional wetland	site ID:	
Remarks: (Explain alternative)			epont.)			
		Absolute	Dominant	Indicator	Dominance Test	Worksheet
<u>Tree Stratum</u> (Plot 1	size:	_) % Cover	Species	Staus	Number of Dominar that are OBL, FACV	•
23					Total Number of Species Across	Dominant
4			·		Percent of Dominar	
5					that are OBL, FACV	-
		0	= Total Cove	r		
Sapling/Shrub stratum (1	Plot size:		= Total Cove			$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
4 5 6 7					Dominance te Prevalence inc	dex is ≤3.0*
8 9 10					supporting dat separate shee	
10		0	= Total Cove	r	Problematic h	ydrophytic vegetation*
<u>Woody vine stratum</u> (1	Plot size:)			present, unle	soil and wetland hydrology must be ss disturbed or problematic
2		0	= Total Cove	r	Hydrophytic vegetation present?	<u>N</u>
Remarks: (Include photo n corn stubble	umbers here or on a s	separate sheet)				

Depth <u>N</u> (Inches) Color (m	/latrix		Ree	dox Feat	ures			
		Color (%	Type*	Loc**	Texture	Remarks
0-23 10YR 2	2/1 100						Silt loam	Ogranic rich
23-35 5Y 5/2	2 97	10YR	4/6	3	С	PL	Silty clay	
				<u> </u>	-		enty enty	
Type: C = Concentration	on, D = Deplet	ion, RM =	Reduce	ed Matrix	, MS = N	/lasked S	and Grains.	**Location: PL = Pore Lining, M = Matrix
Hydric Soil Indicator	rs:							or Problematic Hydric Soils:
Histisol (A1)		_			ed Matrix	(S4)		rairie Redox (A16) (LRR K, L, R)
Histic Epipedor		_		ndy Redo				rface (S7) (LRR K, L)
Black Histic (A	,	_		pped Ma	· · ·			nganese Masses (F12) (LRR K, L, R)
Hydrogen Sulfi		_			ky Miner	· · ·		allow Dark Surface (TF12)
Stratified Layer		-			ed Matrix		Other (e	explain in remarks)
2 cm Muck (A1 Depleted Belov	·	. (. 1 1) -			atrix (F3) Surface			
X Thick Dark Sur		= (ATT) -			ark Surfa	. ,	*Indiaatan	a of budwarbutic version and waltand
Sandy Mucky N	. ,	-			essions	. ,		s of hydrophytic vegetation and weltand y must be present, unless disturbed or
5 cm Mucky Pe	• •	3) -		юх Вері	00010113	(10)	nyarolog	problematic
	•	,				r		P
estrictive Layer (if ol	oservea):						l hudria a ai	
ype: epth (inches):					-		Hydric Sol	I present? Y
					-			
etland Hydrology Ind								
letland Hydrology Indicators (min		s required;	check				Secor	
Vetland Hydrology In rimary Indicators (min Surface Water (A1)	imum of one is	s required;	check	Aquatic	Fauna (B		<u>Secor</u>	Surface Soil Cracks (B6)
Vetland Hydrology In rimary Indicators (min Surface Water (A1) High Water Table (A	imum of one is	s required;	check	Aquatic True Aq	Fauna (B uatic Plai	nts (B14)		Surface Soil Cracks (B6) Drainage Patterns (B10)
Vetland Hydrology Ind rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3)	imum of one is	s required;	check	Aquatic True Aq Hydroge	Fauna (B uatic Plai n Sulfide	nts (B14) Odor (C)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
Vetland Hydrology In rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	imum of one is 2)	erequired;	check	Aquatic True Aq Hydroge Oxidized	Fauna (B uatic Plai n Sulfide	nts (B14) Odor (C		Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Vetland Hydrology Ind rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3)	imum of one is 2)	s required;	<u>check</u>	Aquatic True Aq Hydroge Oxidized (C3)	Fauna (B uatic Plai n Sulfide I Rhizosp	nts (B14) Odor (C	Living Roots	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Vetland Hydrology Ind rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (imum of one is 2) B2)	s required;	<u>check</u>	Aquatic True Aq Hydroge Oxidized (C3) Presenc	Fauna (B uatic Plai n Sulfide I Rhizosp	nts (B14) Odor (C wheres on uced Iron	Living Roots	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Vetland Hydrology Ind rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	<u>imum of one is</u> 2) (B2) 34)	,	<u>check</u>	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6)	Fauna (B uatic Plan In Sulfide I Rhizosp e of Redu Iron Redu	nts (B14) Odor (C oheres on uced Iron uction in T) Living Roots (C4)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Vetland Hydrology In rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or	imum of one is 2) (B2) 34) n Aerial Imager	у (В7)	<u>check</u>	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu	Fauna (B uatic Plai en Sulfide I Rhizosp e of Redu Iron Redu ck Surfac	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7)) Living Roots (C4)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Vetland Hydrology In rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B1) Algal Mat or Crust (E Iron Deposits (B5) Inundation Visible or Sparsely Vegetated	imum of one is 2) (B2) 34) n Aerial Imager Concave Surfa	у (В7)	<u>check</u>	Aquatic True Aq Hydroge Oxidized (C3) Presenc (C6) Thin Mu Gauge o	Fauna (B uatic Plai on Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9)	I) Living Roots (C4) illed Soils	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Vetland Hydrology In rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave	imum of one is 2) (B2) 34) n Aerial Imager Concave Surfa	у (В7)		Aquatic True Aq Hydroge Oxidized (C3) Presenc (C6) Thin Mu Gauge o	Fauna (B uatic Plai on Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7)	I) Living Roots (C4) illed Soils	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Vetland Hydrology Ind rrimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave ield Observations:	imum of one is 2) B2) A4) n Aerial Imager Concave Surfa es (B9)	у (В7)		Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plai n Sulfide l Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks	I) Living Roots (C4) illed Soils	Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave Surface water present?	imum of one is 2) B2) 34) n Aerial Imager Concave Surfa es (B9) Yes	у (В7)		Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C Other (E	Fauna (B uatic Plai in Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches):	I) Living Roots (C4) illed Soils	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Vetland Hydrology Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (Drift Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave ield Observations: Surface water present?	imum of one is 2) B2) A4) n Aerial Imager Concave Surfa es (B9)	у (В7)		Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plai n Sulfide l Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	I) Living Roots (C4) illed Soils	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)
Vetland Hydrology Ind Primary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave Vater table present? Saturation present?	imum of one is 2) (B2) 34) n Aerial Imager Concave Surfa es (B9) Yes Yes Yes Yes	y (B7) ce (B8)	No No	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge C Other (E	Fauna (B uatic Plan n Sulfide I Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	I) Living Roots (C4) iilled Soils	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave Water table present? Vater table present? Saturation present?	imum of one is (2) (B2) (B2) (B2) (B2) (B2) (B2) (B2)	y (B7) ce (B8)	No No No	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E X	Fauna (B uatic Plai in Sulfide d Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ee (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) iilled Soils) 27	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave Surface water present? Saturation present? Saturation present? Saturation present?	imum of one is (2) (B2) (B2) (B2) (B2) (B2) (B2) (B2)	y (B7) ce (B8)	No No No	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E X	Fauna (B uatic Plai in Sulfide d Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ee (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) iilled Soils) 27	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (Drift Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5) Inundation Visible or Sparsely Vegetated	imum of one is (2) (B2) (B2) (B2) (B2) (B2) (B2) (B2)	y (B7) ce (B8)	No No No	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E X	Fauna (B uatic Plai in Sulfide d Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ee (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) iilled Soils) 27	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Vetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave Water-Stained Leave Surface water present? Vater table present? Saturation present? Sat	imum of one is (2) (B2) (B2) (B2) (B2) (B2) (B2) (B2)	y (B7) ce (B8)	No No No	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E X	Fauna (B uatic Plai in Sulfide d Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ee (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) iilled Soils) 27	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
Vetland Hydrology Ind rimary Indicators (min Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Inundation Visible or Sparsely Vegetated Water-Stained Leave Vater table present? Vater table present? Naturation present? ncludes capillary fringer Describe recorded data	imum of one is (2) (B2) (B2) (B2) (B2) (B2) (B2) (B2)	y (B7) ce (B8)	No No No	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E X	Fauna (B uatic Plai in Sulfide d Rhizosp e of Redu ron Redu ck Surfac or Well Da ixplain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ee (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) iilled Soils) 27	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)



WA001 overview looking northeast.

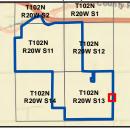


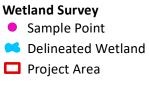
Wetland Sample Point WA001A.



Non-wetland sample point WA001B.







0

2-foot Elevation Contour — Index

- Index Depression
- Intermediate
 - Intermediate Depression 100 200

□ Feet

Wetland Delineation Hayward Solar Freeborn County, Minnesota



		-
	County: Freeborn Cou	<u> </u>
Applicant/Owner: Hayward Solar LLC	State: Minneso	
Investigator(s): Apryl Jennrich	Section, Township	
Landform (hillslope, terrace, etc.): Depression	_	ve, convex, none): Concave
Slope (%): 1 Lat: 43° 38' 9.23" Sail Man Linit Name Deced much linit Name Deced much linit Name	Long: -93° 10' 12	
Soil Map Unit Name: Dassel mucky loam		Alassification: N/A
Are climatic/hydrologic conditions of the site typical for this time of		lf no, explain in remarks)
Are vegetation X, soil , or hydrology		Are "normal circumstances" present? No
Are vegetation, soil, or hydrology SUMMARY OF FINDINGS	naturally problematic?	present? <u>No</u> (If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y		
Hydric soil present? Y	Is the sampled area w	
Indicators of wetland hydrology present? Y	lf yes, optional wetlan	d site ID:
Remarks: (Explain alternative procedures here or in a separate re VEGETATION Use scientific names of plants.	eport.)	
Absolute	Dominant Indicator	Dominance Test Worksheet
Tree Stratum (Plot size:) % Cover	Species Staus	Number of Dominant Species
1		that are OBL, FACW, or FAC: 0 (A)
2		Total Number of Dominant
3		Species Across all Strata: 0 (B)
4		Percent of Dominant Species
5	= Total Cover	that are OBL, FACW, or FAC: 0.00% (A/B)
Sapling/Shrub stratum (Plot size:)		Prevalence Index Worksheet
1		Total % Cover of:
2		OBL species 0 x 1 = 0
3		FACW species 0 x 2 = 0
4		FAC species $0 \times 3 = 0$
5		FACU species $0 \times 4 = 0$
	= Total Cover	UPL species $0 \times 5 = 0$
Herb stratum (Plot size:)		Column totals 0 (A) 0 (B)
2		Prevalence Index = B/A =
3		Hydrophytic Vegetation Indicators:
4		Rapid test for hydrophytic vegetation
5		Dominance test is >50%
6		Prevalence index is ≤3.0*
7		Morphogical adaptations* (provide
8		supporting data in Remarks or on a
9		separate sheet)
	= Total Cover	Problematic hydrophytic vegetation* X (explain)
Woody vine stratum (Plot size:) 1		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2	<u></u>	Hydrophytic vegetation
0	= Total Cover	present? Y
Remarks: (Include photo numbers here or on a separate sheet) ragweed and barnyard grass, dead from last year		

Profile Des	cription: (Descr	ibe to th	e depth needed	l to docu	ment the	e indicat	or or confirm the a	bsence of indicators.)	
Depth	<u>Matrix</u>		<u>Re</u>	edox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-15	10YR 2/1	100					Silt loam		
15-17	10YR 2/1	95	10YR 4/6	5	С	PL	Silty clay		
17-25	5Y 5/2	95	10YR 4/6	5	С	PL	Sandy clay		
17 20	01 0/2	00	1011(4/0	Ŭ					
*Type: C = 0	Concentration, D	= Depleti	on, RM = Reduc	ed Matrix	, MS = N	/lasked S	and Grains. **L	ocation: PL = Pore Lining, M = Matrix	
	il Indicators:							Problematic Hydric Soils:	
Hist	tisol (A1)		Sa	ndy Gley	ed Matrix	(S4)	Coast Prai	rie Redox (A16) (LRR K, L, R)	
Hist	tic Epipedon (A2)		Sa	ndy Redo	ox (S5)		Dark Surfa	ice (S7) (LRR K, L)	
Bla	ck Histic (A3)		Str	ipped Ma	trix (S6)		Iron-Manga	anese Masses (F12) (LRR K, L, R)	
Hyd	lrogen Sulfide (A	4)	Lo	amy Muc	ky Minera	al (F1)	Very Shall	ow Dark Surface (TF12)	
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (explain in remarks)									
2 cr	m Muck (A10)		De	pleted Ma	atrix (F3)				
	leted Below Dark		e (A11) 📃 Re	dox Dark	Surface	(F6)			
	ck Dark Surface (pleted Da		. ,		of hydrophytic vegetation and weltand	
	idy Mucky Minera	. ,		dox Depr	essions	(F8)	hydrology r	nust be present, unless disturbed or	
5 cr	n Mucky Peat or	Peat (S3)					problematic	
Restrictive	Layer (if observ	ed):							
Туре:							Hydric soil p	present? Y	
Depth (inche	es):				-				
Remarks:									
HYDROLO	DGY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	<u>cators (minimum</u>	of one is	required; check	all that a	pply)		Seconda	ary Indicators (minimum of two required)	
	Water (A1)				Fauna (B	13)		urface Soil Cracks (B6)	
High Wa	ter Table (A2)			True Aq	uatic Plai	nts (B14)	Dr	ainage Patterns (B10)	
Saturatio	on (A3)			Hydroge	en Sulfide	Odor (C	1) Dr	y-Season Water Table (C2)	
	larks (B1)				d Rhizosp	heres on	0	ayfish Burrows (C8)	
	nt Deposits (B2)			_(C3)				aturation Visible on Aerial Imagery (C9)	
	posits (B3)					uced Iron		unted or Stressed Plants (D1)	
-	at or Crust (B4) osits (B5)			(C6)	Iron Real	ICTION IN 1		eomorphic Position (D2) AC-Neutral Test (D5)	
	on Visible on Aeria	al Imagen	(B7)		ck Surfac	e (C7)	F	AC-Neutral Test (DS)	
	Vegetated Conca				or Well Da				
	tained Leaves (B9			_		Remarks)		
Field Obser	vations:	,			•		,		
Surface wat		Yes	No	Х	Depth (i	inches):			
Water table		Yes	No	Х	Depth (i			Indicators of wetland	
Saturation p	resent?	Yes	X No		Depth (i		25	hydrology present? Y	
(includes ca	pillary fringe)								
Describe red	corded data (strea	am gauge	e, monitoring we	ll, aerial p	ohotos, p	revious i	nspections), if availa	ble:	
Remarks:									

WETLAND D	ETERMINATI	ON DATA FORM - M	idwest Region						
Project/Site: Hayward Solar	City/	County: Freeborn Cou	inty Sampling Date:	4/27/2020					
Applicant/Owner: Hayward Solar LLC		State: Minneso		WA002B					
Investigator(s): Apryl Jennrich		Section, Township	, Range: T102	2N R20W S13					
Landform (hillslope, terrace, etc.):	Plain	Local relief (conca	ve, convex, none):	None					
	3' 9.37"	 Long: -93° 10' 12	· · · · · · · · · · · · · · · · · · ·	WGS84					
· · · /	el mucky loam		lassification:	N/A					
Are climatic/hydrologic conditions of the site typi		of the year? Y (lf no, explain in remarks)						
	nydrology	· · · ·	Are "normal cir	cumstances"					
	nydrology	naturally problematic?		present? No					
SUMMARY OF FINDINGS	· · · ·		(If needed, explain any	answers in remarks.)					
Hydrophytic vegetation present?	Ν								
Hydric soil present?	N	Is the sampled area w	ithin a wetland?	Ν					
Indicators of wetland hydrology present?	N	If yes, optional wetlan	d site ID:						
Remarks: (Explain alternative procedures here o	Remarks: (Explain alternative procedures here or in a separate report.)								
VEGETATION Use scientific names of	plants.								
	Absolute	Dominant Indicator	Dominance Test Work	ksheet					
<u>Tree Stratum</u> (Plot size: 1	_) % Cover	Species Staus	Number of Dominant Spe that are OBL, FACW, or						
2			Total Number of Dom Species Across all S						
4			Percent of Dominant Spe	、 ,					
5			that are OBL, FACW, or						
	0	= Total Cover							
<u>Sapling/Shrub stratum</u> (Plot size:)		Prevalence Index Wor	rksheet					
1			Total % Cover of:						
2			OBL species 0	x 1 = 0					
3			FACW species 0 FAC species 0	$x^{2} = 0$ x 3 = 0					
4			FACU species 0	x = 0					
	0	= Total Cover	UPL species 0	x = 0					
Herb stratum (Plot size:)		Column totals 0	(A) 0 (B)					
1	`		Prevalence Index = B/A						
2				n Indiantara.					
3			Hydrophytic Vegetation Rapid test for hydro						
5			Dominance test is 2						
6			Prevalence index is						
7			Morphogical adapta						
8			supporting data in I						
9			separate sheet)						
10	0	= Total Cover	Problematic hydrop (explain)	ohytic vegetation*					
<u>Woody vine stratum</u> (Plot size: 1)		-	d wetland hydrology must be turbed or problematic					
2			Hydrophytic						
	0	= Total Cover	vegetation	N					
			present?	<u>N</u>					
Remarks: (Include photo numbers here or on a s corn stubble	separate sheet)								

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abse	nce of indicators.)	
Depth	Matrix		Re	dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-16	10YR 2/1	100					Silt loam		
16-18	10YR 2/1	100					Clay loam		
18-21	2.5Y 5/2	100							
				40			Sandy clay		
21-29	2.5Y 5/2	90	10YR 4/6	10	С	PL/M	Sand		
*Type: C = (Concentration D	I = Denleti	ion RM = Reduc	ed Matrix		laskod S	and Grains **Locat	ion: PL = Pore Lining, M = Matrix	
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils:									
-	Histisol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR K, L, R)								
	tic Epipedon (A2)			ndy Redo		(04)	Dark Surface (
	ck Histic (A3)			ipped Ma				e Masses (F12) (LRR K, L, R)	
	Irogen Sulfide (A4	4)		amy Mucł	· · ·	al (F1)		Dark Surface (TF12)	
· · ·	Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (explain in remarks)								
	2 cm Muck (A10) Depleted Matrix (F3)								
	leted Below Dark	Surface		dox Dark		(F6)			
Thio	ck Dark Surface (A12)	De	pleted Da	ark Surfa	ce (F7)	*Indicators of hy	drophytic vegetation and weltand	
Sar	dy Mucky Minera	ıl (S1)	Re	dox Depr	essions ((F8)		be present, unless disturbed or	
5 cr	5 cm Mucky Peat or Peat (S3) problematic								
Restrictive	Layer (if observe	ed):							
Type:		,-					Hydric soil prese	ent? N	
Depth (inche	es):				-				
Remarks:	,				-				
HYDROLO	DGY								
Wetland Hy	drology Indicato	ors:							
Primary Indi	cators (minimum	of one is	required; check	all that a	pply)		Secondary I	ndicators (minimum of two required)	
Surface	Water (A1)			Aquatic	Fauna (B	13)		e Soil Cracks (B6)	
	ter Table (A2)				uatic Plar			ge Patterns (B10)	
Saturatio	on (A3)			Hydroge	n Sulfide	Odor (C1	l) Dry-Se	ason Water Table (C2)	
	larks (B1)				l Rhizosp	heres on	· ·	h Burrows (C8)	
	nt Deposits (B2)			(C3)				tion Visible on Aerial Imagery (C9)	
	posits (B3)					uced Iron		d or Stressed Plants (D1)	
	at or Crust (B4)				ron Redu	iction in 1		orphic Position (D2)	
	osits (B5) on Visible on Aeria	l Imagen	(B7)	(C6) Thin Mu	ck Surfac	e (C7)		eutral Test (D5)	
	Vegetated Conca				or Well Da				
	tained Leaves (B9			-		Remarks)		
Field Obser	,	/					,		
Surface wat		Yes	No	Х	Depth (i	nches):			
Water table	•	Yes	No	X	Depth (i		I	ndicators of wetland	
Saturation p		Yes	X No		Depth (i		21	hydrology present? N	
(includes ca	pillary fringe)				· ·				
Describe rec	Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Pemerke									
Remarks:									



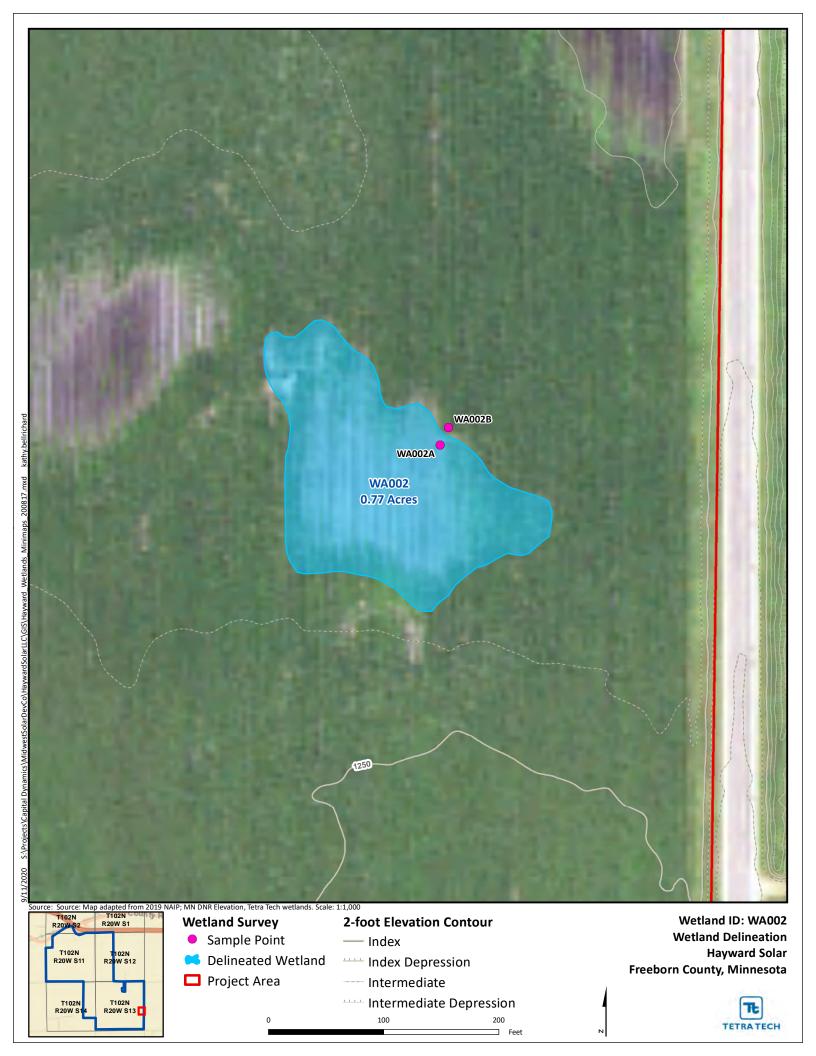
WA002 overview looking southwest.



Wetland Sample Point WA002A.



Non-wetland sample point WA002B.



WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:	Hayward Solar		City/	County:	Freeborn Cou	Inty Sampling D	ate: 4/27/2020
Applicant/Owner:	Hayward Solar LLC			State			
Investigator(s): Ap	ryl Jennrich			Sect	tion, Township	, Range:	T102N R20W S13
Landform (hillslope	, terrace, etc.):	Depressior	n	Loca	l relief (concav	ve, convex, none):	Concave
Slope (%): 1	Lat: 43° 3	38' 10.67"		Long:	-93° 10' 15	5.49" Datum:	WGS84
Soil Map Unit Nam	e: Spie	cer silty clay	loam		NWI C	Classification:	PEM1Af
Are climatic/hydrolo	ogic conditions of the site ty	/pical for thi:	s time c	of the year	? <u>Y</u> (lf no, explain in rema	arks)
Are vegetation	X_, soil, o	r hydrology		significar	ntly disturbed?	Are "norm	al circumstances"
Are vegetation	, soil , oi	r hydrology		naturally	problematic?		present? No
SUMMARY OF	FINDINGS					(If needed, explain	n any answers in remarks.)
Hydrophytic ve	egetation present?	Y					
Hydric soil pres	sent?	Y		Is the sa	mpled area w	vithin a wetland?	Y
Indicators of we	etland hydrology present?	Y		lf yes, o	ptional wetlan	d site ID:	
Remarks: (Explain	alternative procedures here	e or in a sep	oarate r	eport.)			
VEGETATION -	- Use scientific names (of plants.					
	000 0000		solute	Dominant	t Indicator	Dominance Test	Worksheet
<u>Tree Stratum</u> 1	(Plot size:		Cover	Species	Staus	Number of Dominat that are OBL, FACV	nt Species
2						Total Number of	
3						Species Across	all Strata: 0 (B)
4						Percent of Domina	•
5				- Total Ca		that are OBL, FACV	N, or FAC: 0.00% (A/B)
Sanling/Shrub st	ratum (Plot size:) <u> </u>	0	= Total Cov	ver	Prevalence Index	Warkshaat
<u>Sapiirig/Siriub sii</u> 1	<u>alun</u> (FIUL SIZE.)				Total % Cover of:	
2						OBL species	0 x 1 = 0
3						FACW species	0 x 2 = 0
4						FAC species	0 x 3 = 0
5						FACU species	0 x 4 = 0
		、 —	0	= Total Cov	ver	UPL species	$0 \times 5 = 0$
<u>Herb stratum</u>	(Plot size:)				Column totals	0 (A) <u>0 (B)</u>
1						Prevalence Index	= B/A =
2							- t- the last and
3							etation Indicators: hydrophytic vegetation
5						Dominance te	
6						Prevalence in	
7		<u> </u>					adaptations* (provide
8 9							ta in Remarks or on a
10							ydrophytic vegetation*
Woody vine strat	tum (Diot size:	\ <u> </u>	0	= Total Cov	ver	X (explain)	
Woody vine strat	tum (Plot size:)				present, unle	soil and wetland hydrology must be ess disturbed or problematic
2				<u></u>		Hydrophytic vegetation	
			0	= Total Cov	ver	vegetation	

present?

Υ

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

barnyard grass and ragweed

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abser	nce of indicators.)	
Depth	<u>Matrix</u>		Rec	lox Featu	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
018	10YR 2/1	100					Silt loam		
18-26	10YR 2/1	100					Silty clay		
26-34	5Y 5/2	97	10YR 4/6	3	С	PL	Silty clay		
							, ,		
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils: Histisol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F3) Other (explain in remarks) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) *Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic Sandy Mucky Mineral (S1) Redox Depressions (F8) Hydric soil present? Y Restrictive Layer (if observed): Type: Y Metrix soil present? Y Remarks: Metrix S0 Y Y Metrix Soil present? Y									
Depth (inche	es):								
HYDROLO	DGY								
	drology Indicato	ors:							
-			required: check	all that a	nnly)		Secondary Inc	licators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)Secondary Indicators (minimum of two required)Surface Water (A1)Aquatic Fauna (B13)XHigh Water Table (A2)True Aquatic Plants (B14)Drainage Patterns (B10)Saturation (A3)Hydrogen Sulfide Odor (C1)Dry-Season Water Table (C2)Water Marks (B1)Oxidized Rhizospheres on Living RootsCrayfish Burrows (C8)Sediment Deposits (B2)(C3)Saturation (C4)XDrift Deposits (B3)Presence of Reduced Iron (C4)XStunted or Stressed Plants (D1)Algal Mat or Crust (B4)Recent Iron Reduction in Tilled SoilsXGeomorphic Position (D2)Iron Deposits (B5)(C6)Thin Muck Surface (C7)FAC-Neutral Test (D5)Mater-Stained Leaves (B9)Other (Explain in Remarks)Other (Explain in Remarks)								Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)	
Field Obser		Vac	No	×	Denth /	ncheel			
Surface wate Water table Saturation p (includes ca	present?	Yes Yes Yes	No No No	X X X	Depth (i Depth (i Depth (i	nches):		dicators of wetland ydrology present? Y	
Describe rec	Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:									

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:	Hayward Solar		City/	County:	Freeborn Cou	inty Sampling Date:	4/27/2020
Applicant/Owner: Ha	ayward Solar LLC			State:			WA003B
Investigator(s): Apryl J	lennrich			Secti	ion, Township	, Range: T102	2N R20W S13
Landform (hillslope, ter	rrace, etc.):	Plain		Local	relief (concav	ve, convex, none):	None
Slope (%): 1	Lat: 43° 3	8' 10.92"		Long:	-93° 10' 15	.48" Datum:	WGS84
Soil Map Unit Name:	Spic	er silty clay	/ loam		NWI C	lassification:	NA
Are climatic/hydrologic	conditions of the site ty	pical for thi	s time o	of the year?	Y (lf no, explain in remarks)	
Are vegetation X	, soil, or	hydrology		significan	tly disturbed?	Are "normal circ	cumstances"
Are vegetation	, soil , or	hydrology		naturally	problematic?		present? No
SUMMARY OF FIN						(If needed, explain any	answers in remarks.)
Hydrophytic vegeta	ation present?	Ν					
Hydric soil present	?	Y		Is the sa	mpled area w	ithin a wetland?	N
Indicators of wetlar	nd hydrology present?	Ν		lf yes, o	otional wetlan	d site ID:	
VEGETATION Us	se scientific names c	of plants.					
			solute	Dominant	Indicator	Dominance Test Work	sheet
、	Plot size:) %	Cover	Species	Staus	Number of Dominant Spe	
1						that are OBL, FACW, or F	()
2 3						Total Number of Domi Species Across all St	
4			<u> </u>		·	Percent of Dominant Spe	
5					·	that are OBL, FACW, or F	
			0	= Total Cov	er		、
Sapling/Shrub stratu	<u>rr</u> (Plot size:)				Prevalence Index Wor	[·] ksheet
1						Total % Cover of:	
2						OBL species 0 FACW species 0	x 1 = 0 x 2 = 0
3 4					·	FACW species 0 FAC species 0	$\frac{x^2}{x^3} = \frac{0}{0}$
5					·	FACU species 0	x 4 = 0
			0	= Total Cov	rer	UPL species 0	x 5 = 0
<u>Herb stratum</u>	(Plot size:)				Column totals 0	(A) 0 (B)
1						Prevalence Index = B/A	x =
2							
3						Hydrophytic Vegetatio	
4					·	Rapid test for hydro Dominance test is >	
6					·	Prevalence index is	
7					·	Morphogical adapta	
8					·	supporting data in F	
9						separate sheet)	
10						Problematic hydrop	hytic vegetation*
		、 —	0	= Total Cov	rer	(explain)	
<u>Woody vine stratum</u> 1	(Plot size:)				-	d wetland hydrology must be urbed or problematic
2						Hydrophytic	

0

= Total Cover

vegetation

Ν

present?

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

corn stubble

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indica	or or confirm the abser	ce of indicators.)	
Depth	Matrix		Rec	lox Featu	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks	
0-14	10YR 2/1	100	, , ,				Silt loam		
14-19	2.5Y 3/1	99	10YR 4/6	1	С	PL	Silty clay		
19-35	5Y 5/2	95	10YR 4/6	5	С	PL	Clay		
*Type: C = 0	Concentration, D	= Deplet	ion, RM = Reduce	ed Matrix	, MS = N	/lasked S	Sand Grains. **Locati	on: PL = Pore Lining, M = Matrix	
Hydric Sc	il Indicators:						Indicators for Prob	ematic Hydric Soils:	
Hist	isol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast Prairie Re	dox (A16) (LRR K, L, R)	
Hist	ic Epipedon (A2)		San	dy Redo	x (S5)		Dark Surface (S	7) (LRR K, L)	
Bla	ck Histic (A3)		Stri	oped Ma	trix (S6)		Iron-Manganese	Masses (F12) (LRR K, L, R)	
Hyc	rogen Sulfide (A	4)	Loa	my Mucł	ky Minera	al (F1)	Very Shallow Da	rk Surface (TF12)	
Stra	tified Layers (A5)	Loa	my Gley	ed Matrix	(F2)	Other (explain in	remarks)	
	n Muck (A10)		Dep	leted Ma	atrix (F3)	()		,	
	Depleted Below Dark Surface (A11) Redox Dark Surface (F6)								
	k Dark Surface (· · · —		irk Surfa	· · /	*Indicators of hvdi	ophytic vegetation and weltand	
	dy Mucky Minera	-			essions (e present, unless disturbed or	
	n Mucky Peat or					,		problematic	
			/						
	Layer (if observe	ea):							
Туре:	`				•		Hydric soil preser	nt? Y	
Depth (inche	es):				•				
Remarks:									
HYDROLO	OGY								
1	drology Indicato	ne.							
			waaruinadu ahaalu	all that a	mmb ()		C		
-		or one is	s required; check			40)		licators (minimum of two required)	
	Water (A1)				Fauna (B	,		Soil Cracks (B6)	
	ter Table (A2)				uatic Plar			e Patterns (B10)	
	on (A3) arks (B1)					Odor (C		son Water Table (C2)	
	()			(C3)	Rnizosp	neres on	<u> </u>	Burrows (C8)	
	nt Deposits (B2) posits (B3)			. ,	o of Dodu	uced Iron		on Visible on Aerial Imagery (C9) or Stressed Plants (D1)	
·	it or Crust (B4)							phic Position (D2)	
	osits (B5)			(C6)				utral Test (D5)	
	on Visible on Aeria	l Imager	(B7)	. ,	ck Surfac	e (C7)			
	Vegetated Conca	-			r Well Da	```			
	tained Leaves (B9			-		Remarks)		
)			хріантін	rtomanto)		
Field Obser Surface wat		Yes	No	Х	Depth (i	nches).			
Water table	•	Yes	No	× X	Depth (i		In/	dicators of wetland	
Saturation p		Yes	No	X	Depth (i	-		ydrology present? N	
	pillary fringe)	163		~	Dopui (i	10100).	"		
-		om deur	o monitoring wal	acrial -	hotos -	revieus :	nenections) if availables		
Describe rec		ani yaug	e, monitoring well	, aenai p	motos, p	ievious I	nspections), if available:		
Remarks:									



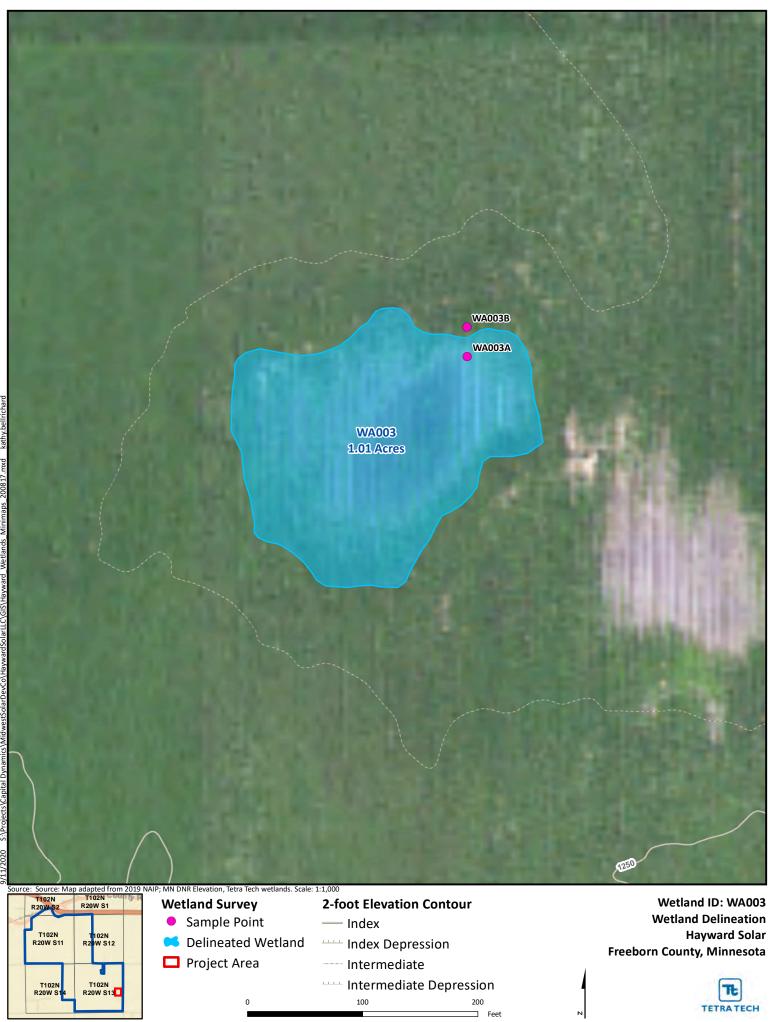
WA003 overview looking south.



Wetland Sample Point WA003A.



Non-wetland sample point WA003B.



WETLAND DETERMINATI		-
	/County: Freeborn Cou	, , , , , , , , , , , , , , , , , , , ,
Applicant/Owner: Hayward Solar LLC	State: Minneso	
Investigator(s): Apryl Jennrich	Section, Township	
Landform (hillslope, terrace, etc.): Depression	_	ve, convex, none): Concave
Slope (%): 1 Lat: 43° 38' 0.61"	Long: -93° 10' 48	
Soil Map Unit Name: Okoboji silty clay loam		Classification: PEM1Af
Are climatic/hydrologic conditions of the site typical for this time		lf no, explain in remarks)
Are vegetation X, soil , or hydrology		
Are vegetation, soil, or hydrology SUMMARY OF FINDINGS	naturally problematic?	present? <u>No</u> (If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y		
Hydric soil present? Y	Is the sampled area w	
Indicators of wetland hydrology present? Y	If yes, optional wetlan	d site ID:
Remarks: (Explain alternative procedures here or in a separate r VEGETATION Use scientific names of plants.	eport.)	
Absolute	Dominant Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size:) % Cover	Species Staus	Number of Dominant Species
1		that are OBL, FACW, or FAC: 0 (A)
2		Total Number of Dominant
3	·	Species Across all Strata: 0 (B)
4 5	·	Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B
	= Total Cover	
Sapling/Shrub stratum (Plot size:)		Prevalence Index Worksheet
1		Total % Cover of:
2		OBL species 0 x 1 = 0
3	·	FACW species 0 x 2 = 0
4	·	FAC species $0 \times 3 = 0$
⁵	= Total Cover	FACU species $0 \times 4 = 0$ UPL species $0 \times 5 = 0$
Herb stratum (Plot size:)		Column totals 0 (A) 0 (B)
1 (* **********************************		Prevalence Index = B/A =
2	·	
3		Hydrophytic Vegetation Indicators:
4		Rapid test for hydrophytic vegetation
5	·	Dominance test is >50%
<u>6</u>	·	Prevalence index is ≤3.0*
/	·	Morphogical adaptations* (provide
9		supporting data in Remarks or on a separate sheet)
10	·	Problematic hydrophytic vegetation*
Woody vine stratum (Plot size:)	= Total Cover	X (explain)
	·	*Indicators of hydric soil and wetland hydrology must b present, unless disturbed or problematic Hydrophytic
20	= Total Cover	vegetation
		present? Y
Remarks: (Include photo numbers here or on a separate sheet) corn stubble, barnyard grass		

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the	e absence	e of indicators.)	
Depth	Matrix		Red	dox Feat	ures					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks	
0-20	10YR 2/1	100	. ,				Clay loam			
20-24	2.5Y 3/1	99	10YR 4/6	1	С	PL	Clay			
							,			
24-34	5Y 5/2	75	10YR 4/6	25	С	М	Clay			
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix										
Hydric So	Hydric Soil Indicators: Indicators for Problematic Hydric Soils:									
His	tisol (A1)		Sar	dy Gleye	ed Matrix	(S4)	Coast Pr	rairie Red	lox (A16) (LRR K, L, R)	
His	tic Epipedon (A2)		Sar	dy Redo	ox (S5)		Dark Sur	rface (S7)) (LRR K, L)	
Bla	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Mar	nganese M	Masses (F12) (LRR K, L, R)	
	Irogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very Sha	allow Darl	k Surface (TF12)	
	atified Layers (A5			•	ed Matrix	• •		xplain in r		
	2 cm Muck (A10) Depleted Matrix (F3)									
	bleted Below Dark	c Surface			Surface					
	ck Dark Surface (ark Surfa	. ,	*Indicators	s of hydro	phytic vegetation and weltand	
Sar	ndy Mucky Minera	al (S1)			essions	. ,			present, unless disturbed or	
	m Mucky Peat or			•		()	,	•	problematic	
	-		,			r				
	Layer (if observe	eu):					Uudria aail	l procent	2 1	
Type:					-		Hydric soil	i present	? <u>Y</u>	
Depth (inche	=5).				-					
Remarks:										
HYDROLO	DGY									
	drology Indicato	ors:								
-	cators (minimum		roquirod: abook	all that a			Saaan	don (Indi	actors (minimum of two required)	
-			required, check			12)			cators (minimum of two required)	
	Water (A1)				Fauna (B				Soil Cracks (B6)	
Saturatio	ater Table (A2)				uatic Plar en Sulfide			-	Patterns (B10) on Water Table (C2)	
	larks (B1)							•	Burrows (C8)	
	nt Deposits (B2)			(C3)	u Kilizosp				n Visible on Aerial Imagery (C9)	
X Drift Dep				-	e of Redu	uced Iron			r Stressed Plants (D1)	
	at or Crust (B4)								hic Position (D2)	
	osits (B5)			(C6)	non noue			•	tral Test (D5)	
	on Visible on Aeria	al Imager	(B7)		ck Surfac	e (C7)				
	/ Vegetated Conca			-	or Well Da					
	tained Leaves (B9			-	Explain in)			
Field Obser	,	/					, I			
Surface wat		Yes	No	Х	Depth (i	inches).				
Water table		Yes	No		Depth (i			Indi	icators of wetland	
Saturation p		Yes	No		Depth (i		<u> </u>		drology present? Y	
	pillary fringe)				(<u> </u>	
-		am daude	e monitoring well	aerial n	hotos n	revioue i	nspections), if ava	ulahle [.]		
Describe rec		ani yauy	e, monitoring weil	, acriai p	notos, p	ievious ii	ispections), il ava			
Remarks:										

WETLAND DETERMINATION	ON DATA FORM - Midwest Region
Project/Site: Hayward Solar City/	County: Freeborn County Sampling Date: 4/27/2020
Applicant/Owner: Hayward Solar LLC	State: Minnesota Sampling Point: WA006B
Investigator(s): Apryl Jennrich	Section, Township, Range: T102N R20W S13
Landform (hillslope, terrace, etc.): Slope	Local relief (concave, convex, none): Concave
Slope (%): 3 Lat: 43° 38' 0.90"	Long: -93° 10' 45.10" Datum: WGS84
Soil Map Unit Name: okoboj silty clay loam	NWI Classification: N/A
Are climatic/hydrologic conditions of the site typical for this time of	of the year? Y (If no, explain in remarks)
Are vegetation X , soil , or hydrology	significantly disturbed? Are "normal circumstances"
Are vegetation , soil , or hydrology	naturally problematic? present? No
SUMMARY OF FINDINGS	(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? N	
Hydric soil present? Y	Is the sampled area within a wetland? N
Indicators of wetland hydrology present? N	If yes, optional wetland site ID:
Remarks: (Explain alternative procedures here or in a separate re	enert)
	eport.)
VEGETATION Use scientific names of plants.	
Absolute	Dominant Indicator Dominance Test Worksheet
Tree Stratum (Plot size:) % Cover	Species Staus Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)
2	
3	Total Number of Dominant Species Across all Strata: 0 (B)
4	Percent of Dominant Species
5	that are OBL, FACW, or FAC: 0.00% (A/B
0	= Total Cover
Sapling/Shrub stratum (Plot size:)	Prevalence Index Worksheet
1	Total % Cover of:
2	OBL species <u>0</u> x 1 = <u>0</u>
3	FACW species 0 x 2 = 0 FAC species 0 x 3 = 0
5	FACU species $0 \times 4 = 0$
	= Total Cover UPL species 0 x 5 = 0
Herb stratum (Plot size:)	Column totals 0 (A) 0 (B)
1	Prevalence Index = B/A =
2	·
3	Hydrophytic Vegetation Indicators:
4	Rapid test for hydrophytic vegetation
5	Dominance test is >50%
6	Prevalence index is ≤3.0*
<u> </u>	Morphogical adaptations* (provide supporting data in Remarks or on a
9	separate sheet)
10	Problematic hydrophytic vegetation*
0	= Total Cover (explain)
Woody vine stratum (Plot size:)	*Indicators of hydric soil and wetland hydrology must b
1	present, unless disturbed or problematic
2	Hydrophytic
0	= Total Cover vegetation present? N
Pomarka: (Include photo numbers here or on a congrete sheet)	P
Remarks: (Include photo numbers here or on a separate sheet)	

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abs	ence of indicators.)			
Depth	Matrix		Red	dox Feat	ures						
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks			
0-16	16YR 2/1	100	. ,		-		Silty clay				
16-21	2.5Y 3/1	98	10YR 4/6	2	С	PL	Clay				
							,				
21-28	5Y 5/2	97	10YR 4/6	3	С	PL	Clay				
	*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix										
Hydric Soil Indicators: Indicators for Problematic Hydric Soils:											
	tisol (A1)				ed Matrix	(S4)		Redox (A16) (LRR K, L, R)			
	Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) (LRR K, L)										
	ck Histic (A3)				trix (S6)			ese Masses (F12) (LRR K, L, R)			
	Irogen Sulfide (A	,			ky Minera	()		Dark Surface (TF12)			
	atified Layers (A5)			ed Matrix		Other (explain	n in remarks)			
	m Muck (A10)				atrix (F3)						
	oleted Below Dark				Surface						
	ck Dark Surface (,			ark Surfa	· · ·		ydrophytic vegetation and weltand			
	ndy Mucky Minera	. ,		lox Depr	essions	(F8)	hydrology mus	st be present, unless disturbed or			
5 cr	m Mucky Peat or	Peat (S3)					problematic			
Restrictive	Layer (if observe	ed):									
Туре:		,					Hydric soil pres	sent? Y			
Depth (inche	es):				-		,				
Remarks:	,				•						
HYDROLO	DGY										
Wetland Hv	drology Indicato	ors:									
-	cators (minimum		required: check	all that a	nnlv)		Secondary	Indicators (minimum of two required)			
-	Water (A1)		required, oneon		Fauna (B	(13)		ce Soil Cracks (B6)			
	ater Table (A2)			-	uatic Plar			age Patterns (B10)			
Saturatio	()					Odor (C		Season Water Table (C2)			
	larks (B1)					-		ish Burrows (C8)			
Sedimer	nt Deposits (B2)			(C3)				ation Visible on Aerial Imagery (C9)			
	posits (B3)				e of Redu	uced Iron	(C4) Stunt	ed or Stressed Plants (D1)			
Algal Ma	at or Crust (B4)			Recent I	ron Redu	uction in T	illed Soils Geon	norphic Position (D2)			
Iron Dep	osits (B5)			(C6)			FAC-	Neutral Test (D5)			
	on Visible on Aeria			-	ck Surfac						
	Vegetated Conca		ce (B8)	-	or Well Da						
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)				
Field Obser											
Surface wat		Yes	No	Х	Depth (i						
Water table		Yes	No	Х	Depth (i	,		Indicators of wetland			
Saturation p		Yes	No	Х	Depth (i	inches):	I	hydrology present? N			
-	pillary fringe)										
Describe red	corded data (strea	am gauge	e, monitoring well	, aerial p	hotos, p	revious ir	nspections), if available	:			
Demerikai											
Remarks:											
1											



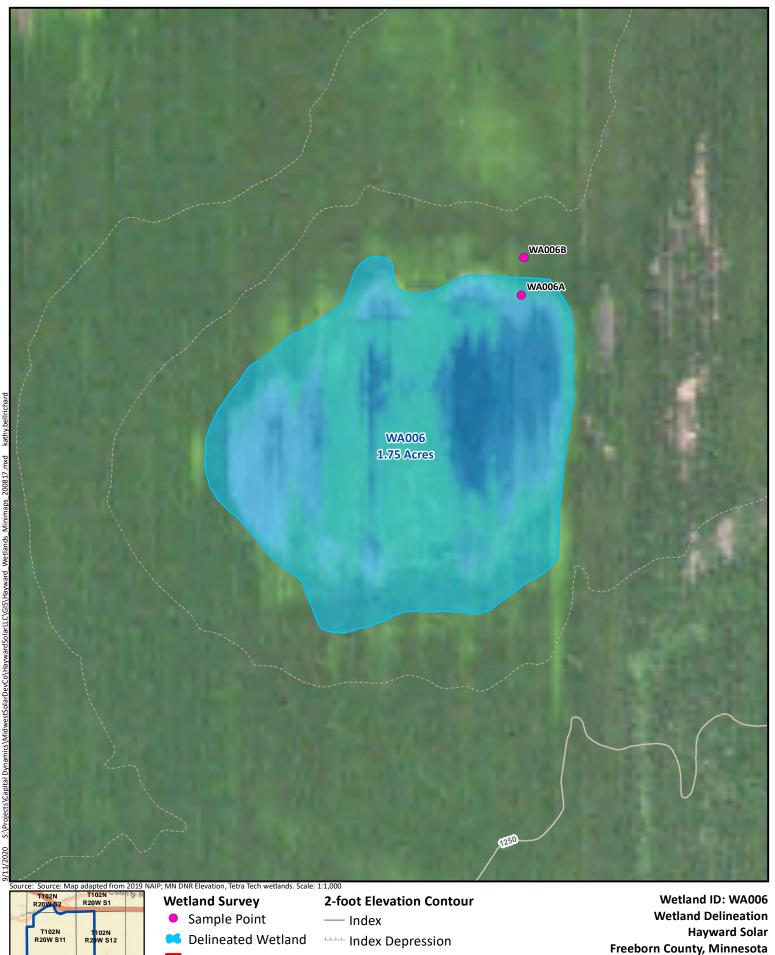
WA006 overview looking south.



Wetland Sample Point WA006A.



Non-wetland sample point WA006B.



Intermediate

100

Intermediate Depression

200

□ Feet

TŁ

TETRA TECH

imaps_200817.mxd Min Wetlands ard S:\Pro 9/11/2020

Project Area

0

T102N R20W S13

T102N R20W S²

			0				
Project/Site: Hayward Solar	· · · —	Freeborn County	Sampling Date:	4/27/2020			
Applicant/Owner: Hayward Solar LLC	State		Sampling Point:	WA007A			
Investigator(s): Apryl Jennrich		tion, Township, Range		N R20W S13			
Landform (hillslope, terrace, etc.): Depression		I relief (concave, conv	· · · · ·	Concave			
Slope (%): 1 Lat: 43° 38' 2.78"	Long:	-93° 10' 50.71"	Datum:	WGS84			
Soil Map Unit Name: Klossner muc		NWI Classific		NA			
Are climatic/hydrologic conditions of the site typical for this	-		plain in remarks)				
Are vegetation X , soil , or hydrology		significantly disturbed? Are "normal circumstances"					
Are vegetation, soil, or hydrology, SUMMARY OF FINDINGS	naturally	problematic? (If ne	eded, explain any a	present? <u>No</u> nswers in remarks.)			
Hydrophytic vegetation present? Y							
Hydric soil present? Y	Is the sa	mpled area within a	wetland?	Y			
Indicators of wetland hydrology present? Y	lf yes, c	ptional wetland site I	D:				
Remarks: (Explain alternative procedures here or in a sepa VEGETATION Use scientific names of plants.	irate report.)						
	solute Dominan	t Indicator Dom	inance Test Works	sheet			
	Cover Species		per of Dominant Spe				
1			re OBL, FACW, or F				
2			tal Number of Domir				
3		S	pecies Across all Str	ata: 0 (B)			
4			ent of Dominant Spe				
5	0 = Total Co		re OBL, FACW, or F	AC: 0.00% (A/B)			
Sapling/Shrub stratum (Plot size:)			alence Index Work	sheet			
1		_	% Cover of:				
2		OBL	species 0	x 1 = 0			
3		FAC	W species 0	x 2 = 0			
4				x 3 = 0			
5				x 4 = 0			
	0 = Total Co		·	x 5 = 0			
Herb stratum (Plot size:)		-	-	(A) <u>0</u> (B)			
2		Prev	alence Index = B/A	=			
3		Hydr	ophytic Vegetatio	n Indicators:			
4			Rapid test for hydro				
5			Dominance test is >				
6		F	Prevalence index is	≤3.0*			
7		N	/lorphogical adaptat	tions* (provide			
8			supporting data in R	emarks or on a			
9			eparate sheet)				
	0 = Total Co		Problematic hydroph explain)	nytic vegetation*			
Woody vine stratum (Plot size:) 1			present, unless distu	wetland hydrology must be rbed or problematic			
2			lydrophytic regetation				
	0 = Total Co		present?	<u>(</u>			
Remarks: (Include photo numbers here or on a separate sh Ag field	neet)						

Profile Des	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Re	dox Feat	ures					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-30	10YR 2/1	100					silty clay			
30-32	2.5Y 3/1	100					clay			
				25	0		,			
32-40	5Y 5/2	65	10YR 4/6	35	С	М	sandy clay			
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix										
		= Deplet	on, RM = Reduc	ed Matrix	, MS = N	lasked S		ation: PL = Pore Lining, M = Matrix		
Hydric Soil Indicators: Indicators for Problematic Hydric Soils: Histisol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR K, L, R)										
						(54)				
	Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) (LRR K, L) Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) (LRR K, L, R)									
	ck Histic (A3)	•		••	, ,					
	Irogen Sulfide (A			amy Mucl	•	. ,		Dark Surface (TF12)		
	atified Layers (A5)		amy Gley			Other (explain	in remarks)		
	m Muck (A10)	. C		pleted Ma						
	bleted Below Dark			dox Dark		. ,	41 11 1 6 1			
	ck Dark Surface (pleted Da		. ,		vdrophytic vegetation and weltand		
	ndy Mucky Minera m Mucky Peat or	. ,		dox Depr	essions	(F8)	nyarology mus	t be present, unless disturbed or		
		,)					problematic		
Restrictive	Layer (if observ	ed):								
Туре:							Hydric soil pres	ent? Y		
Depth (inche	es):									
Remarks:										
HYDROLO	OGY									
	drology Indicato	ors:								
-	cators (minimum		required: check	all that a	nnly)		Secondary	Indicators (minimum of two required)		
-	Water (A1)		required, check		Fauna (B	12)		ce Soil Cracks (B6)		
	ater Table (A2)				uatic Plar			age Patterns (B10)		
Saturatio	()					Odor (C		eason Water Table (C2)		
	larks (B1)			-				sh Burrows (C8)		
	nt Deposits (B2)			(C3)				ation Visible on Aerial Imagery (C9)		
X Drift Dep					e of Redu	uced Iron		ed or Stressed Plants (D1)		
	at or Crust (B4)			Recent I	ron Redu	uction in T		orphic Position (D2)		
Iron Dep	osits (B5)			(C6)				Neutral Test (D5)		
Inundati	on Visible on Aeria	al Imager	y (B7)	Thin Mu	ck Surfac	ce (C7)				
X Sparsely	Vegetated Conca	ave Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)				
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)			
Field Obser	vations:									
Surface wat	er present?	Yes	No	Х	Depth (i	inches):				
Water table		Yes	X No		Depth (i	,	-	Indicators of wetland		
Saturation p		Yes	X No		Depth (i	inches):	32	hydrology present? Y		
(includes ca	pillary fringe)									
Describe red	corded data (strea	am gaug	e, monitoring we	l, aerial p	hotos, p	revious i	nspections), if available	:		
		2	-		5					
Remarks:										

WETLAND DETERMII Project/Site: Hayward Solar	NATION DATA FORM - M City/County: Freeborn Cou	_
	City/County: Freeborn Cou State: Minnesot	<u> </u>
Investigator(s): Apryl Jennrich Landform (hillslope, terrace, etc.): Depression	Section, Township	re, convex, none): Concave
Slope (%): 1 Lat: 43° 38' 2.65"	Long: -93° 10' 00	
Soll Map Unit Name: Klossner muc	*	lassification: NA
Are climatic/hydrologic conditions of the site typical for this		f no, explain in remarks)
Are vegetation X , soil , or hydrology	significantly disturbed?	
Are vegetation , soil , or hydrology		Are "normal circumstances" present? No
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? N		
Hydric soil present? N	Is the sampled area w	ithin a wetland? N
Indicators of wetland hydrology present? N	If yes, optional wetland	d site ID:
Remarks: (Explain alternative procedures here or in a sepa VEGETATION Use scientific names of plants.	irate report.)	
· · ·	solute Dominant Indicator	Dominance Test Worksheet
	Cover Species Staus	Number of Dominant Species
1		that are OBL, FACW, or FAC: 0 (A)
2		Total Number of Dominant
3		Species Across all Strata: 0 (B)
4 5		Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)
	0 = Total Cover	
Sapling/Shrub stratum (Plot size:)		Prevalence Index Worksheet
		Total % Cover of:
2		OBL species 0 x 1 = 0
3		FACW species $0 \times 2 = 0$
4		FAC species0x 3 =0FACU species0x 4 =0
	0 = Total Cover	UPL species $0 \times 4 = 0$ UPL species $0 \times 5 = 0$
Herb stratum (Plot size:)		Column totals 0 (A) 0 (B)
1		Prevalence Index = B/A =
2		
3		Hydrophytic Vegetation Indicators:
4		Rapid test for hydrophytic vegetation
5 6		Dominance test is >50% Prevalence index is ≤3.0*
7		
8		Morphogical adaptations* (provide supporting data in Remarks or on a
9		separate sheet)
10	0 = Total Cover	Problematic hydrophytic vegetation* (explain)
Woody vine stratum (Plot size:)		*Indicators of hydric soil and wetland hydrology must be
1		present, unless disturbed or problematic
2		Hydrophytic vegetation
	0 = Total Cover	present? N
Remarks: (Include photo numbers here or on a separate sh	neet)	

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the ab	sence of indicators.)		
Depth	Matrix		Rec	lox Feat	ures					
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-19	10YR 2/1	100					Silty clay			
19-28	2.5Y 3/1	97	10YR 4/6	3	С	PL				
							Clay			
28-38	2.5Y 3/2	99	10YR 4/6	1	С	PL	Clay			
*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix										
Hydric Soil Indicators: Indicators for Problematic Hydric Soils:										
-	tisol (A1)		San	dy Gleye	ed Matrix	(S4)		e Redox (A16) (LRR K, L, R)		
	tic Epipedon (A2)			dy Redo		()		e (S7) (LRR K, L)		
	ck Histic (A3)				trix (S6)			nese Masses (F12) (LRR K, L, R)		
	Irogen Sulfide (A4	4)		•	ky Minera	al (F1)	Verv Shallov	v Dark Surface (TF12)		
	atified Layers (A5			-	ed Matrix	• •		in in remarks)		
	m Muck (A10)	,			atrix (F3)	. ,		,		
	pleted Below Dark	Surface			Surface					
	ck Dark Surface (· · ·		ark Surfa	. ,	*Indicators of	hydrophytic vegetation and weltand		
	ndy Mucky Minera	-			essions	. ,		ust be present, unless disturbed or		
	n Mucky Peat or	. ,				(10)	nyarology m	problematic		
	-		/			r —		F		
	Layer (if observe	ed):								
Type:					-		Hydric soil pre	esent? N		
Depth (inche	es):				-					
Remarks:										
HYDROLO	JGY									
	drology Indicato	nrs:								
-	cators (minimum		roquirod: abook	all that a	nnly)		Secondar	(Indiantara (minimum of two required)		
		or one is	required, check a			40)		y Indicators (minimum of two required)		
	Water (A1)				Fauna (B			ace Soil Cracks (B6) nage Patterns (B10)		
U	ater Table (A2)				uatic Plar	Odor (C		Season Water Table (C2)		
Saturatio	larks (B1)							/fish Burrows (C8)		
	nt Deposits (B2)			(C3)	i Rnizosp	neres on		uration Visible on Aerial Imagery (C9)		
	posits (B3)				o of Rodi	uced Iron		nted or Stressed Plants (D1)		
· · ·	at or Crust (B4)							morphic Position (D2)		
	osits (B5)			(C6)	Ton Real			C-Neutral Test (D5)		
	on Visible on Aeria	al Imager	(B7)		ck Surfac	e (C7)				
	Vegetated Conca				or Well Da					
	tained Leaves (B9					Remarks)			
Field Obser	•	/				rtomanto	/			
Surface wat		Yes	No	Х	Depth (i	inches).				
Water table		Yes	No		Depth (i			Indicators of wetland		
Saturation p		Yes	No	X	Depth (i		————	hydrology present? N		
	pillary fringe)							,		
	Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Describe rec		ani gaugi	s, monitoring weil	, achai p	notos, p	i evious ii		6.		
Remarks:										
	il cracking.									



WA007 overview looking northwest.



Wetland Sample Point WA007A.



Non-wetland sample point WA007B.



WETLAND [DETERMINATI	ON DATA	FORM - Mi	dwest Region	
Project/Site: Hayward Solar	City/	County:	Freeborn Cou	nty Sampling Date	e: 4/28/2020
Applicant/Owner: Hayward Solar LLC		State:	Minnesot	a Sampling Poir	nt: WA013A
Investigator(s): Apryl Jennrich		Secti	on, Township,	Range:	T102 R20W S13
Landform (hillslope, terrace, etc.):	Ditch	Local	relief (concav	e, convex, none):	Concave
Slope (%): 10 Lat: 43° 38	3' 26.96"	Long:	-93° 11' 2.	26" Datum:	WGS84
· · · ·	sta mucky silt loar	· · · ·	NWI C	assification:	R5UBFx
Are climatic/hydrologic conditions of the site typ	ical for this time of	of the year?	Y (I	f no, explain in remark	s)
	hydrology	-	tly disturbed?	Are "normal	circumstances"
	hydrology	-	problematic?	Are normal	present? Yes
SUMMARY OF FINDINGS	, , , , , , , , , , , , , , , , , , , ,			(If needed, explain a	iny answers in remarks.)
Hydrophytic vegetation present?	Y				
Hydric soil present?	Y	Is the sar	npled area wi	thin a wetland?	Y
Indicators of wetland hydrology present?	Y		• otional wetland		
	· · ·				
Remarks: (Explain alternative procedures here	or in a separate re	eport.)			
VEGETATION Use scientific names o	f plants.				
	Absolute	Dominant	Indicator	Dominance Test W	orksheet
Tree Stratum (Plot size:) % Cover	Species	Staus	Number of Dominant	
1				that are OBL, FACW,	
2			·	Total Number of D Species Across a	
<u>а</u>			·	-	
5				Percent of Dominant that are OBL, FACW,	
	0	= Total Cov	er		(100.0070 (100)
Sapling/Shrub stratum (Plot size:)			Prevalence Index V	Vorksheet
1	,			Total % Cover of:	
2				OBL species () x 1 = 0
3			·	FACW species 9	
4				FAC species (
5		T () 0		FACU species (
Horb stratum (Dist size:	<u> </u>	= Total Cov	er	UPL species (
Herb stratum (Plot size:)	N	FA 0)4/	Column totals 9	
1 Phalaris arundinacea	<u> </u>	- <u>Y</u> N	FACW FACW	Prevalence Index =	B/A = 2.00
2 Urtica dioica 3	5		FACW	Hydrophytic Veget	ation Indicators
4			·		drophytic vegetation
5			·	X Dominance test	
6		-		X Prevalence inde	x is ≤3.0*
7				Morphogical ada	aptations* (provide
8					in Remarks or on a
9			·	separate sheet)	
10			·	,	rophytic vegetation*
Weedwine stratum (Distaire)	<u>95</u>	= Total Cov	er	(explain)	
Woody vine stratum (Plot size:)				l and wetland hydrology must be disturbed or problematic
2			·	Hydrophytic	
۲ <u>ــــــ</u>	0	= Total Cov	er	vegetation	
	0			present?	Y
Remarks: (Include photo numbers here or on a	separate sheet)				

Profile Des	cription: (Descr	ibe to th	e depth need	led to	docu	ment the	e indicat	or or confirm th	e absence o	of indicators.)
Depth	<u>Matrix</u>				x Featu					
(Inches)	Color (moist)	%	Color (mois	st)	%	Type*	Loc**	Texture	;	Remarks
0-12	10YR 2/1	100						Mucky loam		
12-16	2.5Y 5/2	97	10YR 4/6		3	С	PL	Clay		
16-20	2.5Y 5/2	97	10YR 4/6		3	С	PL	Sand		
10-20	2.01 0/2	51	1011(4/0		5	0		Cana		
+= 0									441 (°	
	Concentration, D	= Depleti	on, RM = Red	luced	Matrix	, MS = N	lasked S			PL = Pore Lining, M = Matrix
-	oil Indicators:			<u> </u>	~		(0.1)			atic Hydric Soils:
	tisol (A1)			-	-	ed Matrix	(S4)			(A16) (LRR K, L, R)
	tic Epipedon (A2)			-	/ Redo				urface (S7) (
	ck Histic (A3)					trix (S6)			-	asses (F12) (LRR K, L, R)
	Irogen Sulfide (A					ky Minera				Surface (TF12)
	atified Layers (A5)				ed Matrix		Other (e	explain in rer	marks)
	m Muck (A10)					atrix (F3)				
	bleted Below Dark		· · /			Surface	· · ·			
	ck Dark Surface (,		-		rk Surfa				nytic vegetation and weltand
	ndy Mucky Minera	. ,		Redox	x Depre	essions	(F8)	hydrolog		resent, unless disturbed or
5 C	n Mucky Peat or	Peat (S3)						pro	oblematic
Restrictive	Layer (if observe	ed):					I			
Type:								Hydric so	il present?	Υ
Depth (inche	es):					•				
Remarks:										
I										
HYDROL	DGY									
Wetland Hy	drology Indicato	ors:								
	cators (minimum		required: che	ock all	that a	nnlv)		Seco	ndary Indica	tors (minimum of two required)
	Water (A1)		required, che			Fauna (B	12)	0000		l Cracks (B6)
	ater Table (A2)		-			uatic Plar		X	Drainage Pa	
X Saturati			-				Odor (C			Water Table (C2)
	larks (B1)		-				-	Living Roots	Crayfish Bu	
	nt Deposits (B2)				C3)	11112030				/isible on Aerial Imagery (C9)
	posits (B3)		-			e of Redi	uced Iron	(C4)		Stressed Plants (D1)
	at or Crust (B4)		-							c Position (D2)
	osits (B5)				C6)				FAC-Neutra	
	on Visible on Aeria	al Imager	y (B7)	<u> </u>	,	ck Surfac	ce (C7)		-	
	/ Vegetated Conca		-			or Well Da				
	tained Leaves (B9		•		-		Remarks)		
Field Obse	vations:		•							
Surface wat		Yes	N	D	Х	Depth (i	inches):			
Water table	•	Yes	X N			Depth (i		12	Indica	ators of wetland
Saturation p		Yes	X N	0 -		Depth (i		0	hydr	ology present? Y
	pillary fringe)									
Describe re	corded data (strea	am daud	e, monitorina	well. a	aerial n	hotos. p	revious in	nspections), if ava	ailable:	
			,	, u	··· P	, p		,,		
Remarks:										
small ch	annel of flowing	a water	adiecent lil	elv a	resu	It of rec	ent rain	1		
e.nan on							2	-		

WETLAND D	DETERMINATI	ON DAT	FORM - M	idwest Region	
Project/Site: Hayward Solar	City/	County:	Freeborn Cou	inty Sampling D	ate: 4/28/2020
Applicant/Owner: Hayward Solar LLC		State	Minneso	ta Sampling Po	oint: WA013B
Investigator(s): Apryl Jennrich		Sec	tion, Township	, Range:	T102 R20W S13
Landform (hillslope, terrace, etc.):	Sholder	Loca	l relief (concav	ve, convex, none):	Convex
Slope (%): 5 Lat: 43° 38	3' 26.99"	Long:	-93° 11' 2	.40" Datum:	WGS84
Soil Map Unit Name: Wascou	sta mucky silt loa	m - <u>-</u>	NWI C	lassification:	NA
Are climatic/hydrologic conditions of the site typ	ical for this time o	of the year?	Y (lf no, explain in rema	ırks)
Are vegetation , soil , or	hydrology	significar	tly disturbed?	Are "norm	al circumstances"
- <u> </u>	hydrology	-	problematic?		present? Yes
SUMMARY OF FINDINGS		-		(If needed, explair	any answers in remarks.)
Hydrophytic vegetation present?	Ν				
Hydric soil present?	N	Is the sa	mpled area w	ithin a wetland?	Ν
Indicators of wetland hydrology present?	N		ptional wetlan		
Remarks: (Explain alternative procedures here o	or in a separate re	eport.)			
VEGETATION Use scientific names of	-			Deminent T	Market and
Tree Stratum (Dist size:	Absolute	Dominant		Dominance Test	
<u>Tree Stratum</u> (Plot size:) % Cover	Species	Staus	Number of Dominat that are OBL, FACV	
2				Total Number of	
3				Species Across	
4				Percent of Dominal	、 /
5				that are OBL, FACV	
	0	= Total Cov	/er		
Sapling/Shrub stratum (Plot size:)			Prevalence Index	Worksheet
1				Total % Cover of:	
2				OBL species	0 x 1 = 0
3				FACW species	$\begin{array}{ccc} 0 & x & 2 = & 0 \\ \hline 0 & x & 3 = & 0 \end{array}$
5				FACU species	$90 \times 4 = 360$
	0	= Total Cov	/er	UPL species	0 x 5 = 0
Herb stratum (Plot size:)			Column totals	90 (A) 360 (B)
1 Bromus inermis	90	Y	FACU	Prevalence Index	= B/A = 4.00
2					
3				Hydrophytic Veg	etation Indicators:
4				· · · · · · · · · · · · · · · · · · ·	hydrophytic vegetation
5				Dominance te	
6				Prevalence in	
8					daptations* (provide
9				separate shee	ta in Remarks or on a at)
10					ydrophytic vegetation*
Woody vine stratum (Plot size:	90	= Total Cov	/er	(explain)	
1)				soil and wetland hydrology must be ss disturbed or problematic
2				Hydrophytic	
	0	= Total Cov	/er	vegetation present?	N
Remarks: (Include photo numbers here or on a	separate sheet)			I	
	. ,				

Depth	cription: (Descr Matrix			dox Feat	ures				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	e	Remarks
0-23	10YR 2/1	100					Silt loam		
23-34	5Y 4/1	99	10YR 4/6	1	С	PL	Clay		
23-34	514/1	99	1011 4/0	1	C	FL	Clay		
	Concentration, D	= Depleti	on, RM = Reduc	ed Matrix	k, MS = N	/lasked S			n: PL = Pore Lining, M = Mati
Hydric Sc	oil Indicators:						Indicators	for Proble	ematic Hydric Soils:
	tisol (A1)				ed Matrix	(S4)			lox (A16) (LRR K, L, R)
	tic Epipedon (A2)			ndy Redo				•) (LRR K, L)
	ck Histic (A3)				atrix (S6)			-	Masses (F12) (LRR K, L, R)
	drogen Sulfide (A			•	ky Minera	. ,			k Surface (TF12)
	atified Layers (A5)			ed Matrix		Other (explain in i	remarks)
	m Muck (A10)				atrix (F3)				
	oleted Below Dark				Surface	· · ·			
	ck Dark Surface (,			ark Surfa	. ,	*Indicato	ors of hydro	ophytic vegetation and weltar
	ndy Mucky Minera	· · ·		dox Depr	ressions	(F8)	hydrolo		e present, unless disturbed o
5 cr	m Mucky Peat or	Peat (S3)						problematic
estrictive	Layer (if observ	ed):							
/pe:		,-					Hvdric so	oil present	:? N
-	es):				-		-	•	
epth (inche	es):				-				
epth (inche emarks:					-				
epth (inche emarks: YDROLO	DGY				-				
epth (inche emarks: YDROL(/etland Hy	DGY rdrology Indicato				-				
epth (inche emarks: YDROL(/etland Hy rimary Indi	DGY rdrology Indicato cators (minimum		required; check					ondary Indi	cators (minimum of two requ
epth (inche emarks: YDROL(/etland Hy rimary Indi Surface	DGY rdrology Indicato cators (minimum Water (A1)		required; check	Aquatic	Fauna (B	,		ondary Indi Surface S	<u>cators (minimum of two requ</u> Soil Cracks (B6)
epth (inche emarks: YDROL(retland Hy rimary Indi Surface High Wa	DGY rdrology Indicato cators (minimum Water (A1) ater Table (A2)		required; check	Aquatic True Aq	Fauna (B uatic Plar	nts (B14)	Secc	ondary Indi Surface S Drainage	<u>cators (minimum of two requ</u> Soil Cracks (B6) Patterns (B10)
epth (inche emarks: YDROL(fetland Hy imary Indi Surface High Wa Saturatio	DGY rdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3)		required; check	Aquatic True Aq Hydroge	Fauna (B uatic Plar en Sulfide	nts (B14) Odor (C	<u>Secc</u>	ondary Indi Surface S Drainage Dry-Seas	<u>cators (minimum of two requ</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2)
epth (inche emarks: YDROL(etland Hy imary Indi Surface High Wa Saturatio Water M	DGY rdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1)		required; check	Aquatic True Aq Hydroge Oxidized	Fauna (B uatic Plar en Sulfide	nts (B14) Odor (C	Secc	ondary Indi Surface S Drainage Dry-Seas Crayfish I	<u>cators (minimum of two requ</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
Pepth (inche Pemarks: PUROLO etland Hy imary Indi Surface High Wa Saturatic Water M Sedimer	DGY rdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2)		required; check	Aquatic True Aq Hydroge Oxidized (C3)	Fauna (B uatic Plar en Sulfide d Rhizosp	nts (B14) Odor (C oheres on	Secc 1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish I Saturation	cators (minimum of two requ Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (CS
Pepth (inche emarks: PDROLO etland Hy imary Indi Surface High Wa Saturatio Vater M Sedimer Drift Dep	DGY rdrology Indicato water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3)		required; check	Aquatic True Aq Hydroge Oxidized (C3) Presenc	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu	nts (B14) Odor (C oheres on uced Iron	1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted o	cators (minimum of two requ Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (CS or Stressed Plants (D1)
Pepth (inche emarks: PDROLO etland Hy imary Indi Surface High Wa Saturatio Vater M Sedimer Drift Dep Algal Ma	DGY vdrology Indicato vdrology Indicato water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		required; check	Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu	nts (B14) Odor (C oheres on uced Iron	Secc 1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted o Geomorp	cators (minimum of two requ Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (CS or Stressed Plants (D1) hic Position (D2)
Pepth (inche emarks: PDROLO /etland Hy Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep	DGY vdrology Indicato vdrology Indicato water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	<u>of one is</u>		Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent (C6)	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu	nts (B14) Odor (C oheres on uced Iron uction in T	1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted o Geomorp	cators (minimum of two requ Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (CS or Stressed Plants (D1)
Pepth (inche emarks: PDROLO /etland Hy imary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	DGY vdrology Indicato vdrology Indicato vater (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria	<u>of one is</u> al Imager	y (B7)	Aquatic True Aq Hydroge Oxidized (C3) Presence Recent (C6) Thin Mu	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu	nts (B14) Odor (Coheres on uced Iron uction in T	1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted o Geomorp	cators (minimum of two requ Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (CS or Stressed Plants (D1) hic Position (D2)
Pepth (inche emarks: PDROLO /etland Hy imary Indi Surface High Wa Saturatio Saturatio Drift Dep Algal Ma Iron Dep Inundatio Sparsely	DGY vdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conca	<u>of one is</u> al Imager ave Surfa	y (B7)	Aquatic True Aq Hydroge Oxidized (C3) Presend (C6) Thin Mu Gauge o	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da	nts (B14) odor (Coheres on uced Iron uction in T ce (C7) ata (D9)	1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted o Geomorp	cators (minimum of two requ Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (CS or Stressed Plants (D1) hic Position (D2)
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epth (inche emarks: IYDROLO /etland Hy rimary Indi Surface High Wa Saturatie Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Water-S ield Obser	DGY rdrology Indicators (minimum) Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conca stained Leaves (B9) rvations:	of one is al Imager ave Surfa	y (B7) ce (B8)	Aquatic True Aq Hydroge Oxidized (C3) Presend (C6) Thin Mu Gauge o Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da Explain in	nts (B14) Odor (C oheres on uced Iron uction in 1 ce (C7) ata (D9) Remarks	1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish I Saturation Stunted o Geomorp	cators (minimum of two requ Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (CS or Stressed Plants (D1) hic Position (D2)
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epth (inche emarks: IYDROLO /etland Hy rimary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Water-S ield Obser urface wat /ater table	DGY drology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conca itained Leaves (B9 rvations: er present? present?	of one is al Imager ave Surfa) Yes Yes	y (B7) ce (B8)	Aquatic True Aq Hydroge Oxidized (C3) Presenc (C6) Thin Mu Gauge C Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i 	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish F Saturation Stunted o Geomorp FAC-Neu	cators (minimum of two requ Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9 or Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: IYDROLO /etland Hy rimary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Water-S ield Obser urface wat /ater table aturation p	DGY drology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conca itained Leaves (B9 rvations: er present? present?	of one is al Imager ave Surfa)) Yes	y (B7) ce (B8)	Aquatic True Aq Hydroge Oxidized (C3) Presenc (C6) Thin Mu Gauge o Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da Explain in	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots	ondary Indi Surface S Drainage Dry-Seas Crayfish F Saturation Stunted o Geomorp FAC-Neu	cators (minimum of two requ Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C8 or Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: IYDROL(/etland Hy rimary Indi Surface High Wa Saturatio Vater N Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Water-S ield Obser urface wat /ater table aturation p ncludes ca	DGY vdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Conca itained Leaves (B9 rvations: er present? present? present? pillary fringe)	al Imager ave Surfa)) Yes Yes Yes	y (B7) ce (B8) No No No	Aquatic True Aq Hydroge Oxidized (C3) Presend (C6) Thin Mu Gauge o Other (E X X	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) 'illed Soils	ondary Indi Surface S Drainage Dry-Seas Crayfish F Saturation Stunted o Geomorp FAC-Neu	cators (minimum of two requ Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9 or Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: IYDROL(/etland Hy rimary Indi Surface High Wa Saturatio Vater N Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Water-S ield Obser urface wat /ater table aturation p ncludes ca	DGY drology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria y Vegetated Conca itained Leaves (B9 rvations: er present? present?	al Imager ave Surfa)) Yes Yes Yes	y (B7) ce (B8) No No No	Aquatic True Aq Hydroge Oxidized (C3) Presend (C6) Thin Mu Gauge o Other (E X X	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) 'illed Soils	ondary Indi Surface S Drainage Dry-Seas Crayfish F Saturation Stunted o Geomorp FAC-Neu	cators (minimum of two requ Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9 or Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: IYDROL(/etland Hy rimary Indi Surface High Wa Saturatio Vater N Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Water-S ield Obser urface wat /ater table aturation p ncludes ca	DGY vdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Conca itained Leaves (B9 rvations: er present? present? present? pillary fringe)	al Imager ave Surfa)) Yes Yes Yes	y (B7) ce (B8) No No No	Aquatic True Aq Hydroge Oxidized (C3) Presend (C6) Thin Mu Gauge o Other (E X X	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) 'illed Soils	ondary Indi Surface S Drainage Dry-Seas Crayfish F Saturation Stunted o Geomorp FAC-Neu	cators (minimum of two requ Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9 or Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: IYDROL(/etland Hy rimary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Water-S ield Obser urface wat /ater table aturation p ncludes ca escribe red	DGY vdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Conca itained Leaves (B9 rvations: er present? present? present? pillary fringe)	al Imager ave Surfa)) Yes Yes Yes	y (B7) ce (B8) No No No	Aquatic True Aq Hydroge Oxidized (C3) Presend (C6) Thin Mu Gauge o Other (E X X	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) 'illed Soils	ondary Indi Surface S Drainage Dry-Seas Crayfish F Saturation Stunted o Geomorp FAC-Neu	cators (minimum of two requ Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9 or Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: IYDROL(/etland Hy rimary Indi Surface High Wa Saturatio Vater N Sedimer Drift Dep Algal Ma Iron Dep Inundati Sparsely Water-S ield Obser urface wat /ater table aturation p ncludes ca	DGY vdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Conca itained Leaves (B9 rvations: er present? present? present? pillary fringe)	al Imager ave Surfa)) Yes Yes Yes	y (B7) ce (B8) No No No	Aquatic True Aq Hydroge Oxidized (C3) Presend (C6) Thin Mu Gauge o Other (E X X	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) 'illed Soils	ondary Indi Surface S Drainage Dry-Seas Crayfish F Saturation Stunted o Geomorp FAC-Neu	cators (minimum of two requ Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9 or Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: YDROL(etland Hy fimary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatii Sparsely Water-S eld Obser urface wat dater table aturation p nocludes ca escribe red	DGY vdrology Indicato icators (minimum Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Conca itained Leaves (B9 rvations: er present? present? present? pillary fringe)	al Imager ave Surfa)) Yes Yes Yes	y (B7) ce (B8) No No No	Aquatic True Aq Hydroge Oxidized (C3) Presend (C6) Thin Mu Gauge o Other (E X X	Fauna (B uatic Plar en Sulfide d Rhizosp ce of Redu Iron Redu ick Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in T ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) 'illed Soils	ondary Indi Surface S Drainage Dry-Seas Crayfish F Saturation Stunted o Geomorp FAC-Neu	cators (minimum of two requ Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C8 or Stressed Plants (D1) hic Position (D2) tral Test (D5)



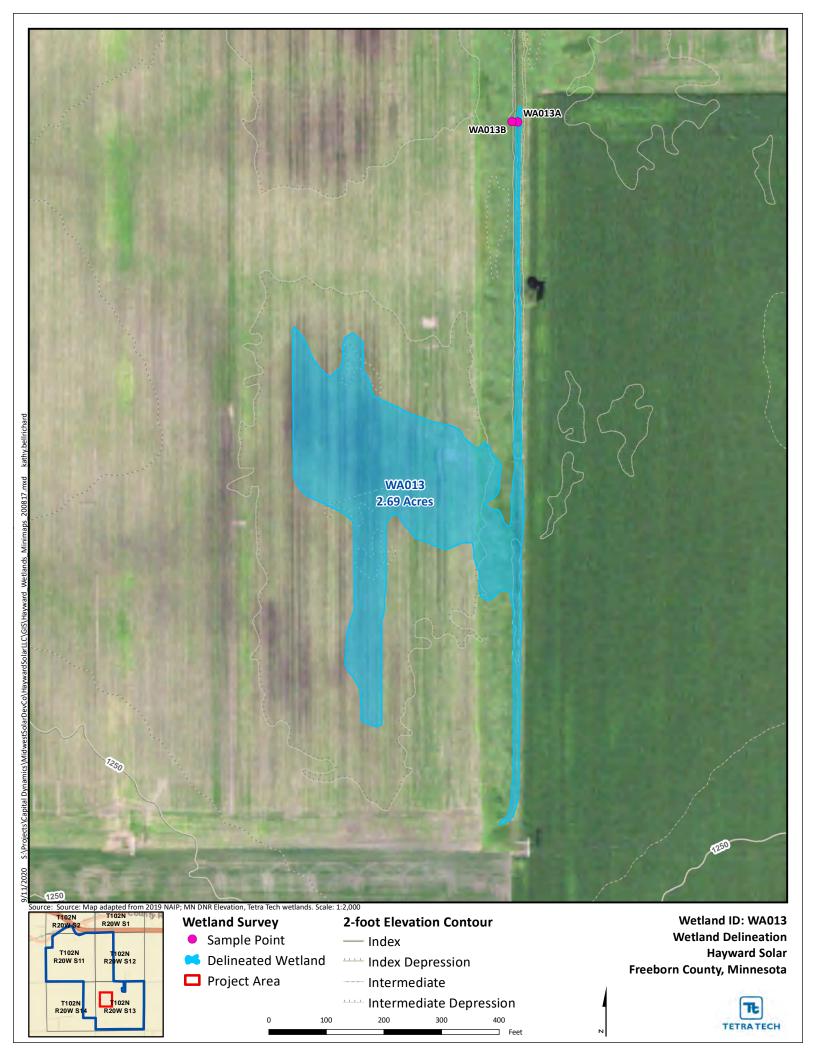
WA013 overview looking north.



Wetland Sample Point WA013A.



Non-wetland sample point WA013B.



WETLAND [DETERMINATI	ON DATA FOR	M - Midwes	t Region	
Project/Site: Hayward Solar	City/	County: Freebo	orn County	Sampling Date:	4/28/2020
Applicant/Owner: Hayward Solar LLC		State: M	linnesota	Sampling Point:	WA015A
Investigator(s): Apryl Jennrich		Section, To	wnship, Range	e: T102	2N R20W S13
Landform (hillslope, terrace, etc.):	Ditch	Local relief	(concave, conv	/ex, none):	Concave
Slope (%): 2 Lat: 43° 38	3' 27.64"	 Long: -93	8° 10' 9.15"	Datum:	WGS84
· · · · · · · · · · · · · · · · · · ·	ossner muck		NWI Classifica	ation:	R5UBFx
Are climatic/hydrologic conditions of the site typ	ical for this time o	of the year? Y	 (If no, ex	plain in remarks)	
Are vegetation , soil , or	hydrology	significantly dist	urbed?	Are "normal cire	cumstances"
	hydrology	naturally probler			present? Yes
SUMMARY OF FINDINGS				eded, explain any	answers in remarks.)
Hydrophytic vegetation present?	Y				
Hydric soil present?	Y	Is the sampled	area within a	wetland?	Y
Indicators of wetland hydrology present?	Y	If yes, optional	wetland site ID):	
Remarks: (Explain alternative procedures here	or in a separate re	aport)			
Remarks. (Explain alternative procedures here	or in a separate re	eport.)			
	6				
VEGETATION Use scientific names o			Dom	inance Test Work	shoot
Tree Stratum (Plot size:	Absolute) % Cover				
1	_) // 00101	000000 01	Num	per of Dominant Spe re OBL, FACW, or F	
2				tal Number of Domi	
3				pecies Across all St	
4			Perce	ent of Dominant Spe	ecies
5			that a	re OBL, FACW, or F	FAC: 100.00% (A/B)
	0	= Total Cover			
Sapling/Shrub stratum (Plot size:)		_	alence Index Wor % Cover of:	ksheet
2				species 0	x 1 = 0
3				-	$x = \frac{180}{180}$
4				species 0	$x_3 = 0$
5				J species 0	x 4 = 0
	0	= Total Cover	UPL	species 0	x 5 = 0
Herb stratum (Plot size:)		Colui	mn totals 90	(A) <u>180</u> (B)
1 Phalaris arundinacea	90	Y FA	CW Preva	alence Index = B/A	= 2.00
2					
3				ophytic Vegetatic	
4				Rapid test for hydro Dominance test is >	
6				Prevalence index is	
7				lorphogical adapta	
8				supporting data in F	
9				eparate sheet)	
10			F	Problematic hydrop	hytic vegetation*
	90	= Total Cover	(explain)	
Woody vine stratum (Plot size:)		*Indi	•	d wetland hydrology must be
1				present, unless dist lydrophytic	urbed or problematic
2	0	= Total Cover		regetation	
	0			-	Y
Remarks: (Include photo numbers here or on a	separate sheet)		I		

Color (moist) % Color (moist) % Type* Loc** Texture Remarks Image: State of the st	Depth	Matrix		Red	dox Feat	ures			
ype: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils: Histiso (A) Sandy Gleyed Matrix (S4) Black Histic (A) Sandy Gleyed Matrix (S4) Histiso (A) Sandy Gleyed Matrix (S4) Histiso (A) Sandy Redx (S5) Histiso (A) Stripped Matrix (S6) Hydric Soil Indicators: Coast Pariate Redx (A16) (LRR K, L, R) Hydric Soil Sostance (A12) Depleted Matrix (F2) Depleted Both Surface (A11) Redox Dark Surface (F7) Tink: Dark Surface (A12) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Tink: Dark Surface (A12) Depleted Matrix (F3) Beach History Peat or Peat (S3) Redox Dark Surface (F7) Tink: Dark Surface (A12) Redox Dark Surface (F7) Hydric soils assumed, did not dig due to utilities YPROLOGY etand Hydrology Indicators: imary Indicators (minimum of one is required: check all that apply) Surface Water Table (A2) True Aquatic Flants (B13) Hydric soils assumed, did not dig due to utilitites YUROLOGY Su	•	Color (moist)	%				Loc**	Texture	Remarks
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Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (7) (LRR K, L) Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Wucky Mineral (F1) Very Shallow Dark Surface (TF12) 2 cm Mucky Mineral (F1) Depleted Matrix (F3) Cother (explain in remarks) Depleted Below Dark Surface (A11) Redox Dark Surface (F7) Indicators of hydrophytic vegetation and weltan Sandy Mucky Mineral (S1) Redox Depressions (F8) Indicators of hydrophytic vegetation and weltan marks: Hydric soil present? Y epitet Mucky Mineral (S1) Redox Depressions (F8) Indicators (minimum of two requires in thydrology must be present; unless disturbed or problematic marks: Hydric soils assumed, did not dig due to utilities Secondary Indicators: Water Table (A2) True Aquatic Plants (B14) Surface Soil Cracks (B6) Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Orticaposits (B3) Presence of Reduced Iron (C4) Saturation Titles or Pressite (B2) Staturation (A3) Presence of Reduced Iron (C4) Saturation Trace or Pressite (B2) Innundation Visible on Areal Imagery (B7) Thin Muck Surface (C7) Saturation or Seseed Pla	-								-
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2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) *Indicators of hydrophytic vegetation and weltan hydrology must be present, unless disturbed or problematic sestrictive Layer (if observed): Y epth (inches): Hydric soil present? Y estrictive control (if observed): Y estrictive Layer (if observed): Y epth (inches): Hydric soil present? Y estrictive Layer (if observed): Y estrictive Layer (if observed): Y Y y Y Y Y estrictive Kayer (introl (in					•	•	. ,		
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escribe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: emarks:	Vetland Hy Irimary Indi Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatid Sparsely Water-S ield Obser Furface wate Vater table	rdrology Indicato cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conca itained Leaves (B9 rvations: er present? present?	ors: of one is al Imagery ave Surfac) Yes Yes	y (B7) (B7) (Ce (B8) (De (B8)) (De (Da	all that a Aquatic True Aq Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp e of Redu iron Redu ck Surfac or Well Da Explain in Depth (i	nts (B14) Odor (C oheres on ucced Iron uction in 7 ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots (C4) Tilled Soils	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
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Some surface water present in ditch. Due to utility conflicts, did not dig hole.	Vetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Water-S Field Obser Surface wate Saturation p includes ca Describe rec	rdrology Indicato cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Conca itained Leaves (B9 rvations: er present? present? present? pillary fringe)	ors: of one is al Imagery ave Surfac) Yes Yes Yes	y (B7) ce (B8) No No No	all that a Aquatic True Aq Hydroge Oxidized (C3) Presenc (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ee of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in ⊺ ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots X (C4) Tilled Soils X X	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
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WETLAN	D DETERMINATI	ON DATA FORM - N	lidwest Region	
Project/Site: Hayward Solar	City/	County: Freeborn Co	unty Sampling Date:	4/28/2020
Applicant/Owner: Hayward Solar LLC		State: Minneso	ota Sampling Point:	WA015B
Investigator(s): Apryl Jennrich		Section, Townshi	p, Range: T10	2N R20W S13
Landform (hillslope, terrace, etc.):	Slope	Local relief (conca	ave, convex, none):	Convex
Slope (%): 20 Lat: 43	° 38' 27.63"	 Long: -93° 10' §	9.02" Datum:	WGS84
Soil Map Unit Name:	Klossner muck	NWI	Classification:	NA
Are climatic/hydrologic conditions of the site	typical for this time of	of the year? Y	(If no, explain in remarks)	
	or hydrology		Are "normal ci	rcumstances"
	or hydrology	naturally problematic?		present? Yes
SUMMARY OF FINDINGS			(If needed, explain any	/ answers in remarks.)
Hydrophytic vegetation present?	Ν			
Hydric soil present?	Y	Is the sampled area v	within a wetland?	Ν
Indicators of wetland hydrology present?	N	If yes, optional wetlar		
Remarks: (Explain alternative procedures he	re or in a separate r	eport.)		
	. f i i .			
VEGETATION Use scientific names		D i i i i i i	Dominance Test Wor	kshoot
Tree Stratum (Plot size:	Absolute) % Cover	Dominant Indicator Species Staus		
1) // 00101		Number of Dominant Sp that are OBL, FACW, or	
2		·	Total Number of Dor	
3			Species Across all S	
4			Percent of Dominant Sp	
5			that are OBL, FACW, or	FAC: 0.00% (A/B)
	0	= Total Cover		
Sapling/Shrub stratum (Plot size:)		Prevalence Index Wo	orksheet
2		·	Total % Cover of: OBL species 0	x 1 = 0
3		·	FACW species 0	$x^{1} = 0$ x 2 = 0
4			FAC species 0	$x^{2} = 0$ x 3 = 0
5		·	FACU species 90	x 4 = 360
	0	= Total Cover	UPL species 0	x 5 = 0
Herb stratum (Plot size:)	•	Column totals 90	(A) <u>360</u> (B)
1 Bromus inermis	90	Y FACU	Prevalence Index = B/	A = 4.00
2				
3		. <u> </u>	Hydrophytic Vegetat	
4				ophytic vegetation
5		·	Dominance test is Prevalence index	
6		·		
8		·	Morphogical adap supporting data in	
9		·	separate sheet)	
10			Problematic hydro	phytic vegetation*
	90	= Total Cover	(explain)	
Woody vine stratum (Plot size:)		*Indicators of hydric soil a	nd wetland hydrology must be
1				sturbed or problematic
2			Hydrophytic vegetation	
	0	= Total Cover	present?	Ν
Remarks: (Include photo numbers here or or	a separate sheet)			

Profile Desc Depth	Matrix		Red	dox Feat	ures			I	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	e	Remarks
(/	- ()		- ()						
ype: C = C	Concentration, D :	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	/lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Mat
Hydric So	il Indicators:						Indicators	for Proble	matic Hydric Soils:
Hist	tisol (A1)		Sar	ndy Gleye	ed Matrix	(S4)	Coast F	Prairie Red	ox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark Su	urface (S7)) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Ma	anganese N	Masses (F12) (LRR K, L, R)
Hyd	lrogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very Sł	nallow Darl	k Surface (TF12)
	atified Layers (A5)			•	ed Matrix	. ,	X Other (e		. ,
	m Muck (A10)				atrix (F3)				
	oleted Below Dark	Surface			Surface				
	ck Dark Surface (· · ·		ark Surfa	. ,	*Indicato	rs of hvdro	phytic vegetation and weltar
	ndy Mucky Minera	,	'		essions (. ,			e present, unless disturbed o
	m Mucky Peat or				·	(- /			problematic
	5	,	,			1			
	Layer (if observe	ea):					l hudula a a		2 Y
							Hydric so	ill nresent	? Y
					-			in present	
epth (inche emarks:	es): oils assumed, c	lid not d	lig due to utiliti	es.	-				
pth (inche marks:	· ·	lid not d	lig due to utiliti	es.	-				
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epth (inche emarks: Hydric so YDROLC	oils assumed, o		dig due to utiliti	es.	-				
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epth (inche emarks: Hydric so YDROL(etland Hy imary Indi	Dils assumed, o DGY drology Indicato cators (minimum	ors:		all that a		.13)		ndary India	cators (minimum of two requ
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Wetland Delineation Photographs, Hayward Solar, Freeborn County, Minnesota



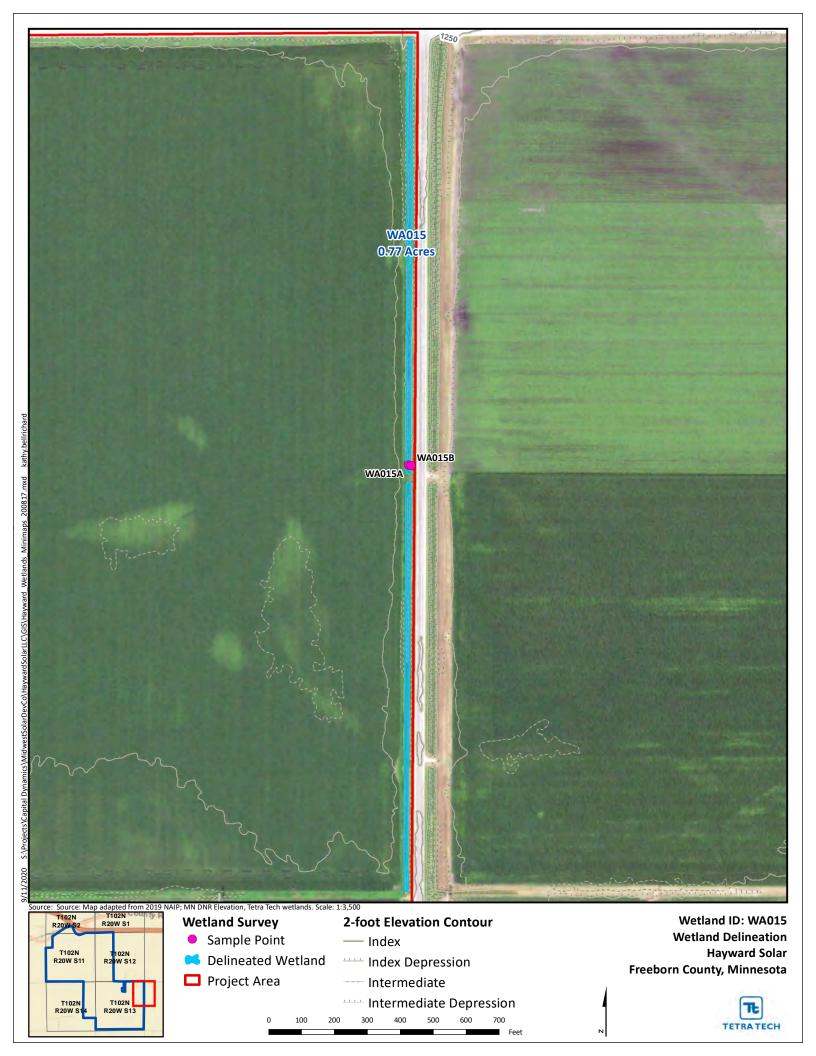
WA015 overview looking north.



Wetland Sample Point WA015A.



Non-wetland sample point WA015B.



WETLAND D	DETERMINATI	ON DATA FORM - M	lidwest Region	
Project/Site: Hayward Solar	City/	County: Freeborn Cou	unty Sampling Date:	4/28/2020
Applicant/Owner: Hayward Solar LLC		State: Minnesc	ota Sampling Point:	WA016A
Investigator(s): Apryl Jennrich		Section, Township	o, Range: T102	2N R20W S13
Landform (hillslope, terrace, etc.):	Ditch	Local relief (conca	ve, convex, none):	None
Slope (%): 2 Lat: 43° 37	" 50.74"	 Long: -93° 10' 9	.33" Datum:	WGS84
Soil Map Unit Name:	Mayer loam	NWI	Classification:	NA
Are climatic/hydrologic conditions of the site typ	ical for this time o	of the year? Y ((If no, explain in remarks)	
Are vegetation , soil , or	hydrology	significantly disturbed?	Are "normal cire	cumstances"
Are vegetation , soil , or	hydrology	naturally problematic?		present? Yes
SUMMARY OF FINDINGS			(If needed, explain any	answers in remarks.)
Hydrophytic vegetation present?	Y			
Hydric soil present?	Y	Is the sampled area w	vithin a wetland?	Y
Indicators of wetland hydrology present?	Y	lf yes, optional wetlan	id site ID:	
Remarks: (Explain alternative procedures here of VEGETATION Use scientific names of		eport.)		
	Absolute	Dominant Indicator	Dominance Test Work	sheet
Tree Stratum (Plot size:) % Cover	Species Staus	Number of Dominant Spe that are OBL, FACW, or I	
2			Total Number of Domi	
3			Species Across all St	· /
5			Percent of Dominant Spe that are OBL, FACW, or I	
	0	= Total Cover	,, _,, _	
Sapling/Shrub stratum (Plot size:)		Prevalence Index Wor	ksheet
1			Total % Cover of:	
2			OBL species 0	x 1 = 0
3				x 2 = <u>180</u>
5			FAC species 0 FACU species 0	$\begin{array}{c} x \ 3 = \\ x \ 4 = \end{array} \begin{array}{c} 0 \\ \end{array}$
<u> </u>	0	= Total Cover	UPL species 0	x = 0 x = 0
Herb stratum (Plot size:)		Column totals 90	(A) 180 (B)
1 Phalaris arundinacea	90	Y FACW	Prevalence Index = B/A	· · · · · ·
2				
3			Hydrophytic Vegetatic	on Indicators:
4			Rapid test for hydro	
5			X Dominance test is >	
6			X Prevalence index is	
8			Morphogical adapta supporting data in F	
9			separate sheet)	Contants of on a
10	90	= Total Cover	Problematic hydrop (explain)	hytic vegetation*
Woody vine stratum (Plot size:) 90			
1)		present, unless dist	d wetland hydrology must be urbed or problematic
2			Hydrophytic	
	0	= Total Cover	vegetation present?	Y
Remarks: (Include photo numbers here or on a	separate sheet)			

Color (moist) % Color (moist) % Type* Loc** Texture Remarks Image: State of the st	Depth	Matrix		Red	dox Feat	ures			
ype: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. "Location: PL = Pore Lining, M = Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils: Histiso (A) Sandy Gleyed Matrix (S4) Black Histic (A) Sandy Gleyed Matrix (S4) Histiso (A) Sandy Gleyed Matrix (S4) Histiso (A) Sandy Redx (S5) Histiso (A) Stripped Matrix (S6) Hydric Soil Indicators: Coast Pariate Redx (A16) (LRR K, L, R) Hydric Soil Sostance (A12) Depleted Matrix (F2) Depleted Both Surface (A11) Redox Dark Surface (F7) Tink: Dark Surface (A12) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Tink: Dark Surface (A12) Depleted Matrix (F3) Beach History Peat or Peat (S3) Redox Dark Surface (F7) Tink: Dark Surface (A12) Redox Dark Surface (F7) Hydric soils assumed, did not dig due to utilities YPROLOGY etand Hydrology Indicators: imary Indicators (minimum of one is required: check all that apply) Surface Water Table (A2) True Aquatic Flants (B13) Hydric soils assumed, did not dig due to utilitites YUROLOGY Su	•	Color (moist)	%				Loc**	Texture	Remarks
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Some surface water present in ditch. Due to utility conflicts, did not dig hole.	Vetland Hy Primary Indi Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Water-S Field Obser Surface wate Saturation p includes ca Describe rec	rdrology Indicato cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Conca itained Leaves (B9 rvations: er present? present? present? pillary fringe)	ors: of one is al Imagery ave Surfac) Yes Yes Yes	y (B7) ce (B8) No No	all that a Aquatic True Aq Hydroge Oxidized (C3) Presenc (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ee of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in ⊺ ce (C7) ata (D9) Remarks inches): inches):	1) Living Roots X (C4) Tilled Soils X X	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Stunted or Stressed Plants (D1) Geomorphic Position (D2) FAC-Neutral Test (D5)
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	WETLAND D	DETERMINAT	ION DAT	A FORM - M	idwest Region	
Project/Site:	Hayward Solar	City	/County:	Freeborn Cou	nty Sampling Da	ate: 4/28/2020
Applicant/Owner:	Hayward Solar LLC		State	: Minnesot	ta Sampling Po	vint: WA016B
Investigator(s): Apry	'I Jennrich		Sec	tion, Township	, Range:	T102N R20W S13
Landform (hillslope, t	errace, etc.):	Slope	Loca	al relief (conca	/e, convex, none):	Convex
Slope (%): 20	Lat: 43° 37	7' 50.73"	Long:	-93° 10' 9.	.23" Datum:	WGS84
Soil Map Unit Name:	I	Mayer loam		NWI C	lassification:	NA
Are climatic/hydrolog	ic conditions of the site typ		of the year	? Y (lf no, explain in rema	rks)
		hydrology	-	ntly disturbed?	Are "norm	al circumstances"
Are vegetation		hydrology		problematic?		present? Yes
SUMMARY OF F			- '		(If needed, explain	any answers in remarks.)
Hydrophytic vege	etation present?	Ν				
Hydric soil prese	-	Y	Is the sa	ampled area w	ithin a wetland?	Ν
	land hydrology present?	N		optional wetland		
				•		
Remarks: (Explain al	ternative procedures here	or in a separate	report.)			
VEGETATION	Use scientific names of	•				
Troo Strotum	(Plot size:	Absolute) % Cover			Dominance Test	
<u>Tree Stratum</u> 1		_) % Cover	Species	Staus	Number of Dominar that are OBL, FACW	
2					Total Number of	
3					Species Across	
4					Percent of Dominar	nt Species
5					that are OBL, FACW	
		0	= Total Co	ver		
Sapling/Shrub strat	tum (Plot size:)			Prevalence Index	Worksheet
1					Total % Cover of:	
2					OBL species	$\begin{array}{c} 0 \\ 0 \\ x \\ 2 \\ z \\ x \\ z \\ z \\ z \\ 0 \end{array}$
3					FACW species	$\frac{0}{0} \times 3 = 0$
5					FACU species	$90 \times 4 = 360$
		0	= Total Co	ver	UPL species	0 x 5 = 0
Herb stratum	(Plot size:)	-		Column totals	90 (A) 360 (B)
1 Bromus inermi	s	90	Y	FACU	Prevalence Index :	= B/A = 4.00
2						
3			_			etation Indicators:
4						hydrophytic vegetation
5					Dominance tes	
6					Prevalence inc	
8						daptations* (provide a in Remarks or on a
9					separate shee	
10						/drophytic vegetation*
		90	= Total Co	ver	(explain)	
Woody vine stratur	<u>m</u> (Plot size:)	_		*Indicators of hydric s	soil and wetland hydrology must be
1						ss disturbed or problematic
2					Hydrophytic vegetation	
		0	= Total Co	ver	present?	Ν
Remarks: (Include pl	noto numbers here or on a	senarate sheet)				
i terriarka. (include pl		separate sheel)				

Profile Desc Depth	Matrix		Red	dox Feat	ures			I	
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	e	Remarks
(/	- ()		- ()						
ype: C = C	Concentration, D :	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	/lasked S	and Grains.	**Location	n: PL = Pore Lining, M = Mat
Hydric So	il Indicators:						Indicators	for Proble	matic Hydric Soils:
Hist	tisol (A1)		Sar	ndy Gleye	ed Matrix	(S4)	Coast F	Prairie Red	ox (A16) (LRR K, L, R)
Hist	tic Epipedon (A2)		Sar	ndy Redo	ox (S5)		Dark Su	urface (S7)) (LRR K, L)
Blac	ck Histic (A3)		Stri	pped Ma	trix (S6)		Iron-Ma	anganese N	Masses (F12) (LRR K, L, R)
Hyd	lrogen Sulfide (A4	4)	Loa	my Mucl	ky Minera	al (F1)	Very Sł	nallow Darl	k Surface (TF12)
	atified Layers (A5)			•	ed Matrix	. ,	X Other (e		. ,
	m Muck (A10)				atrix (F3)				
	oleted Below Dark	Surface			Surface				
	ck Dark Surface (· · ·		ark Surfa	. ,	*Indicato	rs of hvdro	phytic vegetation and weltar
	ndy Mucky Minera	,	'		essions (. ,			e present, unless disturbed o
	m Mucky Peat or				·	(- /			problematic
	5	,	,			1			
	Layer (if observe	ea):					l hudula a a		2 Y
							Hydric so	ill nresent	? Y
					-			in present	
epth (inche emarks:	es): oils assumed, c	lid not d	lig due to utiliti	es.	-				
pth (inche marks:	· ·	lid not d	lig due to utiliti	es.	-				
epth (inche emarks: Hydric so	oils assumed, o	lid not o	dig due to utiliti	es.	-				
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Provide state stat	Dils assumed, of DGY drology Indicator cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conca tained Leaves (B9 vations: er present? present? present? pillary fringe)	I Imagen I Imagen I Ve Surfa) Yes Yes Yes	required; check	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ee of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in ⊺ ce (C7) ata (D9) Remarks inches): inches):	Second I)	ndary India Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	cators (minimum of two requ soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C4 r Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: Hydric so YDROLO etland Hy imary Indii Surface High Wa Saturatio Drift Dep Algal Ma Iron Dep Inundatio Sparsely Water-S eld Obser arface wate aturation p nocludes ca	Dils assumed, o DGY drology Indicato cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conca tained Leaves (B9 vations: er present? present?	I Imagen I Imagen I Ve Surfa) Yes Yes Yes	required; check	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ee of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in ⊺ ce (C7) ata (D9) Remarks inches): inches):	Second I)	ndary India Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	cators (minimum of two requ soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C4 r Stressed Plants (D1) hic Position (D2) tral Test (D5)
IYDROLO /etland Hy surface High Wa Saturation Vater M Sedimer Drift Dep Algal Ma Iron Dep Inundation Sparsely Water-S ield Obser urface water /ater table aturation p ncludes ca	Dils assumed, of DGY drology Indicator cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conca tained Leaves (B9 vations: er present? present? present? pillary fringe)	I Imagen I Imagen I Ve Surfa) Yes Yes Yes	required; check	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ee of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in ⊺ ce (C7) ata (D9) Remarks inches): inches):	Second I)	ndary India Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	cators (minimum of two requ soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C4 r Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: Hydric so YDROLO /etland Hy cimary Indii Surface High Wa Saturatio Drift Dep Algal Ma Iron Dep Inundatio Sparsely Water-S eld Obser aurface wate /ater table aturation p ncludes ca	Dils assumed, of DGY drology Indicator cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conca tained Leaves (B9 vations: er present? present? present? pillary fringe)	I Imagen I Imagen I Ve Surfa) Yes Yes Yes	required; check	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ee of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in ⊺ ce (C7) ata (D9) Remarks inches): inches):	Second I)	ndary India Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	cators (minimum of two requ soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C4 r Stressed Plants (D1) hic Position (D2) tral Test (D5)
Pepth (inche emarks: Hydric so Hydric so Particle so Hydric so Particle so Par	Dils assumed, of DGY drology Indicator cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conca tained Leaves (B9 vations: er present? present? present? pillary fringe)	I Imagen I Imagen I Ve Surfa) Yes Yes Yes	required; check	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ee of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in ⊺ ce (C7) ata (D9) Remarks inches): inches):	Second I)	ndary India Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	cators (minimum of two requ soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C r Stressed Plants (D1) hic Position (D2) tral Test (D5)
epth (inche emarks: Hydric so YDROLO etland Hy imary Indii Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatii Sparsely Water-S eld Obser urface wate fater table aturation p ncludes ca escribe rec	Dils assumed, of DGY drology Indicator cators (minimum Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria / Vegetated Conca tained Leaves (B9 vations: er present? present? present? pillary fringe)	I Imagen I Imagen I Ve Surfa) Yes Yes Yes	required; check	all that a Aquatic True Aqu Hydroge Oxidized (C3) Presenc Recent I (C6) Thin Mu Gauge c Other (E	Fauna (B uatic Plar en Sulfide d Rhizosp ee of Redu Iron Redu ck Surfac or Well Da Explain in Depth (i Depth (i	nts (B14) Odor (C oheres on uced Iron uction in ⊺ ce (C7) ata (D9) Remarks inches): inches):	Second I)	ndary India Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	cators (minimum of two requ soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C4 r Stressed Plants (D1) hic Position (D2) tral Test (D5)



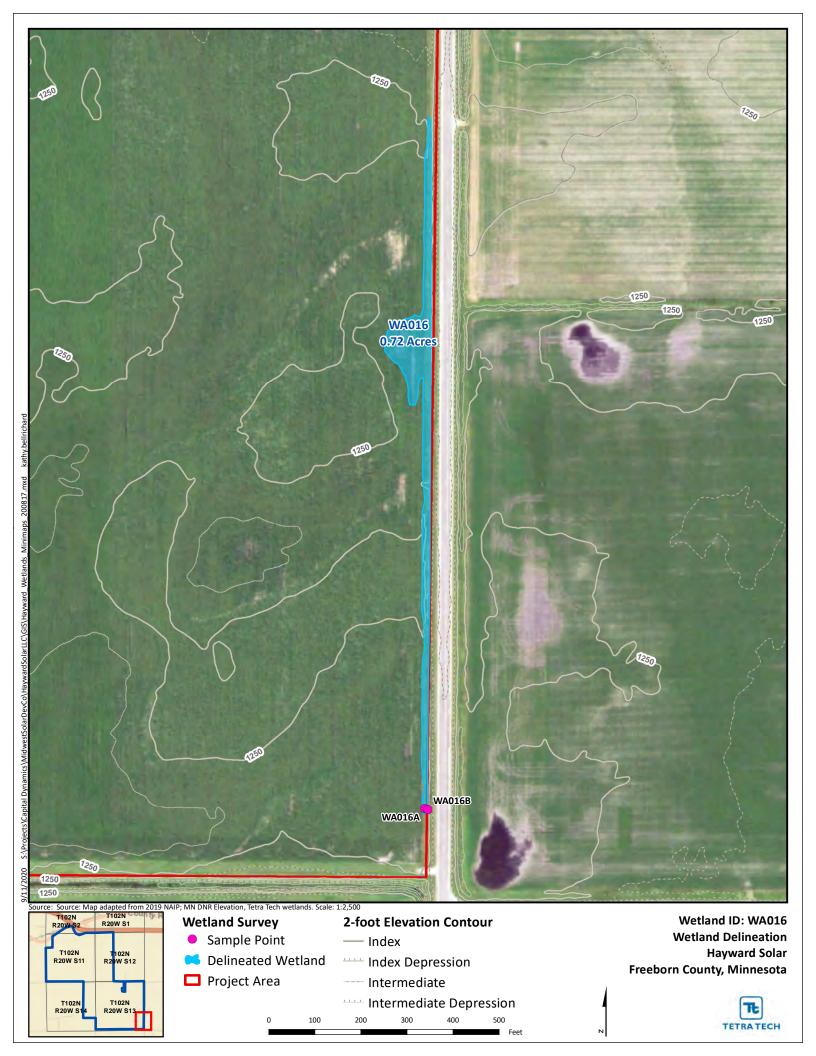
WA016 overview looking northeast.



Wetland Sample Point WA016A.



Non-wetland sample point WA016B.



WETLAND DETERMINAT		-
Project/Site: Hayward Solar City Applicant/Owner: Hayward Solar LLC	County: Freeborn Cou State: Minneso	<u> </u>
Investigator(s): Apryl Jennrich	State. Minineso Section, Township	1 8
Landform (hillslope, terrace, etc.): Depression		ve, convex, none): Convex
Slope (%): 1 Lat: 43° 37' 51.87"	Long: -93° 10' 2'	
Soil Map Unit Name: Glencoe clay loam		Classification: PEM1Af
Are climatic/hydrologic conditions of the site typical for this time		If no, explain in remarks)
Are vegetation X , soil , or hydrology	significantly disturbed?	
Are vegetation , soil , or hydrology	naturally problematic?	Are "normal circumstances" present? No
SUMMARY OF FINDINGS		(If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y		
Hydric soil present? Y	Is the sampled area w	
Indicators of wetland hydrology present? Y	If yes, optional wetlan	d site ID:
Remarks: (Explain alternative procedures here or in a separate r VEGETATION Use scientific names of plants.	report.)	
· · · · · · · · · · · · · · · · · · ·	Densinent Indicator	Dominance Test Worksheet
Absolute <u>Tree Stratum</u> (Plot size:) % Cover		Number of Dominant Species
1		that are OBL, FACW, or FAC: 0 (A)
2		Total Number of Dominant
3		Species Across all Strata: 0 (B)
4		Percent of Dominant Species
5	= Total Cover	that are OBL, FACW, or FAC: 0.00% (A/B)
Sapling/Shrub stratum (Plot size:)		Prevalence Index Worksheet
1		Total % Cover of:
2		OBL species 0 x 1 = 0
3		FACW species 0 x 2 = 0
4		FAC species $0 \times 3 = 0$
5		FACU species $0 \times 4 = 0$
0 Herb stratum (Plot size:)	= Total Cover	UPL species $0 \times 5 = 0$ Column totals 0 (A) 0 (B)
Herb stratum (Plot size:)		Prevalence Index = B/A =
2		
3	- ·	Hydrophytic Vegetation Indicators:
4		Rapid test for hydrophytic vegetation
5		Dominance test is >50%
6		Prevalence index is ≤3.0*
7		Morphogical adaptations* (provide
8		supporting data in Remarks or on a
9 10		separate sheet)
0	= Total Cover	Problematic hydrophytic vegetation* X (explain)
Woody vine stratum (Plot size:) 1		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2		Hydrophytic vegetation
0	= Total Cover	present? Y
Remarks: (Include photo numbers here or on a separate sheet) cornsubble, rageweed, and barn grass		

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the a	bsence of indicators.)
Depth	Matrix		Rec	dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-16	10YR 2/1	100					Silt loam	
16-19	10YR 2/1	100					Clay	
19-23	2.5Y 3/1	95	10YR 4/6	5	С	PL	Clay	
23-28	5Y 5/2	90	10YR 4/6	10	C	PL	Clay	
					-		-	
28-36	5Y 5/2	85	10YR 4/6	15	С	PL/M	Sandy clay	
*Type: C = 0	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	k, MS = N	/lasked S	and Grains. **L	ocation: PL = Pore Lining, M = Matrix
	oil Indicators:	·						Problematic Hydric Soils:
-	tisol (A1)		Sar	dy Gley	ed Matrix	(S4)		rie Redox (A16) (LRR K, L, R)
His	tic Epipedon (A2)		Sar	dy Redo	ox (S5)		Dark Surfa	ce (S7) (LRR K, L)
Bla	ck Histic (A3)		Stri	pped Ma	atrix (S6)		Iron-Manga	anese Masses (F12) (LRR K, L, R)
Hyo	drogen Sulfide (A	4)	Loa	my Mucl	ky Minera	al (F1)	Very Shallo	ow Dark Surface (TF12)
Stra	atified Layers (A5)	Loa	my Gley	ed Matrix	x (F2)	Other (exp	lain in remarks)
	m Muck (A10)			leted Ma	atrix (F3)			
	pleted Below Dark		e (A11) Rec	lox Dark	Surface	(F6)		
	ck Dark Surface (ark Surfa	. ,	*Indicators of	f hydrophytic vegetation and weltand
	ndy Mucky Minera	. ,		lox Depr	ressions	(F8)	hydrology r	nust be present, unless disturbed or
5 c	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Type:	<i>,</i>	,					Hydric soil p	resent? Y
Depth (inch	es):				_		, ,	
Remarks:	·							
HYDROL	DGY							
Wetland Hy	drology Indicato	ors:						
Primary Indi	cators (minimum	of one is	required; check	all that a	ipply)		Seconda	ary Indicators (minimum of two required)
	Water (A1)				Fauna (B	(13)		Irface Soil Cracks (B6)
	ater Table (A2)			True Aq	uatic Plar	nts (B14)		ainage Patterns (B10)
Saturati	on (A3)			Hydroge	en Sulfide	Odor (C	1) Dr	y-Season Water Table (C2)
	larks (B1)			Oxidized	d Rhizosp	heres on	· ·	ayfish Burrows (C8)
	nt Deposits (B2)			(C3)				turation Visible on Aerial Imagery (C9)
	posits (B3)				e of Redu			unted or Stressed Plants (D1)
	at or Crust (B4)				Iron Redu	iction in I		eomorphic Position (D2)
	oosits (B5) on Visible on Aoric	llmagor	(B7)	(C6)	ok Surfor	o (C7)	FA	C-Neutral Test (D5)
	on Visible on Aeria / Vegetated Conca				ick Surfac or Well Da	. ,		
	tained Leaves (B9			-	Explain in	. ,)	
	,	'				. tomarka	/	
Field Obsen Surface wat		Yes	No	х	Depth (i	inches).		
Water table	•	Yes	No	<u> </u>	Depth (i	,	——— I	Indicators of wetland
Saturation p		Yes	No		Depth (i		——— I	hydrology present? Y
	pillary fringe)						——— I	,
		am daula	a monitoring well	aprial r	botos n	rovious ir	nspections), if availa	ble [.]
Describe let		an yauy	s, monitoring well	, acriai þ	notos, p	i evious II	ispections), il avalla	
Remarks:								

WETLAND	DETERMINATI	ON DAT	A FORM - M	idwest Regio	n
Project/Site: Hayward Solar	City	County:	Freeborn Cou	nty Samplin	g Date: 4/28/2020
Applicant/Owner: Hayward Solar LLC		State	e: Minneso	ta Sampling	g Point: WA019B
Investigator(s): Apryl Jennrich		Sec	tion, Township	, Range:	T102N R20W S13
Landform (hillslope, terrace, etc.):	Slope	Loca	al relief (conca	/e, convex, none)): Convex
Slope (%): 3 Lat: 43°	37' 51.97"	Long:	-93° 10' 22	.19" Datum	WGS84
	encoe clay loam		NWI C	lassification:	NA
Are climatic/hydrologic conditions of the site t	pical for this time	of the year	?Y (lf no, explain in re	emarks)
Are vegetation X , soil , o	or hydrology	significa	ntly disturbed?	Are "n	ormal circumstances"
Are vegetation , soil , o	or hydrology	•	problematic?	740 11	present? No
SUMMARY OF FINDINGS		•	-	(If needed, exp	plain any answers in remarks.)
Hydrophytic vegetation present?	N				
Hydric soil present?	Y	Is the sa	ampled area w	ithin a wetland?	Р N
Indicators of wetland hydrology present?	N		optional wetlan		
		•	•		
Remarks: (Explain alternative procedures her	e or in a separate r	eport.)			
VEGETATION Use scientific names	of plants.				
	Absolute	Dominar		Dominance T	est Worksheet
Tree Stratum (Plot size:) % Cover	Species	s Staus	Number of Dom	
1				that are OBL, F	
2		·			er of Dominant ross all Strata: 0 (B)
<u> </u>				Percent of Dom	、 ,
5		·		that are OBL, F	•
	0	= Total Co	over	,	((12)
Sapling/Shrub stratum (Plot size:)			Prevalence In	dex Worksheet
1				Total % Cover	of:
2				OBL species	<u> 0 </u>
3				FACW species	
4				FAC species	$0 \times 3 = 0$
5	0	= Total Co		FACU species UPL species	$\frac{0}{0} \times 4 = 0$ 0 $\times 5 = 0$
Herb stratum (Plot size:)		over	Column totals	$\frac{0}{0}$ (A) $\frac{0}{0}$ (B)
)			Prevalence Inc	
2	·	·		Flevalence inc	
3		·		Hydrophytic \	/egetation Indicators:
4					for hydrophytic vegetation
5		·		Dominanc	e test is >50%
6				Prevalence	e index is ≤3.0*
7					al adaptations* (provide
8					data in Remarks or on a
9				separate s	
10	0	= Total Co		Problemat (explain)	ic hydrophytic vegetation*
Woody vine stratum (Plot size:)		Wei		
1				present,	dric soil and wetland hydrology must be unless disturbed or problematic
2				Hydrophy	
	0	= Total Co	over	vegetation present?	n N
Demositor (Include state and base to a	a concrete a la set				
Remarks: (Include photo numbers here or on	a separate sneet)				
Corn stubble					

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the al	osence of indicators.)
Depth	Matrix			dox Feat				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-20	10YR 2/1	100					Silt loam	
20-26	10YR 3/1	100					Clay	
26-32	2.5Y 4/2	85	10YR 5/6	15	С	PL	Clay	
20-02	2.01 4/2	00	1011(0/0	10			Oldy	
*Turne: C = (Concentration D	– Dopleti	l Ion DM – Boduo	d Matrix	/ MS - N	Laskad S	and Craina **!	eastion: DL = Doro Lining M = Matrix
	Concentration, D	- Depieu			(, IVIS – IV	laskeu a		Docation: PL = Pore Lining, M = Matrix Problematic Hydric Soils:
•	bil Indicators:		Sa		od Motrix	(64)		-
	tisol (A1) tis Epipodop (A2)				ed Matrix	(34)		ie Redox (A16) (LRR K, L, R) ce (S7) (LRR K, L)
	tic Epipedon (A2)			ndy Redo	trix (S6)			inese Masses (F12) (LRR K, L, R)
	ck Histic (A3)	4)		• •	ky Minera			w Dark Surface (TF12)
	drogen Sulfide (A4 atified Layers (A5					· · /		ain in remarks)
	m Muck (A10))			ed Matrix atrix (F3)			an in remarks)
	bleted Below Dark	(Surface			Surface			
	ck Dark Surface (· · /			. ,	*I. I'. (
					ark Surfa			f hydrophytic vegetation and weltand
	ndy Mucky Minera	. ,		lox Debi	essions	(F8)	nyarology m	nust be present, unless disturbed or
	m Mucky Peat or)					problematic
	Layer (if observ	ed):						
Туре:					_		Hydric soil p	resent? Y
Depth (inch	es):				_			
Remarks:								
HYDROL	DGY							
Wetland Hy	drology Indicate	ors:						
Primarv Indi	cators (minimum	of one is	required: check	all that a	(vlaa		Seconda	ry Indicators (minimum of two required
-	Water (A1)	0. 0110 10			Fauna (B	(13)		rface Soil Cracks (B6)
	ater Table (A2)				uatic Plar			ainage Patterns (B10)
Saturati	. ,				en Sulfide	· · ·		/-Season Water Table (C2)
	larks (B1)							ayfish Burrows (C8)
Sedime	nt Deposits (B2)			(C3)			Sa	turation Visible on Aerial Imagery (C9)
Drift De	oosits (B3)			Presence	e of Redu	uced Iron	(C4) Stu	unted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent	Iron Redu	uction in 7	Tilled Soils Ge	omorphic Position (D2)
	oosits (B5)			(C6)			FA	C-Neutral Test (D5)
	on Visible on Aeria			-	ck Surfac	. ,		
	/ Vegetated Conca		ce (B8)	-	or Well Da			
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)	
Field Obse								
Surface wat		Yes	No	Х	Depth (i	,		
Water table		Yes	No	Х	Depth (i			Indicators of wetland
Saturation p		Yes	No	Х	Depth (i	inches):	I	hydrology present? N
(includes ca	pillary fringe)							
Describe re	corded data (strea	am gaug	e, monitoring wel	l, aerial p	photos, p	revious i	nspections), if availal	ole:
_								
Remarks:								



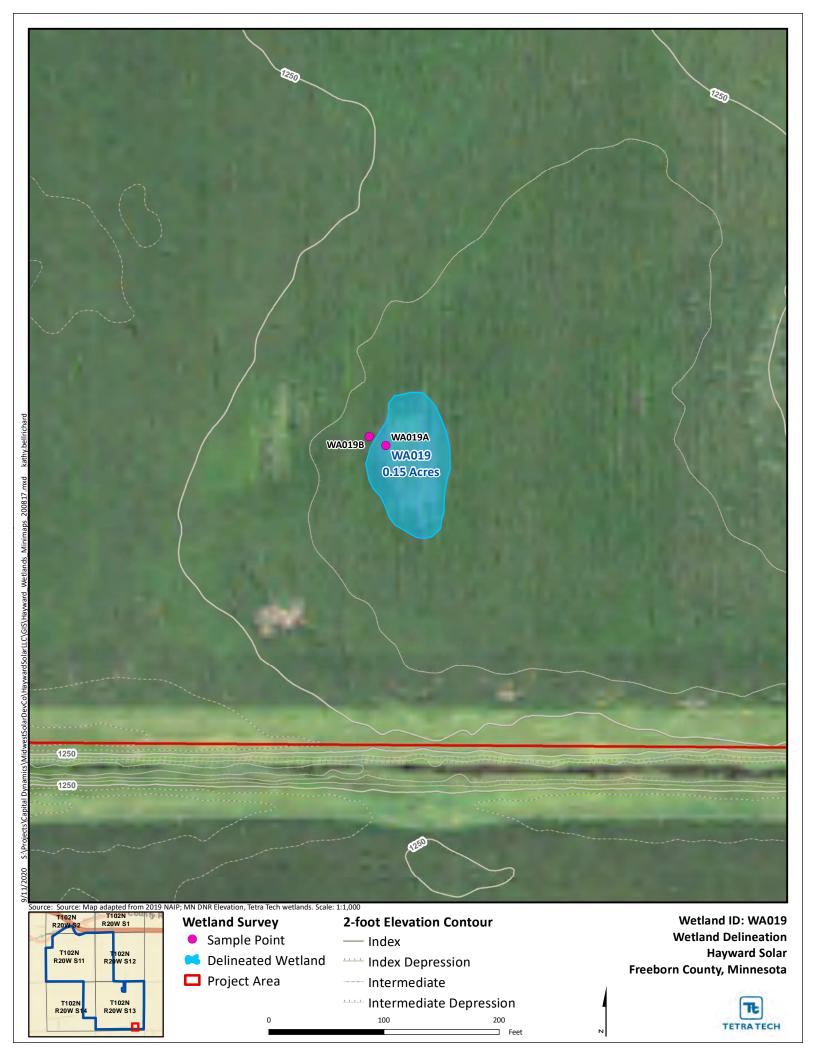
WA019 overview looking southeast.



Wetland Sample Point WA019A.



Non-wetland sample point WA019B.



		•
	County: Freeborn County	
Applicant/Owner: Hayward Solar LLC	State: Minnesota	Sampling Point: WA021A
Investigator(s): Apryl Jennrich	Section, Township, R	·
Landform (hillslope, terrace, etc.): Depression	Local relief (concave,	· · · · · · · · · · · · · · · · · · ·
Slope (%): 2 Lat: 43° 37' 56.12"	Long: -93° 10' 14.67	
Soil Map Unit Name: Mayer loam		esification: PEM1Af
Are climatic/hydrologic conditions of the site typical for this time	· · · · · · · · · · · · · · · · · · ·	o, explain in remarks)
Are vegetation X , soil , or hydrology	significantly disturbed?	Are "normal circumstances"
Are vegetation, soil, or hydrology SUMMARY OF FINDINGS	naturally problematic?	present? <u>No</u> (If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y		
Hydric soil present? Y	Is the sampled area with	in a wetland? Y
Indicators of wetland hydrology present? Y	If yes, optional wetland s	ite ID:
Remarks: (Explain alternative procedures here or in a separate r	eport.)	
VEGETATION Use scientific names of plants.	Denvin ent de die sten	Dominance Test Worksheet
Absolute <u>Tree Stratum</u> (Plot size:) % Cover		Number of Dominant Species
1 (************************************		hat are OBL, FACW, or FAC: 0 (A)
2		Total Number of Dominant
3		Species Across all Strata: 0 (B)
4		Percent of Dominant Species
5		hat are OBL, FACW, or FAC: 0.00% (A/B)
00 Sapling/Shrub stratum (Plot size:)	= Total Cover	Prevalence Index Worksheet
1		Total % Cover of:
2		OBL species 0 x 1 = 0
3		FACW species 0 x 2 = 0
4		FAC species $0 \times 3 = 0$
5		FACU species $0 \times 4 = 0$
		UPL species $0 \times 5 = 0$
Herb stratum (Plot size:)		Column totals 0 (A) 0 (B)
2	·	Prevalence Index = B/A =
3	· -	Hydrophytic Vegetation Indicators:
4	·	Rapid test for hydrophytic vegetation
5	· -	Dominance test is >50%
6		Prevalence index is ≤3.0*
7		Morphogical adaptations* (provide
8		supporting data in Remarks or on a
9	· -	separate sheet)
	= Total Cover	Problematic hydrophytic vegetation* X (explain)
Woody vine stratum (Plot size:) 1		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
20	= Total Cover	Hydrophytic vegetation present? Y
		prodont:
Remarks: (Include photo numbers here or on a separate sheet) Corn stubble		

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth Matrix Redox Features											
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks		
0-19	10YR 2/1	100	. /				Clay loam				
19-23	2.5Y 3/1	99	10YR 3/4	1	С	PL					
				1			Clay				
23-35	2.5Y 5/2	95	10YR 4/6	5	С	PL	Clay				
*Type: C = 0	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	, MS = N	/lasked S	and Grains.	**Location	: PL = Pore Lining, M = Matrix		
	il Indicators:				,				matic Hydric Soils:		
	tisol (A1)		San	dv Gleve	ed Matrix	(S4)			ox (A16) (LRR K, L, R)		
	tic Epipedon (A2)			idy Redo		. ()			(LRR K, L)		
	ck Histic (A3)			-	trix (S6)				lasses (F12) (LRR K, L, R)		
	Irogen Sulfide (A	1)			ky Minera	al (F1)		•	Surface (TF12)		
	atified Layers (A5	,		•	ed Matrix	. ,		explain in re			
	m Muck (A10)	/			atrix (F3)				smanoy		
	pleted Below Dark	Surface			Surface						
	ck Dark Surface (· · ·		ark Surfa	· · ·	*Indiaatan	a of budeou	abutic versitation and weltand		
	ndy Mucky Minera				essions	. ,			phytic vegetation and weltand present, unless disturbed or		
	n Mucky Peat or			iox Debi	65510115	(10)	nyurolog		roblematic		
	IT MUCKY FEAL OF	real (33)					P	lobiematic		
	Layer (if observ	ed):									
Туре:					_		Hydric soi	il present?	? <u>Y</u>		
Depth (inche	es):				_						
Remarks:					_						
r tomanto.											
HYDROLO											
-	drology Indicate										
		of one is	required; check						ators (minimum of two required)		
Surface	Water (A1)				Fauna (B		X	Surface So	oil Cracks (B6)		
0	ater Table (A2)			True Aq	uatic Plar	nts (B14)		Drainage I	Patterns (B10)		
Saturatio					en Sulfide	-			n Water Table (C2)		
	larks (B1)				d Rhizosp	heres on	Living Roots		urrows (C8)		
	nt Deposits (B2)			(C3)				-	Visible on Aerial Imagery (C9)		
	oosits (B3)			Presenc	e of Redu	uced Iron	(C4) X		Stressed Plants (D1)		
-	at or Crust (B4)				Iron Redu	iction in T	illed Soils		ic Position (D2)		
· · · · ·	oosits (B5)			(C6)				FAC-Neut	ral Test (D5)		
	on Visible on Aeria			-	ck Surfac	. ,					
	/ Vegetated Conca		ce (B8)	-	or Well Da						
Water-S	tained Leaves (B9))		Other (E	xplain in	Remarks)				
Field Obser	vations:										
Surface wat	er present?	Yes	No	Х	Depth (i	inches):					
Water table		Yes	No	Х	Depth (i				cators of wetland		
Saturation p		Yes	No	Х	Depth (i	inches):		hyd	Irology present? Y		
(includes ca	pillary fringe)										
Describe red	corded data (strea	am gauge	e, monitoring well	, aerial p	photos, p	revious i	nspections), if ava	ailable:			
	, ,	0 0		•			· /·				
Remarks:											
Weak su	Irface soil crac	ks: corr	from the previ	ious ve	ar appe	ars to h	ave some wea	k stress			
		-,									
1											

WETLAND DETERMINA			-	4/20/2020
	· ·	reeborn County		
Applicant/Owner: Hayward Solar LLC	State:	Minnesota	Sampling Point:	
Investigator(s): Apryl Jennrich		on, Township, F		02N R20W S13
Landform (hillslope, terrace, etc.): Toe slope		-	convex, none):	None
Slope (%): 1 Lat: 43° 37' 55.86"	Long:	-93° 10' 14.6		WGS84
Soil Map Unit Name: mayer loam	(1)		ssification:	NA
Are climatic/hydrologic conditions of the site typical for this tin	-	`	io, explain in remarks	
Are vegetation X, soil , or hydrology		y disturbed?	Are "normal c	
Are vegetation, soil, or hydrology SUMMARY OF FINDINGS	naturally p	roblematic?	(If needed, explain an	present? <u>No</u> y answers in remarks.)
Hydrophytic vegetation present? N				, ,
Hydric soil present? Y	Is the sam	pled area with	in a wetland?	Ν
Indicators of wetland hydrology present? N		tional wetland s		
Remarks: (Explain alternative procedures here or in a separat				
VEGETATION Use scientific names of plants.				
Absolu		malcator	Dominance Test Wo	rksheet
<u>Tree Stratum</u> (Plot size:) % Cov	ver Species		Number of Dominant S	
2		t	hat are OBL, FACW, o	()
3			Total Number of Do Species Across all	
4			Percent of Dominant S	()
5			hat are OBL, FACW, o	
0	= Total Cove	er		
Sapling/Shrub stratum (Plot size:)			Prevalence Index We	orksheet
1			Total % Cover of:	
2			OBL species 0	x 1 = 0
<u> </u>			FACW species 0 FAC species 0	$x^2 = 0$ x 3 = 0
5			FACU species 0	x 4 = 0
0	= Total Cove		UPL species 0	$x_{5} = 0$
Herb stratum (Plot size:)			Column totals 0	(A) 0 (B)
1			Prevalence Index = B	/A =
2				
3			Hydrophytic Vegetat	
4		-		rophytic vegetation
5 6			Dominance test is Prevalence index	
7		-		
8			Morphogical adap supporting data ir	
9			separate sheet)	
10			Problematic hydro	ophytic vegetation*
0	= Total Cove	er	(explain)	
Woody vine stratum (Plot size:) 1			•	and wetland hydrology must be sturbed or problematic
2			Hydrophytic	
0	= Total Cove	er	vegetation	Ν
			present?	<u>N</u>
Remarks: (Include photo numbers here or on a separate shee corn stubble	et)			

Profile Des	cription: (Descr	ibe to th	e depth needed	to docu	ment the	e indicat	or or confirm the abse	ence of indicators.)
Depth	Matrix			dox Feat	ures			
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks
0-16	10YR 2/1	100					Clay	
16-21	2.5Y 3/1	99	10YR 3/4	1	С	PL	Clay	
21-28	2.5Y 3/1	85	2.5Y 5/2	15	D	M	Clay	
	1						-	
28-40	2.5Y 5/2	98	10YR 4/6	2	С	PL	Sandy clay	
± T 0 4								
	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	k, MS = N	lasked S		ation: PL = Pore Lining, M = Matrix
-	oil Indicators:		0			(0.1)		blematic Hydric Soils:
	tisol (A1)				ed Matrix	(S4)		Redox (A16) (LRR K, L, R)
	tic Epipedon (A2)			ndy Redo				(S7) (LRR K, L)
	ck Histic (A3)				atrix (S6)			se Masses (F12) (LRR K, L, R)
	lrogen Sulfide (A				ky Miner	· · ·		Dark Surface (TF12)
	atified Layers (A5)			ed Matrix		Other (explain	in remarks)
	m Muck (A10)	~ ~			atrix (F3)			
	oleted Below Dark		· · ·		Surface	. ,		
	ck Dark Surface (,			ark Surfa	. ,		vdrophytic vegetation and weltand
	ndy Mucky Minera	. ,		lox Depr	ressions	(F8)	hydrology mus	t be present, unless disturbed or
5 ci	m Mucky Peat or	Peat (S3)					problematic
Restrictive	Layer (if observe	ed):						
Туре:							Hydric soil pres	ent? Y
Depth (inche	es):				-			
Remarks:					_			
HYDROL	OGY							
Wetland Hy	drology Indicato	ors:						
-	cators (minimum		required: check	all that a	innly)		Secondary	Indicators (minimum of two required)
	Water (A1)				Fauna (B	(13)		ce Soil Cracks (B6)
	ater Table (A2)				uatic Pla			age Patterns (B10)
Saturati	. ,				en Sulfide			eason Water Table (C2)
	larks (B1)					-		sh Burrows (C8)
	nt Deposits (B2)			(C3)			· ·	ation Visible on Aerial Imagery (C9)
	posits (B3)			-	e of Red	uced Iron		ed or Stressed Plants (D1)
Algal Ma	at or Crust (B4)			Recent	Iron Redu	uction in T	illed Soils Geom	orphic Position (D2)
Iron Dep	oosits (B5)			(C6)			FAC-I	Neutral Test (D5)
Inundati	on Visible on Aeria	al Imager	y (B7)	Thin Mu	ick Surfac	ce (C7)		
Sparsel	Vegetated Conca	ave Surfa	ce (B8)	-	or Well Da			
Water-S	tained Leaves (B9)		Other (E	Explain in	Remarks)	
Field Obse	vations:							
Surface wat		Yes	No	Х	Depth (i			
Water table		Yes	X No		Depth (i		-	Indicators of wetland
Saturation p		Yes	X No		Depth (i	inches):	28	hydrology present? N
(includes ca	pillary fringe)							
Describe re	corded data (strea	am gauge	e, monitoring well	, aerial p	ohotos, p	revious i	nspections), if available	:
_								
Remarks:					_			



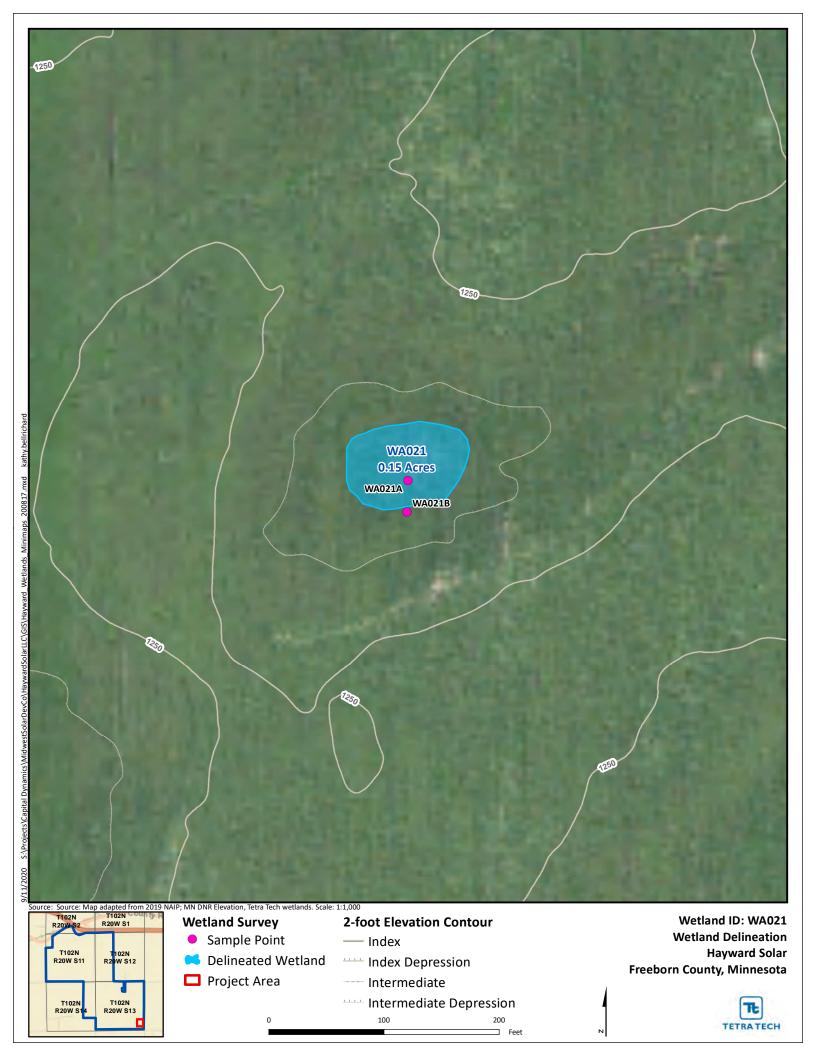
WA021 overview looking east.



Wetland Sample Point WA021A.



Non-wetland sample point WA021B.



WETLAND DETERMINAT		-
	/County: Freeborn Cou	<u> </u>
Applicant/Owner: Hayward Solar LLC	State: Minneso	
Investigator(s): Apryl Jennrich	Section, Township	
Landform (hillslope, terrace, etc.): Depression		ve, convex, none): concave
Slope (%): 1 Lat: 43° 37' 49.72"	Long: -93° 10' 41	
Soil Map Unit Name: Okoboji silty clay loam		Classification: NA
Are climatic/hydrologic conditions of the site typical for this time		lf no, explain in remarks)
Are vegetation X, soil , or hydrology	-	
Are vegetation , soil , or hydrology	naturally problematic?	present? <u>No</u> (If needed, explain any answers in remarks.)
Hydrophytic vegetation present? Y		
Hydric soil present? Y	Is the sampled area w	
Indicators of wetland hydrology present? Y	If yes, optional wetlan	d site ID:
Remarks: (Explain alternative procedures here or in a separate r VEGETATION Use scientific names of plants.	eport.)	
Absolute	Dominant Indicator	Dominance Test Worksheet
<u>Tree Stratum</u> (Plot size:) % Cover	Species Staus	Number of Dominant Species
1		that are OBL, FACW, or FAC: 0 (A)
2		Total Number of Dominant
3	·	Species Across all Strata: 0 (B)
4 5	·	Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)
	= Total Cover	
Sapling/Shrub stratum (Plot size:)	-	Prevalence Index Worksheet
1		Total % Cover of:
2		OBL species 0 x 1 = 0
3		FACW species 0 x 2 = 0
4	·	FAC species $0 \times 3 = 0$
5 <u> </u>	= Total Cover	FACU species $0 x 4 = 0$ UPL species $0 x 5 = 0$
Herb stratum (Plot size:)		Column totals 0 (A) 0 (B)
(* ***********************************		Prevalence Index = B/A =
2		
3		Hydrophytic Vegetation Indicators:
4		Rapid test for hydrophytic vegetation
5		Dominance test is >50%
<u>6</u>	·	Prevalence index is ≤3.0*
/	·	Morphogical adaptations* (provide
9	·	supporting data in Remarks or on a separate sheet)
10		Problematic hydrophytic vegetation*
Woody vine stratum (Plot size:)	= Total Cover	X (explain)
1´		*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2		Hydrophytic vegetation
0	= Total Cover	present? Y
Remarks: (Include photo numbers here or on a separate sheet) barnyard grass		

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth Matrix Redox Features								•				
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture		Remarks			
0-18	10YR 2/1	100	- ()				Silt loam					
						.						
18-23	2.5Y 4/1	95	10YR 4/6	5	С	PL	Sandy clay					
23-28	5Y 5/2	95	10YR 4/6	5	С	PL	Sandy clay					
*Type: C = (Concentration, D	= Depleti	on RM = Reduce	ed Matrix	MS = N	Aasked S	and Grains *	*Location	PL = Pore Lining, M = Matrix			
	bil Indicators:	Dopioti		Ja maan,	, me n				atic Hydric Soils:			
-	tisol (A1)		San	dy Gleve	ed Matrix	(S4)			x (A16) (LRR K, L, R)			
	tic Epipedon (A2)			idy Redo		(04)		rface (S7) (
	ck Histic (A3)			-	trix (S6)				asses (F12) (LRR K, L, R)			
	· · ·	4)			. ,			-				
	drogen Sulfide (A	,		•	ky Minera	• •			Surface (TF12)			
	atified Layers (A5)			ed Matrix			xplain in rei	marks)			
	m Muck (A10)	0 (atrix (F3)							
	oleted Below Dark				Surface							
	ck Dark Surface (ark Surfa				hytic vegetation and weltand			
	ndy Mucky Minera	• •		lox Depr	essions	(F8)	hydrolog		present, unless disturbed or			
5 ci	m Mucky Peat or	Peat (S3)					pro	oblematic			
Restrictive	Layer (if observ	ed):										
Туре:		-					Hydric soi	I present?	Y			
Depth (inche	es):				-		-					
					-							
Remarks:												
HYDROL	OGY											
Wetland Hy	drology Indicate	ors:										
Primary Indi	cators (minimum	of one is	required: check	all that a	(vlaa		Secon	darv Indica	ntors (minimum of two required)			
-	Water (A1)				Fauna (B	(13)			il Cracks (B6)			
	ater Table (A2)				uatic Plar				atterns (B10)			
Saturatio					en Sulfide			•	Water Table (C2)			
	larks (B1)					-		Crayfish Bu				
	nt Deposits (B2)			(C3)			· ·	•	/isible on Aerial Imagery (C9)			
	posits (B3)				e of Redu	uced Iron			Stressed Plants (D1)			
	at or Crust (B4)								c Position (D2)			
	posits (B5)			(C6)				FAC-Neutra	. ,			
	on Visible on Aeria	al Imager	/ (B7)		ck Surfac	ce (C7)	—		(-)			
	y Vegetated Conca			-	or Well Da							
	tained Leaves (B9				Explain in	. ,	;)					
Field Obser	,	-			•							
Surface wat		Yes	No	х	Depth (i	inches).						
Water table	•	Yes	No		Depth (i			Indica	ators of wetland			
Saturation p		Yes	No		Depth (i				ology present? Y			
	pillary fringe)				(.,	<u> </u>			
-				oorial r	botos n	rovious i	nspections), if ava	ilabla:				
Describe rec		ani yauye	e, monitoring weil	, aeriai p	notos, p	ievious ii	nspections), il ava					
Remarks:												
n tomai Að.												

	WETLAND D	ETE	RMINATI	ON DAT	A FORM - M	idwest	Region	
Project/Site:	Hayward Solar		City/	County:	Freeborn Cou	unty	Sampling Da	te: 4/29/2020
Applicant/Owner: H	layward Solar LLC			State	: Minneso	ta	Sampling Poi	int: WA025B
Investigator(s): Apryl	Jennrich			Sec	tion, Township	, Range	: .	T102N R20W S13
Landform (hillslope, te	errace, etc.):	slop	e	Loca	al relief (conca	ve, conv	ex, none):	none
Slope (%): 3	Lat: 43° 37	' 49.54	1"	Long:	-93° 10' 41	1.96"	Datum:	WGS84
Soil Map Unit Name:	Okobo	oji silty	clay loam		NWI C	lassifica	ation:	NA
Are climatic/hydrologi	c conditions of the site typi	cal for	this time o	f the year	? Y (If no, ex	plain in remar	ks)
Are vegetation X			ogy	-	ntly disturbed?			al circumstances"
Are vegetation		hydrolo		-	problematic?			present? No
SUMMARY OF FI		,		,		(If nee	eded, explain	any answers in remarks.)
Hydrophytic vege	tation present?	Ν						
Hydric soil preser		Ν		Is the sa	ampled area w	vithin a v	wetland?	Ν
	and hydrology present?	N			optional wetlan			
Remarks: (Explain alt	ernative procedures here o	or in a	separate re	eport.)				
VEGETATION U	Jse scientific names of	plant	S.			-		
T 01 1			Absolute	Dominan		_	nance Test V	
Tree Stratum	(Plot size:	_)	% Cover	Species	Staus		er of Dominan	
2							e OBL, FACW	
3							al Number of I becies Across a	
4							nt of Dominan	
5							e OBL, FACW	
			0	= Total Co	ver			
Sapling/Shrub strate	um (Plot size:)				Preva	alence Index	Worksheet
1							% Cover of:	
2							·	0 x 1 = 0
3							· ·	$\frac{10}{0} \times 2 = 20$
4 								$\frac{0}{60} \times 4 = 240$
°			0	= Total Co	ver			$\frac{00}{0} \times 5 = 0$
Herb stratum	(Plot size:)					·	70 (A) 260 (B)
1 Bromus inermis		^	60	Y	FACU		lence Index =	
2 Phalaris arundi	nacea		10	N	FACW			
3						Hydro	ophytic Vege	tation Indicators:
4							•	hydrophytic vegetation
5							ominance tes	
6							revalence ind	
/								daptations* (provide
8 9							apporting data	a in Remarks or on a
10							-	vdrophytic vegetation*
			70	= Total Co	ver		explain)	
Woody vine stratum	<u>n</u> (Plot size:)						oil and wetland hydrology must be
1						indio	•	s disturbed or problematic
2							ydrophytic	
			0	= Total Co	ver		egetation	N
-						p p	resent?	<u> </u>
Remarks: (Include ph	oto numbers here or on a s	separa	te sheet)					

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth Matrix Redox Features										
(Inches)	Color (moist)	%	Color (moist)	%	Type*	Loc**	Texture	Remarks		
0-19	10YR 2/1	100					Silt loam			
19-22	2.5Y 2.5/1	90	7.5YR 4/4	10	С	PL	Clay			
22-34	2.5Y 2.5/1	100					Clay			
34-37	5Y 5/2	90	10YR 4/6	10	С	PL	Clay			
			1011(4/0	10	0	1 6	-			
37-39	2.5Y 4/1	100					Sandy clay			
*Type: C = C	Concentration, D	= Depleti	on, RM = Reduce	ed Matrix	a, MS = N	lasked S	and Grains. **Loca	tion: PL = Pore Lining, M = Matrix		
Hydric Soil Indicators: Indicators for Problematic Hydric Soils:										
Histisol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR K, L, R)										
	tic Epipedon (A2)			idy Redo				(S7) (LRR K, L)		
	ck Histic (A3)			pped Ma	• • •			se Masses (F12) (LRR K, L, R)		
	Irogen Sulfide (A				ky Minera	· · /		Dark Surface (TF12)		
	atified Layers (A5)			ed Matrix	. ,	Other (explain	in remarks)		
	n Muck (A10) bleted Below Dark	(Surface			atrix (F3) Surface					
	ck Dark Surface (· · ·		ark Surfa	. ,	*Indiantara of by	dramby tic versitation and waltend		
	idy Mucky Minera	,			essions (. ,		drophytic vegetation and weltand t be present, unless disturbed or		
	n Mucky Peat or	. ,			00010110	(10)	nyarology mus	problematic		
	-	•	/			1		P 2		
	Layer (if observe	ea):					Uudria aail proo	ont2 N		
Type: Depth (inche	ac):				-		Hydric soil pres	ent? N		
Remarks:					-					
HYDROLO	DGY									
Wetland Hy	drology Indicate	ors:								
Primary Indi	<u>cators (minimum</u>	of one is	required; check	all that a	<u>pply)</u>		Secondary I	ndicators (minimum of two required)		
Surface	Water (A1)			Aquatic	Fauna (B	13)	Surfac	e Soil Cracks (B6)		
Ŭ	ter Table (A2)				uatic Plar			age Patterns (B10)		
Saturatio					n Sulfide	-		eason Water Table (C2)		
	larks (B1)				l Rhizosp	heres on	5 ,	sh Burrows (C8)		
	nt Deposits (B2) posits (B3)			(C3)	e of Redu	lood Iron		ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)		
	at or Crust (B4)							orphic Position (D2)		
	osits (B5)			(C6)	Ton Road			Neutral Test (D5)		
	on Visible on Aeria	al Imager	y (B7)		ck Surfac	e (C7)				
Sparsely	Vegetated Conca	ave Surfa	ce (B8)	Gauge o	or Well Da	ata (D9)				
Water-S	tained Leaves (B9)		Other (E	xplain in	Remarks)			
Field Obser										
Surface wat		Yes	No		Depth (i					
Water table		Yes	No		Depth (i	,		ndicators of wetland		
Saturation p		Yes	No		Depth (i	nches):	I	hydrology present? N		
-	pillary fringe)		.,							
Describe red	corded data (strea	am gauge	e, monitoring well	, aerial p	photos, p	revious li	nspections), if available:			
Remarks:										