Exhibit I

Soil Conditions

Nolin Hills Wind Power Project
~~February~~ November 2020

Prepared for

d/b/a Nolin Hills Wind, LLC

Prepared by

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Acronyms and Abbreviations

Applicant	Nolin Hills Wind, LLC
BESS	battery energy storage system
BMP	best management practice
ESCP	Erosion and Sediment Control Plan
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O&M	operations and maintenance
OAR	Oregon Administrative Rules
Project	Nolin Hills Wind Power Project
SPCC Plan	Spill Prevention, Control, and Countermeasures Plan

1.0 Introduction

Exhibit I was prepared to meet the submittal requirements for the Nolin Hills Wind Power Project (Project), per Oregon Administrative Rule (OAR) 345-021-0010(1)(i), related to soil conditions.

2.0 Analysis Area

The Analysis Area for soil resources is the area within the Site Boundary. The Site Boundary is defined in detail in Exhibits B and C, and is shown on Figure I-1.

3.0 Identification and Description of Soil Types – OAR 345-021-0010(1)(i)(A)

OAR 345-021-0010(1)(i) Information from reasonably available sources regarding soil conditions and uses in the analysis area, providing evidence to support findings by the Council as required by OAR 345-022-0022, including:

OAR 345-021-0010(1)(i)(A) Identification and description of the major soil types in the analysis area;

The analysis area for Exhibit I encompasses the area within the Site Boundary (Figure I-1). The near surface soils were identified using ~~According to~~ the Natural Resources Conservation Service (NRCS) web-based soil survey (NRCS 2016). ~~,~~ ~~t~~There are 52 major soil types in the analysis area (Table I-1; Figure I-1). Ten of these major soil types cover the majority of the Site Boundary: Burke silt loam in the northwest portion of the Site Boundary; Ritzville silt loam and Shano silt loam in the northern portion of the Site Boundary; Cantala silt loam, Condon-Bakeoven complex, Morrow silt loam, and Morrow-Bakeoven complex in the southern portion of the Site Boundary; Condon silt loam in the eastern and southern portion of the Site Boundary; and Lickskillet very stony loam and Mikkalo silt loam throughout the Site Boundary. Eight of these ~~These~~10 soil types are ~~characterized as~~ silt loams with depths ~~shallow to~~ranging from 0.5 feet deep to greater than 7 feet deep with moderate to high permeability on slopes ranging from 1 to 40 percent with erosion hazard ratings from slight to severe. ~~deep with low to very high permeability, with areas of fertile silt loams in loess deposits (i.e., wind-blown silt with lesser and variable amounts of sand and clay)~~ The ~~W~~wind turbines and solar array will be sited on ~~the~~ flatter surfaces.

Table I-1. General Description of Mapped Soil Units in Project Area

Soil Type ID	Soil Unit	Setting Within Project Site Boundary	Approximate Thickness	Formation Setting	Permeability	Runoff	Hazard for Erosion
1B	Adkins fine sandy loam	0 to 5 percent slopes	>7 feet	Aeolian sands	High	Moderately Low	Severe
15B	Burke silt loam	1 to 7 percent slopes	>7 feet	Loess over strongly cemented alluvium	Moderate	Moderately High	Slight
15C	Burke silt loam	7 to 12 percent slopes	>7 feet	Loess over strongly cemented alluvium	Moderate	Moderately High	Moderate
15E	Burke silt loam	12 to 30 percent slopes	>7 feet	Loess over strongly cemented alluvium	Moderate	Moderately High	Severe
16B	Cantala silt loam	1 to 7 percent slopes	>7 feet	Loess over calcareous, old alluvium	High	Moderately Low	Severe
16C	Cantala silt loam	7 to 12 percent slopes	>7 feet	Loess over calcareous, old alluvium	High	Moderately Low	Slight
16D	Cantala silt loam	12 to 20 percent slopes	>7 feet	Loess over calcareous, old alluvium	High	Moderately Low	Moderate
16E	Cantala silt loam	20 to 35 percent slopes	>7 feet	Loess over calcareous, old alluvium	High	Moderately Low	Severe

Soil Type ID	Soil Unit	Setting Within Project Site Boundary	Approximate Thickness	Formation Setting	Permeability	Runoff	Hazard for Erosion
17A	Catherine variant-Catherine silt loams	0 to 3 percent slopes	>7 feet	Loess	Moderate	Moderately High	Moderate
18B	Condon silt loam	1 to 7 percent slopes	2.5 feet	Loess	Moderate	Moderately High	Moderate
18C	Condon silt loam	7 to 12 percent slopes	2.5 feet	Loess	Moderate	Moderately High	Severe
18E	Condon silt loam	20 to 35 percent slopes	2.5 feet	Loess	Moderate	Moderately High	Severe
19D	Condon silt loam	12 to 20 percent north slopes	2.5 feet	Loess	Moderate	Moderately High	Severe
20D	Condon silt loam	12 to 20 percent south slopes	2.5 feet	Loess	Moderate	Moderately High	Severe
21D	Condon-Bakeoven complex	2 to 20 percent slopes	0.5 feet	Loess	Moderate	Moderately High	Moderate
28A	Freewater gravelly silt loam	0 to 3 percent slopes	>7 feet	Mixed, very gravelly alluvium	High	Moderately Low	Severe
42A	Kimberly fine sandy loam	0 to 3 percent slopes	>7 feet	Mixed alluvium	Very High	Low	Severe
43A	Kimberly silt loam	0 to 3 percent slopes	>7 feet	Mixed alluvium	Very High	Low	Severe
48E	Lickskillet very stony loam	7 to 40 percent slopes	1.5 feet	Loess mixed with colluvium from basalt	Low	High	Moderate
49F	Lickskillet-Nansene association	35 to 70 percent slopes	1.5 feet	Loess mixed with colluvium from basalt	Low	High	Severe

Soil Type ID	Soil Unit	Setting Within Project Site Boundary	Approximate Thickness	Formation Setting	Permeability	Runoff	Hazard for Erosion
50F	Lickskillet-Rock outcrop complex	40 to 70 percent slopes	0 feet	Mixed alluvium	Low	High	Severe
54B	Mikkalo silt loam	2 to 7 percent slopes	2 feet	Loess	Moderate	Moderately High	Severe
54C	Mikkalo silt loam	7 to 12 percent slopes	2 feet	Loess	Moderate	Moderately High	Moderate
54D	Mikkalo silt loam	12 to 20 percent slopes	2 feet	Loess	Moderate	Moderately High	Moderate
54E	Mikkalo silt loam	20 to 35 percent slopes	2 feet	Loess	Moderate	Moderately High	Moderate
56B	Morrow silt loam	1 to 7 percent slopes	2 feet	Loess	Moderate	Moderately High	Severe
56C	Morrow silt loam	7 to 12 percent slopes	2 feet	Loess	Moderate	Moderately High	Severe
56E	Morrow silt loam	20 to 35 percent slopes	2 feet	Loess	Moderate	Moderately High	Moderate
57D	Morrow silt loam	12 to 20 percent north slopes	2 feet	Loess	Moderate	Moderately High	Severe
58D	Morrow silt loam	12 to 20 percent south slopes	2 feet	Loess	Moderate	Moderately High	Slight
59D	Morrow-Bakeoven complex	2 to 20 percent slopes	0.5 feet	Loess	Moderate	Moderately High	Slight
60F	Nansene silt loam	35 to 70 percent slopes	>7 feet	Loess	High	Moderately Low	Severe
63A	Onyx silt loam	0 to 3 percent slopes	>7 feet	Silty alluvium	High	Moderately Low	Severe

Soil Type ID	Soil Unit	Setting Within Project Site Boundary	Approximate Thickness	Formation Setting	Permeability	Runoff	Hazard for Erosion
72A	Powder silt loam	0 to 3 percent slopes	>7 feet	Loess	High	Moderately Low	Severe
73D	Prosser silt loam	12 to 20 percent slopes	2 feet	Loess	Moderate	Moderately High	Slight
73E	Prosser silt loam	20 to 40 percent slopes	2 feet	Loess	Moderat e	Moderately High	Severe
74B	Quincy fine sand	0 to 5 percent slopes	>7 feet	Calcar eous sandy alluvium	Very High	Low	Severe
75B	Quincy loamy fine sand	0 to 5 percent slopes	>7 feet	Aeolian sands	Very High	Low	Severe
75E	Quincy loamy fine sand	5 to 25 percent slopes	>7 feet	Aeolian sands	Very High	Low	Moderate
76B	Quincy loamy fine sand, gravelly substratum	0 to 5 percent slopes	>7 feet	Aeolian sands over gravelly alluvium	Very High	Low	Severe
80B	Ritzville silt loam	2 to 7 percent slopes	>7 feet	Loess mixed with small amounts of volcanic ash	High	Moderately Low	Slight
80C	Ritzville silt loam	7 to 12 percent slopes	>7 feet	Loess mixed with small amounts of volcanic ash	High	Moderately Low	Slight
80D	Ritzville silt loam	12 to 25 percent slopes	>7 feet	Loess mixed with small amounts of volcanic ash	High	Moderately Low	Severe
81E	Ritzville silt loam	25 to 40 percent slopes,	>7 feet	Loess mixed with small amounts of volcanic ash	High	Moderately Low	Slight

Soil Type ID	Soil Unit	Setting Within Project Site Boundary	Approximate Thickness	Formation Setting	Permeability	Runoff	Hazard for Erosion
87B	Sagehill fine sandy loam	2 to 5 percent slopes	>7 feet	Sandy aeolian deposits and loess over lacustrine deposits	High	Moderately Low	Slight
89B	Shano silt loam	2 to 7 percent slopes	>7 feet	Loess over calcareous, lacustrine deposits	High	Moderately Low	Slight
89C	Shano silt loam	7 to 12 percent slopes	>7 feet	Loess over calcareous, lacustrine deposits	High	Moderately Low	Moderate
89D	Shano silt loam	12 to 25 percent slopes	>7 feet	Loess over calcareous, lacustrine deposits	High	Moderately Low	Not rated
92A	Stanfield silt loam, reclaimed	0 to 3 percent slopes	>7 feet	Silty alluvium	Moderate	Moderately High	Severe
95B	Taunton fine sandy loam	1 to 7 percent slopes	>7 feet	Aeolian sands over strongly cemented alluvium	Moderate	Moderately High	Severe
125F	Wrentham-Rock outcrop complex	35 to 70 percent slopes	0 feet	Loess mixed with colluvium derived from basalt	Moderate	Moderately High	Severe
126A	Xerofluvents	0 to 3 percent slopes	>7 feet	Mixed alluvium	Moderate	Moderately High	Severe
128A	Yakima silt loam	0 to 3 percent slopes	>7 feet	Mixed alluvium	High	Moderately Low	Severe

4.0 Current Land Use within the Analysis Area – OAR 345-021-0010(1)(i)(B)

OAR 345-021-0010(1)(i)(B) Identification and description of current land uses in the analysis area, such as growing crops, that require or depend on productive soils.

The Project Site Boundary encompasses approximately 48,~~077~~ 196 acres. Project facilities are located on private land. Land uses within the Site Boundary consist primarily of private agriculture, generally used for dryland wheat production or rangeland. Areas of irrigated agriculture and light industrial use also occur. Land within the Site Boundary is zoned Exclusive Farm Use by Umatilla County, except for a portion of the Umatilla Electric Cooperative Cottonwood transmission line corridor near Interstate 84 that includes areas of Rural Tourist Commercial, Agri Business, and Light Industrial zoning (see Exhibit K). The Site Boundary contains approximately 15,~~531~~ 567 acres of soils defined as prime farmland if irrigated; 23,~~064~~ 143 acres of farmland of statewide importance; and 9,~~482~~ 485 acres of not prime farmland (NRCS 2019).

5.0 Project Soil Impacts – OAR 345-021-0010(1)(i)(C)

OAR 345-021-0010(1)(i)(C) Identification and assessment of significant potential adverse impact to soils from construction, operation and retirement of the facility, including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills.

5.1 Soil Impacts During Construction

Construction of the Project will require a variety of activities with the potential for adversely impacting soils. Activities that may result in impact to soils include:

- Clearing and grubbing of vegetation in temporary construction areas, turbine pads, transmission line, solar array, battery energy storage system (BESS) foundations, collector circuits, substation and operations and maintenance (O&M) construction areas, and new access roads;
- Grading and widening of existing access roads;
- Construction of new access roads;
- Crane paths and movement;
- Heavy equipment and haul truck traffic for the delivery of aggregates, concrete, water, turbine and solar components, cranes, and similar construction supplies; and
- Fueling or maintenance of construction equipment or vehicles.

As identified in Exhibit C, construction ~~of Turbine Option 2~~ will permanently impact approximately ~~123~~ 2,035 acres and temporarily disturb approximately ~~1,821~~2,075 acres of soil~~; these numbers are more conservative than Turbine Option 1~~. Of the permanent disturbance acres, approximately 87 acres are prime farmland, if irrigated, and approximately 32 acres are farmland of statewide importance. Other types of soil impacts, such as erosion resulting from construction, operation, and decommissioning activities, will be limited through avoidance of sensitive soil areas to the extent practicable, the implementation of best management practices (BMPs) to control erosion, as well as the implementation of appropriate site restoration practices following construction.

5.1.1 Erosion

Potential impacts from erosion will be minimal and will be addressed through the implementation of erosion control measures required by the Project's National Pollutant Discharge Elimination System (NPDES) 1200-C construction permit. The NPDES 1200-C permit application and Draft Erosion and Sediment Control Plan (ESCP) identifying effective erosion and sediment control measures are provided as Attachment I-1 to this exhibit. These documents have been submitted to the Oregon Department of Environmental Quality, whose response will be provided as soon as it is available. Erosion and sediment control measures will meet local, county, state, and federal requirements.

Construction activities can introduce the potential for increased erosion due to soil disturbance, loss of vegetation (exposure of soil), compaction, and changes to surface drainage patterns. Erosion can be caused by increasing exposure to wind or water. Wind erosion is influenced by the wind intensity, vegetative cover, soil texture, soil moisture, grain size of unprotected soil surface, topography, and the frequency of soil disturbance. The runoff potential and water erosion hazard for the identified soils at the site range from low to high with higher erosion potentials associated with steeper slopes, especially on slopes exceeding 25 percent. U.S. Climate Data (2017) reports that Pendleton, Oregon, in the vicinity of the Project, receives approximately 13 inches of rainfall per year. The erosion potential and available precipitation make site soils sensitive to water erosion during winter and spring months when most of the precipitation occurs, particularly where slopes are steep.

BMPs described in the NPDES permit application will minimize the potential for wind or water erosion and sedimentation of soils disturbed by Project construction. Typical measures include, but are not limited to: putting sedimentation control measures in place prior to or concurrently with the initiation of construction in any given location to prevent uncontrolled soil exposure and potential erosion; water spraying on exposed soils and short-term soil stockpiles; covering longer-term soil stockpiles; placing gravel surfacing where appropriate immediately following clearing and grading to limit the time soils are exposed to wind or water erosion; and revegetating disturbed areas as soon as practicable following construction. The areas used only for construction will be reclaimed when the best season exists for replanting, typically in the fall or spring. Reclamation activities may include regrading to original land contours, replacing topsoil, and revegetation (see Exhibit P).

5.1.2 Compaction

Construction will require the use of heavy equipment and vehicles that could cause localized soil compaction which, if left unmitigated, could result in loss of agricultural productivity, increased erosion, or increased difficulty in revegetation. During Project construction, Nolin Hills Wind, LLC (the Applicant) will minimize soil compaction, rutting, and structural damage to wet soils and soils with poor drainage by scheduling the majority of the clearing and construction activities during the dry season~~, as feasible~~. Mechanized clearing and maintenance will occur in late summer and early fall months~~, as possible~~.

The hazards associated with soil compaction will be mitigated following construction through restoration of temporary disturbance areas, including the construction yards and the portions of the access roads not needed for Project operations. Restoration of these areas will involve removal of gravel surfacing, regrading to appropriate contours, and scarification to loosen compacted soils prior to replacement of stockpiled topsoil and revegetation (see Exhibit P). I~~f necessary i~~n agricultural areas, deep decompaction ~~to loosen soils down to approximately~~ to a depth of at least one foot ~~may~~ will be performed in agricultural areas where deep compaction has occurred due to construction. These actions will fully mitigate for any soil compaction that would occur during construction, in areas that would not be permanently occupied by Project facilities.

5.1.3 Restoration and Revegetation

All areas temporarily disturbed during construction activities will be restored and revegetated following completion of Project construction. These activities carry a risk of increased erosion and loss of soil productivity if done improperly.

BMPs to control erosion and sedimentation will be maintained during site restoration or replaced with permanent measures ~~as appropriate~~. Areas undergoing restoration, such as the additional temporary width of access roads, will be sprayed down as needed while soils are exposed to prevent wind erosion. Excavated soils will be stockpiled by soil horizon, so that they can be replaced in proper order with the topsoil on the surface, preventing mixing of topsoil and subsoils and maintaining soil productivity. Scarification and decompaction will serve to maintain soil productivity, as well as reduce the potential for erosion on compacted soils. Final grading will incorporate appropriate contours to manage stormwater runoff and minimize erosion and sedimentation.

Areas disturbed by construction and restoration activities will be revegetated as soon as practicable, to limit the exposure time for wind or water erosion to occur. As described in the Revegetation Plan (Exhibit P, Attachment P-4), disturbed areas will be revegetated using a seed mix appropriate to the specific location. Mulching, hydroseeding, temporary irrigation, or other methods as described in the Revegetation Plan could be used in some areas where soil limitations may inhibit revegetation. Restoration of soils with shallow restrictive layers in most cases requires adaptive seed mixtures and implementation of revegetation practices (i.e., fertilization, mulching, monitoring) to enhance revegetation success. Revegetation of areas with rock outcrop may not be

possible. Droughty soils may not hold enough water within the root zone to support plant life, making revegetation difficult. In areas of droughty soils, the soil surfaces will be mulched and stabilized ~~as feasible~~ to minimize wind erosion and to conserve soil moisture. If possible, large stones excavated during foundation work will be kept separate from topsoil during construction and during surface preparation as part of restoration. The rock removed during construction will be moved to designated on-site locations.

5.1.4 Soil Contamination

An additional category of potential hazards to soils is contamination by chemicals. Because substantial quantities of oils, fuels, and other potential contaminants are not expected to be stored on-site during construction or operation, the potential for soil contamination is limited (see Exhibit G). The greatest risk of soil contamination will occur during fueling or maintenance of construction equipment. To the extent practicable, fueling and maintenance activities will occur in designated areas located far from streams and wetlands.

The Applicant will prepare a draft Spill Prevention, Control, and Countermeasures Plan (SPCC Plan). The SPCC Plan will be implemented during construction and will outline preventative measures and practices to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release. The SPCC Plan will restrict the location of fuel storage, fueling activities, and construction equipment maintenance and provide procedures for these activities; identify training and lines of communication to facilitate the prevention, response, containment, and cleanup of spills during construction activities; and identify the roles and responsibilities of key Applicant's personnel and contractors. Due to these procedures, the Project is not expected to result in impacts to soils from chemical spills during construction.

5.1.5 Productive Agricultural Soils

Except for those areas removed from potential agricultural production by permanent Project facilities, the Project will not adversely impact soils on which agriculture is dependent. The BMPs to control erosion and sedimentation identified in the ESCP will conserve productive agricultural soils as well as non-agricultural soils. Existing vegetation will be preserved, to the extent practicable. Topsoil will be stripped and stockpiled separately from subsoils and replaced on the surface as a final stage of site restoration. Silt fencing will be installed prior to any soil-disturbing activities and used as a perimeter control on the contour down gradient of excavations and around stockpiles to control sedimentation. Appropriate soil stockpiling and replacement of soils during site restoration, along with decompaction of temporarily disturbed areas, will maintain soil productivity even in areas disturbed by construction activities. Temporary revegetation will be used during construction when necessary and permanent revegetation will take place as soon as ~~practicable~~ site conditions and weather allow following land-disturbing activities. As described in Exhibit G, fuels will be the only hazardous material that may be stored in substantial quantities on-site during construction; the Applicant anticipates that up to 500 gallons of diesel fuel and 200 gallons of

gasoline may be kept on-site for fueling of construction equipment. These will both be stored in temporary above-ground tanks in the construction yards, within an area that provides for secondary containment. Fuels will be delivered to the construction yard by a licensed specialized tanker vehicle. There will be no substantial quantities of lubricating oils, hydraulic fluid for construction equipment, or other hazardous materials maintained on-site during construction. Lubricating oil or hydraulic fluids for construction equipment will not be stored in substantial quantities on-site but will instead be delivered on an as-needed basis using a specialized vehicle by a licensed contractor. Construction vehicles will be fueled and maintained to the extent practicable in dedicated areas with secondary containment, and away from streams or wetlands. The SPCC Plan will identify the requirement of spill kits containing items such as absorbent pads will be located on equipment and in on-site temporary storage to ensure a quick response to spills. With the use of secondary containment for fuel storage areas, other potential hazardous materials being present only in small quantities, and a requirement to keep spill response kits on-hand during fuel or oil transfers, should any spill occur it would be limited in size such that it would not affect soil productivity beyond the spill area. The contaminated soil will be removed for off-site remediation and replaced with clean soil from elsewhere on the Project.

5.2 Soil Impacts During Operation

Project operations will have no impact on soil erosion. Operations will be confined to gravel-surfaced areas including the apron constructed around each turbine, the BESS, access roads, substations, and O&M Building. No additional ground disturbance is anticipated to occur during Project operations. The potential for soil contamination will be limited by not maintaining substantial supplies of oil, fuel, pesticides or other hazardous materials on-site, and by observing appropriate safety measures during maintenance procedures such as oil changes for the turbine gearboxes. While secondary containment will be used for the substation transformers, an SPCC Plan will prepared (see Exhibit G) that will outline preventative measures and practices to reduce the likelihood of an accidental spill, and to expedite the response to and remediation of a spill should one occur during operations. If a spill were to occur, the impact area will be limited, and the spill remediated immediately to prevent impacts to soils.

5.3 Soil Impacts During Decommissioning

In the event of decommissioning, potential erosion hazards will be similar to those occurring during Project construction. During decommissioning activities, soil will be exposed to accelerated erosion because of lack of vegetation during the removal of turbine pads, BESS foundations, underground cables, and roadways. Similar measures employed during construction will be used during decommissioning to prevent and control erosion, to rectify for soil compaction, to prevent spills, and to revegetate disturbed areas.

Potential impacts to soils from decommissioning will be similar to those described above for construction activities.

6.0 Mitigation Measures – OAR 345-021-0010(1)(i)(D)

OAR 345-021-0010(1)(i)(D) A description of any measures the applicant proposes to avoid or mitigate adverse impact to soils.

The Project has been designed to avoid impacts to sensitive soils to the extent practicable. For example, impacts to soils on which agriculture is dependent have been minimized through the use of existing roads to the extent possible. Potential impacts to soil from construction, operations, and decommissioning of the proposed Project should be mitigated by adhering to BMPs identified in the ESCP. Localized impacts to soils from temporary disturbance areas will be minimized though the use of BMPs and efforts to restore soil surfaces and vegetation following disturbances.

~~Some minimization and BMPs that may be included in t~~The Revegetation Plan and/or the ESCP ~~may be~~will include, but ~~are~~ not necessarily be limited to, the following minimization measures and BMPs:

- Stabilized Construction Entrance/Exit: A stabilized construction entrance/exit will be installed at locations where construction vehicles will access newly constructed roads and/or disturbed areas from paved roads. The stabilized construction entrance/exits will be inspected and maintained for the duration of the Project's lifespan.
- Preserve Existing Vegetation: To the extent practicable, existing vegetation will be preserved. Where vegetation clearing is necessary, root systems will be conserved if possible.
- Silt Fencing: Silt fencing will be installed throughout the Project ~~as a perimeter control, and~~ on the contour down-gradient of excavations, the O&M Building, and substations.
- Straw Wattles: Straw wattles ~~may~~will be used to decrease the velocity of sheet flow stormwater to prevent erosion. Wattles will be used along the downgradient edge of access roads adjacent to slopes or sensitive areas.
- Mulching: Mulch will be used to immediately stabilize areas of soil disturbance, and during reseeding efforts.
- Stabilization Matting: Jute matting, straw matting, or turf reinforcement matting ~~may~~will be used in conjunction with mulching to stabilize steep slopes that were exposed during access road installation.
- Soil Binders and Tackifiers: Soil binders and tackifiers ~~may~~will be used on exposed slopes to stabilize them until vegetation is established.
- Concrete Washout Area: Concrete chutes and trucks will be washed out in dedicated areas near the ~~turbine~~ foundation construction locations. This will prevent concrete washout water from leaving a localized area. Soil excavated for the concrete washout area will be used as backfill for the completed footing to ensure that the surface soils maintain infiltration capacity.

- Stockpile Management: To facilitate installation of the turbine footings, large excavations will be created. Soil from these excavations will be temporarily stockpiled and used as backfill for the completed footing. Silt fencing will be installed around the stockpile material as a perimeter control. Mulch or plastic sheeting will be used to cover the stockpiled material. Soils will be stockpiled and reused in order to prevent mixing of productive topsoils with deeper subsoils.
- Revegetation: After construction is completed, the site will be revegetated with an approved seed mix. When required, the seed will be applied in conjunction with mulch and/or stabilization matting to protect the seeds as the grass establishes. Revegetation will take place as soon as ~~practicable~~ site conditions and weather allow following construction.
- Check Dams and Sediment Traps: Check dams and sediment traps will be used during the construction of low-impact ford crossings or culvert installations. The check dams and sediment traps will minimize downstream sedimentation during construction of the stream crossings.
- Pollutant Management: During construction and operations, source control measures will be identified in the SPCC Plan to reduce the potential of chemical pollution to surface water or groundwater during construction.
- Construction Timing: To the extent practicable, construction activities will be scheduled to occur in the dry season, when soils are less susceptible to compaction. Similarly, soil disturbance should be postponed when soils are excessively wet such as following a precipitation event.

The final design of the Project is not complete. The discussion above is intended to represent a broad range of BMPs that may be implemented. The actual BMPs used for construction and operation will be identified in the ESCP.

7.0 Monitoring Program – OAR 345-021-0010(1)(i)(E)

OAR 345-021-0010(1)(i)(E) The applicant's proposed monitoring program, if any, for adverse impact to soils during construction and operation.

Impact to soils from Project construction and operation will be limited because of the mitigation efforts required by the NPDES 1200-C construction permit and ESCP. Accordingly, a formal monitoring program is not merited. Visual observation will be made during Project construction and operation; if problem areas are observed, mitigation and reclamation measures will be implemented and a formal monitoring program established for those specific areas.

8.0 Conclusions

OAR Chapter 345, Division 22 does not provide an approval standard specific to Exhibit I. The potential for soil erosion, compaction, and contamination during Project construction will be minimized by avoiding problematic areas to the extent practical, and then by adherence to the ESCP and SPCC Plan. Implementation of an SPCC Plan during construction and operations will further reduce any risk of contamination. Specific construction and site restoration practices will be implemented to mitigate construction impacts on soil productivity. The Project will not adversely impact productive farmland soils except where permanent impacts are proposed. Taking into account the implementation of avoidance measures, BMPs, and post-construction restoration, the Applicant concludes that the design, construction, and operation of the Project are not likely to result in a significant adverse impact to soils.

9.0 References

NRCS (Natural Resources Conservation Service). 2016. Web Soil Survey. Soil maps website. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed March 2018.

NRCS. 2019. Soil Data Access (SDA) Prime and other Important Farmlands. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1338623.htmlv. Accessed November 2019.

U.S. Climate Data. 2017. Climate Pendleton – Oregon. https://www.usclimatedata.com/climate/pendleton/oregon/united-states/usor0267. Accessed on May 9, 2017.

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Nolin Hills Wind Power Project

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Soil Type
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UMATILLA COUNTY, OREGON

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Figure I-1.11

395
320
207
578

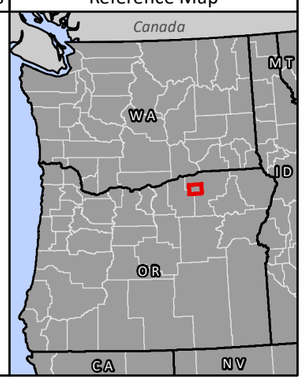
Umatilla County
Morrow County

- Map Grid
- Proposed Site Boundary
- Secondary Highway
- Secondary Road
- County Boundary

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:140,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

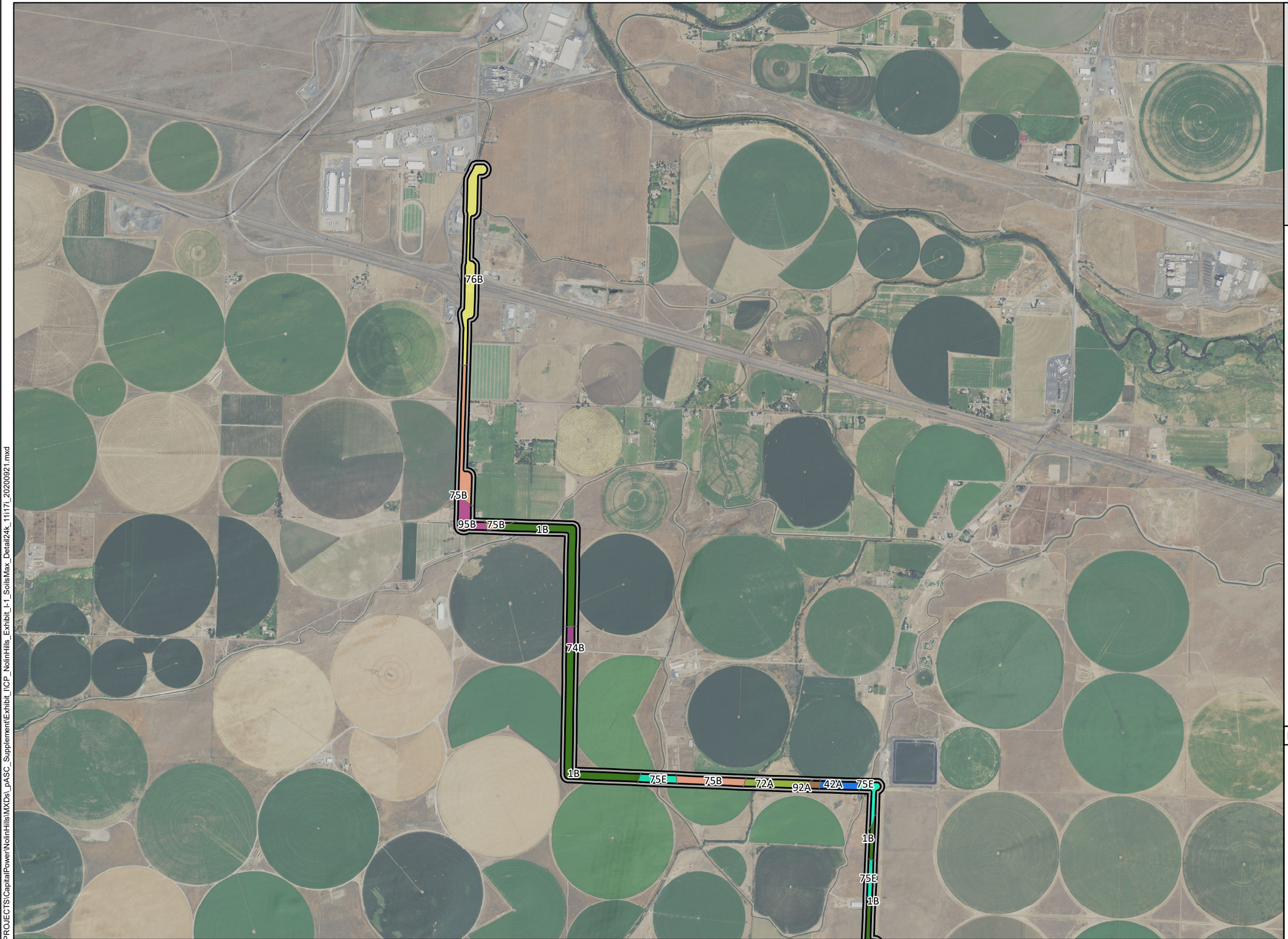
NOT FOR CONSTRUCTION

P:\GIS_PROJECTS\CapitalPower\NolinHills\MXDs_pASC_Supplement\Exhibit_I\CP_NolinHills_Exhibit_I-1_SoilsMax_Index_11i17l_20200918.mxd

Nolin Hills
Wind Power Project

Figure I-1.1
Soil Type

UMATILLA COUNTY, OREGON

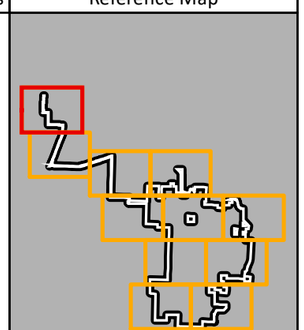


- Proposed Site Boundary
- County Boundary
- Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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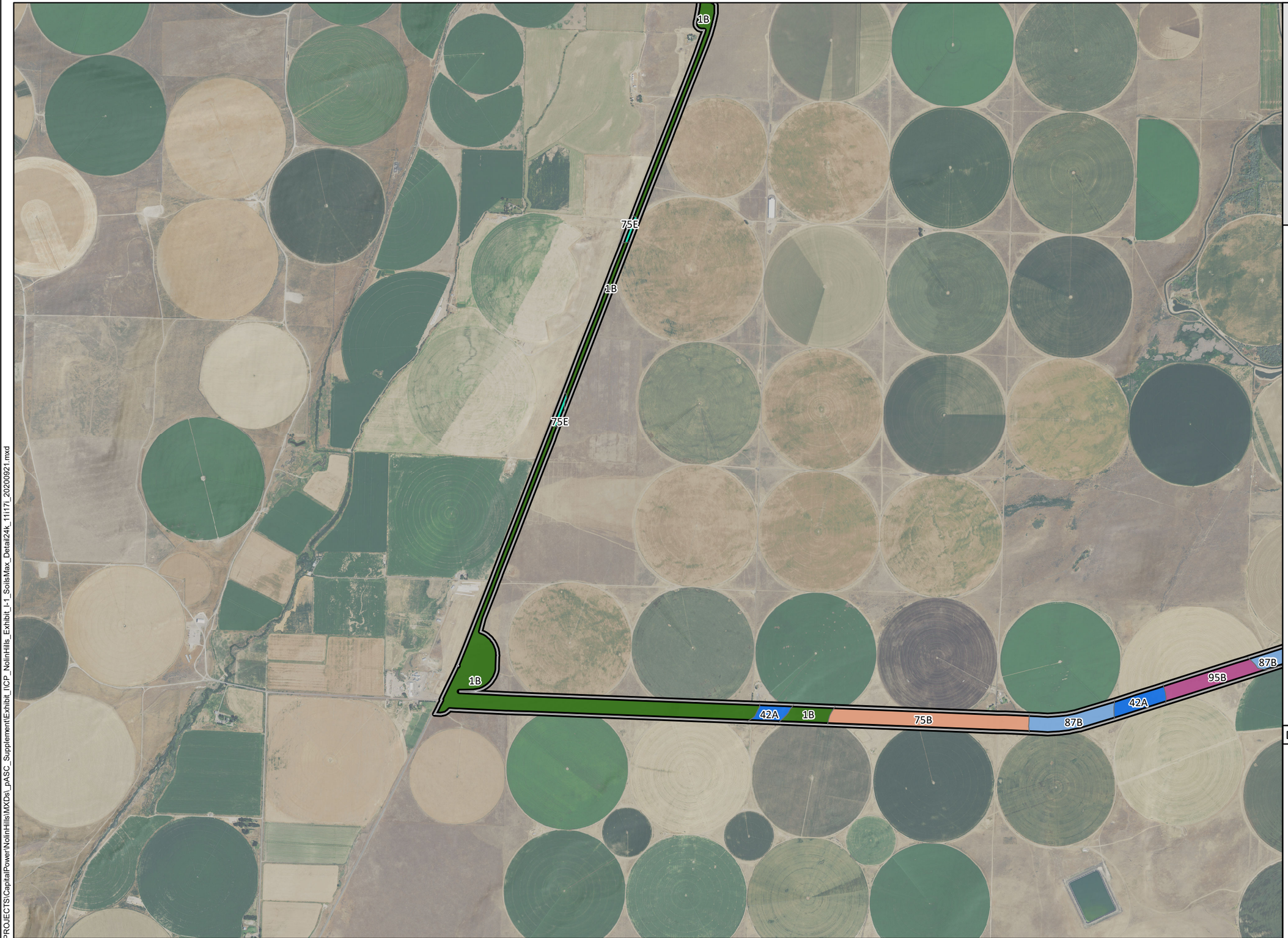
Nolin Hills Wind Power Project

Figure I-1.2
Soil Type

UMATILLA COUNTY, OREGON

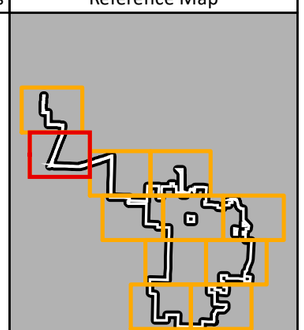


- Proposed Site Boundary
- County Boundary
- Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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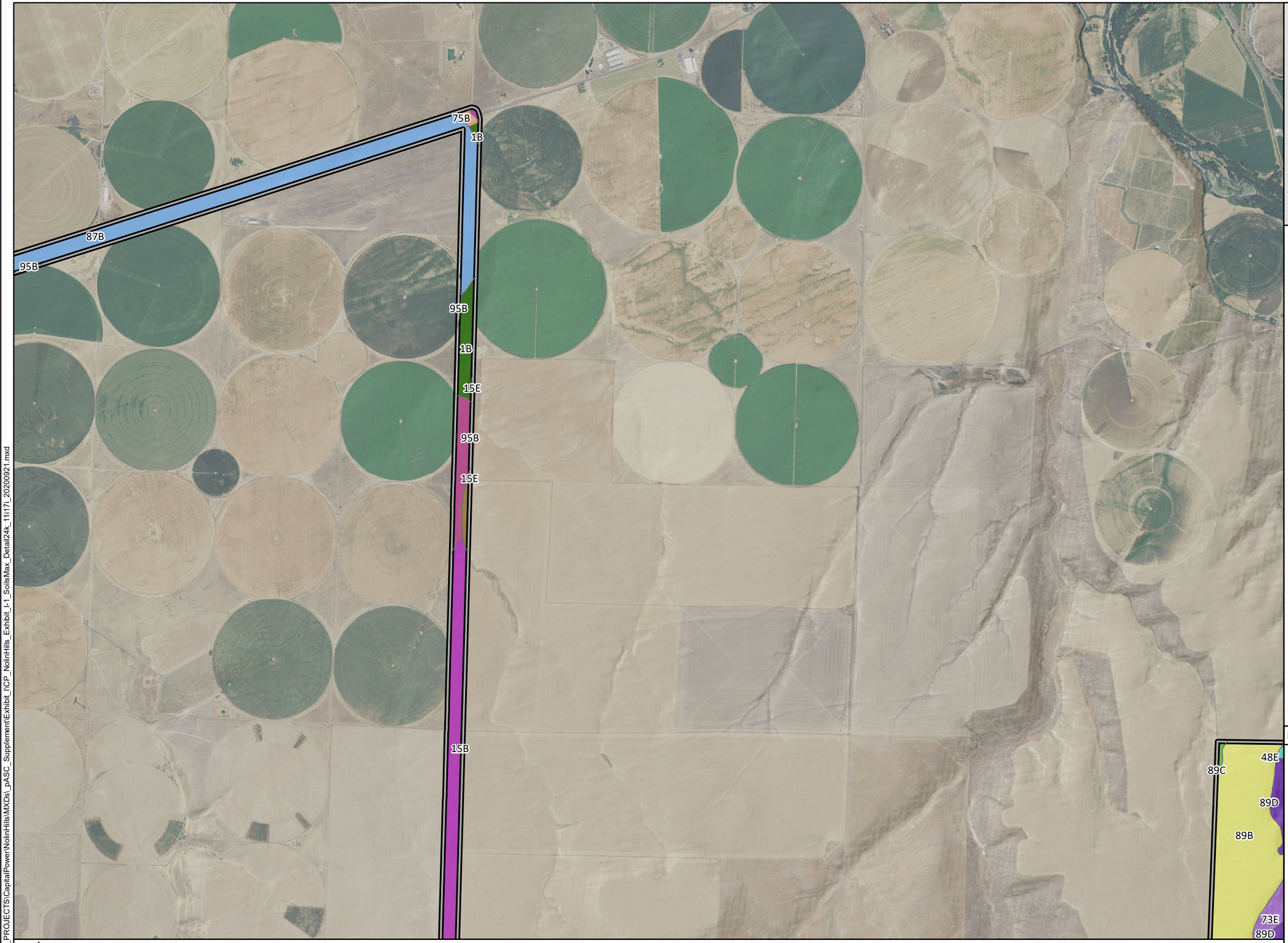
Nolin Hills Wind Power Project

Figure I-1.3
Soil Type

UMATILLA COUNTY, OREGON

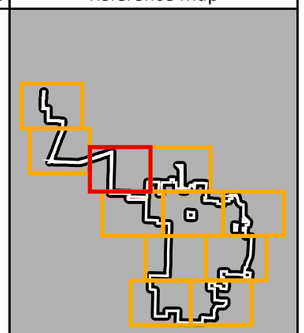


- Proposed Site Boundary
- County Boundary
- Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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Nolin Hills Wind Power Project

Figure I-1.4
Soil Type

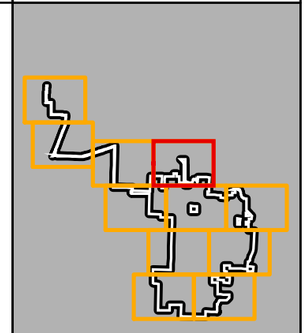
UMATILLA COUNTY, OREGON

Proposed Site Boundary
County Boundary
Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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Nolin Hills Wind Power Project

Figure I-1.5 Soil Type

UMATILLA COUNTY, OREGON

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

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Nolin Hills Wind Power Project

Figure I-1.6
Soil Type

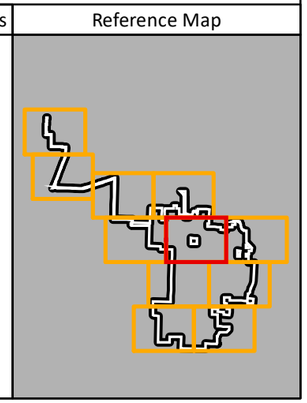
UMATILLA COUNTY, OREGON

- Proposed Site Boundary
- County Boundary
- Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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Nolin Hills Wind Power Project

Figure I-1.7
Soil Type

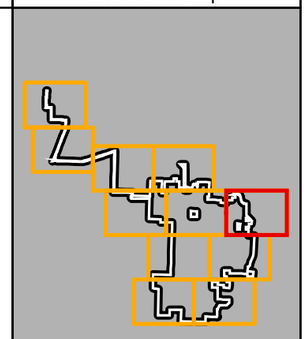
UMATILLA COUNTY, OREGON

Proposed Site Boundary
County Boundary
Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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Nolin Hills Wind Power Project

Figure I-1.8
Soil Type

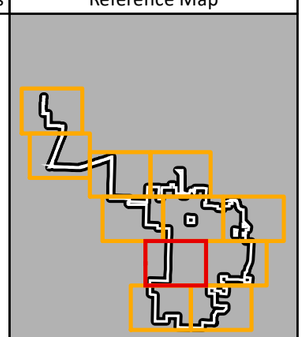
UMATILLA COUNTY, OREGON

- Proposed Site Boundary
- County Boundary
- Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

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Nolin Hills Wind Power Project

Figure I-1.9
Soil Type

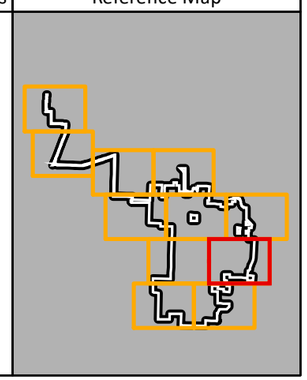
UMATILLA COUNTY, OREGON

Proposed Site Boundary
County Boundary
Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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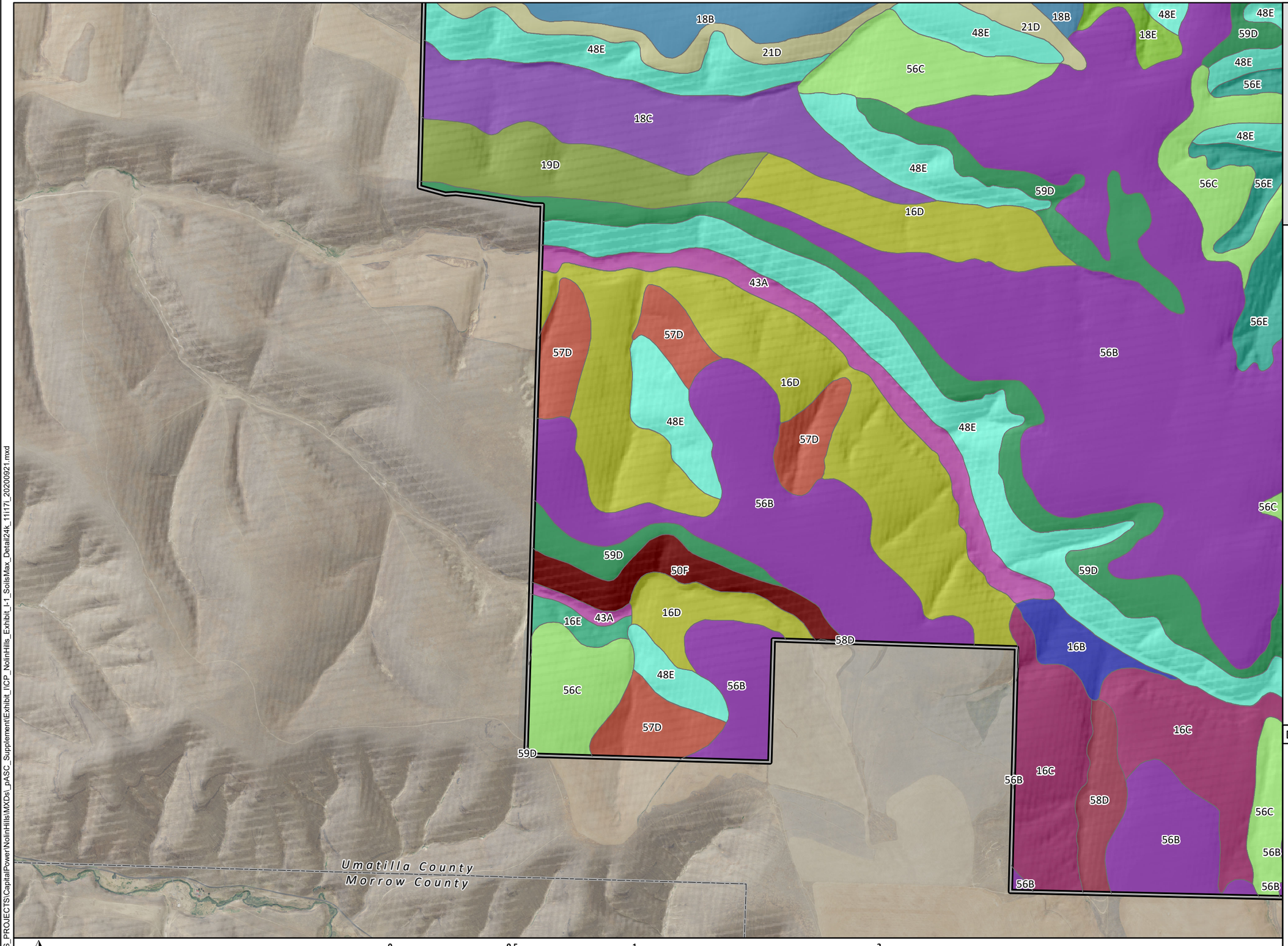
Nolin Hills Wind Power Project

Figure I-1.10
Soil Type

UMATILLA COUNTY, OREGON

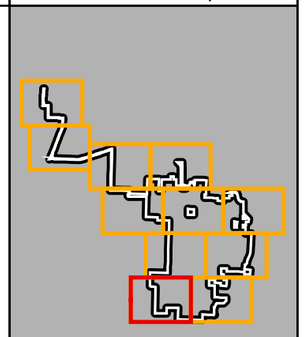


Proposed Site Boundary
County Boundary
Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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Nolin Hills Wind Power Project

Figure I-1.11
Soil Type

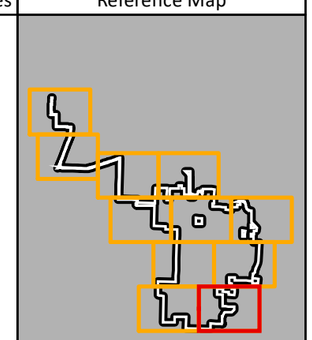
UMATILLA COUNTY, OREGON

Proposed Site Boundary
County Boundary
Soil Unit*

* Soil type descriptions can be found in Exhibit I, Table I-1

TETRA TECH

Capital Power
RESPONSIBLE ENERGY FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; USA NRSC Soil Survey-Soils	

1:24,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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Attachment I-1: NPDES 1200-C Permit Application with Erosion and Sediment Control Plan

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OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

APPLICATION FOR NEW NPDES GENERAL PERMIT 1200-C

Instructions for Completion of 1200-C Construction Stormwater Application: For stormwater discharges to surface waters from construction activities, disturbing one acre or more that do not meet automatic coverage requirements (see page 3 for additional information).

A. PROJECT INFORMATION

1. Enter the legal name of the applicant. This must be the legal Oregon name (i.e., Acme Products, Inc.) or the legal representative of the company if it operates under an assumed business name (i.e., John Smith, dba Acme Products). The name must be a legal, active name registered with the Oregon Department of Commerce, Corporation Division (503) 378-4752, (http://egov.sos.state.or.us/br/pkg_web_name_srch_inq.login), unless otherwise exempted by their regulations. The permit will be issued to the legal name of the applicant.
    - Permit coverage may be transferred from one party to another. For example, a developer may apply for a permit and then transfer the permit to a contractor. Transfer forms: http://www.oregon.gov/deq/wq/wqpermits/Pages/Forms.aspx
2. Provide invoice contact information for billing of DEQ annual permit fee if different from the applicant in #1 above. This is the person or entity legally responsible for payment of the annual fee invoice. This must be the same company as the applicant. not a third party independent of the applicant.
3. Provide contact information for the Architect or Consulting Engineer who designed the Erosion and Sediment Control Plan (ESCP) and Dewatering Plan, if applicable.
4. Provide information on the Erosion and Sediment Control Inspector. This is not a DEQ or DEQ Agent inspector; this is an inspector employed by the applicant. As of January 1, 2017, for project 5 acres or more include inspectors' qualification program, certification number and expiration date.
5. Provide the common name of the project (for example, the name of the subdivision), the location of the site, and, if available, a street address.
6. Check the box that best describes the nature of the construction activity. If "other" is selected, describe the use and include a Standard Industrial Classification Code (visit http://www.osha.gov/pls/imis/sicsearch.html for codes). For projects that have submitted a joint permit application, please provide the US Army Corps of Engineers assigned number.
7. Enter latitude and longitude for the approximate center of the site, to the nearest 15 seconds. Latitude and longitude can be obtained from DEQ's location finder web site at http://deqapp1/website/lit/data.asp. To get the longitude and latitude to appear you can also zoom in and re-center until you find the area. You may want to turn off DEQ interests to eliminate the yellow dots and you may want to turn on the Aerial Photos to help you locate the site (note that the aerial photos are over ten years old). The latitude and longitude will be indicated on the left side of the page once you have checked the locate place at the top of the page and clicked on a location.
8. If known, specify approximate start date. Provide information on the project size as indicated (based on the total project and not just a single phase).
9. For projects that anticipate dewatering or the need for active treatment system, additional details of BMPs and an operation and maintenance plan is required. This includes a plan review fee (Table 70H) for treatment of contaminants beyond sediment. Fee table
10. Indicate the name(s) of the receiving water(s) (i.e., indicate where stormwater runoff during construction will flow). Request information from local authority or other resource to determine the name of the receiving waterbody. Your receiving water may be a lake, stream, river, wetland or other waterbody, and may or may not be located adjacent to the site. Your stormwater may discharge directly to the receiving water or indirectly via a storm sewer system, an open drain or ditch, or other conveyance structure. Do NOT list a man-made conveyance, such as a storm sewer system, as your receiving water. If you discharge to an irrigation channel or ditch you must also indicate the owner or operator of the irrigation channel or ditch. Indicate the first natural receiving water your stormwater discharge enters.

    For example, if your discharge enters a storm sewer system, that empties into Trout Creek, which flows into Pine River, your receiving water is Trout Creek, because it is the first natural waterbody your discharge will reach. Similarly, a discharge into a ditch that feeds Spring Creek should be identified as "Spring Creek" since the ditch is a manmade conveyance. If you discharge into a municipal separate storm sewer system (MS4), you must identify the waterbody into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

11. Indicate whether stormwater runoff during construction will discharge directly to or through a storm sewer or drainage system that discharges to a Total Maximum Daily Load (TMDL) **or** 303(d) listed waterbody for turbidity or sedimentation. To make this determination, the following tools are available on DEQ's website:
    - WQ Assessment page: http://www.deq.state.or.us/wq/assessment/rpt2012/search.asp to use scroll down to search criteria: waterbody and listing status Category 5 (303d) and Category 4a (TMDL approved).

B. SIGNATURE OF LEGALLY AUTHORIZED REPRESENTATIVE

DEFINITION OF LEGALLY AUTHORIZED REPRESENTATIVE:

Please also provide the information requested in brackets *[ ]*

- **Corporation** - president, secretary, treasurer, vice-president, or any person who performs principal business functions; or a manager of one or more facilities that is authorized in accordance to corporate procedure to sign such documents.
- **Partnership** - General partner *[list of general partners, their addresses, and telephone numbers]*.
- **Sole Proprietorship** - Owner(s) *[each owner must sign the application]*.
- **City, County, State, Federal, or other Public Facility** - Principal executive officer or ranking elected official.
- **Limited Liability Company** - Member *[articles of organization]*.
- **Trusts –** Acting trustee *[list of trustees, their addresses, and telephone numbers]*.

(please see 40 CFR §122.22 for more detail, if needed)

APPLICATION AND FEE SUBMITTAL

To authorize permit registration, the following must be completed and submitted to the appropriate DEQ regional office or DEQ Agent

- ☐ DEQ application form signed by the Legally Authorized Representative and meeting the signature requirements above.
- ☐ DEQ LUCS and associated Findings.
- ☐ Stormwater Erosion and Sediment Control Plan Narrative, if applicable.
- ☐ Dewatering and/or Treatment Plan, if applicable.
- ☐ Stormwater Erosion and Sediment Control Plan Drawings; full-sized hard copy and electronic file.
- ☐ Applicable permit fee. Appropriate fees are available at http://www.oregon.gov/deq/Rulemaking%20Docs/340-045-0075WQFeeTables.pdf. All stormwater permits charge an application fee and an annual fee upon registration. DEQ will invoice the annual fee amount if your project coverage extends more than a year. **Please note:** if submitting a dewatering or active treatment O&M Plan to address contaminants beyond sediment, a disposal system plan review fee may be charged as indicated in Table 70H.

APPLICATION AND FEE SUBMITTAL

Submit this application, Narrative Parts I, II & III (if applicable), LUCS, Erosion and Sediment Control Plan (full-sized hard copies and electronic copy), Dewatering and/or Treatment Plan and the applicable fee to the appropriate DEQ regional office or DEQ Agent listed below. Contact the appropriate DEQ regional office or DEQ Agent for the best way to submit the electronic version of the ESCP.

AGENTS AND REGIONAL OFFICES CONTACTS

City of Eugene 99 W. 10th Avenue Eugene, OR 97401 541-682-2706	**City of Hermiston** 215 Gladys Avenue Hermiston, OR 97838 541-667-5025	**City of Troutdale** 342 SW 4th Street Troutdale, OR 97060 503-674-3300
Clean Water Services 2550 SW Hillsboro Highway Hillsboro, OR 97123 503-681-5101 *Includes Banks, Beaverton, Cornelius, Durham, Forest Grove, Gaston, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin, and portions of Washington Co.*		**Rogue Valley Sewer Services** 138 West Vilas Road, PO Box 3130 Central Point, OR 97502 541-664-6300

DEQ Northwest Region	DEQ Western Region		DEQ Eastern Region		
700 Lloyd Building at 700 NE Multnomah St., Suite #600, Portland, OR 97232 503-229-5263 or 1-800-452-4011	165 East 7th Avenue, Suite 100 Eugene, OR 97401 541-686-7930 or 1-800-844-8467		800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 541-278-4605 or 1-800-304-3513		
Clackamas	Benton	Lane	Baker	Hood River	Sherman
Clatsop	Coos	Lincoln	Crook	Jefferson	Umatilla
Columbia	Curry	Linn	Deschutes	Klamath	Union
Multnomah	Douglas	Marion	Gilliam	Lake	Wallowa
Tillamook	Jackson	Polk	Grant	Malheur	Wasco
Washington	Josephine	Yamhill	Harney	Marrow	Wheeler

DEQ USE ONLY

File #:

Application #:

LLID/RM:

River Mile:

Legal Name Confirmed: ☐

Notes:

State of Oregon Department of Environmental Quality

DEPARTMENT Of ENVIRONMENTAL QUALITY

APPLICATION FOR NEW NPDES GENERAL PERMIT 1200-C

For stormwater discharges to surface waters from construction activities disturbing one acre or more that do not meet automatic coverage requirements.*

DEQ USE ONLY

Date Received:

Amount: $

Check #:

Check Name:

Deposit #:

Receipt #:

Notes:

*A project *may* be eligible for "automatic coverage" under NPDES general permit 1200-CN if stormwater *does not* discharge to a waterbody with a TMDL or 303(d) listing for sediment or turbidity *and* it meets one of the following criteria (see 1200-CN at http://www.oregon.gov/deq/FilterPermitsDocs/1200cnPermit.pdf:

1) Disturbs less than one acre and is located in Gresham, Troutdale, or Wood Village.
2) Disturbs less than five acres and is located in Albany, Corvallis, Eugene, Milwaukie, Multnomah Co. (unincorporated areas), Springfield, West Linn, or Wilsonville.
3) Disturbs less than five acres and is within the jurisdictions of Clackamas Co. Water Environment Services [Gladstone, areas within Clackamas Co. Service Dist. #1 (excluding Happy Valley), and areas within the Surface Water Management Agency of Clackamas Co. (including Rivergrove)], Clean Water Services (Banks, Beaverton, Cornelius, Durham, Forest Grove, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin, and Washington Co. within Urban Growth Boundary), or Rogue Valley Sewer Services.

A. PROJECT INFORMATION

1. Nolin Hills Wind, LLC
Applicant (entity legally responsible for permit)

Joe Griffiths
Contact Name (if different from applicant)

155 Federal St Suite 1200
Address

Boston | MA | 02110
City | State | Zip

630-488-5593 | jgriffiths@capitalpower.com
Telephone | E-Mail Address

2. Invoicing information (person or entity legally responsible for payment of annual fee invoice; not a third party independent of the applicant)

Karla Alvarez
Invoice Contact Name (if different from applicant)

155 Federal Street, Suite 1200, 12th Floor
Address

Boston | MA | 02110
City | State | Zip

(617) 330-1340 | kalvarez@capitalpower.com
Telephone | E-Mail Address

3. Tetra Tech, Inc.
Architect/Engineering Firm (Erosion & Sediment Control Plan)

Linnea Fossum
Project Manager

425-482-7823 | linnea.fossum@tetratech.com
Telephone | E-Mail Address

4. TBD
Applicant's Designated Erosion and Sediment Control Inspector

Company Name

Telephone | E-Mail Address

Qualification program, certification number and expiration date

5. Nolin Hills Wind Power Project
Name of Project

Speare Canyon Rd
Address or Cross Street

Echo | OR | 97826
City | State | Zip

Umatilla
County

6. Nature of Construction Activity
- ☐ Single Family (SIC Code 1521)
- ☐ Multi-Family Residential (SIC Code 1522)
- ☐ Commercial (SIC Code 1542)
- ☐ Industrial (SIC Code 1541)
- ☐ Highway (SIC Code 1611)
- ☐ Restoration (SIC Code 1629)
- ☒ Utilities (SIC Code 1623): Wind Power Generation Facility
- ☐ Other (SIC Code required): _____

Army Corps No. (if any): _____

7. Approximate location of center of site

Latitude: 45.619 Longitude: 119.078

For assistance: DEQ Location Improvement Tool at: http://deqapp1/website/lit/data.asp

8. Approximate start date: 06/2021

Project Size
Total Site Acreage (acres): 48,194

Total Disturbed Area (acres): 2,075

Total Number of Lots: Up to 112 WTGs and solar array

9. Is there soil or groundwater contamination located within the site boundary? ☐ YES ☒ NO

Will you be dewatering during construction (plan review fee may apply)? ☐ YES ☒ NO

Depth to groundwater: _____ Data Source: _____

10. Receiving waterbody - Must identify final discharge location of construction stormwater flows.
- ☐ Waters of the State (name or description):
- ☐ Municipal storm sewer or drainage system (include downstream receiving waterbody):
- ☐ Ditch (include downstream receiving waterbody):
- ☐ Irrigation channel or ditch (include owner or operator):
- ☐ Infiltration device(s) (construction stormwater discharge to underground injection control/drywell is prohibited)
- ☒ Other: Stormwater will be treated by BMPs prior to discharging off site to remove sediment. Most stormwater will infiltrate, excess treated water from extreme storm events will leave the site via ephemerals and tributary streams and may ultimately reach Umatilla River.

11. Stormwater runoff during construction discharges directly to or through a storm sewer or drainage system that discharges to a waterbody with a Total Maximum Daily Load (TMDL) **or** 303(d) listing for turbidity or sedimentation? ☐ YES ☒ NO

***For assistance: DEQ assessment database page at* http://www.deq.state.or.us/wq/assessment/rpt2012/search.asp

B. SIGNATURE OF LEGALLY AUTHORIZED REPRESENTATIVE

The legally authorized representative *must* sign the application (see instructions – Section C).

I hereby certify that the information contained in this application is true and correct to the best of my knowledge and belief. In addition, I agree to pay all permit fees required by Oregon Administrative Rules 340-045. This includes a compliance determination fee invoiced annually by DEQ to maintain the permit.

Christopher Kopecky
Name of Legally Authorized Representative (Type or Print)

Capital Power VP, Business Development and Commercial
Title

_____
Signature of Legally Authorized Representative

_____
Date

CAPITAL POWER DEVELOPMENTS LLC
NOLIN HILLS WIND ENERGY PROJECT
EROSION AND SEDIMENT CONTROL PLAN (ESCP) DRAWINGS

1750 SW HARBOR WAY, SUITE 400
PORTLAND, OR 97201
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TETRA TECH

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:

1. Hold a pre-construction meeting of project construction personnel that includes the inspector to discuss erosion and sediment control measures and construction limits. (Schedule A.8.c.i.(3))
2. All inspections must be made in accordance with DEQ 1200-C permit requirements.
3. Inspection logs must be kept in accordance with DEQ's 1200-C permit requirements.
4. Retain a copy of the ESCP and all revisions on site and make it available on request to DEQ, Agent, or the local municipality. During inactive periods of greater than seven (7) consecutive calendar days, retain the ESCP at the construction site or at another location. (Schedule B.2.a)
5. All permit registrants must implement the ESCP. Failure to implement any of the control measures or practices described in the ESCP is a violation of the permit. (Schedule A 8.a)
6. The ESCP measures shown on this plan are minimum requirements for anticipated site conditions. During the construction period, upgrade these measures as needed to comply with all applicable local, state, and federal erosion and sediment control regulations. (Schedule A.8.c.ii.(1)(c))
7. Submission of all ESCP revisions is not required. Submittal of the ESCP revisions is only under specific conditions. Submit all necessary revision to DEQ or Agent. (Schedule A.12.c.iii)
8. Phase clearing and grading to the maximum extent practical to prevent exposed inactive areas from becoming a source of erosion. (Schedule A 8.c.ii.(1)(d))
9. Identify, mark, and protect (by fencing off or other means) critical riparian areas and vegetation including important trees and associated rooting zones, and vegetation areas to be preserved. Identify vegetative buffer zones between the site and sensitive areas (e.g., wetlands), and other areas to be preserved, especially in perimeter areas. (Schedule A.8.c.i.(1) & (2))
10. Preserve existing vegetation when practical and re-vegetate open areas. Re-vegetate open areas when practicable before and after grading or construction. Identify the type of vegetative seed mix used. (Schedule A.7.b.iii(1) and A.7.b.iii(3))
11. Erosion and sediment control measures including perimeter sediment control must be in place before vegetation is disturbed and must remain in place and be maintained, repaired, and promptly implemented following procedures established for the duration of construction, including protection for active storm drain inlets and catch basins and appropriate non-stormwater pollution controls. (Schedule A.7.d.i and A.8.c)
12. Establish concrete truck and other concrete equipment washout areas before beginning concrete work. (Schedule A.8.c.i.(6))
13. Apply temporary and/or permanent soil stabilization measures immediately on all disturbed areas as grading progresses and for all roadways including gravel roadways. (Schedule A.8.c.ii.(2))
14. Establish material and waste storage areas, and other non-stormwater controls. (Schedule A.8.c.i.(7))
15. Prevent tracking of sediment onto public or private roads using BMPs such as: graveled (or paved) exits and parking areas, gravel all unpaved roads located onsite, or use an exit tire wash. These BMPs must be in place prior to land-disturbing activities. (Schedule A 7.d.ii.(1) and A.8.c.i(4))
16. When trucking saturated soils from the site, either use water-tight trucks or drain loads on site. (Schedule A.7.d.ii.(3))
17. Use BMPs to prevent or minimize stormwater exposure to pollutants from spills; vehicle and equipment fueling, maintenance, and storage; other cleaning and maintenance activities; and waste handling activities. These pollutants include fuel, hydraulic fluid, and other oils from vehicles and machinery, as well as debris, leftover paints, solvents, and glues from construction operations. (Schedule A.7.e.i.(2))
18. Implement the following BMPs when applicable: written spill prevention and response procedures, employee training on spill prevention and proper disposal procedures, spill kits in all vehicles, regular maintenance schedule for vehicles and machinery, material delivery and storage controls, training and signage, and covered storage areas for waste and supplies. (Sch A 7.e.iii.)
19. Use water, soil-binding agent or other dust control technique as needed to avoid wind-blown soil. (Schedule A 7.b.ii)
20. The application rate of fertilizers used to reestablish vegetation must follow manufacturer's recommendations to minimize nutrient releases to surface waters. Exercise caution when using time-release fertilizers within any waterway riparian zone. (Schedule A.9.b.iii)
21. If a stormwater treatment system (for example, electro-coagulation, flocculation, filtration, etc.) for sediment or other pollutant removal is employed, submit an operation and maintenance plan (including system schematic, location of system, location of inlet, location of discharge, discharge dispersion device design, and a sampling plan and frequency) before operating the treatment system. Obtain plan approval before operating the treatment system. Operate and maintain the treatment system according to manufacturer's specifications. (Schedule A.9.d)
22. Temporarily stabilize soils at the end of the shift before holidays and weekends, if needed. The registrant is responsible for ensuring that soils are stable during rain events at all times of the year. (Schedule A 7.b)
23. At the end of each workday soil stockpiles must be stabilized or covered, or other BMPs must be implemented to prevent discharges to surface waters or conveyance systems leading to surface waters. (Schedule A 7.e.ii.(2))
24. Construction activities must avoid or minimize excavation and creation of bare ground during wet weather. (Schedule A.7.a.i)
25. Sediment fences: remove trapped sediment before it reaches one third of the above ground fence height and before fence removal. (Schedule A.9.c.i)
26. Other sediment barriers (such as biobags): remove sediment before it reaches two inches depth above ground height. and before BMP removal. (Schedule A.9.c.ii)
27. Catch basins: clean before retention capacity has been reduced by fifty percent. Sediment basins and sediment traps: remove trapped sediments before design capacity has been reduced by fifty percent and at completion of project. (Schedule A.9.c.III & iv)
28. Within 24 hours, significant sediment that has left the construction site, must be remediated. Investigate the cause of the sediment release and implement steps to prevent a recurrence of the discharge within the same 24 hours. Any in-stream clean up of sediment shall be performed according to the Oregon Division of State Lands required timeframe. (Schedule A.9.b.i)
29. The intentional washing of sediment into storm sewers or drainage ways must not occur. Vacuuming or dry sweeping and material pickup must be used to cleanup released sediments. (Schedule A.9.b.ii)
30. The entire site must be temporarily stabilized using vegetation or a heavy mulch layer, temporary seeding, or other method should all construction activities cease for 30 days or more. (Schedule A.7.f.i)
31. Provide temporary stabilization for that portion of the site where construction activities cease for 14 days or more with a covering of blown straw and A tackifier, loose straw, or an adequate covering of compost mulch until work resumes on that portion of the site. (Schedule A.7.f.ii)
32. Provide permanent erosion control measures on all exposed areas. Do not remove temporary sediment control practices until permanent vegetation or other cover of exposed areas is established. However, do remove all temporary erosion control measures as exposed areas become stabilized, unless doing so conflicts with local requirements. Properly dispose of construction materials and waste, including sediment retained by temporary BMPs. (Schedule A.7.b.III(2) and A.8.c.III)

NARRATIVE DESCRIPTIONS

PROJECT LOCATION
13 MILES WEST-SOUTHWEST OF PENDLETON
UMATILLA COUNTY, OREGON
LATITUDE= 45°38'57" N LONGITUDE= 119°05'59" W

EXISTING SITE CONDITIONS
UNDEVELOPED AND AGRICULTURAL RURAL LAND WITH SCATTERED HOMESTEADS. STEEP SLOPES RANGING FROM 1% TO OVER 40%. NATIVE SOILS WILL BE USED FOR AGGREGATE AND FILL AS NEEDED.

PROPERTY DESCRIPTION
APPROXIMATELY 45,899 ACRES OF LAND IN WEST UMATILLA COUNTY, OREGON. ELEVATION RANGES FROM APPROX. 700 FT AMSL TO APPROX. 2550 FT AMSL

SITE SOIL ABOVE 2% OF AREA:
16D – Cantala silt loam, 12 to 20 percent slopes
18B, C, 19D – Condon silt loam 1 to 20 percent slopes
21D – Condon-Bakeoven complex, 2 to 20 percent slopes
48E – Lickskillet very stony loam, 7 to 40 percent slopes
59F – Lickskillet-Nansene association, 35 to 70 percent slopes
50F – Lickskillet-Rock outcrop, 40 to 70 percent slopes
54B, C – Mikkalo silt loam, 2 to 12 percent slopes
56B, C ,57D – Morrow silt loam, 1 to 20 percent slopes
59D – Marrow-Bakeoven complex, 2 to 20 percent slopes
80B – Ritzville silt loam, 12 to 25 percent slopes

RECEIVING WATER BODIES:
WATERBODIES IN THE PROJECT AREA INCLUDE TRIBUTARIES AND EPHEMERAL STREAMS THAT FEED BUTTER CREEK, THE UMATILLA RIVER, AND ULTIMATELY THE COLUMBIA RIVER.

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE
CAPITAL POWER TO CONSTRUCT THE NOLIN HILLS WIND PROJECT TO CONSIST OF:
- SITE PREPARATION: CLEARING, GRADING AND GRAVELING ACCESS ROADS, AND LAYDOWN AREAS
- EXCAVATIONS AND FOUNDATIONS: STOCKPILE DIRT, CONSTRUCT AND POUR FOUNDATION, AND BACKFILL
- SUBSTATION AND TRANSMISSION LINE CONSTRUCTION
- COMPONENT DELIVERY AND TOWER ERECTION
- COLLECTION LINE INSTALLATION AND FINAL SYSTEM ENGAGEMENT
- SEEDING AND RECLAMATION

SITE PREPARATION (DATES, FROM: MAR 2021 & TO: JUN 2021)
EXCAVATION AND FOUNDATION: (DATES, FROM: MAY 2021 & TO: OCT 2021)
SUBSTATION AND TRANSMISSION: (DATES, FROM: MAY 2021 & TO: SEP 2022)
DELIVERY AND ERECTION (DATES, FROM: SEP 2021 & TO: JUL 2022)
COLLECTION SYSTEM (DATES, FROM: MAR 2022 & TO: SEP 2022)
SEEDING AND RECLAMATION (DATES, FROM: AUG 2022 & TO: OCT 2022)

TOTAL SITE AREA: APPROX. 45,899 ACRES
POTENTIAL MAX DISTURBED AREA: APPROX. 1,821 TEMPORARILY AND 123 PERMANENTLY

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200C PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200C PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200C PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

DEVELOPER
DEVELOPER/COMPANY: CAPITAL POWER DEVELOPMENTS
CONTACT: CYRUS TINGLEY
ADDRESS: 155 FEDERAL STREET SUITE 1200
EUGENE, OR, 97405
PHONE: 617-274-7718
EMAIL: CTINGLEY@CAPITALPOWER.COM

PLANNING/ENGINEERING/ SURVEYING FIRM
COMPANY: TETRA TECH
CONTACT: ANNEKE SOLSBY
ADDRESS: 1750 SW HARBOR WAY, SUITE 400
PORTLAND, OR 97201
PHONE: (503) 721-7217
EMAIL: ANENEKE.SOLSBY@TETRATECH.COM

PERMITTEE'S SITE INSPECTOR
INSPECTOR: TBD
COMPANY/AGENCY: TBD
PHONE: TBD
EMAIL: TBD
DESCRIPTION OF EXPERIENCE: TBD

INSPECTION FREQUENCY: TBD

SITE CONDITION	MINIMUM FREQUENCY
1. ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDIGN RUNOFF FROM SNOWMELT, IS OCCURING.
2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY.	ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESARRY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE.
3. INACTIVE PERIODS GREATER THAN FOURTEEN CONSECTUTIVE CALENDAR DAYS.	ONCE EVERY TWO WEEKS.
4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.	IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.

- HOLD A PRE-CON MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE EC INSPECTOR.
- ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
- INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
- REVISIONS TO THE APPROVED ESC PLAN MUST BE SUBMITTED TO DEQ OR AGENT IN ACCORDANCE WITH CURRENT 1200-C PERMIT

LOCAL AGENCY-SPECIFIC EROSION CONTROL NOTES:
1. OWNER OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
2. PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BOUNDARIES OF THE CLEARING LIMITS, VEGETATED BUFFERS, AND ANY SENSITIVE AREAS SHOWN ON THIS PLAN SHALL BE CLEARLY DELINEATED IN THE FIELD. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE IS PERMITTED BEYOND THE CLEARING LIMITS. THE OWNER/PERMITTEE MUST MAINTAIN THE DELINEATION FOR THE DURATION OF THE PROJECT. NOTE: VEGETATED CORRIDORS TO BE DELINEATED WITH ORANGE CONSTRUCTION FENCE OR APPROVED EQUAL.
3. PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BMP'S THAT MUST BE INSTALLED ARE A GRAVEL CONSTRUCTION ENTRANCE, PERIMETER SEDIMENT CONTROL, AND INLET PROTECTION. THESE BMP'S MUST BE MAINTAINED FOR THE DURATION OF THE PROJECT.
4. IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE THE PLACE NO LATER THAN SEPTEMBER 1; THE TYPE AND PERCENTAGES OF SEED IN THE MIX MUST BE IDENTIFIED ON THE PLANS.
5. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP (I.E. FILTER BAG).
6. THE ESC PLAN MUST BE KEPT ON SITE. ALL MEASURES SHOWN ON THE PLAN MUST BE INSTALLED PROPERLY TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER A SURFACE SYSTEM, ROADWAY, OR OTHER PROPERTIES.
7. THE ESC MEASURES SHOWN ON THIS PAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD THESE MEASURES SHALL BE UPGRADED AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL EROSION CONTROL REGULATIONS CHANGES TO THE APPROVED ESC PLAN MUST BE SUBMITTED IN THE FORM OF AN ACTION PLAN TO DEQ PER THE 1200 C PERMIT.
8. IN AREAS SUBJECT TO WIND EROSION, APPROPRIATE BMP'S MUST BE USED WHICH MAY INCLUDE THE APPLICATION OF FINE WATER SPRAYING, PLASTIC SHEETING, MULCHING OR OTHER APPROVED MEASURES.
9. ALL EXPOSED SOILS MUST BE COVERED DURING THE WET WEATHER PERIOD.

BMP MATRIX FOR CONSTRUCTION PHASES
REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S

	2021				2022			
BMPS	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Pipe Slope Drains								
Energy Dissipaters								
Temporary Diversion Dikes								
Check Dams								
Temporary Seeding and Planting								
Permanent Seeding and Planting							x	x
Mycornhizae/Biofertilizers								
Mulches (type)							x	x
Construction Entrance	X	x	x	x	x	x	x	X
Compost Blankets								
Compost Socks								
Compost Berm								
Soil Trackifiers								
Sodding Vegetative Buffer Strips								
Sediments Fencing		x	x	x	x	x	x	x
Erosio Control Blankets & Mts								
Earth Dikes								
Drainage Swales								
Rock Outlet Protection								
Sediments Trap								
Straw Wattles		x	x	x	x	x	x	x
Storm Drain Inlet Protection								
Temporary or Permanent Sedimentation Basins								
Unpaved Roads Graveled or other BMP on Road			X	X	X	X		
Dewatering								
Paving Operations Controls								
Concrete Truck Washout			X	X	X	X		

RATIONALE STATEMENT
A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

INITIAL

PROJECT LOCATION:
UMATILLA COUNTY, OREGON

CLIENT INFORMATION:
CAPITAL POWER DEVELOPMENTS LLC
155 FEDERAL STREET SUITE 1200
BOSTON, MA 02110

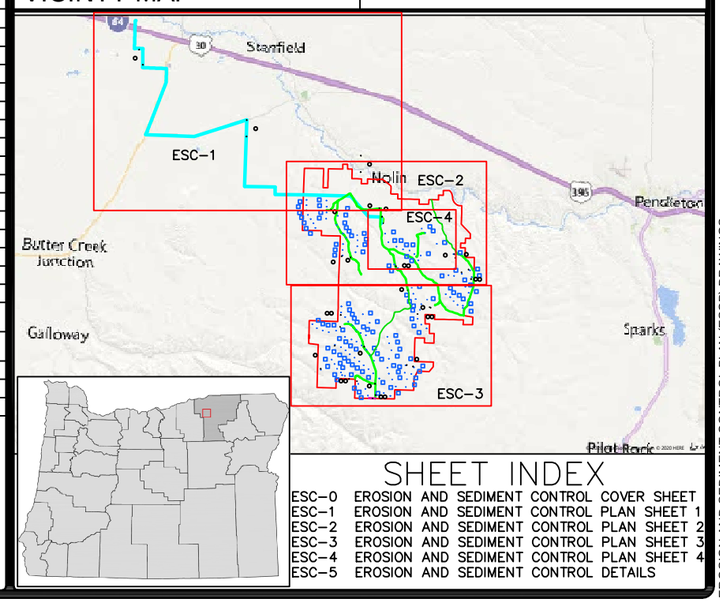
Tt PROJECT No.:
194-6029

CLIENT PROJECT No.:
2519276

PROJECT DESCRIPTION / NOTES:
CAPITAL POWER DEVELOPMENTS LLC TO CONSTRUCT AND OPERATE THE PROPOSED NOLIN HILLS WIND PROJECT. THE PROJECT CONSISTS OF UP TO 112 WIND TURBINE GENERATORS AND UP TO 1,117,600 SOLAR MODULES WITH A TOTAL NOMINAL GENERATING CAPCITY OF 600 MW.

ISSUED:
DRAFT ISSUED FOR REVIEW

VICINITY MAP



SHEET INDEX

EROSION AND SEDIMENT CONTROL PLAN (ESCP) DRAWINGS

GENERAL NOTES

1. THE PREDOMINANT SOIL TYPE IN THIS AREA IS HIGHLY PRONE TO BOTH WIND AND WATER EROSION. THEREFORE, THE IMPLEMENTATION OF EROSION CONTROL PRACTICES MUST BE AN INTEGRAL PART OF ALL PHASES OF CONSTRUCTION.
2. THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE EROSION CONTROL FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONNECTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS OUTSIDE OF PROJECT LIMITS, AND VIOLATE APPLICABLE WATER STANDARDS.
4. THE EROSION CONTROL FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD THESE FACILITIES SHALL BE MAINTAINED AND UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
5. TEMPORARILY STABILIZE EXISTING BARE SOIL AREAS BY SPREADING STRAW MULCH AND PUNCHING IT INTO THE GROUND WITH A DISC. THE APPLICATION RATE FOR STRAW MULCH IS 2500 LBS/ACRE. IN THE FALL, WHEN SOIL MOISTURE IS ADEQUATE, SEED ALL IMPACTED AREAS WITH THE FOLLOWING SEED MIX.
   A. BLUEBUNCH WHEATGRASS 45%
   B. BOTTLEBRUSH SQUIRRELTAIL 15%
   C. SANDBERG'S BLUEGRASS 15%
   D. THICKSPIKE WHEATGRASS 15%
   E. WESTERN YARROW 2%
   F. SHAGGY FLEABANE 2%
   G. DESERT PARSLEY 2%
   H. SILKY LUPINE 2%
   I. LEWIS FLAX. 2%
6. DO NOT DISTURB GROUND OUTSIDE THE OF THE 30' LIMITS WITHIN CONSERVATION RESERVE PROGRAM (CRP) LAND.
7. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR LOCATING ANY NECESSARY DISPOSAL SITES. TO CONTROL THE RELEASE OF SEDIMENT FROM THE SITES, SILT FENCE WITH A STRAW BALE BARRIER SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF ALL DISPOSAL AREAS. SEE DETAIL ON DRAWING ESC-5. IF ADDITIONAL SEDIMENT OR EROSION CONTROL MEASURES ARE DETERMINED TO BE NECESSARY TO CONTROL THE RELEASE OF SEDIMENT FROM THE DISPOSAL SITES. THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE MEASURES.

KEYED NOTES

(1) EXISTING COUNTY ROADS UTILIZED FOR PROJECT ACCESS TO BE RESTORED TO COUNTY STANDARDS AFTER CONSTRUCTION IS COMPLETE. FOR IMPACTED AREAS ADJACENT TO THE ROADWAY, SPREAD MULCH AND SEED ACCORDING TO GENERAL NOTE 5. MAINTAIN EXISTING DRAINAGE.
(2) TOWER STRING SERVICE ROADS TO TURBINES TO BE GRADED AND ROCKED APPROXIMATELY LEVEL WITH EXISTING GROUND SO RUNOFF FROM UPSLOPE SHEET FLOWS ACROSS ROAD. FOR IMPACTED AREAS ADJACENT TO THE ROADWAY, SPREAD MULCH AND SEED ACCORDING TO GENERAL NOTE 5.
(3) INSTALL SILT FENCE ON THE DOWN SLOPE SIDE OF DISTURBED AREA. SEE DETAIL ON DRAWING ESC-5.
(4) INSTALL SILT FENCE ON THE DOWN SLOPE SIDE OF STAGING AREA. SEE DETAIL ON DRAWING ESC-5.
(5) EXISTING ROADS UTILIZED FOR PROJECT ACCESS TO BE REGRADED AND GRAVEL TO BE ADDED AS NEEDED. FOR IMPACTED AREAS ADJACENT TO THE ROADWAY, SPREAD MULCH AND SEED ACCORDING TO GENERAL NOTE 5. MAINTAIN EXISTING DRAINAGE.
(6) INSTALL SILT FENCE BETWEEN REGRADED ROAD AND INTERMITTENT STREAM WHERE ROAD IS ADJACENT TO STREAM CHANNEL.
(7) SERVICE AREAS FOR TURBINES FOR IMPACTED AREAS ADJACENT TO THE PADS, SPREAD MULCH AND SEED ACCORDING TO GENERAL NOTE 5. INSTALL SILT FENCE ON DOWNSLOPE SIDE OF DISTURBED AREA.
(8) STABILIZED CONSTRUCTION ENTRANCE SHALL BE USED WHERE SITE ACCESS ROADS CONNECT TO PAVED LOCAL ROADS. SEE DETAIL ON DRAWING ESC-5.
(9) CONCRETE WASHOUT TYPICALLY OCCURS NEAR EACH WTG LOCATION AND SHALL BE DONE WITHIN CONCRETE WASHOUT AREAS. SEE DETAIL ON DRAWING ESC-5.
(10) STRAW WATTLES SHALL BE USED AS APPROPRIATE TO PREVENT EROSION AROUND NEW AND EXISTING CULVERTS OR SLOPES. SEE DETAIL ON DRAWING ESC-5.

PROPOSED TRANSMISSION LINE

PROPOSED TRANSMISSION LINE

LEGEND

- (3) KEYED NOTES (SEE ESC-1)
- PROJECT BOUDARY
- ACCESS ROAD CENTERLINE
- LIMITS OF DISTURBANCE
- 2 EXISTING 20' CONTOUR
- WIND TURBINE LOCATION
- SURFACE FLOW DIRECTION
- TRANSMISSION LINE

0 1000' 2000' 4000'

SCALE: 1" = 2000'

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MARK	DATE	DESCRIPTION	BY

CAPITAL POWER DEVELOPMENTS, LLC

NOLIN HILLS WIND PROJECT

EROSION AND SEDIMENT CONTROL PLAN
SHEET 1

Project No.:	194-6029
Designed By:	ENM
Drawn By:	ENM
Checked By:	JPP

ESC-1

Bar Measures 1 inch

PROPOSED TRANSMISSION LINE

PROPOSED SOLAR GENERATION STATION BOUNDARY (SEE ESC-4)

MAC HEKE RD

PROPOSED LAYDOWN YARD

PROPOSED OPERATIONS AND MAINTENANCE BUILDING

PROPOSED SUBSTATION

PROPOSED COLLECTION LINES

TYP. FOR ALL TURBINE LOCATIONS

MUD SPRINGS RD

SPRUCE CANYON RD

CR 1363

PROPOSED SUBSTATION INTERCONNECTION

TRIBUTARY OF UMATILLA RIVER

TYP. FOR ALL TURBINE SERVICE ROADS

LEGEND

- KEYED NOTES (SEE ESC-1)
- PROJECT BOUDARY
- ACCESS ROAD CENTERLINE
- LIMITS OF DISTURBANCE
- EXISTING 20' CONTOUR
- EXISTING 100' CONTOUR
- WIND TURBINE LOCATION
- SURFACE FLOW DIRECTION
- TRANSMISSION LINE

0 500' 1000' 2000'

SCALE: 1" = 1000'

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MARK	DATE	DESCRIPTION	BY

CAPITAL POWER DEVELOPMENTS, LLC

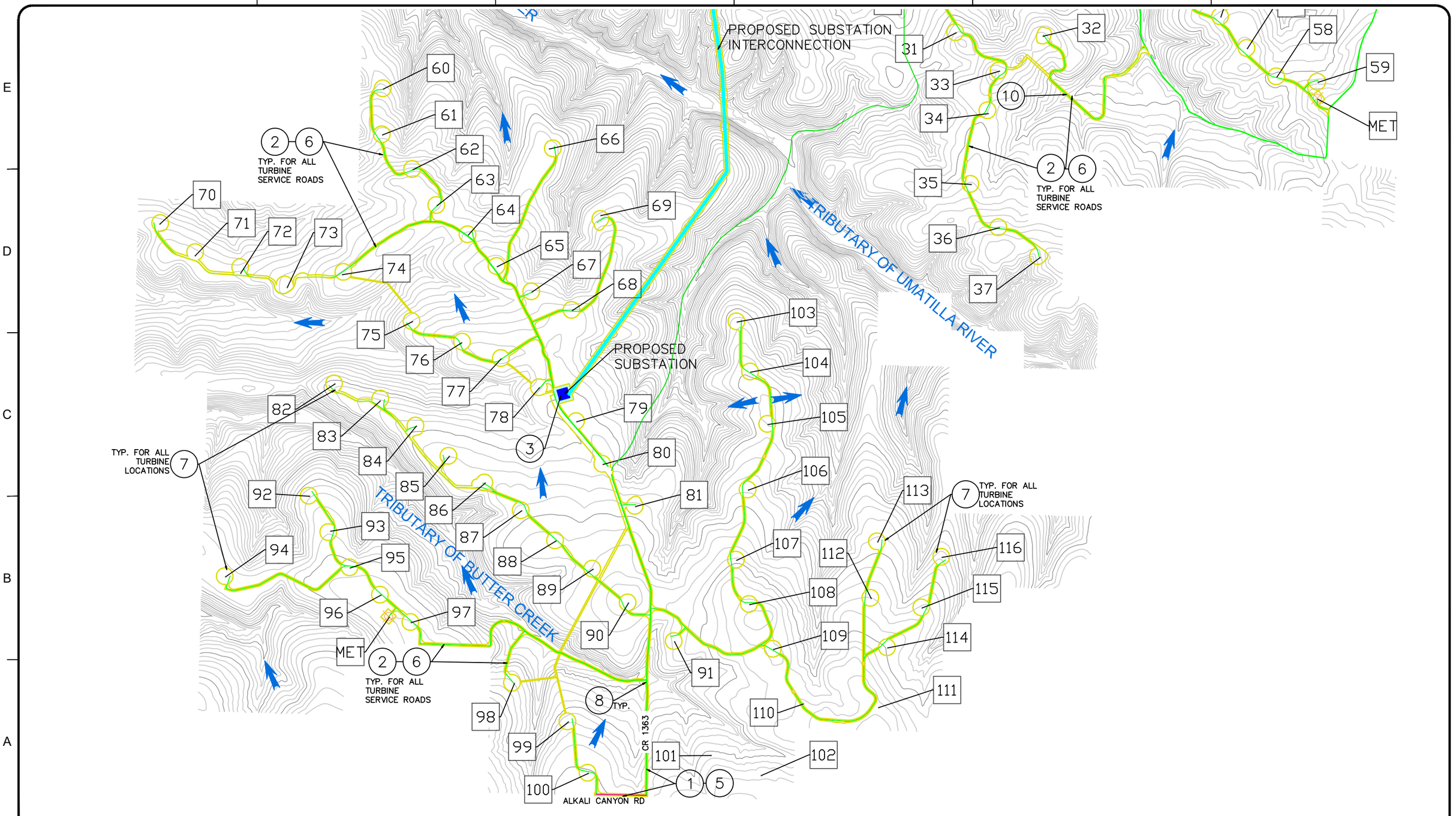
NOLIN HILLS WIND PROJECT

EROSION AND SEDIMENT CONTROL PLAN
SHEET 2

Project No.:	194-6029
Designed By:	ENM
Drawn By:	ENM
Checked By:	JPP

ESC-2

Bar Measures 1 inch



LEGEND

- ③ KEYED NOTES (SEE ESC-1)
- PROJECT BOUDARY
- ACCESS ROAD CENTERLINE
- LIMITS OF DISTURBANCE
- EXISTING 20' CONTOUR
- EXISTING 100' CONTOUR
- [2] WIND TURBINE LOCATION
- SURFACE FLOW DIRECTION
- TRANSMISSION LINE

0 500' 1000' 2000'

SCALE: 1" = 1000'

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MARK	DATE	DESCRIPTION	BY

CAPITAL POWER DEVELOPMENTS, LLC

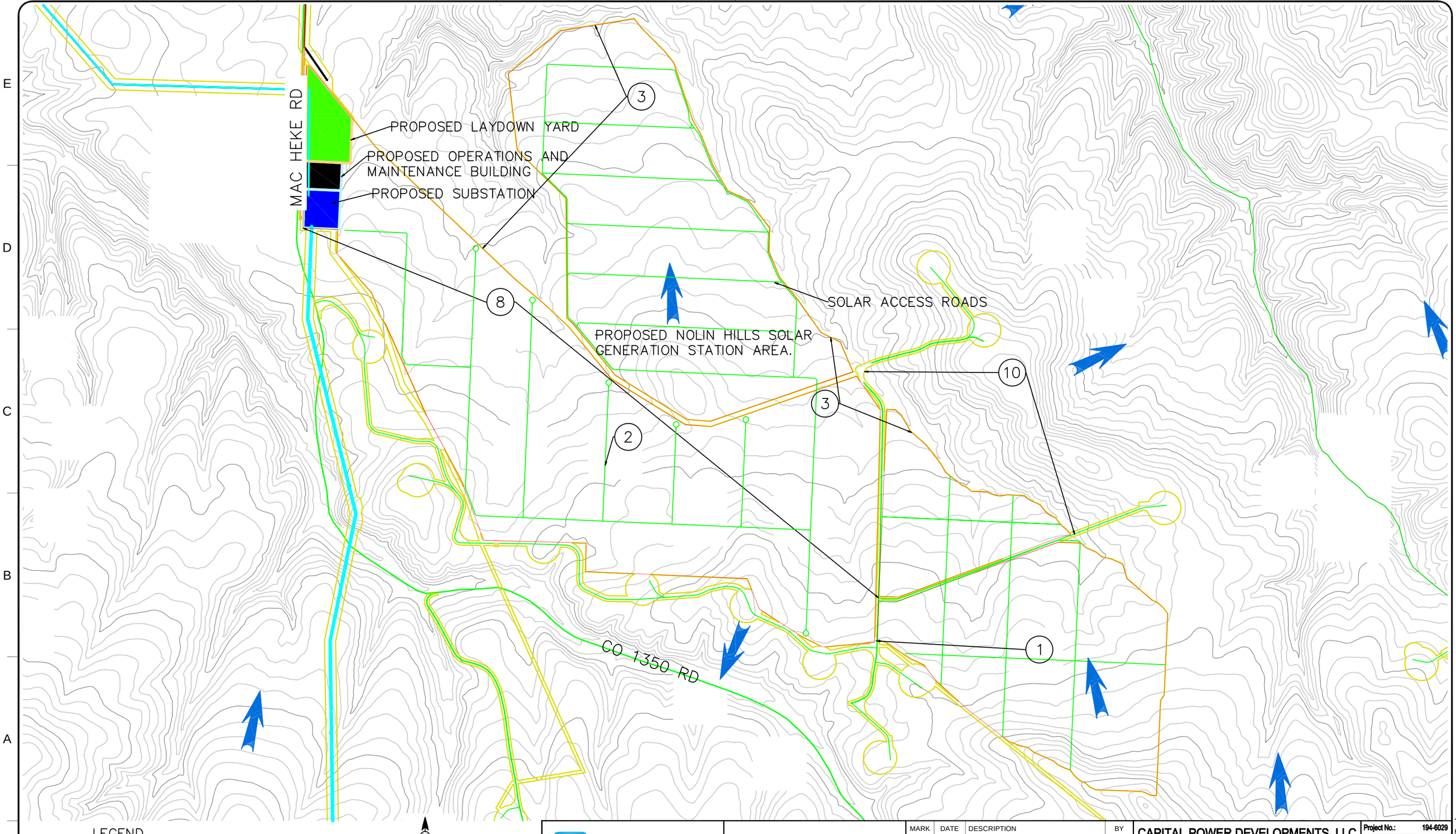
NOLIN HILLS WIND PROJECT

EROSION AND SEDIMENT CONTROL PLAN
SHEET 3

Project No.:	194-6029
Designed By:	ENM
Drawn By:	ENM
Checked By:	JPP

ESC-3

Bar Measures 1 inch



LEGEND

- KEYED NOTES (SEE ESC-1)
- PROJECT BOUDARY
- ACCESS ROAD CENTERLINE
- LIMITS OF DISTURBANCE
- EXISTING 20' CONTOUR
- EXISTING 100' CONTOUR
- WIND TURBINE LOCATION
- SURFACE FLOW DIRECTION
- TRANSMISSION LINE

N

0 250' 500' 1000'

SCALE: 1" = 500'

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MARK	DATE	DESCRIPTION	BY

CAPITAL POWER DEVELOPMENTS, LLC

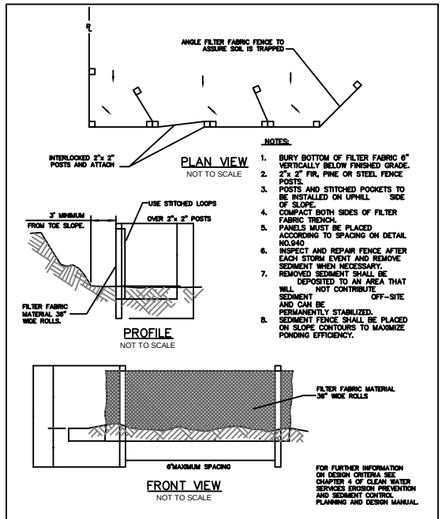
NOLIN HILLS SOLAR PROJECT

EROSION AND SEDIMENT CONTROL PLAN
SHEET 4

Project No.:	194-6029
Designed By:	ENM
Drawn By:	ENM
Checked By:	JPP

ESC-4

Bar Measures 1 inch



SEDIMENT FENCE

DRAWING NO. 875 REVISED 12-16

Clean Water Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SPACING FOR CHECK DAMS

DITCH GRADE	6 INCH	12 INCH	18 INCH
6%	NOT ALLOWED	16 FT O.C.	26 FT O.C.
5%	NOT ALLOWED	20 FT	30 FT
4%	NOT ALLOWED	26 FT	40 FT
3%	15 FT	33 FT	50 FT
2%	25 FT	50 FT	80 FT

BARRIER SPACING FOR GENERAL APPLICATION

INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS

% SLOPE	SLOPE	MAXIMUM SPACING ON SLOPE
10% OR FLATTER	10:1 OR FLATTER	300 FT
>10% OR <15%	>10:1 OR <7.5:1	150 FT
>15% OR <20%	>7.5:1 OR <5:1	100 FT
>20% OR <30%	>5:1 OR <3.5:1	50 FT
>30% OR <50%	>3.5:1 OR <2:1	25 FT

NOTES:

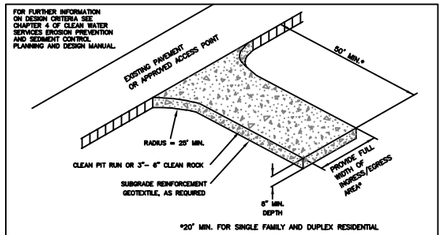
1. FOR MORE INFORMATION REGARDING THESE TABLES SEE CHAPTER 4 TABLES 4-3 AND 4-7 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL DESIGN MANUAL.

SPACING TABLES

DRAWING NO. 940 REVISED 12-16

Clean Water Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



NOTES:

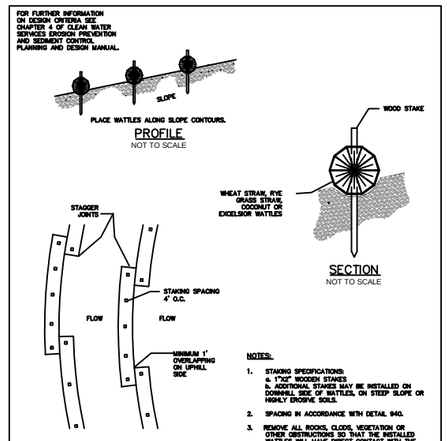
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF- WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS
   SINGLE FAMILY
   20' LONG BY 20' WIDE 8" DEEP OF ¾" MINUS CLEAN ROCK.
   COMMERCIAL
   50' LONG BY 20' WIDE 3-6" CLEAN ROCK, GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

DRAWING NO. 855 REVISED 12-16

Clean Water Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



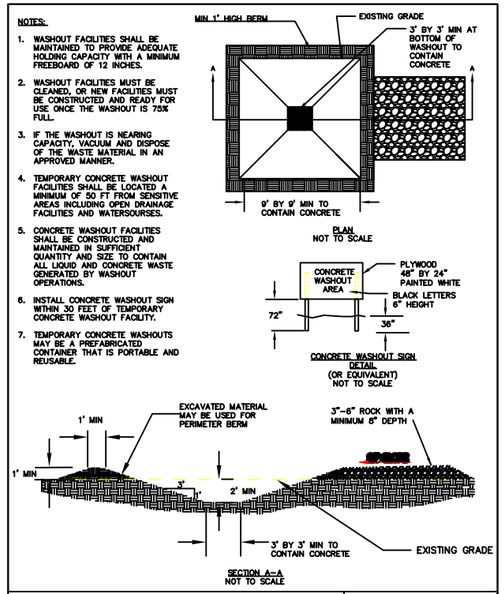
WATTLES

DRAWING NO. 880 REVISED 12-16

Clean Water Services

NOTES:

1. WASHOUT FACILITIES SHALL BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 12 INCHES.
2. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
3. IF THE WASHOUT IS NEARING CAPACITY, VACUUM AND DISPOSE OF THE WASTE MATERIAL IN AN APPROVED MANNER.
4. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FT FROM SENSITIVE AREAS INCLUDING OPEN DRAINAGE FACILITIES AND WATERSOURSES.
5. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
6. INSTALL CONCRETE WASHOUT SIGN WITHIN 30 FEET OF TEMPORARY CONCRETE WASHOUT FACILITY.
7. TEMPORARY CONCRETE WASHOUTS MAY BE A PREFABRICATED CONTAINER THAT IS PORTABLE AND REUSABLE.



CONCRETE WASHOUT

DRAWING NO. 900 REVISED 12-16

Clean Water Services

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www.tetratech.com
1750 SW HARBOR WAY SUITE 400
PORTLAND, OREGON, 97201
PHONE: (503) 221-8636 FAX: (503) 267-1287

MARK	DATE	DESCRIPTION	BY

CAPITAL POWER DEVELOPMENTS, LLC

NOLIN HILLS WIND ENERGY PROJECT

EROSION AND SEDIMENT CONTROL DETAILS

Project No.:	194-8029
Designed By:	ENM
Drawn By:	ENM
Checked By:	JPP

ESC-5

Bar Measures 1 inch