DUDEK
605 NE 21ST AVE
PORTLAND, OREGON 97232
T 971.930.1700

MEMORANDUM

To:	Jupiter Power, LLC
From:	Tony Vingiello, Dudek
Subject:	Biological and Aquatic Resources Preliminary Assessment Results for the West Union Energy Storage Project
Date	August 2, 2024
cc:	Bradley Cole, Dudek
Attachment(s):	Figure 1. Aquatic Resources Figure 2. Soils

Dudek conducted a preliminary site assessment for a 9.51-acre study area encompassing Tax Lots 4300 and 4400 in the NW ¼ of Section 14, Township 1 North, Range 2 West, Willamette Meridian, in Hillsboro, Washington County, Oregon (Figure 1. Aquatic Resources). The existing address is 21393 NW Union Road, Hillsboro, OR 97124; the street address will change in the future to 21435. The study area is bound to the south by NW West Union Road and to the west by NW Bendemeer Road. There are residences north of the study area and rural residences with open fields. A substation lies south of the project, and the larger vicinity includes farmland, light industry, and rural residences with a mix of wooded and open land. The study area lies at the north end of Willamette Valley.

1 Biological Resources Desktop Review

The following datasets were reviewed prior to conducting a site visit of the study area:

- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database (USFWS 2024a)
- USFWS critical habitat data (USFWS 2024b)
- USFWS National Wetland Inventory (USFWS 2024c)
- National Marine Fisheries Service Critical Habitat Mapper (NMFS 2024)
- Oregon Department of State Lands Statewide Wetland Inventory (DSL 2024)
- Oregon Department of Geology and Mineral Industries LiDAR (DOGAMI 2024)
- Oregon Biodiversity Information Center (ORBIC) (Institute of Natural Resources [INR] 2024)
- USFWS National Wetland Inventory (USFWS 2024c)
- USDA Soil Data for Washington County, Oregon (USDA 2023)
- USGS National Hydrography Dataset (USGS 2024)

A USFWS IPaC database search identified the following special-status species as having a potential to occur within the study area and surrounding vicinity: northern spotted owl (*Strix occidentalis caurina*; federally threatened [FT]), marbled murrelet (*Brachyramphus marmoratus*, FT), streaked horned lark (*Eremophila alpestris strigata*; FT), northwestern pond turtle (*Actinemys marmorata*; proposed threatened [PT]), Fender's blue butterfly (*Icaricia icarioides fenderi*); federally endangered [FE]), and monarch butterfly (*Danaus plexippus*; candidate species). Two flowering plants are also listed, Willamette daisy (*Erigeron decumbens*; FE) and Kincaid's lupine (*Lupinus sulphureus* spp. *kincaidii*, FT).

<u>The following ORBIC species information is confidential and not to be distributed:</u>

Dudek requested rare species information from ORBIC which returned these occurrences within a two-mile radius from the study area boundary: Oregon floater (mussel) (*Anodonta oregonensis*, federal species of concern, no state status); Pacific lamprey (*Entosphenus tridentatus*; federal species of concern, state sensitive), and steelhead (*Oncorhynchus mykiss* pop. 33, Upper Willamette River Evolutionarily Significant Unit, winter run, FT, state sensitive). None of the ORBIC occurrences are mapped within the study area. No USFWS or NMFS critical habitat is designated within the study area boundary or within 2 miles of the study area (USFWS 2024b; NMFS 2024).

USFWS National Wetlands Inventory and U.S. Geological Survey National Hydrography Dataset (NHD) mapping show no wetland or water features within the study area. The parcel sits just outside of the Local Wetland Inventory (LWI) for the City of Hillsboro, and no features appear to continue from the boundaries of LWI mapping into the study area (DSL 2024).

Figure 2 shows three soil map units occur within the study area: Amity silt loam (Map Unit 2, 4 percent hydric inclusions), Helvetia silt loam (Map Unit 19B, 2 to 7 percent slopes, 1 percent hydric inclusions), and Woodburn silt loam (Map Unit 45A, 0 to 3 percent slopes, 1 percent hydric inclusions) (USDA 2023). Each mapped soil unit is predominantly non-hydric.

The study area lies within two subwatershed (Hydrologic Unit Code [HUC] 12) units: Lower McKay Creek (170900100307) and Upper Rock Creek (170900100402). These drain to Dairy Creek and Rock Creek, respectively, and both of these creeks drain to the Tualatin River. The study area is entirely within Federal Emergency Management Agency (FEMA) Zone X (areas of minimal flooding hazard) (FEMA 2024).

2 Site Conditions

In discussion with the property owners, the previous owner took fill dirt from a nearby large construction project circa 2000 to create a 5- to 7-foot-tall earthen berm around the open field surrounding the house. The previous owner planted Douglas-fir (*Pseudotsuga menziesii*) trees atop the berm for privacy. The trees are now mature and provide a barrier approximately 40 feet wide (2-to-3 trees deep) around the property except at the driveway entrance on West Union Road. There is minimal understory atop the berm. The residence, gravel driveway, a barn, sheds, and light farm equipment are present within the study area.

Topography within the study area is flat within the surrounding berm. Elevations on site range from approximately 246 to 257 feet above mean sea level (DOGAMI 2024). The open field is used by grazing goats and horses and consists of common grasses and forbs such as tall fescue (*Schedonorus arundinaceus*), hairy cat's ear

(*Hypochaeris radicata*), and Queen Anne's lace (*Daucus carota*) with sparse planted trees, including willow species (*Salix* spp.). The fields are periodically mowed as needed, as well.

No potential wetlands or non-wetland waters were identified within the study area. Five culverts between 8 and 18 inches in diameter were found at the perimeter of the field, allowing the field to drain through the berm and outward in all directions off the property. Slight depressions of up to 3-6" below the surrounding area were present near some of the culvert inlets, but there was not a change in vegetation communities nor hydric soil present in these depressional areas, indicating upland conditions throughout the study area. Additional soil samples throughout the property did not show hydric soil indicators.

3 Special-Status Species

Based on review of the species which are identified in the IPaC and the conditions of the study area, the following species are not anticipated to occur within the study area: marbled murrelet, northern spotted owl, streaked horned lark, Fender's blue butterfly, Kincaid's lupine, and Willamette daisy. Specifically, the study area does not provide large tracts of mature forest for marbled murrelet, nor the complex canopy structure required for northern spotted owl. Streaked horned lark require large open areas with bare ground or sparsely vegetated grassland, which is not found within the study area. The site lacks the necessary water, ponded and riverine, habitat to support northwestern pond turtle. Fender's blue butterfly rely on prairie and oak savannah habitat with populations of Kincaid's lupine, their host plant. This habitat is not present within the study area as it is regularly disturbed by grazing or maintenance. No lupine species were observed along the less disturbed areas along the edges of the study area, so neither Kincaid's lupine nor Fender's blue butterfly are anticipated to occur within the study area. Willamette daisy is only known to occur within prairie habitat in the Willamette Valley, and it was not observed during the site visit, which took place during the latter end of its flowering season.

Monarch butterflies migrating south often congregate along large rivers and require milkweed for breeding. The proposed study area has the potential to support monarch butterflies should the appropriate nectar and host plants be available during the summer months, though milkweed species were not observed on site. Intensively managed pasture is typically poor habitat for monarchs (NRCS 2017). As such, this species has a **low potential to occur** within the study area.

None of the species identified in the ORBIC results (Oregon floater, Pacific lamprey, and steelhead) have the potential to occur within the study area as there is no suitable aquatic habitat present.

4 References

FEMA (Federal Emergency Management Agency). 2024. "National Flood Hazard Layer." Accessed July 2024 https://www.fema.gov/flood-maps/national-flood-hazard-layer

Institute of Natural Resources (INR). 2024. ORBIC Data System Request. Portland State University. Returned on July 26, 2024. https://inr.oregonstate.edu/orbic/data-requests

National Marine Fisheries Service. 2024. National ESA Critical Habitat Mapper. Accessed August 2024. https://www.fisheries.noaa.gov/resource/map/national-esa-critical-habitat-mapper

Natural Resources Conservation Service (NRCS). 2017. *USDA NRCS Monarch Butterfly Wildlife Habitat Evaluation Guide and Decision Support Tool: Western U.S. Edition.* Accessed July 2024. https://efotg.sc.egov.usda.gov/references/Public/OR/Western_Monarch_WHEG_Instructions_March_2017.pdf

Oregon Department of State Lands (DSL). 2024. Statewide Wetland Inventory (SWI). Accessed July 2024. https://maps.dsl.state.or.us/swi/

U.S. Department of Agriculture (USDA). 2023. Soil Survey for Washington County, OR (OR067). Accessed July 2024. https://websoilsurvey.nrcs.usda.gov/app/

USFWS (U.S. Fish and Wildlife Service). 2024a. IPaC: Information for Planning and Consultation. Online project planning tool. Accessed July 2024. https://ecos.fws.gov/ipac/.

USFWS. 2024b. USFWS Threatened & Endangered Species Active Critical Habitat Report. Environmental Conservation Online System (ECOS). Accessed July 2024. https://ecos.fws.gov/ecp/report/critical-habitat.

USFWS. 2024c. National Wetlands Inventory: Wetlands Mapper. Accessed July 2024 https://www.fws.gov/wetlands/data/Mapper.html.

SOURCE: Esri World Imagery; OR Geohub 2024; USGS 2024

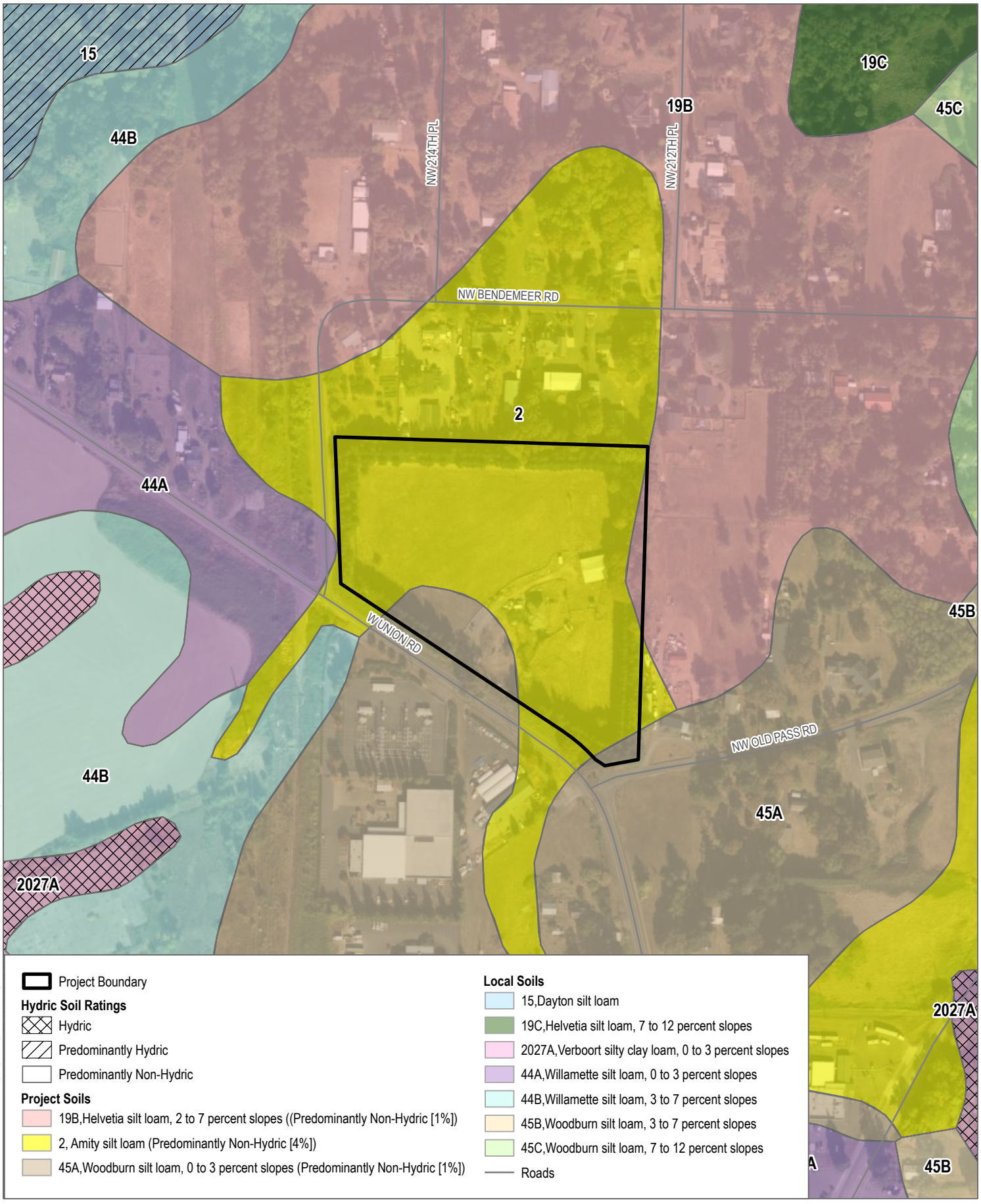
DUDEK

0 80 160 Feet

FIGURE 1

Biological Site Reconnaissance Survey Results - Aquatic Resources

West Union Energy Storage Project



SOURCE: Esri World Imagery; OR Geohub 2024; USDA 2023

DUDEK

0 150 300 Feet

FIGURE 2

Biological Site Reconnaissance Survey Results - Soils

West Union Energy Storage Project