

EXHIBIT J WETLANDS

OAR 345-021-0010(1)(j)

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- J-1 Wetland Delineation Report
- J-2 Oregon Department of State Lands Concurrence Letter and U.S. Army Corps of Engineers Preliminary Jurisdictional Determination Letter

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J.1 INTRODUCTION

OAR 345-021-0010(1)(j) *Information based on literature and field study, as appropriate, about waters of this state, as defined under ORS 196.800, including:*

Response: Madras PV1, LLC (Applicant) proposes to construct and operate the Madras Solar Energy Facility (Facility), in Jefferson County, Oregon, with a planned 63-megawatt photovoltaic (PV) solar power generation facility. This Exhibit presents information and analysis based on a literature review and field study of waters of the state.

J.1.1 Wetland Delineation

A wetland and other waters delineation, consisting of a literature review and field study, was conducted to identify potentially jurisdictional wetlands and other waters. The delineation was performed in accordance with the Oregon Removal-Fill Law and Section 404 of the Clean Water Act. The delineation report (*Wetlands and Nonwetland Waters Delineation Report for the Madras Solar Project*) (Jacobs, 2018) is included as Attachment J-1 (herein referred to as the wetland delineation report). The report (WD# 2018-0671) received concurrence from the Oregon Department of State Lands (DSL) on March 5, 2019, and a Preliminary Jurisdictional Determination (PJD) (Corps No. NWP-2018-616) from the U.S. Army Corps of Engineers (USACE) on March 25, 2019. The DSL concurrence letter and USACE PJD are located in Attachment J-2.

J.1.2 Analysis Area

The Facility will be located approximately 5 miles west of Madras and just east of Lake Simtustus, south and west of Willow Creek, and approximately 0.5 mile from the eastern boundary of the Warm Springs Reservation in Jefferson County, Oregon. The Facility components will be located on private land for which the Applicant has already negotiated an exclusive, long-term option to lease (see Figure C-1, Facility Layout, in Exhibit C).

The analysis area and Facility site boundary for purposes of Exhibit J encompasses approximately 284 acres (see Figure B-1, Facility Vicinity Map, in Exhibit B). The analysis area is referred to in this Exhibit as the study area, consistent with the wetland delineation report.

Section J.2.1 summarizes the literature review performed as part of the wetland survey and Section J.2.2 summarizes the field study. Additional details are provided in the wetland delineation report (Attachment J-1).

J.2 OVERVIEW OF LITERATURE REVIEW AND FIELD STUDY

J.2.1 Literature Review

Before conducting the field study, the following information was reviewed:

- 7.5-minute topographic maps (as provided by the U.S. Geological Survey [USGS] via the Environmental Systems Research Institute [the company that sells the software known as ArcGIS])
- Jefferson County Oregon Tax lot, Urban Growth Boundary, City Boundary (2018) (digital files) (Figure 2 in Appendix A of Attachment J-1)
- National Wetlands Inventory (NWI) maps from the U.S. Fish and Wildlife Service (2018) and National Hydrography Data Set (NHD) (USGS, 2013) (Figure 3 in Appendix A of Attachment J-1)
- Soil Survey Geographic (SSURGO) database for Upper Deschutes River Area, Oregon, including parts of Deschutes, Jefferson, and Klamath counties (NRCS, 2015) (Figure 4 in Appendix A of Attachment J-1)
- Hydric Soils List, Jefferson County (NRCS, 2017)
- Digital Globe 2016, aerial imagery, July 16, 2016 (Figure 5 in Appendix A of Attachment J-1)

No Local Wetland Inventory is available for the study area and location of Facility. No USGS-mapped springs were identified within the study area. The NWI identified one wetland feature within the study area. A NWI wetland is mapped within and adjacent to a NHD watercourse. No

wetland vegetation was observed in this area. The mapped NWI location is within a drainage that is identified in the NHD data set and was mapped during the October 2018 field study.

J.2.2 Field Studies

Field studies documenting the potential for wetlands and other jurisdictional waters were conducted on October 30, 2018. Drainages identified from the review of existing information were field-verified to determine whether they contained stream channels, wetlands, or other waters. Additionally, wetland biologists walked the entire survey corridor (see Figure 6 in Appendix A of Attachment J-1 for depiction of study area) to identify potential isolated wetlands or other waters outside of drainages.

Data collection, descriptions, and analysis for wetlands and other jurisdictional waters of the United States and Oregon followed procedures in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the USACE Wetland Delineation Manual: Western Mountains, Valley and Coast Region* (Environmental Laboratory, 2010).

The routine onsite wetland determination method guided observations of vegetation, soils, and hydrological conditions at representative locations. Paired upland and wetland sample plots documented wetland boundaries. The NRCS online Plants Database (NRCS, 2016) determined hydrophytic status of vegetation.

When potential wetlands are identified, sample plots are representative of conditions. Hydrology is assessed at test pits dug at each sample plot. Mapping of wetland boundaries is aided by evaluation of topographic characteristics, changes in vegetation, the presence of saturation, and characteristics of soils to determine boundaries of wetland areas.

Other waters are mapped along their ordinary high-water elevations using existing data, and field-verified. The centerlines of drainages are mapped for streams with a width of 6 feet or less.

In the October 2018 field study, the site was walked first to observe vegetation and general features while also utilizing the Global Positioning System (GPS) background layers to focus on specific areas. Visual signatures in the field were utilized as well as landscape position, vegetation, recent rainfall, and recent land use.

J.3 DESCRIPTION OF WETLANDS, STREAMS, AND RIPARIAN AREAS

OAR 345-021-0010(1)(j)(A) *A description of all areas within the site boundary that might be waters of this state and a map showing the location of these features.*

Response: No wetlands were mapped within the study area. Three drainages were mapped within the study area, as shown in Table J-1.

Table J-1. Drainages Mapped Within Study Area

Stream ID	Flow Regime	Maximum Width at Ordinary High Water Elevation (feet)	Potential Water of the State	Potential Waters of the U.S.
S1	Ephemeral	4	No	Yes
S2	Ephemeral	1	No	Yes
S3	Ephemeral	3	No	Yes

J.3.1 Potential Waters of the State

J.3.1.1 Wetlands

No wetlands were mapped within the study area.

J.3.1.2 Other Waters

NHD watercourse data mapped three potential waterways within the study area. All three were observed and mapped; however, all three drainages did not follow the exact location identified by NHD mapping. The mapped waterway features are headwaters of tributaries that drain down

steep slopes into the adjacent canyons. The drainage headwaters are mapped on Figure 6 in Appendix A of Attachment J-1, with accompanying photos in Appendix C of Attachment J-1.

S1 is an ephemeral drainage with a V-shaped channel located on the west side of the study area. The waterway exhibited signs of bed and bank, erosion, and deposition. The width of the channel bed varied between 1.5 and 4 feet with the substrate consisting of cobble and boulders. The drainage flows west to Simtustus Lake, which flows to the Deschutes River. Simtustus Lake is above the Pelton Dam.

S2 is an ephemeral drainage located on the northeast side of the study area. It exhibited signs of bed and bank, erosion, and deposition with a channel width of 1 foot and bed substrate of gravel. The drainage is an unnamed tributary that follows a steep slope draining to Willow Creek. Willow Creek flows to west to Simtustus Lake, which flows to the Deschutes River. Simtustus Lake is above the Pelton Dam.

S3 is an ephemeral drainage located on the east side of the study area. It exhibited signs of bed and bank, erosion, and deposition with a channel width that varied between 1.5 to 3 feet wide. The channel substrate consists of cobble and boulders. The drainage is an unnamed tributary of Willow Creek that flows to Simtustus Lake, which flows to the Deschutes River. Simtustus Lake is above the Pelton Dam.

All three drainages are exempt from DSL jurisdiction because ephemeral drainages are not considered waters of the state. The state concurs that there are no jurisdictional features mapped within the study area boundary.

J.3.2 Potential Waters of the U.S.

J.3.2.1 Wetlands

No wetlands were mapped within the study area.

J.3.2.2 Other Waters

The USACE has determined that all aquatic resources (three drainages) described in Section J.3.1.2 above are considered “potential jurisdictional waters” and as such are jurisdictional for permitting purposes.

J.4 EFFECT ON WATERS OF THE STATE AND WETLANDS

OAR 345-021-0010(1)(j)(B) *An analysis of whether construction or operation of the proposed facility would adversely affect any waters of this state.*

Response: No wetlands were delineated or mapped within the study area and therefore, no adverse impacts to wetlands will occur. Other waters were overlaid with proposed Facility components and areas of potential impact were evaluated. Facilities were located to avoid all nonwetland waters; therefore, no adverse impacts to any waters of the state are expected.

J.5 SIGNIFICANT POTENTIAL DISTURBANCES TO WETLANDS

OAR 345-021-0010(1)(j)(C) *A description of the significance of potential adverse impacts to each feature identified in (A), including the nature and amount of material the applicant would remove from or place in the waters analyzed in (B).*

Response: As described in Section J.4, no adverse impacts to wetlands will occur during Facility construction.

J.6 EVIDENCE THAT REMOVAL-FILL PERMIT NEED NOT BE ISSUED

OAR 345-021-0010(1)(j)(D) *If the proposed facility would not need a removal-fill authorization, an explanation of why no such authorization is required for the construction and operation of the proposed facility.*

Response: A removal-fill permit is not required because no temporary or permanent disturbances to wetlands or other nonwetland waters of the state will occur as part of Facility construction and operation.

J.7 EVIDENCE THAT REMOVAL-FILL PERMIT CAN BE ISSUED

OAR 345-021-0010(1)(j)(E) *If the proposed facility would need a removal-fill authorization, information to support a determination by the Council that the Oregon Department of State Lands should issue a removal-fill permit, including information in the form required by the Department of State Lands under OAR Chapter 141 Division 85.*

Response: No removal-fill permit will be required.

J.8 MONITORING PROGRAM FOR DISTURBANCES TO WETLANDS

OAR 345-021-0010(1)(j)(F) *A description of proposed actions to mitigate adverse impacts to the features identified in (A) and the applicant's proposed monitoring program, if any, for such impacts*

Response: Temporary and permanent disturbances to wetlands will not occur; therefore, no mitigation of resources or subsequent monitoring will be required.

J.8.1 Proposed Mitigation Measures

The Facility has been designed to avoid impacts. Efforts to avoid and minimize impacts that were incorporated into the initial design are summarized below.

J.8.1.1 Avoidance Before Construction

The Facility layout was modified to avoid disturbances. Disturbance avoidance modifications include the following:

- Maintaining a setback from waterbodies as much as possible
- Using existing road for Facility access

J.8.1.2 Avoidance During Construction

The following protective measures will be implemented during construction to avoid disturbances:

- An erosion and sediment control plan will be implemented (see Exhibit I, Attachment I-1).
- The setback from waterbodies will be marked before construction activities begin to ensure the setback is maintained.
- Qualified biologists will provide environmental training and environmental monitoring during construction. The qualified biologists will visit the site before site development to flag sensitive resource areas. The qualified biologists will periodically visit the site during construction to maintain flagging and oversee construction and permit compliance.

J.8.2 Proposed Best Management Practices

The Applicant proposes best management practices (BMPs) to ensure that disturbances to nonwetland waters are avoided. The BMPs are listed in the erosion and sediment control plan for the 1200-C Construction Stormwater National Pollutant Discharge Elimination System Permit (see Attachment I-1 in Exhibit I for the permit application).

J.8.3 Proposed Environmental Training

The following measures will be implemented during Facility construction to avoid impacts:

- The Applicant will develop an environmental awareness course for the construction contractors that will provide information on the sensitive stream resources present onsite, the exclusion flagging and signing protocol, permit requirements, and other environmental issues.
- Construction site personnel will be required to attend the environmental awareness course in conjunction with hazard and safety training before working onsite. The Applicant's construction contractor will maintain a list of onsite construction personnel who have received the training.

J.9 SUMMARY

On the basis of the information presented above, the Applicant has satisfied the requirements of OAR 345-021-0010(1)(j).

J.10 REFERENCES

- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. Department of the Army, Waterways Experiment Station, Corps of Engineers, Vicksburg, Mississippi.
- Environmental Laboratory. 2010. *Regional Supplement to the USACE Wetland Delineation Manual: Western Mountains, Valley and Coast Region. (Version 2.0)*. J.S. Wakely, R.W. Lichvar, and C.V. Noble (eds.). U.S. Army Engineer Research and Development Center, Vicksburg, MS. ERDC/EL TR-10-3.
- Jefferson County. 2018. Tax lot, Urban Growth Boundary, City Boundary (digital files). Jefferson County, Oregon, USA. Acquired: September 21, 2018.
- Natural Resources Conservation Service (NRCS). 2015. *Web Soil Survey*. Geographic (SSURGO) database for Upper Deschutes River Area, Oregon, including parts of Deschutes, Jefferson, and Klamath counties. Accessed December 7, 2018. <https://websoilsurvey.sc.egov.usda.gov/>.
- Natural Resources Conservation Service (NRCS). 2016. *Plants Database*. <https://plants.usda.gov/java/>.
- Natural Resources Conservation Service (NRCS). 2017. *Web Soil Survey*. Hydric Soils List. United States Department of Agriculture. Accessed December 7, 2018. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- Natural Resources Conservation Service (NRCS). 2018. *WETS Madras, Oregon Precipitation: 1909-02-01 to 2018-12-07*. Accessed November 2018. <http://agacis.rcc-acis.org/?fips=41031>
- Thorson, T. D., S. A. Bryce, D. A. Lammers, A. J. Woods, J. M. Omernik, J. Kagan, D. E. Pater, and J. A. Comstock. 2003. *Ecoregions of Oregon* (color poster with map, descriptive text, summary tables, and photographs). U.S. Geological Survey, Reston, VA. (map scale 1:1,500,000).
- U.S. Fish and Wildlife Service. 2019. *National Wetlands Inventory*. Accessed May 2, 2019. <https://www.fws.gov/wetlands/Data/Data-Download.html>.
- U.S. Geological Survey (USGS). 2013. *National Hydrography Dataset*. Accessed October 17, 2016. <https://www.blm.gov/or/gis/data/hydro.php>.

Attachment J-1
Wetland Delineation Report

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at: <https://apps.oregon.gov/DSL/EPS/program?key=4>.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279**. A single PDF of the completed cover form and report may be e-mailed to: **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

Contact and Authorization Information

<input checked="" type="checkbox"/> Applicant <input type="checkbox"/> Owner Name, Firm and Address: Ecoplexus, Inc. Terrance Unrein 101 2nd Street, #1250 San Francisco, CA 94105	Business phone # (970) 302-9457 Mobile phone # (optional) E-mail: tunrein@ecoplexus.com
<input type="checkbox"/> Authorized Legal Agent, Name and Address (if different):	Business phone # Mobile phone # (optional) E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Terrance Unrein **Signature:** Terrance Unrein
Date: 12/19/18 **Special instructions regarding site access:** Just call us to coordinate, easy site to access

Project and Site Information

Project Name: Madras Solar Project	Latitude: ~44.66 Longitude: ~-121.22 decimal degree - centroid of site or start & end points of linear project
Proposed Use: 63-megawatt DC photovoltaic (PV) solar energy project.	Tax Map # 1013310000100, 1013300000600
	Tax Lot(s) 100, 600
Project Street Address (or other descriptive location): Adjacent to SW Elk Drive	Tax Map #
	Tax Lot(s)
City: West of the City of Madras County: Jefferson	Township 10S Range 13W Section 30,31 QQ
	Use separate sheet for additional tax and location information
	Waterway: NA River Mile: NA

Wetland Delineation Information

Wetland Consultant Name, Firm and Address: Jacobs C.Steinkoenig 2020 SW 4th Avenue Portland, Oregon 97201	Phone # (503) 736-4136 Mobile phone # (if applicable) E-mail: claudia.steinkoenig@jacobs.com
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The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: [Signature] **Date:** 12/18/2018

Primary Contact for report review and site access is ☒ Consultant ☒ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No Study Area size: 365 acres Total Wetland Acreage: 0.0000

Check Applicable Boxes Below

<input type="checkbox"/> R-F permit application submitted <input type="checkbox"/> Mitigation bank site <input type="checkbox"/> Industrial Land Certification Program Site <input type="checkbox"/> Wetland restoration/enhancement project (not mitigation) <input type="checkbox"/> Previous delineation/application on parcel If known, previous DSL # _____	<input checked="" type="checkbox"/> Fee payment submitted \$ <u>437</u> <input type="checkbox"/> Fee (\$100) for resubmittal of rejected report <input type="checkbox"/> Request for Reissuance. See eligibility criteria. (no fee) DSL # _____ Expiration date _____ <input type="checkbox"/> LWI shows wetlands or waters on parcel Wetland ID code _____
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For Office Use Only

DSL Reviewer: _____	Fee Paid Date: ____/____/____	DSL WD # _____
Date Delineation Received: ____/____/____	Scanned: <input type="checkbox"/> Electronic: <input type="checkbox"/>	DSL App.# _____

Jurisdiction Coordinator
Oregon Department of State Lands
775 Summer St. N.E., Suite 100
Salem, OR 97301-1279

December 19, 2018,

Subject: Wetlands and Nonwetland Waters Delineation Report for the Madras Solar Project

Dear Mr. Evans:

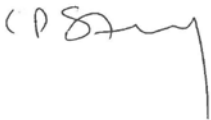
Ecoplexus, Inc. (Ecoplexus) is proposing development of the Madras Solar Project (Project), a planned approximate 63-megawatt photovoltaic (PV) solar power generation facility on an uncultivated site in an unincorporated area of Jefferson County, Oregon.

The enclosed report documents the results of the wetland and nonwetland waters delineation conducted by Jacobs Engineering Group Inc (Jacobs) on October 30, 2018.

No wetlands are identified as part of this survey. Three drainages are mapped and SDAM forms are attached in Appendix B to the attached Supplemental Delineation Report.

We request review for the purpose of state concurrence with the report findings. Please feel free to contact me directly should you wish to discuss this information. My direct contact information is claudia.steinkoenig@jacobs.com, telephone 503-432-7610.

Regards,



Claudia Steinkoenig, PWS
Project Wetlands Biologist

c: Terrance Unrein/Ecoplexus, Inc.
Paul Seilo/Jacobs

Subject	Wetlands and Nonwetland Waters Delineation Report for the Madras Solar Project
Project Name	Madras Solar Project
Attention	Ecoplexus, Inc.
From	Claudia Steinkoenig, PWS/Jacobs
Date	December 12, 2018
Copies to	Paul Seilo/Jacobs

Introduction

Ecoplexus, Inc. (Ecoplexus) is proposing development of the Madras Solar Project (Project), a planned approximate 63-megawatt photovoltaic (PV) solar power generation facility on an uncultivated site in an unincorporated area of Jefferson County, Oregon (see Figure 1 in Appendix A).

Jacobs Engineering Group Inc. (Jacobs) conducted a wetlands and nonwetland waters delineation on October 30, 2018, to identify potentially jurisdictional wetlands and nonwetland waters of the United States (U.S.) and State of Oregon for the Project. This report documents the delineation survey results within the Project study area, which encompasses the site boundary. The delineation was completed in accordance with the implementing regulations for Section 404 of the federal Clean Water Act and the Oregon Removal-Fill Law.

Report Organization

This report is organized in accordance with Oregon Department of State Lands (DSL) requirements per Oregon Administrative Rules (OARs) 141-090-0005 to -0055, as follows:

- A) Landscape Setting and Land Use (Historical and Current)
- B) Site Alterations
- C) Precipitation Data and Analysis
- D) Methods
- E) Description of Wetlands and Nonwetland Waters
- F) Deviations from National Wetlands Inventory/Local Wetlands Inventory Mapping
- G) Wetland Mapping Method
- H) Additional Information
- I) Results and Conclusions
- J) Disclaimer OAR 141-090-0035(12)(J)(j)

Tables are as follows:

- 1 Daily Precipitation (inches) in Madras, Oregon, Area
- 2 Monthly Precipitation Data for the Water Year (October 2017– October 2018)
- 3 Nonwetland Waters within the Madras Solar Project Study Area

Appendixes are as follows:

- A Figures
- B Wetland Determination Data Forms
- C Ground-Level Photographs
- D Additional Information [none]
- E Literature Cited

A) Landscape Setting and Land Use (Historical and Current)

A.1 Project Setting

The Project is in the Deschutes River Valley physiographic province, a Level IV ecoregion designated by the U.S. Environmental Protection Agency (Thorson et al., 2003). This ecoregion is influenced by the Columbia Plateau to the north and Eastern Cascades slopes and foothills to the east. A basalt cap found in the southern region is absent in the northern region and the terrain is more rolling and dissected. The climate is somewhat less arid than the similar high lava plains of the northern basin and range ecoregion to the southeast.

Potential natural vegetation includes Wyoming big sagebrush, antelope bitterbrush, basin big sagebrush, mountain big sagebrush, bluebunch wheatgrass, Idaho fescue, and needle-and-thread on the sagebrush steppe, with western juniper on shallow, rocky soils.

The Project study area is located on a plateau and along a steep slope down to the drainages below. Aerial imagery shows the flat portion of the Project study area was previously modified by dryland wheat or ranching/grazing activities. A recent isolated fire has left the majority of the northern portion of the study area burned and void of vegetation.

A.2 Project Location

The site encompasses approximately 365 acres of land in the center of Jefferson County, just west of the City of Madras. Specifically, the study area is located along SW Elk Drive in Section 30, Tax Lot 600 and Section 31, Tax Lot 100, in Township 10 South, Range 13 West (Figure 2 in Appendix A).

The site is on a plateau about a half mile east of the Deschutes River Canyon. The rim of Dry Canyon occurs along the eastern site boundary and the rim of Willow Canyon occurs along the northern site boundary. Elevation of the study area ranges from 2,370 feet to 2,400 feet near the northwest study area boundary. The topography of the study area is nearly level (0 to 1 percent). Steep slopes occur along the northwest, north, and eastern edge of the study area as the topography transitions into the adjacent canyons.

B) Site Alterations

Aerial imagery shows the vegetation on the flat portion of the Project study area was previously modified by dryland wheat or ranching/grazing activities. A recent isolated fire in August 2018 has left much of the northern portion of the study area burned and void of vegetation.

C) Precipitation Data and Analysis

The Natural Resources Conservation Service (NRCS) and National Water and Climatic Center data for Madras, Oregon, enable comparison of actual precipitation measurements with normal precipitation amounts. Monthly normal ranges of precipitation values were obtained from the NRCS WETS station for Madras, Oregon, while actual daily and monthly precipitation records were obtained from the Weather Underground weather station service records from KORMADRA5, Madras, Oregon. Annual precipitation in the region averages approximately 10.38 inches with an average snowfall of approximately 9.4 inches (NRCS, 2018).

Table 1 presents the precipitation data on the dates of the field investigations and for the 2-week period preceding the field investigations. Precipitation for the water year from October 2017 through October 2018, shown in Table 2, was below normal.

Total precipitation during the 2 weeks before the October 30, 2018 field investigation was approximately 0.05 inch. Overall, hydrologic conditions onsite represented drier than normal conditions during the October field investigation, which was considered during analysis of wetland hydrology indicators. Precipitation prior to the October fieldwork did not complicate the observations or interpretations of wetland indicators.

Table 1. Daily Precipitation (inches) in Madras, Oregon, Area

Date	Precipitation (inches)
October 16-29, 2018	0.05
October 30, 2018	0.02
Total	0.07

Source: Weather Underground, Station (KORMADRA5) (Madras, Oregon Weather Station).

Table 2. Monthly Precipitation Data for the Water Year (October 2017– October 2018)

Month and Year	Actual Precipitation (inches) ^b	Normal Range Precipitation (inches) ^a	Actual of Normal Precipitation
October 2017	0.2	0.42- 0.91	-0.40
November 2017	0.52	0.76- 1.73	-0.24
December 2017	0.25	0.52 1.51	-0.27
January 2018	0.80	0.71- 1.53	-
February 2018	0.40	0.50 1.20	-0.10
March 2018	0.98	0.48- 1.08	-
April 2018	1.43	0.39- 1.01	+0.42
May 2018	0.99	0.46 -1.17	-
June 2018	1.97	0.23 -0.68	+0.18
July 2018	0	0.19- 0.57	-0.19
August 2018	0.01	0.13- 0.47	-0.12
September 2018	0.03	0.22 -0.51	-0.19
October 2018	0.34	-	-0.08
Total	7.92	6.71-12.37	

^a Source: NRCS WETS, Madras, Oregon (NRCS, 2018).

^b Source: Weather Underground, Station KORMADRA5 (Madras, Oregon, Weather Station).

D) Methods

D.1 Information Review

In association with the field investigations, the following information was reviewed:

- 7.5-minute topographic maps (as provided by the U.S. Geological Survey [USGS] via the Environmental Systems Research Institute [the company that sells the software known as ArcGIS])
- National Wetlands Inventory (NWI) maps from the U.S. Fish and Wildlife Service (2018) and National Hydrography Data Set (NHD) (USGS, 2013) (Figure 3 in Appendix A)
- Soil Survey Geographic (SSURGO) database for Upper Deschutes River Area, Oregon, including parts of Deschutes, Jefferson, and Klamath counties (NRCS, 2015) (Figure 4 in Appendix A)
- Hydric Soils List, Jefferson County (NRCS, 2017)
- Digital Globe 2016, aerial imagery, July 16, 2016 (Figure 5 in Appendix A)
- Jefferson County Oregon Tax lot, Urban Growth Boundary, City Boundary (2018) (digital files) (Figure 2 in Appendix A)

D.2 Site-specific Methods and Field Investigation Dates

Field investigations documenting the potential for wetlands and other jurisdictional waters were conducted on October 30, 2018.

Data collection, descriptions, and analysis for wetlands and other jurisdictional waters of the United States and Oregon followed procedures in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the USACE Wetland Delineation Manual: Western Mountains, Valley and Coast Region* (Environmental Laboratory, 2010).

The routine onsite wetland determination method guided observations of vegetation, soils, and hydrological conditions at representative locations. Paired upland and wetland sample plots documented wetland boundaries. The NRCS online *Plants Database* (NRCS, 2016) determined hydrophytic status of vegetation.

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Other waters are mapped along their ordinary high-water elevations using existing data, and field-verified. The centerlines of drainages are mapped for streams with a width of 6 feet or less.

In the October field survey, the site was walked first to observe vegetation and general features while also utilizing the Global Positioning System (GPS) background layers to focus on specific areas. Visual signatures in the field were utilized as well as landscape position, vegetation, recent rainfall, and recent land use.

E) Description of Wetlands and Nonwetland Waters

Delineated wetlands and other waters, sample plot locations, and photo point (PP) locations are shown on Figure 6 in Appendix A. Field data forms are provided in Appendix B. Appendix C contains ground-level color photographs of the areas of investigation. Table 3 summarizes the water resources identified within the study area.

Table 3. Nonwetland Waters within the Madras Solar Project Study Area

Stream ID	Flow Regime	Maximum Width at Ordinary High Water Elevation (feet)	Clean Water Act Section 404 Jurisdiction (PJD) ^a	Oregon Removal-Fill Law Jurisdiction (PJD) ^a
S1	Ephemeral	4	Yes	No
S2	Ephemeral	1	Yes	No
S3	Ephemeral	3	Yes	No

^a Preliminary jurisdictional determinations (PJDs) are advisory only. Final jurisdictional determinations are made by the regulatory agencies.

E.1 Wetlands

No wetlands were mapped within the study area.

E.2 Nonwetland Water

NHD watercourse data mapped three potential waterways within the study area. All three were observed and mapped; however, all three drainages did not follow the exact location identified by NHD mapping. All mapped features are headwaters of tributaries that drain down steep slopes into the adjacent canyons. The drainage headwaters are mapped on Figure 6 in Appendix A with accompanying photos in Appendix C.

S1 is an ephemeral drainage with a V-shaped channel located on the west side of the study area. The waterway did exhibit signs of bed and bank, erosion, and deposition. The width of the channel bed varied between 1.5 and 4 feet with substrate consisting of cobble and boulders. The drainage flows west to Simtustus Lake, which flows to the Deschutes River. Simtustus Lake is above the Pelton Dam.

S2 is an ephemeral drainage located on the northeast side of the study area. It did exhibit signs of bed and bank, erosion, and deposition with a channel width of 1 foot and bed substrate of gravel. The drainage is an unnamed tributary that follows a steep slope draining of Willow Creek. Willow Creek flows to west to Simtustus Lake, which flows to the Deschutes River. Simtustus Lake is above the Pelton Dam.

S3 is an ephemeral drainage located on the east side of the study area. It did exhibit signs of bed and bank, erosion, and deposition with a channel width that varied between 1.5 to 3 feet wide. The channel substrate consists of cobble and boulders. The drainage is an unnamed tributary of Willow Creek that flows to Simtustus Lake, which flows to the Deschutes River. Simtustus Lake is above the Pelton Dam.

F) Deviations from National Wetlands Inventory/Local Wetlands Inventory Mapping

The NWI identified one wetland feature within the study area. A NWI wetland is mapped within and adjacent to a NHD watercourse. No wetland vegetation was observed in this area. The mapped NWI location is within a drainage that is identified in the NHD data set and was mapped during the October field survey. No Local Wetlands Inventory map is available for this area.

G) Wetland Mapping Method

Wetlands and other waters boundaries and sample plot locations were surveyed using a hand-held Trimble Geo Explorer 7X GPS unit with submeter accuracy and post-processed using differential correction by Trimble GPS Pathfinder Office software. ArcGIS software was used to map the wetlands boundaries and sample points.

H) Additional Information

There is no additional information.

I) Results and Conclusions

Table 3 summarizes the results of this wetlands and nonwetland waters identification and delineation within the Project study area and gives PJDs for the identified waters.

The wetland delineation identified three waterways within the study area. None of the ephemeral stream channels are potentially jurisdictional because ephemeral streams are not included in the definition of waters of the State [OAR 141-085-0510(91)].

The waterways flow to the Deschutes River, which is a tributary to a Traditional Navigable Water (Columbia River) and therefore would be jurisdictional to the U.S. Army Corps of Engineers (USACE) under 33 *Code of Federal Regulations* Part 328.3(a)(3).

Jurisdictional determinations, including the potential applicability of jurisdictional exemptions, are made on a case-by-case basis by the regulatory agencies. The jurisdictional determinations in this report are PJDs. PJDs are advisory only. Final determinations are made by the regulatory agencies.

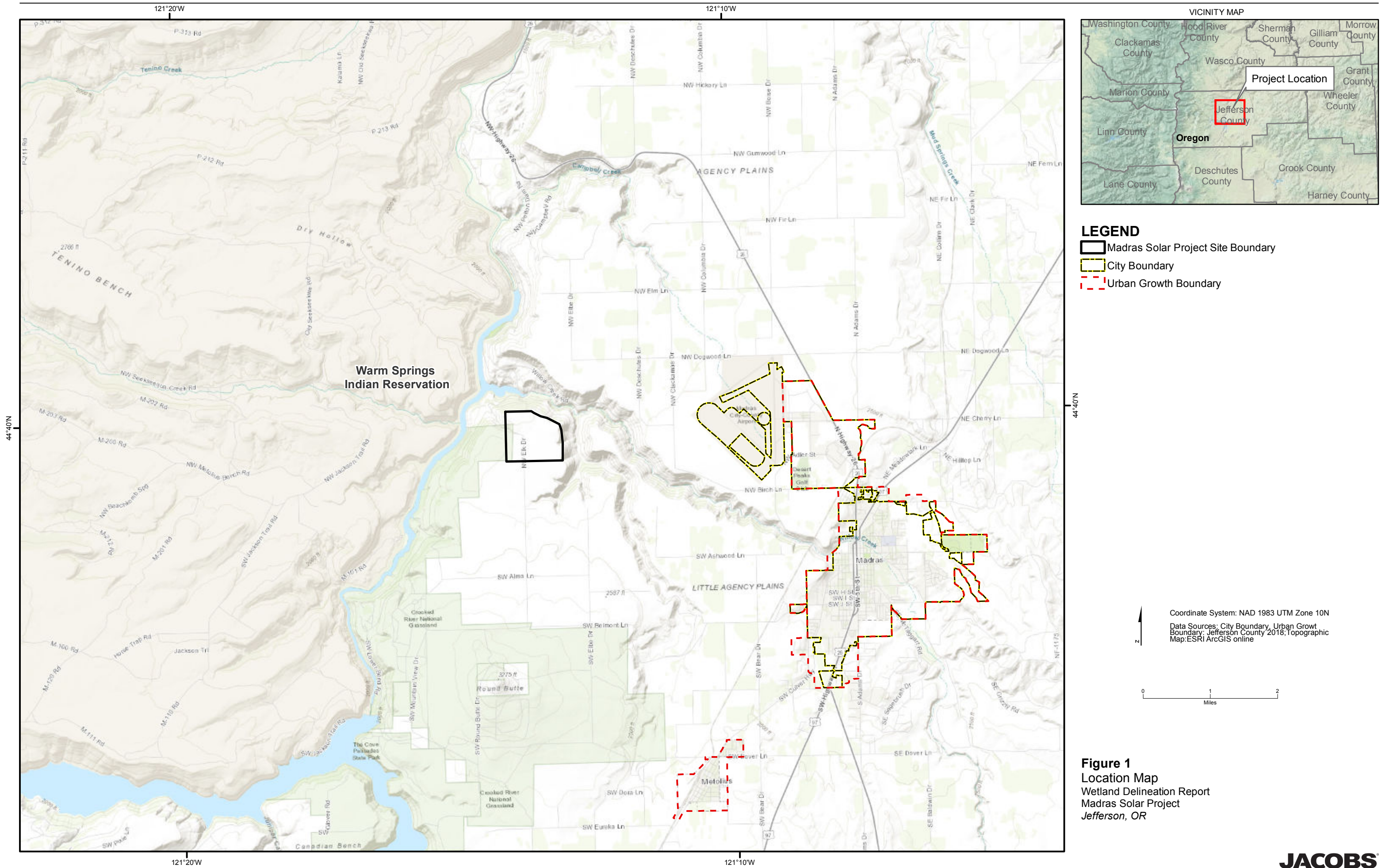
J) Disclaimer OAR 141-090-0035(12)(J)(j)

The wetlands and nonwetland waters identified in this report are potentially subject to federal and state water regulatory jurisdiction. Jurisdictional determinations, including the applicability of exemptions, are made on a case-by-case basis by the regulatory agencies, DSL, and USACE. The regulatory conclusions in this report are provided as PJDs. PJDs, including the applicability of exemptions, are advisory only. Final determinations are made by the regulatory agencies.

This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of Jacobs knowledge. It should be considered a PJD of wetlands and other waters and used at the reader's own risk until it has been reviewed and approved in writing by DSL in accordance with OAR 141-090-0005 through 141-090-0055 and by the USACE, Portland District.

Appendix A

Figures



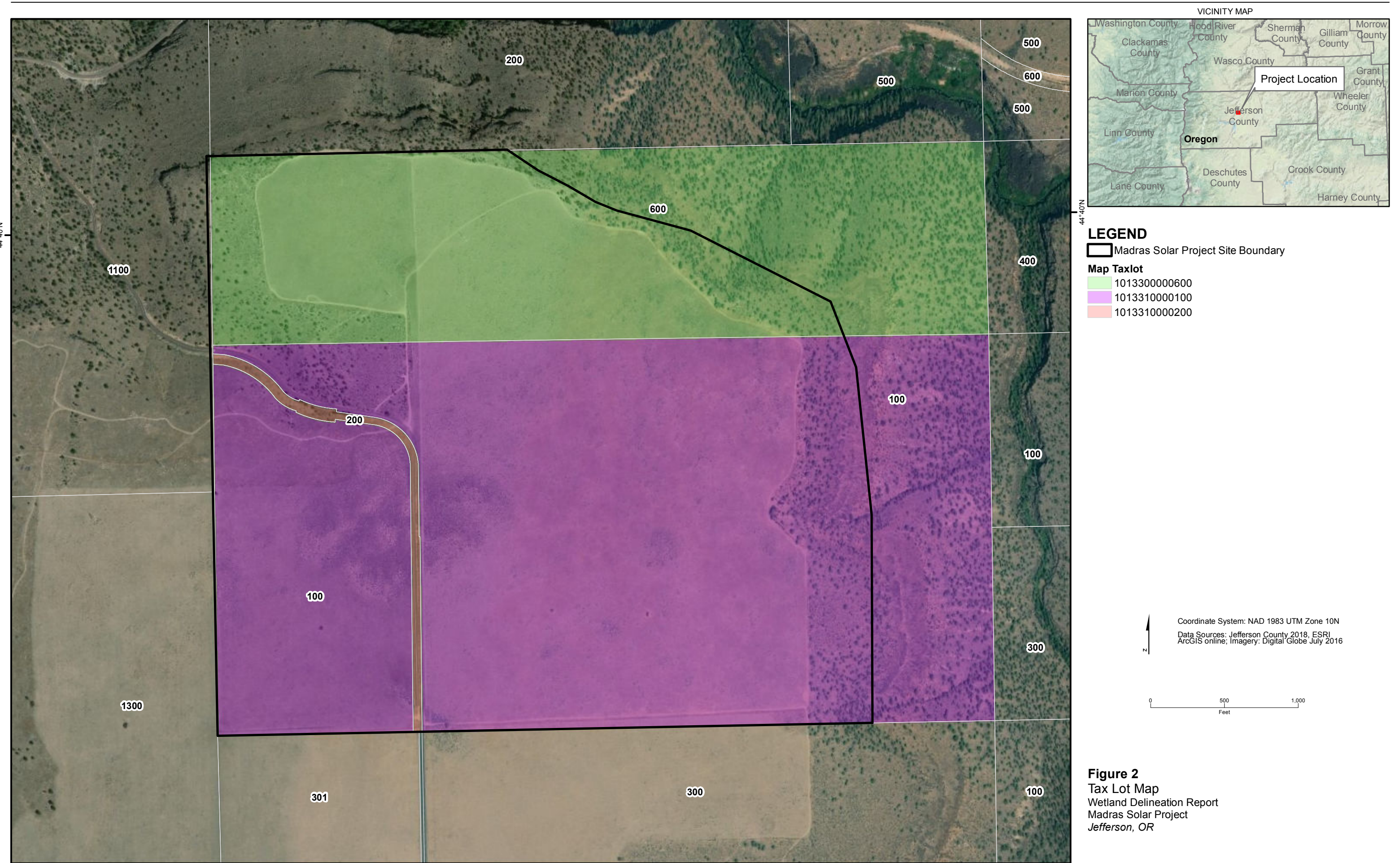


Figure 2
Tax Lot Map
 Wetland Delineation Report
 Madras Solar Project
 Jefferson, OR



- LEGEND**
- Madras Solar Project Site Boundary
 - NHD Watercourse
- National Wetlands Inventory Type**
- Riverine

Coordinate System: NAD 1983 UTM Zone 10N
 Data Sources: NWI: US Fish and Wildlife Service 2018; NHD: USGS 2013; ESRI ArcGIS online; Imagery: Digital Globe July 2016

0 500 1,000
Feet

Figure 3
 National Wetlands Inventory and National Hydrography Dataset Map
 Wetland Delineation Report
 Madras Solar Project
 Jefferson, OR

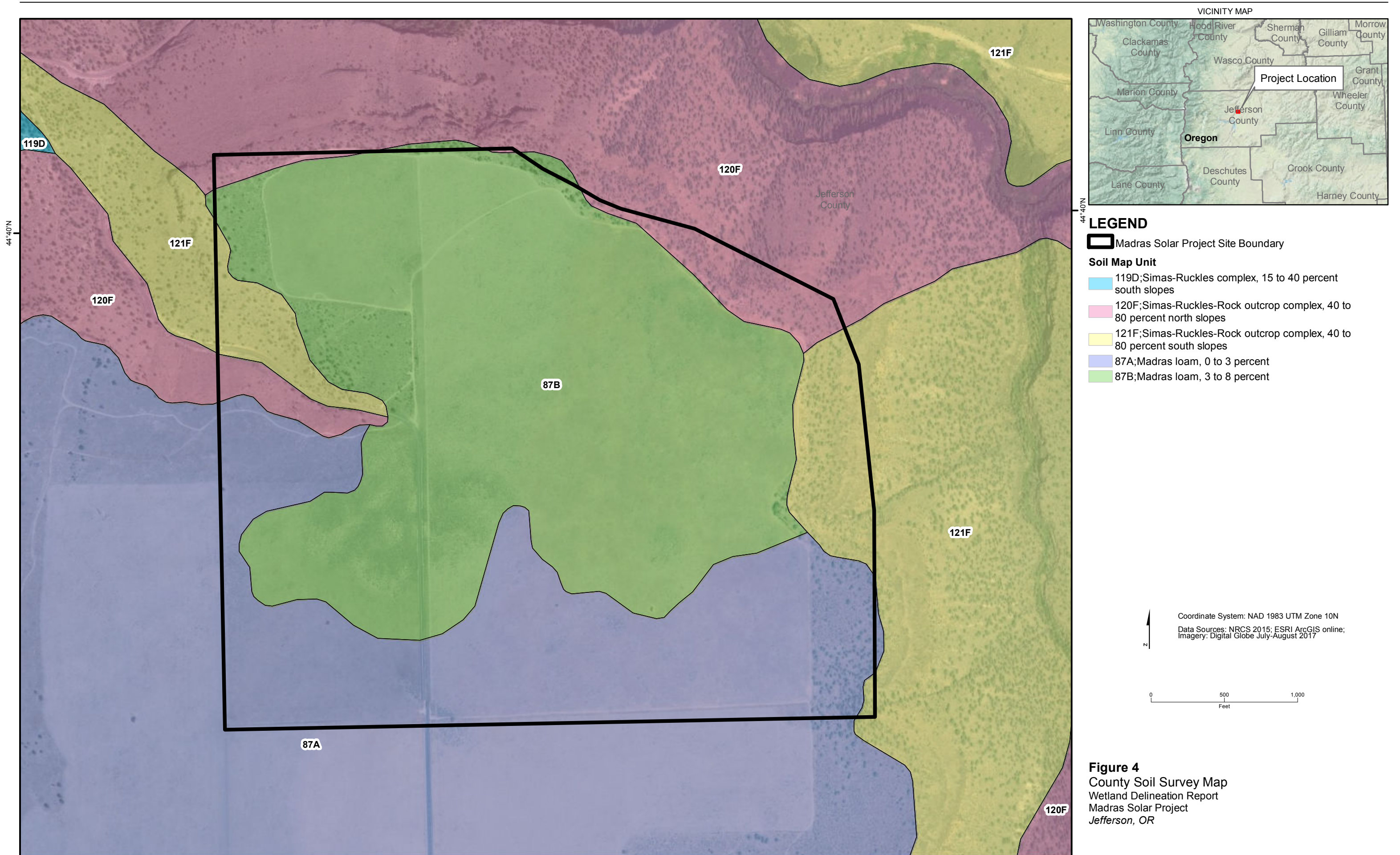



Figure 4
County Soil Survey Map
Wetland Delineation Report
Madras Solar Project
Jefferson, OR



LEGEND
 Madras Solar Project Site Boundary

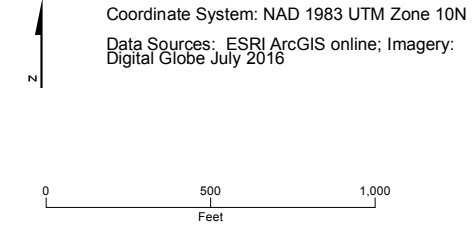
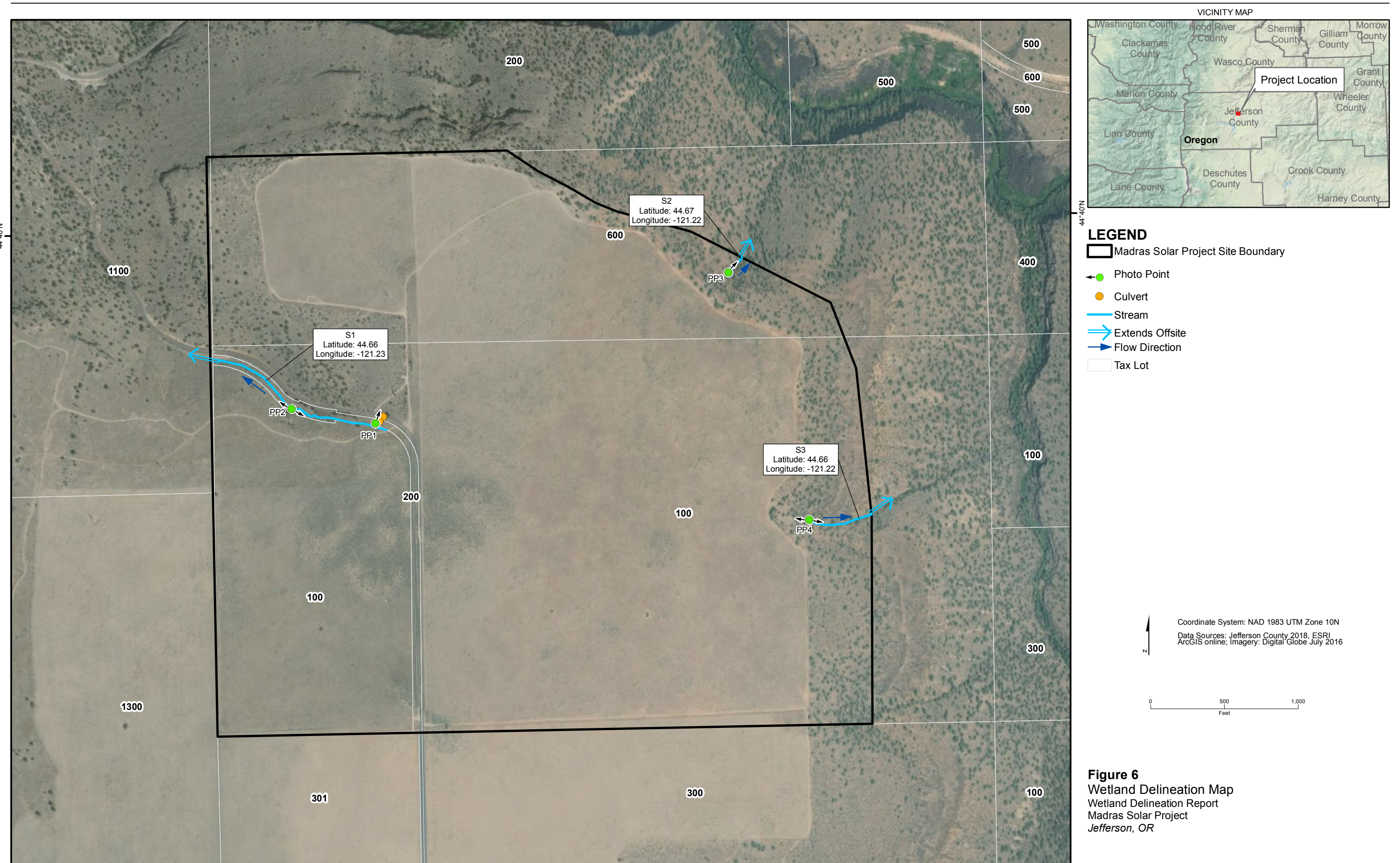


Figure 5
 Aerial Photo Map
 Wetland Delineation Report
 Madras Solar Project
 Jefferson, OR



Appendix B

Wetland Determination Data Forms

Streamflow Duration Field Assessment Forms

Streamflow Duration Field Assessment Form

Project # / Name Madras Solar Project		Assessor C.Steinkoenig																
Address Elk Drive		Date 10/30/2018																
Waterway Name S1-Unnamed tributary of Simtustus Lake		Coordinates at downstream end <div style="display: flex; justify-content: space-between; font-size: small;"> Lat. 44.66 N Long. -121.23 W </div>																
Reach Boundaries		<input type="checkbox"/> Disturbed Site / Difficult Situation (Describe in "Notes")																
Precipitation w/in 48 hours (cm) 0.02 inches		Channel Width (m) 0.02 in.																
Observed Hydrology	% of reach w/observed surface flow <u> 0 </u> % of reach w/any flow (surface or hyporheic) <u> 0 </u> # of pools observed <u> 0 </u>																	
Observations	<div style="display: flex;"> <div style="flex: 1;"> Observed Wetland Plants (and indicator status): No wetland plants observed. </div> <div style="flex: 1;"> Observed Macroinvertebrates: <table style="width:100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th style="text-align: left;">Taxon</th> <th style="text-align: left;">Indicator Status</th> <th style="text-align: left;">Ephemer-optera?</th> <th style="text-align: left;"># of Individuals</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center; padding-top: 10px;">No macroinvertebrates observed.</td> </tr> </tbody> </table> </div> </div>			Taxon	Indicator Status	Ephemer-optera?	# of Individuals	No macroinvertebrates observed.										
Taxon	Indicator Status	Ephemer-optera?	# of Individuals															
No macroinvertebrates observed.																		
Indicators	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">1. Are aquatic macroinvertebrates present?</td> <td style="width: 20%; text-align: center;"><input type="checkbox"/> Yes</td> <td style="width: 20%; text-align: center;"><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>2. Are 6 or more individuals of the Order Ephemeroptera present?</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>3. Are perennial indicator taxa present? (refer to Table 1)</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>4. Are FACW, OBL, or SAV plants present? (Within ½ channel width)</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>5. What is the slope? (In percent, measured for the valley, not the stream)</td> <td colspan="2" style="text-align: center;"><u> 4 </u> %</td> </tr> </table>			1. Are aquatic macroinvertebrates present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	2. Are 6 or more individuals of the Order Ephemeroptera present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	3. Are perennial indicator taxa present? (refer to Table 1)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	4. Are FACW, OBL, or SAV plants present? (Within ½ channel width)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	5. What is the slope? (In percent, measured for the valley, not the stream)	<u> 4 </u> %	
1. Are aquatic macroinvertebrates present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																
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5. What is the slope? (In percent, measured for the valley, not the stream)	<u> 4 </u> %																	
Conclusions	<div style="text-align: center;"> <pre> graph TD Q1([Are aquatic macroinvertebrates present? (Indicator 1)]) --> Q2a([If Yes: Are 6 or more individuals of the Order Ephemeroptera present? (Indicator 2)]) Q1 --> Q2b([If No: Are SAV, FACW, or OBL plants present? (Indicator 4)]) Q2a --> Q3a([If Yes: Are perennial indicator taxa present? (Indicator 3)]) Q2a --> Q3b([If No: INTERMITTENT]) Q3a --> Q4a([If Yes: PERENNIAL]) Q3a --> Q4b([If No: What is the slope? (Indicator 5)]) Q4b --> Q5a([Slope < 16%: INTERMITTENT]) Q4b --> Q5b([Slope ≥ 16%: PERENNIAL]) Q2b --> Q6a([If Yes: What is the slope? (Indicator 5)]) Q2b --> Q6b([If No: EPHEMERAL]) Q6a --> Q7a([Slope < 10.5%: INTERMITTENT]) Q6a --> Q7b([Slope ≥ 10.5%: EPHEMERAL]) </pre> </div>																	
Single Indicators: <input type="checkbox"/> Fish <input type="checkbox"/> Amphibians		Finding: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial																

Streamflow Duration Field Assessment Form

Notes: single indicator conclusions, description of disturbances or modifications that may interfere with indicators, etc.)

Difficult Situation:

Describe situation. For disturbed streams, note extent, type, and history of disturbance.

☐ Prolonged Abnormal Rainfall / Snowpack

☐ Below Average

☐ Above Average

☒ Natural or Anthropogenic Disturbance

☐ Other: _____

Additional Notes: (sketch of site, description of photos, comments on hydrological observations, etc.) Attach additional sheets as necessary.

An isolated fire occurred on the northern section of study area in August 2018. However, this did not change the outcome of the findings for wetlands and other water bodies. See Photo PP2 in Appendix C.

Ancillary Information:

☐ Riparian Corridor

☐ Erosion and Deposition

☐ Floodplain Connectivity

Observed Amphibians, Snake, and Fish:

Taxa	Life History Stage	Location Observed	Number of Individuals Observed

Streamflow Duration Field Assessment Form

Project # / Name Madras Solar Project		Assessor C.Steinkoenig																
Address Elk Drive		Date 10/30/2018																
Waterway Name S2- unnamed tributary of Willow Creek		Coordinates at downstream end (ddd.mm.ss) Lat. 44.67 N Long. -121.23 W																
Reach Boundaries		<input type="checkbox"/> Disturbed Site / Difficult Situation (Describe in "Notes")																
Precipitation w/in 48 hours (cm) 0.02 inches		Channel Width (m) 0.02 in.																
Observed Hydrology	% of reach w/observed surface flow <u> 0 </u> % of reach w/any flow (surface or hyporheic) <u> 0 </u> # of pools observed <u> 0 </u>																	
Observations	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Observed Wetland Plants (and indicator status): No wetland plants observed. </div> <div style="width: 45%;"> Observed Macroinvertebrates: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Taxon</th> <th style="text-align: left;">Indicator Status</th> <th style="text-align: left;">Ephemeroptera?</th> <th style="text-align: left;"># of Individuals</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center; padding-top: 10px;">No macroinvertebrates observed.</td> </tr> </tbody> </table> </div> </div>			Taxon	Indicator Status	Ephemeroptera?	# of Individuals	No macroinvertebrates observed.										
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☐ Floodplain Connectivity

Observed Amphibians, Snake, and Fish:

Taxa	Life History Stage	Location Observed	Number of Individuals Observed

Appendix C

Ground-Level Photographs

Project Title	Madras Solar Project
Location	City of Madras, Jefferson County, Oregon
Date	December 2018

Madras Solar Project

Appendix C: Ground-level Photographs



Photograph 1: Facing northeast from the south-central portion of the site toward representative shrub-steppe habitat



Photograph 2: Facing west from northeast portion of site representative of burned area



Photograph 3: Facing northwest from northeast portion of site



Photograph 4: PP1 – Facing North Elk Drive Roadway culvert



Photograph 5: PP2 – S1 facing east



Photograph 6: PP2 – S1 facing west



Photograph 7: PP3 – S2 facing northeast



Photograph 8: PP4 – S3 facing east



Photograph 9: PP4 – S3 facing west

Appendix D

Additional Information

None.

Appendix E

Literature Cited

Appendix E. Literature Cited

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Thorson, T. D., S. A. Bryce, D. A. Lammers, A. J. Woods, J. M. Omernik, J. Kagan, D. E. Pater, and J. A. Comstock. 2003. Ecoregions of Oregon (color poster with map, descriptive text, summary tables, and photographs). U.S. Geological Survey, Reston, VA. (map scale 1:1,500,000).

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U.S. Geological Survey (USGS). 2013. *National Hydrography Dataset*. Accessed online at <https://www.blm.gov/or/gis/data/hydro.php>. Downloaded on October 17, 2016.

Weather Underground. 2018. Downtown Madras KORMADRA5. Accessed November 2018. <https://www.wunderground.com/personal-weather-station/dashboard?ID=KORMADRA5#history>

Attachment J-2
Oregon Department of State Lands
Concurrence Letter and U.S. Army Corps
of Engineers Preliminary Jurisdictional
Determination Letter



Oregon

Kate Brown, Governor

Department of State Lands

775 Summer Street NE, Suite 100

Salem, OR 97301-1279

(503) 986-5200

FAX (503) 378-4844

www.oregon.gov/dsl

State Land Board

March 5, 2019

Ecoplexus, Inc.
Attn: Terrance Unrein
101 2nd St., #1250
San Francisco, CA 94105

Kate Brown
Governor

Dennis Richardson
Secretary of State

Re: WD # 2018-0671 Wetland Delineation Report for the Madras Solar Project; Jefferson County; T10S R13W Sec. 31, Tax Lot 100 and 200 (Portions); T10S R13W Sec. 30, Tax Lot 600 (Portion)

Tobias Read
State Treasurer

Dear Mr. Unrein:

The Department of State Lands has reviewed the wetland delineation report prepared by Jacobs for the site referenced above. Please note that the study area includes only a portion of the tax lots described above (see the attached map). Within the study area, 3 ephemeral drainages (S1-S3) were identified. These drainages are exempt per OAR 141-085-0515(3). Based upon the information presented in the report, and additional information submitted upon request, we concur that there are no jurisdictional features with the study area boundary as mapped in revised Figure 6 of the report. Please replace all copies of the preliminary wetland map with this final Department-approved map.

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will determine jurisdiction for purposes of the Clean Water Act. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. Please phone me at 503-986-5246 if you have any questions.

Sincerely,



Chris Stevenson
Jurisdiction Coordinator

Approved by



Peter Ryan, PWS
Aquatic Resource Specialist

Enclosures

ec: Claudia Steinkoenig, Jacobs
Jefferson County Planning Department (Maps enclosed for updating LWI)
Andrea Wagner, Corps of Engineers
Heidi Hartman, DSL

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at: <https://apps.oregon.gov/DSL/EPS/program?key=4>.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279**. A single PDF of the completed cover form and report may be e-mailed to: **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

Contact and Authorization Information

☒ Applicant ☐ Owner Name, Firm and Address:

Ecoplexus, Inc.
Terrance Unrein
101 2nd Street, #1250
San Francisco, CA 94105

Business phone # (970) 302-9457

Mobile phone # (optional)

E-mail: tunrein@ecoplexus.com

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #

Mobile phone # (optional)

E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Terrance Unrein

Signature: Terrance Unrein

Date: 12/19/18

Special instructions regarding site access: Just call us to coordinate, easy site to access

Project and Site Information

Project Name: Madras Solar Project

Latitude: ~44.66 6589.59 Longitude: ~-121.22 4633
decimal degree - centroid of site or start & end points of linear project

Proposed Use:

63-megawatt DC photovoltaic (PV) solar energy project.

Tax Map # 1013310000100, 1013300000600

Tax Lot(s) 100, 600

Tax Map #

Project Street Address (or other descriptive location):

Adjacent to SW Elk Drive

Tax Lot(s)

Township 10S Range 13W Section 30,31 QQ

Use separate sheet for additional tax and location information

City: West of the City of Madras County: Jefferson

Waterway: NA

River Mile: NA

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:

Jacobs
C.Steinkoenig
2020 SW 4th Avenue
Portland, Oregon 97201

Phone # (503) 736-4136

Mobile phone # (if applicable)

E-mail: claudia.steinkoenig@jacobs.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: C. Steinkoenig

Date: 12/18/2018

Primary Contact for report review and site access is ☒ Consultant ☒ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present?

☒ Yes ☐ No

Study Area size: 365 acres

Total Wetland Acreage: 0.0000

Check Applicable Boxes Below

☐ R-F permit application submitted

☒ Fee payment submitted \$ 437

☐ Mitigation bank site

☐ Fee (\$100) for resubmittal of rejected report

☐ Industrial Land Certification Program Site

☐ Request for Reissuance. See eligibility criteria. (no fee)

☐ Wetland restoration/enhancement project (not mitigation)

DSL # _____ Expiration date _____

☐ Previous delineation/application on parcel If known, previous DSL # _____

☐ LWI shows wetlands or waters on parcel Wetland ID code _____

For Office Use Only

DSL Reviewer: C.S.

Fee Paid Date: ____ / ____ / ____

DSL WD # 2018-0671

Date Delineation Received: 12/19/18

Scanned: ☐

Electronic: ☒

DSL App.# _____

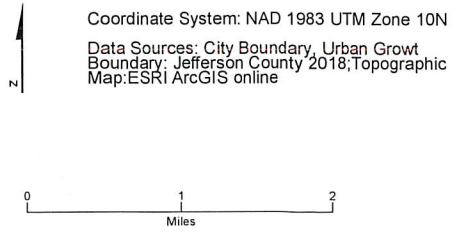
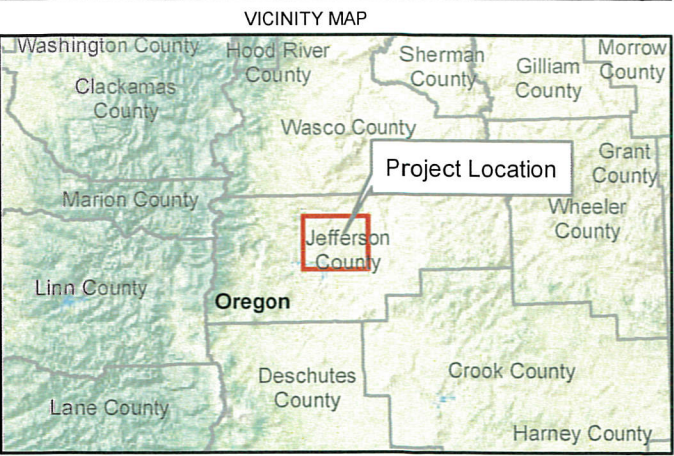
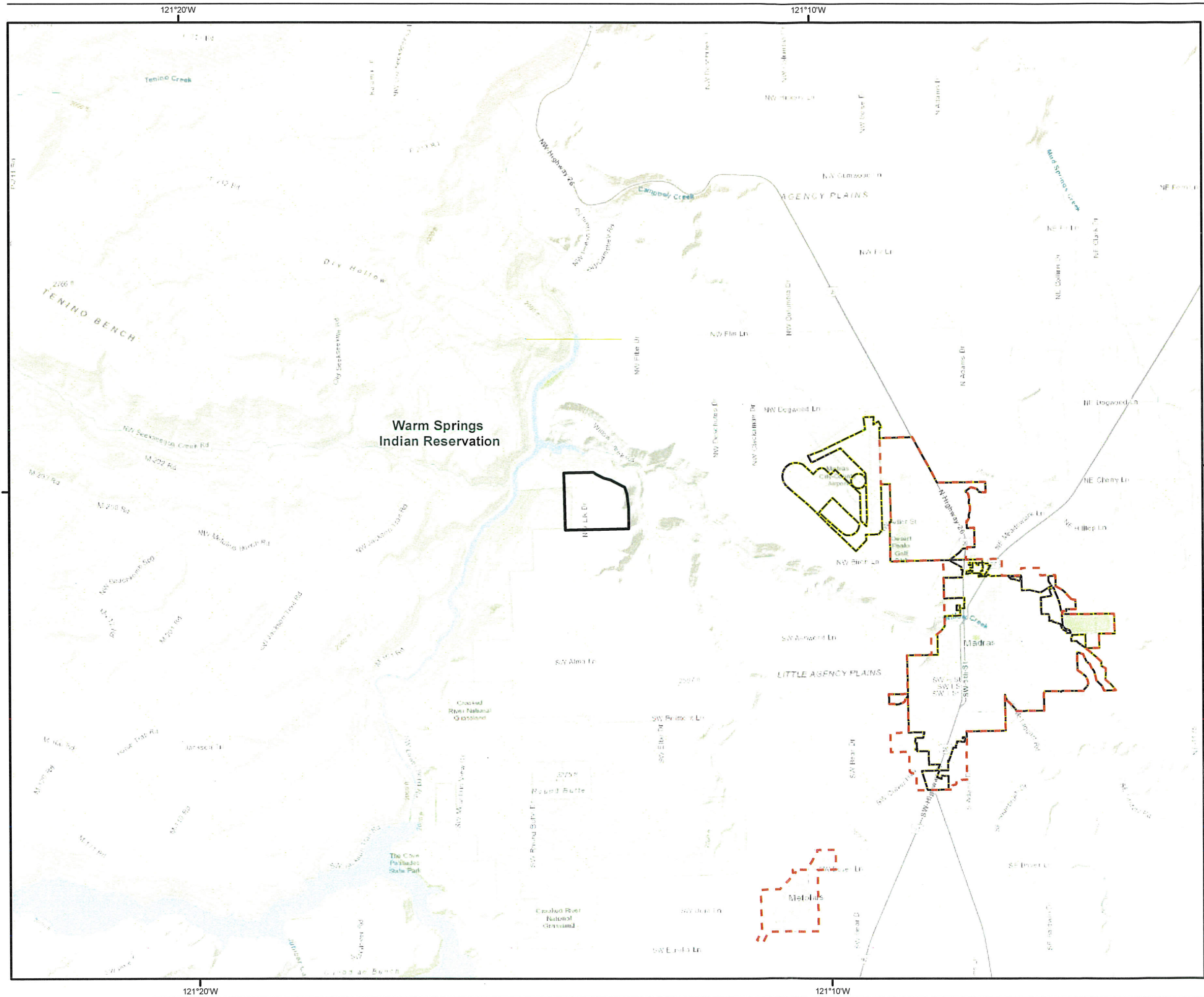
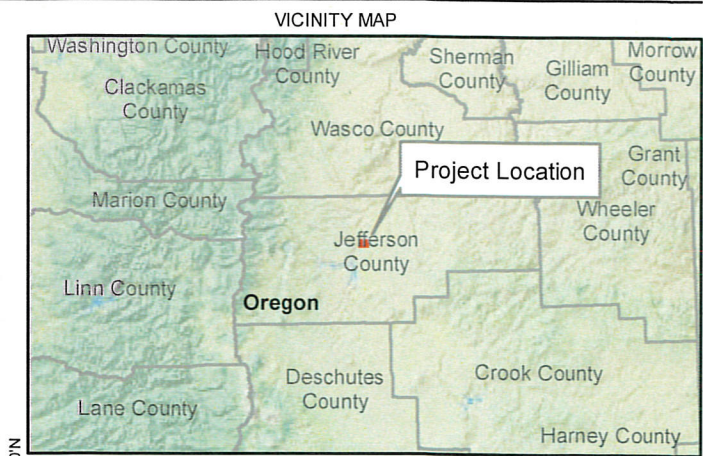
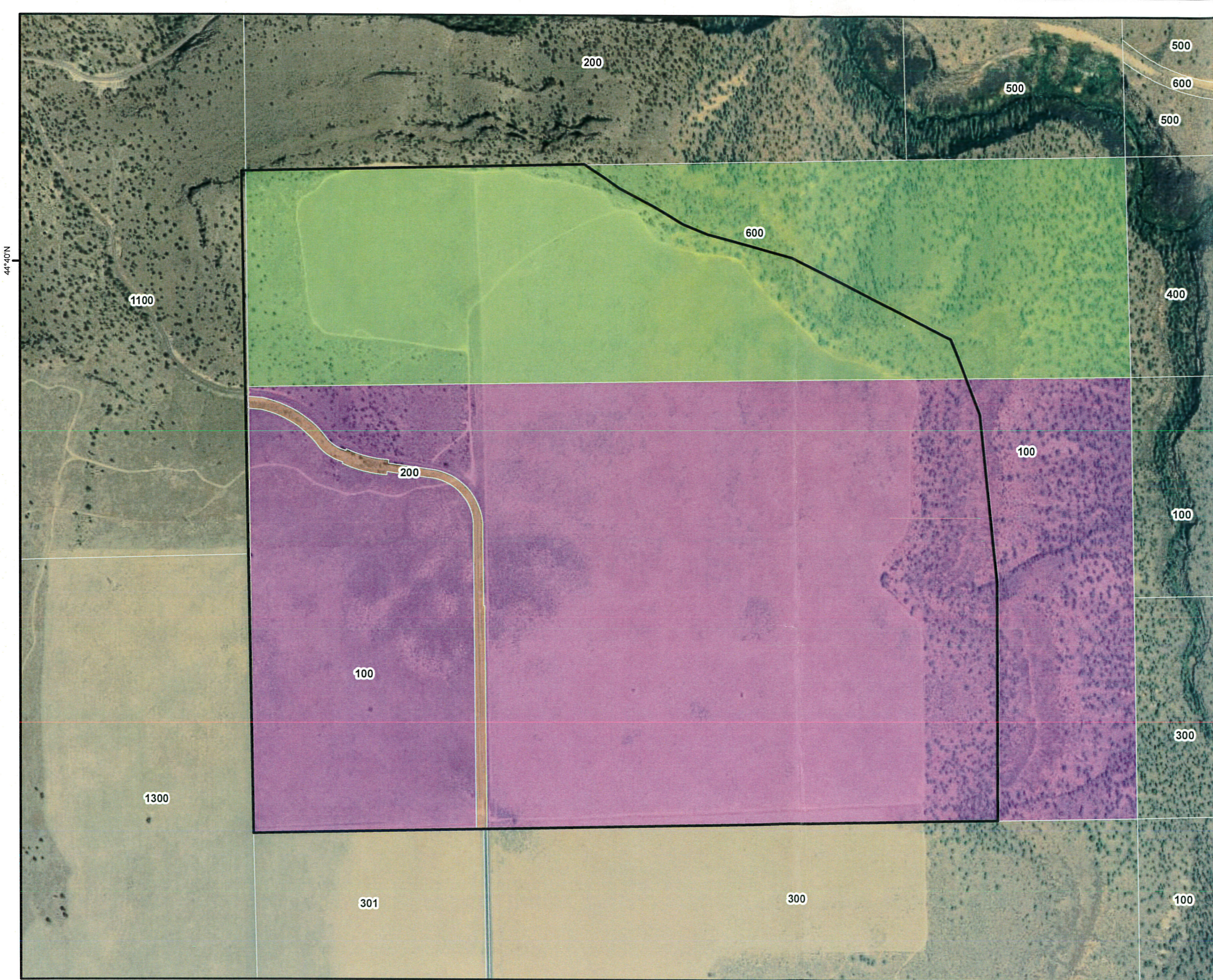


Figure 1
 Location Map
 Wetland Delineation Report
 Madras Solar Project
 Jefferson, OR



LEGEND

Madras Solar Project Site Boundary

Map Taxlot

- 1013300000600
- 1013310000100
- 1013310000200

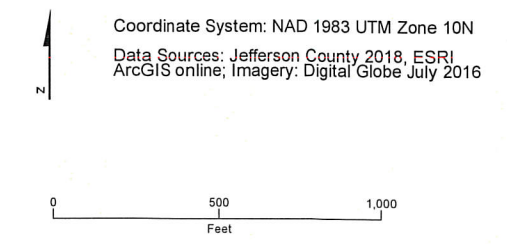
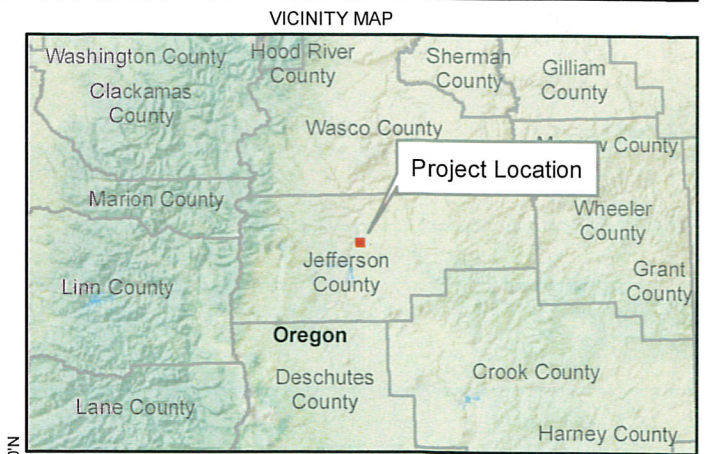
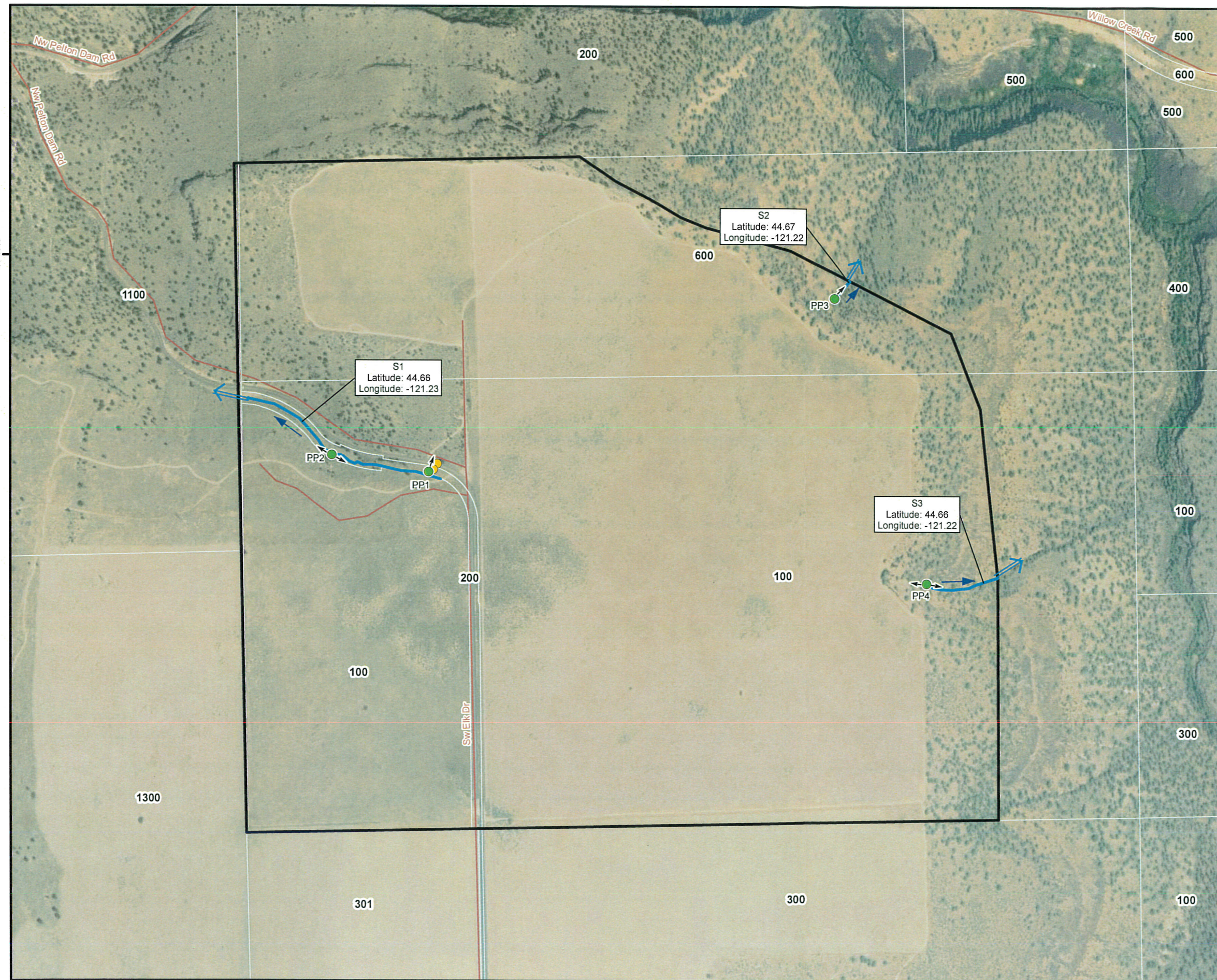


Figure 2
 Tax Lot Map
 Wetland Delineation Report
 Madras Solar Project
 Jefferson, OR



LEGEND

- Madras Solar Project Site Boundary
- Photo Point
- Culvert
- Stream
- ➡ Extends Offsite
- ➡ Flow Direction
- Tax Lot
- Road

DSL WD # 2018-0671
 Approval Issued 3-05-19
 Approval Expires 3-05-24

Coordinate System: NAD 1983 UTM Zone 10N
 Data Sources: Jefferson County 2018, ESRI
 ArcGIS online; Imagery: Digital Globe July 2016
 Note: Locations were surveyed using a hand-held
 Trimble Geo Explorer 7X global positioning system
 (GPS) unit with submeter accuracy.

0 500 1,000
 Feet

Figure 6
 Wetland Delineation Map
 Wetland Delineation Report
 Madras Solar Project
 Jefferson, OR



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT
EUGENE FIELD OFFICE
211 E 7TH AVENUE, SUITE 105
EUGENE, OR 97401-2763

March 25, 2019

Regulatory Branch
Corps No. NWP-2018-616

Mr. Terrance Unrein
Ecoplexus, Inc.
101 2nd Street, Suite 1250
San Francisco, California 94105
tunrein@ecoplexus.com

Dear Mr. Unrein:

The U.S. Army Corps of Engineers (Corps) received your request for a Preliminary Jurisdictional Determination (PJD) of the aquatic resources within the review area as shown on the enclosed drawings (Enclosure 1). The review area is located at Tax Lots 100 and 600 adjacent to Southwest Elk Drive near Madras, Jefferson County, Oregon at Latitude/Longitude: 44.66°, -121.22°.

The Corps has determined the aquatic resources identified on the enclosed PJD form (Enclosure 2) "may be" waters of the U.S. The aquatic resources shown in Enclosure 1 are considered "potential jurisdictional waters" and the boundaries are approximate. The Corps may use this PJD for the basis of a permit decision. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of this PJD will treat all aquatic resources in the review area that would be affected in any way by a permitted activity as jurisdictional. Please see the enclosed PJD form for additional information on the applicability of a PJD. If you concur with the PJD, please sign and return the PJD form to either the letterhead address above or the email address below within 30 days of the date of this letter.

The enclosed PJD is advisory in nature and may not be appealed. However, you have the option to request an Approved Jurisdictional Determination (AJD). An AJD is an official determination regarding the presence or absence of waters of the U.S. and is an appealable action. The enclosed *Notification of Administrative Appeal Options and Process and Request for Appeal* form describes options regarding PJDs and AJDs (Enclosure 3). If an AJD is requested, please be aware that we may require the submittal of additional information to complete the AJD.

The enclosed PJD finds there "may be" waters of the U.S. in the subject review area and the determination does not have an expiration date. However, the Corps may re-evaluate this determination at any time if new information warrants revisions.

- 2 -

If you have any questions regarding our Regulatory Program or jurisdictional determinations, please contact me at the letterhead address, by telephone at (541) 465-6882, or E-mail andrea.r.wagner@usace.army.mil.

Sincerely,

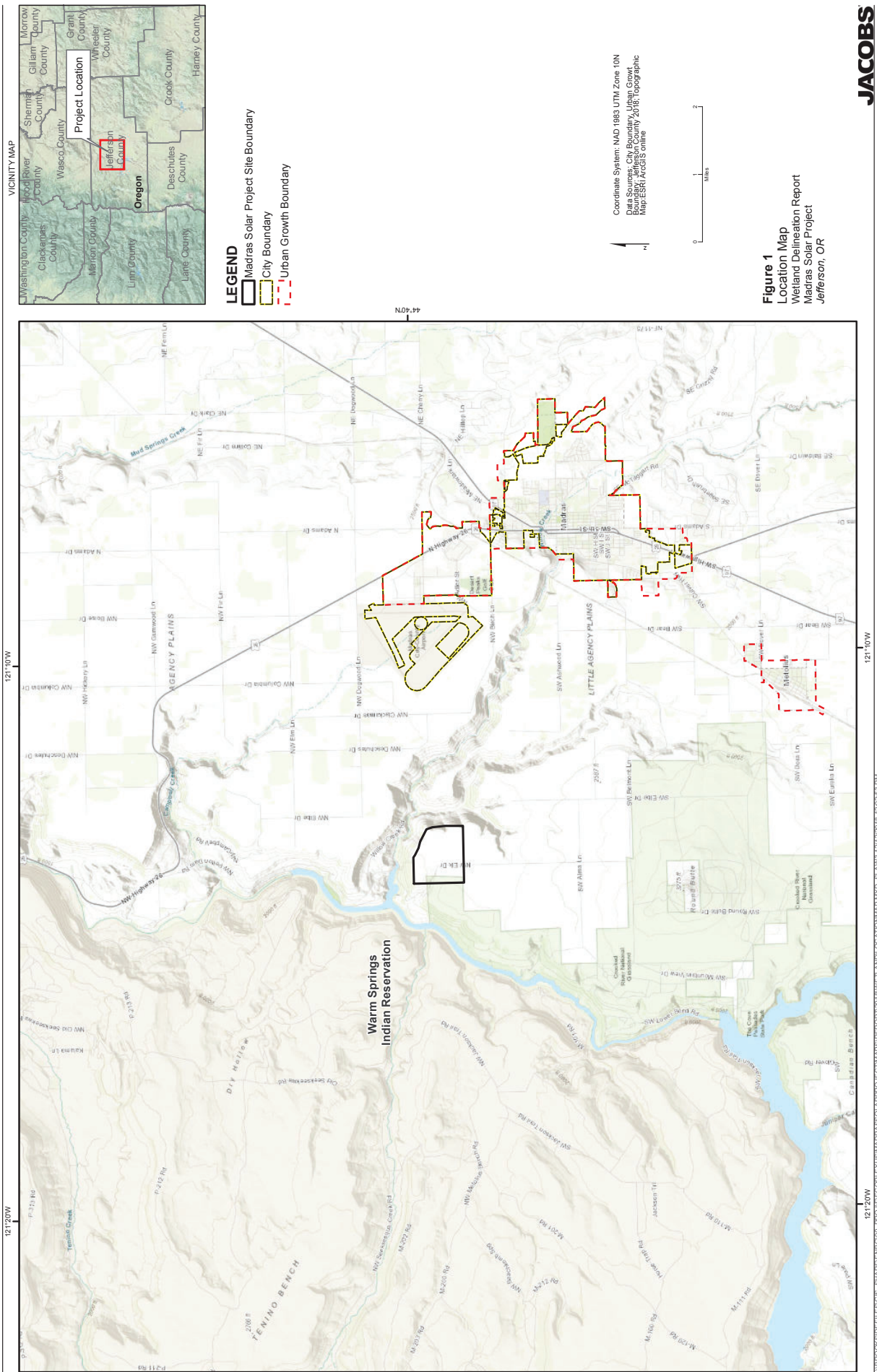


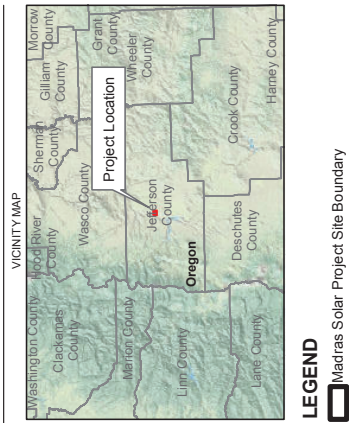
Andrea Wagner
Project Manager
Regulatory Branch

Enclosures

cc with drawings:

Oregon Department of State Lands (Hartman)
Jacobs Engineering Groups, Inc. ([Steinkoenig, claudia.steinkoenig@jacobs.com](mailto:Steinkoenig@jacobs.com))





Coordinate System: NAD 1983 UTM Zone 10N
 Data Source: ESRI ArcGIS online Imagery
 Digitized: July 2018

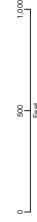
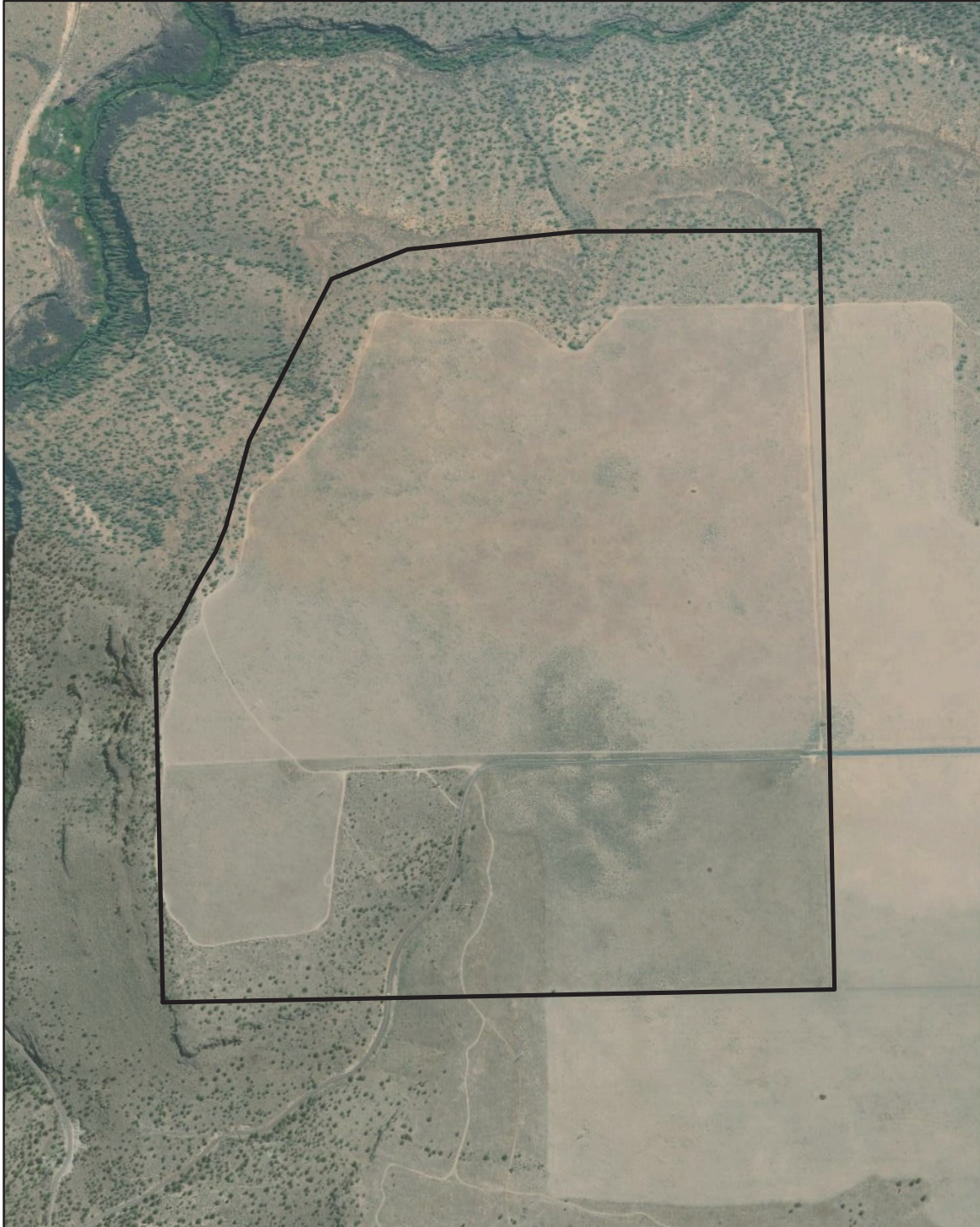
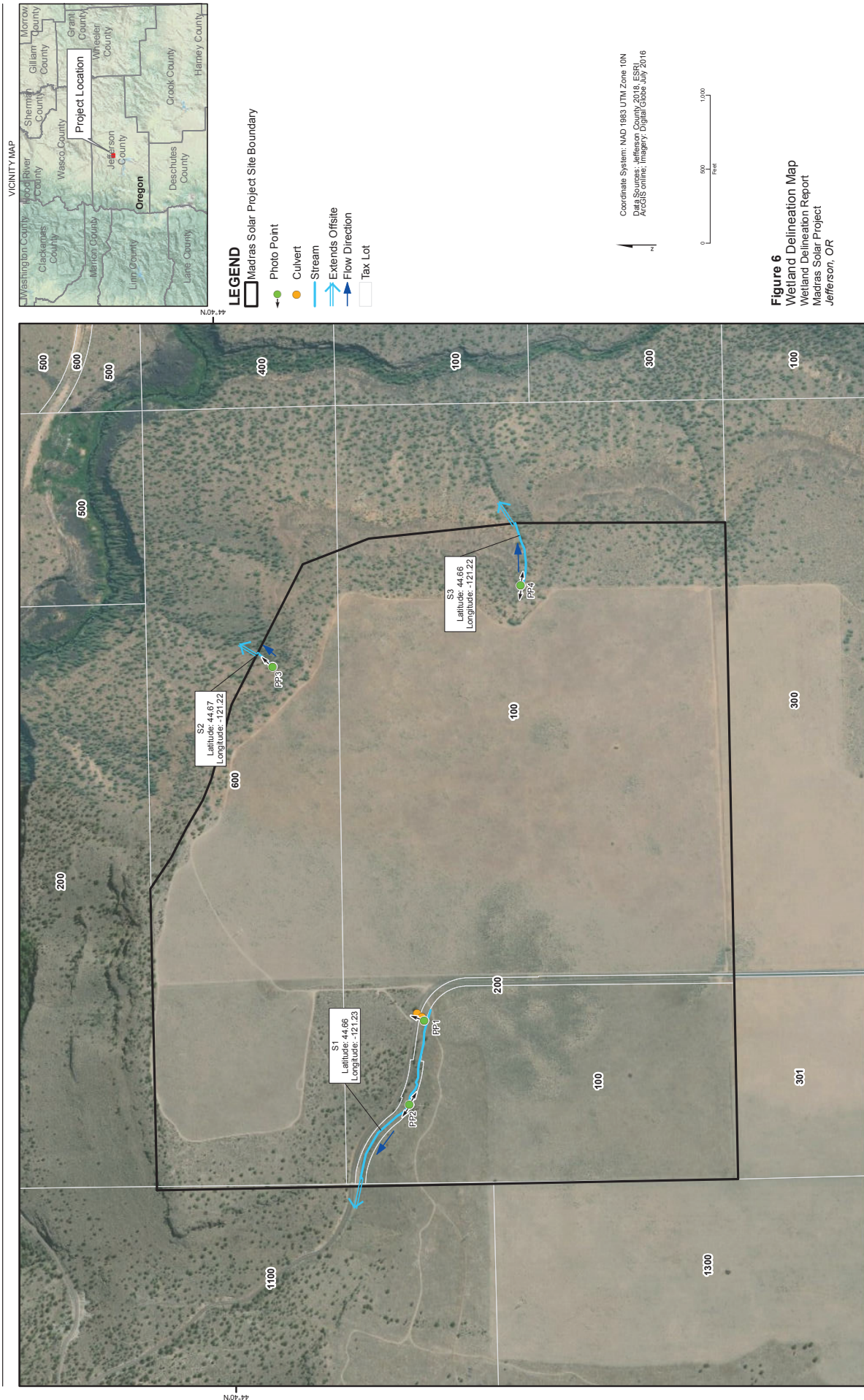


Figure 5
 Aerial Photo Map
 Wetland Delineation Report
 Madras Solar Project
 Jefferson, OR



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PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: March 25, 2019

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Ecoplexus, Inc.
101 2nd Street
Suite 1250
San Francisco, California 94105

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENWP-OD-G, Ecoplexus, Inc.
(Wetland Delineation), NWP-2018-616

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AT DIFFERENT SITES)

State: Oregon County: Jefferson City: Madras

Center coordinates of site (lat/long in degree decimal format):

Latitude: 44.66° North, Longitude: -121.22° West

Universal Transverse Mercator: (see Lat/Long above)

Name of nearest waterbody: Deschutes River

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination.
☐ Field Determination.

Date: March 25, 2019
Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site Number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimate amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Site 1 S1	44.663521	-121.232747	1,500 linear feet	non-wetland waters	Section 404
Site 2 S2	44.665666	-121.220969	150 linear feet	non-wetland waters	Section 404
Site 3 S3	44.660920	-121.218149	520 linear feet	non-wetland waters	Section 404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map: Provided in "Wetlands and Nonwetland Waters Delineation Report for the Madras Solar Project" prepared for Ecoplexsus, Inc. prepared by Jacobs Engineering Group, Inc., 12 December 2018 (Delineation)
- ☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report. Rationale:
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☒ U.S. Geological Survey Hydrologic Atlas: 170703060204
 - ☒ USGS NHD data
 - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24k Madras West
- ☒ Natural Resources Conservation Service Soil Survey. Citation: Figure 4 in Delineation, NRCS Web Soil Survey accessed 25 March 2019
- ☒ National wetlands inventory map(s). Cite name: Figure 3 in Delineation, ORM accessed 25 March 2019
- ☐ State/local wetland inventory map(s):
- ☐ FEMA/FIRM map(s):
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs ☒ Aerial (Name & Date): Figures 5 and 6 in Delineation, ORM and Google Earth accessed 25 March 2019
or ☒ Other (Name & Date): Appendix C in Delineation
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

 25 March 2019

Signature and date of Regulatory
staff member completing PJD

Signature and date of person requesting
PJD (REQUIRED, unless
obtaining the signature is impracticable)¹

¹ Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Ecoplexus, Inc.		File Number: NWP-2018-616	Date: 25 March 2019
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
	PERMIT DENIAL	C	
	APPROVED JURISDICTIONAL DETERMINATION	D	
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found in Corps regulations at 33 CFR Part 331, or at <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/FederalRegulation.aspx>

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Mr. William D. Abadie
U.S. Army Corps of Engineers
Portland District Office
PO Box 2946

Portland, OR 97208-2946 Telephone: (503)808-4373

If you only have questions regarding the appeal process you may also contact:

Melinda M. Witgenstein, Regulatory Appeals Review Officer
U.S. Army Corps of Engineers, Northwestern Division
P.O. Box 2870
Portland, OR 97208-2870 Telephone: (503) 808-3888

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number: