ESTERSON Sarah * ODOE

From: Hutchinson, Matthew <matthew.hutchinson@avangrid.com>
Sent: Monday, July 2, 2018 5:22 PM
To: ESTERSON Sarah * ODOE
Cc: WOODS Maxwell * ODOE; Walsh, Brian; Konkol, Carrie; Tetra Tech (Linnea.Fossum@tetratech.com); Albrich, Elaine
Subject: Avangrid/Golden Hills - Final RFA 5
Attachments: Golden Hills_Final RFA 5_Turbines.pdf; Golden Hills_Final RFA 5_Turbines.docx

Sarah,
Please see attached for the final version of the RFA 5 that incorporates our responses to Requests for Additional Information the Department proved on the Preliminary RFA 5. Also included as a tracked change version for your reference.

Please confirm receipt.

Thanks,
Matt

AVANGRID RENEWABLES

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Final Request for Amendment No. 5 to the Site Certificate for the Golden Hills Wind Project

Prepared for

Oregon Energy Facility Siting Council

July 2018

Prepared and Submitted by

Golden Hills Wind Farm, LLC

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Section 1. Introduction

The Golden Hills Wind Project (Facility) is a wind energy generation facility in Sherman County, Oregon, with an electrical capacity of up to 400 megawatts (MW). On May 15, 2009, the Oregon Energy Facility Siting Council (the Council) issued a site certificate approving the Facility. Golden Hills Wind Farm, LLC (Golden Hills) holds the *Fourth Amended Site Certificate for the Golden Hills Wind Project* (Site Certificate), dated April 28, 2018.[1] The Site Certificate has previously been amended four times, to extend the construction deadlines, update the Facility design, and to account for a change in Golden Hill's parent ownership. As approved in the Site Certificate, the Facility could consist of up to 125 wind turbines, as well as related or supported facilities located within an area encompassing approximately 29,500 acres of privately owned land (Figure 1; Site Boundary). Golden Hills expects to begin Facility construction by June 18, 2020. For this Fifth Amendment Request (RFA 5), Golden Hills proposes to update turbine dimensions to reflect current technology it anticipates using for Facility construction.

Golden Hills plans on using the most technologically advanced turbines at the Facility, selecting designs that are best suited for the wind resource of the site. However, the Site Certificate limits Golden Hill's ability to select the most viable turbine because the dimensions of modern turbines differ from those previously approved by the Council in the Final Order on the Site Certificate[2]. While modern turbines are larger in dimension, fewer turbines are needed to generate the maximum Facility output, and depending on the turbine type selected, Golden Hills could decrease the number of installed turbines. Therefore, Golden Hills is requesting two modifications to the Site Certificate. First, Golden Hills requests that Condition PRE-DC-01 be amended to allow turbines with a higher hub height, taller maximum blade tip height, or shorter minimum blade clearance. Modifications to previously approved supporting facilities include wider temporary access roads and crane paths, and taller meteorological towers, although these changes do not result in any increase to resource impacts. Second, Golden Hills also requests to strike Condition PRE-DC-01(e) pertaining to maximum combined weight of metals from the Site Certificate, as this condition no longer holds relevancy with the any aspect of this Facility, including its construction, operation, or decommissioning. If approved, RFA 5 will enable Golden Hills to select the most economically viable turbine for the Facility while also reducing the Facility's footprint.

While the proposed changes in RFA 5 will not result in a significant adverse impact that the Council has not previously considered, Golden Hills submits RFA5 under Oregon

[1] The Council issued a Final Order approving the Third Amended Site Certificate on February 24, 2017. The Third Amended Site Certificate was fully executed on February 24, 2017. The Fourth Amended Site Certificate was fully executed on April 27, 2018.

[2] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 29 (February 24, 2017).

Administrative Rules (OAR) 345-027-0050(4)(c) because the proposed changes require modifications to the text of the Site Certificate conditions.

Section 2. Amendment Determination Request

Golden Hills submits as a part of RFA 5 an amendment determination request under OAR 345-027-0057(3) seeking confirmation that RFA 5 qualifies for Type B review under OAR 345-027-0051(3). Section 3.3 provides the narrative description of the proposed changes, Figures 1 and 2 provides maps and turbine diagrams representing the proposed changes, and this Section 2 provides Golden Hill's evaluation for why RFA 5 qualifies for Type B review under OAR 345-027-0051(3).

OAR 345-027-0057(8) provides factors the Department may consider when considering whether RFA5 justifies review under a Type B process. Specifically, the Department may consider factors, including but not limited to: (a) the complexity of the changes proposed in RFA 5; (b) the level of anticipated public interest in RFA5; (c) the anticipated level of interest reviewing agencies may have in RFA5; (d) the likelihood of significant adverse impacts posed by the changes in RFA 5; and (e) the type and amount of any additional mitigation triggered by RFA 5. The following reasons demonstrate that RFA 5 is eligible for Type B review:

- **Proposed changes are minor –** Golden Hills proposes two modifications to Site Certificate condition language. As described in Section 3.3 below, the proposed changes would modify the turbine dimensions by increasing the maximum turbine hub height by 28 meters, increasing the maximum blade tip height by 40 meters, and decreasing the minimum blade tip clearance by 5.8 meters. The proposed change to turbine dimensions does not change the Council's previous conclusions on applicable standards, including concerns about visual or noise impacts. Golden Hills completed a visual analysis using the taller turbines and concluded that taller turbines will be visible at the same scenic resources as previously considered (see Section 4.10). Modern turbines have a similar noise profile as the turbines that previous considered by the Council (see Section 5).

  The Site Boundary and micrositing corridors will not be changed; therefore, there are no new resources (e.g., unknown cultural sites, different habitat types, or different types of farm use) to consider that were not previously evaluated. Other than the change in turbine dimensions, the Facility will substantially be constructed and operated in the same manner as approved by the Council.

- **Anticipated public interest will likely be low -** The proposed change in turbine dimensions may generate public comments related to wildlife impacts, turbine setbacks, and health and safety standards. The Department may look to the number of comments received on RFA 4 along with the nature of comments received on the Request for

Amendment 3 on the Montague Wind Power Facility (Montague RFA 3) which also involved a similar change in turbine dimensions to account for modern turbine technology. The comments on Golden Hills RFA 4 were minimal (two comments received) and were related to the Department's review of federally listed species[3] and locations of cultural sensitive areas[4]. One public comment was received on Montague RFA 3 raised concerns related turbine setbacks; however the Department's response to this comment did not require changes to Montague's site certificate conditions or additional analysis[5].

In general, there has been numerous opportunities for public comments on the Facility since 2008. Of the substantive public comments received during the prior proceedings[6], the comments related to noise, Sherman County setbacks, visual impacts, and safety concerns could be associated with the proposed changes to turbine dimensions. In response to public concerns about the operational noise from the Facility, the Council concluded that Golden Hills was able to comply with the Oregon Department of Environmental Quality's (ODEQ) noise control regulations (Oregon Revised Statutes [ORS] 340-035-0035), and imposed Condition PRE-CJ-01 to complete a noise analysis based on the final design to demonstrate compliance with noise control regulations. The modern turbines considered under this amendment request have a similar noise profile to the turbines that were previously considered; therefore, the Council's previous findings and site certificate condition to address public comments on noise are adequate (see Section 5 for more information).

In response to public concerns regarding setbacks, the council imposed Condition PRE-CJ-01 requiring the Certificate Holder to satisfy Sherman County's Ordinance #39-2007 setback ordinance which applies to all turbine types, regardless of size. The modern turbines considered under this amendment request will be in compliance with the Ordinance. Therefore, the proposed changes in this amendment request do not change ODOE's response to public comments that Golden Hills is able to construct the Facility consistent with local land use codes.

In response to public concerns about visual impacts, the Council imposed conditions on painting and signs (PRE-SR-01), building types (GEN -SR-01), and lighting (OPR -SR-

[3] Comment by Irene Gilbert.

[4] Comment by Confederated Tribes of the Umatilla Indian Reservation.

[5] Montague Wind Power Facility Final Order on Request for Amendment #3, July 2017, p.10.

[6] EFSC also received public comments on Facility location, public notice procedures, mineral rights, lighting, fish and wildlife habitat, revegetation, health impacts, transmission line, wetlands and waters impacts, and the Oregon Trail. None of these categories are related to turbine dimensions.

01).[7] None of these conditions are related to turbine dimensions, and will be unaffected by the proposed changes. Regarding public comments on potential visual impacts to protected areas, Golden Hills has reanalyzed the visual impact model (Zone of Visual Influence; "ZVI") with the proposed taller turbines to demonstrate that the Council can rely on its previous finding (see Section 4.6).

In response to public concerns about the structural reliability of larger turbines, the Council imposed setbacks from public roadways, residences, and the lease boundary. Golden Hills can conform to these public safety setbacks with the taller turbines described in this amendment request because the setbacks are a function of turbine height; as the turbine height increases so does the setback. The modern turbines described in this amendment request are designed and engineered to the same safety and reliability standards as the turbines that were previously considered by the Council. Therefore, the previous response to public safety concerns is adequate, considering the proposed changes.

- **Anticipated level of input from reviewing agencies is low** - Reviewing agencies have had multiple opportunities to provide input on the Facility and the associated Site Certificate conditions. Golden Hills expects the level of input from reviewing agencies to be similar to comments provided on the *Revised Proposed Order for the Third Amended Site Certificate*, which also changed the turbine dimensions. In that proceeding, ODOE received two agency comments. The Sherman County Planning Department provided a letter stating they had no comments on changes to turbine dimensions, or on other proposed changes. The second letter was from the Oregon Department of State Lands (ODSL) confirming the wetland delineation procedures. None of these agency comments are related to changes in turbine dimensions.

  Regarding potential agency comments on wildlife impacts, ODFW submitted the following comment on Montague RFA 3, "the modification to a larger MW per turbine reduces the overall number of turbines and therefore reduces the footprint of the facility. This further minimizes impacts to wildlife habitat. As stated in the RFA, the reduced blade-to ground distance does have the potential for additional mortality effects on birds and bats. ODFW agrees with the applicant that this is a possibility, but like the applicant, ODFW is not able to find published information that describes the mortality effects of these larger turbines on avian and bat species. Given the lack of available information demonstrating an increased risk to wildlife beyond what has already been assumed in the existing facility design and mitigation plan, ODFW assumes the existing avoidance and mitigation strategies remain adequate. Therefore, ODFW does not have any additional measures or practices beyond those established in the existing Site

[7] Golden Hills Wind Project Final Order, p.86 (May 15, 2009).

Certificate." This statement is relevant to the proposed change at the Facility because it supports the concept that fewer, larger turbines can result in reduced impact, and reiterates that proposed avoidance and minimization measures are effective regardless of turbine size. A detailed analysis of wildlife impacts is provided in Section 4.8

Golden Hills believes that comments from reviewing agencies on RFA 5 will be consistent with past input. In preparation of RFA 5, Golden Hills consulted with the Oregon Department of Aviation and the Navy about the use of taller turbines near Wasco County Airport's airspace and military training routes. See section 4.15 for more information. Golden Hills also consulted with Department of Geology and Mineral Industries regarding use of larger turbines and compliance with structural standards. See section 4.3 for more information.

- **Proposed changes will reduce impact –** RFA 5 does not propose to increase the number of turbines or enlarge the Facility footprint. In fact, if approved, the proposed changes would allow Golden Hills to generate the maximum output of the Facility with fewer turbines. Accordingly, the Facility could be constructed with a significantly smaller footprint, as fewer turbines, roads, and electrical collector lines will be needed. Impacts to wildlife habitat and agricultural areas would also then be reduced. Golden Hills will construct any selected turbine within the approved micrositing corridors and will not exceed the habitat impact acreages by category as listed in the Final Order on Amendment 3.
- **No new mitigation is needed –** Golden Hills will implement its Habitat Mitigation Plan and Wildlife Monitoring and Mitigation Plan based on the final design of the Facility. These plans allow for changes in turbine dimensions and areas of habitat impacts, and Golden Hill's obligation to provide compensatory mitigation for temporary and permanent impacts to Category 3 and 4 habitats does not change in RFA5. With a reduced Facility footprint, there will be less habitat impacts to mitigate, and Golden Hills has secured a mitigation parcel that is large enough to offset impacts of all turbine scenarios.[8] Sections 3 and 4 demonstrate that the proposed changes do not result in new significant impacts that require mitigation.

For these reasons, the Department may find that RFA 5 justifies review under the Type B review process.

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[8] The certificate holder has entered into a conservation easement agreement with a private landowner that allows the certificate holder to conduct certain habitat improvements on a 22-acre habitat improvement parcel as well as provides the certificate holder with the option to expand the habitat improvement parcel to an adjacent 29-acre parcel. The total area available to the certificate holder to perform habitat improvements is 51 acres in Sherman County. The total area available to perform habitat improvements through the conservation easement is more than adequate to account for the anticipated compensatory mitigation requirements.

Section 3. Details of Proposed Changes

3.1 Contact Information

Name and Address of Certificate Holder:

Golden Hills Wind Farm, LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209

Name, Mailing Address, Email Address, and Phone Number of Individual Responsible for Submitting the Request:

Brian Walsh
Senior Developer
Avangrid Renewables, LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209
(503) 796-6928
brian.walsh@avangrid.com

3.2 Redlined Changes to the Site Certificate

Golden Hills seeks Council approval of the following revisions to Condition PRE-DC-01 (also, see Attachment 1):

> *The certificate holder shall construct a facility substantially as described in the site certificate and may select up to 125 turbines, subject to the following restrictions and compliance with other site certificate conditions. Before beginning construction, the certificate holder shall provide to the Department a description of the turbine types selected for the facility demonstrating compliance with this condition.*
>
> *a) The total number of turbines at the facility must not exceed 125 turbines.*
>
> *b) The combined peak generating capacity must not exceed 400 megawatts.*
>
> *c) The turbine hub height must not exceed 123 meters and the maximum blade tip height must not exceed 198 meters.*
>
> *d) The minimum blade tip clearance must be 14 meters above ground.*

3.3 Description of Proposed Changes

The proposed changes to the Facility allow Golden Hills to select a turbine type that requires fewer turbines to generate the maximum output authorized by the Site Certificate. Section III.A.I of the Site Certificate authorizes the use of 125 turbines with a peak electric generating capacity of up to 400 MW, whereas the proposed changes allow Golden Hills to achieve this same output with as few as 95 turbines[9]. Golden Hills has not yet selected a turbine type for the Facility and this amendment request could allow the use of more economical and technologically advanced turbines. However, Golden Hills does not seek to reduce the maximum number of turbines allowed because the total number of turbines that will be used is a function of interconnection capacity and the actual number of turbines used will vary by turbine type. Additionally, this allows for consistency with past final orders and related impact analyses. If turbines with larger generation capacity are selected, then fewer turbines will be installed. It would violate the interconnection agreement to install more generation capacity than allowed under the interconnection agreement. For example, it would be infeasible to install 125 4.2 MW turbines as the interconnection agreement would be exceeded. However, evaluating this scenario demonstrates how the existing site certificate conditions are adequate for larger, modern turbines.

Golden Hills seeks Council approval to alter the minimum blade tip clearance from 19.8 meters to 14 meters above ground, lengthen the maximum turbine hub height from 95 meters to 123 meters, and lengthen the maximum blade tip height from 158 meters to 198 meters. Overall, these changes are minor compared to the authorized turbine dimensions (Table 1).

Table 1. Turbine Comparison

Turbine Specification	Approved	Proposed
Maximum Hub Height	95 meters	123 meters
Maximum Blade Tip Height	158 meters	198 meters
Minimum Blade Tip Clearance	19.8 meters	14 meters

Also related to turbine types, Golden Hills requests to strike the requirement mandating that that the combined weight of metals in the tower must not exceed 336 U.S. tons per turbine. The underlying basis for this condition, which limited the weight of metals in each tower. The rationale for this weight limit is not documented in the record but is believed to have been based on either the anticipated landfill capacity at the time of Facility retirement (see

[9] Golden Hills notes that the Facility's interconnect with Bonneville Power Administration's Schoolhouse Substation is limited to 200 MW, but the Site Certificate allows a maximum generation output up to 400 MW. To be consistent with past final orders, this amendment request assumes 125 turbines, each with generation output of 3.2 MW, for a maximum output of 400 MW.

Supplement to Request for Amendment No. 3, page 5), or based on calculations used to estimate the retirement cost. This limit serves no purpose for this Facility. If the basis of the weight limit relates to the decommissioning cost estimate, Condition PRE-RT-01 requires that the decommissioning cost estimate be adjusted based on the final design, so the actual metal weight will be used to adjust the cost estimate. If the original basis of the weight limit was related to concerns about landfill capacity, there is sufficient capacity at the closest landfill to handle the turbines in the unlikely event the metals are not recycled. The evolution of turbine technology has resulted in more efficient turbines which are larger and heavier than previous models. The closest landfill to the Facility is the Columbia Ridge Recycling and Landfill Center. This landfill is not projected to reach capacity for approximately 143 years[10]. The landfill has 329 million tons of remaining capacity available, and the proposed changes will not significantly alter Golden Hills' impact on the landfill. Further, Golden Hills plans to recycle all components capable of being salvaged, resulting in a significant reduction in mass to be deposited in the landfill. Finally, implementation of turbine metals weight limits is not a current practice of ODOE and is not consistent with recent site certificates issued for other facilities.

For the purpose of evaluating how the proposed changes could affect resources or interests protected by applicable laws and Council standards, RFA 5 considers two differently sized turbines made by Vestas: the V136 and V150 turbine. These turbine models are representative of the types of turbines that will be allowed if the amendment request is approved, but are not necessarily the turbine model or manufacture that will be selected by Golden Hills, as other manufacturers make turbines within this range of turbine dimensions. Figure 2 compares the Vestas V136 and V150 turbines to the turbines currently authorized by the Site Certificate. A mixture of turbine models may be installed at the facility. Compliant with IRS rules, turbines have been pre-purchased to take full advantage of the Production Tax Credit, and pre-purchased "safe harbor" turbines could be used at the Facility depending on when the project is constructed. Use of a mix of turbines will not change the worst-case scenario analysis, because safe harbor turbines will comply with the turbine dimensions already approved for the facility and do not rely on a site certificate amendment. In support of this request, Golden Hills will provide detailed turbine specifications for the Vestas V136 and V150 under a separate cover.

Because Golden Hills will construct turbines within the approved micrositing corridor, there are no updated locational maps or geospatial data provided in this amendment request. However, modifications will occur to the dimensions of the temporary access roads, crane paths, and met towers, but these changes alone do not trigger this site certificate amendment (Table 2). These changes are within the permitted facility micrositing corridor and the total temporary impacts will not exceed the acreages for temporary impacts described in the Final Order on Amendment 3. This information is presented as a conservative assumption about how temporary impacts

[10] http://www.wmnorthwest.com/landfill/columbiaridge.htm

may occur during construction with the use of larger turbines. Similarly, the increase in met tower height will occur if the larger turbines are selected, and any impacts associated with the increase in met tower height is accounted for in the impacts analysis for the change in turbine dimensions.

This amendment request compares the proposed changes to analysis presented in the application for site certificate and subsequent amendmentstherefore, all exhibits and information provided in the previous Golden Hills' applications and amendment requests is hereby incorporated by reference.

Table 2. Comparison of Turbine Types

Description	Approved	Proposed
Number of turbines	125 turbines	No change [1]
Maximum Hub Height	95 meters	123 meters
Maximum blade tip height	158 meters	198 meters (+21%)
Minimum blade clearance	19.8 meters	14 meters (-30%)
Maximum rotor swept area per turbine	12,668 m^2	17,671 m^2
Turbine sound level	106 dBA	104.9 dBA [3]
Temporary impact per turbine	5 acres [2]	No change
Permanent impact per turbine	7,850 square feet	No change
Met Tower Height	95 meters	123 meters
Operational water use	5,000 gallons of water/day	No change
Number of substations	One substation	No change
Number of O&M buildings	One building	No change
Length of transmission line	5 miles	No change
Length of collector line	62 miles	No change [4]
Length of new access roads	41 miles	No change [4]
Permanent access road width	20 feet	No change
Temporary access road width	40 feet	Up to 100 feet [5]
Length of crane paths	11 miles	No change
Crane path width	40 feet	Up to 100 feet [5]
Total bond amount	$14,424,936	No change [6]

1. Use of turbines types described in this request could reduce the number of turbines to as few as 95 turbines; however, Golden Hills is not requesting to change the maximum number of turbines allowed.

2. Sized based on Final Order on the ASC, "turbines – the site would include the area within 150 feet in all directions..."

3. Based on turbines with serrated trailing edges (STE) on the blades which are standard on the Vestas turbine models considered in this amendment request.

Table 2. Comparison of Turbine Types

Description	Approved	Proposed
4. Use of turbine types described in this request is expected to reduce the length of new access roads and collector lines by 30 to 50 percent. 5. Temporary access road and crane width will vary depending on need for cut and fill slopes and associated work area. However, the width will be constrained, as necessary, to avoid Class 1 and 2 habitat impacts. 6. As described in Section 4.7, the total bonding amounts for scenarios using the Vestas V136 or V150 are less than the approved amount; however, Golden Hills does not request to change the decommissioning estimates at this time, but would rather rely on Condition PRE-RT-01, which requires Golden Hills to obtain a bond prior to construction based on final design.		

Section 4 demonstrates how the proposed changes are consistent with Council's previous findings, and consistent with applicable laws and Council standards. Overall, the requested change could allow fewer impacts to wildlife habitat and farm land and the Facility will not exceed the acreages for habitat categories listed in the Final Order on Amendment 3. The Facility will be constructed and operated in the same manner as approved by the Council, and Golden Hills will still be able to comply with site certificate conditions and still be required to obtain approvals for the FAA and Aviation for taller turbines.

Section 4. Applicable Council Standards

The Council standards relevant to RFA 5 include Division 22 (General Standards for Siting Facilities) and Division 24 (Specific Standards for Siting Facilities). The Facility is a wind power generating facility. Therefore, Division 23, which applies to non-generating facilities, does not apply. Similarly, inapplicable provisions of Division 24 (e.g., standards applicable to gas plants, gas storage, non-generating facilities) are not discussed. The requirements of each applicable Council standard are outlined in Table 3, along with Golden Hill's responses.

Table 3. Applicable General and Specific Council Standards for Siting Facilities

Council Standard	Division Subpart	Applicability to Proposed Change
Division 22 – General Standards for Siting Facilities		
General Standard of Review	0000	**Applicable.** This standard is applicable regardless of proposed changes and described in Section 4.1.

Table 3. Applicable General and Specific Council Standards for Siting Facilities

Council Standard	Division Subpart	Applicability to Proposed Change
Organizational Expertise	0010	**Not applicable.** The proposed change will not affect Golden Hills' ability to construct and operate the Facility as described in the Site Certificate. Golden Hills' parent company will remain as Pacific Wind Development LLC, a subsidiary of Avangrid Renewables, LLC. Golden Hills, along with its parent companies, has the necessary expertise to construct and operate the Facility regardless of turbine dimensions.
Structural Standard	0020	**Applicable.** Site certificate conditions that are related to safety and reliability do correspond to turbine dimensions, as setbacks are a function of turbine height. See Section 4.3 for more information on how the turbine types described in this amendment request meet or exceed engineering standards for wind turbines.
Soil Protection	0022	**Not applicable.** This request does not seek to change the total acres of soil impacts previously considered by the Council. Use of the turbines described in this amendment may reduce permanent soil impacts, as fewer turbines are needed. Further, nothing in this request limits Golden Hills' ability to comply with its National Pollutant Discharge Elimination System (NPDES) permit. See Section 4.4 for more information on applicable permits.
Land Use	0030	**Applicable.** The delivery of larger turbine components may require additional improvements to County or State roads. See section 4.5 for more information.
Protected Areas	0040	**Applicable.** The proposed increase in turbine heights affects the Council's previously finding on visual impacts on protected areas. See Section 4.6 for a revised visual analysis.
Retirement and Financial Assurance	0050	**Applicable.** The proposed changes to turbine size and number affects the decommissioning estimate that was previously approved by the Council. See Section 4.7 for a revised decommissioning estimate; however, Golden Hill is not requesting to change the estimate at this time, and instead will rely on Condition PRE-RT-01 to post a bond amount based on final design prior to construction.
Fish and Wildlife Habitat	0060	**Applicable.** The size and number of turbines affects the amount of compensatory mitigation needed, as outlined in the Habitat Mitigation Plan and post construction monitoring efforts described in the Wildlife Monitoring and Mitigation Plan. These plans, along with an assessment of collision risk, are discussed in Section 4.8.

Table 3. Applicable General and Specific Council Standards for Siting Facilities

Council Standard	Division Subpart	Applicability to Proposed Change
Threatened and Endangered Species	0070	**Not applicable.** The proposed changes to turbine size does not limit Golden Hills' ability to comply with Site Certificate conditions for bald eagle and peregrine falcon nest reporting (PRE-TE-01), for implementation of mitigation measures during construction (PRE-TE-02), or for pre-construction surveys (PRE-FW-05). Turbines will be constructed within approved micrositing corridors, so there are no new species occurrences or habitat types to consider. There have been no changes to the list of state threatened and endangered species known or expected to occur within the analysis area since the last Final Order in 2017.
Scenic Resources	0080	**Applicable.** See response about Protected Resources, and Section 4.10 for a revised visual analysis.
Historic, Cultural and Archaeological Resources	0090	**Not applicable.** This request does not change the micrositing corridors or Site Boundary.
Recreation	0100	**Applicable.** See response about Protected Resources, and Section 4.12 for a revised visual analysis.
Public Services	0110	**Applicable.** See response about Land Use, and Section 4.13 for more information.
Waste Minimization	0120	**Not applicable.** The proposed changes will not increase the amount of solid waste and wastewater generated by the Facility, and will not modify the procedures and practices used for handling these materials. Golden Hills will continue to comply with Site Certification conditions related to waste management, as is described in Section 4.14.
Division 24 – Specific Standards for Siting Facilities		
Public Health and Safety	0010	**Applicable.** Taller turbines will encroach into higher elevations of airspace than previously considered. According to Aviation's standards of determining obstructions (OAR 738-070-0110(1)(a)), any turbine over 500 feet above ground level is considered an obstruction to air navigation. The Council has already approved turbines over 500 feet for the Facility, and imposed a condition to consult with Aviation. Golden Hills will conduct an aeronautical study in consultation with Aviation to determine effects on navigable airspace, if any. See Section 4.15 for more information.
Cumulative Effects	0015	**Applicable.** The proposed change in turbine dimensions could have a beneficial cumulative effect, as fewer turbines will be needed to generate electricity from the Council-approved Facility.

4.1 General Standard of Review

Because this amendment triggers the modification of Site Certificate Conditions PRE-DC-01 (c)(d) and (e), this amendment is subject to the Council's review pursuant to the General Standard of Review. When reviewing this amendment, the Council shall ensure that Golden Hills continues to comply with the requirements of the Oregon Energy Facilities Siting statutes, ORS 469.300 to 469.570 and ORS 469.590 to 469.619, as well as the standards adopted by the Council pursuant to ORS 469.501. The Council shall also ensure that Golden Hills continues to provide an overall public benefit that outweighs any adverse effects on a particular resource or interest protected by the applicable standards.

When reviewing this amendment request, the Council can apply a preponderance of the evidence standard. If necessary, the Council may consult with agencies that hold special subject matter expertise in order to provide clarification on statutes, rules, and ordinances normally administered by those agencies. The following sections provide the analysis required for the Council to determine that the proposed amendment does not affect Golden Hills' compliance with the standards and requirements set forth under the General Standard of Review.

4.2 Organizational Expertise

The Council previously found that Golden Hills "continues to have the ability to construct, operate, and retire the facility, as amended, in compliance with Council standards and all existing site certificate conditions, as required by the Organizational Expertise standard."[11] Golden Hills is wholly owned by Pacific Wind Development, LLC, a subsidiary of Avangrid Renewables, LLC, and its organizational expertise was described in RFA 4. There have been no changes to Golden Hills' organizational expertise that would impact prior findings. Therefore, the Council may rely on its previous conclusion that the Facility complies with the Council's Organizational Expertise standard.

The Council has previously found that third parties must either have any necessary permits or have a reasonable likelihood of obtaining any necessary permits. The proposed amendment request does not affect this prior finding[12].

[11] Final Order on Request on Amendment #4 and Request for Transfer of the Site Certificate, p. 25(April 27, 2018).

[12] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 29 (February 24, 2017).

4.3 Structural Standard

OAR 345-022-0020 authorizes the Council to issue a site certificate without making findings with respect to the Structural Standard, but the rules also authorize the Council to impose site certificate conditions based on the requirements of OAR 345-022-0020. The Council adopted site certificate conditions to address the potential for seismic and non-seismic geologic hazards at the Facility, and has found that "the conditions currently imposed in the site certificate to address the Structural standard ensure issues related to that standard are fully addressed."[13] Golden Hills' ability to design, engineer, and construct the Facility to avoid dangers to human safety is not affected by the proposed changes in turbine dimensions. Golden Hills will use experts in the fields of engineering and geology to complete site-specific geotechnical investigations prior to construction to verify soil conditions are suitable at proposed each turbine location. Additionally, the conditions listed in the Structural Standard section of the Site Certificate provide further assurance that the proposed changes will not affect Golden Hills' coordination with the Oregon Department of Geology & Mineral Industries, or the requirements of Oregon's Building Code Division.

Golden Hills seeks approval to use turbines with longer blades than previously considered for the Facility. Turbine blades, regardless of size, are designed to meet high safety and structural standards. Specifically, turbine blades are designed to meet International Electrotechnical Commission (IEC) 61400 standards. The IEC 61400 standards specify the minimum design requirements for wind turbines, and outline full-scale structural testing protocols of blades before new types of blades become commercially available. These tests include extreme loading and fatigue testing to simulate a range of field conditions through the design lifetime of the blades. For example, Vestas blades undergo robust laboratory testing consistent with IEC 61400 at the Vestas R&D facility in the U.K., and are deployed on prototype turbines at full production conditions before becoming commercially available. Based on industry design standards and advancements in material testing, the probability of catastrophic blade failure from modern wind turbines is remote.

There is a rare possibility that blade failure may occur due to lightning damage, human error, stresses that exceed the design parameters of the blade or its connection to the hub, or manufacturing defects. Lightning damage and human error are unrelated to blade length. Manufacturing defects are no more likely with the longer blade than they are with the previously approved blade length, and the longer blade is designed and tested to withstand the same stresses (caused by wind pressure and operation of the turbine) that the previously approved blade was designed to withstand. Turbine manufacturers and wind farm developers undertake significant measures to ensure blade safety to minimize risk and liability. During

[13] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 31 (February 24, 2017).

operations, blades are inspected to identify and address potential blade defects, and minimize the potential for blade failure.

Risks from ice shedding or ice throw depend on several variables, including the number of icing events per year, wind speed, turbine size, and the number of passersby who could potentially be struck by ice. None of these variables are related to the proposed changes except for turbine size. The turbine size variable used in calculating ice throw risk is the hub height plus the blade length, which is equal to the maximum blade tip height. Setbacks from residences and public roads are increased with increased maximum blade tip height thereby minimizing the number of passersby who could potentially be struck by ice.

New changes to the Structural Standard became effective on October 18, 2017. Golden Hills address the new structural standards in response to ODOE's Request for Additional Information (RAI) for RFA 4 (RAI-4). In Attachment A of RAI-4, Golden Hills explained that disaster resiliency is integrated into the design of the facility, and an assessment of future climate conditions was considered in consultation with the Department of Geology and Mineral Industries (DOGAMI). The change in turbine dimensions does not change the information provided in RAI-4. In addition, Golden Hills coordinated with DOGAMI regarding the proposed changes to turbines and DOGAMI stated that they do not have any additional review comments or concerns at this stage of the project (see Attachment 2).

Turbines will be located within the previously approved micrositing corridor where potential geological and soil hazards have already been evaluated and approved by the Council. The Council has responded to previous concerns raised by the public by incorporating Conditions PRE-SS-01 to PRE-SS-03 and GEN-SS-01 into the Site Certificate, and these conditions continue to ensure that Golden Hills meets the requirements of the Structural Standard. Therefore, the proposed change to hub height, maximum blade tip height, and minimum blade tip clearance does not change the Facility's compliance with OAR 345-022-0020, or any related conditions in the Site Certificate.

4.4 Soil Protection

The Council previously found that the Facility complies with the Soil Protection Standard.[14] RFA 5 makes no changes that alter the basis for the Council's earlier findings. For this amendment request, Golden Hills does not present a revised turbine layout or modified permanent and temporary impacts acreage tables because Golden Hills has not yet selected a turbine type, and wants to retain the flexibility to select a turbine that could impact the same acreage (or less) than previously reviewed by the Council. The Council has previously

[14] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 33 (February 24, 2017).

considered both 1,522 acres of temporary impacts[15] and 141 acres of permanent impacts[16] in the Final Order on the Application and 1,069 acres of temporary impacts and 132 acres of permanent impacts[17] in the Final Order on Amendment 3. Golden Hills is requesting a wider temporary impact area for access roads and crane walks (from 40 feet to up to 100 feet). However, because there may be less turbines and therefore less access roads and crane walks (potentially 30 to 50 percent less), temporary impacts acreages are anticipated to be less than previously reviewed in the Final Order on the Application (1,522 acres) and permanent impacts are anticipated to be the same or less than reviewed in the Final Order on Amendment 3 (132 acres). The Council has recognized the need for wind energy developers to have flexibility to "microsite" the final location of wind turbines and related infrastructure after issuance of a site certificate, and turbine size is a factor considered during micrositing and final design. Golden Hills will construct turbines, regardless of size, within the approved micrositing corridors. In addition, Condition PRE-DC-02 requires temporary and permanent facility maps and temporary and permanent acreage impacts be calculated by habitat type prior to construction.

Site Certificate conditions (Conditions GEN-SP-01, CON-SP-01, PRE-SP-01, CON-SP-02, OPR-SP-01, OPR -SP-02) require Golden Hills to construct the Facility in compliance with an erosion and sediment control plan satisfactory to ODEQ, as per the requirements of a National Pollutant Discharge Elimination System (NPDES) permit; to salvage topsoil from areas of temporary impacts and stockpile this topsoil for redistribution; to implement a weed control plan to reduce the spread of noxious weeds; and to eliminate concrete wash water runoff. Nothing in this amendment request impairs Golden Hills' ability to implement erosion control measures summarized in the Final Order[18] or required by the Facility's NPDES permit. Therefore, the Council may rely on its prior findings and conclude that the modifications described in RFA 5 also complies with OAR 345-022-002.

4.5 Land Use

The Council previously concluded that the Facility complied with the Land Use Standard[19]. In its evaluation of the Facility under the Land Use Standard (OAR 345-022-0030), the Council considered the applicable substantive criteria of Sherman County's comprehensive plan and land use ordinances. There have been no modifications to the Sherman County Zoning Ordinance (SCZO) (adopted 1994 and amended in 2003) that would impact the Council's prior findings under the Land Use Standard. Similarly, the proposed change to turbine dimensions

15 Final Order, Golden Hills Wind Project, p. 79 (May 15, 2009).

16 Final Order, Golden Hills Wind Project, p. 125 (May 15, 2009).

17 Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 32 (February 24, 2017).

18 Final Order on Application for Site Certificate, p.78 (May 15, 2009).

19 Final Order on Application for Site Certificate, p.78 (May 15, 2009).

will not affect the Council's previous conclusions regarding the Land Use Goals of the Sherman County Comprehensive Plan (adopted in 1994 and updated in 2007); see Table 4.

Table 4. Sherman County Comprehensive Plan Land Use Goals

Land Use Goal	Effect of Proposed Change to Turbine Dimensions
Goal I: Qualify of the Physical Environment	**No change.** The proposed changes to turbine dimensions do not affect Golden Hills' ability to comply with its NPDES permit or other erosion control measures.
Goal II: Natural Hazards	**No change.** Golden Hills will avoid placing turbines in Natural Hazards Combining Zones. Turbine dimensions will not affect this commitment.
Goal VI: Landscape	**No change.** Golden Hills will install turbines within the approved micrositing corridor, and will not impact rock outcroppings, trees, the John Day River Canyon, or the Deschutes River Canyon. The proposed change does not affect this conclusion.
Goal VII: Fish and Wildlife	**No change.** The proposed change does not affect Golden Hills' ability to avoid sensitive habitat (i.e., Category 1 habitat), and may actually result in less habitat impact, as fewer turbines could be constructed. See Section 4.8 for more information on wildlife impacts.
Goal XIII: Plant and Animal Diversity	**No change.** Golden Hills is not expected to significantly affect any listed endangered or threatened species, or adversely affect fish and wildlife species or habitat. Due to the lack of habitat for listed species in the Site Boundary, this conclusion is the same regardless of turbine size.
SCCP Section XII: Social Characteristics	**No change.** There are 10 issues related to social services under this section. The Facility will be consistent with this goal, as described in Section 4.13. Overall, the change in turbine dimension does not affect the Council's previous finding.
SCCP Section XIV: Economic Base and Viability of Agricultural	**No change.** The Facility will support the local economy by diversifying income sources while maintaining agricultural as the primary use. The proposed change could reduce the number turbines, which would benefit farming use while still injecting money into the local economy though wind lease payments.
SCCP Section XV: Energy Resources	**No change.** Regardless of whether the proposed change in turbine size and number occurs, the Facility supports the development of renewable energy in the county.
SCCP Section XVI: Land Use	**No change.** Golden Hills does not propose to change the location of the Facility. It is entirely located on Exclusive Farm Use zoned land. See below for a detailed evaluation of SCZO Section 5.8.20.2.

The Council previously found that the Facility would be consistent with the general criteria of the SCZO.[20] SCZO Section 5.8.20.2 applies to the Facility and requires that there be no significant interference with accepted farming practices on adjacent lands devoted to farm use. The proposed change in turbine dimensions will allow the use of turbines with a larger rotor swept area, as shown in Figure 2, which could reduce the amount of land available for aerial spraying around each turbine or change the flight patterns for spraying. But fewer turbines will be needed, so the overall number of obstacles will be less. Additionally, the proposed turbines will be located in linear strings within micrositing corridors, rather than groups or clusters, which will minimize the area impacted for aerial spraying.

Landowners willingly participating in the project have the understanding that their farm operations may be interrupted by the turbines. In turn, Golden Hills compensates landowners for inconvenience. The lease payment could allow landowners to use ground based applicators near turbines rather than aerial spraying.

Golden Hills considers the worst case impact scenario to farm practices to be the scenario that uses the most turbines. In this case, the 125-turbine layout that the Council has reviewed and approved represents the worst case scenario. The Council previously approved a 267-turbine layout, which further confirms that SCZO Section 5.8.20.2 was previously addressed for the worst case scenario, and no revisions to the analysis are needed for RFA 5.

Golden Hills will follow Condition PRE-LU-03, which limit placement of aboveground facilities within 50 feet from any property line, or within 50 feet from the right-of-way of any arterial or major collector road. These are intended to satisfy Sherman County's setbacks for land zoned as Exclusive Farm Use. In practice, turbines will be placed much further than 50 feet from property boundaries, because turbines cannot be placed in locations where the blades could cross property boundaries for siting and leasing reasons. Also, Condition GEN -PH-01 requires a setback that is 110 percent of the maximum blade tip height from public road rights-of-way, which is significantly larger than the 50-foot setback required by Sherman County. Additionally, Condition PRE-LU-14 requires that prior to construction, the Certificate Holder to demonstrate that the final location of turbines within the micrositing corridors approved by the Council will satisfy setback requirements prescribed by Section 4 of the Sherman County Wind Setback Ordinance (Ordinance No. 39-2007). Where two setback distances could apply according to the Conditions in the Site Certificate, the more stringent, or the greater setback distance, will take precedent.

Golden Hills will not place turbines on lands designated by Sherman County as within a Natural Hazards (NH) Combining Zone. Turbines will be limited to the approved micrositing

[20] Final Order on the Golden Hills Wind Project, p. 40 (May 15, 2009).

corridors, which do not cross this overlay.[21] According to Sherman County, this overlay generally follows the canyons associated with Deschutes and John Day Rivers and their major drainages including the Grass Valley Canyon in the Site Boundary.[22] Golden Hills will complete a site-specific geological study prior to construction (see Section 4.3), avoid the mapped hazard areas for turbine placement consistent with Sherman County's zoning ordinance, and comply with conditions GEN -LU-02 and PRE-LU-04 to PRE-LU-07 as they relate to the NH zone

In its previous amendment request, Golden Hills increased the width of temporary access roads from 36 to 40 feet in order to account for the delivery of larger turbine components.[23] Golden Hills confirms that turbines considered in this amendment request could be delivered on temporary access roads with a 40-foot wide drivable surface. However, the actual disturbance limits for temporary roads will be as wide as 100 feet, depending on the need for cut and fill slopes. Golden Hills may need to temporarily enlarge turning radii on county roads to accommodate the delivery of longer turbine blades. Prior to construction, Golden Hills will designate haul routes for turbine delivery, and consult with the Sherman County Road Department on needed intersection improvements. Golden Hill remains committed to repairing damage to County roads caused by construction in a manner consist with Conditions PRE-LU-12 and PRE-LU-13. For these reasons, the Council may rely on its prior findings and conclude that this amendment request complies with the Land Use Standard and Sherman County's zoning and comprehensive plan.

4.6 Protected Areas

The Council previously found that the Facility is not located in any protected area listed in OAR 345-022-0040, and that "the facility, as amended, is not likely to result in significant adverse impacts to any protected area, and complies with the Protected Areas Standard."[24] Golden Hills has confirmed there are no new protected areas within the 20-mile study area since the last final order in 2017. The following protected areas have previously been identified and evaluated (Final Order on the Application, 2009):

- John Day Federal Wild and Scenic River;
- John Day State Scenic Waterway;
- John Day Wildlife Refuge;
- Deschutes Federal Wild and Scenic River;
- Deschutes State Scenic Waterway;

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[21] See Figure K-1 of ASC, Exhibit K (July 2007).

[22] Person communication with Sherman County Planner (April 2, 2018).

[23] Final Order on the Third Amended Site Certificate, p.1 (February 24, 2017).

[24] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 35 (February 24, 2017).

- Lower Deschutes Wildlife Area;
- Columbia Hills Natural Area Preserve;
- Columbia Basin Agriculture Research Center;
- Columbia River Gorge National Scenic Area (CRGNSA), including Columbia Hills State Park and much of the Columbia Hills Natural Area Preserve; and
- Columbia Hills State Park.

The discussion below clarifies for each area how views will be different for the proposed modifications from the approved project. Note that all of the John Day protected areas are discussed together as "John Day River," and all of the Deschutes River protected areas are discussed together as "Deschutes River', because these areas overlap significantly.

John Day River. As for the approved facility, the turbines of the proposed amended Facility will not be seen from the John Day River or its adjacent shorelines. Under the proposed amendment, several areas where turbines will already have been visible (along canyon rims and some walls) will be slightly expanded. Because the turbines will be taller, a larger portion of the blade or tower may be visible than previously evaluated. However, fewer turbines will be constructed, so the total number of turbines visible will be similar to or less than the number previously expected. The turbines will still not be visible from the water, shoreline, or the lower canyon areas of the river, but will be visible from the canyon rims. Views of turbines from the canyon rim were previously evaluated and determined not be a significant impact due to a number of intervening wind projects and transmission lines. Therefore, the proposed Facility will not result in significant, adverse visual impact on the John Day River protected areas.

Deschutes River. As with the approved turbines, some of the proposed amended turbines will be seen from isolated rims of the Deschutes River Canyon. Turbines will not be visible from the river, shoreline, or interior canyon areas. The Final Order found that federal Wild and Scenic Rivers and state scenic rivers and waterways are managed for outstanding scenic quality, but that the management plans for these types of rivers focus on views from the rivers, not from canyon rims. Gordon Ridge follows the east side of the Lower Deschutes River Canyon west of the Facility, and in many locations this ridge will block views of turbines.

The Lower Deschutes Wildlife Area is located about 1.8 miles southwest of the Site Boundary. This area is managed by the Oregon Department of Fish and Wildlife (ODFW) for wildlife habitat and public recreational opportunities. The Council concluded that the Facility would not be audible at the wildlife area due to both the distance and topographic screening.[25] This site is not managed for scenic quality. Therefore, the proposed Facility will not result in significant adverse visual impact on the Deschutes River protected areas.

[25]Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 64 (February 24, 2017).

Columbia River Gorge National Scenic Area. EFSC previously found that public views of the approved Facility located beyond the CRGNSA, when viewed from within the CRGNSA, will be generally limited to locations along SR-14 in the State of Washington. The proposed Facility will be seen from hillsides above and below SR-14, but these steep areas are not easily accessible to the general public. EFSC previously found that intervening features between the approved Facility and SR-14 (located both within and outside of the CRGNSA) that will be seen from the highway included multiple transmission lines (composed of steel lattice towers and distribution lines), radio towers, rail lines, Interstate 84, Highway 30, and rural development, all of which will have decreased the visual impact of the approved Facility from views originating from the portion of SR-14 within the CRGNSA. The proposed amended Facility will have fewer, but taller, turbines that will potentially be seen from within the CRGNSA. As with the approved turbines, the proposed amended turbines will be seen from most of the sections of SR-14 located within the portion of the CRGNSA that occurs within the analysis area. They will also be seen somewhat higher on the hillsides above SR-14 than the previously approved turbines, and on steep hillsides located below SR-14 and above the Columbia River. The same existing, intervening features between SR-14 and the proposed Facility will decrease the visual impact of the Facility on views from SR-14. Therefore, as with the approved Facility, the proposed amended Facility will not result in significant adverse impacts on this protected area.

Columbia Basin Agricultural Research Center. The nearest protected area within the analysis area is the Columbia Basin Agricultural Research Center, located 0.4 miles southwest of the Site Boundary (Figure 3). The Columbia Basin Agricultural Research Center is an agricultural experiment station used for field research related to the production of wheat and rotational crops. Golden Hills previously estimated the maximum noise level from turbine operation at this protected area to be 33 A-weighted decibels (dBA), which would be audible at low levels.[26] The proposed larger turbines could result in differing noise levels at the Columbia Basin Agricultural Research Center compared to the previous estimate, but any change in noise levels would not affect the operations of the protected area. The Council has previously found that "any potential increase in operational noise from the facility, as amended, would not be expected to result in a significant adverse impact to the agricultural field research conducted at the Center, as the Center's purpose and function does not represent a human population or natural resource that could be affected by facility-related noise levels."[27]

Both the Columbia Basin Agriculture Research Center and Columbia Hills Natural Area Preserve are not managed for scenic quality, therefore views of the proposed Facility, as modified by RFA 5, will not adversely affect these protected areas. Columbia Hills State Park does not have a management document (or master plan) that contains a visual resource section

[26] Addendum to Exhibit L of the Site Certificate Golden Hills (September 4, 2008).

[27] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 63-64 (February 24, 2017).

of relevance to the proposed Facility. The visual impact of the proposed Facility will not adversely affect this protected area.

General Noise Impacts. Pursuant to Condition PRE-CJ-01, Golden Hills will complete a new noise analysis prior to construction.[28] This analysis will be provided to ODOE, and the analysis will demonstrate that the maximum noise level at noise-sensitive properties will not exceed ODEQ's 50-dBA noise limit for new industrial sources. Noise-sensitive properties, as defined in OAR 345-035-0015(38), do not include properties used in agricultural activities such as the Columbia Basin Agricultural Research Center. This request does not seek to enlarge the Site Boundary or site turbines outside of approved micrositing corridors. Allowing for the proposed changes in turbine specifications will potentially reduce the number of turbines, likely resulting in less noise impacts in the areas surrounding the Facility.

General Traffic Impacts. The Council found in the Final Order on the ASC, facility-related road use during construction and operation would not result in a significant adverse impact to protected areas. The Council made a similar finding for RFA 3 which proposed fewer, larger turbines that would result in a net decrease in truck traffic during construction of approximately 30 percent below the previous estimate. Truck traffic for the changes proposed under RFA 5 would be similar to that reviewed under RFA 3. RFA 5 does not change the estimate of construction or operations traffic from what was described in RFA 4.[29]

General Visual Impacts. Golden Hills completed a revised "zone of visual influence" (ZVI) analysis to evaluate whether the taller turbines could be visible at different protected resources, or if the change would result in significant visual impacts at areas previously considered (See Figure 3). For the ZVI analysis, Golden Hills conservatively assumed that all 125 turbine locations are 650 feet tall. This assumption greatly overestimates the number of turbines that would be used if the larger turbines are selected, but it also depicts the worst-case scenario from all points within the 20-mile analysis area overlooking the micrositing corridors. This conservative analysis demonstrates that impacts on protected areas are similar to the impacts that were described for the approved facility. As shown on Figure 3, the taller turbines slightly extend the distance from the facility from which turbines may be seen in some locations compared to the approved Facility. However, because the new areas from which turbines may be seen are small areas adjacent to areas from which Facility turbines already will be visible, the Council can find the Facility as modified by the proposed changes will not result in significant adverse visual impacts to protected areas.

According to the FAA Advisory Circular (70/7460-1L) on Obstruction Marking and Lighting, turbines 499 feet tall or smaller are required to have one light on each of the turbines on either

[28] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 63 (February 24, 2017).

[29] Final Order on Amendment #4 (April 27, 2018)

end of a string, and on additional turbines within the string so that there are no gaps greater than 0.5 miles. This results in approximately 60% of the turbines being lighted (for a layout of 125 turbines, approximately 75 turbines will be lit). For turbines greater than 499 feet in height, the FAA requires all turbines to have two lights placed on the nacelle (one on each side). Fewer turbines will be constructed under this scenario, as few as 95 larger turbines will be placed, and all will have lights. Because turbines up to 518 feet in height were previously approved for Golden Hills, this lighting scenario was already considered by EFSC. Nighttime turbine lighting will not create new, adverse impacts to protected areas because such lighting was previously allowed by the site certificate, as required by FAA regulations and no restrictions on such nighttime lighting have been identified in management plans.

The proposed modified turbines will not be closer to residences than the approved turbines, and any shadow flicker effects from the proposed modified project will therefore be similar to or less than what would have occurred with the project as approved. Shadow flicker has not been an issue of concern for this project in the past, and there is no reason to believe it will be a concern with taller turbines. In fact, shadow flicker is less likely to be an issue with taller turbines because the elongated shadows that occur during morning and evening hours, when shadow flicker can be experienced at nearby residences, are likely to be more diffused, with greater distance from the taller shadowing object.

The revision to Condition PRE-DC-01 makes no changes that alter the basis for the Council's earlier findings. Therefore, the Council may find that this amendment request also complies with OAR 345-022-0040.

4.7 Retirement and Financial Assurance

The Council previously found that Golden Hills would meet the Retirement and Financial Assurance Standard. As explained under OAR 345-027-0070(10)(d), the number of turbines is a notable factor in determining the decommissioning and restoration cost of the Facility, and the Council previously concluded that Golden Hills was capable of posting a bond or letter of credit for up to 125 turbines.[30] However, the Council is currently reevaluating Golden Hills' financial backing as part of RFA 4 because its parent company has changed from Orion Renewable Energy Group to Pacific Wind Development, LLC. This amendment request assumes that the Council will approve the transfer request. The proposed change in turbine dimensions will allow Golden Hills to construct the Facility with fewer turbines. Because the number of turbines is a notable factor in determining the cost of decommissioning and restoration, the financial assurance for retirement could be less for the amended Facility (Table 5). However, Golden Hills is not requesting to change the bonding amount at this time because the actual turbine type has not been selected. Golden Hills will rely on Condition PRE-RT-01 to post a bond prior

[30] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 69 (February 24, 2017).

to construction in an amount based on the final design. The proposed amendment makes no changes that alter the basis for the Council's earlier findings; therefore, the Council may find that OAR 345-022-0050 is met.

Table 5. Decommissioning and Restoration Estimates (Approved and Potential with Approval of RFA 5)

Facility	Approved (RFA 3)	Potential
Turbines	$5,058,175	$3,844,213
Transmission Line	$144,402	$144,402
Related and Supporting Facilities	$6,463,780	$6,463,780
General Costs	$451,365	$451,365
Subtotal	$12,117,722	$10,903,760

4.8 Fish and Wildlife Habitat

The Council previously found that the Facility complies with the Fish and Wildlife Habitat Standard. The proposed changes in turbine dimensions will not affect the Council's prior findings regarding the Facility's consistency with the Fish and Wildlife Habitat Standard because the proposed changes will be within the previously approved micrositing corridors and will not result in different habitat types being affected. The implementation of the Habitat Mitigation and Revegetation Plan will adequately offset habitat impacts following ODFW's habitat mitigation policy.

4.8.1 Habitat Impacts

Golden Hills mapped the habitat types within the Exhibit P analysis area in the ASC[31], which identify about 93 percent of the area as Category 6 agricultural or developed land. This habitat type is consistent with the large scale agricultural use that occupies most of the land within the Site Boundary. There are small areas of remnant grassland habitat (i.e., Category 2 or 3 habitat) in ravines that are not used for agricultural purposes, or on land held in the Conservation Reserve Program. In 2015, ODFW confirmed that the habitat categories mapped in 2006 as part of the ASC were still valid.[32] Golden Hills also confirmed that there has not been a significant change in habitat types by comparing the habitat types mapped in 2006 with recent aerial imagery.

[31] See Figures P-5 through P-10 of the Application for Site Certificate (July 2007).

[32] Email correspondence between Joel Thompson, Wildlife Biologist and Project Manager/WEST, and Jeremy Thompson, District Wildlife Biologist/ODFW (November 18, 2015).

In RFA 3, Golden Hills described temporary impacts to 1,069 acres and permanent impacts to 132 acres; 93 percent of permanent impacts would be to Category 6 habitat.[33] The proposed change to turbine dimensions would allow the Facility to utilize fewer turbines, which would have a corresponding reduction in permanent habitat impacts. For this amendment request, Golden Hills does not present a revised turbine layout or modified acreage tables because Golden Hills has not yet selected a turbine type, and wants to retain the option to select a turbine that could impact the same acreage (or less) than the previously disclosed amount. Golden Hills would construct turbines, regardless of size, within the approved micrositing corridors, and is committed to following Conditions PRE-FW-02, PRE-FW-03, and PRE-FW-04 to avoid Category 1 habitat, Category 2 habitat[34], and Category 3 upland tree habitat. Golden Hills will not exceed the habitat impact acreages for categories listed in the Final Order on Amendment 3. When a turbine type is selected, Golden Hills will provide updated acreage tables and habitat maps to ODOE, ODFW, and Sherman County based on the final design of the Facility, per Condition PRE-FW-01.

Operations and maintenance activities for larger turbines are the same as for the turbines approved for the facility. All turbine types, including the approved turbines, have the potential need for significant repairs that require a crane. However, major repairs, such as blade or gearbox replacements, are infrequent and are not considered routine. These parts are intended to last for the duration of the turbine's design life. If a crane is needed for repairs, the crane will be assembled near the base of the turbine. This area will be temporarily disturbed during the work, and then restored to prior habitat conditions. In limited circumstances, cranes will be walked down access roads to work on multiple turbines. Restoration will follow the approach of the Habitat Mitigation and Revegetation Plan, which describes methods for restoring native habitat and cropland. Landowners are also compensated for temporary impacts to cropland as a result of turbine repairs. Most (93%) of the micrositing corridor is Category 6 habitat, so it is unlikely that turbine repair would result in adverse impacts on habitat or sensitive species. It is also unlikely that the same turbine would require frequent, major repairs that would result in habitat conversion. OAR 345-026-0080 requires Golden Hills to submit an annual report during operation describing compliance with site certificate conditions. When major repairs are completed, the annual report will describe how major repairs were consistent with OPR-SP-01 for road repair, OPR-LU-01 for minimizing crop damage, and OPR-FW-01 for habitat restoration. Golden Hills has developed a Habitat Mitigation and Revegetation Plan in consultation with ODFW that outlines measures to mitigate for the permanent and temporary impacts to habitat in a manner that meets the ODFW goals of no net loss of habitat for

[33] Final Order on the Request for Contested Case and Amendment No. 3 of the Site Certificate, Table 1, p.72 (February 2017).

[34] Condition IV.M.9 allows the 2.9 acres of temporary disturbance and 0.0017 acres of permanent disturbance to Category 2 habitat.

Categories 2, 3 and 4, and a net benefit in habitat quantity or quality for impacts to habitat in Categories 2 and 5. Section 4.1 of the Habitat Mitigation and Revegetation Plan describe how Golden Hills must hire a qualified biologist to perform a preconstruction inventory of habitat types that will be impacted by construction, which will form the basis for compensatory mitigation. As such, the Habitat Mitigation and Revegetation Plan provides flexibility for a range of turbine types, including those proposed in this amendment request, because mitigation amounts are based on actual impacts. Golden Hills has an executed conservation agreement for a 51-acre mitigation site where impacts associated with the Facility will be compensated. The total area available to perform habitat improvements through the conservation easement is more than adequate to account for the anticipated compensatory mitigation requirements, regardless of turbine type.

4.8.2 State Sensitive Species

Golden Hills has reviewed the updated ODFW State Sensitive Species list and prepared an update to Table P-11 in Exhibit P of the ASC (Table 6). Golden Hills reviewed existing databases and performed surveys in 2016 to update known occurrences of State Sensitive Species in the vicinity of the Facility.

Burrowing owl, common nighthawk, ferruginous hawk, grasshopper sparrow, loggerhead shrike, long-billed curlew, and Swainson's hawks have been observed during surveys performed for the Facility. Impacts to State Sensitive Species were disclosed in the ASC and are applicable to the updated list of State Sensitive Species.

Table 6. List of ODFW Sensitive Species within the Columbia Plateau Ecoregion of Oregon and Potential Occurrence within the Analysis Area

Common Name	Scientific Name	2007 ODFW Status[1]	2017 ODFW Status[2]	Occurrence within the Analysis Area
Fish				
Bull trout	*Salvelinus confluentus*	Not Listed	SC	Habitat absent from the Analysis Area; nearest habitat occurs in the Columbia and Deschutes rivers (StreamNet 2012).
Chinook salmon – fall & spring (Mid-Columbia River SMU)	*Oncorhynchus tshawytscha*	Not Listed	S	Habitat absent from the Analysis Area; nearest habitat occurs in the Columbia, John Day, and Deschutes rivers (StreamNet 2012).
Inland/Interior Redband Trout	*Oncorhynchus mykiss gairdneri*	SV	Not Listed	Delisted. Not considered.
Pacific lamprey	*Entosphenus tridentata*	SV	S	Habitat absent from the Analysis Area; nearest habitat occurs in the Columbia and John Day rivers (StreamNet 2012).

Table 6. List of ODFW Sensitive Species within the Columbia Plateau Ecoregion of Oregon and Potential Occurrence within the Analysis Area

Common Name	Scientific Name	2007 ODFW Status[1]	2017 ODFW Status[2]	Occurrence within the Analysis Area
Steelhead – summer (Mid-Columbia River SMU)	*Oncorhynchus mykiss*	SV	SC	Habitat present within the Analysis Area (ORBIC 2017); no impacts to fish bearing streams are anticipated.
Western brook lamprey	*Lampetra richardsoni*	Not Listed	S	Habitat absent from the Analysis Area; nearest habitat occurs in the middle reaches of the John Day River (StreamNet 2012).
Western river lamprey	*Lampetra ayresii*	Not Listed	S	Habitat absent from the Analysis Area; habitat occurs in the Columbia River
Westslope cutthroat trout	*Oncorhynchus clarki lewisi*	Not Listed in Columbia Basin	SC	Habitat absent from the Analysis Area; nearest habitat occurs in the upper reaches of the John Day River (StreamNet 2012).
Amphibians				
Northern leopard frog	*Rana pipiens*	SC	Not Listed	Delisted. Not considered.
Western toad	*Bufo boreas*	SV	Not Listed in Columbia Plateau	Not considered.
Reptiles				
California mountain kingsnake	*Lampropeltis zonata*	Not Listed in Columbia Basin	S	No ORBIC (2017) occurrences within the Analysis Area or within five miles. Habitat is pine forests, oak woodlands, and chaparral; rare along the Columbia River (ODFW 2017). Typical habitat is absent from the Analysis Area.
Northern sagebrush lizard	*Sceloporus graciosus graciosus*	SV	S	No ORBIC (2017) occurrences within the Analysis Area or within five miles. Habitat is sagebrush and xeric habitats (ODFW 2017), which are present within the Analysis Area.
Sharptail snake	*Contia tenuis*	Included as SV in ASC; however, no state status (ORHNIC 2004, 2007).	Not Listed	Not Considered.

Table 6. List of ODFW Sensitive Species within the Columbia Plateau Ecoregion of Oregon and Potential Occurrence within the Analysis Area

Common Name	Scientific Name	2007 ODFW Status[1]	2017 ODFW Status[2]	Occurrence within the Analysis Area
Western painted turtle	*Chrysemys picta bellii*	SC	SC	No ORBIC (2017) occurrences within the Analysis Area or within five miles. Painted turtles use ponds and other slow moving water with muddy bottoms and aquatic vegetation; in the Columbia Plateau Ecoregion they live only along the Columbia River (ODFW 2017). Unlikely to be present within any habitats within the Analysis Area.
Western rattlesnake	*Crotalus viridis*	SV	Not Listed in Columbia Plateau	Not Considered.
Birds				
Bank swallow	*Riparia riparia*	SU	Not Listed	Not Considered.
Brewer's sparrow	*Spizella breweri breweri*	Not Listed	S	No ORBIC (2017) occurrences within the Analysis Area or within five miles. This species prefers sagebrush habitat (ODFW 2017); habitat is present within the Analysis Area.
Burrowing owl (western)	*Athene cunicularia hypugaea*	SC	SC	Nests in earthen burrows in open shrub-steppe and grassland habitat (ODFW 2017). Habitat is present within the Analysis Area and two observations were recorded in 2006 east of the Analysis Area; historical county records also exist.
Columbian sharp-tailed grouse	*Tympanuchus phasianellus columbianus*	Included in ASC; however, no state status (ORHNIC 2004, 2007).	Not Listed in Columbia Plateau.	Not Considered.
Common nighthawk	*Chordeiles minor*	SC	S	Nests in open landscapes in sagebrush and rocky scablands and rimrock habitat (ODFW 2017). Habitat is present within the Analysis Area and this species was observed in 2007 east of the Analysis Area.

Table 6. List of ODFW Sensitive Species within the Columbia Plateau Ecoregion of Oregon and Potential Occurrence within the Analysis Area

Common Name	Scientific Name	2007 ODFW Status[1]	2017 ODFW Status[2]	Occurrence within the Analysis Area
Willow Flycatcher (Eastern Oregon)	*Empidonax traillii (adastus)*	SU	Not Listed in Columbia Plateau.	Not Considered.
Ferruginous hawk	*Buteo regalis*	SC	SC	Occurs in open landscapes east of the Cascade Mountains (ODFW 2017). Habitat is present within the Analysis Area and three observations were recorded within the Analysis Area.
Grasshopper sparrow	*Ammodramus savannarum perpallidus*	SV	S	Habitat is present within the Analysis Area in open grasslands. Commonly observed within the Analysis Area.
Lewis's woodpecker	*Melanerpes lewis*	SC	SC	Breeds in low numbers in open habitat along eastern Oregon river and stream valleys (ODFW 2017). No ORBIC (2017) occurrences within the Analysis Area or within 5 miles. Probably migrant through Analysis Area.
Loggerhead shrike	*Lanius ludovicianus*	SV	S	Breeds in open habitat east of the Cascades (ODFW 2017). Several observations recorded and three known nesting sites documented within the Analysis Area.
Long-billed curlew	*Numenius americanus*	SV	SC	Commonly breeds in open grassland areas east of the Cascades (ODFW 2017). Habitat is present within the Analysis Area. Observations recorded east of the Analysis Area and ORBIC (2017) occurrences within 5 miles.
Mountain quail	*Oreortyx pictus*	SU	Not Listed in Columbia Plateau.	Not Considered.

Table 6. List of ODFW Sensitive Species within the Columbia Plateau Ecoregion of Oregon and Potential Occurrence within the Analysis Area

Common Name	Scientific Name	2007 ODFW Status[1]	2017 ODFW Status[2]	Occurrence within the Analysis Area
Sagebrush sparrow	*Artemisiospiza nevadensis*	Absent from ASC due to not being listed for Sherman County; however, status of SC for Columbia Basin (ORHNIC 2004, 2007).	SC	Found throughout the arid expanses of the Great Basin and usually associated with big sage (ODFW 2017). No ORBIC (2017) occurrences within the Analysis Area or within five miles. Habitat is present within the Analysis Area.
Swainson's hawk	*Buteo swainsoni*	SV	S	Breeds in bunchgrass prairies east of the Cascades; prefers open country (ODFW 2017). Nesting documented within two miles of the Analysis Area; infrequent use of the Analysis Area.
Golden eagle	*Aquila chrysaetos*	Included in ASC; however, no state status (ORHNIC 2004, 2007).	Not listed.	Not an ODFW Sensitive Species; however, golden eagle nests have been monitored during project surveys and seven occupied nests were observed in 2016 within 10 miles of the project.
Western bluebird	*Sialia Mexicana*	SV	Not Listed in Columbia Plateau.	Not Considered.
Western greater sage-grouse	*Centrocercus urophasianus*	SV	Not Listed in Columbia Plateau.	Not Considered.
Western meadowlark	*Sturnella neglecta*	SC	Not Listed in Columbia Plateau.	Not Considered.
Yellow-breasted chat	*Icteria virens*	SC	Not Listed in Columbia Plateau.	Not Considered.

Table 6. List of ODFW Sensitive Species within the Columbia Plateau Ecoregion of Oregon and Potential Occurrence within the Analysis Area

Common Name	Scientific Name	2007 ODFW Status[1]	2017 ODFW Status[2]	Occurrence within the Analysis Area
Mammals				
Hoary bat	*Lasiurus cinereus*	Included in ASC; however, no state status (ORHNIC 2004, 2007).	S	Probably migrant through Analysis Area. No ORBIC (2017) occurrences within the Analysis Area or within five miles.
Long-eared myotis	*Myotis evotis*	SU	Not Listed	Not Considered.
Long-legged myotis	*Myotis volans*	SU	Not Listed in Columbia Plateau.	Not Considered.
Pallid bat	*Antrozous pallidus*	SV	S	Unknown. No ORBIC (2017) occurrences within the Analysis Area or within five miles.
Silver-haired bat	*Lasionycteris noctivagans*	SU	S	Probably migrant through Analysis Area. No ORBIC (2017) occurrences within the Analysis Area or within five miles.
Spotted bat	*Euderma maculatum*	Not Listed.	S	Probably migrant through Analysis Area. No ORBIC (2017) occurrences within the Analysis Area or within five miles.
Townsend's big-eared bat	*Corynorhinus townsendii*	SC	SC	Probably migrant through Analysis Area. No ORBIC (2017) occurrences within the Analysis Area or within five miles.
Western small-footed myotis	*Myotis ciliolabrum*	SU	Not Listed	Not Considered.

Table 6. List of ODFW Sensitive Species within the Columbia Plateau Ecoregion of Oregon and Potential Occurrence within the Analysis Area

Common Name	Scientific Name	2007 ODFW Status[1]	2017 ODFW Status[2]	Occurrence within the Analysis Area
This table is updated from Table P-11 of the Application for Site Certificate (July 2007).				
1. 2007 ODFW Status: SC = Sensitive Critical, SV = Sensitive Vulnerable, SU = Sensitive Unknown status.				
2. 2017 ODFW Status: SC = Sensitive Critical, S = Sensitive.				
Sources:				
ORBIC (Oregon Biodiversity Information Center). 2017. GIS data for rare, threatened and endangered plants and animals within the vicinity of the Golden Hills Wind Project. December, 2017.				
ODFW (Oregon Department of Fish and Wildlife). 2016. Oregon Department of Fish and Wildlife Sensitive Species List. Available online at: http://www.dfw.state.or.us/wildlife/diversity/species/docs/2017_Sensitive_Species_List.pdf				
ODFW. 2017. Wildlife Viewing website. Accessed December 22, 2017; available at: https://myodfw.com/wildlife-viewing				
ORNHIC (Oregon Natural Heritage Information Center). 2004. Rare, Threatened and Endangered Species of Oregon. Oregon State University, Portland, Oregon. March, 2004.				
ORNHIC. 2007. Rare, Threatened and Endangered Species of Oregon. Oregon State University, Portland, Oregon. March, 2007.				
StreamNet. 2012. Fish distribution data for All Fish Species. Accessed September 2017. Seattle, Washington. Available online at: http://www.streamnet.org/data/interactive-maps-and-gis-data/				

4.8.3 Avian and Bat Collision Risk

Turbines with longer blades and taller hub heights than previous models may pose increased collision risk to birds and bats. Turbines with longer blades have a corresponding larger rotor-swept area, and the requested change to lengthen the maximum blade tip height from 158 meters to 198 meters will increase the overall swept area, or collision risk area, by about 40 percent per turbine. Similarly, the requested change for a taller maximum blade tip height may cause the rotor-swept area to overlap with flight heights of migrating birds that were previously above shorter turbine models, leading to increased collision risk. Decreased blade clearance may lead to greater collision risk of low-flying avian species that would have passed below the blade clearance of previous turbine models. Barclay et al. (2007)[35] compared avian fatality data at wind farms using a range of turbine nameplate capacities from 0.04 to 1.8 MW, tower heights ranging from 24 to 94 meters, and rotor diameters ranging from 15 to 80 meters. Barclay et al. (2007) concluded that avian fatality rates were not affected by variation in any of these turbine dimensions, stating "it might be expected that as rotor-swept area increased, more animals would be killed per turbine, but our analyses indicate that this is not the case." This study did

[35] Barclay, R. M. R., et al. (2007). "Variation in bat and bird fatalities at wind energy facilities: assessing the effects of rotor size and tower height." Canadian Journal of Zoology 85(3): 381-387.

not consider the new generation turbines that are much larger; but their conclusion is relevant to the Facility as it suggests that avian impacts predicted in the original assessment may not differ substantially with increased rotor-swept area. More recent meta-analyses have produced contrasting results, with a review by Loss et al. (2013)[36] revealing increased avian mortalities with hub height, whereas Erickson et al. (2014)[37] found no linear correlation between hub height and estimated avian fatality rates. Therefore, there remains uncertainty as to whether or not the proposed turbine model changes may result in increased avian collision risk. To help address this uncertainty, Golden Hills will complete post-construction fatality monitoring using search plots scaled to the turbine size, and will implement additional mitigation if fatality rates exceed the thresholds of concern for a species group, as outlined in the original analysis (see Attachment A of the Final Order on Site Certificate, Wildlife Monitoring and Mitigation Plan).

The same changes to turbines specifications that may increase collision risk to birds are likely true for bats. The analysis by Barclay et al. (2007) found that bat fatalities increased exponentially with increased tower height. In contrast, a recent meta-analysis by Zimmerling et al. (2016)[38] found no relationship between bat mortality rates and height of wind turbines, with the caveat that there was relatively little variation in the maximum blade tip height of wind turbines within the available data (range of 117 m to 136 m). Flight altitudes of migratory bats are poorly known, especially for the migratory, tree-roosting bats that appear more prone to collisions with wind turbines (Reynolds 2006[39]). Hoary bats and silver-haired bats, known to occur in the vicinity of the Facility, are both species of long-range migrants that have been killed at wind power projects during their migratory periods, suggesting that at least some bats migrate below 150 meters above ground level. Bat use between 14 meters and 20 meters in the vicinity of the Facility is not known. However, migratory bats have been documented at heights ranging from 46 to 2,448 meters above ground level (Allen 1939[40], Altringham 1996[41], Peurach 2003[42]), which is within and above the rotor-swept area originally evaluated and approved for

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[36] Loss, S. R., et al. (2013). "Estimates of bird collision mortality at wind facilities in the contiguous United States." Biological Conservation 168: 201-209.

[37] Erickson, W. P., et al. (2014). "A comprehensive analysis of small-passerine fatalities from collision with turbines at wind energy facilities." PLoS ONE 9(9): e107491.

[38] Zimmerling, J. R. and C. M. Francis (2016). "Bat mortality due to wind turbines in Canada." Journal of Wildlife Management 80(8): 1360-1369.

[39] Reynolds, D.S. 2006. "Monitoring the Potential Impact of a Wind Development Site on Bats in the Northeast." Journal of Wildlife Management. No. 70. pp. 1219-1227. We saved this conversation. You'll see it soon in the Conversations tab in Skype for Business and in the Conversation History folder in Outlook.

[40] Allen, G.M. 1939. Bats. Dover Publications, New York, NY. 358 pp.

[41] Altringham, J.D. 1996. Bats: Biology and Behavior. Oxford University Press, Inc., New York, NY 262 pp.

[42] Peurach, S.C. 2003. "High-Altitude Collision between an Airplane and a Hoary Bat, Lasiurus Cinereus." Bat Research News. No. 44. pp. 2–3.

Golden Hills' turbines. If bats are present, they may be at increased risk of collision with wind turbines that have larger rotor-swept areas; however, any change to potential impacts is difficult to estimate because so little is known about the flight heights of these species. Plus, it is anticipated there will be fewer turbines to collide with, which may reduce exposure. ODFW suggested in its comments on Amendment 3 that Golden Hills consider operating the turbines with modified cut-in speeds to reduce collision risks for bats. However, Golden Hills concluded that the amended Facility is unlikely to significantly impact bats for multiple reasons, including the lack of riparian areas or other water sources the Facility that could attract bats. Therefore, implementation of modified cut-in speeds is unneeded, plus the Wildlife Monitoring and Mitigation Plan (WMMP) includes provisions for monitoring bat fatalities, and if established thresholds are exceeded, then considerations for additional mitigation are triggered. Any additional measures will be developed in consultation with ODFW.

4.9 Threatened and Endangered Species

The Council previously determined that Golden Hills could design, construct, and operate the Facility is a manner that was not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by the Oregon Fish and Wildlife Commission or Oregon Department of Agriculture (ODA).[43] The Final Order on the Application described 10 species that are listed as state or federal threatened or endangered, or federal candidates for listing, that could occur near the Facility.[44] Of these listed species, two bird species, the bald eagle and the peregrine falcon, were observed within the analysis area and were subsequently considered for analysis. The other species were excluded from analysis due to lack of suitable habitat or their restricted range.[45]

Both bald eagles and peregrine falcons have been delisted since the Final Order on the Application. Regardless, Golden Hills conducted aerial nest surveys with 10 miles of the micrositing corridors in 2016, and detected one active bald eagle nest in a tree on an island in the Columbia River, near its confluence with the Deschutes River. This observation is consistent with past surveys that found bald eagles using areas along the Columbia River.[46] Golden Hills also reviewed the ORBIC (2017) database for the most recent observations of species within 5 miles of the Site Boundary. In accordance with Condition PRE-TE-01, the 2016 aerial raptor nest survey and review of ORBIC (2017) data confirm that no bald eagle or peregrine falcons are nesting within 2 miles of the Facility.

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[43] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 83 (February 24, 2017).

[44] Final Order on the Application, Table IV.L.1, p.109 (May 15, 2009).

[45] Final Order on the Application, p.110 (May 15, 2009).

[46] Final Order on the Application, p.110 (May 15, 2009).

Golden Hills completed a rare plant survey in 2007, and did not observe any listed plant species. Another survey was performed in 2016 associated with changes to the site boundary described in RFA 3. No listed plant species were observed and habitat could not support listed plants. Habitat conditions in the micrositing corridors have not significantly changed since 2016 (see Section 4.8); therefore, it remains unlikely that listed plant species occur in the construction footprint. To verify absence, Golden Hills will complete a pre-construction rare plant survey, as required by Condition PRE-TE-03.

Golden Hills understands that a February 24, 2017 rule change amended OAR 345-021-0010(1)(q) to remove the requirement for an applicant (certificate holder) to identify federally listed threatened and endangered species in Exhibit Q of a site certificate application (request for amendment). As such, Golden Hills is only required to address state-listed threatened and endangered species in this amendment. However, to track threatened and endangered species status changes since the ASC, Golden Hills has updated Table Q-1 of the ASC and retained federal threatened and endangered species along with the required state threatened and endangered species (Table 7).

In preparation of Table 7, Golden Hills reviewed updated databases of species occurrence and distribution as well as included results of recent surveys of the Facility. Golden Hills reviewed updated ORBIC data (December 21, 2017), the U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC) species list (USFWS 2017), the National Marine Fisheries Service list of anadromous fish species within the Interior Columbia Recovery Domain (NMFS 2016), the ODA listed plant species for Sherman County (ODA 2017), and the ODFW list of threatened, endangered, and candidate fish and wildlife species in Oregon (ODFW 2017). State-listed species that have the potential to occur within the 5-mile Analysis Area include the North American wolverine, Washington ground squirrel, Snake River chinook salmon, northern wormwood, and Laurence's milkvetch (Table 7). None of these species will be affected by the Facility. The wolverine is very unlikely to utilize habitat within the Analysis Area, other than during a brief, temporary presence during rare dispersal events by transient individuals. Washington ground squirrels' range has retracted over time and are thought to no longer occur west of the John Day River. Snake River chinook salmon are present within the Analysis Area, but the Facility will not affect any riparian habitat, nor will it have any effect on water quality in the Columbia River. Northern wormwood is believed to be extinct in Oregon, and Laurence's milkvetch was not observed during rare plant surveys, and no ORBIC records exist within the analysis area.

Table 7. State and Federal Threatened, Endangered, and Proposed Species with the Potential to Occur Within the Analysis Area

Species	2007		2017		Notes on Listing Status and Occurrence
	Federal Status	State Status	Federal Status	State Status	
Birds					
Bald eagle (*Haliaeetus leucocephalus*)	--	LT	--	--	**Species delisted**. Nest observed during 2016 aerial surveys at the confluence of the Deschutes and Columbia Rivers approximately 5 mi NW of the GHWP.
Yellow-billed cuckoo (*Coccyzus americanus*)	C	--	LT	--	**Species listed as Federal Threatened**. Absent from ORBIC data, no known occurrences in the Exhibit Q Analysis Area. Believed extirpated from Oregon (ASC, Exhibit Q, Page 3).
American peregrine falcon (*Falco peregrinus anatum*)	--	LE	--	--	**Species delisted**. 2017 ORBIC review indicates occurrences along the Columbia River, within the Exhibit Q Analysis Area.
Mammals					
Gray wolf (*Canis lupus*)	--	--	LE	--	**Species listed as Federal Endangered**. Absent from ORBIC data, no known occurrences in the Exhibit Q Analysis Area. Unlikely to occur within the Analysis Area.
North American Wolverine (*Gulo gulo luscus*)	--	--	PT	LT	**Species listed as State Threatened and Federal Proposed Threatened**. Absent from ORBIC data, no known occurrences in the Exhibit Q Analysis Area. Unlikely to occur within the Analysis Area.
Washington ground squirrel (*Spermophilus washingtoni*)	C	LE	--	LE	**State status unchanged**. **Found to be not warranted for federal listing in September of 2016.** One historical occurrence in 2017 ORBIC data from 1979; however their range has been dramatically reduced since then and their range is limited to areas east of the John Day River (ASC, Exhibit Q, Page 3).

Table 7. State and Federal Threatened, Endangered, and Proposed Species with the Potential to Occur Within the Analysis Area

Species	2007		2017		Notes on Listing Status and Occurrence
	Federal Status	State Status	Federal Status	State Status	
Fish					
Bull trout (*Salvelinus confluentus*)	LT	--	LT	--	**Not included in previous application documents, listed as Federal Threatened in 1998.** 2017 ORBIC review indicates occurrence within the Analysis Area in the Deschutes River. Critical habitat designated in 2010 includes the Columbia River and Deschutes River within the Analysis Area.
Steelhead – Mid Columbia River ESU, summer run (*Oncorhynchus mykiss*)	LT	--	LT	--	**No change.** 2017 ORBIC review indicates occurrences within the Grass Valley Creek which bisects the GHWP.
Steelhead- Snake River Basin ESU	LT	--	LT	--	**No change.** Migrates through the Exhibit Q Analysis Area in the Columbia River.
Steelhead – Upper Columbia River ESU	LE	--	LT	--	**Down-listed to Federal Threatened in 2009.** Migrates through the Exhibit Q Analysis Area in the Columbia River.
Sockeye Salmon – Salmon River Tributary to the Snake River (*Oncorhynchus nerka*)	LE	--	LE	--	**No change.** Migrates through the Exhibit Q Analysis Area in the Columbia River.
Chinook Salmon – Snake River ESU, spring/summer/fall runs (*Oncorhynchus tshawytscha*)	LT	LT	LT	LT	**No change.** Migrates through the Exhibit Q Analysis Area in the Columbia River.
Chinook Salmon – Upper Columbia River ESU	LE	--	LE	--	**No change.** Migrates through the Exhibit Q Analysis Area in the Columbia River.
Plants					
Northern wormwood (*Artemisia campestris var. wormskioldii*)	C	LE	--	LE	**State status unchanged**. **Found to be not warranted for federal listing in September of 2016.** 2017 ORBIC review includes occurrences within the Analysis Area near the Columbia River; however, those occurrences are historical (1941) and this species is presumed extirpated or extinct in Oregon.

Table 7. State and Federal Threatened, Endangered, and Proposed Species with the Potential to Occur Within the Analysis Area

Species	2007		2017		Notes on Listing Status and Occurrence
	Federal Status	State Status	Federal Status	State Status	
Laurence's milkvetch (*Astragalus collinus var. laurentii*)	--	LT	--	LT	**No change.** Absent from ORBIC data, no known occurrences in the Exhibit Q Analysis Area.
Liverwort monkeyflower (*Mimulus jungermannioides*)	--	LT	--	--	**Species delisted.** Absent from ORBIC data, no known occurrences in the Exhibit Q Analysis Area.

Listing Status: LT = Listed Threatened, PT = Proposed Threatened, LE = Listed Endangered, C = Candidate

This table updated from Table Q-1 of the Application for Site Certificate (July 2017).

Sources:

National Marine Fisheries Service. 2016. Status of ESA Listings & Critical Habitat Designations for West Coast Salmon and Steelhead. Available online at: http://www.westcoast.fisheries.noaa.gov/publications/gis_maps/maps/salmon_steelhead/critical_habitat/

ORBIC (Oregon Biodiversity Information Center). 2017. GIS data for rare, threatened and endangered plants and animals within the vicinity of the Golden Hills Wind Project. December, 2017.

ODFW (Oregon Department of Fish and Wildlife). 2017. Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon. Available online at: http://www.dfw.state.or.us/wildlife/diversity/species/docs/Threatened_and_Endangered_Species.pdf

Oregon Department of Agriculture. 2017. Oregon Listed Plants by County for Sherman County. Available online at: http://www.oregon.gov/ODA/programs/PlantConservation/Pages/ListedPlants.aspx

U.S. Fish and Wildlife Service. 2017. Information for Planning and Consultation. IPaC list of species known or expected be on or near the Exhibit Q analysis area. Available online at: https://ecos.fws.gov/ipac/

Overall, the Facility is appropriately sited in agricultural fields with low potential for wildlife habitat, and in a manner consistent with the Oregon Columbia Plateau Ecoregion Wind Energy Siting and Permitting Guidelines. Because this amendment request does not change the micrositing corridors, there is no change the Council's previous conclusion that the Facility complies with the Threatened and Endangered Species Standard.

4.10 Scenic Resources

The Council previously relied on Conditions PRE-SR-01through OPR -SR-01to address the Facility's compliance with the Scenic Resources Standards.[47] These conditions address the color

[47] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 85-86 (February 24, 2017).

of facilities, signs, and lighting but are not related to the size of turbines. The Council previously considered a layout of 125 turbines with a maximum height of 518 feet, and concluded that turbines would be visible from six locations with land management plans.[48] The proposed change will increase the maximum turbine height allowed to 650 feet. Golden Hills completed a revised "zone of visual influence" (ZVI) analysis to evaluate whether the taller turbines could be visible at different scenic resources, or if the change would result in significant visual impacts at the six locations previously considered. For the ZVI analysis, Golden Hills conservatively assumed that all 125 turbine locations are 650 feet tall. This assumption greatly overestimates the number of turbines that would be used if the larger turbines are selected, but it also depicts the worst-case scenario from all points within the 10-mile analysis area overlooking the micrositing corridors.

The ZVI analysis indicates that the turbines will be visible from the same scenic resources as previously considered (Table 8). In some areas, more turbines maybe visible and in some areas the area of visibility is slightly extended. Considering the slight increase in area from which the facility will be visible compared to the previous area, as shown on Figure 4, the Council can conclude there is no significant impact to scenic resources.

Table 8. Visibility of Turbines at Scenic Resources

Scenic Resources	Distance to Closest Turbines	Turbine Visible at Scenic Resource	
		Approved (518 feet)	Proposed (650 feet)
Lands within the Columbia River Gorge National Scenic Area	5 miles	Yes	Yes
State Route 14 within the Columbia River Gorge National Scenic Area	7.5 miles	Yes	Yes
Lower Deschutes River and corridor	5.5 miles	Yes	Yes
John Day River and corridor	9 miles	Yes	Yes
Journey Through Time Scenic Byway	0.3 miles	Yes	Yes
Rock outcroppings, trees, the John Day River Canyon, the Deschutes River Canyon, and the rural nature of the Sherman County landscape	5.0 miles	Yes	Yes

[48] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 85-86 (February 24, 2017).

RFA 5 provides an opportunity to use fewer turbines, which could reduce Facility impacts on visual resources. Consequently, the proposed amendment makes no changes that alter the basis for the Council's earlier findings, so the Council may find that this amendment request satisfies OAR 345-022-0080.

4.11 Historic, Cultural and Archaeological Resources

The Council previously relied on conditions imposed in the existing Facility Site Certificate to address compliance with the Council's Historic, Cultural, and Archaeological Resources Standard.[49] Conditions PRE-HC-01through PRE-HC-03V and CON-HC-01-CON-HC-02 discuss buffer zones, areas to be avoided, and unanticipated discoveries. Condition CON-HC-03addresses construction avoidance to any intact physical evidence of the Oregon Trail. Construction avoidance may include redesign, reengineering, or restrictions on the area of construction activity. The proposed changes turbine dimensions do not affect Golden Hills' ability to comply with cultural conditions of the Site Certificate because this amendment request does not seek to change the Site Boundary or increase the number of turbines. All turbines will be placed within the previously evaluated micrositing corridor. Additional analysis of historic resources is provided below.

Three historic properties were identified within the Golden Hills Site Boundary in Exhibit S of the ASC: Oregon National Historic Trail (NHT), Barlow Cutoff, and DeMoss Springs Memorial Park. As described in the Final Order on the Application (p. 92-94), turbines will be visible from these historic properties. The larger turbine proposed in RFA 5 will also be visible because there is no change in the micrositing corridor.

As described below, the Council and SHPO previously evaluated these three resources and concluded that there would be no significant adverse impacts from facility construction or operation under the Cultural Resources Standard (OAR 345-022-0090) (see Final Order on the Application, p. 134). The Council also considered potential visual impacts under the Scenic and Recreation Standards on these three historical sites and likewise concluded there would be no significant impact. Details of the previous analysis and how the modifications proposed under RFA 5 might alter the potential impacts are provided for each resource below.

Oregon NHT and Barlow Cutoff

The Oregon NHT was not a single-track highway, but instead a broad meandering route along favorable ridges, valleys, and stream crossings. The Oregon NHT crosses the north portion of the Site Boundary. Barlow Cutoff is an alternate trail route associated with the Oregon NHT, and crosses the southern portion of the Site Boundary. The Barlow Cutoff allowed emigrants

[49] Final Order on Request for Contested Case and Amendment #3 of the Site Certificate, p. 90 (February 24, 2017).

along the Oregon NHT to shorten their journey to Oregon City by as much as a week. No physical evidence of either trail, such as wagon wheel ruts, has been identified in the analysis area (see Attachment 1 to Exhibit S-1 of the Application for Site Certificate for survey findings).

The Zone of Visual Influence (ZVI) analysis conducted for RFA No. 5 reaffirms that turbines will be visible from the trail routes, as was the case for the facility as approved. Figure 5 shows the locations of trail routes as depicted in the *Archaeological Inventory for the Golden Hills Wind Energy Development* (Tetra Tech, 2007) along with the current turbine layout, the ZVI analysis for the approved facility, and the additional areas from which the taller turbines will be visible. The Final Order on the Application (EFSC, 2009) concluded that turbine visibility would not adversely impact these trail routes because 1) private land limits opportunities to visit and view the approximate historic trail routes, and 2) no intact segments of the trails have been identified in the analysis area. The Oregon NHT was described in the original cultural resources surveys conducted for Golden Hills. Oregon SHPO reviewed this report and provided a letter to ODOE dated August 5, 2008, concurring that the project would have no effect on archaeological resources, provided certain stipulations were met. The stipulations were included as conditions to the site certificate. In the original site certificate, three conditions were included at SHPO request (V.B.1, V.B.2, and V.B.3). When the site certificate conditions were reorganized as part of Amendment 4, Condition V.B.3 was found to be duplicative with other conditions and was removed from the site certificate. Conditions V.B.1 and V.B.2 were renumbered to PRE-HC-01 and PRE-HC-02. Condition PRE-HC-01 requires avoidance of impacts to sites 35SH217, 35SH220, GH site 6 (aboveground resource), 35SH219 and GH Isolate 6. Condition PRE-HC-02 requires development of a Cultural Resources Management Plan. None of the changes proposed under RFA 5 affect Golden Hills' ability to comply with these conditions.

Potential visual impacts on the Oregon NHT were considered in the Council's findings on the scenic and recreational standards, but this analysis was not used to determine potential impacts in the Council's findings on cultural resources.

In the Final Order on the Application (EFSC, 2009), EFSC reviewed visual impacts to the Oregon NHT under the recreational standard and found (p. 92) that "Facility components would be visible from the trail alignments, but because there are no intact trail remnants within the analysis area and because the facility would not be visible from High Potential Sites identified in the trail's management plan, the visual impact would not adversely affect this recreational opportunity."

The scenic resource analysis presented in the Final Order on Amendment 3 considered visual impacts to the Oregon NHT (see pp. 87-88) from three "high potential sites" within 10 miles of the Site Boundary: the McDonald Ferry John Day River Crossing, Biggs Junction, and the Deschutes River Crossing. These sites were selected based on criteria established in the National Trails System Act including historic significance, the presence of visible historic remnants,

scenic quality, and relative freedom from intrusion (NPS, 1999), and are all located at least 5 miles from the nearest micrositing corridor. The Final Order on Amendment 3 concluded that views from these "high-potential" sites to the project area are obscured by topography. The ZVI presented in RFA 5 reaffirms that turbines will not be visual from these areas even if the larger turbines are used. Therefore, the proposed height increase would not result in significant adverse impacts to the trails under the scenic resource standard (OAR 345-022-0080).

DeMoss Springs Memorial Park

Located near the original DeMoss homestead and town plat of DeMoss, the DeMoss Springs Memorial Park is the site of a bandstand erected by the DeMoss family in 1924. The surrounding park was used for community gatherings in the early part of the 20th Century. The site was listed on the NRHP in 2007. There are four contributing resources to the NRHP listing: the bandstand, pump house, a basalt retaining wall, and bridge remnants. These resources are depicted in photos 1 through 4 in Attachment 3. The park is located in the southern portion of the Site Boundary between two ridgelines that include micrositing corridors.

DeMoss Springs Memorial Park was listed on the NRHP under Criterion B, for its association with the lives of persons significant in our past. In this case, the listing of DeMoss Springs Memorial Park based on its association with the DeMoss family, specifically James, Henry, George, and Lizzie who were members of the DeMoss Family Lyric Bards. The band was considered one of Oregon's premiere traveling musical groups in the late 19th and early 20th centuries. The park's period of significance is from 1897 through 1921.

The Final Order on the Application previously considered the potential noise, traffic, and visual impacts on DeMoss Springs Memorial Park under the recreation standard and concluded that "while some turbines would be visible from the DeMoss Springs Memorial Park, the park is not managed for its visual quality. For this reason, the visual impacts of the proposed facility on the DeMoss Springs Memorial Park would not interfere with the recreational opportunity" (EFSC 2009, p. 94). Therefore, the proposed height increase would not result in significant adverse impacts to the park under the recreation standard (OAR 345-022-0100). EFSC noted that turbine noise at the park could be up to 48 dBA but did not find this to be an adverse effect.

In the Final Order on the Application (EFSC, 2009, p. 133), impacts to the DeMoss Springs Memorial Park were considered for cultural resources. Because the facility was redesigned to avoid potential impact to the park itself, EFSC concluded that there would be no adverse effects.

The Council has approved micrositing corridors to the northeast (within 0.5 mile) and west (within 0.5 mile) of DeMoss Springs Memorial Park where turbines may be located. The introduction of turbines close to the park would introduce a new visual element when viewing the contributing buildings but the park is surrounded by trees and vegetation that generally obscure views. There are some clearings within the park where existing tall

towers (telephone poles and transmission line towers) are visible near the park. Attachment 3 provides a photo log showing the current appearance of park elements and surrounding area.

The Final Order on the Application (p. 94) states that turbines will be visible from DeMoss Springs Memorial Park. This conclusion was based on a "Zone of Visual Influence" evaluation which addresses potential turbine visibility based on topography and does not take into account screening from vegetation or structures.

Tetra Tech conducted additional analysis of the visibility and appearance of turbines from DeMoss Springs Memorial Park, with the objective of preparing a photographic simulation indicating future viewing conditions with the modified project in place. The park is approximately 2 acres in size and the site is confined in the narrow, relatively shallow valley formed by Barnum Creek. US Highway 97 is situated immediately to the west of the park. The eastern valley wall is adjacent to the east side of the park, and the western valley wall is just beyond US 97. The park property includes numerous mature trees and other vegetation, particularly along the west edge near the highway and to the north of the bandstand and other structures. The local topography and the trees effectively block or screen outward views from most locations within the park. There are some clearings within the park, particularly near the parking area and the restroom facility, where visibility is more open.

Using Photos 7 and 5 in Attachment 3, Tetra Tech conducted three-dimensional simulations to analyze locations of project turbines that are within the nominal field of view of the photo taken from that location. The first step in this process was to generate a base model to provide accurate, contextual information for the location and placement of the 3D modeled project components (turbines) in the scaled, virtual computer environment. The base model is developed from an ortho-rectified aerial photograph of the study area and typically includes a combination of GIS spatial data for the study area, land survey data, and design drawings for the project. Key metadata collected with the respective photographs, including the X, Y, Z coordinate position of the camera, focal length of the camera lens, and eye-level height of the photographer, are then integrated into the 3D computer model. This creates virtual camera viewpoints that match their positions in the scaled, virtual computer modeled environment to the lens of the original camera, a process typically called "View-Matching". This ensures that the 3D model of the proposed project in the scene will be accurately portrayed in scale and distance from the photo location. To be accurate, the 3D scene needs to have at least three existing elements (such as vegetation, a building, or a fence) that match the real-world dimensions of key foreground, mid-ground and background elements in the photos.

Figures 11 and 12 in Attachment 3 are graphic images, typically referred to as indicative simulations or pre-simulations, based on Photos 7 and 5 from the photo log. Figure 11 is the pre-simulation based on Photo 7, which shows the view to the southeast from a location by the entrance walkway at the park. A grain bin immediately south of the park and a utility pole atop the low ridge east of the park were used as reference objects for image matching in the

simulation process; these objects are shown with magenta shading in the figure. Light-gray turbine images have been placed within the view, based on their respective x-, y- and z-coordinates (including turbines of two different heights) relative to this location in the park. As indicated in the graphic, the turbines that are within the nominal field of view are located behind the ridge east of the park and another intervening ridge, and would not be visible from this location.

Figure 12 is the pre-simulation based on Photo 5, which shows the view to the north, toward the bandstand, from a location on the walkway near the park entrance. Reference objects used for image matching are again shown with magenta shading. Numerous project turbines are within the nominal field of view, as indicated by the light-gray turbine images. Based on their respective three-dimensional coordinates, however, views toward most of these turbines would be blocked by the surrounding terrain. The upper portions of approximately 7 turbines shown in this graphic extend above the height of the terrain located north of the park, and would potentially be visible from this location based on topography alone. However, as indicated in the pre-simulation, these turbines are all located behind the large trees in the foreground and would be screened from view.

Based on the supplemental analysis documented in the two pre-simulations, there would be very limited or no visibility of project turbines from DeMoss Springs Memorial Park. To the extent that any turbines might be visible, those views would be limited to the upper portions of a small number of turbines and would only be possible with the trees in leaf-off condition.

Even though turbines could be visible at certain times of year from some areas of the park, the views of turbines will not adversely affect the historic significance of the park and the four contributing buildings because the setting is not the most important factor in the NRHP listing. The potential reduction in the value of the setting due to turbine visibility will not diminish the importance of the park's association with the DeMoss family. The park will continue to convey the other factors of integrity despite the height increase of the towers.

RFA 5 makes no changes that alter the basis for the Council's earlier findings, and OAR 345-022-0090 is met.

4.12 Recreation

The Council previously found that the Facility complies with the Recreation Standard. The analysis was based on the importance and uniqueness of the recreational opportunities in the area, and on usage or demand, along with potential impacts from Facility construction and operation on the recreational activity. Golden Hills has evaluated the potential for new recreation areas and found that there are no new, important recreational opportunities within the analysis area that were not previously analyzed.

This amendment request does not seek to change the Site Boundary or increase the number of turbines. Consequently, and in consideration of the below, the proposed amendment makes no changes that would alter the basis for the Council's earlier findings:

- The noise analysis conducted for the Final Order on the Application indicated that the approved Facility will be inaudible from all recreational opportunities in the analysis area except the Oregon National Historic Trail, the Journey Through Time Scenic Byway, and DeMoss Springs Memorial Park. The modifications proposed in this amendment request will still comply with noise conditions described in the site certificate and, for the same reasons previously cited by EFSC, audible noise will not adversely affect recreation.
- There will be no changes to construction traffic or operations traffic than previously reviewed by Council in RFA 3 and 4.
- Visibility of the proposed turbines and the changes resulting from the modifications described in this amendment request are detailed in the previous sections for Protected Areas and Scenic Resources. As noted in those sections, the proposed turbines slightly, but not substantially, extended the ZVI in some areas.

Therefore, the Council may find that this amendment request complies with OAR 345-022-0040.

4.13 Public Services

The Council has adopted Site Certificate Conditions PRE-PS-01, PRE-PS-02, OPR -PS-01, OPR -PS-02, CON-PS-01-CON-PS-04, PRO -PS-01, GEN -PS-01, and GEN -PS-02, to address the Public Services Standard. The proposed amendment will not alter the Facility's impacts on the ability of public and private service providers to supply sewer and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. The traffic analysis presented in the ASC included an analysis of the vehicles needed to deliver and construct turbines and there is no change to anticipated truck size or construction equipment that will result from the proposed amendment. As noted in the Final Order on Amendment 3, because the turbines will be larger, there will be fewer of them. Therefore, construction truck traffic is expected to be equal or less than presented in the ASC. The modifications proposed under RFA 5 do not change this conclusion.

As provided in RFA 4, Golden Hills now assumes that during the peak construction period there will be 300 workers onsite, and there will be an average of 170 workers onsite throughout construction. Included as Attachment F to RFA 4, the certificate holder conducted a Public Services Evaluation in which the anticipated increase in workers' construction-related impacts to public services (e.g., housing, health care, transportation and roadway impacts, etc.) were taken into consideration. The certificate holder also confirmed in RFA 4 that the estimated

number of permanent employees needed to operate the Facility, between 10 and 15 permanent employees, would remain consistent with what was previously assumed in Exhibit U of the ASC. The increase in passenger (construction worker) traffic is not anticipated to increase Facility-related traffic impacts due to very low use of these local roadways. The modifications proposed under RFA 5 do not alter the estimates presented in RFA 4. As noted above, the Public Services conditions provides safety, fire protection and emergency response measures for the Facility, including the requirement to develop a fire safety and response plan with affected agencies prior to construction of the Facility.

RFA 5 does not seek to change the Site Boundary or increase the number of turbines, and there are no other circumstances that would alter the basis for the Council's earlier determination. Accordingly, RFA 5 meets OAR 345-022-110.

4.14 Waste Minimization

The Waste Minimization Standard analysis provides an assessment of procedures and practices needed to minimize generation of solid waste and wastewater. RFA 5 will not increase the amount of solid waste and wastewater generated by the Facility, and will not modify the procedures and practices to be used to handle these materials. The Council adopted Conditions PRE-WM-01, PRO -WM-01, CON-WM-01 and OPR -WM-01 to address the Waste Minimization Standard for the Facility's compliance. RFA 5 does not alter Golden Hills' ability to comply with the Facility Site Certificate conditions. Therefore, the Council may rely on its earlier finding that OAR 345-022-0120 is met.

4.15 Public Health and Safety

The majority of the Site Boundary is actively farmed for dry land wheat and barley. The tallest farm equipment used for dry land wheat farming is the combine, with a maximum height of 5.5 meters. The proposed modified turbines will have a minimum blade tip clearance of 14 meters. Therefore, landowners can continue to farm dry land wheat under the proposed turbines.

Occasionally, low flying crop duster aircraft are used to apply herbicides. The Council previously relied on comments from local crop duster operators to conclude that placement of 125 turbines would not impede this accepted farm practice.[50] In rural areas, aerial applicators are allowed to fly as close to structures as required for application without creating a hazard to persons or property. The Oregon Department of Agricultural recommends in its Aerial Pesticide Applicator Responsibilities in Oregon (ODA, 2011) that applicators should scout target sites to identify terrain and obstacles, like turbines, before application. Because aerial

[50] Final Order on the Golden Hills Wind Project, p.56 (May 15, 2009).

applicators fly close to the ground, less than 10 feet in some cases, any obstacle or terrain feature could affect their operation or spraying patterns. The proposed change could reduce the number of turbines by nearly half, which would have a corresponding reduction in the number of obstacles to low flying aircraft. There are hundreds of existing turbines in Sherman County, including areas near Wasco State Airport, therefore it is reasonable to expect that aerial applicators operating in the county are capable of avoiding turbines, and that the proposed modifications will not create new obstacles to crop dusters.

For RFA 5, Golden Hills contacted Aviation to get its input on taller turbines at the Facility. In response, Aviation referred to its May 31, 2016 letter to ODOE (Attachment 5) that summarized the need for an airspace study, coordination with the FAA, and outlined air safety concerns about the area in the immediate vicinity of Wasco State Airport. As required by the FAA and Condition PRE-PH-03, Golden Hills will submit a Notice of Proposed Construction and Alteration (FAA form 7460-1) to the FAA and Aviation that identifies turbine locations and heights based on final design. Golden Hills will also follow FAA's recommendations for daytime marking of turbines and permanent met towers, and their final locations will be recorded on FAA's digital obstacle database. Because the turbine tip height is greater than 499 feet, Part 77 will require public notice of each turbine with a 30-day comment period. This will allow the aviation community in the area an opportunity to communicate to the FAA any concerns they might have.

The closest turbine micrositing corridor to Wasco State Airport is about 1.5 miles to the south, and about 2 miles to the west. The runway is oriented east-west, so that departing aircraft must fly over the city of Wasco before reaching the facility. Based on an obstacle study completed for Golden Hills in 2014 a portion of the site boundary is assumed to be within Category B traffic patterns, which is airspace actively managed by air traffic control. The Category B airspace is outside of any micrositing corridors and no turbines will be built in this airspace. A larger area around the airport that could potentially be classified as Category C airspace also overlaps the site boundary. Category C is radar-controlled airspace. If the FAA determines the application of Category C traffic patterns around Wasco State Airport, then placement of turbines within micrositing corridors will be affected, because turbines are not allowed in this type of airspace. Golden Hills acknowledges that final turbine locations require approval from the FAA, and the placement of turbines near Wasco State Airport may be affected by the use of the airspace by members of the public. If a subset of proposed turbine locations is disallowed by FAA, Golden Hills will relocate these turbines elsewhere within the micrositing corridor. Golden Hills also consulted with the Navy (Attachment 6) as a military training route (MTR; IR-343) crosses a portion of the site boundary. The Navy confirmed that military aircraft using this MTR operate a minimum elevation of 5,000 feet. Therefore, the proposed change to increase turbine height will not affect the safe operation of military aircraft within an MTR.

The Council addressed the Public Health and Safety Standard for Wind Facilities in Section IV.I of the Final Order on the Application and found that the Golden Hills could design, construct, and operate the facility to exclude members of the public from close proximity to the turbine blades and electrical equipment. The Council further found that the certificate holder could design, construct, and operate the facility to preclude structural failure of the tower or blades that could endanger public safety, and to have adequate safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure. The Council previously imposed Condition CON-PH-01 requiring that the certificate holder follow the manufacturer's recommended handling instructions and procedures to prevent damage to turbine or turbine tower components that could lead to failure. In addition, the Council imposed setback conditions in consideration of public safety as part of RFA 1 that are based on blade tip height. Accordingly, the Council can find that the facility, with conditions, can comply with the Public Health and Safety Standard, OAR 345-22-0110.

4.16 Cumulative Effects

The Council previously found in the Final Order on Amendment 3 that the Facility complies with the Cumulative Effects Standards for Wind Energy Facilities (OAR 345-024-0015). The proposed changes will not change the Facility's reliance on existing roads where possible. As described in Section 4.10 above, although the proposed turbines will be taller, the changes to visual impact on protected areas or public viewing areas will not be significant. Proposed changes will not significantly affect wetlands or other waters of the state because the Facility construction will avoid impacts to wetlands through boring or rerouting facilities around these features as necessary. The facility has been sited to reduce impacts to productive fish and wildlife habitat by siting as much of the facility as possible in Class 6 habitat. In addition, the facility as modified would comply with the existing site certificate conditions, including Conditions IV.I.1 to CON-PH-02 and condition PRE-PH-01 related to compliance with the Threatened and Endangered Species standard, and Conditions PRE-FW-01 to PRE-FW-05, and CON-FW-01, related to compliance with the Fish and Wildlife Habitat standard. RFA 5 makes no changes that would alter the basis for EFSC's earlier findings that OAR 345-024-0015 is met.

Section 5. Other Applicable Regulatory Requirements

Golden Hills demonstrates in Table 9 that the Facility, as amended, will comply with other applicable Requirements.

Table 9. Summary of Other Applicable Regulatory Requirements

Agency	Regulation	Applicability to Proposed Change
FAA	Notice of Proposed Construction or Alteration	**Applicable**: Existing site certificate Condition PRE-PH-03 requires that before beginning construction, the certificate holder shall submit to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation a Notice of Proposed Construction or Alteration identifying the proposed final locations of the turbines and related or supporting facilities and shall provide a copy of this notice to the Department.
ODEQ	Noise Control Regulations	**Applicable**: Condition PRE-CJ-01requires a new noise analysis be submitted to the department prior to construction that demonstrates the Facility, as proposed, will comply with all relevant noise related requirements. The Certificate Holder has multiple means to demonstrate compliance, including (1) eliminating or moving turbine locations within the approved corridors, (2) altering the turbine selection, (3) documenting that the hourly L50 noise levels caused by the Facility at any noise-sensitive property will not cause the hourly L50 to increase by more than 10 dBA, and 4) obtaining a legally-effective easement or real covenant. Nothing in this amendment request alters the Facility's ability to comply with OAR 340-035-0035 or the four noise related conditions of approval (Conditions CON-CJ-01, PRO-CJ-01, and OPR-CJ-01).
ODSL	Removal-Fill Law	**Not Applicable**: The Facility can be constructed and operated without triggering the need for a Removal/Fill Permit from DSL or a Section 404 permit from the USACE because impacts to wetlands, waters of the state, and waters of the State will be avoided.
Oregon Water Resources Department	Ground Water Act	**Applicable**: The amendment request does not increase the quantity of water used during construction or operation. The request does not significantly change the quantity of water used and wastewater generated during operations from what was originally authorized in the Site Certificate. The modifications proposed in this amendment request do not affect the Certificate Holder's ability to comply with the Site Certificate, and OAR Chapter 690.

Section 6. Conclusion

Table 10 provides the location where the required information for a written request for amendment (OAR 345-027-0060 (1)) is located in this document. In the analysis provided in this amendment request, Golden Hills demonstrates that the Facility, as amended, will comply with the applicable requirements outlined in OAR 345-027-0060. Golden Hills has provided sufficient evidence for the Council to reasonably conclude that the requested site certificate amendment is warranted and allowed.

Table 10. Submittal Requirements Matrix

Requirement	Location
OAR 345-027-0060 (1) To request an amendment to the site certificate required by OAR 345-027-0050(3) and (4), the certificate holder shall submit a written preliminary request for amendment to the Department of Energy that includes the following:	N/A
OAR 345-027-0060(1)(a) The name of the facility, the name and mailing address of the certificate holder, and the name, mailing address, email address and phone number of the individual responsible for submitting the request.	Section 3.1
OAR 345-027-0060(1)(b) A detailed description of the proposed change, including:	Section 3.2
(A) a description of how the proposed change affects the facility,	Section 3.2
(B) a description of how the proposed change affects those resources or interests protected by applicable laws and Council standards, and	Section 2.0, Section 4.0 & Section 5.0
(C) the specific location of the proposed change, and any updated maps and/or geospatial data layers relevant to the proposed change.	Section 3.1
OAR 345-027-0060(1)(c) References to any specific Division 21 information that may be required for the Department to make its findings.	Section 4.1 & 4.2
OAR 345-027-0060(1)(d) The specific language of the site certificate, including conditions, that the certificate holder proposes to change, add or delete through the amendment.	Section 3.0
OAR 345-027-0060(1)(e) A list of the Council standards and all other laws - including statutes, rules and ordinances - applicable to the proposed change, and an analysis of whether the facility, with the proposed change, would comply with those applicable laws and Council standards. For the purpose of this rule, a law or Council standard is "applicable" if the Council would apply or consider the law or Council standard under OAR 345-027-0075(2).	Section 4.0 & Section 5.0
OAR 345-027-0060(1)(f) An updated list of the owners of property located within or adjacent to the site of the facility, as described in OAR 345-021-0010(1)(f).	Attachment 6

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Figures

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120°50'W 120°48'W 120°46'W 120°44'W 120°42'W 120°40'W 120°38'W 120°36'W 120°34'W

45°38'N 45°36'N 45°34'N 45°32'N 45°30'N

China Valley Creek

Wasco

Klondike Substation

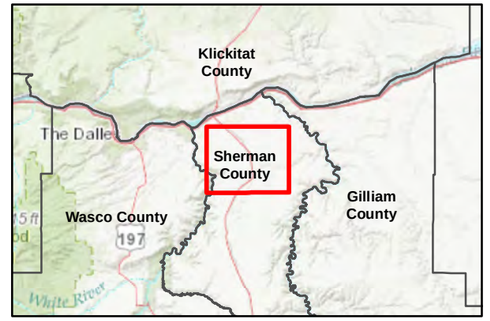
Sherman County

Proposed Substation

Wasco County

Moro

Vicinity Map



Legend

- Wind Turbine
- Existing Substation
- Proposed Substation
- Operations and Maintenance Facility
- Existing Hay Canyon 230-kV Transmission Line
- Proposed 230-kV Transmission Line
- 230 kV GenTie Northern Termination
- Low-voltage Collector System
- Approved Micrositing Corridor
- Crane Path
- Access Road
- Public Road (Paved)
- Public Road (Gravel)
- Temporary Laydown Area
- Land Parcel Boundary
- Facility Site Boundary
- City Boundary
- County Boundary

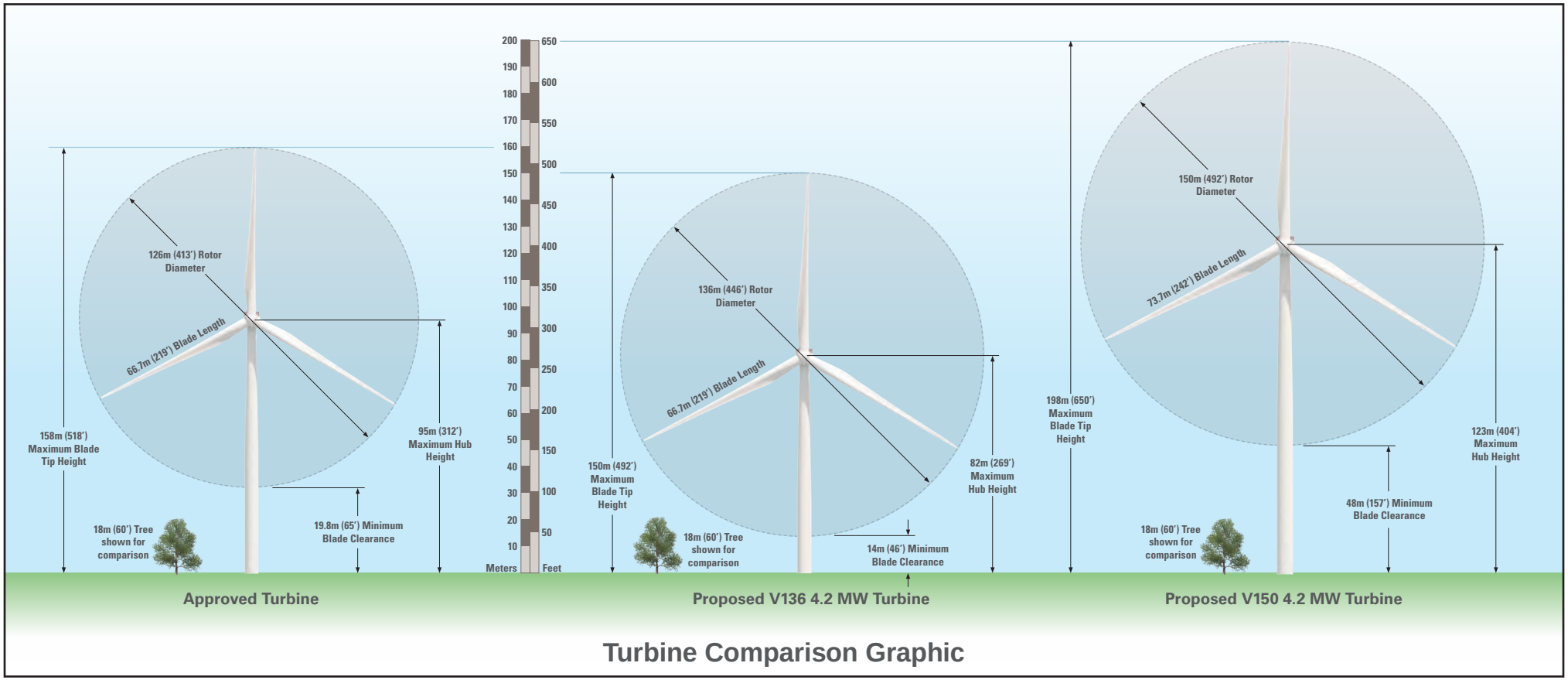
N

0 0.5 1 2
Miles

Golden Hills Facilities Map

Sherman County, Oregon

AVANGRID RENEWABLES



Turbine Comparison Graphic

Figure 2. Turbine Options

Golden Hills Wind Project

Sherman County, Oregon

AVANGRID RENEWABLES

Golden Hills Wind Project

Figure 3
Protected Areas

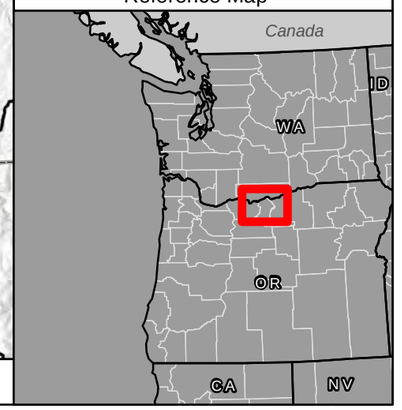
SHERMAN COUNTY, OR

- Wind Turbine Location
- Area of Turbine Visibility
- Additional Visible Areas from Original ZVI
- County Boundary
- Facility Site Boundary
- Analysis Area (20 Miles)
- Protected Area
- Major River or Stream
- Wild / Scenic River Corridor
- Wilderness Study Area
- Columbia River Gorge National Scenic Area
- Columbia Hills Natural Area Preserve
- John Day Wildlife Refuge
- Lower Deschutes Wildlife Area
- Interstate Highway
- Secondary Highway
- Secondary Road

Turbine Hub Height: 123 meters
Turbine Rotor Diameter: 75 meters
Worst-case Total Turbine Height: 198 meters
Total Number Assessed: 125 turbines
Analysis Area: 20 miles from Site Boundary
Assumed Viewer Height: 6-foot tall person

TETRA TECH

Reference Map



1:325,000 WGS 1984 UTM Zone 10N

0 5 10 20 30 40 Miles

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Golden Hills Wind Project

Figure 4
Scenic and Aesthetic Values

SHERMAN COUNTY, OR

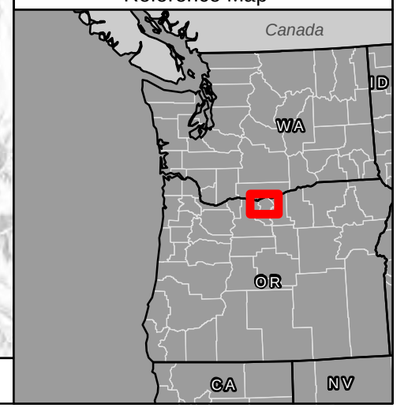
- Wind Turbine Location
- Area of Turbine Visibility
- Additional Visible Areas from Original ZVI
- Analysis Area (10 Miles)
- Facility Site Boundary
- County Boundary
- Scenic Resource
- Major River or Stream
- Wild / Scenic River Corridor
- Wilderness Study Area
- Columbia River Gorge National Scenic Area
- Interstate Highway
- Secondary Highway
- Secondary Road

Turbine Hub Height: 123 meters
Turbine Rotor Diameter: 75 meters
Worst-case Total Turbine Height: 198 meters
Total Number Assessed: 125 turbines

Analysis Area: 10 miles from Site Boundary
Assumed Viewer Height: 6-foot tall person

TETRA TECH

Reference Map



1:200,000 WGS 1984 UTM Zone 10N

0 2.5 5 10 15 20 Miles

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Golden Hills Wind Project

Figure 5
Turbine Visability from High-Potential Oregon Trail Locations

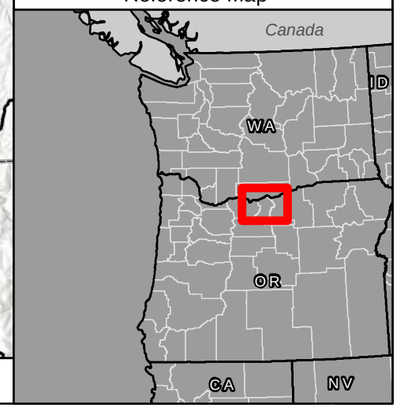
SHERMAN COUNTY, OR

- Wind Turbine Location
- Area of Turbine Visibility
- County Boundary
- Facility Site Boundary
- Analysis Area (20 Miles)
- Major River or Stream
- Interstate Highway
- Secondary Highway
- Secondary Road
- De Moss Spring Memorial Park
- Barlow Cutoff
- Oregon Trail
- Scenic Resource

Turbine Hub Height: 123 meters
Turbine Rotor Diameter: 75 meters
Worst-case Total Turbine Height: 198 meters
Total Number Assessed: 125 turbines
Analysis Area: 20 miles from Site Boundary
Assumed Viewer Height: 6-foot tall person

TETRA TECH

Reference Map



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Attachment 1

Redline of Proposed Fifth Amended Site Certificate

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ENERGY FACILITY SITING COUNCIL

OF THE

STATE OF OREGON

~~Fourth~~ Fifth Amended
Site Certificate for the

Golden Hills Wind Project

ISSUANCE DATES

Site Certificate	**May 15, 2009**
First Amended Site Certificate	**May 11, 2012**
Second Amended Site Certificate	**January 30, 2015**
Third Amended Site Certificate	**February 24, 2017**
Fourth Amended Site Certificate	**April 27, 2018**
Fifth Amended Site Certificate	**XXXX XX, 2018**

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Table of Contents

Attachments

Attachment A	Facility Site Boundary Map

Acronyms and Abbreviations

ASC	Application for Site Certificate
Council	Oregon Energy Facility Siting
Department	Oregon Department of Energy
DOGAMI	Oregon Department of Geology and Mineral Industries
DSL	Department of State Lands
HMRP	Habitat Mitigation and Revegetation Plan
NH zone	Natural Hazards Combining Zone
O&M	Operations and Maintenance
OAR	Oregon Administrative Rule
ODFW	Oregon Department of Fish and Wildlife
ODEQ	Oregon Department of Environmental Quality
ORS	Oregon Revised Statute
SHPO	State Historic Preservation Office

1.0 Introduction and Site Certification

This site certificate is a binding agreement between the State of Oregon (State), acting through the Energy Facility Siting Council (Council), and Golden Hills Wind Farm LLC (certificate holder), which is a wholly-owned subsidiary of Pacific Wind Development, LLC (Pacific Wind or parent company). As authorized under Oregon Revised Statute (ORS) Chapter 469, the Council issues this site certificate authorizing the certificate holder to construct, operate and retire the Golden Hills Wind Project (facility) at the below described site within Sherman county, subject to the conditions set forth herein.

Both the State and certificate holder must abide by local ordinances, state law and the rules of the Council in effect on the date this site certificate is executed. However, upon a clear showing of a significant threat to public health, safety, or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules (ORS 469.401(2)).

The findings of fact, reasoning, and conclusions of law underlying the terms and conditions of this site certificate are set forth in the Council's Final Order in the Matter of the Application for a Site Certificate for the Golden Hills Wind Project (the "Final Order on the Application" or "Final Order") issued on May 15, 2009, the Council's Final Order in the Matter of the Request for Amendment #1 of the Site Certificate for the Golden Hills Wind Project ("Final Order on Amendment #1") issued May 11, 2012, the Council's Final Order in the Matter of the Request for Amendment #2 of the Site Certificate for the Golden Hills Wind Project ("Final Order on Amendment #2"), issued January 30, 2015, the Council's Final Order in the Matter of the Request for Amendment #3 of the Site Certificate for the Golden Hills Wind Project ("Final Order on Amendment #3"), issued February 24, 2017, and the Council's Final Order in the Matter of the Request for Amendment #4 of the Site Certificate for the Golden Hills Wind Project ("Final Order on Amendment #4"), issued April 27, 2018, and the Council's Final Order in the Matter of the Request for Amendment #5 of the Site Certificate for the Golden Hills Wind Project ("Final Order on Amendment #4"), issued XXX, 2018 and incorporated herein by this reference. In interpreting the amended site certificate, any ambiguity shall be clarified by reference to the following, in order of priority: (1) this amended site certificate; 2) the Final Order on Amendment #5; (~~2~~3) the Final Order on Amendment #4; (~~3~~4) the Final Order on Amendment #3; (45) the Final Order on Amendment #2; (~~5~~6) the Final Order on Amendment #1; (~~6~~7) the Final Order on the Application; and (~~7~~8) the record of the proceedings that led to all the Final Orders. This site certificate binds the State and all counties, cities and political subdivisions in Oregon as to the approval of the site and the construction, operation, and retirement of the facility as to matters that are addressed in and governed by this site certificate (ORS 469.401(3)). This site certificate does not address, and is not binding with respect to, matters that are not included in and governed by this site certificate, and such matters include, but are not limited to: employee health and safety; building code compliance; wage and hour or other labor regulations; local government fees and charges; other design or operational issues that do not relate to siting the facility (ORS 469.401(4)); and permits issued under statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council (ORS 469.503(3)).

Each affected state agency, county, city, and political subdivision in Oregon with authority to issue a permit, license, or other approval addressed in or governed by this site certificate, shall upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license or other approval subject only to conditions set forth in this

site certificate. In addition, each state agency or local government agency that issues a permit, license or other approval for this facility shall continue to exercise enforcement authority over such permit, license or other approval (ORS 469.401(3)). For those permits, licenses, or other approvals addressed in and governed by this site certificate, the certificate holder shall comply with applicable state and federal laws adopted in the future to the extent that such compliance is required under the respective state agency statutes and rules (ORS 469.401(2)).

The certificate holder must construct, operate and retire the facility in accordance with all applicable rules as provided for in Oregon Administrative Rule (OAR) Chapter 345, Division 26. After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate (ORS 469.430).

The obligation of the certificate holder to report information to the Department or the Council under the conditions listed in this site certificate is subject to the provisions of ORS 192.502 *et seq.* and ORS 469.560. To the extent permitted by law, the Department and the Council will not publicly disclose information that may be exempt from public disclosure if the certificate holder has clearly labeled such information and stated the basis for the exemption at the time of submitting the information to the Department or the Council. If the Council or the Department receives a request for the disclosure of the information, the Council or the Department, as appropriate, will make a reasonable attempt to notify the certificate holder and will refer the matter to the Attorney General for a determination of whether the exemption is applicable, pursuant to ORS 192.450.

The Council recognizes that many specific tasks related to the design, construction, operation and retirement of the facility will be undertaken by the certificate holder's agents or contractors. Nevertheless, the certificate holder is responsible for ensuring compliance with all provisions of the site certificate.

The duration of this site certificate shall be the life of the facility, subject to termination pursuant to OAR 345-027-0013 or the rules in effect on the date that termination is sought, or revocation under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered. The Council shall not change the conditions of this site certificate except as provided for in OAR Chapter 345, Division 27.

The definitions in ORS 469.300 and OAR 345-001-0010 apply to the terms used in this site certificate, except where otherwise stated, or where the context clearly indicates otherwise.

2.0 Facility Location and Site Boundary

The energy facility and its related and supporting facilities will be located within Sherman County. The site boundary, as defined in OAR 345-001-0010, encompasses approximately 29,500 acres and be located near Wasco in Sherman County, Oregon. More particularly, the site would occupy portions of Sections 1-17, Township 1 South, Range 17 East, Sections 6-7, Township 1 South, Range 18 East, Sections 29-31, Township 1 North, Range 18 East, Sections 5-9, 14-23, and 25-36, Township 1 North, Range 17 East, Sections 1-3, 12-14, 23-26, and 35-36, Township 1 North, Range 16 East, Sections 29-32, Township 2 North, Range 17 East, Sections 25-27 and 34-36, Township 2 North, Range 16 East. Attachment A of this site certificate contains a map of the site boundary.

3.0 Facility Description

3.1 Energy Facility

ORS 469.300(11)(a)(J) defines the "energy facility" in this case as an electric power generating plant with an average electric generating capacity of 35 megawatts or more if the power is produced from ... wind energy at a single energy facility." The proposed "electric power generating plant" would consist of up to 125 wind turbine locations, each consisting of a turbine tower and foundation, turbine pad area, nacelle, rotor and blade assembly, and step-up transformer. Wind turbines would be placed in micrositing survey corridors as shown in the Application for a Site Certificate. A map of the site boundary, including micrositing corridors, is included as Attachment A to this site certificate. Golden Hills would have a peak electric generating capacity of up to 400 MW and an average electric generating capacity of about 133 MW.

Golden Hills has not yet selected the wind turbine model or models that would be installed in the facility. Golden Hills requested a site certificate that would allow the installation of up to 125 turbines with turbine towers measuring up to ~~95~~ 123 meters (~~312~~ 404 feet) at the rotor hub, the diameter of the rotor-swept area measuring up to ~~126~~ 150 meters (~~413~~ 492 feet), and the total maximum turbine height measuring up to ~~158~~ 198 meters (~~518~~ 650 feet).

A wind turbine features a nacelle mounted on a tubular steel tower. The nacelle houses the generator and gearbox and supports the rotor and blades at the hub. The turbine tower supports and provides access to the nacelle. Each turbine unit sits on a concrete pad that accommodates the turbine pedestal, a step-up transformer and a turnout area for service vehicles. The purpose of the step-up transformer is to increase the output voltage of the wind turbine to the voltage of the power collection system. Underlying the pad would be a deep concrete turbine foundation with a surface area dependent upon the type and size of wind turbine selected.

3.2 Related or Supporting Facilities

Golden Hills proposes to construct the following related or supporting facilities:

- Power collection system
- Substation
- 230 kV transmission line
- Meteorological towers
- Supervisory Control and Data Acquisition ("SCADA") System
- O&M facility
- Access roads
- Temporary laydown areas

Power Collection System. About 55 miles of power collection system, operating at 34.5 kV, would transport the power from the wind turbines to the substation. Some portion of the power collection system may be installed above ground to avoid impacts or to accommodate unforeseen geotechnical conditions.

Substation. The facility would include one substation, located near the center of the Golden Hills site. The substation would occupy a graveled and fenced area about 5 acres in size to facilitate transformers, switching equipment and a parking area.

230-kV Transmission Line. An approximately 5-mile, 230 kV transmission line would interconnect the substation to the existing Hay Canyon 230 kV transmission line. From there, electricity would be transmitted using the existing Hay Canyon 230 kV line to the northernmost transmission pole structure near the existing Klondike Substation where up to approximately 700 feet of new 230 kV transmission line would be constructed along with associated structures and equipment necessary to interconnect the facility to Bonneville Power Administration's (BPA's) transmission structure located approximately 300 feet north of the Klondike Substation.

Meteorological Towers. GHWF proposes to install up to six permanent meteorological towers ("met towers"). The met towers would be unguyed tubular structures about ~~95~~ 123 meters (~~312~~ 404 feet) tall and set in concrete foundations.

SCADA System. A fiber optic communications network would link the wind turbines to a central computer at the O&M facility. The SCADA system would collect operating and performance data from each wind turbine and Golden Hills as a whole and provide for remote operation of the wind turbines.

O&M Facility. A 5,000-square-foot operations and maintenance ("O&M") building would be constructed at one or the other of two locations proposed by GHWF. The O&M building would house office and workshop areas, a control room for the SCADA system, and a kitchen, bathroom and shower. The 5-acre O&M facility site would include parking for vehicles. Domestic water use would not exceed 5,000 gallons per day, and domestic water would be obtained from an on-site well. Domestic wastewater would be drained into an on-site septic system.

Access Roads. Approximately 41 miles of new roads would be constructed to provide access to the turbine strings and other facility components. Access roads would connect to graveled turbine pad areas at the base of each wind turbine. The roads would be 20 feet wide and constructed with crushed gravel. In addition, GHWF would improve and widen some existing county and farm roads.

Temporary Laydown Areas. Up to seven principal, temporary laydown areas would be used to stage construction and store supplies and equipment during construction. In addition, temporary laydown areas would be required at the base of each wind turbine. The laydown areas would be covered with gravel, and the gravel would be removed and the areas would be restored to their preconstruction conditions following completion of construction.

4.0 Site Certificate Conditions

4.1 Condition Format

The conditions in Sections 4.2 through 4.7 of this Site Certificate are organized and coded to indicate the phase of implementation, the standard the condition is required to satisfy, and an identification number (1, 2, 3, etc.)[1]. The table below presents a "key" for phase of implementation:

Key	Type of Conditions/Phase of Implementation
GEN	General Conditions: Design, Construction and Operation
PRE	Pre-Construction Conditions
CON	Construction Conditions
PRO	Pre-Operational Conditions
OPR	Operational Conditions
RET	Retirement Conditions

The standards are presented using an acronym; for example, the General Standard of Review is represented in the condition numbering as "GS"; the Soil Protection standard is represented in the condition numbering as "SP" and so forth.

For example, the coding of Condition GEN-GS-01 represents that the condition is a general condition (GEN) to be implemented during design, construction and operation of the facility, is required to satisfy the Council's General Standard of Review, and is condition number 1.

The Council administratively amends the following conditions due to OAR Division 27 regulatory changes, as approved by Council on October 19, 2017: Condition VII.1 through VII.5, VII.7 through VII.18, and VII.20 through VII.21.

Conditions from the site certificate that have either been incorporated into other amended conditions or deleted due to duplication with other conditions have been removed.[2] No substantive changes were made to the requirements of each of the removed conditions, and still apply to the certificate holder.

Condition IV.C.8, relating to the value of salvage in decommissioning calculations, was removed because Council no longer recognizes salvage value as an offset to the total site restoration and decommissioning cost.

[1] The identification number is not representative of an order that conditions must be implemented; it is intended only to represent a numerical value for identifying the condition.
[2] The removed conditions that were either incorporated into other amended conditions or deleted due to duplication with other conditions are; IV.B.3, IV.C.9, IV.D.16, IV.D.17, IV.D.21,V.B.3, V.C.12, V.C.13, V.C.14, VII.6, and VII.19.

4.2 General Conditions (GEN): Design, Construction and Operations

Condition Number	Pre-Construction (PRE) Conditions
DESCRIPTION CONDITIONS (DC)	
GEN-DC-01	The certificate holder shall begin construction of the facility by June 18, 2020. Under OAR 345-015-0085(9), an amended site certificate is effective upon execution by the Council Chair and the certificate holder. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027¬0030 or any successor rule in effect at the time the request for extension is submitted. On or before June 18, 2020, the certificate holder shall provide written notification to the Department that it has met the construction commencement deadline. Construction is defined in OAR 345-001-0010. [Final Order on ASC, Condition III.D.1; Amended in Final Order on AMD2, AMD3, AMD4]
GEN-DC-02	The certificate holder shall complete construction of the facility by June 18, 2021. Construction is complete when (1) the facility is substantially complete as defined by the certificate holder's construction contract documents; (2) acceptance testing has been satisfactorily completed; and (3) the energy facility is ready to begin continuous operation consistent with the site certificate. The certificate holder shall promptly notify the Department of the date of completion of construction. The Council may grant an extension of the deadline for completing construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted. [Final Order on ASC, Condition III.D.2; Amended in Final Order on AMD2, AMD3]
STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]	
GEN-OE-01	During construction, operation and facility retirement, the certificate holder shall report to the Department within 7 days, any change in the corporate structure of Avangrid Renewables LLC (a subsidiary of Avangrid, Inc., and the parent company of Pacific Wind Development, LLC). The certificate holder shall report promptly to the Department any change in its access to the resources, expertise and personnel of Avangrid Renewables LLC. The certificate holder shall include in the report, an evaluation of whether the change in corporate structure represents a change in ownership of the certificate holder and whether a site certificate transfer is warranted. [Final Order on ASC, Condition IV.B.1; Amended in Final Order on AMD2, AMD4]
GEN-OE-02	Any matter of noncompliance under the site certificate shall be the responsibility of the certificate holder. Any notice of violation issued under the site certificate shall be issued to the certificate holder. Any civil penalties assessed under the site certificate shall be levied on the certificate holder. [Final Order on ASC, Condition IV.B.4]
GEN-OE-03	The certificate holder shall contractually require the engineering and procurement contractor and all independent contractors and subcontractors involved in the construction and operation of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provision shall not operate to relieve the certificate holder of responsibility under the site certificate. [Final Order on ASC, Condition IV.B.5]
GEN-OE-04	During construction, operation and retirement, the certificate holder shall obtain, or shall ensure that its contractors obtain, necessary federal, State and local permits or approvals. The certificate holder shall work with local and State fire officials to ensure compliance with all fire code regulations regarding public buildings. [Final Order on ASC, Condition IV.B.6; Amended in Final Order on AMD4]
GEN-OE-05	The certificate holder shall: (a) Prior to construction, notify the Department of the identity, telephone number, e-mail address and qualifications of the on-site construction manager or assistant construction manager. The construction

	manager or assistant construction manager must be capable of managing a wind facility construction project, including permit and regulatory compliance requirements. (b) Prior to operation, notify the Department of the identity, telephone number, e-mail address and qualifications of the facility operations manager. The facility operations manager must be capable of managing permit and regulatory compliance requirements and manage operation of a wind facility. (c) Prior to facility retirement, notify the Department of the identity, telephone number,-and e-mail address and qualifications of the personnel or entity responsible for facility decommissioning and restoration activities. The personnel or entity responsible for facility decommissioning and restoration activities must be capable of managing permit and regulatory compliance requirements and be qualified to decommission a wind facility. The certificate holder shall notify the Department within three business days upon any change in personnel or contact information provided to satisfy Condition IV.B.7 (a) through (c). [Final Order on ASC, Condition IV.B.7; Amended in Final Order on AMD4]
GEN-OE-06	Within three business days after discovery of conditions or circumstances that may violate the terms or conditions of the site certificate, the certificate holder shall report, in accordance with OAR 345-029-0010(1), the conditions or circumstances to the Department. Within 30-days of discovery, the certificate holder shall submit to the Department a written report pursuant to OAR 345-029-0010(3). [Final Order on ASC, Condition IV.B.8; Amended in Final Order on AMD4]
STANDARD: STRUCTURAL STANDARD (SS) [OAR 345-022-0020]	
GEN-SS-01	The certificate holder shall design and construct the facility in accordance with requirements set forth by the State's Building Code Division and any other applicable codes and design procedures. Prior to operation, the certificate holder shall provide confirmation to the Department that facility design and construction satisfies the requirements set forth by the State's Building Code Division and any other applicable codes and design procedures. [Final Order on ASC, Condition V.A.3; Amended in Final Order on AMD4]
STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]	
GEN-SP-01	The certificate holder shall conduct all construction work in compliance with an Erosion and Sediment Control Plan (the "ESCP") satisfactory to the Oregon DEQ and as required under the National Pollutant Discharge Elimination System Storm Water Discharge General Permit #1200-C. The certificate holder shall include in the ESCP any procedures necessary to meet local erosion and sediment control requirements or storm water management requirements. [Final Order on ASC, Condition IV.E.1]
STANDARD: LAND USE (LU) [OAR 345-022-0030]	
GEN -LU-01	The certificate holder shall ensure that no equipment or machinery is parked or stored on any county road except while in use. [Final Order on ASC, Condition IV.D.2]
GEN -LU-02	Aboveground transmission line structures shall not occupy areas that show gross indicators of landslide activity or marginal stability. Prior to construction of aboveground transmission line structures, the certificate holder shall provide confirmation to the Department that the locations of the aboveground transmission line structures do not occupy areas that show gross indicators of landslide activity or marginal stability. The certificate holder may rely upon the analysis included in the pre-construction geotechnical investigation, as required per Condition V.A.1, to satisfy this condition. [Final Order on ASC, Condition IV.D.5; Amended in Final Order on AMD4]
STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]	

GEN -RT-01	The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder. [Final Order on ASC, Condition IV.C.3]
STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]	
GEN -FW-01	The certificate holder shall restore areas outside the permanent footprint that are disturbed, according to the methods and monitoring procedures described in the HMRP included in the Final Order on Amendment 4 as Attachment ~~B~~C and as amended from time to time. Mitigation and restoration requirements in the plan shall apply to all laydown areas and other areas of temporary disturbance, including those associated with construction of transmission lines. [Final Order on ASC, Condition IV.M.2; Amended in Final Order on AMD4]
GEN -FW-02	Permanent met towers shall not have guy wires. [Final Order on ASC, Condition IV.M.3]
GEN -FW-03	Trees in Category 3 upland tree habitat shall not be physically harmed or removed. [Final Order on ASC, Condition IV.M.6]
GEN -FW-04	The certificate holder shall design and construct all aboveground transmission line support structures following the practices suggested by the Avian Powerline Interaction Committee (APLIC 2006; APLIC 2012) and shall install anti-perching devices on transmission pole tops and cross arms where the poles are within the site or are located within one-quarter mile of any wind turbine. [Final Order on ASC, Condition IV.M.8; Amended in Final Order on AMD4]
STANDARD: SCENIC RESOURCES (SR) [OAR 345-022-0080]	
GEN -SR-01	The certificate holder shall design and construct the O&M facility to be generally consistent with the character of similar buildings used by commercial farmers or ranchers in the area and shall paint the building in a neutral color to blend with the surrounding landscape. [Final Order on ASC, Condition IV.G.2]
STANDARD: HISTORIC, CULTURAL, AND ARCHEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]	
GEN -HC-01	Prior to and during construction, the certificate holder shall ensure that construction personnel receive training from a cultural resources specialist on how to identify sensitive historic, cultural, and archaeological resources present onsite and on measures to avoid accidental damage to identified resource sites. Records of such training must be maintained onsite during construction, and made available to the Department upon request. [Final Order on ASC, Condition V.B.5; Amended in Final Order on AMD4]
GEN -HC-02	Prior to and during construction, “no access” buffers shall be identified on construction plans and temporarily demarcated in the field if work is planned within 200 feet of known cultural resources that require buffers. The facility Environmental Inspector shall monitor flagged “no access” buffers around archeological sites during construction to prevent accidental damage to cultural resources. These flags or markers shall not be moved or removed during construction activities, and construction personnel shall be advised of these restrictions. [Final Order on ASC, Condition V.B.7; Amended in Final Order on AMD4]
STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0100]	
GEN -PS-01	During construction and operation of the facility, the certificate holder shall install on-site security and shall require on-site security personnel to establish a line of communication with the Sherman County Sheriff’s Office to regularly report on the status of on-site security operations. [Final Order on ASC, Condition V.C.2]
GEN -PS-02	During construction and operation of the facility, the certificate holder shall ensure that the O&M facility and all

	service vehicles are equipped with shovels and portable fire extinguishers of a 4A5OBC or equivalent rating. [Final Order on ASC, Condition V.C.5]
STANDARD: PUBLIC HEALTH AND SAFETY STANDARDS FOR WIND ENERGY FACILITIES (PH) [OAR 345-024-0010]	
GEN -PH-01	The certificate holder shall construct all facility components in compliance with the following setback requirements a. The certificate holder shall maintain a minimum distance of 110 percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest edge of any public road right-of-way. The certificate holder shall assume a minimum right-of-way width of 60 feet. b. The certificate holder shall maintain a minimum distance of 1,320 feet, measured from the centerline of the turbine tower to the center of the nearest residence existing at the time of tower construction. c. The certificate holder shall maintain a minimum distance of 110 percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest boundary of the certificate holder's lease area. Prior to construction of turbine towers, the certificate holder shall submit to the Department final facility design and layout maps, with supporting distance tables (i.e. distance of facility component to nearest setback location – residence, right of way, etc), demonstrating compliance with the aforementioned setback requirements. [Final Order on ASC, Condition IV.I.8; Amended in Final Order on AMD4]
REQUIREMENTS UNDER COUNCIL JURRISDICTION (CJ)	
GEN -CJ-01	Prior to construction, the certificate holder shall take reasonable steps to reduce or manage human exposure to electric and magnetic fields, including, but not limited to: a) Submittal of final facility design maps to the Department demonstrating that all aboveground transmission lines would be located at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line; b) Fencing all areas near the facility substations to ensure that substation equipment is not accessible to the public; c) Submittal of evidence to the Department that a map of underground and overhead transmission lines on private property and an advisory of possible health risks has been provided to all landowners within 200-feet of the transmission line; and d) Designing and maintaining all transmission lines so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public. [Final Order on ASC, Condition VI.A.4.1; Amended in Final Order on AMD4]
MANDATORY CONDITIONS (MC)	
GEN -MC-01	OAR 345-025-0006 (1): The Council shall not change the conditions of the site certificate except as provided for in OAR Chapter 345, Division 27. [Final Order on ASC, Condition VII.1; Amended in Final Order on AMD4]
GEN -MC-02	OAR 345-025-0006 (3): The certificate holder shall design, construct, operate, and retire the facility: a) Substantially as described in the site certificate; b) In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and c) In compliance with all applicable permit requirements of other state agencies. [Final Order on ASC, Condition VII.3; Amended in Final Order on AMD4]
GEN -MC-03	OAR 345-025-0006 (4): The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate. [See Conditions (III.D.1) and (111.D.2).] [Final Order on ASC, Condition VII.4; Amended in Final Order on AMD4]

GEN -MC-04	OAR 345-025-0006 (7): The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder. [Final Order on ASC, Condition VII.7; Amended in Final Order on AMD4]
GEN -MC-05	OAR 345-025-0006 (10): The Council shall include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant. [Final Order on ASC, Condition VII.10; Amended in Final Order on AMD4]
GEN -MC-06	OAR 345-025-0006(11): Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility. [Final Order on ASC, Condition VII.11; Amended in Final Order on AMD4]
GEN -MC-07	OAR 345-025-0006 (12): The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction. [Final Order on ASC, Condition VII.12; Amended in Final Order on AMD4]
GEN -MC-08	OAR 345-025-0006 (13): The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division and to propose mitigation actions. [Final Order on ASC, Condition VII.13; Amended in Final Order on AMD4]
GEN -MC-09	OAR 345-025-0006 (14): The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. [Final Order on ASC, Condition VII.14; Amended in Final Order on AMD4]
GEN -MC-10	OAR 345-025-0006 (15): Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the Department of the proposed new owners. The requirements of OAR 345-027¬0100 apply to any transfer of ownership that requires a transfer of the site certificate. [Final Order on ASC, Condition VII.15; Amended in Final Order on AMD4]
GEN -MC-11	OAR 345-025-0006 (16): If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Office within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Department to prepare a proposed a final retirement plan for the Council's approval. Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in OAR 345-027¬0020(8) to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site

	restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [Final Order on ASC, Condition VII.16; Amended in Final Order on AMD4]
GEN -MC-12	OAR 345-025-0006 (4): a) The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the 2012 Edition of the National Electrical Safety Code approved on June 3, 2011, by the American National Standards Institute; and b) The certificate holder shall develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line. [Final Order on Amendment No. 3] [Final Order on ASC, Condition VII.17 [OAR 345-027-0023(4)]; Amended in Final Order on AMD4]
GEN -MC-13	OAR 345-025-0006 (5) -The certificate holder is authorized to construct a 230-kV transmission line anywhere within the approved corridor, subject to the conditions of the site certificate. The approved corridor includes a 5-mile segment and 700-foot segment extending the length of the 230-kV transmission line route and is 200 feet in width. [Final Order on ASC, Condition VII.18; Amended in Final Order on AMD4]
GEN -MC-14	OAR 345-026-0048: Following receipt of the site certificate or an amended site certificate, the certificate holder shall implement a plan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. As a part of the compliance plan, to verify compliance with the requirement to begin construction by the date specified in the site certificate, the certificate holder shall report promptly to the Department of Energy when construction begins. Construction is defined in OAR 345-001-0010. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before beginning construction, including work performed before the Council issued the site certificate, and shall state the cost of that work. For the purpose of this exhibit, "work on the site" means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor. The certificate holder shall document the compliance plan and maintain it for inspection by the Department or the Council. [Final Order on ASC, Condition VII.20]
GEN -MC-15	OAR 345-026-0080: The certificate holder shall report according to the following requirements: (a) General reporting obligation for energy facilities under construction or operating: (i) Within six months after beginning construction, and every six months thereafter during construction of the energy facility and related or supporting facilities, the certificate holder shall submit a semiannual construction progress report to the Department of Energy. In each construction progress report, the certificate holder shall describe any significant changes to major milestones for construction. The certificate holder shall include such information related to construction as specified in the site certificate. When the reporting date coincides, the certificate holder may include the construction progress report within the annual report described in OAR 345-026-0080. (ii) By April 30 of each year after beginning construction, the certificate holder shall submit an annual report to the Department addressing the subjects listed in OAR 345-026-0080. The Council Secretary and the certificate holder may, by mutual agreement, change the reporting date. (iii) To the extent that information required by OAR 345-026-0080 is contained in reports the certificate holder submits to other state, federal or local agencies, the certificate holder may submit excerpts from such other reports to satisfy this rule. The Council reserves the right to request full copies of such excerpted reports. (b) In the annual report, the certificate holder shall include the following information for the calendar year preceding the date of the report: (i) Facility Status: An overview of site conditions, the status of facilities under construction, and a summary of the operating experience of facilities that are in operation. In this section of the annual report, the certificate holder shall describe any unusual events, such as earthquakes, extraordinary windstorms, major accidents or the

	like that occurred during the year and that had a significant adverse impact on the facility. (ii) Reliability and Efficiency of Power Production: For electric power plants, the plant availability and capacity factors for the reporting year. The certificate holder shall describe any equipment failures or plant breakdowns that had a significant impact on those factors and shall describe any actions taken to prevent the recurrence of such problems. (iii) Status of Surety Information: Documentation demonstrating that bonds or letters of credit as described in the site certificate are in full force and effect and will remain in full force and effect for the term of the next reporting period. (iv) Monitoring Report: A list and description of all significant monitoring and mitigation activities performed during the previous year in accordance with site certificate terms and conditions, a summary of the results of those activities, and a discussion of any significant changes to any monitoring or mitigation program, including the reason for any such changes. (v) Compliance Report: A description of all instances of noncompliance with a site certificate condition. For ease of review, the certificate holder shall, in this section of the report, use numbered subparagraphs corresponding to the applicable sections of the site certificate. (vi) Facility Modification Report: A summary of changes to the facility that the certificate holder has determined do not require a site certificate amendment in accordance with OAR 345-027-0050. [Final Order on ASC, Condition VII.21; Amended in Final Order on AMD4]
GEN -MC-16	OAR 345-026-0105: The certificate holder and the Department of Energy shall exchange copies of all correspondence or summaries of correspondence related to compliance with statutes, rules and local ordinances on which the Council determined compliance, except for material withheld from public disclosure under state or federal law or under Council rules. The certificate holder may submit abstracts of reports in place of full reports; however, the certificate holder shall provide full copies of abstracted reports and any summarized correspondence at the request of the Department. [Final Order on ASC, Condition VII.22]
GEN -MC-17	OAR 345-026-0170(1): The certificate holder shall notify the Department of Energy within 72 hours of any occurrence involving the facility if: a) There is an attempt by anyone to interfere with its safe operation; b) A natural event such as an earthquake, flood, tsunami or tornado, or a human-caused event such as a fire or explosion affects or threatens to affect the public health and safety or the environment; or c) There is any fatal injury at the facility. [Final Order on ASC, Condition VII.23]

4.3 Pre-Construction (PRE) Conditions

Condition Number	Pre-Construction (PRE) Conditions
DESCRIPTION CONDITIONS (DC)	
PRE-DC-01	The certificate holder shall construct a facility substantially as described in the site certificate and may select up to 125 turbines, subject to the following restrictions and compliance with other site certificate conditions. Before beginning construction, the certificate holder shall provide to the Department a description of the turbine types selected for the facility demonstrating compliance with this condition. (a) The total number of turbines at the facility must not exceed 125 turbines. (b) The combined peak generating capacity of the facility must not exceed 400 megawatts. (c) The turbine hub height must not exceed ~~95~~ 123 meters and the maximum blade tip height must not exceed ~~158~~ 198 meters. (d) The minimum blade tip clearance must be ~~19.8~~14 meters above ground. ~~(e) The maximum combined weight of metals in the tower (including ladders and platforms) and nacelle must not exceed 336 U.S. tons per turbine.~~ [Final Order on ASC, Condition III.A.1]
PRE-DC-02	At least 45-days prior to construction, but not more than two years before beginning construction, and after considering all micrositing factors, the certificate holder shall: a) Conduct a field-based habitat survey to confirm the habitat categories of areas that will be affected by facility components, as well as the locations of any sensitive resources such as active raptor and other bird nests. The survey protocols and habitat classification categories shall be confirmed with the Department and ODFW. b) At least 45-days prior to construction, unless otherwise agreed to by the Department, submit to the Department a habitat assessment report that includes: • Habitat impact table, based upon final facility design and updated habitat survey, including permanent and temporary impacts by facility component and habitat category/type/subtype. • Maps showing: habitat categories and subtypes of all areas within the site boundary, final location of temporary and permanent facility components, and locations of any sensitive resources within areas that will be affected by facility components. If any sensitive resources are identified, they will need to be flagged as exclusion zones in accordance with Condition IV.M.10. If necessary, sensitive resource information shall be submitted to the Department in hard copy only and provided under request for information to be treated as confidential. The field survey and information in the habitat assessment report will be used to finalize the HRMP for Department and ODFW approval (Condition PRE-TL). The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat. [Final Order on ASC, Condition III.C.1; Amended in Final Order on AMD4]
PRE-DC-03	Before beginning construction, the certificate holder shall notify the Department in advance of any work on the site that does not meet the definition of "construction" in ORS 469.300(6), excluding surveying, exploration or other activities to define or characterize the site, and shall provide to the Department a description of the work and evidence that its value is less than $250,000. [Final Order on ASC, Condition III.D.3]
STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]	
PRE-OE-01	Before beginning construction, the certificate holder shall notify the Department of the identity and qualifications of the major design, engineering and construction contractor(s) for the facility. The certificate

	holder shall select contractors that have substantial experience in the design, engineering and construction of similar facilities. Within three business days, the certificate holder shall report to the Department any change of major contractors. [Final Order on ASC, Condition IV.B.2; Amended in Final Order on AMD4]
STANDARD: STRUCTURAL STANDARD (SS) [OAR 345-022-0020]	
PRE-SS-01	Prior to construction, the certificate holder shall: (a) Submit a draft site-specific geotechnical investigation report to the Department and Oregon Department of Geology & Mineral Industries ("DOGAMI"), for review. The investigation and report shall conform to the Oregon State Board of Geologist Examiners guidelines titled "Guidelines for Engineering Geologic Reports" and "Guidelines for Site-Specific Seismic Hazard Reports for Essential and Hazardous Facilities and Major and Special-Occupancy Structures in Oregon." The site-specific geotechnical investigation shall address native soil and bedrock stability concerns at cuts, fills and culvert crossings, and shall include design and construction recommendations to minimize the potential for destabilizing marginally stable slopes and the potential for stream erosion. (b) The Department shall review and concur with the report, in consultation with DOGAMI, prior to construction. [Final Order on ASC, Condition V.A.1; Amended in Final Order on AMD4]
PRE-SS-02	The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by non-seismic hazards. As used in this condition, "non-seismic hazards" include settlement, landslides, flooding and erosion. [Final Order on ASC, Condition V.A.4]
PRE-SS-03	The certificate holder shall ensure that wind turbine corridors and major structures are constructed with sufficient setbacks from all steeper slopes to minimize the potential for creating unstable or marginally stable conditions. [Final Order on ASC, Condition V.A.5]
STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]	
PRE-SP-01	Prior to construction, the certificate holder shall develop a plan to control the introduction and spread of noxious weeds during facility construction and operation. The plan shall be developed in consultation with the Department, the Sherman County Weed Control manager, and ODFW. The plan shall be approved by the Department prior to construction. The plan shall focus on weed species listed on the Sherman County noxious weed list, but shall also include preventative measures, based on consultation with the Sherman County Weed Control Manager, to combat noxious weeds of concern in the area. [Final Order on ASC, Condition IV.E.4; Amended in Final Order on AMD3, AMD4]
STANDARD: LAND USE (LU) [OAR 345-022-0030]	
PRE-LU-01	Prior to construction, the certificate holder shall provide to the Department, Sherman County Planning Department, and Sherman County Transportation Department, as applicable, road design plans demonstrating that: (a) New or substantially modified public roads meet or exceed road standards for the road classifications in the County's Transportation System Plan and Zoning Ordinance. (b) Private access connection and driveway design of the O&M facility and substation comply with applicable requirements established in Sherman County Zoning Ordinance Section 4.14.4. [Final Order on ASC, Condition IV.D.1; Amended in Final Order on AMD4]
PRE-LU-02	The site certificate holder shall, in consultation with affected landowners, design and construct private access roads to minimize the division of existing farm units. [Final Order on ASC, Condition IV.D.3]

PRE-LU-03	The certificate holder shall not locate any aboveground facility structure (including wind turbines, O&M building, substation and met towers, but not including aboveground power collection and transmission lines and poles and junction boxes) within 50 feet from any external property line or within 50 feet from the right of way of any arterial or major collector road. Prior to construction of any aboveground facility structure, the certificate holder shall submit to the Department maps and distance tables (i.e. distance from nearest facility component to setback location), based on final facility design, demonstrating that the aboveground facility structures are not located within 50 feet from any external property line or within 50 feet from the right of way of any arterial or major collector road. [Final Order on ASC, Condition IV.D.4; Amended in Final Order on AMD4]
PRE-LU-04	Collector lines in the Natural Hazards Combining Zone ("NH zone") shall be placed under ground except in instances where it is more practical to install aboveground power collection lines and provided that the aboveground power collection lines will be designed to minimize slope stability and other NH zone hazards. The site-specific geotechnical investigation required prior to construction shall address native soil and bedrock stability concerns at cuts, fills and culvert crossings, and shall include design and construction recommendations to minimize the potential for destabilizing marginally stable slopes and the potential for stream erosion. [Final Order on ASC, Condition IV.D.6]
PRE-LU-05	Prior to construction, the certificate holder shall submit to the Department evidence that the Sherman County Planning Department has received and concurred with the SCZO Article 3.7.5(e) Development Proposal, required for uses within a NH zone. [Final Order on ASC, Condition IV.D.7; Amended in Final Order on AMD4]
PRE-LU-06	Construction staging areas shall be limited to areas outside the Natural Hazards Combining Zone. Prior to construction of staging areas, the certificate holder shall provide construction related maps demonstrating that the staging areas are located outside the Natural Hazards Combining Zone ("NH Zone"). [Final Order on ASC, Condition IV.D.8; Amended in Final Order on AMD4]
PRE-LU-07	The certificate holder shall stabilize all roads or streets in the Natural Hazards Combining by planking, gravel or pavement as deemed necessary, and shall build roadways without installation of excessive fill, diversion of water or excessive cuts unless the site investigation determines that such conditions will not be detrimental to the area or create unwarranted maintenance problems or additional hazards. [Final Order on ASC, Condition IV.D.9; Amended in Final Order on AMD4]
PRE-LU-08	Prior to construction, the certificate holder shall submit to the Department final facility design maps presenting the location of temporary construction laydown and staging areas, including those associated with construction of transmission lines or placement of conductors on third-party transmission lines. The facility shall be designed to minimize disturbance with farming practices and, wherever feasible, as determined in consultation with affected landowners, shall place turbines and transmission interconnection lines along the margins of cultivated areas to reduce the potential for conflict with farm operations. The certificate holder shall place aboveground transmission and collector lines and poles and junction boxes along property lines and public road rights-of-way to the extent practicable. [Final Order on ASC, Condition IV.D.10; Amended in Final Order on AMD4]
PRE-LU-09	Prior to construction, the certificate holder shall submit to the Department evidence that a Farm Management Easement covering the properties on which the certificate holder locates wind power generation facility components has been recorded in the real property records of Sherman County and the Sherman County Planning Director. [Final Order on ASC, Condition IV.D.13; Amended in Final Order on AMD4]
PRE-LU-10	The certificate holder shall remove from Special Farm Assessment the portions of parcels on which facilities are located and shall pay all property taxes due and payable after the Special Farm Assessment is removed from such properties. [Final Order on ASC, Condition IV.D.14]

PRE-LU-11	Prior to start of construction, the certificate holder shall, in consultation with Sherman County, assign a 9-1-1 5-digit rural address to every tower road that intersects a State or county road. The county will provide and install the signage for these addresses. [Final Order on ASC, Condition IV.D.18]
PRE-LU-12	The certificate holder shall: (a) Prior to beginning construction, provide evidence to the Department that both a pre-construction road condition inspection and consultation with the Sherman County Road Department has occurred. Through the consultation, the certificate holder shall, at a minimum, obtain confirmation of the following or provide the following documentation to the Sherman County Road Department: (1) Final facility design maps identifying the route or routes for the transport of wind turbine construction material (including water, aggregate, concrete, machinery and tower pieces) and facility access for construction personnel; and, concurrence on the pre-construction conditions of any routes using or crossing county roads. (2) A written summary of possible anticipated road damage to the designated route or routes, and an estimate of the cost of repair to the designated route or routes; (3) Communication protocol for reporting to the Sherman County Road Department unusual damage or wear identified during facility construction and determined to be a result of facility construction vehicle use. (4) Establish and maintain an escrow account for so long as construction is ongoing, funded in an amount equal to the estimated cost to repair the designated route or routes consistent with the estimate provided in (b); and (5) Conduct an inspection of the roads along the designated route or routes after construction with a representative of the Sherman County Road Department and an independent third party with the required expertise to inspect and evaluate paved and graveled roads. In the event a dispute arises, the third party shall be the final arbiter. The cost of the hiring of the third party shall be borne by the certificate holder. (b) Following completion of construction and prior to operation, conduct the inspection of the roads along the designated route or routes with a representative of the Sherman County Road Department and an independent third party, as specified in sub(a)(5) of this condition. [Final Order on ASC, Condition IV.D.19; Amended in Final Order on AMD4]
PRE-LU-13	Before beginning construction of facility access roads, the certificate holder shall confer with the Sherman County Road Master regarding any utility permits needed for county road right-of-ways and obtain permits for construction of all approach roads onto county roads. [Final Order on ASC, Condition IV.D.20; Amended in Final Order on AMD4]
PRE-LU-14	Prior to construction, Certificate Holder shall demonstrate that the final location of turbines within the micrositing corridors approved by the Council will satisfy setback requirements prescribed by Section 4 of the Sherman County Wind Setback Ordinance (Ordinance No. 39-2007) unless the Council has approved a variance to such setback for the turbine or the Certificate Holder has negotiated a setback agreement with the affected adjacent property owner or wind project developer. [Amendment #1] [Final Order on Amendment #1, Condition IV.D.22; Amended in Final Order on AMD1, AMD4]
STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]	
PRE-RT-01	Before beginning construction, the certificate holder shall submit to the State through the Council a bond or letter of credit in the amount described herein naming the State, acting by and through the Council, as beneficiary or payee. If the certificate holder elects to build the facility in a single phase, the initial bond or letter of credit amount is $14,425,000 (in 2008 dollars), adjusted to the date of issuance as described in (b), or the amount determined as described in (a). If the certificate holder elects to build the facility in more than one phase, the amount of the initial bond or letter of credit for each phase of construction shall be the amount determined as described in (a). The certificate holder shall adjust the amount of each bond or letter of credit on an annual basis thereafter as described in (b). (a) The certificate holder may adjust the amount of each bond or letter of credit based on the final design configuration of the facility by applying the unit costs and general costs illustrated in Table IV.C.1 of

	the Final Order on the Application to the final design and calculating the financial assurance amount as described in that order, adjusted to the date of issuance as described in (b) and subject to approval by the Department. (b) The certificate holder shall adjust the amount of each bond or letter of credit, using the following calculation and subject to approval by the Department: (i) Adjust the subtotal component of the bond or letter of credit amount (expressed in 2008 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency (the "Index") and using the annual average index value for 2008 dollars and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the Index is no longer published, the Council shall select a comparable calculation to adjust 2008 dollars to present value. (ii) Calculate the adjusted performance bond amount as 1 percent of the new subtotal (i). (iii) Add the subtotal (i) to the adjusted performance bond amount (ii) for the adjusted gross cost. (iv) Calculate the adjusted administration and project management costs as 10 percent of the adjusted gross cost (iii). (v) Calculate the adjusted future developments contingency as 10 percent of the adjusted gross cost (iii). (vi) Add the adjusted gross cost (iii) to the sum of adjusted administration and project management costs (iv) and the adjusted future developments contingency (v) and round the resulting total to the nearest $1,000 to determine the adjusted financial assurance amount. (c) The certificate holder shall use a form of bond or letter of credit approved by the Council. (d) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council. (e) The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under Condition (VII.21.a.ii). (f) The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site. [Final Order on ASC, Condition IV.C.4; Amended in Final Order on Amendment 3]
STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]	
PRE-FW-01	Prior to construction, the certificate holder shall finalize and implement the Habitat Mitigation and Revegetation Plan (HMRP), included as Attachment C to the Final Order on Amendment, as approved by the Department in consultation with ODFW and as amended from time to time. Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments, and the Council retains the authority to approve, reject, or modify any amendments of the HMRP agreed to by the Department. [Final Order on Amendment 4] The finalized HMRP shall incorporate the maps, habitat classifications, and anticipated temporary and permanent habitat impact assessment completed as per site certificate Condition III.C.1. Prior to start of construction, the certificate holder shall acquire the legal right to create, enhance, maintain and protect a habitat mitigation area so long as the site certificate is in effect by means of outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the Department. The nominal lease term shall be at least 30 years, with an option to extend if the facility continues operations past year 30. The mitigation area shall be as shown in figures 1, 2 and 3 of Attachment B to the Final Order. Any different mitigation area shall require prior approval of the Department in consultation with ODFW. If, prior to the achievement of success criteria for revegetation and restoration of temporarily impacted areas as provided in the final HMRP, any area temporarily disturbed during facility construction is converted for some other use such that the Department, in consultation with ODFW, determines the success criteria cannot be achieved, or the Department otherwise determines, in consultation with ODFW, that the success criteria cannot be achieved, the Department shall amend the HMRP using the process described above to require additional

	mitigation consistent with the habitat classifications and mitigation requirements for other areas permanently impacted by the facility. [Final Order on ASC, Condition IV.M.1; Amended in Final Order on AMD3, AMD4]
PRE-FW-02	The certificate holder shall survey the status of known raptor nests within 0.5 miles before ground-disturbing activities begin. If an active nest is found, and ground-disturbing activities are scheduled to begin before the end of the sensitive nesting and breeding season (mid-April to mid-August), the certificate holder will not engage in ground-disturbing activities within a 0.25-mile buffer around the nest until the nest fledges young or the nest fails, unless ODFW approves an alternative plan. If ground-disturbing construction activities continue into the sensitive nesting and breeding season for the following year, the certificate holder will not engage in ground-disturbing activities within the 0.25-mile buffer if the nest site is found to be active until the nest fledges young or the nest fails, unless ODFW approves an alternate plan. [Final Order on ASC, Condition IV.M.4]
PRE-FW-03	Prior to construction, the certificate holder will survey the status of known loggerhead shrikes nests and visit sites where non-nesting loggerhead shrikes were observed in order to determine old and new nest sites. The certificate holder shall avoid all construction activities within a 492-foot (150-meter) buffer from active loggerhead shrikes nests. [Final Order on ASC, Condition IV.M.5; Amended in Final Order on AMD4]
PRE-FW-04	Prior to construction, the certificate holder shall submit to the Department final facility design maps confirming that turbines and other facility components will be located within the 900-foot corridors shown on Figures P-1 through P-10 of the Application for a Site Certificate and August 2008 supplement. The certificate holder shall not construct any facility components within areas of Category 1 or Category 2 habitat and shall avoid temporary disturbance of Category 1 or Category 2 habitat, except for those acreages allowed in Table 1 in the Final Order for RFA No. 3. The certificate holder may rely upon the maps and data submitted per Condition IV.M.1 to satisfy this condition. [Final Order on ASC, Condition IV.M.9; Amended in Final Order on AMD3, AMD4]
PRE-FW-05	Prior to construction, the certificate holder shall: a. Conduct one (1) year of raptor nest surveys. The raptor nest surveys shall be conducted following the instructions set forth in the Raptor Nest Survey Protocol for Golden Hills Wind Project included as Attachment D to the Fourth Amended Site Certificate. b. At least 45-days prior to construction, the certificate holder shall provide a written report on the raptor nest surveys to the Department and ODFW. If the surveys identify the presence of raptor nests within the survey area, the certificate holder shall implement appropriate measures, consistent with the Wildlife Monitoring and Mitigation Plan, and as approved by the Department in consultation with ODFW, to assure that design, construction, and operation of the facility are consistent with the Fish and Wildlife Habitat standard. [Final Order on ASC, Condition IV.M.11; Amended in Final Order on AMD3, AMD4]
STANDARD: THREATENED AND ENDANGERED SPECIES (TE) [OAR 345-022-0070]	
PRE-TE-01	The certificate holder shall report the results of the database review and consultation to the Department and to ODFW and, if there have been new documentations of nesting bald eagles or peregrine falcons within 2 miles of the facility, the certificate holder shall implement appropriate measures to protect the species from adverse impact, as approved by the Department and ODFW. [Final Order on ASC, Condition IV.L.1]
PRE-TE-02	The certificate holder shall implement measures to mitigate impacts to sensitive wildlife habitat during construction including, but not limited to, the following: (a) Preparing maps to show sensitive areas, such as nesting or denning areas for sensitive wildlife species, that are off limits to construction personnel;

	(b) Ensuring that a qualified person instructs construction personnel to be aware of wildlife in the area and to take precautions to avoid injuring or destroying wildlife or significant wildlife habitat; and (c) Avoiding unnecessary road construction, temporary disturbance and vehicle use. [Final Order on ASC, Condition IV.L.2]
PRE-TE-03	Prior to the beginning of construction but no more than two years prior to the beginning of construction of the facility, the certificate holder shall: a. Submit protocol for field surveys for threatened and endangered species to the Department for review and approval, in consultation with ODFW. The survey protocol shall be based on the protocol included on ASC Exhibit P, Attachment P-1, and shall be updated based on consultation with ODFW. b. Perform new field surveys for threatened and endangered species following the survey protocol as approved per sub(a). c. The certificate holder shall report the results of the field surveys to the Department and ODFW. If the surveys identify the presence of threatened or endangered species within the site boundary, the certificate holder shall implement appropriate measures to avoid a significant reduction in the likelihood of survival or recovery of the species, as approved by the Department in consultation with ODFW. [Final Order on Amendment 2, Condition IV.L.3; Amended in Final Order on AMD3, AMD4]
STANDARD: SCENIC RESOURCES (SR) [OAR 345-022-0080]	
PRE-SR-01	To reduce the visual impact of the facility, the certificate holder shall: a. Mount nacelles on smooth steel structures painted uniformly in a neutral color to blend with the surrounding landscape; b. Paint substation structures in a neutral color to blend with the surrounding landscape; c. Not allow any advertising to be used on any part of the facility; d. Use only those signs required for facility safety or required by law, except that the certificate holder may erect a sign to identify the facility; and e. Maintain any signs allowed under this condition in good repair. [Final Order on ASC, Condition IV.G.1]
STANDARD: HISTORIC, CULTURAL, AND ARCHEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]	
PRE-HC-01	The certificate holder shall design the facility to avoid impacts to sites 35SH217, 35SH220, GH site 6 (above ground resource), 35SH219 and GH Isolate 6. [Final Order on ASC, Condition V.B.1]
PRE-HC-02	At least 45 days prior to construction, the certificate holder shall prepare a Cultural Resource Management Plan (the "CRMP") and shall submit the CRMP to the Department and State Historic Preservation Office (the "SHPO") for review. The Department must approve the CRMP, in consultation with SHPO, prior to construction. The CRMP shall at a minimum include: (a) Specific protocols and procedures for protecting known cultural resources including imposing a 30-meter buffer zone and designating as ~~a~~ "no-work zones", around sites 35SH215, 35SH216, 35SH221, and to the sites identified in Condition V.B.1: 35SH217, 35SH220, GH site 6 (above ground resource), 35SH219 and GH Isolate 6. Both the buffer and no work zones apply to cultural resources, including any additional archeological sites and possible human remains accidentally discovered during construction. The CRMP shall identify how protocols will follow State laws and rules at ORS 358.905-961, ORS 390.235, OAR 736-051-0090 and ORS 97.740-760 as in effect on the date of this site certificate,, The certificate holder shall submit the CRMP to the State Historic Preservation Office (the "SHPO") for concurrence and shall provide to the Department documentation confirming SHPO concurrence prior to start of construction.

	(b) Protocols and procedures for responding to accidental discovery of cultural resources during operations and ongoing maintenance activities. [Final Order on ASC, Condition V.B.2; Amended in Final Order on AMD4]
PRE-HC-03	Before beginning construction of any phase of the facility, the certificate holder shall provide to the Department a map showing the final design locations of all components of that phase of the facility and areas that would be temporarily disturbed during construction, and also showing the areas surveyed by Tetra Tech in preparing the Archeological Inventory for Golden Hills Wind Energy Development included in the Application for a Site Certificate as Attachment S-1. If there are any additional areas where ground-disturbing activities will occur that were not part of the original facility area, the certificate holder shall notify the Department and SHPO to determine whether additional surveys or avoidance measures are necessary. [Final Order on ASC, Condition V.B.4; Amended in Final Order on AMD4]
STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0100]	
PRE-PS-01	Before beginning construction the certificate holder shall develop and implement a fire safety and response plan for both construction and operation phases in consultation with the Oregon State Fire Marshal, the Sherman County Emergency Services, North Sherman Fire and Rescue, Moro Rural Fire Protection District and other first-response agencies the facility will rely upon for fire protection services. A copy of the plan must be provided to the Department at least 30 days before beginning construction. The plan must be updated at least annually by the agencies identified in (a) below and a copy provided to the agencies identified in (a), (b), and (c) and to the Department within 30 days of the update. The fire safety and response plan shall address, at a minimum, the following: (a) Identification of agencies that participated in developing the plan; (b) Identification of agencies that are designated as first response agencies or are included in any mutual aid agreements with the facility; (c) A list of any other mutual aid agreements or fire protection associations in the vicinity of the facility; (d) Complete contact information for each agency listed in (a), (b), and (c) above, including at least two facility contacts available on a 24-hour basis; (e) Communication protocols for both routine and emergency events and the incident command system to be used in the event a fire response by multiple agencies is needed at the facility; (f) Access and fire response at the facility site during construction and operations. Fire response plans during construction shall address regular and frequent communication amongst the agencies regarding the number and location of construction sites within the site boundary, access roads that are completed and those still under construction, location of water receptacles, and a temporary signage system until permanent addresses and signs are in place; (g) The minimum designated time period of the fire season (i.e., May 1 through October 15) and the criteria to modify the designated fire season to respond to changing conditions; (h) The number, size, and location of onsite water receptacles to be staged around the facility site for firefighting purposes during the fire season; and (i) Training needs (both for facility personnel and for first responders). (j) Copies of mutual aid, fire protection association, or other agreements entered into concerning fire protection at the facility site. [Final Order on ASC, Condition V.C.3; Amended in Final Order on AMD2]
PRE-PS-02	Before beginning construction of the facility, the certificate holder shall develop, in consultation with Sherman County Road Department, a construction-phase traffic management plan.. The certificate holder shall submit to the Department a copy of the final construction-phase traffic management plan. [Final Order on ASC, Condition V.C.10; Amended in Final Order on AMD4]
STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]	
PRE-WM-01	Prior to construction, the certificate holder shall submit to the Department a Construction Waste Management

	Plan that includes, but is not limited to, the following measures: (a) Recycling steel and other metal scrap; (b) Recycling wood waste; (c) Recycling packaging wastes, such as paper and cardboard; (d) Collecting non-recyclable waste for transport to a landfill; and (e) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent materials, lubricant and cleaning solution containers, mercury-containing lights, and lead-acid and nickel-cadmium batteries, for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes. The requirements of the plan shall be implemented and adhered to during construction activities. [Final Order on ASC, Condition V.D.1; Amended in Final Order on AMD4]
STANDARD: PUBLIC HEALTH AND SAFETY STANDARDS FOR WIND ENERGY FACILITIES (PH) [OAR 345-024-0010]	
PRE-PH-01	The certificate holder shall: a) During facility construction, install self-monitoring devices on each turbine, connected to a fault annunciation panel or SCADA system at the O&M facility to alert operators to potentially dangerous conditions. The certificate holder shall equip each turbine with vibration-sensing equipment that will shut down the turbine in the event of abnormal levels of vibration. b) During facility operation, maintain the self-monitoring devices and vibration-sensing equipment on each turbine, connected to the fault annunciation panel or SCADA system at the O&M facility. [Final Order on ASC, Condition IV.I.2; Amended in Final Order on AMD4]
PRE-PH-02	Prior to construction, the certificate holder shall provide evidence to the Department demonstrating that the facility substation~~s~~ will be enclosed with appropriate fencing and locked gates. [Final Order on ASC, Condition IV.I.6; Amended in Final Order on AMD4]
PRE-PH-03	Before beginning construction, the certificate holder shall submit to the FAA and the Oregon Department of Aviation ("ODA") a Notice of Proposed Construction or Alteration identifying the proposed final locations of the turbines and related or supporting facilities and shall provide a copy of this notice to the Department. The certificate holder shall notify the Department of the FAA's and ODA's responses as soon as they have been received. [Final Order on ASC, Condition IV.I.7]
STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (ST) [OAR 345-024-0090]	
PRE-ST-01	The certificate holder shall install the underground segments of the 34.5-kV collector system at a minimum depth of three feet. [Final Order on ASC, Condition IV.K.1]
REQUIREMENTS UNDER COUNCIL JURRISDICTION (CJ)	
PRE-CJ-01	The certificate holder shall submit, for Department approval prior to construction, a complete new noise analysis for the facility based on the final design layout and generate a new table listing each noise-sensitive property, as defined in OAR 340-035-0015(38), and the predicted maximum hourly L50 noise level at each noise-sensitive property. In addition, the certificate holder shall provide the predicted sound levels contributed by each turbine at each noise-sensitive property that does not provide a waiver of the ambient noise rule. The certificate holder shall perform the analysis using the CADNA/A by DataKustik GmbH of Munich, Germany, and shall base the analysis on the final facility design including final choice of turbine and location of all facility components. The analysis shall demonstrate to the satisfaction of the Department that each of the following requirements have been met: (a) For any noise-sensitive property, the certificate holder shall identify the final design locations of all turbines to be built and perform a noise analysis demonstrating, in accordance with OAR 340-035-0035(1)(b)(B)(iii)(IV), that the total hourly L50 noise level generated by the facility would not

	exceed 50 dBA at the appropriate measurement point. The certificate holder shall assume the following input parameters: • The maximum sound power level warranted by the manufacturer or confirmed by other means acceptable to the Department; • The exact locations of the proposed turbines; • Attenuation of sound due to absorption to be calculated using a methodology satisfactory to the Department; • The use of 50° F temperature and 70 percent relative humidity in the analysis; • A 2dB safety margin shall be added to turbine sound power levels; • No credit for shielding of any residence by terrain; and • All receptors treated as simultaneously downwind of all turbines. (b) If the hourly L50 noise levels caused by the facility at any noise-sensitive property would increase the ambient noise level at any noise-sensitive property over the full set of wind conditions ranging from cut in to full load by more than 10 dBA, the certificate holder shall obtain a legally effective easement or real covenant from that property owner pursuant to which the owner of the property authorizes the certificate holder's operation of the facility to increase ambient statistical noise levels L50 and L50 by more than 10 dBA at the appropriate measurement point. A legally effective easement or real covenant shall (i) include a legal description of the burdened property (the noise-sensitive property); (ii) be recorded in the real property records of the county; (iii) expressly benefit the certificate holder; (iv) expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and (v) not be subject to revocation without the certificate holder's written approval. (c) If, for any noise-sensitive property where the hourly L50 noise levels caused by the facility would increase by more than 10 dBA above the ambient level over the full range of wind conditions measured for that property and where the certificate holder has not obtained a legally effective easement or real covenant as described in (b), the certificate holder shall identify measures to reduce noise at that property either by eliminating or moving turbines, and shall perform the noise analysis again to demonstrate, in accordance with OAR 340-035-0035(1)(b)(B)(iii)(IV), that the total noise generated by the facility would meet the ambient noise degradation test at the appropriate measurement point at that noise-sensitive property. The certificate holder shall obtain Department concurrence of the new analysis prior to start of construction. [Final Order on ASC, Condition VI.A.1.2]
PRE-CJ-02	Prior to construction, the certificate holder shall: 1) Conduct an updated wetlands and waters delineation survey of all areas to be temporarily or permanently impacted by the facility based on final layout and design. 2) Submit the delineation survey report to the department and Oregon Department of State Lands and receive concurrence of the report from DSL. 3) Confirm from the results of the delineation survey and DSL concurrence that the facility will not need a removal-fill permit. 4) If a removal-fill permit is necessary, file a site certificate amendment request to review and process the permit request. (Final Order on Amendment No. 3, Removal-Fill Condition 1)
PRE-CJ-03	Prior to construction, the certificate holder shall prepare detailed design drawings and specifications for 230 kV, and 34.5 kV transmission lines, in consultation with the Utility Safety and Reliability Section of the Oregon Public Utility Commission to ensure that the designs and specifications are consistent with applicable codes and standards. [Final Order on ASC, Condition VI.A.4.2; Amended in Final Order on AMD4]
PRE-CJ-04	Prior to start of construction, the certificate holder shall submit to ODOE a procedure for coordinating, with all

	affected local electric service utilities and transmission service providers, crane movements under electric transmission lines during construction and maintenance of the facility. The procedure shall address subjects including, but not limited to, minimum advance notification prior to any crane movement under an electric transmission or distribution line, protocols for determining adequate line clearance and specific crane path locations. With the procedure, the certificate holder shall provide evidence of concurrence by each affected electric service utility or transmission service provider. The certificate holder shall ensure that all employees, construction contractors and subcontractors adhere to this procedure throughout construction and maintenance of the facility. [Final Order on ASC, Condition VI.A.4.3]
MANDATORY CONDITIONS (MC)	
PRE-MC-01	OAR 345-025-0006 (5): Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345¬001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, "construction rights" means the legal right to engage in construction activities. For wind energy facilities, transmission lines or pipelines, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and: a) The certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of the transmission line or pipeline occurs during the certificate holder's negotiations to acquire construction rights on another part of the site; or b) The certificate holder would construct and operate part of a wind energy facility on that part of the site even if other parts of the facility were modified by amendment of the site certificate or were not built. [Final Order on ASC, Condition VII.5; Amended in Final Order on AMD4]
PRE-MC-02	OAR 345-025-0006 (8): Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility. [See Condition IV.C.4.] [Final Order on ASC, Condition VII.8; Amended in Final Order on AMD4]

4.4 Construction (CON) Conditions

<table>
<tr><th>Condition Number</th><th>Pre-Construction (PRE) Conditions</th></tr>
<tr><td colspan="2">STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]</td></tr>
<tr><td colspan="2">STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]</td></tr>
<tr><td>CON-SP-01</td><td>During construction, the certificate holder shall salvage approximately three feet of topsoil and stockpile this topsoil in windrows, wherever temporary impacts will occur in cultivated areas. The certificate holder shall protect the windrows with plastic sheeting or mulch. Upon removal of the temporary features, the certificate holder shall cultivate the subsoil to a depth of at least 12 inches (except where bedrock prohibits achieving this depth) and then redistribute the salvaged topsoil to match adjacent grades.
[Final Order on ASC, Condition IV.E.2; Amended in Final Order on AMD4]</td></tr>
<tr><td>CON-SP-02</td><td>During construction, the certificate holder shall ensure that the wash down of concrete trucks occurs only at a contractor-owned batch plant or at tower foundation locations. If such wash down occurs at tower foundation locations, then the certificate holder shall ensure that wash down wastewater does not run off the construction site into otherwise undisturbed areas and that the wastewater is disposed of on backfill piles and buried underground with the backfill over the tower foundation.
[Final Order on ASC, Condition IV.E.5]</td></tr>
<tr><td colspan="2">STANDARD: LAND USE (LU) [OAR 345-022-0030]</td></tr>
<tr><td>CON-LU-01</td><td>During construction, the certificate holder shall provide access across construction trenches to fields within the facility site and otherwise provide adequate and timely access to properties during critical periods in the farming cycle, such as harvest, as necessary and as determined feasible by the certificate holder and landowner.
[Final Order on ASC, Condition IV.D.12; Amended in Final Order on AMD4]</td></tr>
<tr><td colspan="2">STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]</td></tr>
<tr><td>CON-FW-01</td><td>During construction, the certificate holder shall protect the area within a 1300-foot buffer around any active nests of the following species during the sensitive period, as provided in this condition:
<table>
<tr><th>Species</th><th>Sensitive Period</th><th>Early Release Date</th></tr>
<tr><td>Swainson’s hawk</td><td>April 1 to August 15</td><td>May 31</td></tr>
<tr><td>Golden eagle</td><td>February 1 to August 31</td><td>May 31</td></tr>
<tr><td>Ferruginous hawk</td><td>March 15 to August 15</td><td>May 31</td></tr>
<tr><td>Burrowing owl</td><td>April 1 to August 15</td><td>July 15</td></tr>
</table>
The 1300-foot buffer may be reduced, with Department approval, if there is an adequate physical barrier between the nest site and the construction impacts such that a 1300-foot buffer proves to be excessive.
During the year in which construction of any phase occurs, the certificate holder shall use a protocol approved by ODFW to determine whether there are any active nests of these species within a half-mile of any areas that would be disturbed during construction. If a nest is occupied by any of these species after the beginning of the sensitive period, the certificate holder shall not engage in high-impact construction activities (activities that involve blasting, grading or other major ground disturbance) or allow high levels of construction traffic within 1300 feet of the nest site, or such lesser distance as may be approved by the Department in the event there is an adequate physical barrier between the nest site and the construction impacts.
In addition, the certificate holder shall flag the boundaries of the 1300-foot buffer area, or such lesser distance as may be approved by the Department in the event there is an adequate physical barrier between the nest site and the construction impacts, and shall instruct construction personnel to avoid any unnecessary activity within the buffer area. The certificate holder shall direct a qualified independent third-party biological monitor, as</td></tr>
</table>

	approved by the Department, to observe the active nest sites during the sensitive period for signs of disturbance and to notify the Department of any noncompliance with this condition. If the monitor observes nest site abandonment or other adverse impact to nesting activity, the certificate holder shall implement appropriate mitigation, in consultation with ODFW and subject to the approval of the Department, unless the adverse impact is clearly shown to have a cause other than construction activity. The certificate holder may begin or resume high-impact construction activities before the ending day of the sensitive period if any known nest site is not occupied by the early release date. If a nest site is occupied, then the certificate holder may begin or resume high-impact construction before the ending day of the sensitive period with the approval of ODFW, but after the young are fledged. The certificate holder shall use a protocol approved by ODFW to determine when the young are fledged (meaning the young are independent of the core nest site). [Final Order on ASC, Condition IV.M.10]
STANDARD: HISTORIC, CULTURAL, AND ARCHEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]	
CON-HC-01	During construction, if any cultural resources are discovered, all work at that location shall cease immediately and the certificate holder shall notify the Department and SHPO to determine whether it is necessary to have an archeologist travel to the worksite and assess the discovery or monitor construction activities. [Final Order on ASC, Condition V.B.6; Amended in Final Order on AMD4]
CON-HC-02	During construction, the certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archaeological or cultural resources are found during construction of the facility until a qualified archaeologist can evaluate the significance of the find. No construction personnel will be allowed in the discovery area except for facility management in consultation with the SHPO. The certificate holder shall notify the Department and the SHPO of the find. If the SHPO determines that the resource is significant, the certificate holder shall make recommendations to the Council for mitigation, including avoidance or data recovery, in consultation with the Department, the SHPO, the appropriate Oregon tribes and other appropriate parties. The certificate holder shall not restart work in the affected area until the certificate holder has demonstrated to the Department that it has complied with State archaeological protection and archaeological permit laws in coordination with the SHPO. [Final Order on ASC, Condition V.B.8; Amended in Final Order on AMD4]
CON-HC-03	During construction, the certificate holder shall ensure that construction personnel are instructed on the location of the mapped alignment of the Oregon Trail, per Condition V.B.5. If any intact physical evidence of the trail is discovered that was not previously identified, the certificate holder shall avoid any disturbance to the intact segments by redesign, reengineering or restricting the area of construction activity. The certificate holder shall promptly notify the Department and the SHPO of the discovery. The certificate holder shall consult with the Department and with the SHPO to determine appropriate mitigation measures. [Final Order on ASC, Condition V.B.9; Amended in Final Order on AMD4]
CON-HC-04	Upon completion of construction, the certificate holder shall consult with the Oregon Historic Trails Advisory Council regarding the appropriate content of an interpretive sign. After such consultation, the certificate holder shall place in a publicly accessible location a sign giving notice of the historic background of the facility site and surrounding areas. [Final Order on ASC, Condition V.B.10]
STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0100]	
CON-PS-01	During construction of the facility, the certificate holder shall ensure that construction vehicles and equipment are operated on graveled areas to the extent possible and that open flames, such as cutting torches, are kept away from grassy areas. [Final Order on ASC, Condition V.C.4]
CON-PS-02	During construction of the facility, the certificate holder shall maintain a water truck on site to respond to potential fire incidents. [Final Order on ASC, Condition V.C.6]

CON-PS-03	The certificate holder shall construct turbines on concrete pads with a minimum of 10 feet of nonflammable and non-erosive ground cover on all sides. The certificate holder shall cover turbine pad areas with nonflammable, non-erosive material immediately following exposure during construction and shall maintain the pad area covering during operation of the facility. [Final Order on ASC, Condition V.C.7]
CON-PS-04	During construction of the facility, the certificate holder shall implement measures to reduce traffic impacts, including: (a) Providing notice to all affected local jurisdictions in advance of deliveries; (b) Providing notice to adjacent landowners and residents of Biggs Junction in advance of deliveries; and (c) Requiring flaggers to be at appropriate locations at appropriate times during construction to direct traffic and reduce accident risks. [Final Order on ASC, Condition V.C.11]
STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]	
CON-WM-01	During construction, the certificate holder shall provide portable toilets for on-site sewage handling and shall ensure that they are pumped and cleaned regularly by a licensed contractor. [Final Order on ASC, Condition V.D.3]
STANDARD: PUBLIC HEALTH AND SAFETY STANDARDS FOR WIND ENERGY FACILITIES (PH) [OAR 345-024-0010]	
CON-PH-01	The certificate holder shall follow manufacturer's recommended handling instructions and procedures to prevent damage to turbine or turbine tower components that could lead to failure. [Final Order on ASC, Condition IV.I.1]
CON-PH-02	The certificate holder shall construct turbine towers with no exterior ladders or access to the turbine blades and shall install locked tower access doors. The certificate holder shall keep tower access doors locked at all times except when authorized personnel are present. [Final Order on ASC, Condition IV.I.3]
REQUIREMENTS UNDER COUNCIL JURRISDICTION (CJ)	
CON-CJ-01	During construction, to reduce noise impacts at nearby residential areas, the certificate holder shall: (a) Confine the noisiest operation of heavy construction equipment to the daylight hours; (b) Require contractors to install and maintain exhaust mufflers on all combustion engine-powered equipment; and (c) Establish a complaint response system at the construction manager's office to address noise complaints. [Final Order on ASC, Condition VI.A.1.1; Amended in Final Order on AMD4]
MANDATORY CONDITIONS (MC)	
CON-MC-01	OAR 345-025-0006 (4): The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate. [See Conditions (III.D.1) and (111.D.2).] [Final Order on ASC, Condition VII.4; Amended in Final Order on AMD4]

4.5 Pre-Operational (PRO) Conditions

Condition Number	Pre-Construction (PRE) Conditions
STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0100]	
PRO -PS-01	Before beginning operation of the facility, the certificate holder shall provide to North Sherman Fire Protection District and Moro Rural Fire Protection District a site plan indicating the identification number assigned to each turbine and the location of all facility structures. During operation of the facility, the certificate holder shall ensure that appropriate district personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site. [Final Order on ASC, Condition V.C.9; Amended in Final Order on AMD4]
STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]	
PRO -WM-01	Prior to operation, the certificate holder shall submit to the Department an Operational Waste Management Plan that includes, but is not limited to, the following measures: (a) Training employees to minimize and recycle solid waste; (b) Recycling paper products, metals, glass and plastics; (c) Recycling used oil and hydraulic fluid; (d) Collecting non-recyclable waste for transport to a landfill; and (e) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent materials, oil and cleaning solution containers, mercury-containing lights, and lead-acid and nickel-cadmium batteries, for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes. The requirements of the plan shall be implemented and adhered to during operational activities. [Final Order on ASC, Condition V.D.2; Amended in Final Order on AMD4]
STANDARD: PUBLIC HEALTH AND SAFETY STANDARDS FOR WIND ENERGY FACILITIES (PH) [OAR 345-024-0010]	
PRO-PH-01	Prior to operation, the certificate holder shall submit to the Department materials or other documentation demonstrating the facility's operational safety-monitoring program. The program shall, at a minimum, include requirements for regular turbines and turbine tower component inspections and maintenance. [Final Order on ASC, Condition IV.I.4; Amended in Final Order on AMD4]
PRO-PH-02	Prior to operation, the certificate shall submit to the Department evidence demonstrating that, for turbine types having pad-mounted step-up transformers, transformers are installed at the base of each tower in locked cabinets designed to protect the public from electrical hazards and to avoid creation of artificial habitat for raptor prey. [Final Order on ASC, Condition IV.I.5; Amended in Final Order on AMD4]
REQUIREMENTS UNDER COUNCIL JURRISDICTION (CJ)	
PRO-CJ-01	Prior to start of commercial operation, the certificate holder shall submit a plan for complaint-based operational noise monitoring to the Department. Commercial operation shall not commence until the Department has concurred in writing with the complaint-based noise monitoring protocol. The plan shall provide for testing at houses whose owners or occupants submit a complaint to the Council or the Department. The plan shall include a schedule for completion of required testing and a date certain by which written results shall be provided to the Council. If the owner of the property that filed the complaint refuses to grant access for the purpose of performing the noise test described in this condition after reasonable attempts are made by the certificate holder to receive permission for access, then the Department shall not require further corrective action. [Final Order on ASC, Condition VI.A.1.4]

4.6 Operational (OPR) Conditions

Condition Number	Pre-Construction (PRE) Conditions
STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]	
OPR -SP-01	During facility operation, the certificate holder shall routinely inspect and maintain all roads, pads and trenched areas and, as necessary, maintain or repair erosion control measures. The certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities to predisturbance condition or better. [Final Order on ASC, Condition IV.E.3]
OPR -SP-02	During facility operation, if blade-washing becomes necessary, the certificate holder shall ensure that there is no runoff of wash water from the site or discharges to surface waters, storm sewers or dry wells. The certificate holder shall not use acids, bases or metal brighteners with the wash water. The certificate holder may use biodegradable, phosphate-free cleaners sparingly. [Final Order on ASC, Condition IV.E.6]
STANDARD: LAND USE (LU) [OAR 345-022-0030]	
OPR -LU-01	During operation of the facility, the certificate holder, in cooperation with landowners, shall avoid impact on cultivated land to the extent reasonably possible when performing facility repair and maintenance activities. [Final Order on ASC, Condition IV.D.11]
OPR -LU-02	Within 90 days after beginning operation, the certificate holder shall provide to the Department and to the Sherman County Planning Director the actual latitude and longitude location or Stateplane NAD 83(91) coordinates of each turbine tower, connecting lines and transmission lines. In addition, the certificate holder shall provide to the Department and to the Sherman County Planning Director, a summary of as-built changes in the facility compared to the original plan, if any. [Final Order on ASC, Condition IV.D.15]
STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]	
OPR -RT-01	The certificate holder shall: (a) Notify the Department of any spill or release of hazardous material during construction, operation or retirement of the facility within one working day after the discovery. The certificate holder shall follow applicable Oregon Department of Environmental Quality ("DEQ") response requirements regulations pursuant to OAR Chapter 340 Division 142. (b) Within 45-days of the discovery, the certificate holder shall submit to the Department copies of the Oregon Emergency Response System Spill/Release Report, as submitted to DEQ. [Final Order on ASC, Condition IV.C.6; Amended in Final Order on AMD4]
OPR -RT-02	If the certificate holder has not remedied a spill consistent with applicable ODEQ standards within six months after the date of the spill, the certificate holder shall submit to the Council for its approval an independently prepared estimate of the additional cost of remediation or correction within such six-month period. (a) Upon approval of an estimate by the Council, the certificate holder shall increase the amount of its bond or letter of credit by the amount of the estimate. (b) In no event, however, shall the certificate holder be relieved of its obligation to exercise all due diligence in remedying a spill of hazardous substances. [Final Order on ASC, Condition IV.C.7, Final Order on AMD4]
STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]	
OPR -FW-01	During facility operation, the certificate holder shall conduct wildlife monitoring as described in the Wildlife Monitoring and Mitigation Plan that is included as Attachment E to the Final Order on Amendment 4 and as

	amended from time to time. [Final Order on ASC, Condition IV.M.7; Amended in Final Order on AMD4]
STANDARD: SCENIC RESOURCES (SR) [OAR 345-022-0080]	
OPR -SR-01	During operation of the facility, the certificate holder shall not use exterior nighttime lighting except: a. The minimum turbine tower lighting required or recommended by the Federal Aviation Administration (the "FAA"); b. Security lighting at the O&M facility and substations, provided that such lighting is shielded or directed downward to reduce glare; c. Minimum lighting necessary for repairs or emergencies; and d. As otherwise required by federal, State or local law. [Final Order on ASC, Condition IV.G.3]
STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0100]	
OPR -PS-01	During operation of the facility, the certificate holder shall obtain water for on-site use from one well located at the O&M facility, subject to compliance with applicable permit requirements. During operation of the facility, the certificate holder shall not use more than 5,000 gallons of water per day from the on-site well. [Final Order on ASC, Condition V.C.1]
OPR -PS-02	During operation of the facility, the certificate holder shall ensure that all on-site employees receive annual fire prevention and response training, including tower rescue training, from qualified instructors or members of local fire districts and shall ensure that all employees are instructed to keep vehicles on roads and off dry grassland, except when off-road operation is required for emergency purposes. [Final Order on ASC, Condition V.C.8]
STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]	
OPR -WM-01	During operation, the certificate holder shall discharge sanitary wastewater generated at the O&M facility to a licensed on-site septic system in compliance with county permit requirements. The certificate holder shall design the septic system with a discharge capacity of less than 5,000 gallons per day. The certificate holder shall provide copies of all necessary septic system permits to the Department. [Final Order on ASC, Condition V.D.4; Amended in Final Order on AMD4]
REQUIREMENTS UNDER COUNCIL JURRISDICTION (CJ)	
OPR-CJ-01	During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall promptly notify the Department of any complaints received regarding facility noise and of any actions taken by the certificate holder to address those complaints. Prior to start of commercial operation, the certificate holder shall notify, in writing, the owners of potentially affected noise-sensitive properties identified in Exhibit X of the completed Application for a Site Certificate. The notice shall inform the property owners of the procedure and contact information for filing a complaint regarding the noise level from the facility once it is operating. The certificate holder shall document the issuance of this notice and provide that documentation to the Department. [Final Order on ASC, Condition VI.A.1.3]
MANDATORY CONDITIONS (MC)	
OPR-MC-01	OAR 345-025-0006 (2): The certificate holder shall submit a legal description of the site to the Department of Energy within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identifies the outer boundaries that contain all parts of the facility. [Final Order on ASC, Condition VII.2; Amended in Final Order on AMD4]

4.7 Retirement Conditions (RET)

Condition Number	Pre-Construction (PRE) Conditions
STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]	
RET -RT-01	The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, and prepared pursuant to Condition (IV.C.2). [Final Order on ASC, Condition IV.C.1]
RET -RT-02	Two years before closure of the energy facility, the certificate holder shall submit to the Department a proposed final retirement plan for the facility and site, pursuant to OAR 345-027-0110, including: (a) A plan for retirement that provides for completion of retirement within two years after permanent cessation of operation of the energy facility and that protects the public health and safety and the environment; (b) A description of actions the certificate holder proposes to take to restore the site to a useful, non-hazardous condition suitable for agricultural use; and (c) A detailed cost estimate, a comparison of that estimate with the dollar amount secured by a bond or letter of credit and any amount contained in a retirement fund, and a plan for assuring the availability of adequate funds for completion of retirement. [Final Order on ASC, Condition IV.C.2]
RET -RT-03	If the certificate holder elects to use a bond to meet the requirements of Condition (IV.C.4), the certificate holder shall ensure that the surety is obligated to comply with the requirements of applicable statutes, Council rules and this site certificate when the surety exercises any legal or contractual right it may have to assume construction, operation or retirement of the energy facility. The certificate holder shall also ensure that the surety is obligated to notify the Council that it is exercising such rights and to obtain any Council approvals required by applicable statutes, Council rules and this site certificate before the surety commences any activity to complete construction, operate or retire the energy facility. [Final Order on ASC, Condition IV.C.5]
RET -RT-04	The certificate holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council's approval in the site certificate of an estimated amount required to restore the site. [Final Order on ASC, Condition IV.C.9]
RET -RT-05	If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110 and prepared pursuant to Condition (IV.C.2), the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Department within a reasonable time not to exceed 90 days. (a) If the certificate holder does not submit a proposed final retirement plan by the specified date or if the Council rejects the retirement plan that the certificate holder submits, the Council may direct the Department to prepare a proposed a final retirement plan for the Council's approval. (b) Upon the Council's approval of the final retirement plan prepared pursuant to (a), the Council may draw on the bond or letter of credit described in Condition (IV.C.4) and shall use the funds to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. (c) If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition.

	(d) After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [Final Order on ASC, Condition IV.C.10]
COUNCIL'S MANDATORY CONDITIONS (MC)	
RET -MC-01	OAR 345-025-0006 (9): The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council's approval in the site certificate of an estimated amount required to restore the site. [Final Order on ASC, Condition VII.9; Amended in Final Order on AMD4]
RET -MC-02	OAR 345-025-0006 (16): If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Office within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Department to prepare a proposed a final retirement plan for the Council's approval. Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in OAR 345-027¬0020(8) to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [Final Order on ASC, Condition VII.16; Amended in Final Order on AMD4]

5.0 Successors and Assigns

To transfer this site certificate or any portion thereof or to assign or dispose of it in any other manner, directly or indirectly, the certificate holder shall comply with OAR 345-027-0100.

6.0 Severability and Construction

If any provision of this agreement and certificate is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the agreement and certificate did not contain the particular provision held to be invalid.

7.0 Execution

This amended site certificate may be executed in counterparts and will become effective upon signature by the Chair of the Energy Facility Siting Council and the authorized representative of the certificate holder.

IN WITNESS THEREOF, this site certificate has been executed by the State of Oregon, acting by and through the Energy Facility Siting Council, and by Golden Hills Wind Farm, LLC.

ENERGY FACILITY SITING COUNCIL

By: _____

Barry Beyeler, Chair

Oregon Energy Facility Siting Council

Date: _____

Golden Hills Wind Farm, LLC

By: _____

_____ [Print Name]

Golden Hills Wind Farm, LLC

Date:_____

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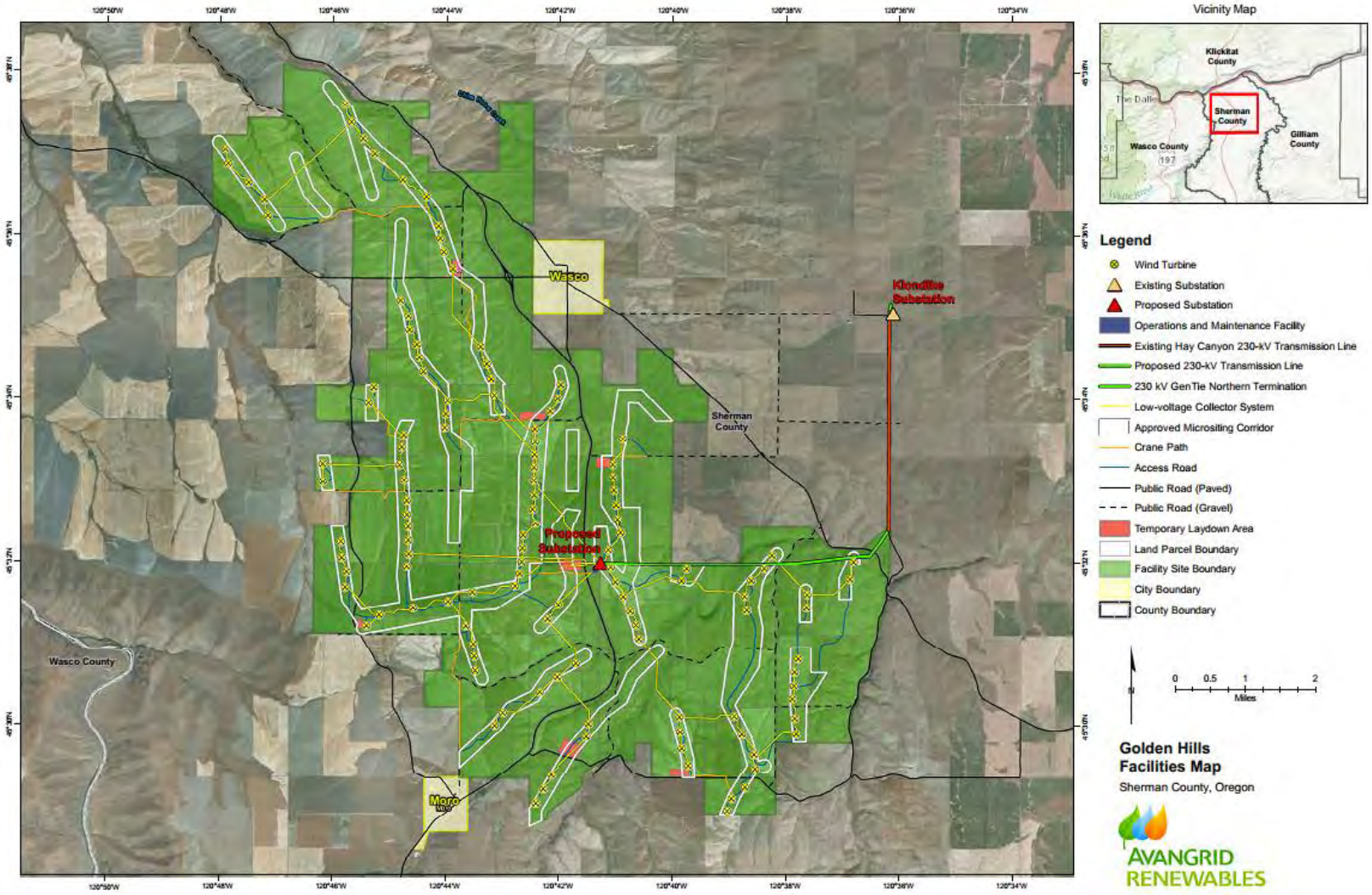
Attachment A
Facility Site Boundary Map

Golden Hills Site Boundary and Turbine Micrositing Corridors



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Attachment 2

Consultation with DOGAMI

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From: WANG Yumei * DGMI [mailto:Yumei.WANG@oregon.gov]
Sent: Wednesday, January 03, 2018 6:06 PM
To: Hutchinson, Matthew
Cc: Lockard, Alex; Mullen, Mark; MCVEIGH-WALKER Chase * ODOE; WANG Yumei * DGMI
Subject: RE: Avangrid/Golden Hills - DOGAMI Consultation

Hi Matt,

My sincere apologies for the delayed response. We have an "over active" spam filter and I only just received your email.

Thank you for the update on your status and for stating what you will complete. What you stated below appears reasonable. Also, the partial 2009 geotech report that you sent is indeed helpful and adequate.

At this early stage, DOGAMI does not have any additional review comments or concerns.

I attached DOGAMI's 2007 correspondence on this project so that we can all refer to it later.

Please let me know if you have any questions.

Yumei

Cc: Chase McVeigh-Walker, ODOE

Yumei Wang, P.E. | Geotechnical Engineer
Oregon Department of Geology and Mineral Industries (DOGAMI)
800 NE Oregon Street, Suite 965, Portland, Oregon 97232
Office: (971) 673-1551 | Mobile: (503) 913-5749
yumei.wang@oregon.gov | www.oregongeology.org

Follow us! Facebook Twitter

From: Hutchinson, Matthew [mailto:matthew.hutchinson@avangrid.com]
Sent: Thursday, December 21, 2017 9:48 AM
To: WANG Yumei * DGMI <Yumei.WANG@oregon.gov>
Cc: Lockard, Alex <alex.lockard@avangrid.com>; Mullen, Mark <Mark.Mullen@avangrid.com>
Subject: [Fortimail Spam Detected] RE: Avangrid/Golden Hills - DOGAMI Consultation

Yumei,
I found a 2009 geotechnical report for Golden Hill Wind Farm that includes borings for 69 turbine locations. See attached. This might help in your response to our request for DOGMAI input per the new Structural Standard.

I've only attached the narrative portion of the report due to large file size. Let me know if you want to bore logs and photos.

Thanks,
Matt

Matt Hutchinson
O:503.478.6317 M:503.701.0665
matthew.hutchinson@avangrid.com

From: Hutchinson, Matthew
Sent: Monday, December 18, 2017 9:57 AM
To: 'WANG Yumei * DGMI'
Cc: Lockard, Alex; Mullen, Mark
Subject: Avangrid/Golden Hills - DOGAMI Consultation

Yumei,

Avangrid Renewables has acquired the Golden Hills Wind Farm Project in Sherman County and is working with Oregon Department of Energy and EFSC to transfer and amend the Site Certificate. We propose to amend the Site Certificate to delay construction by two years from 2018 to 2020, and to increase the maximum turbine size allowed from 518 feet tall to 650 feet. As part of this process, we are seeking input from DOGAMI as required by the new Structural Standards at OAR 345-021-0010(1)(h)(B) which state:

(B) A summary of consultation with the Oregon Department of Geology and Mineral Industries regarding the appropriate methodology and scope of the seismic hazards and geology and soil-related hazards assessments, and the appropriate site-specific geotechnical work that must be performed before submitting the application for the Department to determine that the application is complete.

Unlike our pre-construction discussions for the Montague Wind Project, the Golden Hills project is at much earlier stage in development. We have not yet completed final design of the facility or

completed a site-specific geotechnical investigation, so there is not much for you to review other than the Exhibit H that was prepared in 2007.

Golden Hills will complete the following actions prior to construction to identify and address geological hazards:

1) Complete geotechnical borings at turbine locations, substation, O&M building, and along the proposed transmission line alignment.
2) Provide geotechnical reports to DOGAMI for review.
3) The structural design will consider the following:
    a. Turbine foundations are typically designed as spread footings based upon the geotechnical conditions determined by recent investigations for the project.
    b. Foundation design will follow local building code and consider site-specific loading parameters.
    c. Foundations should not bear on collapsible soils, unless those are mitigated.
    d. The foundations will bear on competent soil and/or rock. This includes verification of suitable bearing capacity, limited settlement (and specifically, differential settlement), and stiffness of the subgrade.
    e. The foundation design will account for buoyancy if findings of the geotechnical investigation suggest high elevations of groundwater.
    f. Geotechnical investigation will inform if the foundation backfill soil will provide adequate weight to resist the overturning moment
    g. The foundations can be designed using Type II cement for corrosion protection.
    h. The design life of the Golden Hills facility is 40 years.

General project information can be found on the ODOE's website at
http://www.oregon.gov/energy/facilities-safety/facilities/Pages/GHW.aspx

Thanks,
Matt

AVANGRID RENEWABLES

Matt Hutchinson
Manager, Permitting and Environmental

1125 NW Couch St., Suite 700, Portland, OR, 97209
Telephone 503.478.6317
Cell 503.701.0665
matthew.hutchinson@avangrid.com

Oregon
Theodore R. Kulongoski, Governor

Department of Geology & Mineral Industries
Administrative Office
800 NE Oregon Street #28, Suite 965
Portland, OR 97232
PHONE 971-673-1555
FAX 971-673-1562

September 27, 2007

Mr. Adam Bless
Oregon Department of Energy
625 Marion St. NE
Salem, OR 97301-3737

Re: Completeness Review of Site Certificate Application, Golden Hills Wind Farm, Sherman County, Oregon

Dear Mr. Bless,

The Oregon Department of Geology and Mineral Industries (DOGAMI) performed a completeness review of the Golden Hills Wind Farm Application for Site Certificate (ASC) dated July 2007.

DOGAMI's review has included Exhibit H: Geology and Seismicity. The bases for the completeness review were a) professional standard-of-practice for characterization of geotechnical hazards and b) relevant guidelines in state and federal statutes.

Specific rules and standards referenced in the completeness of the ASC include:

1) The Energy Facility Siting Council's Structural Standard OAR 345-022-0020
2) OAR 345-021-0010

Overall, DOGAMI finds the ASC submittal to currently lack adequate geologic hazards and geotechnical information and/or the acknowledgment of future studies to be performed prior to permitting.

Specifically we note the following:

On page H-1, it states "a detailed geologic study of the project area was performed" then later on page H-5 it states "a detailed office study and geologic field reconnaissance" was conducted. Since these two studies can vary significantly, please clarify what was done and what will be done in the future. The confusion between varying levels of studies is throughout Exhibit H.

On page H-4, there is discussion of a more complete geotechnical investigation that will be completed prior to construction. DOGAMI should be provided with the results of this future investigation and reserves the right to comment on the results with respect to public safety issues pertaining to potential site geologic hazards. Once the site-specific geotechnical investigation is

completed, then the seismic hazard assessment should integrate any new pertinent information and revisions made.

On page H-6, it lists the references used to conduct the "detailed office study", the following reference, which has 1:24,000 scale geologic mapping for the area and a geologic hazard evaluation was not used and should be considered and reviewed. We encourage the applicant to perform a detailed review of any pertinent existing references.

Beaulieu, J.D., 1977, Geologic hazards of N. Hood River, Wasco, and Sherman counties, Oregon, Bulletin, B-91

On page H-8, it states that evidence of consultation with DOGAMI was performed through review of DOGAMI publications. Consultation with DOGAMI staff concerning the Golden Hills Wind Farm was not conducted.

On page H-11, it concludes a site soil profile of class C is appropriate for design. This conclusion appears to be made without site-specific exploration and is therefore not acceptable for design. This is important since the exhibit also states the site is mantled by loess. Loess is a potentially collapsible soil type, which therefore potentially makes the site soil profile class F. Once the site-specific detailed geotechnical and seismic investigation are completed, the results should be integrated and any new pertinent information and revisions made. Furthermore, the site-specific profile (s) should encompass the site boundaries in order to include the potential range of potential conditions across the site.

On page H-12, there is discussion of local crustal faults near the site. From our review of USGS (OFR 03-095), it appears that mapped potentially active faults may be located in close proximity to the site boundary. We encourage the applicant to perform a detailed review of any pertinent existing references.

The Oregon Board of Geologist Examiners developed a flexible framework of guidelines titled: Guidelines for Engineering Geology Reports and Site-Specific Seismic Hazard Report. Copies are available from the Oregon Department of Geology and Mineral Industries for general reference as Open File Report 00–00-4.

It is the responsibility of the applicant to ensure that those preparing geologic hazard, geotechnical, and seismic hazard reports in the state of Oregon meet all appropriate requirements. For more information the applicant is referred to the respective Oregon boards for geology and for engineering.

If you have any questions, please contact me at 971-673-1538 or bill.burns@dogami.state.or.us.

Sincerely,

William Burns, MS, CEG
Engineering Geologist

cc: Yumei Wang, Geotechnical Engineer
Don Lewis, Assistant Director, GS&S

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Attachment 3

Photographic Log and Visual Simulations of DeMoss Springs Memorial Park

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Photo 1. Bandstand, contributing building to NRHP listing. Looking WSW. 6/15/2018.

Photo 2. Pumphouse, contributing structure to NRHP listing. Looking E. 6/15/2018.

Photo 3. Bridge Remnants, contributing structure to NRHP listing. Looking N. 6/15/2018.

Photo 4. Wall Remnants, contributing structure to NRHP listing. Looking SSE. 6/15/2018.

Photo 5. Park overview from entrance at parking lot toward Project to north (view blocked by vegetation). Looking N. 6/15/2018.

Photo 6. Dedication plaque. Looking N. 6/15/2018.

Photo 7. View of Project from parking lot where most visibility would occur on adjacent ridgeline. Looking SE. 6/15/2018.

Photo 8. View of swingset/play area toward Project on adjacent ridgeline. Looking SE. 6/15/2018.

Photo 9. View from within park looking back toward Project on adjacent ridgeline. Looking S. 6/15/2018.

Photo 10. View from within park looking back toward Project on adjacent ridgeline. Looking S. 6/15/2018.

Photo 11. Pre-simulation for Photo 7. Looking SE. 6/29/2018.

Photo 12. Pre-simulation for Photo 5. Looking N. 6/29/2018.

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Attachment 4

Consultation with the Oregon Department of Aviation

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Oregon
Kate Brown, Governor

OREGON DEPARTMENT OF AVIATION
3040 25th Street, SE
Salem, OR 97302-1125
Phone: (503) 378-4880
Toll Free: (800) 874-0102
FAX: (503) 373-1688

May 31, 2016

Maxwell Woods
Energy Facility Siting Analyst
Oregon Department of Energy
625 Marion Street NE
Salem, OR 97301

SUBJECT: Golden Hills Wind Project – Amendment #3 Supplement

The Oregon Department of Aviation (ODA) has received the Amendment #3 Supplemental Information for the Golden Hills Wind Farm LLC application. ODA has prepared the following background information and comments that we request to be included in the Final Order, as prepared by the Oregon Department of Energy and adopted by the Energy Facility Siting Council (EFSC).

The Siting Council adopted conditions that required the certificate holder to submit to both the FAA and ODA, a Notice of Proposed Construction and Alteration (FAA form 7460-1) once the final location of the wind turbines are identified. ODA requests that this condition of approval remain as part of the updated final order.

In addition, it should be noted that in a detail review of the submitted material, Figure 3 (REVISED) and Figure 4 (REVISED) identified a "Worst-case Total Turbine Height of 158 meters (518 feet)". In accordance with ORS 836.530, the Department has adopted rules for Physical Hazards to Air Navigation (OAR 738-070). Specifically *OAR 738-070-0110(1)(a)* identifies any future object would be an obstruction to air navigation if it is over 500 feet above ground level at the site of the object. As stated above, the REVISED figures show the turbines above 500 feet. As a result by rule, these objects are automatically classified as "Obstructions".

To determine if these proposed turbines constitute a hazard while being consistent with Federal Aviation Administrative Advisory Circulars *(FAA – AC 70/7461-1L – Obstruction Marking and Lighting)* ODA recommends an airspace study and analysis of the overall project. This study would incorporate any potential impact to airport operations in and around Wasco State Airport as well as aircraft flying in proximity to the study area.

If the study determines the wind turbines not to be a hazard to air navigation, the project will still have to be marked and light in accordance with *FAA AC 70/7461-1L*.

Finally, ODA requests that all other current and updated ODA and FAA rules, standards and regulation are met at the time of the aeronautical study and that FAA form 7460-1 are submitted prior to construction of the project. This is important to state that Wasco State Airport is under Federal grant assurances and obligations, specifically:

Grant Assurance #20 Hazard Removal and Mitigation. The (airport sponsor) will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

Grant Assurance # 21 – Compatible Land Use The (airport sponsor) will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

**Please note that ODA and FAA rules, standards and regulations may have changed since the Final Order was issued on May 15, 2009.

Thank you for allowing ODA to comment on this proposed amendment(s) for the Golden Hills Wind Project. Feel free to contact me at (503) 378-2340 if you have any questions.

Sincerely,

Mitch Swecker
Director
Oregon Department of Aviation

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Attachment 5

Consultation with the U.S. Navy

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DEPARTMENT OF THE NAVY
NAVAL AIR STATION WHIDBEY ISLAND
3730 NORTH CHARLES PORTER AVENUE
OAK HARBOR, WASHINGTON 98278-5000

3700
Ser N00RM/0040
8 Jan 18

Mr. Chase McVeigh-Walker
Siting Analyst
Oregon Department of Energy
625 Marion Street, NE
Salem, Oregon 97301-3742

Dear Mr. McVeigh-Walker,

SUBJECT: GOLDEN HILLS WIND PROJECT AMENDMENT

The Navy has reviewed the Amendment and associated Application for the siting of the Golden Hills Wind Project proposed by Golden Hills Wind Farm, LLC, a subsidiary of Avangrid Renewables LLC, on land in Sherman County in Oregon and offers the following comments on the proposed project for consideration.

Based on the information available regarding the proposed site location it appears the project would be in the vicinity of navigable airspace that is utilized by the Department of Defense (DoD) for military aircraft readiness training. Naval Air Station Whidbey Island is the designated scheduling facility for the Military Training Route (MTR), IR-343; which is the MTR in question. Because the specific portion of the IR-343 in vicinity of the proposed project has a beginning vertical limit (floor) of 5,000 feet Mean Sea Level (MSL), the siting of wind turbines (less than 500 feet Above Ground Level) would not directly obstruct military flight activities in the IR-343 MTR. Supplementary analysis would be required to evaluate additional impacts that may emerge should secondary or cumulative development be proposed in the vicinity as well as to consider any proposed power transmission interconnect infrastructure.

In addition to airspace and vertical obstruction considerations, the potential for electromagnetic interference to air traffic control and air defense radar systems must be evaluated separately by the Northern American Aerospace Defense Command (NORAD) and the Federal Aviation Administration (FAA) via the FAA's Part 77 review process.

The Navy appreciates the opportunity to comment on the Golden Hills proposal and seeks to meet with developers and review projects at the earliest stages of inception in order to minimize operational impacts, avoid undue project delays and to protect the public health and safety.

My point of contact for this project is: Ms. Kimberly Peacher, cell (360) 930-4085 or email Kimberly.peacher@navy.mil.

Sincerely,

G. C. MOORE
Captain, U.S. Navy
Commanding Officer

Copy to:
Sherman County Planning Department, Planning Director, Ms. Georgia Macnab
Avangrid Renewables LLC

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Attachment 6

Property Owners within 500 feet of the Project Site Boundary

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Attachment 6. Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

MapTaxlot	First Name	Last Name	Name 2	Company/ Organization	C/O-Attn.	Address 1	Address 2	City	State	Zip
01N16E00003500	BETTY SUZANNE LE ETAL	ALT				107 FERNWOOD		WILLIAMSBURG	VA	23185
01N17E00007100	KARL F ETAL	AMIDON				202 KNIGHT ROAD		GOLDENDALE	WA	98620
01S17E00001700	KARL F ETAL	AMIDON				202 KNIGHT ROAD		GOLDENDALE	WA	98620
01S17E00001900	KARL F ETAL	AMIDON				202 KNIGHT ROAD		GOLDENDALE	WA	98620
01S17E17BC1500	ANDREW & CAROL	ANDERSON				PO BOX 103		MORO	OR	97039-0103
01N17E00004800	DARLENE ETAL	ANDERSON			LINDA M BARNETT	418 MORGAN ROAD		ASOTIN	WA	99402
01N16E0000200				ANDREWS FAMILY TRUST	ANDREWS, BRUCE & DEBBIE TRSTEE	PO BOX 980		SEASIDE	OR	97138
01N17E00001400				ANDREWS FAMILY TRUST	ANDREWS, BRUCE TRUSTEE	PO BOX 980		SEASIDE	OR	97138
01N17E0000800				BARNETT ESTATE PARTNERSHIP	HILDERBRAND, JOSH	PO BOX 2		WASCO	OR	97065
02N17E00007400				BARNETT ESTATE PARTNERSHIP	HILDERBRAND, JOSH	PO BOX 2		WASCO	OR	97065
01N17E00004900				BARNUM, MAY TRUST	US BANK	FARM, RANCH & TIMBER ASSET MGT	PO BOX 3588, PD-WA-T7TR	SPOKANE	WA	99220-3588
01N17E00006800				BARNUM, MAY TRUST	US BANK	FARM, RANCH & TIMBER ASSET MGT	PO BOX 3588, PD-WA-T7TR	SPOKANE	WA	99220-3588
01S16E0000100	NORMA M	BARZEE				14314 SE WEBSTER RD - APT A-9		MILWAUKIE	OR	97267
01S16E0000400	NORMA M	BARZEE				14314 SE WEBSTER RD - APT A-9		MILWAUKIE	OR	97267
01S17E00001800	NORMA M	BARZEE				14314 SE WEBSTER RD - APT A-9		MILWAUKIE	OR	97267
01S18E00001000	JAMES R & JERRINE A	BELSHE				PO BOX 327		WASCO	OR	97065
01S18E0000900	JAMES R & JERRINE A TR	BELSHE				PO BOX 327		WASCO	OR	97065
01N18E00004900	JAMES R & JERRINE CO-T	BELSHE				500 SANDON STREET		WASCO	OR	97065
01N17E00001000	DOUGLAS R	BISH				PO BOX 13		WASCO	OR	97065
01N17E00001100	DOUGLAS R	BISH				PO BOX 13		WASCO	OR	97065
02N17E00004200	DOUGLAS R	BISH				PO BOX 13		WASCO	OR	97065
02N17E00006300	DOUGLAS R	BISH				PO BOX 13		WASCO	OR	97065
02N17E00006800	DOUGLAS R	BISH				PO BOX 13		WASCO	OR	97065
02N17E00006900	DOUGLAS R	BISH				PO BOX 13		WASCO	OR	97039
02N17E00007300	DOUGLAS R	BISH				PO BOX 13		WASCO	OR	97065
01N16E0000500	SCOTT ETAL	BLAU				314 2ND STREET		LAKE OSWEGO	OR	97034-3115
02N16E00003700	SCOTT ETAL	BLAU				314 2ND STREET		LAKE OSWEGO	OR	97034-3115
01S17E00002600	ORVILLE ETAL	BLAYLOCK				68808 HIGHWAY 97		MORO	OR	97039
01N16E00003600	SHIRLEY E	BLAYLOCK				68808 HIGHWAY 97		MORO	OR	97039
01N17E00006900	SHIRLEY E	BLAYLOCK				68808 HIGHWAY 97		MORO	OR	97039
01S17E00001600	SHIRLEY E	BLAYLOCK				68808 HIGHWAY 97		MORO	OR	97039
01S17E00001602	SHIRLEY E	BLAYLOCK				68808 HIGHWAY 97		MORO	OR	97039
01S17E00002400	SHIRLEY E	BLAYLOCK				68808 HIGHWAY 97		MORO	OR	97039
01S17E00002900	PATRICIA PERSONAL REP	BURNET			MCKINNEY, KIMBERLY TRUSTEE	70544 MCKINNEY ROAD		WASCO	OR	97065

Attachment 6. Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

MapTaxlot	First Name	Last Name	Name 2	Company/ Organization	C/O-Attn.	Address 1	Address 2	City	State	Zip
01S17E00003200	PATRICIA PERSONAL REP	BURNET			MCKINNEY, KIMBERLY TRUSTEE	70544 MCKINNEY ROAD		WASCO	OR	97065
01S17E00001500	BON & CORA MAY	CHRISTIANSON				10505 N SAGE HOLLOW WAY		BOISE	ID	83714-9575
01N17E00004500				CLARK FARMS I LP	CLARK, LAWRENCE	PO BOX 145		SELAH	WA	98942
01N17E00004501				CLARK FARMS I LP	CLARK, LAWRENCE	PO BOX 145		SELAH	WA	98942
01N17E00005000				CLARK FARMS I LP	CLARK, LAWRENCE	PO BOX 145		SELAH	WA	98942
01N17E00005001				CLARK FARMS I LP	CLARK, LAWRENCE	PO BOX 145		SELAH	WA	98942
01S17E00004100	GLORIA F LE ETAL	COCKBURN				10776 SE IDLEMAN ROAD		PORTLAND	OR	97086
01S17E00004200	GLORIA F LE ETAL	COCKBURN				10776 SE IDLEMAN ROAD		PORTLAND	OR	97086
01N17E00001701	LINDA KAY	CORNIE			LAWRENCE, TRAVIS & MELISA	94144 HWY 206		WASCO	OR	97065
01N17E00007800				DEMOSS SPRINGS RANCH LLC	C/O CAROLYN DEMOSS	15007 75TH AVENUE NE		KENMORE	WA	98028-4649
01S17E00001100				DEMOSS SPRINGS RANCH LLC	C/O CAROLYN DEMOSS	15007 75TH AVENUE NE		KENMORE	WA	98028-4649
01S17E00001400				DEMOSS SPRINGS RANCH LLC	C/O CAROLYN DEMOSS	15007 75TH AVENUE NE		KENMORE	WA	98028-4649
01S17E00001401				DEMOSS, CAROLYN J TRUSTEE		15007 75TH AVENUE NE		KENMORE	WA	98028-4649
01N17E00001800	DAVID E	DUNN				21811 SHELTERING SPRUCE		CHUGIAK	AK	99567
01N18E00001900				DUTTON RANCH TRUST	DUTTON, DONALD W CO-TRUSTEE	1604 X AVENUE		LA GRANDE	GR	OR 97850
01S17E00001101				FEDERAL GOVERNMENT		EXEMPT		#VALUE!		0
02N16E00003402	JOHN & NANCY	FIELDS				PO BOX 48		WASCO	OR	97065
02N16E00003400	JOHN M	FIELDS	FIELDS, NANCY			PO BOX 48		WASCO	OR	97065
02N17E00006500	JOHN M	FIELDS	FIELDS, NANCY			PO BOX 48		WASCO	OR	97065
01N16E00003700	MICHAEL R	FOSS				23826 SE 47TH PLACE		ISSAQUAH	WA	98029
01S17E00001601	MICHAEL R	FOSS				23826 SE 47TH PLACE		ISSAQUAH	WA	98029
01N16E00002600				FULTON, JAMES TRUST	US BANK	FARM, RANCH & TIMBER ASSET MGT	PO BOX 3588, PD-WA-T7TR	SPOKANE	WA	99220-3588
01N18E0700100				HAKALA, VIRGINIA TRUSTEE		63011 MARSH ORCHID ROAD		BEND	OR	97701
01N17E00005600	DARRYL R	HART				63461 FRASER ROAD		MORO	OR	97039
01N17E00007900	DARRYL R	HART				63461 FRASER ROAD		MORO	OR	97039
01S17E0000300	DARRYL R	HART				63461 FRASER ROAD		MORO	OR	97039
01S17E00003300	DEBBIE L ALAN R & DARRYL	HART	PERNA, MARC & NANCY			3688 AUGUSTA NAT'L DR SOUTH		SALEM	OR	97302
01N18E00001700				HILDERBRAND FAMILY LMTD PART		PO BOX 326		WASCO	OR	97065
01N18E00003100				HILDERBRAND FAMILY LTD PART		PO BOX 326		WASCO	OR	97065
01N18E0700500				HILDERBRAND FAMILY LTD PART		PO BOX 326		WASCO	OR	97065
01N18E00003104				HILDERBRAND, FAMILY LMTD PART		PO BOX 326		WASCO	OR	97065

Attachment 6. Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

MapTaxlot	First Name	Last Name	Name 2	Company/ Organization	C/O-Attn.	Address 1	Address 2	City	State	Zip
01N18E00001799	GORDON W	HILDERBRAND			HILDERBRAND, RANDY G	PO BOX 326		WASCO	OR	97065
02N16E00005700					JUSTESEN, FRED	59720 TWIN LAKES ROAD		GRASS VALLEY	VA	OR 97029
01N16E00002100				KASEBERG, J KENNETH GST TRUST&	RIPER, BARBARA J TRUSTEE	1670 EDGEWOOD DRIVE		PALO ALTO	AL	CA 94303
01N16E0000400	LEE & KAREN	KASEBERG				70031 VAN GILDER RD		WASCO	OR	97065
01N16E00003300	LEE C	KASEBERG				70031 VANGILDER ROAD		WASCO	OR	97065
01N16E0000800	LEE C	KASEBERG				70031 VAN GILDER RD		WASCO	OR	97065
01N16E0000802	STEVEN D	KASEBERG				92394 HWY 206		WASCO	OR	97065
01N16E0000801	TERRY D & DIANE	KASEBERG				93431 HWY 206		WASCO	OR	97065
01S17E17BC1600	JEFFREY	KASER	KASER, JENNIFER			PO BOX 58		MORO	OR	97039
01N17E00004300				KOCK RANCH, LLC	KOCK, STEPHEN H & ANITA J	72889 HWY. 97		WASCO	OR	97065
01N18E0700700	VIRGINIA M ETAL	LAUGHLIN				63011 MARSH ORCHID ROAD		BEND	OR	97701
01N18E00003400	NANCY SHELTON	LEWIS				7460 MOUNTAINSIDE DRIVE		CORNELIUS	OR	97113
01N16E0000804	BRAD A & DONNA C	LOHREY			WASHINGTON MUTUAL BANK	C/O ACS IMAGE SOLUTIONS	12691 PALA DRIVE - MS156DPCA	GARDEN GROVE	CA	92841
01S16E0000500	MARY A	MACNAB				PO BOX 251		WASCO	OR	97065
01N16E00004200	PETER J LE	MACNAB				608 YATES		WASCO	OR	97065
01N16E00006100	PETER J LE	MACNAB				608 YATES STREET		WASCO	OR	97065
01N16E00004000	PETER J TRUSTEE	MACNAB				608 YATES		WASCO	OR	97065
01S17E00003800	TOM & GEORGIA	MACNAB				66330 HENRICHS ROAD		MORO	OR	97039
02N16E00004100						PO BOX 201		RUFUS	OR	97050
01S17E00003700	ROBERT L TRUSTEE	MARTIN				65886 HENRICHS ROAD		MORO	OR	97039
01S17E00002703	CURTIS R & JAYME B	MASON			WESTCORP MORTGAGE GROUP	202 EAST SECOND STREET		THE DALLES	OR	97058
01N16E00003701	MIKE & JEANNEY	MCARTHUR				93350 FOSS LANE		WASCO	OR	97065
01N17E00004101	LYNDON P	MCCLENNAN				PO BOX 215		WASCO	OR	97065
01N17E00004200	LYNDON P	MCCLENNAN				PO BOX 215		WASCO	OR	97065
01N17E00004400	LYNDON P	MCCLENNAN				PO BOX 215		WASCO	OR	97065-0215
01N16E00003800				MCCOY LAND	MCCOY, THOMAS	93340 HWY 206		WASCO	OR	97065
01N16E00006200				MCCOY LAND	MCCOY, THOMAS	93340 HWY 206		WASCO	OR	97065
01N17E00007000				MCCOY LAND	MCCOY, THOMAS	93340 HWY 206		WASCO	OR	97065
01N17E00003800				MCDERMID CENTURY FARM LLC		27640 POWERLINE ROAD		HALSEY	OR	97348
01N17E00005200				MCDERMID CENTURY FARM LLC		27640 POWERLINE ROAD		HALSEY	OR	97348
01N17E00006000				MCDERMID CENTURY FARM LLC		27640 POWERLINE ROAD		HALSEY	OR	97348
01N17E00006300				MCDERMID CENTURY FARM LLC		27640 POWERLINE ROAD		HALSEY	OR	97348

Attachment 6. Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

MapTaxlot	First Name	Last Name	Name 2	Company/ Organization	C/O-Attn.	Address 1	Address 2	City	State	Zip
01N17E00006400				MCDERMID CENTURY FARM LLC		27640 POWERLINE ROAD		HALSEY	OR	97348
01N18E00003300				MCDERMID CENTURY FARM LLC		27640 POWERLINE ROAD		HALSEY	OR	97348
01N17E00003200	RICHARD D & JEAN H	MCGREGOR				12154 SE 114TH CT #224		HAPPY VALLEY	OR	97086
01S17E00002101	KIM	MCKINNEY				70544 MC KINNEY ROAD		WASCO	OR	97065
01S17E00003000	KIM	MCKINNEY				70544 MC KINNEY ROAD		WASCO	OR	97065
01S17E00003003	KIM	MCKINNEY				70544 MC KINNEY ROAD		WASCO	OR	97065
01S17E00003004	KIM	MCKINNEY				70544 MC KINNEY ROAD		WASCO	OR	97065
01S17E00002100	KIMBERLY	MCKINNEY				70544 MCKINNEY ROAD		WASCO	OR	97065
01S17E18AA100				MELZER, MYRNA L TRUSTEE		PO BOX 342		MORO	OR	97039
02N17E00007200				METHODIST CHURCH CEMETERY		EXEMPT		#VALUE!		0
01N18E00005800				MID COLUMBIA PRODUCERS INC		PO BOX 344		MORO	OR	97039
01N18E00005900				MID COLUMBIA PRODUCERS INC		PO BOX 344		MORO	OR	97039
01N18E0700600				MID COLUMBIA PRODUCERS INC		PO BOX 344		MORO	OR	97039
01S17E0000900				MID COLUMBIA PRODUCERS INC		PO BOX 344		MORO	OR	97039
02N16E00003800	ALETHA CHRISTINE	MORGAN	WELK, PATRICIA MAE FULTON			19855 SW TOUCHMARK WAY #421		BEND	OR	97702
01S17E00002401				MORO, CITY		PO BOX 231		MORO	OR	97039
01S17E17BC1502				MORO, CITY		PO BOX 231		MORO	OR	97039
01N17E0000901				MORROW COUNTY GRAIN GROWERS	WASCO BRANCH	PO BOX 367		LEXINGTON	OR	97839
01N17E0400400	WILLIAM P ETAL	O'MEARA				5080 GREEN ROAD		HOOD RIVER	OR	97031
01N17E00003100	WILLIAM P ETAL	O'MEARA				5080 GREEN ROAD		HOOD RIVER	OR	97031
01N18E00003500	WILLIAM P ETAL	O'MEARA				5080 GREEN ROAD		HOOD RIVER	OR	97031
01N18E00005200	WILLIAM P ETAL	O'MEARA				5080 GREEN ROAD		HOOD RIVER	OR	97031
01N18E00005500	WILLIAM P ETAL	O'MEARA				5080 GREEN ROAD		HOOD RIVER	OR	97031
01N18E00005700	WILLIAM P ETAL	O'MEARA				5080 GREEN ROAD		HOOD RIVER	OR	97031
01S17E00002402				OREGON DEPT OF TRANSPORTATION	RIGHT OF WAY SECTION	4040 FAIRVIEW INDUSTRIAL DR SE MS#2		SALEM	OR	97302-1142
01S17E00001102				PACIFIC POWER & LIGHT CO		PUBLIC UTILITY		#VALUE!	AS	0
01N18E00001701				PACIFIC WIND DEVELOPMENT LLC		1125 NW COUCH ST STE 600		PORTLAND	OR	97209
01N17E00001900	BRYAN F	PETERS	PETERS, FOREST A			P O BOX 63		WASCO	OR	97065

Attachment 6. Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

MapTaxlot	First Name	Last Name	Name 2	Company/ Organization	C/O-Attn.	Address 1	Address 2	City	State	Zip
01N17E00001601	FOREST	PETERS				69420 N SAWTOOTH ROAD		WASCO	OR	97065
01N17E00001602	FOREST	PETERS				69420 N SAWTOOTH ROAD		WASCO	OR	97065
01N17E0900900	FOREST A	PETERS			ORCHARD VIEW	69420 N SAWTOOTH ROAD		WASCO	OR	97065
01N17E00001600				PETERS, FRANCIS W TRUST	PETERS, FOREST A	69420 N SAWTOOTH ROAD		WASCO	OR	97065
01N17E00006600				PINKERTON BROTHERS		PO BOX 312		MORO	OR	97039
01N17E00006700				PINKERTON BROTHERS		PO BOX 312		MORO	OR	97039
01N17E00007600				PINKERTON BROTHERS	PINKERTON, BRUCE R	PO BOX 312		MORO	OR	97039
01N17E00006500				PINKERTON RANCH	PINKERTON, T DEAN	PO BOX 343		MORO	OR	97039
01N17E00007300				PINKERTON RANCH	PINKERTON, JANET PERSONAL REP	PO BOX 343		MORO	OR	97039
01N17E00007400				PINKERTON RANCH	PINKERTON, T DEAN	PO BOX 343		MORO	OR	97039
01N17E00007500				PINKERTON RANCH		PO BOX 343		MORO	OR	97039
01S17E00001300				PINKERTON RANCH	PINKERTON, T DEAN	PO BOX 343		MORO	OR	97039
01N17E00007301	BARBARA L	PINKERTON				1704 SW 3RD ST		PENDLETON	OR	97801
02N17E00006100				POSTON PROPERTIES LLC	POSTON, DIANA E	301 SOUTH ELM STREET SUITE 206		GREENSBORO	NC	27401
01N17E00003900				POWELL, PATRICK A TRUSTEE		PO BOX 440		WASCO	OR	97065
01N17E00004000				POWELL, PATRICK A TRUSTEE		PO BOX 440		WASCO	OR	97065
01N17E00004100				POWELL, PATRICK A TRUSTEE		PO BOX 440		WASCO	OR	97065
01N17E00004201				POWELL, PATRICK A TRUSTEE		PO BOX 440		WASCO	OR	97065
01N17E00005400				PROBSTFIELD-CLARK LLC	PROBSTFIELD, JUDITH	13315 WEST PROSPECT DRIVE		SUN CITY WEST	AZ	85375
01N17E00005500				PROBSTFIELD-CLARK LLC	PROBSTFIELD, JUDITH	13315 WEST PROSPECT DRIVE		SUN CITY WEST	AZ	85375
01N16E00003601	DOUGLAS	RHINEHART				72484 SCOTT CANYON ROAD	PO BOX 67	WASCO	OR	97065
02N17E00007500				RICE KEITH, CHRISTINE TRUST	US BANK	FARM, RANCH & TIMBER ASSET MGT	PO BOX 3588, PD-WA-T7TR	SPOKANE	WA	99220-3588
01N17E00001300				RICHELDERFER BROTHERS	RICHELDERFER, MARTIN	PO BOX 93		WASCO	OR	97065
01N17E00001302	E MARTIN	RICHELDERFER				PO BOX 113		WASCO	OR	97065
01N17E00001200	MARTIN	RICHELDERFER			ZACHARIASEN, MARY	PO BOX 93		WASCO	OR	97065
01N17E00005800	SYLVIA IRENE ETAL	ROGERS				2010 SW NANCY DRIVE		GRESHAM	OR	97080
01N17E00007700	SYLVIA IRENE ETAL	ROGERS				2010 SW NANCY DRIVE		GRESHAM	OR	97080
01S17E00002000	SYLVIA IRENE ETAL	ROGERS				2010 SW NANCY DRIVE		GRESHAM	OR	97080
01S17E00003500	SHARON A LE ETAL	ROLFE				1818 ARMADALE AVENUE		HOOD RIVER	OR	97031
02N16E00003600	TERRY	SANDERSON			SANDERSON, HAROLD C	91608 BIGGS-RUFUS HWY		WASCO	OR	97065
01S17E18AA101	R GARY ETUX	SHELTON				PO BOX 311		MORO	OR	97039
01N17E00001500				SHERMAN COUNTY		EXEMPT				

Attachment 6. Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

MapTaxlot	First Name	Last Name	Name 2	Company/ Organization	C/O-Attn.	Address 1	Address 2	City	State	Zip
01S17E00002800				SHERMAN COUNTY		EXEMPT				
01S17E0000800				SHERMAN COUNTY		EXEMPT				
01S17E0000901				SHERMAN COUNTY		EXEMPT				
01S17E00004400				SHERMAN COUNTY EXPERIMENT	OREGON STATE UNIVERSITY	EXEMPT				
01N16E00003900	DAWN M	SHERWOOD			VAN GILDER, GARY L	68192 PETES RD		WASCO	OR	97065
01S17E00002700				SHIPLEY FARMSTEAD LLC	ERRAND, CAROL	PO BOX 1107		BAKER CITY	OR	97814
01S17E00002701				SHIPLEY FARMSTEAD LLC	ERRAND, CAROL	PO BOX 1107		BAKER CITY	OR	97814
01S17E00002702				SHIPLEY FARMSTEAD LLC	ERRAND, CAROL	PO BOX 1107		BAKER CITY	OR	97814
01N18E00006100	EDITH L & GEREMY E	SHULL				61909 LONEROCK ROAD		GRASS VALLEY	OR	97029
01N18E00005701	GEREMY E	SHULL				61909 LONEROCK ROAD		GRASS VALLEY	OR	97029
01S17E00003100				SIGLOO RANCH LLC		3302 ROYAL CREST DRIVE		THE DALLES	OR	97058
01S17E00003400				SIGLOO RANCH LLC		3302 ROYAL CREST DRIVE		THE DALLES	OR	97058
01S18E00001300				SIGLOO RANCH LLC		3302 ROYAL CREST DRIVE		THE DALLES	OR	97058
01S17E17BC800				SIMANTEL, ROLAND & SHARON TRST	SIMANTEL FAMILY REV TRUST	PO BOX 121		MORO	OR	97039
01S17E17BC801				SIMANTEL, ROLAND & SHARON TRST	SIMANTEL FAMILY REV TRUST	PO BOX 121		MORO	OR	97039
01S17E17BC802				SIMANTEL, ROLAND & SHARON TRST	SIMANTEL FAMILY REV TRUST	PO BOX 121		MORO	OR	97039
01S17E00004501	GRANT	SIMPSON				PO BOX 370		MORO	OR	97039
01S17E17BC500	GRANT	SIMPSON				PO BOX 370		MORO	OR	97039
01S17E17BC600	GRANT	SIMPSON				PO BOX 370		MORO	OR	97039
01S17E17BC700	GRANT	SIMPSON				PO BOX 370		MORO	OR	97039
01N16E0000901	PATRICIA A	SKILES			C/O SHAWN SKILES	PO BOX 32		DUFUR	OR	97021
01N16E0000900	PATRICIA ANN LE ETAL	SKILES			KASEBERG, LARRY EDWARD LE ETAL	C/O SHAWN SKILES	PO BOX 32	DUFUR	OR	97021
01N16E00002702	PATRICIA ANN LE ETAL	SKILES			KASEBERG, LARRY EDWARD ETAL	69384 WHEATACRES ROAD		WASCO	OR	97065
01N17E0900700	RAY	SMITH				PO BOX 293		WASCO	OR	97065
01N17E0900800	RAY D	SMITH				PO BOX 293		WASCO	OR	97065
01N18E00005300				STATE OF OREGON		EXEMPT				
01N18E00005400				STATE OF OREGON		EXEMPT				
01N18E00006000				STATE OF OREGON		EXEMPT				
01N18E00003700				STEVENS FAMILY FARMS		PO BOX 328		HUSUM	WA	98623
01N18E00003600	JOSEPH M	THOMAS				4480 HILLCREST AVENUE		JUNEAU	AK	99801
01N18E00005100	JOSEPH M	THOMAS				4480 HILLCREST AVENUE		JUNEAU	AK	99801
01N17E00005700				THOMPSON PEAKE, CAROLE TRUST		PO BOX 353		MORO	OR	97039
01N17E00005701				THOMPSON PEAKE, CAROLE TRUST		PO BOX 353		MORO	OR	97039

Attachment 6. Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

MapTaxlot	First Name	Last Name	Name 2	Company/ Organization	C/O-Attn.	Address 1	Address 2	City	State	Zip
01S17E0000100				THOMPSON PEAKE, CAROLE TRUST		PO BOX 353		MORO	OR	97039
01S17E0000200				THOMPSON PEAKE, CAROLE TRUST		PO BOX 353		MORO	OR	97039
01S18E00001100				THOMPSON, DONALD DEAN TRUST	UMEMOTO, KAREN TRUSTEE	66351 HAY CANYON RD		MORO	OR	97039
01S18E00001200				THOMPSON, DONALD DEAN TRUST	UMEMOTO, KAREN TRUSTEE	66351 HAY CANYON RD		MORO	OR	97039
01S18E00001400				THOMPSON, DONALD DEAN TRUST	UMEMOTO, KAREN TRUSTEE	66351 HAY CANYON RD		MORO	OR	97039
01S18E00001401	RONALD D	THOMPSON			THOMPSON, AARON	62986 BILYEU WAY		BEND	OR	97701
01S18E00001500	RONALD D	THOMPSON			THOMPSON, AARON	62986 BILYEU WAY		BEND	OR	97701
01N18E00005600				THOMPSONS GOLDEN WINDS LLC		PO BOX 353		MORO	OR	97039
01S18E00001101				THOMPSONS GOLDEN WINDS LLC		PO BOX 353		MORO	OR	97039
01S17E00002500				UNION PACIFIC RAILROAD CO	PROPERTY TAX	1400 DOUGLAS STOP 1640		OMAHA	NE	68179-1640
01S17E0000700				UNION PACIFIC RAILROAD CO	PROPERTY TAX	1400 DOUGLAS, STOP 1640		OMAHA	NE	68179-1640
01N16E0000100				VAN GILDER ENTERPRISES LLC		PO BOX 275		WASCO	OR	97065
01N17E00001301				VAN GILDER ENTERPRISES LLC		PO BOX 275		WASCO	OR	97065
01N17E0000900				VAN GILDER ENTERPRISES LLC		PO BOX 275		WASCO	OR	97065
01N17E04CB600				VAN GILDER ENTERPRISES LLC		PO BOX 275		WASCO	OR	97065
01N17E04CB700				VAN GILDER ENTERPRISES LLC		PO BOX 275		WASCO	OR	97065
01N17E04CC400				VAN GILDER ENTERPRISES LLC	VAN GILDER, ARTHUR A	PO BOX 275		WASCO	OR	97065
02N17E00006200				VAN GILDER ENTERPRISES LLC		PO BOX 275		WASCO	OR	97065
02N17E00006600				VAN GILDER ENTERPRISES LLC		PO BOX 275		WASCO	OR	97065
02N17E00007000				VAN GILDER ENTERPRISES LLC		PO BOX 275		WASCO	OR	97065
01N16E00002200				VAN GILDER HERITAGE LLC		PO BOX 96		WASCO	OR	97065
01N16E00002300				VAN GILDER HERITAGE LLC		PO BOX 96		WASCO	OR	97065
01N16E00002400				VAN GILDER HERITAGE LLC		PO BOX 96		WASCO	OR	97065
01N17E00001700				VAN GILDER HERITAGE LLC		PO BOX 96		WASCO	OR	97065
01N17E00004600				VAN GILDER HERITAGE LLC		PO BOX 96		WASCO	OR	97065
01N16E00002500	JAMES MURRAY	WALKER				15819 NE 43RD ST		VANCOUVER	WA	98682
01N17E00004700	JAMES MURRAY	WALKER				15819 NE 43RD ST		VANCOUVER	WA	98682

Attachment 6. Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

MapTaxlot	First Name	Last Name	Name 2	Company/ Organization	C/O-Attn.	Address 1	Address 2	City	State	Zip
02N17E00007100				WASCO CEMETERY ASSOCIATION		EXEMPT				0
01N17E0000801				WASCO, CITY		PO BOX 26		WASCO	OR	97065
01N17E0000902				WASCO, CITY		PO BOX 26		WASCO	OR	97065
01N17E04CB500				WASCO, CITY		PO BOX 26		WASCO	OR	97065
01N18E00003200				WEEDMAN BROTHERS		PO BOX 386		WASCO	OR	97065
01N18E0700800				WEEDMAN BROTHERS		PO BOX 386		WASCO	OR	97065
01N18E0700102				WEEDMAN RANCHES INC		PO BOX 386		WASCO	OR	97065
01N18E0700103				WEEDMAN RANCHES INC		PO BOX 386		WASCO	OR	97065
01N18E0700400				WEEDMAN RANCHES INC		PO BOX 386		WASCO	OR	97065
01N18E00003102	MICHAEL & GUY	WEEDMAN				PO BOX 386		WASCO	OR	97065
01N18E0700601	MICHAEL & GUY	WEEDMAN				PO BOX 386		WASCO	OR	97065
01N18E0700300	MICHAEL E & GUY P	WEEDMAN				PO BOX 386		WASCO	OR	97065
02N16E00003300	PATRICIA MAE	WELK				19855 SW TOUCHMARK WAY #421		BEND	OR	97702
01N17E00005300	ALISON	YAMAUCHI				4900 CRESTWOOD DRIVE		LITTLE ROCK	AR	72207
01N17E00005900	ALISON	YAMAUCHI				4900 CRESTWOOD DRIVE		LITTLE ROCK	AR	72207
01N17E00006100	ALISON	YAMAUCHI				4900 CRESTWOOD DRIVE		LITTLE ROCK	AR	72207
01N17E00006200	ALISON	YAMAUCHI				4900 CRESTWOOD DRIVE		LITTLE ROCK	AR	72207
01N17E00007200	ALISON	YAMAUCHI				4900 CRESTWOOD DRIVE		LITTLE ROCK	AR	72207

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018).

Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018) Index Map

SHERMAN COUNTY, OR

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Map #14
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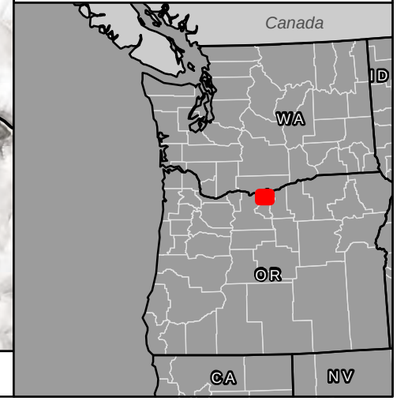
Map #17
Map #18
Map #19

Wasco
Moro
97
206

Site Boundary
500ft Buffer
Detailed Map Extent
City/Town
County Boundary
Interstate Highway
Secondary Highway
Secondary Road

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map



1:80,000 WGS 1984 UTM Zone 10N

0 0.5 1 2 3 4 Miles

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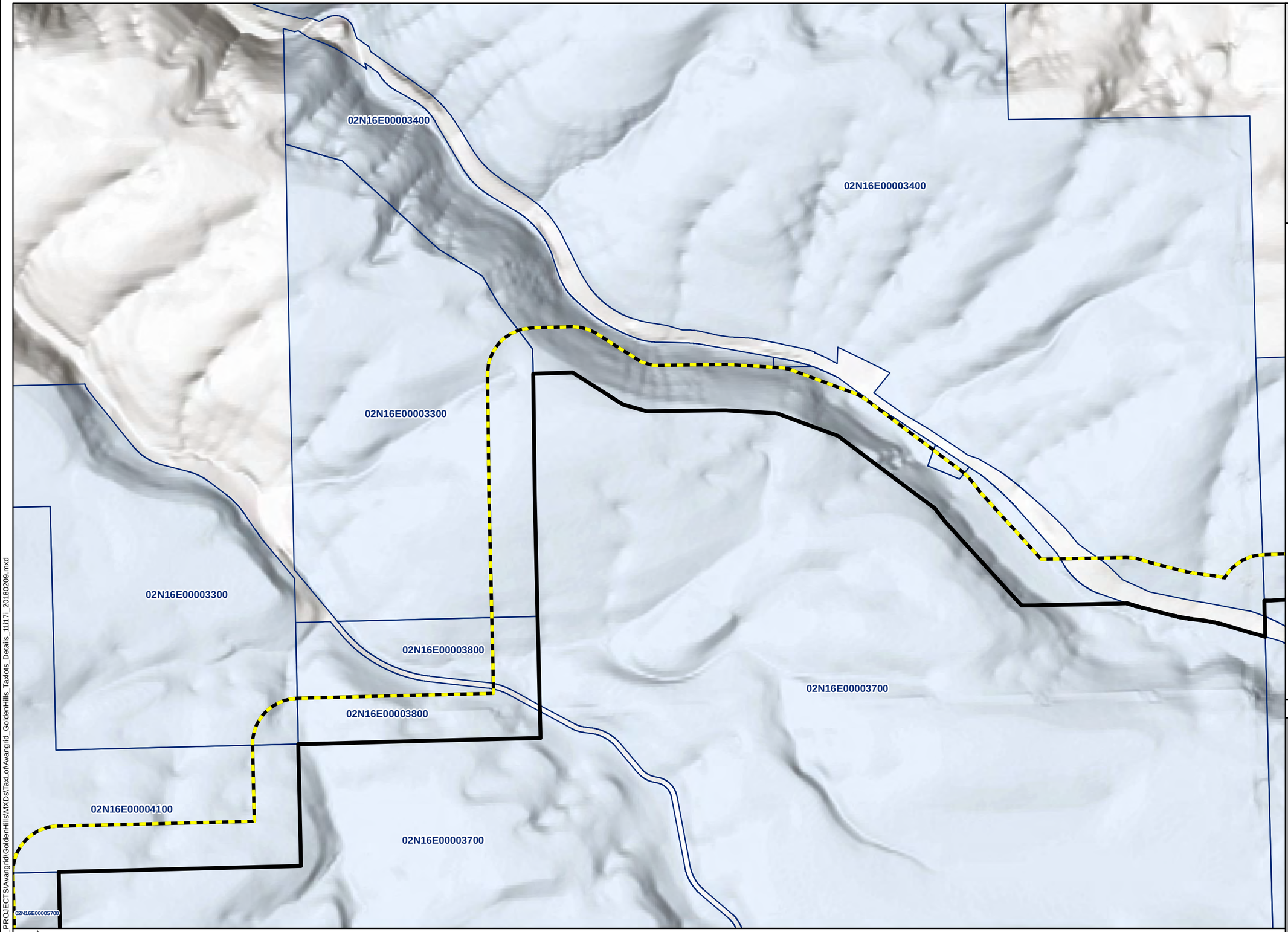
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #1
SHERMAN COUNTY, OR

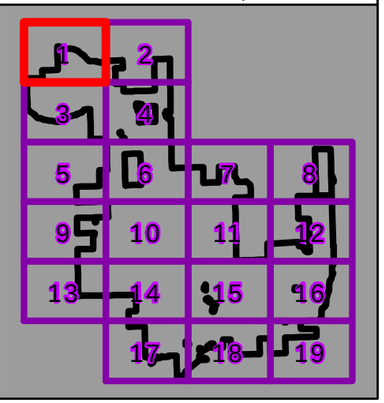


Site Boundary
500ft Buffer
Sherman County Tax Lots
County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



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0 0.25 0.5 1 Miles

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Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #2
SHERMAN COUNTY, OR

02N17E00004200

02N17E00006500

02N17E00006600

02N17E00006300

02N17E00006200

02N17E00006100

02N17E00004200

02N17E00006600

02N17E00004200

02N17E00006800

02N17E00006800

02N17E00007300

02N17E00006200

02N17E00007400

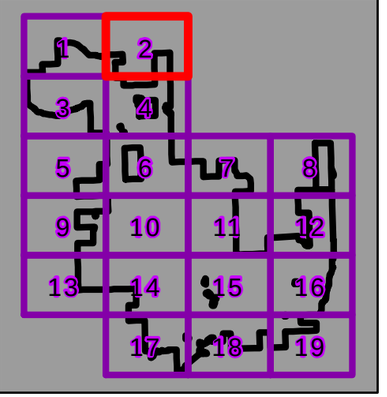
02N17E00007400

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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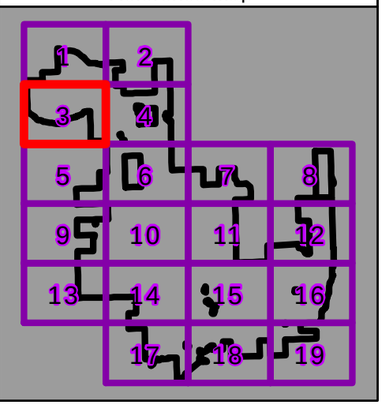
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #3
SHERMAN COUNTY, OR

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



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16E00005700
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01N16E0000802
01N16E0000801
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01N16E0000400
01N16E00002100

1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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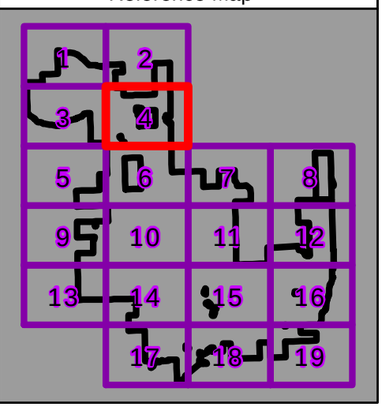
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #4
SHERMAN COUNTY, OR

Site Boundary
500ft Buffer
Sherman County Tax Lots
County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



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02N17E00006200
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02N17E00007500
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1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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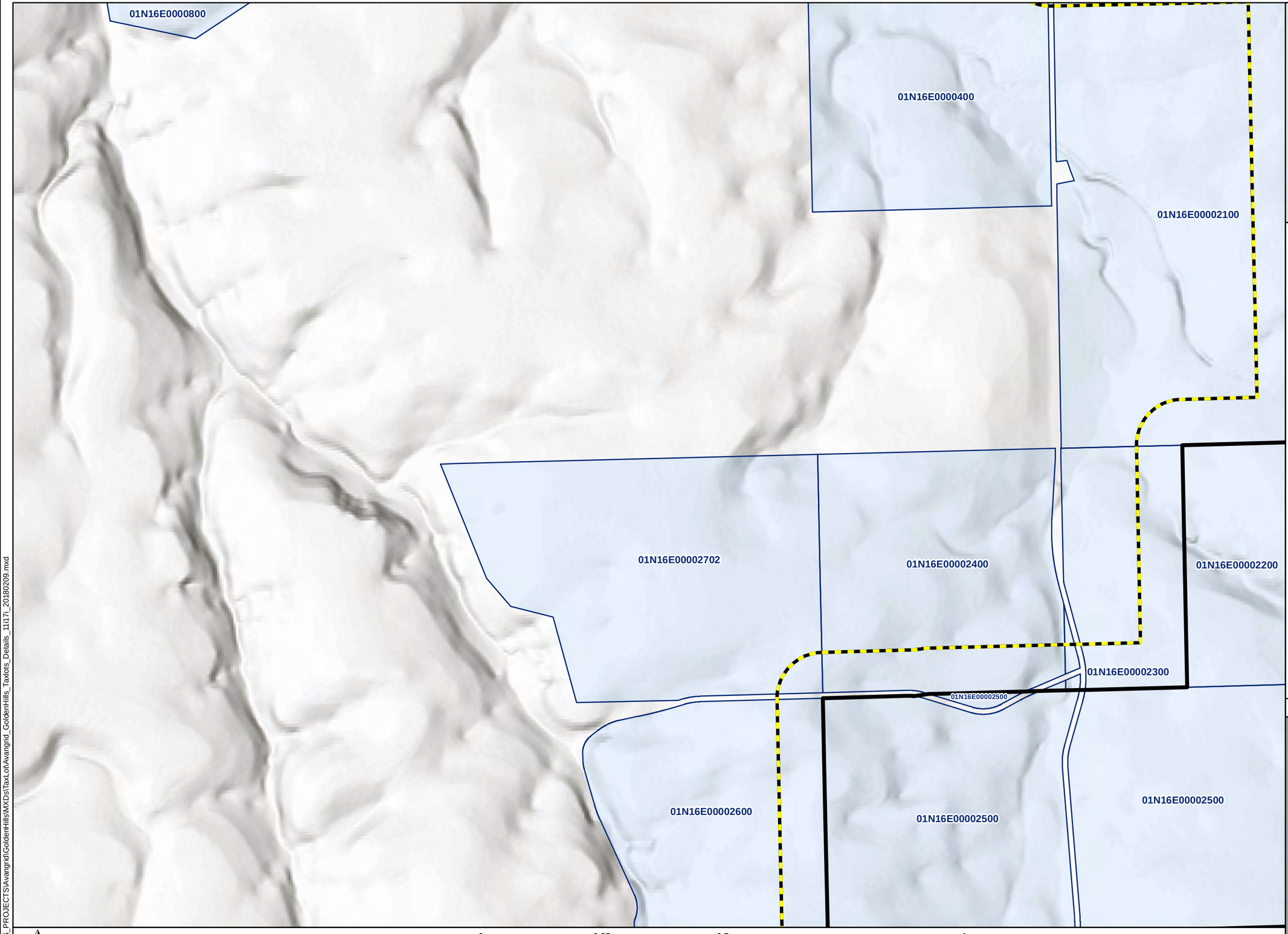
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #5
SHERMAN COUNTY, OR

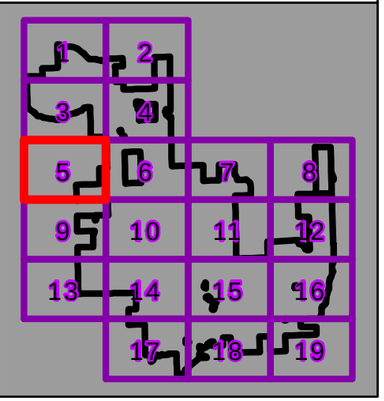


Site Boundary
500ft Buffer
Sherman County Tax Lots
County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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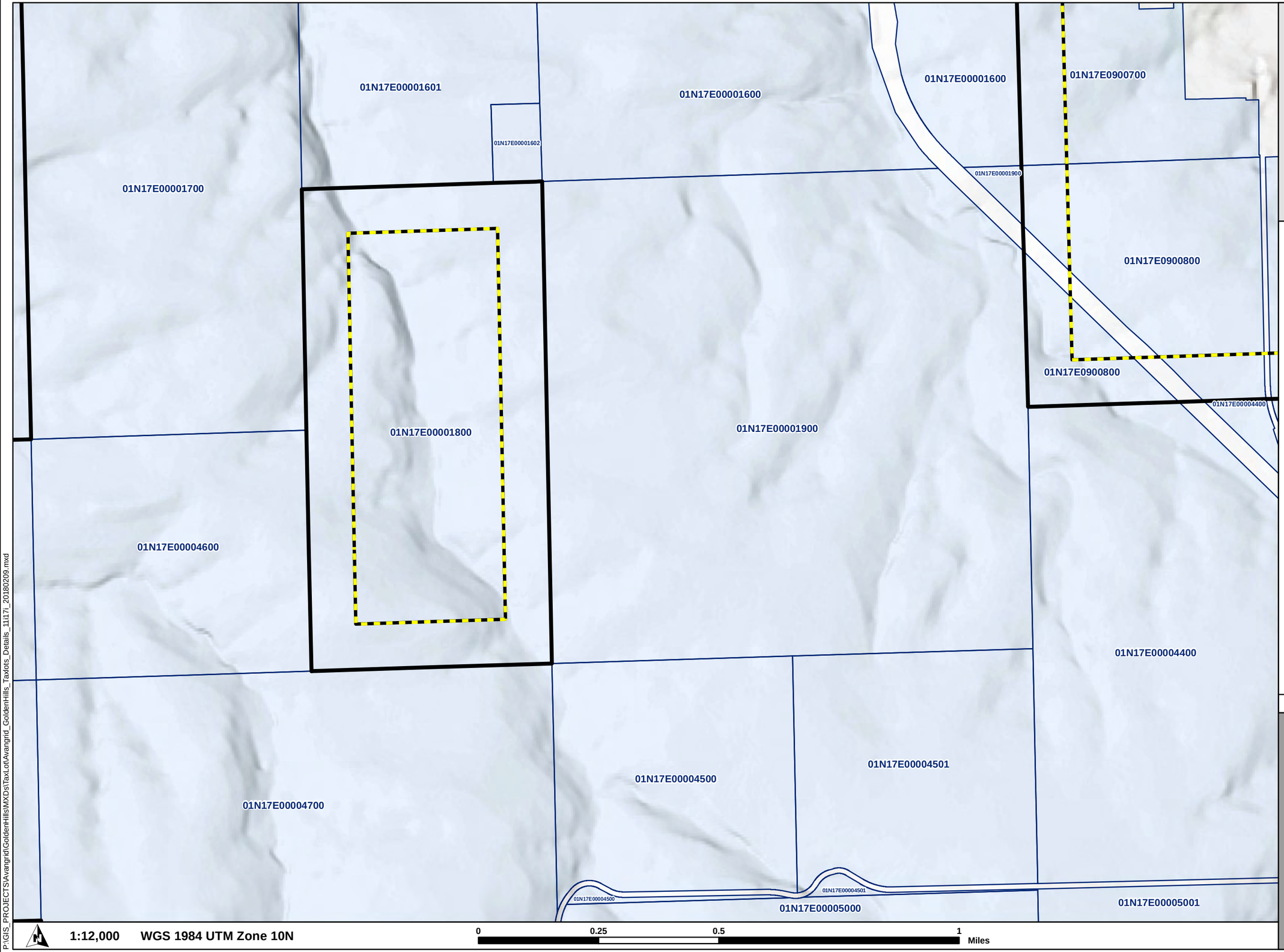

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1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

AVANGRID RENEWABLES

Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018) Map #6

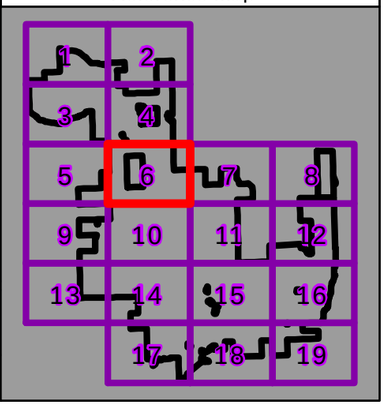
SHERMAN COUNTY, OR

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

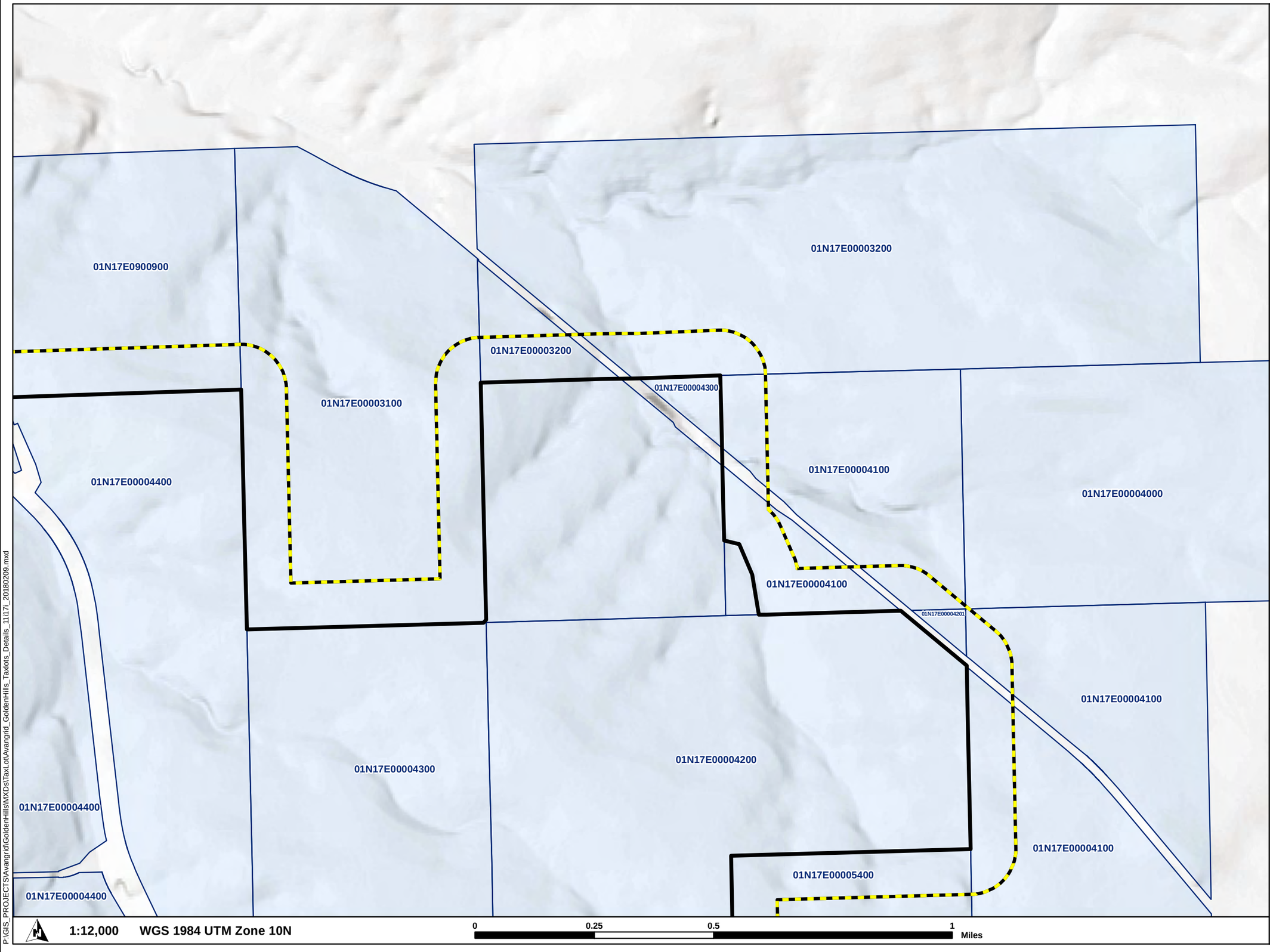
Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



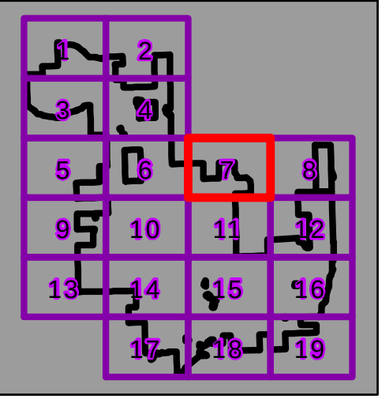
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #7
SHERMAN COUNTY, OR



- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map



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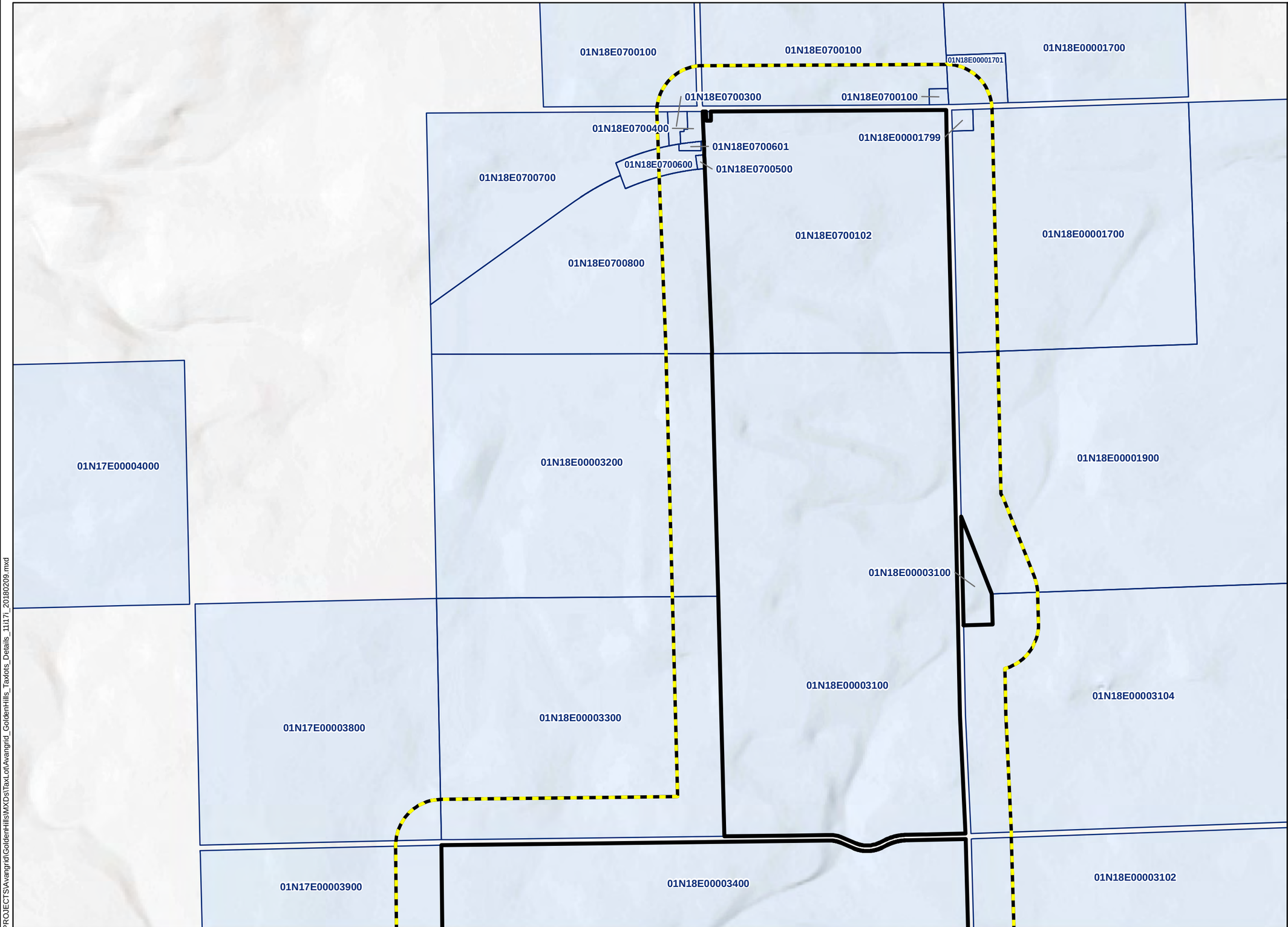
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

Map #8

SHERMAN COUNTY, OR



1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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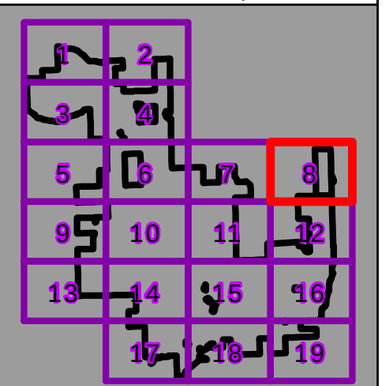
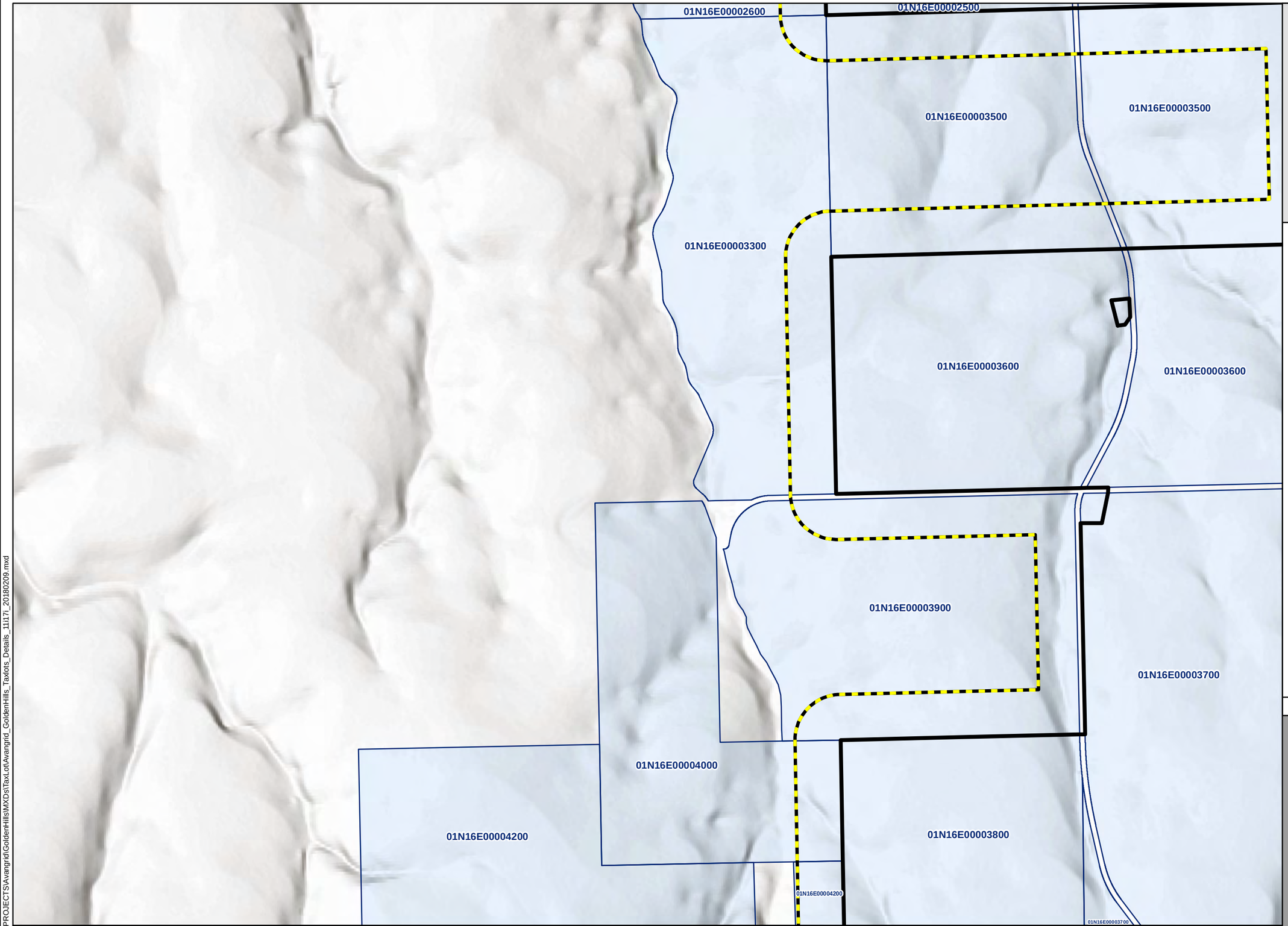
Site Boundary
500ft Buffer
Sherman County Tax Lots
County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map





Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

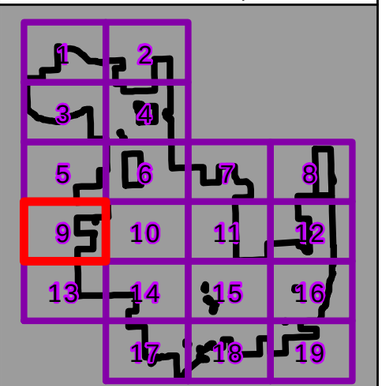
Map #9

SHERMAN COUNTY, OR

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map



1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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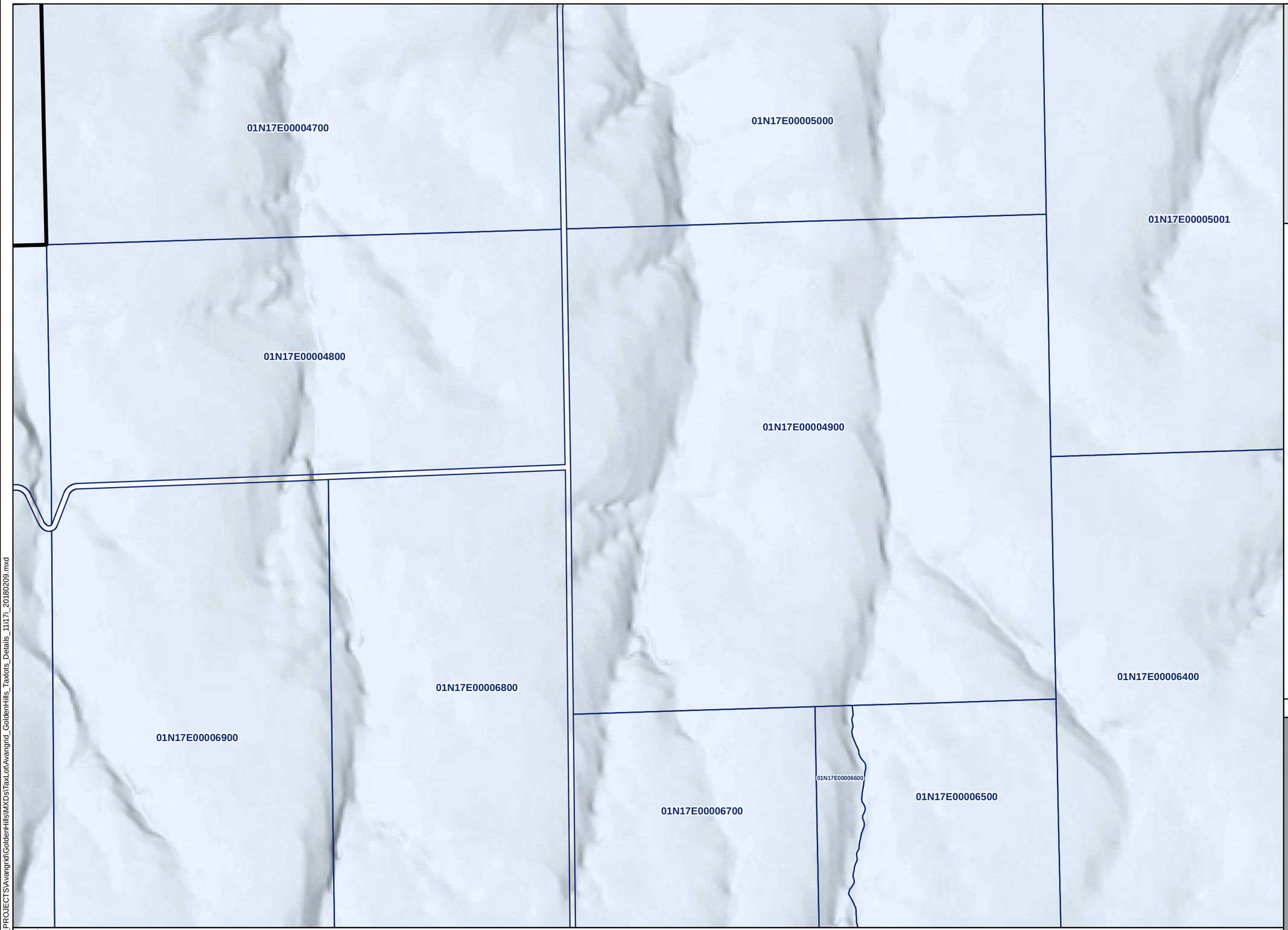


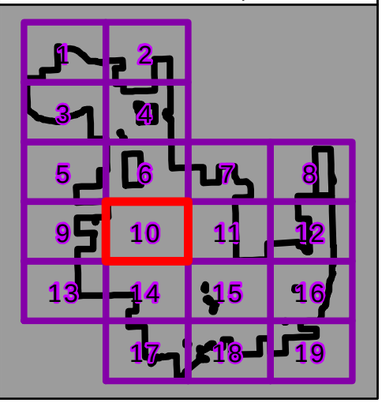
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018) Map #10

SHERMAN COUNTY, OR

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map



1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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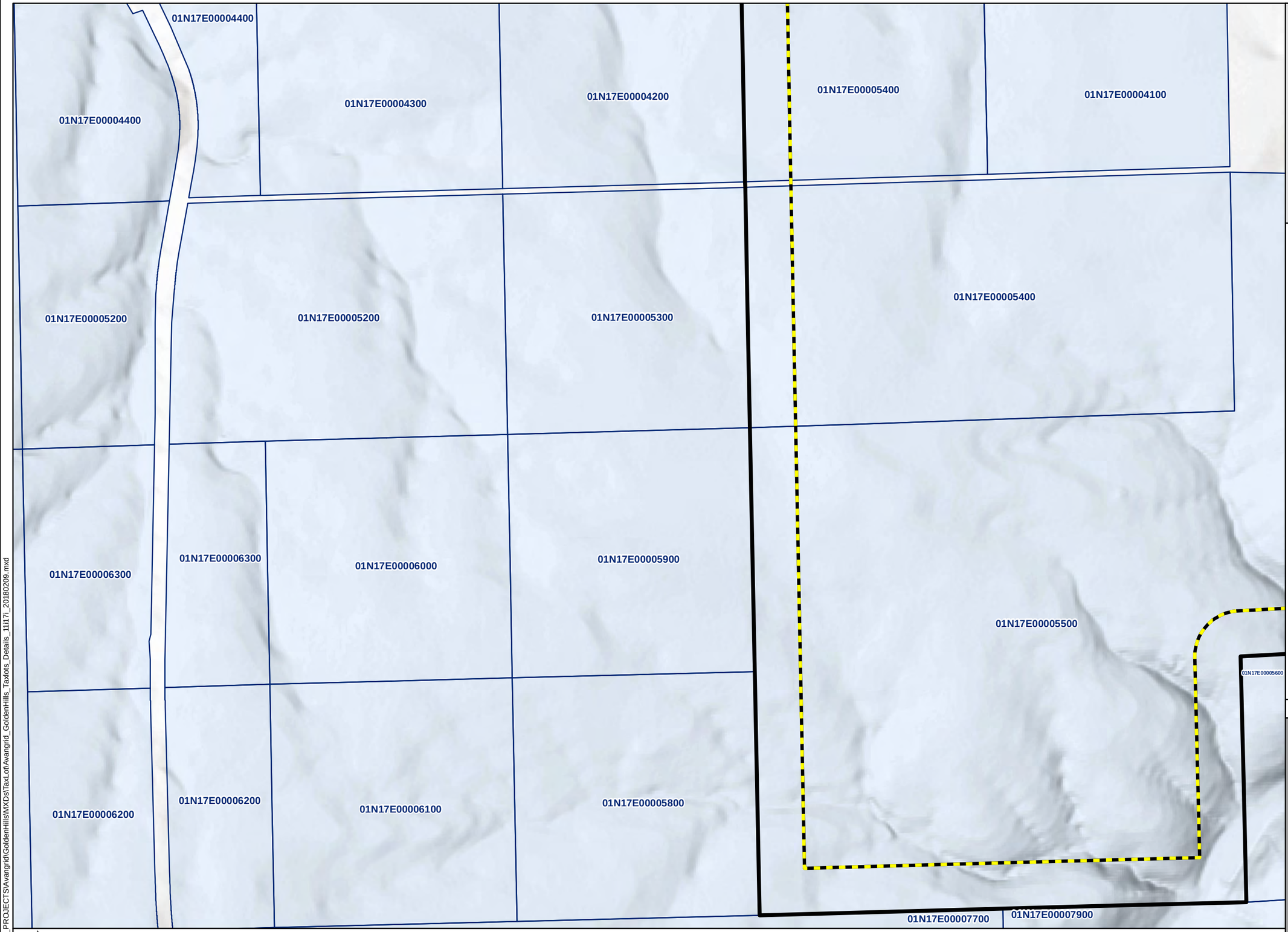
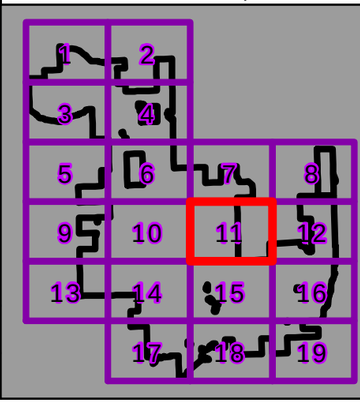
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #11
SHERMAN COUNTY, OR



Site Boundary
500ft Buffer
Sherman County Tax Lots
County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map



1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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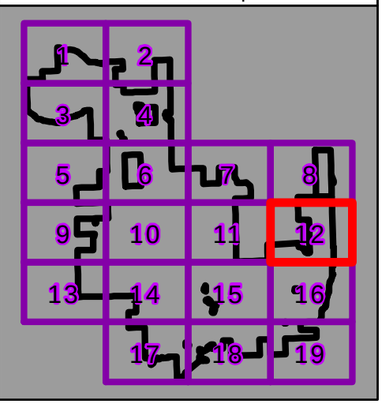
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #12
SHERMAN COUNTY, OR

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



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1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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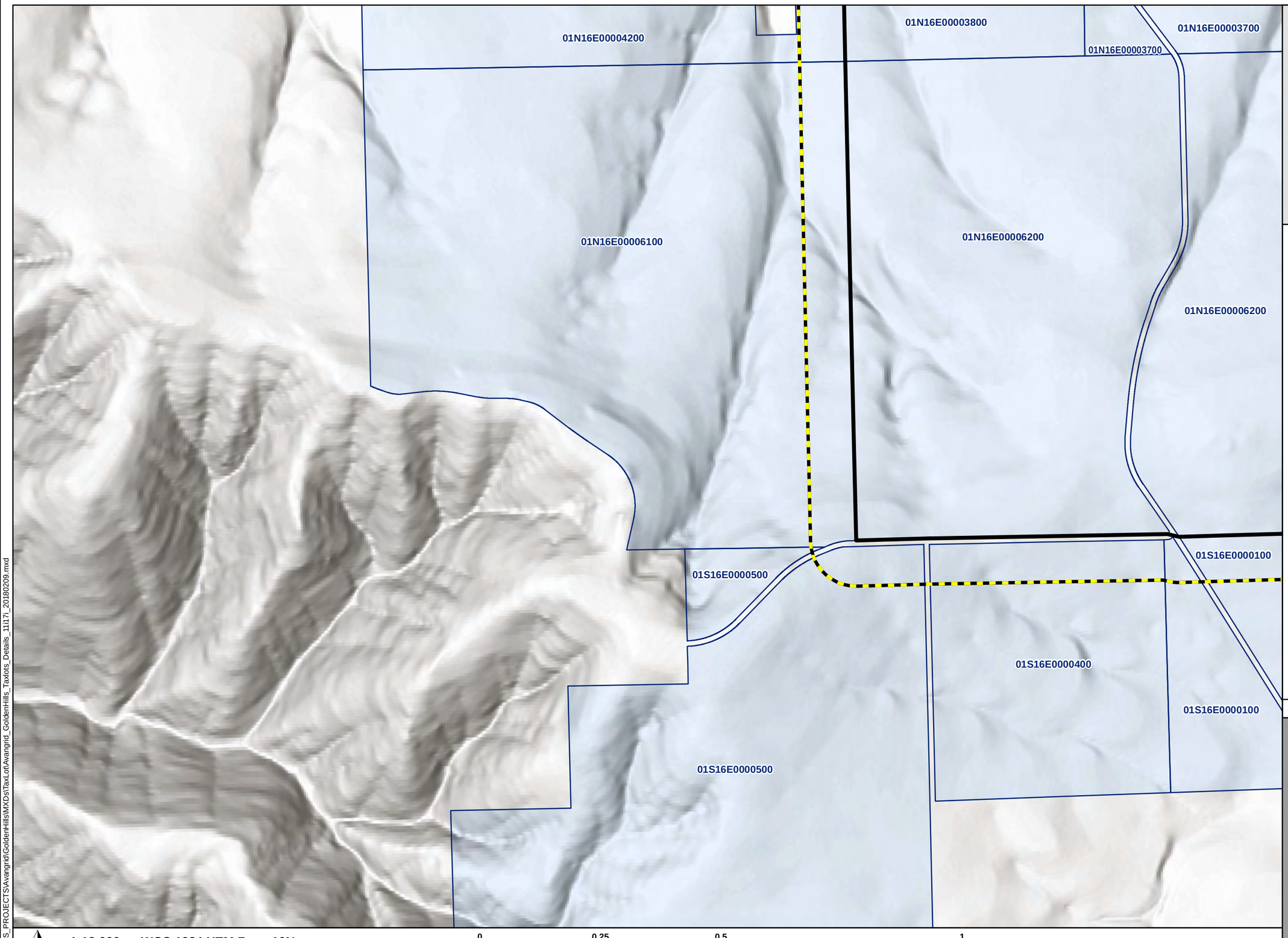


Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)

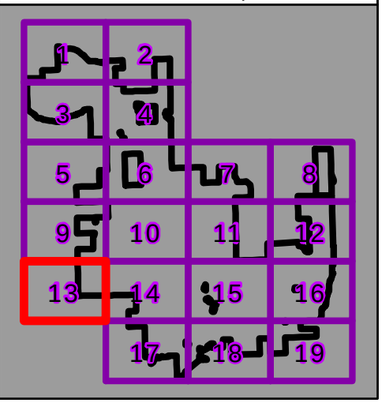
Map #13

SHERMAN COUNTY, OR

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map



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Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018) Map #14

SHERMAN COUNTY, OR

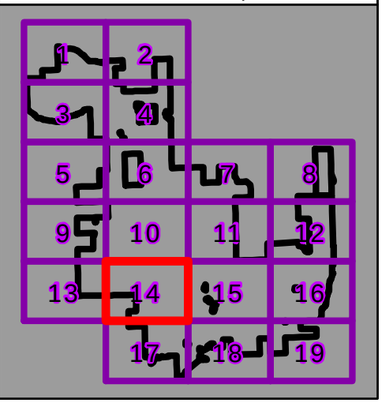
AVANGRID RENEWABLES

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



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1:12,000 WGS 1984 UTM Zone 10N

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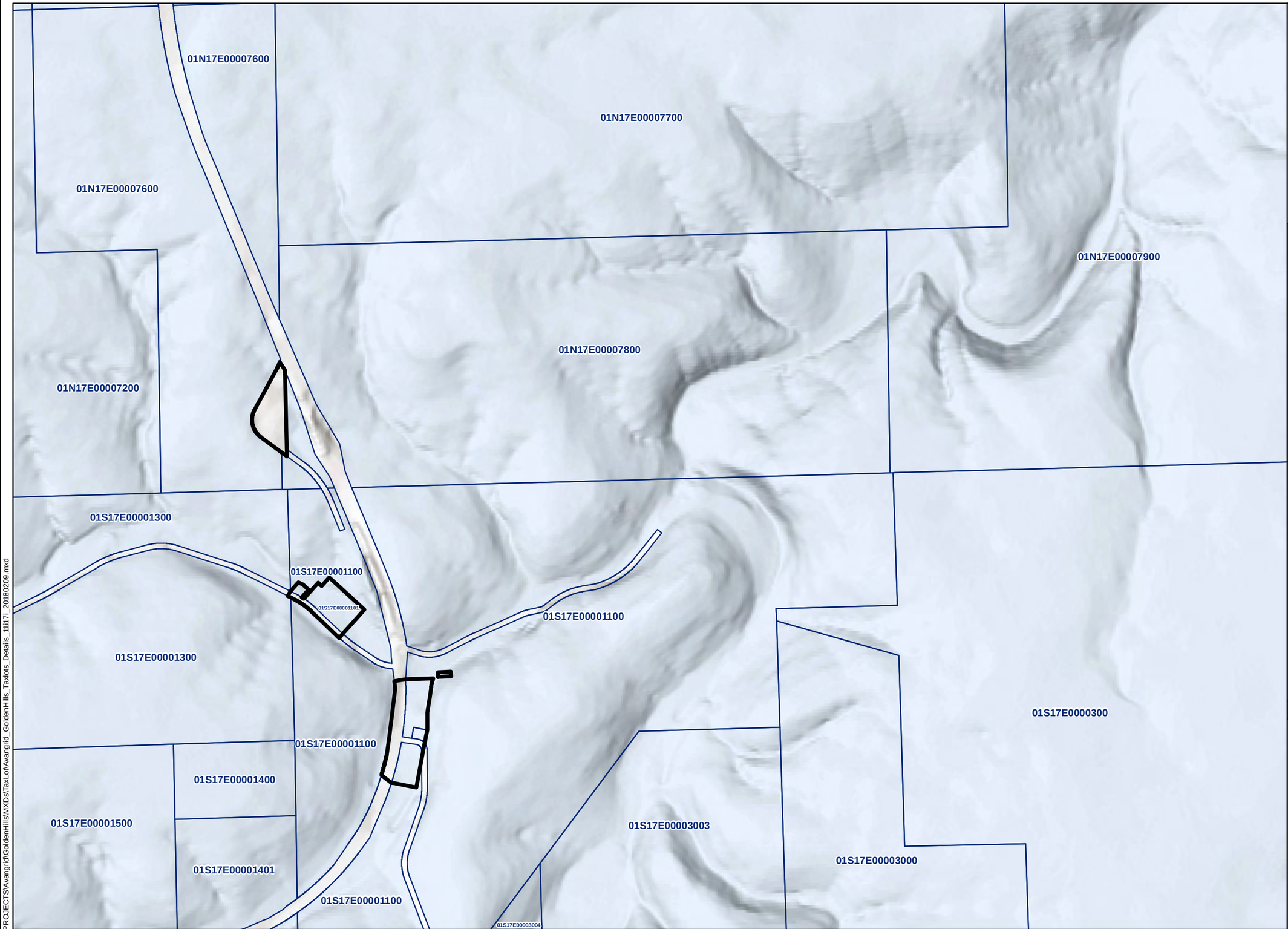
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #15
SHERMAN COUNTY, OR



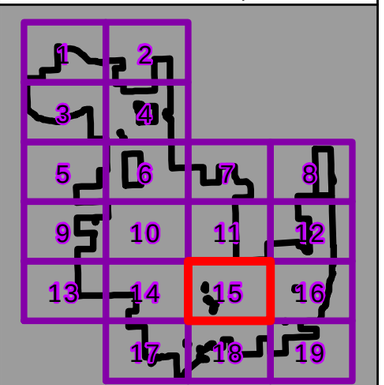
1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map



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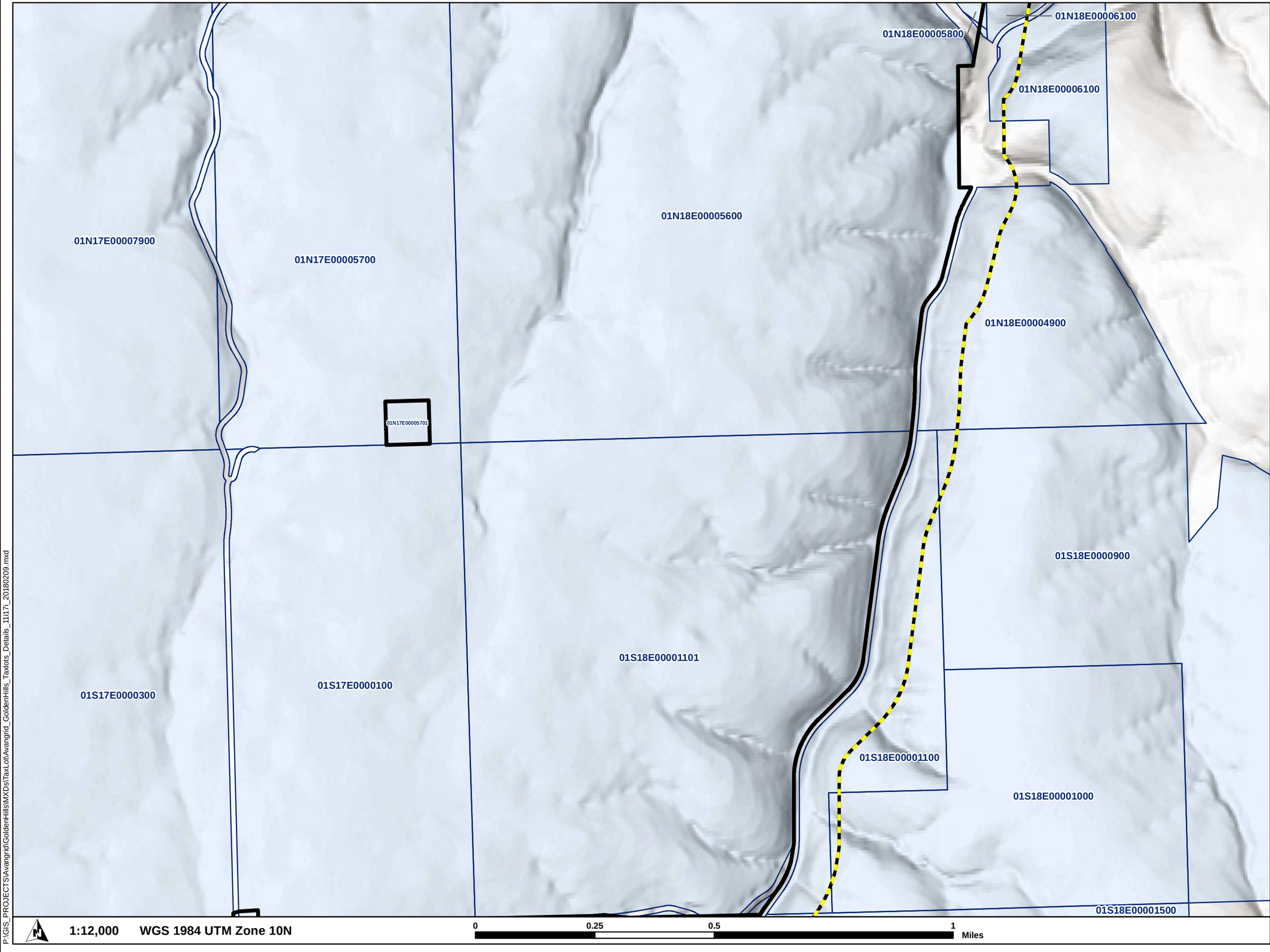
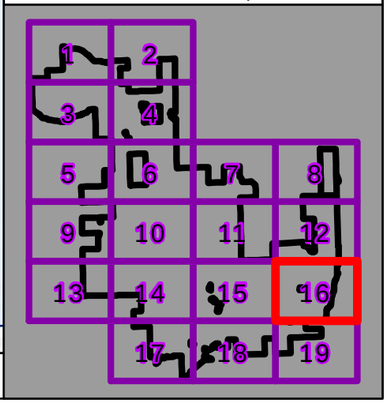
Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #16
SHERMAN COUNTY, OR



- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

Reference Map



1:12,000 WGS 1984 UTM Zone 10N

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Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #17
SHERMAN COUNTY, OR

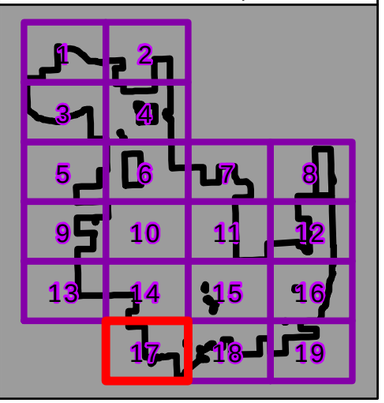
AVANGRID RENEWABLES

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



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1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018)
Map #18
SHERMAN COUNTY, OR

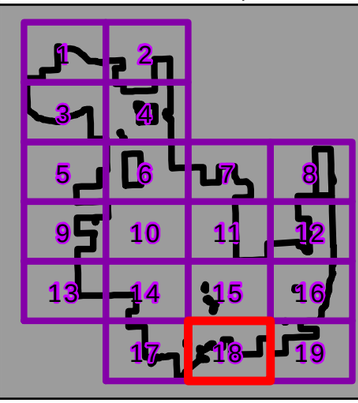
AVANGRID RENEWABLES

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



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1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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01S17E00003500
01S17E00003300
01S17E00003300
01S17E00003300

Golden Hills Wind Project Tax Lot Map of Property Owners within 500 feet of the Proposed Project Site Boundary (Data Obtained February 8, 2018) Map #19

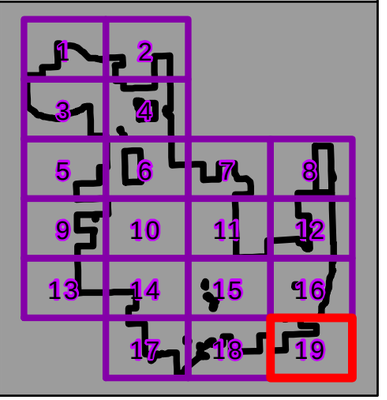
SHERMAN COUNTY, OR

- Site Boundary
- 500ft Buffer
- Sherman County Tax Lots
- County Boundary

Tetra Tech verified that there have been no updates to the county database since February 8, 2018 (personal communication, J.Solars June 26, 2018)

TETRA TECH

Reference Map



1:12,000 WGS 1984 UTM Zone 10N

0 0.25 0.5 1 Miles

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