# Horse Heaven Wind Farm Site Certification Agreement Appendix 2. Mitigation Measures

# 1. Earth Resources (Geo) Mitigation

**Geo-1 Soil Management:** Minimize soil disturbance activities with the potential for soil compaction when soils are saturated, such as following a major precipitation event (e.g., five-day antecedent rainfall of greater than 1.1 inches during mid-October to mid-April or greater than 2.1 inches during mid-April to mid-October). Direct construction away from areas with saturated soils and where drainage may concentrate until soils are no longer saturated. Limit vehicular traffic to established access roads. Where possible, leave existing vegetation root structure intact to enhance soil stability and infiltration capacity. Utilize best management practice (BMPs) such as low-ground-pressure and/or long-reach equipment, temporary matting and work pads, and localized engineered drainage improvements (e.g., interceptor drains, detention basins). Where soil compaction is observed to have occurred, decompact subsoils to a minimum depth of 18 inches or as identified in site reclamation plans and lease agreements.

Rationale: This mitigation measure limits erosion and disturbance of natural soil profiles.

# 2. Air Quality (A) Mitigation

**A-1 Speed Limit:** Traffic speeds on unpaved areas shall be posted at no more than 15 mph, rather than the Certificate Holder-proposed 25-mph limit. The Applicant shall provide training to all employees working onsite before they are allowed to drive into the construction area. Periodic speed checks shall be performed by the construction contractor's health and safety officer and reviewed by EFSEC monthly. If speeds are found to be routinely more than 15 mph, the Applicant shall submit a corrective action plan to EFSEC within 30 days of the finding.

**Rationale**: Road-related fugitive dust emissions increase with increasing vehicle speed. Consequently, one of the BMPs for mitigation of road-related fugitive dust emissions is to limit vehicle speed. The Certificate Holder has proposed to limit vehicle speed to 25 mph. Access-road-related fugitive dust from construction vehicle traffic is the single largest source of PM<sub>10</sub> and PM<sub>2.5</sub> emissions from Project construction and a lower vehicle speed limit of 15 mph will further reduce fugitive PM<sub>10</sub> and PM<sub>2.5</sub> emissions.

**A-2 Proof of Contact: Soil Destabilization Notification:** Certificate Holder shall submit a Proof of Contact: Soil Destabilization Notification to EFSEC at least 90 days prior to commencement of construction. **Rationale:** Fugitive dust emissions are a potential concern. This notification will facilitate EFSEC awareness of commencement construction so that compliance with implementation of all Certificate Holder-proposed BMPs can be field validated.

## 3. Water Resources (W)

W-1 Least Risk Fish Windows: Project construction and decommissioning within ephemeral and intermittent streams that have active water flow shall observe the least risk windows for spawning and incubating salmonoids, which are, conservatively, August 1 to September 15 for the Yakima and Columbia Rivers and their tributaries in Benton County (WDFW 2018). Ephemeral and intermittent streams would not be subject to least risk window restrictions while those streams are dry.

**Rationale:** This mitigation measure addresses potential impacts on surface water and fish habitat and will minimize risk to aquatic species.

W-2 Minimize Work in Heavy Rain: Project construction and decommissioning shall be minimized during rainy periods and heavy rain—in particular, work near ephemeral or intermittent streams.

Rationale: This mitigation measure addresses potential impacts of surface water and runoff and will minimize the risk of sediment release to surface water and wetlands.

**W-3 Check Dams:** As indicated in Ecology (2019) BMP C207E, check dams cannot be placed or used in streams unless approved by WDFW. Check dams used for work within ephemeral or intermittent streams shall be approved by EFSEC in coordination with WDFW and Ecology prior to use. Stream crossing designs and associated mitigation plans shall be provided and approved by EFSEC in coordination with WDFW and Ecology.

**Rationale:** This mitigation measure addresses the use of check dams on site, which will require approval by WDFW and Ecology prior to use.

**W-4 Culvert Installation BMPs:** Based on the Final ASC, one culvert is proposed along one intermittent stream. Installation of the culvert shall follow WDFW Fish Passage BMPs:

- Be oriented and aligned with the natural stream channel.
- Be constructed at or near natural elevation of the streambed to avoid or minimize potential flooding upstream of the crossing and erosion below the outlet.
- Use suitable measures to avoid or minimize water from seeping around the culvert.
- Use suitable measures to avoid or minimize culvert plugging from transported debris or bedload.
- Be regularly inspected and cleaned as necessary for the life of the Project (USDA 2012).
- Cover culvert with sufficient fill to avoid or minimize damage by traffic.
- Install culverts long enough to extend beyond the toe of the fill slopes to minimize erosion.

**Rationale:** This mitigation measure addresses permanent impacts on ephemeral streams. It provides specifications on culvert installation to enable assessment of the potential impacts.

**W-5 Employee Training:** An employee training plan shall be included as part of the SPCC Plan. For the duration of the Project, employees and workers on site shall receive appropriate training according to the employee training plan to ensure that any spills are reported and responded to in an appropriate manner (Ecology 1999). This shall include training on the use of spill response equipment and orientations identifying the location of hazardous materials, proper storage of hazardous materials, and location of spill response equipment to ensure that workers are competent in spill response.

**Rationale:** This mitigation measure addresses potential impacts on water quality including sedimentation and accidental spill. Employee training reduces the risk of human error and increases confidence in the effectiveness of spill response in the event of accidents such as an accidental spill.

W-6 Wetland SWPPP: A Stormwater Pollution Prevention Plan (SWPPP) shall be designed specifically for work within the Micrositing Corridor adjacent to the wetland (EIS Figure 3.4-1, Section 3.4). The SWPPP shall include BMPs from the Stormwater Management Manual for Eastern Washington (Ecology 2019). The plan shall include, but not be limited to, structural measures such as installation of silt fences and sediment ponds, and non-structural measures, including routine inspection and maintenance and enforcement of BMPs, to minimize surface water runoff generated from the construction activities to the wetland.

Rationale: This mitigation measure addresses potential impacts on the wetland situated near the Micrositing Corridor. The wetland is located downgradient from the construction area, so additional mitigation measures are proposed to avoid impacts.

**W-7 Clear-Span 100-Year Floodplain:** Clear-span the transmission line to avoid temporary disturbance to the 100-year flood plain. Site transmission line poles outside the 100-year floodplain. **Rationale:** This mitigation measure addresses physical disturbance of the 100-year floodplain, a Critical Aquifer Recharge Area.

**W-8 Spill Response Equipment:** Spill response equipment, such as absorbent pads or compounds, shall be stored in every Project vehicle regularly accessing the site during construction, operation, and

decommissioning, excluding employee personal vehicles. In addition, an oil pan shall be placed below heavy equipment when stored or not in use on site.

**Rationale:** This mitigation measure addresses spill response impacts by specifying locations for spill response equipment.

**W-9 Minimize Water Use:** During construction, operation, and decommissioning, water use shall be minimized where possible. During drought or water shortage, schedule adjustment shall be considered to minimize water needs on the site where possible, or additional alternate off-site water supplies shall be identified.

**Rationale:** This mitigation measure addresses impacts on public water supply and is proposed to minimize water use on site throughout the life of the Project.

**W-10 Panel Washing:** During drought or water shortage, panel washing shall be postponed or alternate off-site water sources could be identified to minimize impacts on public water supply. Panel wash water shall be recycled and re-used where possible during operation.

**Rationale:** This mitigation measure addresses impacts on public water supply and is proposed to minimize water use on site from panel washing, if required.

**W-11 Concrete Batch Plant to Avoid Streams:** Laydown areas or locations where temporary concrete batch plants will be sited shall be a minimum of 100 ft from mapped streams or waterbodies.

**Rationale:** Siting temporary concrete batch plants outside of stream and riparian areas reduces the potential impacts off accidents and malfunctions from release of concrete wash water on water quality.

### 4. Vegetation (Veg) Mitigation

**Veg-1 Tree Avoidance:** Construction shall avoid removing or disturbing trees within the Project Lease Boundary. Disturbance to trees includes any disturbance within the drip-line of the tree (i.e., the area from the edge of the outermost branches), including topping, which preserves an intact root system. Disturbance within the drip-line of the tree shall be avoided as this can lead to tree mortality. The avoidance area within the drip-line of trees in work areas shall be delineated using snow fencing or similar measure to improve the visibility of avoidance zones. Trees cannot be removed without pre-approval. Where tree disturbance cannot be avoided by the Project (e.g., near transmission lines), the number and location of the trees shall be provided to EFSEC, along with a statement justifying why avoidance cannot be achieved, and a mitigation plan. The mitigation plan shall include replanting trees within the Lease Boundary to maintain the diversity of habitat structures provided by trees and will require approval by EFSEC prior to proceeding.

**Rationale:** Trees are a rare feature on the landscape that provide habitat value to wildlife species and structural diversity. Replanting trees may be challenging in an arid environment, and there will be a time lag before trees reach the same size and age. Veg-1 seeks to avoid physical disturbance to existing trees.

Veg-2 Pre-Disturbance Surveys for Special Status Plant Species: Special status plant species are known to occur near the Lease Boundary. Areas with increased potential for special status plant species include areas of Priority Habitat and areas identified by the Certificate Holder as potential habitat for woven spore lichen. Where possible, disturbance to Priority Habitat and high potential areas will be avoided, but if avoidance is not possible, surveys for special status plant surveys will be conducted. Surveys shall be conducted by a qualified professional. Surveys shall be conducted prior to both construction and decommissioning activities. All findings shall be documented and provided to EFSEC in an annual report. Where special status plant species are encountered within proposed disturbance areas, the Certificate Holder will modify the Project design to avoid the species or, where modification is not possible, develop additional mitigation measures based on discussions with EFSEC and WDFW, such as relocation where a species is tolerant of relocation; minimization; or other form of mitigation. Mitigation plans for encountered special status plant species will be provided to EFSEC for consideration and to provide additional direction. Any modifications to the Project

design shall also be provided to EFSEC as part of the report. An environmental monitor shall be required to track any mitigation associated with the finding of special status plant species.

**Rationale:** This mitigation measure minimizes potential impacts on special status plant species by providing an opportunity to modify the design to avoid any identified plants, prior to actual disturbance activities during construction and decommissioning. It also provides the opportunity to apply additional mitigation should special status plant species be encountered within disturbance areas.

**Veg-3 Special Status Plant Species Education:** The environmental orientation provided to workers on site shall include information on special status plant species. This shall include diagnostic characteristics, suitable habitat descriptions, and photos of special status plant species with potential to occur within the Lease Boundary. A protocol shall be established for any chance find by workers, who shall notify the environmental monitor on site prior to proceeding with work. The environmental monitoring shall report any findings of special status plant species to EFSEC in a report, and EFSEC will consider these reports and provide additional direction on actions to address any impacts. Workers' completion of the environmental orientation shall be tracked by the Certificate Holder and provided in an annual report to EFSEC.

**Rationale:** This mitigation measure minimizes impacts on special status plant species by educating workers in identification and suitable habitat.

Veg-4 As-Built Report, Offset Calculation, and Monitoring of Revegetation: Within 60 days of completing construction, the Certificate Holder shall provide an as-built report that documents the amount of temporary and permanent disturbance associated with the Project. This shall include associated maps and georeferenced spatial files. The as-built report shall be factored into the final calculation of habitat offset based on the Certificate Holder-provided ratios. The acreages of modified habitat planted for the Project under the solar arrays shall also be included in this report. EFSEC will determine the number of years that vegetation monitoring of temporary disturbance and modified habitat will be conducted and the success criteria for revegetation. The success criteria will include measurable parameters that the Certificate Holder shall measure to determine whether successful revegetation has occurred. The Certificate Holder shall submit annual reports for each year of vegetation monitoring following construction to document the success of revegetation. At the end of the vegetation monitoring period, as determined by EFSEC, areas of modified habitat and revegetated temporary disturbance that have met the success criteria will be eligible for offset by the Certificate Holder at the respective ratios. Any areas of modified habitat or temporary disturbance that do not meet the success criteria after completion of revegetation monitoring will be considered permanent disturbance, and this will be added to the offset requirement.

**Rationale:** This mitigation measure addresses habitat offset by providing a final calculation of offset requirements based on actual disturbance. In addition, it addresses the uncertainty associated with the success of revegetation and, in particular, of restoring shrub-steppe ecosystems.

**Veg-5 Operation and Decommissioning Dust Control Plan:** A dust control plan shall be prepared for Project operation and decommissioning, similar to the dust control plan presented by the Certificate Holder. The plan will minimize impacts on vegetation from dust during the Operations and Decommissioning stages of the Project.

**Rationale:** This mitigation measure minimizes indirect impacts from dust during operation and decommissioning.

**Veg-6 Decommissioning Legislated Requirements:** If the applicable legislated requirements at the time of decommissioning are more restrictive than at the time of the execution of the SCA, the decommissioning measures will be updated to meet the new requirements.

**Rationale:** This mitigation measure enables adjustment of requirements based on changes in legislation once decommissioning occurs, based on the requirements at that time.

**Veg-7 Detailed Site Restoration Plan:** The Detailed Site Restoration Plan is a required, regulatory document. It shall be prepared and submitted for approval by EFSEC for final revegetation prior to Project decommissioning for the temporary and permanent disturbance areas. It will be adapted to include modified habitat.

**Rationale:** The Detailed Site Restoration Plan will be a living document. It shall include the methods, success criteria, monitoring, and reporting for revegetation at the end of the Project life. It shall also include provisions for adaptive management and shall be prepared based on any lessons learned from implementing the revegetation planned for the temporary disturbance from Project construction as described in Appendix N of the 2022 ASC (Appendix N, Horse Heave Wind Farm, LLC 2022).

**Veg-8 Decommissioning Noxious Weed Management Plan:** A Noxious Weed Management Plan (or extension of the current plan) to include prevention and control during decommissioning of the Project shall be prepared. This Plan shall include monitoring of the area for three years following decommissioning of the Project.

**Rationale:** This mitigation measure addresses noxious weeds during decommissioning. It is designed to minimize the introduction and spread of noxious weeds during decommissioning.

**Veg-9 Maintenance of Solar Array Fence:** During Project operation, the solar array fence shall be maintained, including removal of vegetation material that may become entwined in the fence. Monthly fence surveys shall be conducted during periods where the wildfire danger rating, as determined by DNR, is assessed as "low." When the wildfire danger rating is assessed as "moderate" or higher, weekly surveys shall be required.

**Rationale:** Vegetation material entwined within the solar array fence presents a fuel source for fire. Maintenance and removal will minimize this risk.

**Veg-10 Shrubland and PHS Avoidance:** No solar arrays would be sited on any rabbitbrush shrubland or WDFW-designated Priority Habitat types.

**Rationale:** Rabbitbrush shrubland and Priority Habitats serve a vital environmental need and face a number of threats from development. Preserving these habitat types from Project impacts serves to reduce impacts to the vegetation and wildlife that are dependent on them.

#### 5. Wildlife and Habitat

# A. Wildlife (Wild) Mitigation

#### Wild-1 Post-construction Bird and Bat Fatality Monitoring Program:

Prior to initiation of operation, the Certificate Holder shall develop, in coordination with the Preoperational Technical Advisory Group (PTAG) and approval by EFSEC, a post-construction bird and bat fatality monitoring program. Monitoring shall be conducted for a minimum of three years. While the three years of monitoring need not be consecutive, all post-construction monitoring shall be conducted within the initial five years of operation to document variation in annual fatality rates. The program shall describe survey methods, timing, and effort as described in the Certificate Holder's Bird and Bat Conservation Strategy (Appendix M of the Final ASC). Surveys shall include carcass surveys to document the longevity of carcass persistence and detectability of carcasses. Surveys shall be conducted year-round to account for variation in bird and bat abundance and diversity. Additional surveys (e.g., survey frequency) shall be conducted during sensitive periods for birds and bats (e.g., migration periods). Surveyed area shall include turbines, solar arrays, and transmission lines at a minimum.

#### Bird and bat fatality adaptive management strategy development

Prior to initiation of operation, the Certificate Holder shall develop, in coordination with the PTAG and approval by EFSEC, an adaptive management strategy. The adaptive management strategy shall include

additional mitigation measures to be applied during sensitive periods (e.g. migration) or if mortality thresholds are exceeded.

Migratory bat species are at risk of population level impacts due to wind power facilities and these species are most at risk of collisions with turbines during spring and fall migration. As such, adaptive management strategies will be applied during these sensitive periods, which are generally April to June (spring migration) and August to October (fall migration) (Hayes and Wiles 2013). Acoustic surveys during operation may be used to define a project-specific migratory period. Acoustic detectors may be deployed across the Lease Boundary prior to spring and fall migration to detect increased bat activity suggesting the onset of bat migration. These data will be used to adjust the generalized bat sensitive periods listed above. Similarly, acoustic data will be used to document the end of bat migration and when adaptive management strategies may no longer be required. Bat data shall be downloaded and analyzed on a weekly basis to document the start and end of migration.

Adaptive management mitigation strategies that will be considered include altering the operation of the turbines by increasing the cut-in speed to above 18 feet (5.5 meters) per second (Alberta Government 2013) and curtailing turbines during known bird and bat migration period. As noted in in Section 4.6.2.2, projected impacts of wind power projects estimate that wind power could result in mortality levels of 3 to 46 percent of the hoary bat population by 2050. Friedenberg and Frick (2021) conclude that a 5 m/s curtailment could avoid hoary bat extinction in several of the modeled scenarios. Acoustic monitors and smart curtailment may also be included in adaptive management to refine data on bat presence near turbines and when curtailment mitigation should be implemented. Mitigation strategies may be limited to groups of turbines based on the results of post-construction monitoring.

### Bird and bat fatality adaptive management review

The Certificate Holder, the TAC, EFSEC, and WDFW will review the results of the bird and bat post-construction fatality monitoring program after each monitoring period to determine whether the mitigation measures outlined in the adaptive management strategy should be revised or adjusted. The data will also be used to determine whether monitoring efforts are sufficient to verify predicted impacts on birds and bats. EFSEC may require the Certificate Holder to conduct more intensive surveys (e.g., additional spatial extent or frequency) or extend the duration of post-construction monitoring beyond the minimum three years. The Adaptive management mitigation strategies shall be periodically reviewed (minimum of every five years) with the TAC during operation to consider inclusion of new science and technologies that may more efficiently reduce bird and bat fatalities.

**Rationale:** This mitigation allows for continued monitoring and adaptive management of potential Project-related wildlife mortalities.

Wild-2 Trash Containers: All trash containers shall be wildlife resistant.

**Rationale:** This mitigation measure reduces potential human-wildlife conflicts thereby reducing potential Project-related wildlife mortalities.

**Wild-3 USFWS Eagle Consultation:** The Certificate Holder shall provide EFSEC a summary of the consultation undertaken with the USFWS regarding eagle mortality.

**Rationale:** This mitigation measure allows for continued monitoring and adaptive management of potential Project-related impacts on eagles.

**Wild-4 Pesticide Management Plan:** The Certificate Holder shall avoid the use of pesticides, including rodenticides, during Project construction and operation. If pesticides are required, the Certificate Holder shall, prior to application of the pesticides, develop a management plan for submission to and approval by

EFSEC that describes how the Certificate Holder will avoid and/or otherwise minimize potential impacts on wildlife, including all potentially impacted special status species.

**Rationale:** This mitigation measure reduces potential impacts on habitat and wildlife mortality while allowing for adaptive management of potential Project related impacts.

**Wild-5 Construction Zone Management:** The Certificate Holder shall limit construction disturbance by identifying sensitive areas on mapping and flagging in the field exclusion zones around any sensitive areas, including wildlife features, such as wildlife colonies, active nests, dens, and wetlands. Encroachment into exclusion zones required during construction shall be reviewed by the Certificate Holder's biologist to determine the impacts on the feature and recommend additional measures to manage impacts to the resource. The Certificate Holder shall provide information on where encroachment will be required, the rationale for encroachment, and additional mitigation measures for EFSEC to review prior to implementation. The Certificate Holder shall conduct ongoing environmental monitoring during construction to ensure that flagged exclusion zones are avoided.

Rationale: This mitigation measure reduces potential loss of habitat and wildlife mortality.

**Wild-6 Wildlife Road Mortality Management:** The Certificate Holder shall maintain a database of road mortalities throughout construction and operation as part of the operational procedures. The Certificate Holder shall review road-based mortalities annually and propose additional mitigation for areas under the control of the Certificate Holder where frequent mortalities or wildlife crossing observations occur. Additional mitigation measures may include speed control, signage, temporary road closures (e.g., during migration periods), or wildlife passageways and will be reviewed and approved by EFSEC prior to implementation.

**Rationale:** This mitigation measure allows for continued monitoring and adaptive management of potential Project-related wildlife mortalities.

**Wild-7 Construction Hours:** The Certificate Holder shall schedule construction activities to occur during daylight hours, when feasible, to reduce disturbance of nocturnal species and the need for nighttime lighting.

Rationale: This mitigation measure reduces disturbance to wildlife (i.e., indirect loss).

**Wild-8 Turbine Buffer Zones:** Wind turbine buffer zones shall be established around all known raptor nests and be a minimum of 0.25 miles. The Certificate Holder shall prepare a Raptor Nest Monitoring and Management Plan for review by EFSEC and the PTAG if buffer zones cannot be maintained.

**Rationale:** This mitigation measure reduces potential impacts on habitat and raptor mortality while allowing allow for adaptive management of potential Project-related impacts.

**Wild-9 Breeding Bird Period Mitigation:** Vegetation clearing and grubbing shall avoid local bird breeding periods, when feasible, to reduce potential destruction or disturbance of nesting birds. If avoidance of this period is not feasible, additional mitigation measures, such as pre-construction surveys for and buffering of active bird nests, shall be undertaken.

Rationale: This mitigation measure avoids or reduces potential bird mortality.

**Wild-10 Pre-construction Bat Monitoring:** The Certificate Holder shall conduct pre-construction surveys to develop an estimate of regional bat populations and identify to what degree seasonality affects the bat population in the area. The PTAG shall be contacted prior to undertaking these surveys and shall be involved in the development of the methodology and review of the results.

**Rationale:** This mitigation measure would provide baseline information necessary for adaptive management efforts to curtail bat mortality that is anticipated as a result of Project operation.

### B. Habitat (Hab) Mitigation

Hab-1 Wildlife Movement Corridors: The Certificate Holder shall locate primary Project components, specifically turbines, solar arrays, and BESS, outside of movement corridors modeled in Washington Wildlife Habitat Connectivity Working Group (2013) as medium to very high linkage. The Certificate Holder shall locate secondary Project components, such as roads, transmission lines, substations, MET and ADLS towers, and laydown yards, outside of corridors modeled as high to very high linkage unless co-located with existing infrastructure, such as roads or transmission corridors. The Certificate Holder shall provide rationale to EFSEC for any secondary components to be sited within medium to very high linkage movement corridors, and a Corridor Mitigation Plan shall be required that describes:

- Extent of direct and indirect habitat impact within the movement corridor
- Proposed measures to be implemented to reduce potential impacts on movement corridors (e.g., habitat enhancements to promote continued use of corridors)
- Proposed features (e.g., open-bottom culverts) to accommodate wildlife movement for linear Project components (e.g., roads, powerlines)
- Proposed restoration in movement corridors following Project decommissioning
- Performance standards to assess the effectiveness of mitigation measures and restoration
- Methods to monitor and measure performance standards

The Corridor Mitigation Plan shall be developed in consultation with the PTAG and reviewed and approved by EFSEC prior to implementation. Results of corridor monitoring shall be reviewed annually with the TAC to evaluate the effectiveness and apply additional measures if necessary. Data shall be provided to EFSEC with additional mitigation measures for review and approval prior to implementation.

**Rationale:** This mitigation measure reduces potential Project related barriers to wildlife movement while allowing for continued monitoring and adaptive management of potential Project related barriers.

**Hab-2 Canyon Crossings:** Transmission line crossings of canyons and draws shall be minimized. Where crossings are required, the Certificate Holder shall provide EFSEC with rationale for the crossings and propose additional mitigation measures to reduce potential barriers to movement (e.g., retaining vegetation under transmission lines) and wildlife collisions (e.g., installing flight diverters on overhead lines). EFSEC will approve the final transmission line layout, mitigation, and adaptive management strategy.

**Rationale:** This mitigation reduces potential Project related barriers to wildlife movement while allowing for continued monitoring and adaptive management of potential Project related barriers.

**Hab-3 Temporary Laydown Areas:** Temporary laydown areas shall be situated out of native shrub-steppe habitat. Where temporary disturbance of shrub-steppe habitat is required, the Certificate Holder shall provide EFSEC with rationale and propose additional mitigation measures to reduce habitat loss. **Rationale:** This mitigation measure avoids and reduces impacts to habitat while allowing for adaptive management of potential Project related habitat loss.

**Hab-4 Establish PTAG** and **TAC:** The Certificate Holder, in consultation with EFSEC, shall establish a PTAG and TAC. The PTAG shall be established at least one year prior to construction and will be responsible for reviewing and providing technical advice on documents produced by the Certificate Holder related to wildlife and wildlife habitat. The PTAG will also provide advice on adaptive management. The PTAG will be responsible for, at a minimum:

- Reviewing and providing technical advice on Project wildlife and habitat management plans (e.g., ferruginous hawk management plan)
- Reviewing and providing advice to EFSEC on pre-design and pre-construction data collection requirements to address Project mitigation measures and conditions of management plans
- Reviewing and providing advice to EFSEC on the final Project design

 Advising on thresholds to be applied to the Project that will trigger the requirement for additional mitigation measures

The Certificate Holder, in consultation with EFSEC, shall establish a TAC prior to Project operation. The PTAG will cease to exist once the Certificate Holder has completed all planned construction and will be replaced by the TAC, which will exist for the life of the Project. The TAC will be responsible for, at a minimum:

- Advising on the monitoring of mitigation effectiveness and reviewing monitoring reports
- Advising on additional or new mitigation measures that will be implemented by the Certificate Holder to address exceedances of thresholds
- Reviewing the results of annual data generated from surveys and incidental observations and
  providing recommendations for alternative mitigation and adaptive management strategies, as well
  as advising on aspects of existing mitigation that are no longer needed.

The PTAG and TAC may include representation by WDFW, the Washington Department of Natural Resources, interested tribes, Benton County, and the USFWS. The PTAG and TAC may also include local interest groups, not-for-profit groups, and landowners. The exact composition of the PTAG and TAC will be determined through discussions between the Certificate Holder and EFSEC and will depend on the relevance and/or availability of proposed members.

**Rationale:** This mitigation measure avoids and reduces impacts on wildlife and habitat, including habitat loss, wildlife disturbance, barriers to movement, and wildlife mortality. Further the mitigation measure will allow for continued monitoring and adaptive management of potential Project-related impacts.

Hab-5 Indirect Habitat Loss Management Plan: As noted by the Certificate Holder, the Project is expected to result in indirect habitat loss through loss of habitat function and changes in wildlife behavior in response to the Project. Further, as noted by the Certificate Holder, WDFW guidelines require that compensatory habitat mitigation must fully offset the loss of habitat function and value. To address indirect habitat loss associated with the Project, the Certificate Holder shall develop an Indirect Habitat Loss Management Plan that addresses potential indirect habitat loss resulting from the Project. The Certificate Holder shall work with the PTAG during the development of the Indirect Habitat Loss Management Plan (IHLMP) for review and approval by EFSEC. EFSEC and the PTAG will review the IHLMP prior to its implementation. The IHLMP shall be provided to the PTAG for review 90 days prior to construction.

The objectives of the IHLMP will be to identify a Project-specific ZOI and required mitigation based on the Project-specific ZOI. The Project-specific ZOI will be developed based on Project conditions and may differ from the ZOI presented in the EIS. The IHLMP shall include:

- A description of the study's purpose and objectives
- A description of methods to define Project-specific ZOIs (e.g., gradient analysis, nest density)
- A description of data requirements to establish Project-specific ZOIs and field programs that will be implemented (pre-construction and post-operation)
- A description of the duration of studies required to establish Project-specific ZOIs
- A description of criteria to be used to compensate for loss of habitat function and value
- An environmental effectiveness monitoring strategy of compensatory habitat to ensure that the habitat meets success criteria

The IHLMP shall also include a series of compensatory site-selection criteria, developed in consultation with the PTAG. The selection criteria will be used to evaluate candidate habitat compensation habitats. Habitats that achieve more of the criteria will be identified as the preferential sites. Selection criteria shall include, at a minimum:

 Proximity to the Lease Boundary (e.g., hierarchy of preferences with respect to location— within the Lease Boundary being the highest priority, adjacent to the Lease Boundary being the second highest priority, and off site being the third priority)

- Protection of existing native shrub-steppe or grassland habitats
- Encompassing sensitive or important wildlife habitat (e.g., mapped movement corridors, ferruginous hawk core habitat, HCAs, areas of high prey abundance)
- Proximity to Project infrastructure

**Rationale:** This mitigation measure avoids and reduces disturbance to wildlife (indirect habitat loss) while allowing for ongoing monitoring, adaptive management, and offsetting of potential Project related impacts.

**Hab-6 Project Layout & Design:** The Certificate Holder shall work with EFSEC, with advice from the PTAG, on the development of the final Project layout and design, including the application of Certificate Holder commitments and recommended mitigation measures.

**Rationale:** This mitigation measure avoids and reduces potential habitat loss and disturbance to wildlife (indirect habitat loss).

**Hab-7 Decommissioning Roadway Requirements:** All roadways constructed for the Project during the construction and operation phases shall be removed and restored during decommissioning. The Certificate Holder shall provide EFSEC with rationale and propose additional mitigation measures if roadways are not decommissioned post-operation.

Rationale: This mitigation measure restores habitat post-operation and reduces habitat loss.

**Hab-8 Indirect Habitat Loss Compensation:** The Certificate Holder shall be required to provide compensation habitat loss and alteration (indirect habitat loss) (See Hab-5, Veg-4) through one or more actions of land acquisition, onsite easement and restoration (excluding areas impacted by the project such as temporary laydowns), and/or fee-based mitigation.

The Certificate Holder shall prioritize development of conservation easements (Option 1¹ in the Certificate Holder's Draft Wildlife and Habitat Mitigation Plan) and shall compensate for the remaining permanent and altered (indirect) impacts by providing money to WDFW, or a third party identified by WDFW, and agreed to by EFSEC, to purchase other lands suitable as in-kind and/or enhancement mitigation. The Certificate Holder shall provide EFSEC, for review and approval, with rationale for fee-based mitigation (Options 2 and 3 in the Certificate Holder's Draft Wildlife and Habitat Mitigation Plan) including a description of how much compensatory habitat will be addressed through Option 1 (conservation easement) and rationale for why fee-based mitigation is required.

The fee-based mitigation includes a per acre fee that shall be determined by market rates and land sales within the general vicinity of the Lease Boundary for lands containing comparable habitat types and quality present within the Lease Boundary. The per acre fee shall be developed by the Certificate Holder in consultation with WDFW and approved by EFSEC. The Total Financial Obligation (TFO) shall be determined by multiplying the cost per acre by the total Compensatory Mitigation Acres (CMA) remaining after the application of Option 1 mitigation strategy and shall include a one-time 15% premium to cover administration and management costs for the purchased lands. The TFO for compensatory mitigation shall be determined and agreed to by EFSEC 90 days before construction. If construction has not begun within 12 months of the approval of the TFO, the TFO identified shall expire and be recalculated prior to beginning construction. The TFO shall be calculated based on the following: Average Comparable Land Sale Cost (per acre)\*(CMA-Option 1 Acres)\*1.15 = TFO In addition to the wildlife and habitat mitigation measures, the following measures developed for the Vegetation chapter are applicable to wildlife and habitat.

Rationale: This mitigation measure clarifies the process to be followed in selection of offsetting habitat.

<sup>&</sup>lt;sup>1</sup> Certificate Holder's Draft Wildlife and Habitat Mitigation Plan identifies three compensation options: Option 1 – Conservation easement within or adjacent to the Lease Boundary; Option 2 – Annual fee or lump sum payment provided to WDFW; Option 3 – payment to local land trusts, conservation organizations, or local tribes to support conservation projects.

### C. Special Status Species (Spec) Mitigation

**Spec-1: Striped Whipsnake & Sagebrush Lizard:** The Certificate Holder shall conduct pre-construction surveys for sensitive reptile species prior to alteration or destruction of suitable habitat such as areas within the Lease Boundary identified as core habitat in GAP mapping, as well as shrubland (e.g., shrub-steppe, rabbitbrush). WDFW shall be contacted prior to undertaking these surveys.

If these species are identified through pre-construction surveys, the Certificate Holder shall prepare a Reptile Management Plan to reduce potential impacts on habitat, mortality, and barriers to movement. The Reptile Management Plan shall describe:

- How the Certificate Holder will avoid suitable habitat, including where the species were observed
- How the Certificate Holder will implement management recommendations in Larsen (1997)
- How the Certificate Holder will maintain rodent burrows in suitable reptile habitat (e.g., shrub-steppe)
- Additional mitigation measures to reduce potential mortality of these species during the construction and operation stages of the Project

The Reptile Management Plan shall be reviewed by the PTAG and approved by EFSEC prior to initiation of construction. Survey results and proposed adaptive management shall be reviewed by the PTAG and approved by EFSEC prior to implementation (see Hab-4).

**Rationale:** This mitigation measure avoids and reduces potential striped whipsnake and sagebrush lizard habitat loss and mortality while allowing for adaptive management throughout Project construction and operation.

**Spec-2: American White Pelican:** The Certificate Holder shall maintain a database of American white pelican observations within the Project Lease Boundary. Observational data shall be reviewed with the TAC annually, and additional survey strategies shall be applied as needed to inform adaptive management. **Rationale:** This mitigation measure allows for adaptive management of potential American white pelican mortality through Project operation.

**Spec-3: Eagles:** The Certificate Holder shall obtain any required federal approvals. The Certificate Holder shall continue ongoing coordination with the USFWS (Eagle Coordinator, Columbia Pacific Northwest Region) regarding an eagle take permit for incidental take of bald and golden eagles and shall continue to evaluate eagle risk to determine if an eagle take permit is appropriate considering the use of the Project by bald and golden eagles.

The Certificate Holder shall apply WDFW-recommended buffers for bald eagle and golden eagle nests (Larsen et al. 2004):

- Bald eagle protected zone (400 feet) and conditioned zone (up to 800 feet beyond the protected zone)
- Golden eagle 1.9 miles

**Rationale:** This mitigation measure avoids and reduces potential disturbance of eagle nests and eagle mortality.

**Spec-4: Burrowing Owl**: The Certificate Holder shall conduct burrowing owl surveys within areas of direct loss (permanent, temporary, and modified) and associated ZOIs. The results of these surveys shall be provided to the PTAG and EFSEC and used to inform the final Project layout.

Active burrows shall be retained and satellite burrows with characteristics used by burrowing owls shall be avoided where feasible to maintain habitat capacity.

WDFW-recommended seasonal buffers (0.5 miles) shall be applied around burrowing owl nests to avoid disturbing nesting burrowing owls, if present (Larsen et al. 2004). Seasonal buffers (February 15 to September 25) shall be applied during construction and for temporary disturbances, such as periodic maintenance, during operation.

If active burrowing owls are identified within the Lease Boundary, the Certificate Holder shall develop a species-specific management plan that describes:

- The location of active burrows
- How active burrows will be avoided through re-alignment or reconfiguration of Project features.
- Additional mitigation measures that will be applied where disturbance to active burrows is expected (e.g., construction of artificial burrows)
- Additional mitigation measures that will be applied during operation if burrowing owl mortalities are recorded.
- How ongoing monitoring of active burrows will be undertaken.

The Burrowing Owl Management Plan shall be reviewed by the PTAG and approved by EFSEC prior to initiation of construction. Survey results and proposed adaptive management shall be reviewed by the PTAG and approved by EFSEC prior to implementation (see Hab-4).

The Certificate Holder shall monitor access roads for burrowing owl use and mortalities. Mortalities shall be reported to the PTAG or TAC (depending on the Project phase) and EFSEC within 5 days of the observation. Incidental observations of burrowing owl use shall be provided to the PTAG (construction) or TAC (operation) on an annual basis.

**Rationale:** This mitigation measure avoids and reduces potential loss of burrowing owl habitat, disturbance to burrowing owls, and burrowing owl mortality, while allowing for adaptive management throughout Project construction and operation.

Spec-5: Ferruginous Hawk: The Certificate Holder shall not site any wind turbines within core habitat in ferruginous hawk territories, defined as the area within a 2-mile radius surrounding ferruginous hawk nests in PHS data at the time SCA execution and any nests added to the PHS data between SCA execution and the time of construction and in Horse Heaven Wind Farm, LLC (2022). Other primary Project components, specifically solar arrays and BESS, shall not be sited within 0.5 miles of a documented ferruginous hawk nest. Siting of solar arrays or BESS within 0.5-2 miles of a known ferruginous hawk nest or secondary project components (i.e., roads, transmission lines, substations, etc.) within 2 miles of a documented nest may be considered if the Certificate Holder is able to demonstrate that the nest site and foraging habitat is no longer available to the species and that compensation habitat, as described below, will provide a net gain in ferruginous hawk habitat. Habitat considered no longer available for ferruginous hawk would include habitat that has been altered by landscape-scale development (cropland conversion, residential development, industrial development) rendering the territory non-viable. This could include habitats that have been altered such that no native or foraging habitat remains and no nesting structures exist. Any Project infrastructure to be sited within 2 miles of a ferruginous hawk nest will require prior approval by EFSEC based on the process described below.

The extent of Project component encroachment into 2-mile core habitat may vary depending on the type of infrastructure proposed (e.g., solar array, power line, road). If encroachment is considered by the Certificate Holder, the Certificate Holder shall provide the PTAG and EFSEC with:

1. A set of habitat parameters, developed in consultation with the PTAG for approval by EFSEC, to document whether habitat in a core range is consider non-viable. The results of habitat surveys shall be reviewed by the PTAG and approved by EFSEC.

- A description of the current nesting habitat available and a description of documented use of the core habitat by ferruginous hawk available through historic background information or field-based surveys.
- 3. A description of the type and location of infrastructure proposed within the core habitat.
- 4. The proximity of infrastructure to any known nest site or suitable foraging habitat.

In the event that a Project component is proposed for siting within the 2-mile buffer, the Certificate Holder shall, in consultation with the PTAG for approval by EFSEC, develop a Project-specific ferruginous hawk mitigation and management plan:

- 1. A description of efforts to site Project infrastructure to avoid core habitat, identified as the area within 2 miles of nests documented in PHS data and Horse Heaven Wind Farm, LLC (2022):
  - a. If Project components are sited within 2 miles of a ferruginous hawk nest, the infrastructure shall be reviewed by the PTAG and approved by EFSEC.
  - b. The plan shall explain how and where the Certificate Holder will create offsetting habitat for direct and indirect habitat loss within the 2-mile core habitat of ferruginous hawk nests documented in PHS data and in Horse Heaven Wind, LLC (2022).
- 2. A description of when construction activities will be undertaken to avoid sensitive timing periods for ferruginous hawk.
- 3. A description of pre- and post-monitoring programs that will be conducted to establish:
  - a. Habitat use within the Lease Boundary.
  - b. Mapping of ground squirrel colonies and other prey items.
  - c. Identification of potential flyways between nest sites and foraging habitat.
  - d. Ongoing monitoring of nest use and territory success.
- 4. A description of restoration activities that will be undertaken in disturbed areas to enhance ferruginous hawk habitat during Project decommissioning.

Results of ferruginous hawk monitoring programs and adaptive management will continue through Project operation and decommissioning with review by the TAC and approval by EFSEC.

**Rationale:** The mitigation measure avoids and reduces potential loss of ferruginous hawk habitat, disturbance to ferruginous hawk, and ferruginous hawk mortality, while allowing for adaptive management throughout Project construction and operation.

**Spec-6: Great Blue Heron, Sandhill Crane, & Tundra Swan:** The Certificate Holder shall maintain a database of incidental observation of great blue heron, sandhill crane, and tundra swan foraging within the Lease Boundary during operation. Observational data and proposed adaptive management strategies shall be reviewed with the TAC annually (see Hab-4).

The Certificate Holder shall reduce the use of overhead power lines, where possible.

The Certificate Holder shall apply buffers recommended in Larsen et al (2004) sandhill crane feeding areas (0.5 miles) and roosting areas (0.3 miles), if documented in the Lease Boundary.

**Rationale:** The mitigation measure avoids and reduces potential disturbance to and mortality of great blue heron, sandhill crane and tundra swan, while allowing for adaptive management throughout Project construction and operation.

**Spec-7:** Loggerhead Shrike, Sagebrush Sparrow, Sage Thrasher, & Vaux's Swift: The Certificate Holder shall maintain connectivity between natural habitat patches to reduce potential habitat loss and fragmentation. The Certificate Holder shall restore areas with shrubs, where feasible, to reduce potential habitat loss. The Certificate Holder shall avoid the use of insecticides and herbicides to reduce potential mortality and loss of prey items.

The Certificate Holder shall retain trees, shrubs, and hedgerows, as feasible, to reduce habitat loss.

The Certificate Holder shall consult with the PTAG and TAC and EFSEC if suitable habitat for loggerhead shrike, sagebrush sparrow, and sage thrasher cannot be avoided. If suitable habitat cannot be avoided, the Certificate Holder shall, in consultation with the PTAG for approval by EFSEC, develop nest set back buffers that are supported by literature to be applied during clearing and grubbing activities.

The Certificate Holder shall avoid clearing and grubbing during the active nesting period to reduce potential destruction of active nests and disturbance of nesting birds. If clearing and grubbing occurs during the nesting season, the Certificate Holder shall conduct pre-clearing surveys for active nests and maintain appropriate setback buffers around active nests.

Observational data and proposed adaptive management strategies will be reviewed with the TAC annually (see Hab-4).

**Rationale:** This mitigation measure avoids and reduces potential habitat loss, habitat fragmentation, and mortality to avoid and reduce impacts on loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift. The measure allows for adaptive management throughout Project construction and operation.

**Spec-8: Prairie Falcon:** The Certificate Holder shall conduct pre-construction surveys for prairie falcon nests for construction work proposed during the prairie falcon nesting season and the winter season preceding the start of construction and maintain a seasonal buffer of 2,640 feet from active nest sites (Larsen et al. 2004) to reduce potential destruction or disturbance of active nests.

Observational data and proposed adaptive management strategies will be reviewed with the TAC annually (see Hab-4).

**Rationale:** This mitigation measure avoids and reduces potential disturbance to prairie falcon, and prairie falcon mortality, while allowing for adaptive management throughout Project construction and operation.

**Spec-9: Ring-necked Pheasant**: The Certificate Holder shall consider using native grasses and legumes that support ring-necked pheasant in seed mixes applied during post-construction restoration of temporary disturbances and decommissioning to reduce potential habitat loss (Larsen et al. 2004).

Observational data and proposed adaptive management strategies will be reviewed with the TAC annually (see Hab-4).

**Rationale:** This mitigation measure reduces potential loss of ring-necked pheasant habitat and allows for adaptive management throughout Project construction and operation.

**Spec-10: Black-tailed Jackrabbit & White-tailed Jackrabbit:** The Certificate Holder shall conduct surveys for jackrabbit in suitable habitat identified through GAP predictive mapping.

If jackrabbits are identified, the Certificate Holder shall develop and implement a management plan with additional mitigation measures to reduce potential loss of habitat supporting jackrabbits.

Observational data and proposed adaptive management strategies will be reviewed with the TAC annually (see Hab-4).

**Rationale:** This mitigation measure reduces potential loss of black-tailed and white-tailed jackrabbit habitat, indirect habitat loss, habitat fragmentation, and mortality, while allowing for adaptive management throughout Project construction and operation.

**Spec-11: Townsend's Big-eared Bat:** The Certificate Holder shall restrict bat access to open water if the water could be contaminated.

The Certificate Holder shall retain old buildings, outbuildings, and trees where feasible.

The Certificate Holder shall report mortalities of Townsend's big-eared bat to EFSEC and the TAC. Bat mortality data and adaptive management strategies will be reviewed with the TAC annually (see Hab-4). **Rationale:** This mitigation measure reduces potential loss of Townsend's big-eared bat habitat and mortality and allows for adaptive management throughout Project construction and operation.

**Spec-12: Townsend's Ground Squirrel:** The Certificate Holder shall conduct surveys for Townsend's ground squirrel colonies within the Lease Boundary in areas of the Project disturbance footprint to inform final design.

The Certificate Holder shall avoid habitat loss within Townsend's ground squirrel habitat concentration areas, as well as known colonies, in final design. Additional Townsend's ground squirrel colonies identified through surveys shall be shown on Project mapping. If Project components are required in habitat concentration areas (rated as medium or greater) or near known colonies, the Certificate Holder shall prepare a species-specific management plan for areas where avoidance is not feasible. This plan shall provide rationale for why colonies cannot be avoided and shall detail additional mitigation measures to reduce impacts to Townsend's ground squirrel. Additional mitigation measures may include identification of setbacks, colony monitoring, habitat restoration, colony relocation, and reconstruction of habitat features. The plan shall also describe monitoring and adaptive management measures to be implemented during Project operation. The plans shall be provided and discussed with the PTAG, and approved by EFSEC, if avoidance of identified ground squirrel colonies is not feasible.

Observational data and adaptive management strategies will be reviewed with the TAC annually. **Rationale:** This mitigation measure reduces potential loss of Townsend's ground squirrel habitat, disturbance of squirrel colonies, and Townsend's ground squirrel mortality, while allowing for adaptive management through Project construction and operation.

**Spec-13: Pronghorn Antelope:** The Certificate Holder shall limit fencing where feasible (e.g., around solar arrays). Final fencing layouts and design, including use of non-barbed-wire security fencing, shall be provided to the PTAG and EFSEC with rationale for fencing requirements.

The Certificate Holder shall design and implement a study of seasonal pronghorn antelope occurrence and use of the Lease Boundary before construction and during operation to document the change, if any, of pronghorn antelope presence, abundance, and habitat use within the Lease Boundary. The PTAG will review and provide input to the study design. The results of the study will be used to develop adaptive management measures to respond to changes in pronghorn antelope habitat use. Survey results and proposed adaptive management will be reviewed by the PTAG and TAC prior to implementation (see Hab-4).

The Certificate Holder shall maintain a potentially confidential database of pronghorn antelope observations, including details such as numbers, location, age, and sex, and shall make this database available to WDFW, EFSEC, and the Yakama Nation.

**Rationale:** This mitigation measure reduces potential disturbance to pronghorn antelope and barriers to pronghorn antelope movement, while allowing for adaptive management throughout Project construction and operation.

# 6. Energy and Natural Resources (ENR)

**ENR-1 Water Source:** The Certificate Holder shall provide an executed agreement to EFSEC that identifies the source and quantity of water intended to be supplied to the Project prior to its construction, operation, and decommissioning.

**Rationale**: Provides verification that water being used by the Project is originating from a sustainable source.

**ENR-2 High-efficiency Electrical Requirements:** The Certificate Holder shall install high-efficiency electrical fixtures and appliances in the O&M facility, BESS, and substations to reduce energy needs for the Project's operations stage.

Rationale: Reduces the Project's demands on energy and natural resources.

**ENR-3 High-efficiency Security Lighting:** The Certificate Holder shall install high-efficiency security lighting to reduce energy needs for the Project's operations stage.

**Rationale**: Reduces the Project's demands on energy resources.

**ENR-4 Low-water Toilets:** The Certificate Holder shall install low-water-use flush toilets in the O&M facilities to reduce the Project's water requirements during its operations stage.

Rationale: Reduces the Project's demands on water resources.

**ENR-5 Recycle Wash Water:** The Certificate Holder shall capture and recycle wash water to reduce the Project's water requirements during its operations stage.

**Rationale**: Reduces the Project's demands on water resources.

**ENR-6 Component Recycling:** To retrieve as much of the natural resources used in construction and operation of the Project as possible, the Certificate Holder shall demolish and recycle all components of the Project that have the potential to be used as raw materials in commercial or industrial applications. For any Project components that the Certificate Holder deems non-recyclable, the rationale for that determination shall be presented to EFSEC for approval prior to the disposal of the components. If the Certificate Holder intends to leave any portion of the facility, including concrete foundations, they must submit a request to EFSEC in an update to their decommissioning plan.

Rationale: Reduces the Project's demands on natural resources.

## 7. Land and Shoreline Use (LSU) Mitigation

**LSU-1 Livestock Management Plan:** The Certificate Holder shall prepare a livestock management plan with property owners and livestock owners to control the movement of animals within the Lease Boundary during construction, operation, and decommissioning.

**Rationale:** To limit conflicts between the Project and farmers and ranchers.

**LSU-2 Dryland Farming Management Plan:** The Certificate Holder shall prepare a dryland farming management plan for construction, operation, and decommissioning that outlines communication requirements between the Certificate Holder and the land owners. The plan shall establish work windows that will allow farmers uninterrupted access to their fields for dryland wheat planting and harvesting. **Rationale:** To limit conflicts between the Project and farmers and ranchers.

**LSU-3 Livestock Management:** The Certificate Holder shall be responsible for ensuring that arrangements for the removal of all livestock have been made during Project construction and decommissioning. **Rationale:** To limit conflicts between the Project and farmers and ranchers.

**LSU-4 Temporary Disturbance Restoration:** After construction is completed, the Certificate Holder shall restore all temporary disturbance areas to their preconstruction status.

**Rationale:** This measure will allow the areas of temporary disturbance within the Lease Boundary to return to their preconstruction agricultural production levels as soon as possible.

**LSU-5 Site Restoration Plan:** Prior to decommissioning, the Certificate Holder shall submit a Detailed Site Restoration Plan, per WAC 463-72-050, for restoring the site to its preconstruction character. The Certificate Holder will be responsible for working with the landowner to return all agricultural land to its preconstruction status. If future site conditions or land ownership no longer allows for the land to be returned to agricultural production, the Certificate Holder shall submit a request to EFSEC for an alternative land use that shall be in alignment with the Lease Boundary's preconstruction rural character and resource value. If the Detailed Site Restoration Plan requests an alternative land use, EFSEC may require that the Certificate Holder provide additional mitigation to offset impacts from a permanent conversion of the land. **Rationale:** This measure will assist in preventing conversion of a land use that is not in alignment with the Lease Boundary's current designation.

# 8. Historic and Cultural Resources (CR)

**CR-1 Traditional Cultural Properties Mitigation:** Ongoing engagement with affected Tribes could facilitate mitigation of any potential impacts on TCPs. Tribal review of site/engineering plans could provide input to guide design and avoidance, without confidential disclosure of locations. This engagement shall also include opportunities for identified stakeholders to evaluate the effectiveness of any implemented mitigation measures throughout the Project's lifecycle.

Appropriate mitigation measures may include (but are not limited to) the demarcation of "no-go," culturally sensitive areas to be avoided by contractors throughout the life of the Project, including redesign, refinement, and/or maintenance. The demarcation of culturally sensitive areas could also facilitate safe access to TCPs and/or other places of cultural significance for Tribes. If appropriate, the implementation of environmental enhancement measures (e.g., planting and/or screening) or the protection of certain aspects of the environmental setting may be considered in coordination with affected Tribes.

The CTUIR proposed several mitigation strategies (CTUIR 2021a, 2021b). Potential mitigation strategies include:

- Enable continued access for Tribes through an Access Agreement (e.g., continued access to First Foods).
- Create protections for natural resources that support First Foods procurement (e.g., preserve landforms, practice responsible stream management, avoid negative impacts on pollinator species).
- Perform off-site mitigation, including education and outreach work, to assist Tribes in the
  perpetuation of oral history and legends that would have been taught in-situ in the Area of Analysis;
  engage with Tribes on appropriate rehabilitation (closure) strategies for the safeguarding of
  viewshed and cultural landscapes.
- Include Tribal representatives during any ground-disturbing activities (Cultural Resource Monitor).
- Develop an agreement with the Tribes in anticipation of a time when the wind farm will be considered for disassembly to restore the landscape and viewshed.

**Rationale:** This measure will provide affected Tribes with an opportunity to continue discussions with the Certificate Holder and EFSEC throughout the life of the Project to identify and adapt mitigation practices to reduce impacts to TCPs.

**CR-2 Archaeological and Architectural Resources Mitigation:** Table 4.9-9 of Section 4.9 sets out proposed mitigation measures for historic and cultural resources potentially impacted by the Project. Any mitigation strategies shall be detailed in an agreement document between EFSEC, Washington State Department of Archaeology and Historic Preservation (DAHP), the Tribes, and the Project proponent.

Mitigation measures are intended to minimize impacts on historic and cultural resources with elevated sensitivity (precontact archaeological resources, National Register of Historic Places (NRHP)-eligible historic-period archaeological resources, TCPs, and unidentified historic and cultural resources), primarily through avoidance. If avoidance is not possible, the mitigation clarifies which resources will require a DAHP permit prior to disturbance. Mitigation measures also identify instances where engagement with DAHP, Tribes, and/or landowners shall be required.

**Rationale:** This measure will provide the Certificate Holder with instruction on how to avoid, minimize, or mitigate for any impacts to identified archaeological and architectural resources.

Table CR-2 Summary of Recommendations for Archaeological and Architectural Resources Potentially Impacted by the Project

Resource ID	Resource Type	Resource Sensitivity	Required Mitigation If Avoidance Not Possible	
<ul><li>45BN2092</li><li>45BN2146</li></ul>	Archaeological Resources Precontact Isolates	Avoidance requested and recommended	<ul> <li>DAHP permit not required for disturbance</li> <li>Further coordination with Tribes and DAHP</li> </ul>	
<ul><li>45BN261</li><li>45BN2090</li><li>45BN2153 (precontact component)</li></ul>	Archaeological Resources: Precontact or multicomponent sites	Avoidance requested and recommended DAHP-issued permit required prior to disturbance	<ul> <li>Further coordination with Tribes and DAHP</li> </ul>	
<ul> <li>45BN2081</li> <li>45BN2082</li> <li>45BN2083</li> <li>45BN2084</li> <li>45BN2086</li> <li>45BN2088</li> <li>45BN2091</li> <li>45BN2093</li> <li>45BN2138</li> <li>45BN2139</li> <li>45BN2144</li> <li>45BN2150</li> <li>45BN2155</li> <li>45BN2156</li> <li>45BN2157</li> <li>45BN2158</li> <li>45BN2163</li> </ul>	Archaeological Resources: Historic- Period Sites and Isolates	Determined not eligible for the NRHP	None	

Table CR-2 Summary of Recommendations for Archaeological and Architectural Resources Potentially

Impacted by the Project

Impacted by the Proj	ect	T	
Resource ID	Resource Type	Resource Sensitivity	Required Mitigation If Avoidance Not Possible
<ul> <li>45BN205</li> <li>45BN2085</li> <li>45BN2087</li> <li>45BN2089</li> <li>45BN2140</li> <li>45BN2141</li> <li>45BN2142</li> <li>45BN2143</li> <li>45BN2145</li> <li>45BN2147</li> <li>45BN2148</li> <li>45BN2149</li> <li>45BN2151</li> <li>45BN2152</li> <li>45BN2153 (historic component)</li> <li>45BN2154</li> <li>45BN2159</li> <li>45BN2160</li> <li>45BN2161</li> <li>45BN2162</li> </ul>	Archaeological Resources (Historic Sites)	Unevaluated for the NRHP	<ul> <li>DAHP permit required prior to any disturbance</li> <li>Evaluate site for NRHP eligibility</li> </ul>
<ul> <li>667765 (Nine Canyon Road)</li> <li>721665 (McNary–Badger Canyon No. 1 Transmission Line)</li> <li>722996 (147407 E. Beck Road Residence)</li> <li>724939 (Farmhouse and Garage)</li> <li>724940 (Shop)</li> <li>724941 (Machine Shed)</li> <li>724942 (Grain Elevator and Grain Storage Silos)</li> </ul>	Architectural Resources	Determined not eligible for the NRHP	<ul> <li>Notify DAHP of any anticipated physical impacts</li> </ul>

Table CR-2 Summary of Recommendations for Archaeological and Architectural Resources Potentially

Impacted by the Project

Resource ID	Resource Type	Resource Sensitivity	Required Mitigation If Avoidance Not Possible
<ul> <li>721666 (McNary– Franklin No. 2 Transmission Line)</li> <li>722995 (Grain elevator)</li> <li>724937 (Nicoson Road Farmstead Barn Storage Building)</li> <li>724938 (Nicoson Road Farmstead Cribbed Grain Elevator)</li> </ul>	Architectural Resources	Determined eligible for the NRHP	<ul> <li>Notify DAHP of any anticipated physical impacts</li> </ul>
■ N/A	Archaeological Resources and Architectural Resources	Unidentified historic and cultural resources	<ul> <li>DAHP permit required prior to any disturbance to archaeological sites</li> <li>Further coordination with Tribes and DAHP</li> </ul>

#### Notes:

APP = Avoidance and Protection Plan; DAHP = Washington State Department of Archaeology and Historic Preservation; NRHP = National Register of Historic Places; RCW = Revised Code of Washington

## 9. Visual Aspects, Light and Glare

# A. Visual Aspects (VIS) Mitigation

## Wind turbines:

**VIS-1 Foreground Turbine Locations:** Relocate turbines located within the foreground distance zone (0 to 0.5 miles) of non-participating residences to avoid completely dominating views from these highly sensitive viewing locations.

**Rationale:** This measure will reduce the level of visual contrast and prominence of turbines by requiring them to be sited further away from non-participating residences.

**VIS-2 Retain Natural-appearing Agricultural Landscape:** Do not place piggyback advertising, cell antennas, commercial messages, or symbols on proposed wind turbines.

**Rationale:** This measure will reduce the level of visual contrast of turbines by prohibiting advertising elements that would seem out of place when compared to the agricultural landscape.

**VIS-3 Turbine Cleaning:** Maintain clean nacelles and towers to avoid any spilled or leaking fluids accumulating dirt. When a sufficient number of nacelles and/or towers are noticeably not clean, the deployment of a cleaning crew shall be required.

**Rationale:** This measure will reduce the level of visual contrast of turbines by ensuring that they remain a clean, consistent white/gray color that is less visually distinct on the existing landscape.

#### Solar arrays:

**VIS-4 Solar Array Vegetation:** Avoid complete removal of vegetation beneath solar arrays during construction, where possible. If site grading requires the removal of vegetation, the area will be revegetated and maintained during Project operation (BLM 2013).

**Rationale:** This measure will reduce the level of visual contrast between areas of exposed soil and adjacent undisturbed areas during Project operation.

**VIS-5 Opaque Fencing:** Install opaque fencing to directly screen views of the solar arrays where sited within 0.5 miles of linear viewpoints (including the alignment of I-82) or residences.

**Rationale:** This measure will minimize color contrast between the proposed fencing and the existing landscape, allowing it to blend into the setting more effectively.

# **Battery Energy Storage System:**

**VIS-6 Retain Natural-appearing Characteristics:** Design BESS to blend with the adjacent agricultural character, including selecting materials and paint colors to reduce contrast with the existing setting. **Rationale:** This measure will reduce the level of visual contrast between BESS facilities and the area's agricultural setting as the facilities will mimic design characteristics of agricultural structures in the area.

#### Substation and transmission lines:

**VIS-7 Maximize Span Length:** Maximize the span length across highways and other linear viewing locations to decrease visual contrast at the highway crossings.

**Rationale:** By moving the structures as far from the road as possible, the effect of those structures being located directly adjacent to these linear viewing locations will be reduced.

**VIS-8 Visual Clutter:** Choose the type of proposed transmission structure (H-frame or monopole) to best match the adjacent transmission lines.

**Rationale:** This measure will minimize visual clutter from the introduction of different structure types into the landscape.

#### B. Shadow Flicker (SF) Mitigation

**SF-1: Shadow Flicker:** The Certificate Holder shall attempt to avoid, minimize, and mitigate shadow flicker at non-participating residences. Shadow flicker can usually be addressed by planting trees, shading windows, or other mitigation measures. As a last resort, the control system of the wind turbine could be programmed to cease operation during brief periods when conditions result in a perceptible shadow flicker. Conditions that would result in perceptible shadow flicker at non-participating residences are expected to be infrequent, only occurring during limited periods with the correct angle of the sun, wind speeds, and unobstructed, clear sky conditions.

**Rationale:** This measure will reduce the impacts of shadow flicker to non-participating residences by taking preventative actions.

**SF-2 Complaint Resolution:** The Certificate Holder shall set up a complaint resolution procedure that shall include the following: 1) A 24-hour "hot line" or other form of communication that the public can use to report any undesirable shadow flicker associated with the operation of the wind turbines, with the ability to log the date and time of a complaint. This line of communication shall be maintained for at least one year, at which time it could be reassessed to continue or be terminated; 2) An attempt to contact the complainant within 24 hours; and 3) A requirement to report any complaints and their resolution to EFSEC during monthly reports to the Council.

**Rationale:** This measure will reduce the impacts of shadow flicker by allowing the Certificate Holder to better track the incidence of occurrence and requiring that they take prompt corrective action.

#### C. Light (LIG) Mitigation

**LIG-1 LEED-certified & Security Lighting:** The Project shall be constructed with LEED-certified building exterior(s) and security lighting to minimize vertical and horizontal illuminance.

**Rationale:** This measure will reduce the impacts of Project lighting at and beyond the Lease Boundary by more effectively focusing lighting on desires areas.

## 10. Noise and Vibration (N) Mitigation

**N-1 Staging Noise:** Avoid laydown and equipment storage/parking areas closer than 2,500 feet from the nearest NSR location.

**Rationale:** These laydown and storage areas will have more noise sources for longer periods of time than other areas; therefore, siting these locations further from NSR locations will limit the sound level and the duration that such equipment could impact an NSR.

**N-2 Large Equipment Noise:** Limit large, noise-generating equipment operations, such as earth-moving equipment, cranes, and trucks, as outlined in Table 4.11-8, to daytime hours (between 7 a.m. and 10 p.m.), and limit the loudest and most impulsive pieces of construction equipment and activities, such as pile-driver operations and blasting, to typical working hours only: 7 a.m. to 6 p.m., Monday through Saturday.

**Rationale:** This measure will ensure that a typical workday will not include pile-driver operations or blasting during evening hours (6 p.m. to 10 p.m.) but could include some on-site activities during nighttime hours such as early-morning setup and preparation for the workday. Nighttime operations will be atypical. The purpose is to limit noise impacts during sensitive hours while allowing contractors some flexibility.

**N-3 Nighttime Noise:** Monitor noise during nighttime construction operations (between 10 p.m. and 7 a.m.), when construction activities have the potential to impact NSRs or reduce activities to ensure that construction noise does not exceed state noise limits.

**Rationale:** This monitoring will take place throughout the entirety of the nighttime hours or until construction activities cease.

**N-4 Noise Complaint Resolution Procedure:** Update the Certificate Holder's noise complaint resolution procedure to better address and respond to noise complaints from the public. The updates include the following: a complaint hotline during construction and providing a phone number to be posted on signage throughout the construction project and ensure that current site contact information is maintained with EFSEC. The Certificate Holder shall log all correspondence and promptly follow up with inquiries to provide appropriate resolution. The correspondence and resolutions shall be logged throughout the construction process, and the log shall be made available to EFSEC during routine reporting or upon request. During the operation stage, the site will be staffed and contact information shall be available.

Rationale: This measure will better address and respond to noise complaints from the public.

**N-5 Operation Noise Complaint Resolution:** Establish a noise complaint resolution procedure similar to that proposed for construction and decommissioning to better address and respond to noise complaints. **Rationale:** This measure will better address and respond to noise complaints from the public.

#### 11. Recreation (R) Mitigation

**R-1: Recreational Activities:** The Certificate Holder shall coordinate with DNR, Benton County, and other entities (i.e., BLM) when appropriate to identify new recreational activities and/or improve existing recreational activities within the Lease Boundary (e.g., multi-use trails). Coordination entities may be consulted for impacts to recreation identified specific to their administered lands. The Certification Holder shall identify measures for EFSEC's approval prior to the start of construction. EFSEC will be responsible for determining if the Certificate Holder has sufficiently coordinated with all relevant entities that promote recreational activities within the vicinity of the Lease Boundary.

Rationale: To mitigate the potential loss of recreational activities due to the Project.

**R-2 Information for Recreationalists:** The Certificate Holder shall provide a minimum of five informational boards approved by DNR and EFSEC at viewpoints associated with scenic areas of interest. The construction of the informational boards shall be completed within five years of the beginning of construction.

**Rationale:** To mitigate the loss of uninterrupted views of scenic viewpoints and provide information to the public regarding the Project, the Project's expected years of operation and the reclamation of the Project. Additionally, photographs of the viewshed prior to the construction of the Project shall be displayed, in color, on the informational boards.

R-3 Recreation Safety Management Plan: To mitigate the loss of safe recreation use for recreation enthusiasts, the Certificate Holder shall attempt to coordinate with local and regional (when appropriate) recreation groups (e.g., the Northwest Paragliding Club, the Tri-City Bicycle Club) to develop and maintain an adaptive safety management plan to continue access to recreation activities in the Lease Boundary while keeping recreation enthusiasts safe. This plan shall identify potential hazards within the Lease Boundary (e.g., construction on or near common bicycle paths, no fly zones, etc.) and provide opportunities to identify or improve other similar recreation use areas to offset any recreation removed from the Project area as a result of the Project. Specific to paragliding, the Certificate Holder shall perform outreach to other regional paragliding entities to share the safety management plan to ensure that recreationists are aware of the limitations the Project creates for safe landing and safe air space. EFSEC will be responsible for determining if the Certificate Holder has sufficiently coordinated with all entities that promote recreational activities within the Lease Boundary.

**Rationale:** To mitigate the loss of safe use for recreation enthusiasts.

## 12. Public Health and Safety (PHS) Mitigation

**PHS-1: Fire Suppression Aircraft Access:** Due to first responder safety concerns, fire suppression aircraft are not anticipated to operate within or in close proximity to the Project footprint. However, in the event of a major wildfire occurring in an area where fire suppression aircraft may need access near the Project, whether related to the Project or resulting from another cause, the Certificate Holder shall shut down turbines temporarily.

**Rationale:** This mitigation measure will allow access for fire suppression aircraft carrying water and fire suppression chemicals, as needed.

#### 13. Transportation (TR) Mitigation

**TR-1 Load Movement:** The load movement team shall review the procedures to be followed if the load should become lodged at a crossing and shall review the emergency contact numbers for each crossing daily—that is, before starting travel for the day.

**Rationale:** Ensures safe practices during the transportation of materials for construction and decommissioning.

**TR-2: Train Safety Training:** The Certificate Holder shall work with WSDOT and Operation Lifesaver to provide train safety presentations to employees and contractors to increase knowledge regarding train safety, including train track crossings. Since this measure cannot be required by EFSEC, it cannot be considered fully effective mitigation for the purpose of this analysis.

Rationale: Lessens potential collisions at train crossings.

**TR-3 Decommissioning Traffic Analysis:** A third-party engineer shall provide a traffic analysis prior to decommissioning. The traffic analysis will evaluate all modes of transportation (e.g., waterways, rail,

roads, etc.) used for the movement of people and materials during decommissioning via the haul route(s) in Washington State.

**Rationale:** Ensures that no changes have occurred since the traffic analysis was originally provided prior to construction.

**TR-4 Railroad Crossing Traffic Analysis:** All railroad crossing and grade changes shall be included in a route survey performed by a third-party engineer with the Washington Utilities and Transportation Commission participating to determine if current traffic control systems at crossings are appropriate or if additional mitigation is needed prior to decommissioning. The route survey shall include anticipated traffic counts. Since this measure will require the participation of other agencies before it could be implemented, it cannot be considered fully effective mitigation for the purpose of this analysis. **Rationale:** Ensures that no changes have occurred since the route survey was originally provided prior to construction.

TR-5 Traffic Analysis – Existing Laws at Decommissioning: The analysis of impacts from decommissioning is based on existing laws and regulations at the time when the Final ASC was submitted to EFSEC. The Certificate Holder shall consult with WSDOT and Benton County on the development of a decommissioning-stage Traffic and Safety Management Plan prior to decommissioning. The Traffic and Safety Management Plan must include a safety analysis of the WSDOT-controlled intersections (in conformance with the WSDOT Safety Analysis Guide) and recommend mitigation or countermeasures where appropriate. The analysis shall review impacts from decommissioning traffic and be submitted to WSDOT for review and comment prior to decommissioning. Since this measure will require the participation of other agencies before it could be implemented, it cannot be considered fully effective mitigation for the purpose of this analysis. EFSEC will work with the identified agencies to facilitate cooperation in implementing this mitigation measure.

Rationale: Ensures that no changes have occurred to the laws and regulations used in this analysis.

**TR-6 Additional Route Analysis:** The Certificate Holder provided a Traffic Impact Analysis (TIA) with the Final ASC (Horse Heaven Wind Farm, LLC 2023). Oversize truck routes to the Project Area were analyzed using I-82, north through State Route 397, Locust Grove Road, and Plymouth Road. Additionally, the delivery of turbine towers was only analyzed from I-82 to the Locust Grove/State Route 397 exit. The use of additional routes for oversize or overweight deliveries may require supplemental analysis and requires approval by EFSEC.

Rationale: Ensures consistency with state and county transportation plans and codes.

**TR-7 Intersection Safety and Mitigation:** Coordinate with WSDOT, Benton County, and EFSEC prior to construction and prior to demolition on potential mitigation for intersections with safety concerns. **Rationale:** Ensures safe practices during the transportation of materials for construction and decommissioning.

#### 14. Public Services and Utilities (PSU) Mitigation

**PSU-1 Component Disposal Procedure:** To address the potential for the inappropriate disposal of Project waste, the Certificate Holder shall dispose of all non-recyclable Project components in an appropriately licensed waste disposal facility.

**Rationale:** This mitigation measure prevents disposal of Project-related wastes in inappropriate landfills or unauthorized facilities.

# 15. Socioeconomics (Socio-ec) Mitigation

**Socio-ec-1: Decommissioning Housing Survey:** Prior to decommissioning, the Certificate Holder shall provide an up-to-date analysis on the availability of temporary housing for workers, consistent with the

Washington Department of Labor & Industries guidelines. If sufficient temporary housing for workers is not available, the Certificate Holder shall present EFSEC with options for housing workers from outside the community.

**Rationale:** This mitigation measure will minimize adverse impacts on the availability of housing for residents of the surrounding communities.

**Summary of Milestones and Timing Table** 

Timing	Mitigation Measure	Milestone	PTAG/TAC review				
Construction							
One year prior to construction	Hab-4	Establishment of Pre- operational Technical Advisory Group (PTAG will be replaced by the Technical Advisory Committee upon the onset of operation).	NA				
During appropriate season within 1 year prior to construction	Spec-1, 4, 8, 10, 12	Pre-construction surveys	PTAG				
180 days prior to construction	Hab-6	Final design	PTAG				
90 days prior to construction	Hab-1	Corridor Mitigation Plan, if necessary	PTAG/ TAC				
90 days prior to construction	Hab-2	Rationale for and mitigation of canyon and draw crossings	NA				
90 days prior to construction	Wild-8	Raptor Nest Monitoring and Management Plan	PTAG				
90 days prior to construction	Hab-5	Indirect Habitat Loss Management Plan	PTAG				
90 days prior to construction, if needed	Spec-5	Ferruginous hawk Mitigation and Management Plan	PTAG/TAC				
60 days prior to initiation of surveys (preconstruction).	Spec-13	Pronghorn antelope seasonal study	PTAG/TAC				
60 days prior to construction, if needed	Spec 1, 4, 10, 12	Species specific management plans	PTAG/ TAC				
Prior to construction	Wild-5	Flagging sensitive features and habitat	NA				
Prior to construction	Wild-9	Pre-construction bird nest surveys, if necessary	NA				
Operation							
60 days post-construction	Veg-4	As-built report and offset calculation	NA				
Two years after commencement of operation	Wild-1	Review of post-construction fatality monitoring results	PTAG/ TAC				
Annually during operation	Wild-6	Review mortality database and provide mitigation	NA				
Annually during operation	Spec-2, 4, 6, 7, 8, 9, 12	Incidental databases	TAC				
Annually during operation	Spec-11	Townsend's big-eared bat mortality database	TAC				
Decommissioning							
60 days prior to initiation of decommissioning	Veg-7	Detailed Site Restoration Plan	NA				
60 days prior to initiation of decommissioning	Hab-7	Rationale for and mitigation of remaining roadways, if any	NA				

Notes: NA = Not Applicable; PTAG = Pre-operational Technical Advisory Group; TAC = Technical Advisory Committee

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