

## **APPENDIX C: SEPA CHECKLIST**

**STATE ENVIRONMENTAL POLICY  
ACT (SEPA) CHECKLIST  
FOR THE  
HORSE HEAVEN WIND FARM**

## A. BACKGROUND

### 1. Name of proposed project, if applicable:

Horse Heaven Wind Farm (Project)

### 2. Name of applicant:

The Applicant is Horse Heaven Wind Farm, LLC and Scout Clean Energy LLC is the indirect owner of 100 percent of Horse Heaven Wind Farm, LLC.

### 3. Address and phone number of applicant and contact person:

Dave Kobus  
Horse Heaven Wind Farm, LLC  
5775 Flatiron Parkway, Suite 120  
Boulder, CO 80303  
Phone Number: (509) 947-3258

### 4. Date checklist prepared:

February 8, 2021

### 5. Agency requesting checklist:

Benton County Planning and Community Development Department as well as the State of Washington Energy Facility Site Evaluation Council (EFSEC, or Council).

- Note that the Applicant has prepared an EFSEC Application for Site Certification (ASC). The EFSEC ASC contains information and analysis that is relevant to this State Environmental Policy Act (SEPA) checklist, and this information and analysis are included in this SEPA checklist by reference.

### 6. Proposed timing or schedule (including phasing, if applicable):

The Project would likely be built using a “phased approach” for construction with distinct, fully functional portions of the Project potentially being built and implemented in a staggered manner. Environmental review would not be phased or segmented – a single, complete SEPA review would address all environmental issues for the fully constructed Project. Table 2.15-1 in the EFSEC ASC provides a general description of a potential phased construction approach that could be followed to achieve the Project’s targeted nameplate energy generating capacity of up to 1,150 megawatts (MW). The example provided in Table 2.15-1 and Section 2.15 of the EFSEC ASC is for illustrative purposes only and does not represent all possible phasing approaches that may be considered for the Project. This phased approach example was developed to describe the range of possible impacts that could occur as a result of the Project’s phased construction approach.

Table 2.15-2 in the EFSEC ASC identifies the major schedule milestones for the Project’s engineering and procurement, construction, and start-up. Assuming approval and authorization of the Project in December 2021, the Applicant anticipates beginning construction of the first phase of the Project in January 2023 and commercial operation by the end of 2023. A second phase of the Project would begin construction in January 2024 and begin operation by the end of

2024. The construction schedule would be revised according to the date of the actual approval of the Project and implementation of commercial agreements for power purchase.

More details regarding the schedule can be found in Section 2.15 of the EFSEC ASC.

**7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

The Applicant does not have any plans for future addition or expansion of the Project. The impacts of the Project in its entirety are addressed in this SEPA checklist as well as the EFSEC ASC.

**8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

Table A-1 lists the environmental studies and technical reports that have been prepared or will be prepared for this Project. All studies that are currently being developed will be made available to the appropriate agencies upon their completion.

**Table A-1. Environmental Studies and Technical Reports**

Environmental Resource (SEPA Checklist section)	Survey / Report	Reference	Extent of Area Addressed in Study/Report	Report Status
General	Wind Power GeoPlanner™ Microwave Study	Comsearch, Jan. 2020	Full site microwave beampath study and National Telecommunications and Information Administration review/approval of siting	Complete
General	Phase 1 Environmental Site Assessment (ESA)	Tetra Tech 2020a	East; identify recognized environmental conditions (RECs), historical RECs (HRECs), or controlled RECs (CRECs), in, on, or at a property	Complete
General	Phase 1 ESA	Tetra Tech 2020b	West; identify recognized RECs, HRECs, or CRECs, in, on, or at a property	Complete
General	Phase 1 ESA	Tetra Tech 2020c	West; identify recognized RECs, HRECs, or CRECs, in, on, or at a property	Complete

<b>Environmental Resource (SEPA Checklist section)</b>	<b>Survey / Report</b>	<b>Reference</b>	<b>Extent of Area Addressed in Study/Report</b>	<b>Report Status</b>
General	Obstruction Evaluation; Capitol Airspace Group	CAG 2019a	East; airspace analysis to identify obstacle clearance surfaces established by Federal Aviation Administration (FAA) and height constraints for wind turbine locations	Complete
General	Obstruction Evaluation; Capitol Airspace Group	CAG 2019b	West; airspace analysis to identify obstacle clearance surfaces established by FAA and height constraints for wind turbine locations	Complete
General	Obstruction Evaluation & Airspace Analysis; Capitol Airspace Group	CAG 2020a	All; airspace analysis to identify obstacle clearance surfaces established by FAA and height constraints for wind turbine locations	Complete
General	Air Traffic Flow Analysis; Capitol Airspace Group	CAG 2020b	Determine number of operations potentially affected by airspace changes required to accommodate wind development at each proposed turbine location	Complete
General	Preliminary Hydrology Study	Westwood 2020a	Describes the hydrology of Project, Federal Emergency Management Agency floodplain identification, and any impacts that the hydrology may play into design	Complete
General	Pasco Radar and Navigation Aid Screening Analysis	Westslope Consulting 2020	Radar Line-Of-Site analysis of Project turbine locations on all radar sources	Complete
Earth	Preliminary Geotechnical Investigation Report	Westwood 2020b	Soil borings conducted at 16 proposed Turbine locations	Complete
Earth	Final Geotechnical Investigation Report	N/A	Full site subsurface condition testing at all turbine locations, Project substations, solar arrays, and BESS	In development ( <i>anticipated prior to construction</i> )

<b>Environmental Resource (SEPA Checklist section)</b>	<b>Survey / Report</b>	<b>Reference</b>	<b>Extent of Area Addressed in Study/Report</b>	<b>Report Status</b>
Wetlands	Wetlands and Other Waters Delineation Report for the Horse Heaven Wind Farm Project	Tetra Tech 2020d	Surveys conducted at the Horse Heaven Project area, excluding the portions of the area encompassed by the Washington Department of Natural Resources (DNR) lands.	Complete
Wetlands	Wetlands and Other Waters Delineation Report for the Horse Heaven Wind Farm Project (Report 2)	N/A	Surveys will be conducted on the DNR lands encompassed by the Horse Heaven Project area that were not surveyed in the previous efforts.	In development ( <i>anticipated March 2021</i> )
Plants	Botany and Habitat Survey Report for the Horse Heaven Wind Farm	Tetra Tech 2021a	Surveys conducted at 44 proposed Turbine locations that are sited in areas mapped as native habitat.	Complete
Plants	Botany and Habitat Survey Report for the Horse Heaven Wind Farm Project (Report 2)	N/A	Surveys will be conducted for habitat and rare plants within the Solar Siting Areas	In development ( <i>anticipated June 2021</i> )
Plants	Revegetation and Noxious Weed Management Plan	Tetra Tech 2021b	Entire Project area	Complete
Plants and Animals	Site Characterization Study for the Badger Canyon Wind Project	Chatfield and Thompson 2018a	Surveys conducted in the western portion of the Project area	Complete
Plants and Animals	Site Characterization Study for the Four Mile Wind Project	Chatfield and Thompson 2018b	Surveys conducted in the eastern portion of the Project area	Complete
Animals	Avian Use and Raptor Nest Survey Report for the Horse Heaven Wind Project	Jansen et al. 2019	Surveys conducted within the Horse Heave Project area	Complete
Animals	Raptor Nest Survey Report for the proposed Horse Heaven Wind Project	Jansen 2017	Surveys conducted in the western portion of the Project area	Complete
Animals	Results of the 2019 Raptor Nest Survey for the Four Mile Wind Project	Chatfield et al. 2019a	Surveys conducted in the eastern portion of the Project area	Complete

<b>Environmental Resource (SEPA Checklist section)</b>	<b>Survey / Report</b>	<b>Reference</b>	<b>Extent of Area Addressed in Study/Report</b>	<b>Report Status</b>
Animals	Results of avian use surveys at the Four Mile Wind Project Study Area for the period June 2018 through February 2019 (summer, fall, and winter)	Chatfield 2019a	Surveys conducted in the eastern portion of the Project area	Complete
Animals	Results of summer 2018 avian use surveys at the Four Mile Wind Project	Chatfield 2018	Surveys conducted in the eastern portion of the Project area	Complete
Animals	Results of summer and fall 2018 avian use surveys at the Four Mile Wind Project Study Area	Chatfield 2019b	Surveys conducted in the eastern portion of the Project area	Complete
Animals	Results of the 2019 Raptor Nest Survey for the Badger Canyon Wind Project	Chatfield et al. 2019b	Surveys conducted in the western portion of the Project area	Complete
Animals	Results of avian use surveys at the Badger Canyon Wind Project Study Area for the period June 2018 through February 2019 (summer, fall, and winter)	Chatfield 2019c	Surveys conducted in the western portion of the Project area	Complete
Animals	Avian Use Surveys for the Four Mile Wind Project	Chatfield et al. 2019c	Surveys conducted in the eastern portion of the Project area	Complete
Animals	Avian Use Surveys at the Badger Canyon Wind Project	Chatfield et al. 2019d	Surveys conducted in the western portion of the Project area	Complete
Animals	Bat Acoustic Survey Report (2017-2019)	Hays et al. 2019	Surveys conducted in the western portion of the Project area	Complete
Animals	Wildlife Survey Report for the Horse Heaven Wind Project (2017-2018)	Jansen and Brown 2018	Surveys conducted in the western portion of the Project area	Complete
Animals	Summer and fall 2018 Avian Use Surveys for the Four Mile Wind Project (2018)	Chatfield 2019d	Surveys conducted in the eastern portion of the Project area	Complete

Environmental Resource (SEPA Checklist section)	Survey / Report	Reference	Extent of Area Addressed in Study/Report	Report Status
Animals	Results of the 2018 Townsend's ground squirrel ( <i>Urocitellus townsendii</i> ) habitat assessment for the proposed substation at the Four Mile Wind Project (2018)	Chatfield and Brown 2018	Surveys conducted in the eastern portion of the Project area	Complete
Environmental Health	Shadow Flicker Analysis Memorandum	Tetra Tech 2021c	Entire Project area	Complete
Environmental Health	Glare Analysis Report	Tetra Tech 2021d	Entire Project area	Complete
Socioeconomic Effects	Economic Impact Assessment of the Horse Heaven Wind Project	Tetra Tech 2021e	Benton and Franklin Counties	Complete
Cultural / Historic	Cultural Resources Investigations on Washington Department of Natural Resources Land for the Horse Heaven Wind Farm Project, Benton County, Washington	HRA 2020a	Cultural resources investigations on the portions of the Project that are situated on DNR land; excluding the Solar Siting Areas.	Complete
Cultural / Historic	Cultural Resources Investigations on Washington Department of Natural Resources Land for the Horse Heaven Wind Farm Project, Benton County, Washington-Addendum One	HRA 2020b	Additional cultural resource surveys on portions of the Project on DNR land; excluding the Solar Siting Areas.	Complete
Cultural / Historic	Cultural Resources Investigations on Privately Owned Land for the Horse Heaven Wind Farm Project, Benton County, Washington	HRA 2020c	Surveys conducted at the Project area; excluding the Solar Siting Areas.	Complete
Cultural / Historic	Cultural Resources Investigations on Privately Owned Land for the Horse Heaven Wind and Solar Farm Project, Benton County, Washington (Report 2)	N/A	Surveys will be conducted in the Solar Siting Areas encompassed by the Project that were not surveyed in the previous efforts.	In development ( <i>anticipated March 2021</i> )



**9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

The Applicant is not aware of any other pending proposals or unrelated government approvals (i.e., approvals not directly related to this Project) that could affect the Project area.

**10. List any government approvals or permits that will be needed for your proposal, if known.**

Note that a detailed list of pertinent federal, state, and local permits, requirements, and authorizations are found in Section 2.23 of the EFSEC ASC. Specifically, Table 2.23-1 lists pertinent federal, state, and local permits, requirements, and authorizations pursuant to Washington Administrative Code (WAC) 463-60-297 that would apply to the Project if it were not under Council jurisdiction. The following summarizes the information provided in the EFSEC ASC.

Federal:

- Federal Aviation Administration (FAA): Notice of Proposed Construction or Alteration, and a Determination of No Hazard by the FAA; will include input and review by the Department of Defense
- Bonneville Power Administration (BPA): Interconnection Agreement/National Environmental Policy Act Review
- U.S. Fish and Wildlife Services (USFWS): Migratory Bird Treaty Act Consultation; and Bald and Golden Eagle Protection Act Coordination

State:

- Washington Department of (Ecology): Construction Stormwater General Permit, Sand and Gravel General Permit
- Washington Department of Natural Resources (DNR): Authorization to Use State-owned Lands
- Washington Department of Fish and Wildlife (WDFW): State Protected Species Consultation
- Washington Department of Transportation (WSDOT): Access Permit, Utility Permit, Oversize and Overweight Permit
- Washington Department of Labor and Industries: Electrical Construction Permit
- Washington Department of Archaeology and Historic Preservation (DAHP): Archaeological Sites and Resources, Archaeological Site Alteration and Excavation Permit
- Washington SEPA: EFSEC Permit
- Benton County Clean Air Agency: New Source Review, Portable Air Containment Sources - Notice of Construction, and Notice of Intent

County:

- Benton County Planning and Building Development: Building Permits, Special Permit – General, Road Approach Permit, Oversize Load Permit, Right-of-Way Encroachment Permit, and Franchise Agreement.

**11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

A complete and detailed Project description is provided in Chapter 2 of the EFSEC ASC. In summary, the Project is a renewable energy generation facility that would have a nameplate energy generating capacity of up to 1,150 MW for a combination of wind and solar facilities as well as a battery storage facility. The number of wind turbine generators (Turbines) and extent of solar arrays that would be used for the Project to generate this energy would depend on the final Turbine models and/or solar modules selected as well as the final array layout options selected. The ASC is seeking permitting authorization for up to 244 Turbine locations and the maximum extent of solar arrays described in the EFSEC ASC (see Table 2.3-1 in the EFSEC ASC), with all possible Turbine locations and solar array extent cumulatively reviewed in the analysis of potential resource impacts, although fewer Turbines and solar arrays may be constructed for this Project. The final layout of Turbines and solar arrays would be determined prior to construction. The Applicant has evaluated impacts for the proposed solar array considering different technology options, while limiting the total area to be occupied by the solar arrays to no more than approximately 6,570 acres with a nameplate generating capacity of up to 800 MW.

Assessing the widest range of possible locations and buildouts will aid in siting flexibility during the final design process while allowing consideration of the full range of potential Project impacts. This approach will allow the Applicant to select the most appropriate system for generating and storing energy available at the time all of the equipment is acquired, so long as the system selected does not result in greater impact than allowed for in the final authorizations and permits, and that it satisfies all pre-construction conditions of the final authorizations and permits.

Power generated by the Project would be transmitted to existing BPA transmission lines via two interconnections. Up to 650 MW of power could interconnect to the planned BPA 230 kilovolt (kV) Bofer Canyon substation on Beck Road. Up to 500 MW of power could interconnect to the planned BPA 500-kV Webber Canyon substation on Sellards Road. Other Project components would include a battery storage facility, underground and limited overhead electrical collection lines, underground communication lines, new project substations, access roads, operation and maintenance (O&M) facilities, meteorological towers, control houses, and temporary construction yards.

More details regarding the various components of the Project can be found in Section 2.3 of the EFSEC ASC.

**12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should**

**submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The Project is located in unincorporated Benton County, Washington, within the Horse Heaven Hills area (see Figure 2.1-1 in Section 2 of the EFSEC ASC), which is an anticline ridge of the Yakima Folds within the larger Columbia Plateau Ecoregion (Clarke and Bryce 1997). At its closest point, the Project is located approximately 4 miles south/southwest of the city of Kennewick and the larger Tri-Cities urban area, along the Columbia River.

The legal description of the Project area is provided in Section 2.2 of the EFSEC ASC.

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

Note that a detailed analysis of soil, geology, and “Earth” related topics is found in Section 3.1 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

#### a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other \_\_\_\_\_

#### b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope in the Project Lease Boundary is 152 percent (approximately 50 degrees). The steepest slope in the Micrositing Corridor is 102 percent (approximately 46 degrees); however, Project facilities would not be built on slopes greater than about 27 percent (approximately 15 degrees).

#### c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The soils and soil classifications are listed in Table 3.1-1 of the EFSEC ASC. In summary, the majority of soils (about 92 percent) in the Project Lease Boundary are Ritzville silt loam. The remainder of soils in the Project Lease Boundary are silt loams, fine sandy loams, very fine sandy loams, stony fine sandy loams, and very stony silt loams, all with an approximate thickness of 7 feet. There are approximately 6,869 acres of agricultural land of long-term commercial significance that would be permanently impacted (i.e., lost) as a result of the Project.

#### d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There are two Quaternary mass-wasting deposits (i.e., landslides) identified just within the northern edge of the Project Lease Boundary; however, these are not located within the Micrositing Corridors or Solar Siting Areas, and no Project components would be placed within these known landslide areas.

The Project Lease Boundary is located in areas identified as susceptible to erosion, landslides, and bluff failures that may require specialized engineering to develop the area. According to Benton County Critical Area Ordinance – Geologically Hazardous Areas Map (Benton County 2018), there are areas/drainages identified as combined erosion hazard and steep slopes (i.e., 15 percent), areas/drainages with steep slopes (i.e., 15 percent), historic landslides, and areas with moderate to high potential for liquefaction within the Project Lease Boundary (EFSEC ASC Figure 3.1-5).

It is the intent of the Applicant that Project components avoid geological hazards (i.e., that all Project components would be sited outside of areas that contain geological hazards); therefore, no impacts are expected to occur due to combined erosion hazards and steep slopes, landslides, or liquefaction.

**e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.**

The primary impacts from construction would involve approximately 9,826 acres of earth-disturbing activities (approximately 6,869 acres of permanent disturbance and 2,957 acres of temporary disturbance; see Table 2.1-1 in EFSEC ASC). Activities that require surface-disturbance are discussed in EFSEC ASC Section 2.3, and include construction/erection of the turbine tower foundations, solar array foundations, and battery energy storage system (BESS); trenching for electrical collection system and supervisory control and data acquisition (SCADA); and development of the Project substations, transmission lines, access roads, O&M facilities, meteorological towers, temporary laydown yards, and crane paths. These activities would impact the topography of the area to some extent; however, the areal footprint of the grading and total volume of material excavated will depend on the final design(s) of the facilities. Specific fill and grade volumes and locations would be determined as engineering design advances, and detailed grading drawings and cut/fill quantities would be submitted to the County as part of the building permit application submittals. It is anticipated that no fill would be brought in from offsite.

**f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

Construction activities can introduce the potential for increased erosion due to soil disturbance, loss of vegetation (exposure of soil), compaction, and changes to surface drainage patterns. Erosion can be caused by increasing exposure to wind or water. Wind erosion is influenced by the wind intensity, vegetative cover, soil texture, soil moisture, grain size of unprotected soil surface, topography, and the frequency of soil disturbance. Potential impacts from erosion will be minimal and will be addressed through the implementation of mitigation measures (described in Section 3.1 of the EFSEC ASC) such as the compliance requirement of the State Water Pollution Control Act with the National Pollutant Discharge Elimination System (NPDES), which would be handled through a Construction Stormwater General Permit from Ecology. The NPDES permit will be required as well as an Erosion and Sediment Control Plan and a Storm Water Pollution Prevention Plan (SWPPP).

**g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

The primary impacts from construction would involve approximately 6,869 acres of permanent disturbance; see Table 2.1-1 in EFSEC ASC). This would be approximately 9.5 percent of the 72,428-acre Project Lease Boundary.

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

Please see response to question “f” above; mitigation measures are described in Section 3.1.3 of the EFSEC ASC.

## 2. Air

Note that a detailed analysis of air quality and potential Project-related emissions is found in Section 3.2 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

**a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.**

The primary sources of air pollution generated by construction of the Project would be vehicle exhaust emissions and fugitive dust particles from disturbed soils that become airborne. A dust control plan that identifies management practices and operational procedures to effectively control fugitive dust emissions will be maintained and provided to the Benton County Clean Air Agency (BCAA) prior to construction per BCAA Regulation 1 Section 4.02.E.

Combustion emissions and fugitive dust generated by vehicles traveling on Project access roads to perform standard and routine O&M functions would be the only emissions expected during O&M. The volume of O&M vehicle traffic would be very low; therefore, quantities of potential emissions generated by these vehicles would be very low, intermittent, and localized.

Mitigation measures are described in Section 3.2.3 of the EFSEC ASC.

**b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

No off-site sources of emissions or odor are expected.

**c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

Please see response to question “a” above; a Fugitive Dust Control Plan will be prepared as part of the Project. Mitigation measures for this Project are described in Section 3.2.3 of the EFSEC ASC.

### 3. Water

Note that a detailed analysis of water quality and potential Project-related impacts to this resource is found in Section 3.3 of the EFSEC ASC, while a detailed analysis of wetlands is provided in Section 3.5 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

#### a. Surface Water:

- 1) **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Review of National Wetlands Inventory (NWI) data show no wetlands or standing waters within the Project Lease Boundary (USFWS 2018; EFSEC ASC Figure 3.3-1). Furthermore, there are no perennial streams identified within the Project Lease Boundary (USGS 2017). However, two intermittent streams (seasonal streams) were mapped in the Project Lease Boundary during wetland and water delineations (Tetra Tech 2020d). All surface waters flow into the nearby Yakima and Columbia Rivers.

- 2) **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

Project features, such as collection lines, roads, crane paths, and transmission lines, will have temporary impacts on 19 of the 31 mapped ephemeral stream channels and both of the two mapped intermittent streams; and permanent impacts on one ephemeral stream within the Ordinary High Water Level (OHWL). If these impacts cannot be avoided and work in the OHWL will occur, a Joint Aquatic Resources Permit Application (JARPA) would be required, which would include a Hydraulic Project Approval (HPA). The JARPA would be developed upon final design of the project. Indirect impacts to surface water quality would be minimal, if any, due to mitigation measures.

- 3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

No fill would occur in wetlands or other surface waters.

- 4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No surface water withdrawals or diversions would be required for the Project.

- 5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

There are approximately 148.9 acres of 100 year floodplains (also referred to as Frequently Flooded Areas by Benton County code), which are associated with Critical Aquifer Recharge Areas (CARAs) as defined by Benton County, within the Project Lease Boundary (EFSEC ASC Figure 3.3-2).

The Project would have temporary impacts to approximately 0.8 acre of 100 year floodplains/Frequently Flooded Areas, which are associated with CARAs. No Project components would be placed in 100 year flood zones/Frequently Flooded Areas. Impacts to

floodplains would be temporary and minimal due to the mitigation measures discussed in Section 3.2 of the EFSEC ASC.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No waste materials would be discharged to surface waters.

**b. Ground Water:**

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

No groundwater would be withdrawn and used onsite, nor is the Project expected to cause any discharges to groundwater.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

Project operations would require water for the limited needs of the O&M facilities, and for solar panel washing. There would be no industrial wastewater stream from the Project. Wastewater discharge would come from the O&M facilities, and would be discharged to an on-site septic system. The anticipated use is expected to be less than 5,000 gallons per day for kitchen and bathroom use. In addition, solar modules would be washed approximately once per year during operations. An estimated 2,025,000 gallons of water per year would be required for solar panel washing.

**c. Water runoff (including stormwater):**

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

Runoff on the site would come from rainfall and snowstorm events in the Project Lease Boundary. Given the moderate permeability and depth of the soils on site (see Section 3.1 of the EFSEC ASC), surface water is anticipated to infiltrate into the ground. Infiltrated water would ultimately drain into the Columbia River on both the northeast and southwest sides of Horse Heaven Hills northwest trending anticline (see Figure 3.3-2 of the EFSEC ASC). Section 3.3.3 of the EFSEC ASC describes how surface water runoff and erosion are to be controlled during construction and operation to ensure compliance with state water quality standards.

Because surface water is anticipated to infiltrate into the ground (as discussed above), no runoff impacts are expected to occur. In addition, although the impervious surfaces would increase slightly with the construction of the Project (in the form of graveled access roads and foundations), they are not expected to notably affect runoff onsite.



**2) Could waste materials enter ground or surface waters? If so, generally describe.**

Please see responses to questions “a.6” and “b.2” above; the proposed Project does not involve any discharges of waste material to surface waters and the facility will have a septic system. The septic system will be designed in accordance with regulations of the Benton-Franklin Health Districts On-Site Sewage Program. The location, design, installation, operation, maintenance, and monitoring of the system will be designed to minimize the potential for adverse effects. No waste materials will be discharged to ground or surface waters.

**3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

There may be temporary impacts to drainage patterns during construction. These impacts would be addressed through BMPs identified in the Erosion and Sediment Control Plan such as water bars and check dams that are meant to minimize erosion and the transport of sediment from the construction area. The Project’s operation is not expected to change current stormwater drainage patterns.

**d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:**

Potential impacts from erosion would be minimal and would be addressed through the implementation of mitigation measures (described in Section 3.1 of the EFSEC ASC) such as the compliance requirement of the State Water Pollution Control Act with the NPDES, which would be handled through a Construction Stormwater General Permit from Ecology. The NPDES permit will be required as well as an Erosion and Sediment Control Plan and a SWPPP.

#### 4. Plants

Note that a detailed analysis of vegetative communities and potential Project-related impacts to this resource is found in Section 3.4 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

**a. Check the types of vegetation found on the site:**

- deciduous tree: alder, maple, aspen, other  
 evergreen tree: fir, cedar, pine, other  
 shrubs  
 grass  
 pasture  
 crop or grain  
 Orchards, vineyards or other permanent crops.  
 wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other  
 water plants: water lily, eelgrass, milfoil, other  
 other types of vegetation

**b. What kind and amount of vegetation will be removed or altered?**

The following nine upland habitat subtypes were mapped within the Project Lease Boundary:

- Agricultural land,
- Developed/disturbed,
- Dwarf shrub-steppe,
- Non-native grassland,
- Planted grassland,
- Rabbitbrush shrubland,
- Sagebrush shrub-steppe,
- Unclassified Grassland, and
- Unclassified Shrubland.

Of these habitat types, dwarf shrub-steppe, rabbitbrush shrubland, sagebrush shrub-steppe, unclassified shrubland, non-native grassland, planted grassland, agricultural land, and developed/disturbed areas will be removed and altered. Table 3.4-14 in the EFSEC ASC provides the estimated number of acres of each habitat type and subtype impacted by the Project.

**c. List threatened and endangered species known to be on or near the site.**

One federally listed threatened plant species, the Umtanum desert buckwheat (*Eriogonum codium*), is known to occur within Benton County (USFWS 2020). However, this species has a highly restricted distribution, and the entire known population occurs in a 1.9-acre area on the eastern end of Umtanum Ridge within the Hanford Reach National Monument, which is more than 25 miles north of the Project Lease Boundary (USFWS 2019). Additionally, the

approximately 5 acres of designated critical habitat for Umtanum desert buckwheat is restricted to this region along Umtanum Ridge (i.e., outside the Project Lease Boundary).

Two state-listed endangered, 11 state-listed threatened, and 15 state sensitive vascular plant species are known or have the potential to occur in Benton County (WNHP 2020a). In addition, two state sensitive vascular plant species now believed to be extirpated in the state and/or county are also historically known to occur in Benton County (WNHP 2020a). One state threatened vascular plant species, grey cryptantha (*Cryptantha leucophaea*), has been documented within 5 miles of the Project Lease Boundary (WNHP 2020b); however, this occurrence is across the Columbia River from the Project Lease Boundary.

Special status plant surveys were conducted in June 2020, concurrently with the habitat verification and mapping surveys discussed above (Tetra Tech 2020e). These surveys were restricted to 44 proposed Turbine locations and areas traversed while walking between Turbine locations. No special status plant species were observed during these surveys. However, surveys conducted in 2020 did not cover the entire Project Lease Boundary; therefore, other state-listed endangered, threatened, or sensitive plants species may occur within the Project Lease Boundary.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

Please see Section 3.4.3 of the EFSEC ASC for proposed measures to avoid, minimize, and otherwise mitigate impacts to habitat / native plants.

**e. List all noxious weeds and invasive species known to be on or near the site.**

Noxious weed surveys were conducted concurrently with habitat verification and mapping and special status plant surveys in June 2020 (Tetra Tech 2020e). Six state and county-designated noxious weeds were observed during these surveys. Table 3.4-2 in the EFSEC ASC lists the noxious weed species observed, their noxious weed designation, and the frequency of observations. However, surveys conducted in 2020 did not cover the entire Project Lease Boundary; therefore, other state- and/or county-designated noxious weeds may also occur within the Project Lease Boundary.

## 5. Animals

Note that a detailed analysis of wildlife and potential Project-related impacts to this resource is found in Section 3.4 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

**a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.**

Examples include:

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other: bats

fish: bass, salmon, trout, herring, shellfish, other \_\_\_\_\_

**b. List any threatened and endangered species known to be on or near the site.**

No wildlife species currently listed, or candidates for listing, under the federal Endangered Species Act (ESA) are expected to occur at the Project. One state threatened species initially identified as having the potential to occur (i.e., the greater sage grouse; *Centrocercus urophasianus*) is not expected to occur because the Project falls outside of species' current range and suitable shrub-steppe habitat is limited in the Project Lease Boundary.

A total of 20 special status wildlife species<sup>1</sup> have the potential to occur within the Project Lease Boundary; this includes 4 mammals, 2 reptiles, and 14 birds (Table 3.4-3 of the EFSEC ASC). General habitat requirements and the potential for occurrence for each of these species is presented in Table 3.4-3 of the EFSEC ASC. Of the 20 special status wildlife species with potential to occur, 14 species have been documented within the Project Lease Boundary. As stated above, none of these species are listed under the federal ESA; while three (i.e., American white pelican, ferruginous hawk, and sandhill crane [*Antigone canadensis*]) are state listed species.

The Applicant conducted baseline wildlife surveys at the Project from 2017 through 2020, including avian use surveys, aerial raptor nest surveys, and acoustic bat surveys within various survey areas (i.e., based on previous Project layouts) that overlap with the current Project Lease Boundary. Table 3.4-5 of the EFSEC ASC summarizes all wildlife observed during Project surveys conducted from 2017-2020.

**c. Is the site part of a migration route? If so, explain.**

The Project lies in the Pacific Flyway, which runs through the portions of the United States west of the Continental Divide. Most birds that move along the Pacific Flyway during fall migration travel from Alaska and Canada, through the western states, eventually reaching the tropics of South America via Baja California and western Mexico. The Project contains stopover habitat (i.e., habitat where migratory species may stop to rest, drink, and refuel) for raptors, songbirds,

<sup>1</sup> For purposes of this assessment, the term "special status wildlife" includes species listed under the federal ESA, state endangered species (designated in WAC 220-610-010), state threatened species (designated in WAC 220-200-100), state sensitive species (designated in WAC 220-200-100), state candidate species (designated and reviewed by WDFW per WAC 220-610-010),

waterfowl, and shorebirds in the form of cropland with much smaller areas of shrubland and grassland habitat. High-quality riparian/wetland and forest stopover habitat is absent from Project Lease Boundary.

The Project is not located within a migration route for big game species.

**d. Proposed measures to preserve or enhance wildlife, if any:**

Please see Section 3.4.3 of the EFSEC ASC for proposed measures to avoid, minimize, and otherwise mitigate impacts to habitat, vegetation, fish, and wildlife.

**e. List any invasive animal species known to be on or near the site.**

Eight introduced animal species were observed during Project-specific surveys (see Table 3.4-5 of the EFSEC ASC); however, none of these are considered invasive priority species per the Washington Invasive Species Council.

## 6. Energy and Natural Resources

A detailed analysis of the Project's potential effects on energy and natural resources is found in Section 3.6 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

Operation of the Project would require electric energy for the O&M facilities (i.e., for lighting, heating, and general electrical service), which would be provided by the local utilities. Normally self-supplied, the Project Turbines consume parasitic load during calm wind periods for control systems, heating/cooling, lighting, and hydraulics, with the peak load ranging from 44 to 80 kilowatts per Turbine.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

Given required property setbacks and minimal sources of shade, the Project would not affect the potential for solar energy use by adjacent properties.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

Operation of the Project would have minimal demands on energy supplies. High-efficiency electrical fixtures and equipment would be incorporated into the Project's design where possible. No additional conservation measures are necessary or proposed.

## 7. Environmental Health

Note that a detailed analysis of the Project's potential effects on environmental health is found in Section 4.1.1 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

- 1) Describe any known or possible contamination at the site from present or past uses.**

Three Phase I Environmental Site Assessments (ESAs) were performed for the Project in January 2020, March 2020, and August 2020 (Tetra Tech 2020a, 2020b, 2020c); collectively these ESAs cover the Project Lease Boundary. The ESA conducted in January 2020 identified no recognized environmental conditions (RECs) or controlled recognized environmental conditions (CRECs); it did identify 23 orphan sites which are facilities with incomplete or insufficient address information within the vicinity of the Project Lease Boundary. Of these 23 orphan sites, 6 were determined to be located within the Project Lease Boundary and are considered to be historical recognized environmental conditions (HRECs). Of the six sites, two occurred along I-82, which is not within the Project Lease Boundary (but were within the database search area, considered the Subject Property in an ESA), and both were cleaned up; three were cleaned up to the satisfaction of the applicable agencies, with one representing *de minimis* conditions; and the fourth was identified on the landowner questionnaire as two private garbage pits with no awareness of hazardous materials (the ESA suggests avoiding this area). The ESA conducted in March 2020 identified three HREC sites, all of which have been cleaned up to the satisfaction of the applicable agencies. The ESA conducted in August 2020 identified no RECs, CRECs, or HRECs. All known or potential sites would be avoided, taking into consideration the individual characteristics of each site, including remediation actions performed and the age of the contamination or spill.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

One underground interstate gas transmission pipeline traverses the Project (i.e., the Williams Northwest Pipeline). Turbines and the solar array have been setback from this pipeline, and construction of the Project would not impact the pipeline's operations. As underground collector lines and communications (SCADA) for the Project would cross above the pipeline, the Applicant is coordinating with Williams (i.e., the pipeline owner and operator) on construction specifications and would obtain their approval prior to crossing the pipeline.

No other hazardous chemicals/conditions that might affect Project development and design are known or anticipated at or in the vicinity of the Project.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

As described in ESFEC ASC Section 2.10.1, during construction, small quantities of a few hazardous materials may be utilized or stored in the construction yards. During operations, there

would be no substantial quantities of fuels, oils, or chemicals on site, except as contained in qualified oil-filled equipment, including the Turbine gearboxes, substation transformers, and inverter station transformers within the solar array, and the sulfuric acid contained in the lead-acid batteries. Additional detail of the types of hazardous materials along with preventative procedures to avoid spills, cleanup procedures, storage procedures, and spill reporting procedures are described in Section 2.10.1 of the EFSEC ASC. In addition, a Spill Prevention, Control, and Countermeasures (SPCC) Plan will be developed as required by the State of Washington Site Certification Agreement and by state and federal requirements. Under an SPCC Plan for both construction and operation, the Applicant would have the overall responsibility to ensure the Project's compliance with state and federal environmental regulations, and compliance with environmental commitments made to EFSEC.

**4) Describe special emergency services that might be required.**

Potential emergency services that might be required would include police, medical, and fire services. Except as related to Turbines, no special emergency services would be required. Due to the type of access (narrow internal tower ladder) and height of the Turbines, high angle rope rescue may be required if a technician were to need emergency assistance while working at the top of a tower.

**5) Proposed measures to reduce or control environmental health hazards, if any:**

The Applicant and its contractors would comply with applicable federal, state, and local health and safety standards as identified in Section 4.1 of the EFSEC ASC. In addition, the Applicant will prepare and submit an SPCC Plan for both construction and operations and a SWPPP for construction.

**b. Noise**

Note that a detailed analysis of the Project's potential effects on noise levels in the area is found in Section 4.1.1 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

**1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

A wide range of noise settings occurs within the Project Lease Boundary. Variations in acoustic environment are due in part to existing land uses, population density, and proximity to transportation corridors. Elevated existing ambient sound levels in the region occur near major transportation corridors such as interstate highways and in areas with higher population densities. Portions of the communities traversed by the proposed transmission lines are open land or rural in nature, and will have comparatively lower ambient sound levels, possibly 30 A-weighted decibels or less during nighttime. Principal contributors to the existing acoustic environment likely include motor vehicle traffic, mobile farming equipment, farming activities such as plowing and irrigation, all-terrain vehicles, local roadways, rail movements, periodic aircraft flyovers, and natural sounds such as birds, insects, and leaf or vegetation rustle during elevated wind conditions. Diurnal effects result in sound levels that are typically quieter during the night than during the daytime, except during periods when evening and nighttime insect noise dominates in warmer seasons.



**2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Table 4.1.1-5 in the EFSEC ASC summarizes equipment that may be used on the Project and estimates of construction sound levels at a reference distance of 50 feet and far field distance of 2,000 feet. The variation in power and usage imposes additional complexity in characterizing construction noise levels. The estimated composite site noise level assumes that all equipment would operate simultaneously at the given usage load rating, over a standard 8 hour workday, to calculate the composite average daytime equivalent sound level. Usage factor accounts for the fraction of time that the equipment is in use over the specified time period.

The construction noise assessment indicated that construction noise would be periodically audible at off-site locations; however, that noise would be temporary and minimized to the extent practicable through implementation of best management practices and noise mitigation measures. Traffic noise generated during construction on and off site would also add to overall sound levels but would be intermittent and short-term.

Operational sound levels were modeled and evaluated at nearby residences and property lines. During operations, Project sound sources consist of the Turbines, substation transformers, solar integrated inverter/transformers, and BESS units. Acoustic modeling results indicate that the maximum received sound levels resulting from Project operations are associated with the Turbine Option 1 layout. With both the GE 2.82 MW and GE 3.03 MW Turbine configurations, compliance with applicable WAC 173-60 regulatory limits is achieved through use of noise mitigation options. For the GE 2.82 MW Turbine configuration, Turbine IDs 6, 7, and 8 would have to operate in noise-reduced operations (NRO) 106 mode. For the GE 3.03 MW Turbine configuration, Turbine IDs 6, 7, and 8 would need to be equipped with low-noise trailing edge (LNTE) blade technology in order to comply with the 50 dBA nighttime limit at the Project property boundary adjacent to RL-5 zoned land.

Received sound levels were also modeled for the Option 2 layout using GE 5.5 MW and SG 6.0 MW Turbine models. The Project successfully demonstrated compliance with the WAC 173-60 regulatory requirements at NSRs and the Project property boundary.

Based on the presented data and analysis, the Project would meet all established noise limits for the Project. It is expected that received sound levels at NSRs would be consistent with sound generated at similar wind energy facilities successfully sited throughout the State of Washington employing the same or similar criteria.

**3) Proposed measures to reduce or control noise impacts, if any:**

Please see Section 4.1.1 of the EFSEC ASC for proposed measures to avoid, minimize, and otherwise mitigate impacts related to noise.

## 8. Land and Shoreline Use

A detailed analysis of the Project's potential effects on land and shoreline use is found in Section 4.2.1 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

**a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

Most of the Project Lease Boundary consists of private land currently used for cultivated crops (primarily dryland agriculture), pastureland (with some livestock grazing), open shrub-steppe habitat and grassland, and rural residences with related roadway and electrical infrastructure. There are also four parcels of DNR state trust land in the Project Lease Boundary. Interstate 82/U.S. Highway 395 runs north-south through the Project Lease Boundary, roughly dividing it into western and eastern sections. The predominant land use on properties adjacent to the Project Lease Boundary includes privately-owned dryland and irrigated agriculture.

The permanent footprint of the Project would occupy approximately 6,869 acres (6,866 acres of which are classified as "agricultural lands"; see Table 4.2.6-4 of the EFSEC ASC). The remainder of the Project Area would remain open for agricultural or other current uses. During construction, there would be temporary disturbance of additional agricultural lands due to Project-related transportation use on local roadways. Movement of construction components or vehicles during construction and operations would be coordinated with the local agricultural community to ensure that Project-related traffic does not interfere with movement of agricultural products at sensitive times of the year. During operations, land use impacts on nearby or adjacent properties are not anticipated, because the Project is not expected to affect regional growth, overall land use patterns, or off-site land uses.

**b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

The Project site has been used as working farmlands as described above and in more detail in Section 4.2.1 of the EFSEC ASC. Approximately 6,866 acres of agricultural land would be impacted by the permanent footprint of the Project, and would therefore be converted to nonfarm use for the life of the Project.

**1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:**

The Project's operation is not expected to affect or be affected by the normal business operations of the surrounding working farm or forest lands. The Applicant is consulting with landowners to minimize any potential impacts to their ongoing agricultural operations.

**c. Describe any structures on the site.**

Existing structures within the Project's Lease Boundary include farmhouses (occupied and abandoned), barns, corrals, and other agricultural structures.

**d. Will any structures be demolished? If so, what?**

No structures are anticipated to be demolished to allow construction and operation of the Project.

**e. What is the current zoning classification of the site?**

The current zoning is Benton County Growth Management Act Agriculture District (GMAAD).

**f. What is the current comprehensive plan designation of the site?**

The Benton County Comprehensive Plan designated this site as Unincorporated Area, Growth Management Act Agriculture (GMA AG).

**g. If applicable, what is the current shoreline master program designation of the site?**

No portion of the proposed Project site is designated under the shoreline master program.

**h. Has any part of the site been classified as a critical area by the city or county? If so, specify.**

Section 2.23.3 of the EFSEC ASC identifies compliance with the Critical Areas Ordinance in relation to the Project. A summary of the analysis found in Section 2.23.3 of the EFSEC ASC (and its subsequent referenced analysis/sections) is provided below:

- CARAs (BCC 15.06): Section 3.3 of the EFSEC ASC identifies CARAs in relation to Project disturbance areas. There would be a small area of temporary Project disturbance within two CARA types. With the implementation of appropriate control measures during construction, as described in Section 3.3 of the EFSEC ASC, the Project would comply with Benton County's critical areas regulations for critical aquifer recharge areas under BCC 15.06.
- Frequently Flooded Areas (BCC 15.08): As discussed in Section 3.3 of the EFSEC ASC, while there could be a small area of temporary disturbance during construction, no Project components would be placed in special flood hazard areas, and the provisions of BCC 3.26 (Flood Damage Prevention) and BCC 15.08 (Frequently Flooded Areas) would not apply to the Project.
- Geologically Hazardous Areas (BCC 15.12): Section 3.1 of the EFSEC ASC identifies geologically hazardous areas in relation to Project components. Based on the maximum potential layout, the Project would include areas of temporary and permanent disturbance within geologically hazardous areas. Section 3.1 of the EFSEC ASC also discusses applicable avoidance, minimization, and control measures to demonstrate that the Project would comply with Benton County's critical areas regulations for geologically hazardous areas under BCC 15.12.
- Fish and Wildlife Habitat Conservation Areas (FWHCAs; BCC 15.14): Section 3.4 of the EFSEC ASC identifies the County's FWHCAs in relation to Project components. Based on the maximum potential layout, the Project would include areas of temporary and permanent disturbance in FWHCAs. However, with the implementation of the proposed minimization and mitigation measures (see Section 3.4 of the EFSEC ASC),

which would be developed based on final design, the Project would comply with Benton County's critical areas regulations for fish and wildlife habitat conservation areas under BCC 15.14.

All critical areas would be avoided to the greatest extent possible. Where it is not feasible to avoid a critical area (e.g., fish and wildlife habitat conservation areas) the Applicant has proposed BMPs and mitigation measures to reduce and mitigate potential impacts to a level of non-significance.

**i. Approximately how many people would reside or work in the completed project?**

The Project would employ 16 to 20 personnel for O&M. No people would reside at the completed Project.

**j. Approximately how many people would the completed project displace?**

The completed Project would not displace any people.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

As there would be no displacement impacts from the Project, no measures are proposed.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The Project is designed to be compatible with ongoing agricultural production as the principal land use in the Project Lease Boundary. Through the micrositing process, potential conflicts with existing agricultural activities will be avoided or minimized to the greatest extent possible. Agricultural uses would continue within the Project Lease Boundary during construction and operation. In addition, the Project is compatible with surrounding land uses, including active agricultural operations, and (with required setback buffers) residential development. The construction and operation of the Project would not cause any changes in any land uses, would not increase the cost of any farming operations, and would not otherwise interfere with any ongoing uses the adjacent and surrounding non-Project lands.

**m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:**

The proposed Project has been designed with input from participating landowners, with whom the Applicant has lease agreements that include terms, as applicable, to avoid or reduce impacts to agricultural operations. Construction and operation of the Project would follow site-specific BMPs to minimize potential impacts to traffic, noise, air quality, and vegetation, as described in the respective resource sections of this SEPA checklist. Upon decommissioning of the Project, the Applicant would remove all above-grade facilities as well as below-grade facilities to not less than 3 feet below grade. The Applicant would also strip, segregate, and replace topsoil and reseed areas where the tower pads were located with grasses and/or other vegetation reasonably acceptable to the landowner. Given these measures and the relatively small Project footprint in relation to available agricultural land in the area, no significant impacts to agricultural lands of long-term commercial significance are expected. See Section 4.2.6 of the EFSEC ASC for more information.

## 9. Housing

A detailed analysis of the Project's potential effects on housing (as well as other socioeconomic factors) is found in Section 4.4 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

The Project would not provide any housing units.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

The Project would not eliminate any housing units.

- c. Proposed measures to reduce or control housing impacts, if any:**

There would be no housing impacts; therefore, no measures are proposed.

## 10. Aesthetics

A detailed analysis of the Project's potential effects on aesthetics is found in Section 4.2.3 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

**a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

The tallest proposed structures would be the Turbines. As described in Section 2 of the EFSEC ASC, there are two Turbine options being considered: Option 1 consists of Turbines with a nameplate generating capacity of 2.82 MW and 3.03 MW that would have a maximum blade tip height of about 496 to 499 feet (151 to 152 meters). Option 2 consists of Turbines with a nameplate generating capacity of 5.5 MW and 6.0 MW and have a maximum blade tip height of about 657 to 671 feet (200 to 204 meters). Solar panels would be installed on single-axis tracking systems. Solar panels would be no higher than 20 feet above ground surface at maximum tilt and would consist of solar modules with anti-reflective coating.

The Applicant would construct support facilities including substations, O&M buildings, and BESS containers with non-reflective materials in muted tones. The Turbines would be painted one of two allowable FAA colors, white or light gray, using non-reflective paint to eliminate the need for daytime aviation lighting and eliminate glare from the Turbines.

Other support facilities would include non-reflective materials in muted tones. The Project O&M facilities, BESS, and substations would not exceed 40 feet in height.

**b. What views in the immediate vicinity would be altered or obstructed?**

The rural, rural residential, and dryland agriculture within the Project's general vicinity currently includes existing substations, high-voltage transmission lines, and a wind farm. The visual character of the area would change to contain additional Turbines, solar arrays, and associated infrastructure.

Section 4.2.3 of the EFSEC ASC includes a detailed visual impact analysis of the Project. In summary, short-term visual effects would result from construction activities and the presence of equipment and work crews during construction. Long-term visual effects during operation of the Project would result from the visibility of the aboveground components associated with the Project Turbines, solar arrays, substations, BESS, and transmission line.

**c. Proposed measures to reduce or control aesthetic impacts, if any:**

Mitigation measures are identified in EFSEC ASC Section 4.2.3 and include dust suppression, restoration of disturbed areas, minimal exterior lighting on Turbines as allowed by FAA, the use of non-reflective materials in muted tones, and sensor and switches to limit exterior security and perimeter lighting when not required.

## 11. Light and Glare

A detailed analysis of the Project's potential effects on light and glare levels in the area is found in Section 4.2.2 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

### a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The Project would generate minimal light during the construction process, primarily resulting from vehicles and equipment. Construction work would be concentrated during daylight hours, minimizing the potential need for temporary nighttime lighting.

Once constructed, external lighting at supporting facilities such as the substations, O&M facilities, and BESS would be limited to security lighting. Security lighting would be directed downward and shielded to avoid nighttime light pollution effects. This type of exterior lighting would be consistent with other similar sources of light in the area such as the existing BPA substation and rural residential development, as well as the adjacent Nine Canyon Wind Farm facility.

The Turbine towers would be painted off-white with a non-reflective coating in accordance with FAA regulations. Aviation lighting would be mounted on Turbine nacelles per FAA requirements, which include additional lighting for Turbines with blade tip heights above 499 feet, and mid-tower lighting for Turbines with blade tip heights above 599 feet. Up to four permanent meteorological towers would also be lighted as specified by the FAA (see Section 2.23 of the EFSEC ASC for FAA regulatory compliance discussion). These lights would be most visible at night, akin to lighted communication towers common in the Tri-Cities area.

The solar modules would be mounted on single-axis trackers that optimize electricity production by rotating the solar modules to follow the path of the sun throughout the day. The modules to be used for the Project would have anti-reflection coating; however, there could still be some potential for glare. To evaluate the potential extent of glare from the proposed solar arrays, the Applicant conducted a solar glare analysis for a sampling of observation points and vehicle routes within approximately 2 miles of the solar modules. These observation points and vehicle routes were selected to be consistent with the visual analysis discussed in Section 4.2.3 of the EFSEC ASC.

The results of the glare modeling analysis indicate that the surrounding observation points and vehicle routes would not experience glare as a result of the Project (see Appendix H of the EFSEC ASC). The glare analysis also found that the Project would not create any glare effects that could impact jurisdictional airports. The predicted glare at these receptors is considered to be a conservative representation as the modeling tool does not consider weather conditions or obstacles (either man-made or natural) between the defined solar photovoltaic arrays and the receptors such as vegetative screening (existing or planted), buildings, topography, etc. Where such features exist, they would screen views of the Project and, thus, minimize or eliminate glare from these receptor locations.

**b. Could light or glare from the finished project be a safety hazard or interfere with views?**

For the reasons presented above in response to question “a”, light or glare from construction and operation of the Project would not result in a safety hazard or other significant adverse impact.

**c. What existing off-site sources of light or glare may affect your proposal?**

Existing light or glare could occur from vehicles traveling local roadways and I-82 that cross the Project, nearby rural residential development, the adjacent Nine Canyon Wind Project, and any nearby BPA substations. The level of light and glare from these sources is low, and typical for the rural, largely agricultural setting. Therefore, no existing off-site sources of light or glare would affect the Project.

**d. Proposed measures to reduce or control light and glare impacts, if any:**

No significant light and glare impacts are anticipated from the Project; therefore, no mitigation measures are proposed.



**12. Recreation**

A detailed analysis of the Project's potential effects on recreation is found in Section 4.2.4 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

**a. What designated and informal recreational opportunities are in the immediate vicinity?**

According to information from public databases, much of the federal and state-managed lands found within 25 miles of the Project are open to public access, including off-highway vehicles and permitted hunting, though some are also held for potential extractive uses such as mining or logging (see Section 4.2.4 of the EFSEC ASC).

**b. Would the proposed project displace any existing recreational uses? If so, describe.**

Construction and operation of the Project would not displace any existing recreational uses within the vicinity of the Project.

**c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

This Project would not significantly interfere with recreation in conjunction with the current land use; therefore, no mitigation measures specific to recreation are proposed.

### 13. Historic and Cultural Preservation

A detailed analysis of the Project's potential effects on historic and cultural resources is found in Section 4.2.5 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

There are 28 previously recorded cultural resources in and within 1 mile of the Project Lease Boundary (see Table 4.2.5-2 of the EFSEC ASC). Of these, 15 resources are within 1 mile but outside of the Project Lease Boundary and consist of 4 architectural resources and 11 archaeological sites.

Thirteen previously recorded sites are within the Project Lease Boundary, and only four of these are within the areas surveyed. Resources within the areas surveyed include three historic period architectural resources and sites. Of the three historic period architectural resources, two are not eligible for listing on the National Register of Historic Places (NRHP), and one is eligible but with a finding of no significant impact from the Project. The one precontact archaeological site has not been evaluated for listing in the NHRP.

The remaining nine resources within the Project Lease Boundary include four architectural resources, a cemetery, three historic-period archaeological resources, and five paleontological sites (three are associated with prehistoric sites, and one is associated with a historic site). Of these nine resources within the Project Lease Boundary, only one has been determined eligible for listing in the NRHP; the other eight have not been formally evaluated.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.**

The Applicant's consultant, Historical Research Associates, Inc. (HRA), conducted agency and tribal coordination, cultural resource background research, archaeological surveys, an architectural inventory, and provided NRHP and management recommendations for the Project. HRA conducted a pedestrian survey of 10,261 acres on private land and 703 acres on DNR land that included Turbine, access road, crane path, connection, and communication line locations within the Project Lease Boundary (Figure 4.2.5-1). Forty-seven percent of the micrositeing areas have been surveyed for archaeological and architectural resources. HRA is currently conducting archaeological surveys for remaining Project micrositeing areas not yet surveyed; the completion date of these surveys is anticipated for spring of 2021.

There are landmarks, features, and other evidence of Indian or historic use or occupation in the Project Lease Boundary. Table 4.2.5-1 of the EFSEC ASC discloses the cultural resource surveys conducted and their findings in and within 1 mile of the Project Lease Boundary.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

The Applicant assessed potential impacts to cultural and historic resources by conducting archaeological surveys, researching prior studies through the Washington Department of Archaeology and Historic Preservation (DAHP), researching historic maps, and conducting outreach to interested tribes. Letters were sent to the Confederated Tribes and Bands of the Yakama Nation (Yakama), Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Nez Perce Tribe (Nez Perce), and the Wanapum Tribe. The Yakama and CTUIR provided review of draft survey reports and the CTUIR participated in a portion of the pedestrian surveys. In addition, the CTUIR are separately conducting a confidential Traditional Use Study that would inform their assessment of potential impacts from the Project to resources of interest. The Project would avoid direct impacts to cultural and historic resources or, if avoidance is not possible, additional archaeological investigations would be conducted to assess eligibility for the National Register for Historic Places and the Washington Historic Register.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

Proposed measures to avoid and minimize resources are discussed Section 4.2.5 of the EFSEC ASC. Mitigation measures including Cultural Resource Worker Education/Training, Preconstruction Survey and Cultural Resource Avoidance Plan, and a Plan for Inadvertent Discovery of Archaeological Resources During Construction.

## 14. Transportation

Note that a detailed analysis of the Project's potential effects on transportation is found in Section 4.3 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.**

The Horse Heaven Wind Farm would be constructed in two separate phases. Each would utilize a different set of local roads and constructed access roads for interior access; however, both phases would be served by I-82 as the primary inbound route for materials and equipment. From I-82, State Route 397 and county two-lane roads would be used to access the eastern portion of Project Lease Boundary. From I-82, State Route 221 and county roads would be used to access the western portion of the Project Lease Boundary.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

No public transit serves the Project Lease Boundary.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?**

The O&M facilities would have parking for operations vehicles. No existing parking would be eliminated.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

During construction, portions of existing roads may need to be improved, resulting in the temporary widening and increased turning radii of some public and private roads (see Section 2.3.6 and Appendix V of the EFSEC ASC). These improvements would be removed, and the area restored to preconstruction conditions to the extent practical unless otherwise requested by the landowner. Where necessary, up to approximately 105 miles of new, private access roads would be constructed between existing roadways and Project components such as Turbine sites, solar arrays, construction yard, Project substations, O&M facilities, and transmission line towers. The permanent access roads would be all-weather, gravel surfaced, and generally 16 feet in width for the drivable area and additional width for the shoulder and drainage (if necessary).

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

Although there is existing waterborne, rail, and air traffic within the area, these methods of transportation would not be used for Project construction or operation and no impacts related to existing waterborne, rail, and air traffic in the immediate vicinity of the Project would occur.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and**

**nonpassenger vehicles). What data or transportation models were used to make these estimates?**

Once operational, expected traffic volumes during normal operation of the Project would be up to 16 to 20 vehicle trips per day to and from the O&M facilities by O&M staff. O&M staff would commute to the Project during normal peak commuting hours. It is assumed that O&M staff would reside in the Tri-Cities or nearby communities and use the same roads that would be used by the construction workforce; operational traffic generation would be minimal. The O&M staff would perform scheduled, preventive maintenance on the Turbines, solar modular, and battery storage facilities. The O&M staff would drive throughout the Project on a regular basis conducting unrecorded visual inspections of the Project. It is anticipated that O&M staff would drive light-duty trucks, water trucks, and utility vehicles kept at the O&M facilities (not driven offsite) to conduct maintenance. Truck traffic would be minimal; heavy equipment may be brought in occasionally for major repairs or Turbine replacement, but these occasions are expected to be infrequent. Additional trips may occur in the form of delivery vehicles (e.g., FedEx/UPS) used to deliver small packages to the site; however, these deliveries would be at an infrequent and unknown frequency. Because there would be minimal O&M staff activity, minimal impacts to traffic and to transportation infrastructure are expected. No transportation models were made to use this estimate.

**g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

During construction, the Project would result in an increase in traffic on local roadways when compared to existing traffic. Movement of construction components or vehicles during construction and operations would be coordinated with the local agricultural community to ensure that Project-related traffic does not interfere with movement of agricultural products at sensitive times of the year.

**h. Proposed measures to reduce or control transportation impacts, if any:**

Prior to commencement of construction, the Applicant will consult with WSDOT and Benton County on the development of a construction-phase Traffic Management Plan. Typical measures that would be implemented to reduce or control transportation impacts are discussed in Section 4.3 of the EFSEC ASC.

## 15. Public Services

A detailed analysis of the Project's potential effects on public services (as well as other socioeconomic factors) is found in Sections 4.1.2 and 4.4 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

Potential public services that might be required during construction and operation would include police, medical, and fire services. Temporary increases in population during Phase 1 and Phase 2 construction would add an average monthly and peak increase equivalent to less than 0.1 percent of existing population in the study area. This increase would be temporary and would not be expected to affect the ability of public service agencies to serve existing constituencies in the study area. During operation approximately 16 to 20 personnel would be employed by the Project; this would not noticeably affect existing service levels for public services during the life of the Project.

- b. Proposed measures to reduce or control direct impacts on public services, if any.**

An Emergency Response Plan is provided as Appendix P to the EFSEC ASC. As described in Section 4.1.2 of the EFSEC ASC, the Applicant would also prepare and submit the following plans to EFSEC for approval prior to construction: Safety Manual, SPCC Plan, and SWPPP. The Applicant would coordinate with local emergency services personnel and provide training to emergency personnel where necessary.

## 16. Utilities

A detailed analysis of the Project's potential effects on utilities is found in Section 3.6 of the EFSEC ASC. The following summarizes the information provided in the EFSEC ASC.

**a. Circle utilities currently available at the site:**

electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other \_\_\_\_\_

Electricity in the general region is provided by Benton Public Utility District No. 1 (Benton PUD) and Benton Rural Electric Association (Benton REA); natural gas is provided by Cascade Natural Gas Corporation. Century Link and Frontier Communications underground telephone lines are present on site, as well as Charter Communications and Frontier Communications underground fiber optic cable. Natural gas service is available from Cascade Natural Gas Corporation, and the Williams Northwest Pipeline (i.e., via an interstate gas transmission line that traverses the Project Lease Boundary).

**b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

Construction activities required for the Project are described in detail in Section 2.3 of the EFSEC ASC, while details regarding the Project's water use are provided in Section 2.6 of the EFSEC ASC.

The completed Project would generate electricity. The O&M facilities would require electricity, communication (telephone/fiber), refuse disposal services, and water. In addition, the Project Turbines would consume parasitic load during calm wind periods ranging from 44 to 80 kW per Turbine. Distribution-level electricity from Benton PUD or Benton REA, and telephone/fiber service from either Century Link or Frontier would be set up at the Project during construction and operation. Refuse produced during construction and operations would be hauled offsite by a licensed provider (such as Waste Management) for recycling or disposal as appropriate. Common construction waste would include scrap metal, cable, wire, wood pallets, plastic packaging materials, and cardboard. Much of the construction waste would be recyclable (with specific recycling procedures to be developed by the Applicant's construction contractor).

During construction, water would be used to mix concrete for structural foundations and to suppress fugitive dust during grubbing, clearing, grading, trenching, and soil compaction. In addition, non-toxic soil binding agents may be employed to help with soil stabilization during construction. Water trucks will be used to control dust generation in all disturbed areas during road construction; foundation installation; Turbine and transmission structure erection; and final cleanup, reclamation, and restoration. Fire prevention represents a minor water use; this would involve stationing a water truck at the job site to keep the ground and vegetation moist during extreme fire conditions. Construction water would be purchased by the contractor from the City of Kennewick and transported to the site in water-tanker trucks. Water conservation will be implemented to the extent practicable by use of less water-intensive methods of dust suppression, including use of soil stabilizers, tightly phasing construction activities, staging grading and other

dust-creating activities, and/or compressing the entire construction schedule to reduce the time period over which dust suppression measures would be required.

Project operations would require water for the limited needs of the O&M facilities, and for solar panel washing. Water for solar panel washing would be obtained by a contractor from the City of Kennewick or another source with available water rights.



### C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 

Name of signee: Michael Rucker

Position and Agency/Organization: Manager, Horse Heaven Wind Farm LLC

Date Submitted: February 8, 2021

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