Draft Environmental Impact Statement

Horse Heaven Wind Farm

Executive Summary

December 2022

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EXECUTIVE SUMMARY

Horse Heaven Wind Farm, LLC (Applicant) is proposing to construct and operate the Horse Heaven Wind Farm (Project, or Proposed Action) in unincorporated Benton County, Washington, within the Horse Heaven Hills area. The Washington State Energy Facility Site Evaluation Council (EFSEC) is the state agency responsible for evaluating and making recommendations to the governor on the approval or denial of certain major energy facilities in Washington. This includes voluntary applicants, as in the case of the proposed Project.

ES-1 Purpose of this Environmental Impact Statement

During the site certification process, EFSEC reviewed the Application for Site Certification[1] (ASC) and is serving as the "lead agency" responsible for complying with the Washington State Environmental Policy Act (SEPA) procedural requirements (Washington Administrative Code [WAC] 463-47). EFSEC prepared this Draft Environmental Impact Statement (EIS) under SEPA with the assistance of an independent consultant and cooperating state agency support, reviewing all Applicant-prepared information and analyses in the ASC and conducting additional analyses as needed during preparation of this Draft EIS.

ES-2 Proposed Action and Alternatives

ES-2.1 Proposed Action: Horse Heaven Wind Farm Project

The Project would consist of a renewable energy generation facility that would have a nameplate generating capacity[2] of up to 1,150 megawatts for a combination of wind and solar facilities, battery energy storage systems (BESS), and other Project components, including underground and overhead electrical collection lines, underground communication lines, new Project substations, access roads, operations and maintenance facilities, and meteorological towers.

At its closest point, the Project would be located approximately 4 miles south/southwest of the City of Kennewick and the larger Tri-Cities urban area, along the Columbia River. **Figure ES-1** shows the Project Lease Boundary and Project vicinity. The Project's Lease Boundary (approximately 72,428 acres) incorporates all of the parcels for which the Applicant has executed a lease to construct the turbines, solar arrays, and associated facilities. The Project's Wind Energy Micrositing Corridor encompasses 11,850 acres within the Lease Boundary and consists of the areas where the turbines and supporting facilities would be sited during the final design. The Applicant seeks authorization for up to 244 turbine locations and a maximum of three solar arrays, with all possible turbine locations and solar arrays cumulatively reviewed to analyze potential resource impacts.

As shown in **Table ES-1**, the maximum number of turbines and maximum turbine height carried forward for analysis as components of the Proposed Action are reflected in Turbine Option 1 and Turbine Option 2**.** The number of turbines would not exceed 244, and the maximum turbine height (at blade tip) would not exceed 671 feet. For the purpose of analyzing the maximum footprint and impact, this Draft EIS assumes that the road disturbance associated with Turbine Option 1 and Turbine Option 2 would be identical.

[1] An Application for Site Certification (ASC) is a formal submittal prepared by an applicant that provides EFSEC with information regarding the Applicant, the proposed project design and features, the natural environment, and the built environment in sufficient detail to enable EFSEC to go forward with its application review.

[2] Nameplate generating capacity is the amount of electricity a generator can produce when running at its maximum designed output.

Table ES-1: Proposed Action - Wind Turbines[a]

Turbine Options	Option 1	Option 2
Layout Description	244 turbines up to a maximum blade tip height of 499 feet	150 turbines up to a maximum blade tip height of 671 feet
Temporary Disturbance	1,070 acres	
Permanent Disturbance	30 acres	
Lease Boundary	72,428 acres	

Source: ASC Table 2.1-1; Table 2.3-1 (Horse Heaven Wind Farm, LLC 2021)
Note: [a] As proposed in the ASC

Table ES-2 presents the temporary and permanent disturbance acreage for the solar siting and supporting infrastructure for the wind and solar facilities. The Project's Solar Siting Areas, which are three locations under consideration for the proposed solar arrays, encompass 10,755 acres within the Lease Boundary. The wind energy components would be combined with the solar arrays, BESSs, and other infrastructure to provide solar and wind energy.

Table ES-2: Proposed Action - Solar Siting and Supporting Infrastructure for Wind and Solar Facilities[a]

Project Infrastructure	Temporary Disturbance (acres)	Permanent Disturbance (acres)
Solar Arrays in Fields		
East Solar Field	37	1,994
County Well Solar Field	18	2,641
Sellards Solar Field	22	1,935
Total Disturbance Acreage of Solar Arrays in Fields	**77**	**6,570**
BESSs[3]		
BESS adjacent to the Bofer Canyon - HH-East Substation	1	18
BESS adjacent to the Primary HH-West Step-Up Substation		
BESS adjacent to the Alternate HH-West Step-Up Substation		
Substations		
HH-East Substation	3	38
Primary HH-West Intermediate Substation		
Alternate HH-West Intermediate Substation		
Primary HH-West Step-Up Substation[b]		
Alternate HH-West Step-Up Substation[b]		

[3] The Applicant indicated in the ASC that there is the potential for fewer than three BESSs to be constructed but has requested analysis for all the components and distinct parts as presented in Table 2.1-1 of the ASC.

Table ES-2: Proposed Action - Solar Siting and Supporting Infrastructure for Wind and Solar Facilities[a]

Project Infrastructure	Temporary Disturbance (acres)	Permanent Disturbance (acres)
Supporting Infrastructure		
Roads,[c] Crane Paths, Laydown Yards, O&M Facilities, Met Towers	870.9	218.5
Collector Lines		
Overhead	0.5	0.01
Underground	787	0.06
Transmission Lines		
230 kV	235	0.02
500 kV	12	<0.01
Total Disturbance Acreage of Supporting Infrastructure	**1,905.4**	**218.6**

Source: Horse Heaven Wind Farm, LLC 2021

Note:

[a] As proposed in the ASC, Table 2.1-1

[b] May alternatively be used as the HH-West Alternate Solar Substation (ASC Table 2.3-2) to support solar operations, depending on the location where the Bonneville Power Administration elects to construct the Webber Canyon Substation.

[c] Includes new access roads and road modification (turning radius widening). This Draft EIS assumes that road disturbance would be identical under both Option 1 and Option 2.

ASC = Application for Site Certification; BESS = battery energy solar station; HH = Horse Heaven; kV = kilovolt; met tower = meteorological tower; O&M = operations and maintenance

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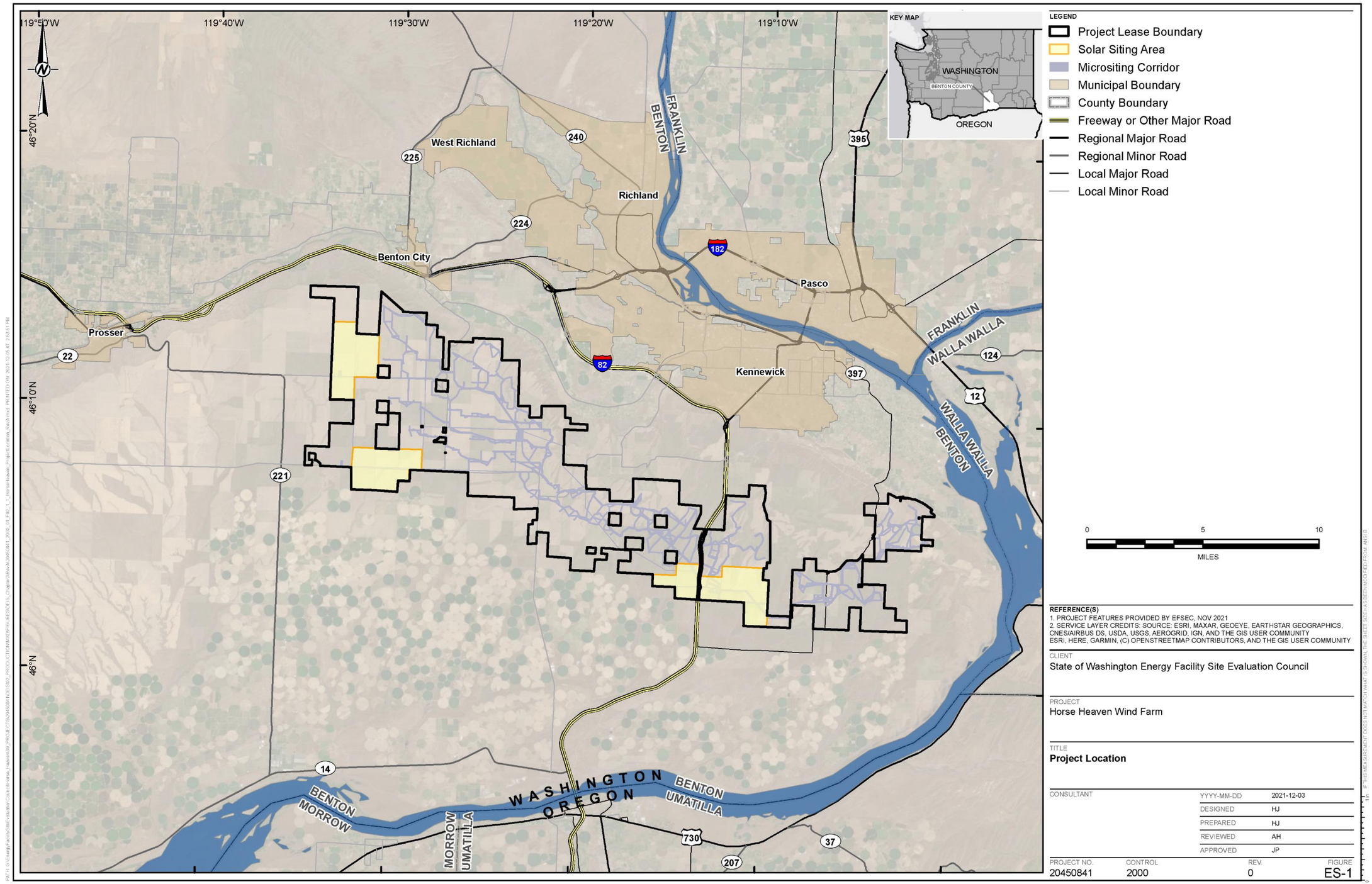

Figure ES-1: Project Lease Boundary and Project Vicinity

ES-2.2 Alternatives to the Proposed Action

Several alternatives were considered for analysis but were eliminated from detailed evaluation in the Draft EIS because they would not generate the designed nameplate generating capacity required by the Applicant. The No Action Alternative was carried forward for analysis in the Draft EIS. Under the No Action Alternative, the Project would not be constructed or operated, power would not be supplied by the Project, and the potential environmental impacts associated with the Project would not occur. As part of the No Action Alternative, existing agricultural use in the Lease Boundary would continue without interruption.

ES-3 Environmental Impact Analysis

ES-3.1 Approach to Impact Assessment

This Draft EIS identifies impacts from the Proposed Action and the potential environmental impacts associated with the No Action Alternative. “Impacts” are the effects or consequences of actions (WAC 197-11-752) upon the environmental resources listed in ES-3.2. For example, an impact from grading during construction could result in the production of fugitive dust. The dust would then have the potential to affect various nearby resources such as surface waters, where it could contribute to nutrient loading, or, if it landed on neighboring vegetation, could smother and kill the plants. In accordance with SEPA, this Draft EIS weighs the likelihood of occurrence with the severity of an impact (WAC 197-11-794) and considers several factors when analyzing potential impacts.

This Draft EIS presents an analysis of impacts for each of the three Project stages (i.e., pre-construction and construction, operation, and decommissioning) on the elements of the environment identified in ES-3.2. The impacts associated with the Proposed Action and under the No Action Alternative are described quantitatively if sufficient data or information were available to do so.

When detailed information was not available and that information was not essential to determining the level of adverse environmental impacts, impacts are described qualitatively. In addition to existing laws and regulations, conservation measures and best management practices proposed by the Applicant in the ASC to avoid or reduce potential impacts during Project stages are taken into consideration in the characterization of potential impacts. Three types of environmental impacts are described in the Draft EIS:

Direct impacts: These are the effects of an action (i.e. construction, operation and maintenance, or decommissioning) on a resource that occur at the same time and place as the action. An example of a direct impact would be increased noise levels experienced by residents living near a construction site.

Indirect impacts: These are impacts that are similar to direct impacts in that they are caused by an action; however, they occur later in time or further from the activity causing the impact. An example of an indirect impact would be a decline in numbers of a wildlife species due to fragmentation of that species’ habitat by installation of fencing.

Cumulative impacts: These are the combined results of incremental direct and indirect impacts on resources from a project or plan, past and present actions, and other reasonably foreseeable developments. An example of a cumulative impact would be if increased runoff and contaminants from construction were added to the volumes and levels of contamination from similar development projects surrounding the same wetland.

The Draft EIS presents the discussion of impacts that could result from the comprehensive Project and the various individual components (e.g., Turbine Option 1, Turbine Option 2, solar arrays). An analysis of the comprehensive Project evaluates the full extent of the Proposed Action’s impacts. The additional information obtained from the various individual components can identify which, if any, components would contribute to a

medium or high impact and will assist in further examination of possible options to mitigate the impact of those components and, ultimately, reduce the impact of the comprehensive Project.

ES-3.2 Environmental Resources Analyzed

The following resources of the built and natural environment are characterized for existing conditions and analyzed for potential impacts:

- Earth Resources (including seismic hazards)
- Air Quality
- Water Resources
- Vegetation
- Wildlife and Habitat
- Energy and Natural Resources
- Land and Shoreline Use
- Historic and Cultural Resources
- Visual Aspects, Light and Glare
- Noise and Vibration
- Recreation
- Public Health and Safety
- Transportation
- Public Services and Utilities
- Socioeconomics

ES-3.2.1 Special Studies

During the preparation of the Draft EIS, EFSEC asked its independent contractor to prepare special studies related to collision risk of birds and bats with wind turbines and the visual impacts of turbines for the two turbine options (Turbine Option 1 and Turbine Option 2) described in ES-2.1. The following special studies are included as appendices to this Draft EIS:

The Wind Turbine Wildlife Collision Risk Assessment: Horse Heaven Wind Farm: This special study, presented as Appendix 4.6-1 of the Draft EIS, compares the potential bird and bat collision risk associated with each turbine option. The information and conclusions presented in the study are based on existing information collected during the Proposed Action's baseline studies and a review of published scientific literature pertaining to bird and bat interactions with wind turbines (GAL 2022).

Horse Heaven Wind Farm Project Final Visual Impact Assessment Report: This special study, presented as Appendix 4.10-1 of the Draft EIS, focuses on potential visual impacts resulting from modification of the landscape and the response of viewers to those features. Additionally, the study analyzes whether the Proposed Action would be consistent with and comply with state and local visual resource guidance. The information contained in the special study report was provided by the Applicant and supplemented with publicly available data where necessary. Information and conclusions presented in the special study focused on the introduction of the Proposed Action into the setting and characterization of long-term modifications to the existing landscape's form, line, color, and texture (SWCA 2022).

ES-3.3 Impacts from the Proposed Action for Which EFSEC Identified Mitigation and/or Significance

Mitigation measures can be implemented to reduce impacts associated with the construction, operation and maintenance, and decommissioning of the Project. **Attachment ES-3-1** presents a comprehensive list of EFSEC identified Mitigation Measures. Such measures may be imposed by EFSEC pursuant to their authority under

Revised Code of Washington (RCW) 80.50 or through the use of their SEPA "substantive authority," which provides the ability to condition or deny a proposal based on identified environmental impacts (WAC 197-11-660).

Mitigation measures put forth by EFSEC in this Draft EIS are identified by an abbreviation of the affected resource and sequential numbering system. If the same mitigation measure is recommended to address impacts to another resource later in the Draft EIS, the mitigation measure retains its initial unique identifier. For example, mitigation measure ENR-5 is first recommended in the analysis of Energy and Natural Resources. ENR-5 is subsequently presented as a recommended mitigation measure to address impacts to Public Services and Utilities.

Taking mitigation into account, each impact identified in this Draft EIS is categorized as significant or nonsignificant. **Tables ES-3 and ES-4** described below and attached to this Executive Summary as **Attachment ES-3-2** provide a summary of the impacts identified in this Draft EIS:

Tables ES-3 (a, b, & c) summarize the impacts identified for each element of the environment (see Section ES-3.2 above for the complete list). The impacts are presented in respect to the comprehensive Project, mitigation identified by EFSEC, and the determination of significant unavoidable impacts that may occur during the construction, operation, and decommissioning of the Project. Impacts identified with a medium to high magnitude of impact are highlighted in light blue.

Tables ES-4 (a, b, & c) summarize the impacts identified for each element of the environment (see Section ES-3.2 above for the complete list). The impacts are presented in reference to Project components (Turbine Option 1, Turbine Option 2, solar arrays, BESSs, and substations), mitigation identified by EFSEC, and the determination of significant unavoidable impacts that may occur during the construction, operation, and decommissioning of the Project. Impacts identified with no mitigation and with a negligible to low magnitude of impact were not included in these tables. Impacts identified with a medium to high magnitude of impact are highlighted in light blue. All impacts, including negligible and low magnitude impacts are included in the tables at the end of each resource Section 4.

EFSEC is the State of Washington agency that is responsible for making the decision about whether a potential impact is significant. "Significant" in SEPA means a reasonable likelihood of more than a moderate adverse impact on environmental quality. An impact may also be significant if its chance of occurrence is not great, but the resulting environmental impact would be severe if it occurred. This Draft EIS weighs the likelihood of occurrence with the severity of an impact (WAC 197-11-794) when determining the significance of identified potential impacts (WAC 197-11-330 and WAC 197-11-794). "Significant unavoidable impacts" are impacts that remain significant, even after all measures committed to by the Applicant and mitigation recommended by EFSEC have been applied.

ES-3.4 Cumulative Impacts

When impacts are assessed for an individual proposed action, they may be determined less than significant, but when considered collectively (cumulatively) with the impacts of other actions, especially over a period of time, they can be significant (40 Code of Federal Regulations 1508.7). SEPA requires that agencies address cumulative impacts.

Cumulative impacts are the combined result of incremental direct and indirect impacts on resources of concern from a project or plan, past and present actions, and other reasonably foreseeable developments. Reasonably foreseeable developments generally include actions that are currently underway, formally proposed or planned, or highly likely to occur based on available information. The Draft EIS identifies past, present, and reasonably

foreseeable future developments that could interact with resources impacted by the Proposed Action and analyzes the potential for cumulative impacts.

Information about direct and indirect impacts of past and present actions is useful in identifying and predicting the level of impact a proposed action might have on the natural or built environment. However, the impacts of past actions may have no cumulative relationship to the impacts of a proposed action. To fully evaluate cumulative impacts, it is necessary to assess the type and extent of a proposed action's impacts and how the project and its alternatives would add to, modify, or mitigate impacts from past actions. In accordance with Council on Environmental Quality (CEQ) guidance, this cumulative impact analysis focuses on the current aggregate impacts of past actions without delving into the historical details of individual past projects (CEQ 2005).

Table ES-5 presents the resources that the Proposed Action would cumulatively impact in a meaningful way,. It describes the direct or indirect impact that the Proposed Action would have for each resource, and whether that impact would be significant. It then identifies whether cumulative impacts to that resource have been identified from past and present actions and RFDs. Finally, it indicates whether the impact from the Proposed Action would make a meaningful contribution to a cumulative impact when combined with past and present actions and RFDs..

Table ES-5: Summary of Significance Determinations and Cumulative Impact

Section	Topic	Description of Impact from the Proposed Action	Significant Direct or Indirect Impact from the Proposed Action	Cumulative Impacts from Past and Present Actions and RFDs	Proposed Action Meaningfully Contributes to a Cumulative Impact
Vegetation	Priority Habitat	Loss and degradation of Priority Habitat	No	**Yes**	**Yes**
Vegetation	Special Status Plant Species	Loss and isolation of special status plant species	No	**Yes**	**Yes**
Wildlife and Habitat	Habitat Loss	Habitat loss and degradation	No	**Yes**	**Yes**
Wildlife and Habitat	Barriers to Movement and Fragmentation	Fencing as a barrier to movement and fragmentation of habitat due to Project footprint	No	**Yes**	**Yes**
Wildlife and Habitat	Wildlife Mortality	Mortalities from wildlife-vehicle collisions or turbine strikes	No	**Yes**	**Yes**
Wildlife and Habitat	Special Status Species	Loss of special status species from mortalities or loss or degradation of habitat	No	**Yes**	**Yes**
Historic and Cultural Resources	Archaeological Resources	Partial or complete loss of archaeological resources	**Yes**[(a)]	**Yes**	**Yes**
Historic and Cultural Resources	Traditional Cultural Properties	Partial or complete loss of traditional cultural properties and resources	**Yes**[(a)]	**Yes**	**Yes**
Visual Aspects, Light and Glare	Visual Aspects	Turbines would dominate the existing landscape and viewshed.	**Yes**	**Yes**	**Yes**
Visual Aspects, Light and Glare	Light and Glare	Security lighting and solar panels would introduce sources of light and glare	No	**Yes**	**Yes**
Noise and Vibration	Noise	Noise from construction and Project components during operation.	No	**Yes**	**Yes**
Recreation	Recreation - Use	Reduction in access to available recreation lands	No	**Yes**	**Yes**
Recreation	Recreation – Public Health and Safety	Health and safety of paragliders and hang gliders	**Yes**	**Yes**	**Yes**
Transportation	Traffic Volume	Increased traffic volume from construction and decommissioning	No	**Yes**	**Yes**
Transportation	Level of Service	Decreased level of service for motorists, particularly at intersections close to Project	No	**Yes**	**Yes**
Transportation	Roadway Safety	Safety of motorists due to the presence and movement of heavy vehicles	No	**Yes**	**Yes**

ES-4 Key Issues and Issues to be Resolved

ES-4.1 Additional Analysis

ES 4.1.2 Air Quality for Construction and Decommissioning

The Applicant provided air emission information based on the assumption that the Project would be constructed in two phases (see Section 2.15 of the ASC). The Project does not currently include single phase/concurrent construction of all three solar arrays, one of the turbine options, and three BESSs, although the ASC did include all these items as part of a maximum footprint to be analyzed. At this time, the air quality environmental impact analysis is based on two phases of construction, which would reduce the amount of construction equipment operating at one time as compared to constructing all components in one phase.

For this Draft EIS, the Applicant's example of a two-phased approach[4] presented in the ASC was used as a basis of analysis for the Proposed Action's impact on air quality during construction and decommissioning. If the Applicant determines that their approach to construction would require more flexibility, such as constructing the Project in one phase, then the Final EIS would need to analyze the air emissions for the maximum air quality impact scenario. Following issuance of the Final EIS, any changes to construction phasing that involves more construction occurring at the same time would require additional environmental analysis, which could result in a SEPA Addendum or a Supplemental EIS, depending on the significance of any new adverse environmental impacts (WAC 197-11-600 (4)(c) and (d)).

ES-4.2 Significant Impacts Worst Case Analysis

ES 4.2.1 Cultural Resources

SEPA directs EFSEC to analyze adverse environmental impacts on cultural resources caused by the proposed Project. A third-party consultant has completed cultural resource investigations and inventory reports of both private land and Washington Department of Natural Resource-administered land within the Project Lease boundary. The Project may impact Traditional Cultural Properties (TCPs) that include but are not limited to spiritual sites, traditional use sites, and the specific geographic availability of foods and medicines. The Yakama Nation has stated that several TCPs may be impacted by the proposed Project. Furthermore, the Yakama Nation has indicated to the third-party consultant that a documented archaeological resource located within the Project Lease Boundary is directly associated with a TCP. Tribal coordination is currently ongoing and will continue through Project completion. Any information on TCPs in the Project area and vicinity would remain confidential and would not be available to the public. In the meantime, EFSEC is required to include a worst-case analysis of adverse environmental impacts and likelihood of occurrence (WAC 197-11-080). A number of impacts on cultural resources, including TCPs, are identified as significant; additional information and mitigation identified prior to the Final EIS may change the impact ratings.

ES-4.3 Impacts and Mitigation Affecting Multiple Resources

ES 4.3.1 Wildlife, Cultural Resources, Visual Resources

The Draft EIS identifies impacts on multiple resources that may result from the Project's turbine layout. Individual turbines may cause impacts on cultural, visual, and/or wildlife resources. It will be useful for these turbines to be identified and for decisionmakers to be aware of the level of mitigation that removal of individual turbine locations might provide. Additionally, prior to the Final EIS, the Applicant may voluntarily offer to remove certain turbine

[4] The Applicant's two phased approach to construction was used as the basis of analysis for the Proposed Action's impact on air quality, transportation, and socioeconomics.

locations as a result of the analysis provided in the Draft EIS. In either case, EFSEC is working to provide more information in the Final EIS about individual turbine locations that impact multiple resources and any recommendations for removing locations that would mitigate impacts.

ES 4.3.2 Vegetation, Wildlife and Habitat

The Draft EIS identifies loss of Priority Habitats, loss of wildlife habitat, degradation of habitat (e.g., indirect habitat loss), wildlife mortality, and creation of barriers to movement and habitat fragmentation as potential impacts to vegetation, wildlife, and habitat. The extent of these impacts may vary depending on the proximity of individual turbines to sensitive habitats (e.g. nests, Priority Habitats, movement corridors), height of the turbines, and siting of ancillary components.

EFSEC has identified mitigation measures, in addition to Applicant-identified commitments, to reduce impacts on vegetation, wildlife, and habitat. For vegetation, EFSEC has recommended mitigation measures to avoid and reduce impacts on trees and special status plants by requiring that these features be avoided, and additional pre-disturbance surveys be conducted. Further, EFSEC has recommended that an as-built report and offset calculation be provided once construction is complete.

For wildlife and habitat, these mitigation measures include the establishment of a Technical Advisory Committee to review and provide input to pre-construction surveys, post-operation monitoring, and implementation of mitigation measures. Additionally, EFSEC has identified measures to avoid sensitive features and habitats, develop wildlife and habitat specific management plans (e.g., Indirect Habitat Loss Management Plan), and conduct additional pre-construction and post-operation surveys to inform the final design and monitor changes in species abundance and richness through operation. Due to the interconnected relationship between vegetation and wildlife and habitat, recommended mitigation measures for each of these resources has the potential to address impacts from the Proposed Action to the other.

ES 4.3.3 Energy and Natural Resources, Public Services and Utilities

There are mitigation measures for retrieving and recycling as much of the natural resources used in construction and operation of the Project as possible. For example, throughout the Project's lifecycle, the Applicant would recycle all components of the Project that have the potential to be used as raw materials in commercial or industrial applications. Similarly, to reduce the amount of water necessary to operate the Project, the Applicant would capture and recycle wash water during the operations stage. These mitigation measures would reduce the amount of waste that would be sent to sewage and solid waste treatment facilities, thereby serving as useful mitigation for both resource areas.

ES-4.4 Impacts That May Not Have Been Identified As Significant by the End of the Analysis but Are Issues of Concern That Warrant Discussion

ES 4.4.1 Curtailment and Exclusion of Turbines to Address Impacts on Ferruginous Hawk

The Draft EIS has identified potential impacts on ferruginous hawk habitat and populations through loss of habitat and potential mortality from collision with wind turbines. As these impacts could result in a high-magnitude impact on ferruginous hawks, EFSEC has proposed additional mitigation measures specific to avoiding and reducing Project-related impacts on ferruginous hawks, including exclusion of turbines within core ferruginous hawk habitat and curtailing turbine operation while ferruginous hawks are present. Specifically, mitigation measures for ferruginous hawks would require avoiding siting Project components within 2 miles of ferruginous hawk nests documented in PHS data and reported by the Applicant in the ASC (Horse Heaven Wind Farm, LLC 2021) to preserve foraging habitat. Where siting features away from ferruginous hawk habitat is not feasible, the mitigation

measure would require using options such as turbine curtailment to reduce potential strikes with ferruginous hawks in core habitat while nests are active (i.e., during the breeding season). The extent to which ferruginous hawk mitigation may be implemented will be informed by the final Project layout and field data on ferruginous hawk presence and habitat use of the Lease Boundary collected through pre-construction monitoring programs.

ES 4.4.2 Loss of Priority Habitat

The Draft EIS has identified potential impacts on Priority Habitat. These impacts are concentrated within the areas of the Micrositing Corridor and East Solar Field. Impacts to Priority Habitat include:

Permanent disturbance[5] of 72.5 acres of Eastside (interior) grassland and temporary disturbance[6] of 16.2 acres. Eastside (interior) grassland is Class III Priority Habitat.

Permanent disturbance of 1.1 acres of dwarf shrub-steppe and temporary disturbance of 8.9 acres. Dwarf shrub-steppe is Class II Priority Habitat.

Permanent disturbance of 1.4 acres of sagebrush shrub-steppe and temporary disturbance of 31.4 acres. Sagebrush shrub-steppe is Class II Priority Habitat.

Permanent disturbance of 717.2 acres of rabbitbrush shrubland and temporary disturbance of 152.3 acres. While rabbitbrush shrubland is not explicitly stated as a Class II habitat, the Applicant has agreed to consider this a Class II habitat based on discussions with the Washington Department of Fish and Wildlife (WDFW).

Priority Habitats are areas of conservation concern and have experienced continuous loss and degradation from anthropogenic development in Washington. As temporary and permanent impacts would result from the Project, EFSEC has proposed additional mitigation measures specific to offsetting impacts on Priority Habitat. Specifically, an as-built report and offset calculation would be required by the Applicant and would indicate the final temporary and permanent disturbance of Priority Habitat listed above and calculation of offsets required based on final temporary, permanent, and modified habitat impacts. EFSEC would determine the number of years that vegetation monitoring of temporary disturbance and modified habitat would be conducted and the success criteria for revegetation. The success criteria would include measurable parameters that the Applicant would apply to determine whether successful revegetation has occurred. In addition, a Detailed Site Restoration Plan has been recommended to provide the Revegetation Plan to be undertaken during decommissioning. The Detailed Site Restoration Plan would include provisions for adaptive management and would be updated based on lessons learned from implementing the Applicant's Revegetation Plan. These documents and associated monitoring reports provide a means to determine the effectiveness of revegetation and offset treatments. Chapter 4.5 Vegetation, Table 4.5-11 presents a summary of the habitat offset ratios provided by the Applicant in Appendix L (Habitat Mitigation Plan) of the ASC.

ES-4.5 Other Issues to Be Resolved: Other Agencies or Interested Parties Cooperation to Implement Mitigation

Recommended mitigation measures TR-5, TR-7, and TR-8 would involve the cooperation of other agencies to implement the required actions. Similarly, recommended mitigation measure CR-2 would involve discussions with affected Tribes (e.g., Yakama Nation). This could provide more detailed information about the impacts and

[5] Permanent disturbance is defined as habitat loss that would persist throughout the life of the Project and would not be restored when construction is complete (WDFW 2009).
[6] Temporary disturbance is defined as habitat loss that would end when construction is complete and the area would be restored to pre-construction conditions (WDFW 2009).

potential mitigation. EFSEC will work with the identified agencies, affected Tribes, or interested parties to facilitate cooperation in implementing identified mitigation measures.

ES-5 Public and Agency Involvement

EFSEC initiated a public involvement program, which included SEPA scoping, inter-agency coordination, and multiple public comment periods. Scoping is the first step in the SEPA environmental review process, to identify issues and concerns related to a proposed project, and thus to assist with identifying potential impacts and alternatives to analyze in the EIS. The scoping comment period for this EIS was May 11, 2021 to June 6, 2021. Members of the public, government agencies, tribes, and other interested stakeholders were invited to attend two scoping meetings/hearings and to submit comments verbally or written on comment forms during scoping meetings or by email or surface mail. EFSEC received approximately 370 comments from private citizens, environmental organizations, public agencies, and tribal representatives during the scoping period. EFSEC reviewed and considered these comments when determining the scope of the EIS. The Scoping Memo can be found on EFSEC's website (Horse Heaven SEPA | EFSEC - The State of Washington Energy Facility Site Evaluation Council).

EFSEC invited agency representatives with regulatory authority or special expertise with respect to environmental issues to assist in development of the Draft EIS. Representatives from the following agencies cooperated in developing the Draft EIS:

Washington Department of Fish and Wildlife (WDFW)

Washington Department of Ecology (Ecology)

Washington State Department of Transportation (WSDOT)

Washington State Department of Archaeology and Historic Preservation (DAHP)

Washington Utilities and Transportation Commission (UTC)

Washington Department of Natural Resources (DNR)

Washington State Department of Agriculture (WSDA)

ES-6 Next Steps

If EFSEC determines the project should be recommended to the Governor, the Council would develop an administrative order on recommendation (including any recommended pre-emption of local land use regulations) and a draft Site Certification Agreement (SCA) to be signed by the Governor. The SCA contains all of the environmental, social, economic, and engineering conditions the applicant must meet for construction and operation throughout the life of the project. Within 60 days of receipt of EFSEC's recommendation, the governor may approve the Facility, reject the Facility, or direct EFSEC to reconsider certain aspects of the project and draft SCA. If an Application for Site Certification is denied, the proposal cannot be constructed and operated. The date of the governor's ultimate decision is not currently known.

Following the Governor's approval, RCW 80.50 directs EFSEC to regulate the construction and operations of the Project through the SCA. The SCA lists the conditions the Applicant must meet during construction, while operating the facility, and through site restoration following a project's termination. For the entirety of a Project's lifespan, EFSEC is responsible for determining the Project's compliance with state laws and the terms set in the

SCA. The SCA for the Project would include, by reference, a comprehensive list of Applicant-committed measures and additional mitigation required by EFSEC. These additional measures may be identified through the SEPA process or through EFSEC's adjudicative process.. EFSEC ensures compliance through an environmental monitoring program that the agency administers for the duration of the Project's lifespan. EFSEC has the regulatory authority to enforce compliance with state laws and the conditions in the SCA through fines and other actions.

ES-7 Further Information about the Project

The following presents a hyperlink to the EFSEC Project web page: Horse Heaven Wind Project | EFSEC - The State of Washington Energy Facility Site Evaluation Council. The web page includes the following hyperlinks that catalog EFSEC's review of the Proposed Action:

Hyperlink to the Horse Heaven ASC

Hyperlink to site tour information

Hyperlink to public informational meeting and land use consistency hearing

Hyperlink to comments received

Hyperlink to EFSEC administrative orders

Hyperlink to Agency Correspondence

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Attachment ES-3-1

EFSEC Recommended Mitigation Measures

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EFSEC has identified the following additional and modified mitigation measures for the Project to avoid and/or minimize potential impacts:

Earth Resources

Geo-1[7]**:** To limit erosion and disturbance of natural soil profiles, soil disturbance would be postponed when soils are excessively wet, such as following a precipitation event.

In addition to the geology mitigation measures the following measures developed for the Vegetation chapter are applicable to geology:

Veg-7[8]**: Detailed Site Restoration Plan:** A Detailed Site Restoration Plan would be prepared and submitted for approval by EFSEC for final revegetation prior to Project decommissioning for the temporary and permanent disturbance areas, including modified habitat. The Restoration Plan would be a living document. It would include the methods, success criteria, monitoring, and reporting for revegetation at the end of the Project life. It would also include provisions for adaptive management and would be updated based on any lessons learned from implementing the Restoration Plan created for the temporary disturbance from Project construction (Appendix N, Horse Heaven Wind Farm, LLC 2021). This mitigation measure provides specifications on the Detailed Site Restoration Plan for decommissioning.

Air Quality

A-1[9]**:** Limit traffic speeds on unpaved areas to less than 15 mph, rather than the Applicant-proposed 25-mph limit. Access-road-related fugitive dust from construction vehicle traffic is the single largest source of PM_{10} and $PM_{2.5}$ emissions from Project construction. Road-related fugitive dust emissions increases with increasing vehicle speed. Consequently, one of the best management practices for mitigation of road-related fugitive dust emissions is to limit vehicle speed. The Applicant has proposed to limit vehicle speed to 25 mph. A lower vehicle speed limit of 15 mph is feasible and would further reduce fugitive PM_{10} and $PM_{2.5}$ emissions.

Water Resources

W-1[10]**: Least Risk Fish Windows:** Project construction and decommissioning within ephemeral and intermittent streams would 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). This mitigation measure addresses potential impacts on surface water and fish habitat and would minimize risk to aquatic species.

W-2: Minimize Work in Heavy Rain: Project construction and decommissioning would be minimized during rainy periods and heavy rain—in particular, work near ephemeral or intermittent streams. This mitigation measure addresses potential impacts of surface water and runoff and would minimize the risk of sediment release to surface water and wetlands.

[7] Geo-: Identifier of numbered mitigation item for Geology

[8] Veg-: Identifier of numbered mitigation item for Vegetation

[9] A-: Identifier of numbered mitigation item for Air Quality

[10] W-: Identifier of numbered mitigation item for Water Resources

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 would be approved by EFSEC in coordination with WDFW and Ecology prior to use. Stream crossing designs and associated mitigation plans would be provided and approved by EFSEC in coordination with WDFW and Ecology. This mitigation measure addresses the use of check dams on site, which would require approval by WDFW and Ecology prior to use.

W-4: Culvert Installation BMPs: Based on the ASC, one culvert is proposed along one intermittent stream. Installation of the culvert would follow U.S. Department of Agriculture 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.

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

W-5: Employee Training: An employee training plan would be included as part of the SPCC Plan. For the duration of the Project, employees and workers on site would 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 would 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. The 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) would be designed specifically for work within the Micrositing Corridor adjacent to the wetland (Figure 3.4-1, Section 3.4). The SWPPP would include BMPs from the Stormwater Management Manual for Eastern Washington (Ecology 2019). The plan would 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. The 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 is 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. The mitigation measure

addresses physical disturbance of the 100-year floodplain, a CARA. Clear-span would minimize physical disturbance.

W-8: Spill Response Equipment: Spill response equipment would be stored in every vehicle accessing the site during construction, operation, and decommissioning. In addition, an oil pan would be placed below heavy equipment when stored or not in use on site. The 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 would be minimized where possible. During drought or water shortage, schedule adjustment would be considered to minimize water needs on the site, where possible, or additional alternate off-site water supplies would be identified. The 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 would be postponed or alternate off-site water sources could be identified to minimize impacts on public water supply. Panel wash water would be recycled and re-used where possible during operations. The mitigation measure addresses impacts on public water supply and is proposed to minimize water use on site from panel washing, if required.

Vegetation

Veg-1: Tree Avoidance: Construction would avoid removing or disturbing trees within the Project Lease Boundary. Disturbance to trees includes any disturbance, including topping, within the drip-line of the tree (i.e., the area from the edge of the outermost branches), which preserves an intact root system. Disturbance within the drip-line of the tree should be avoided as this can lead to tree mortality. The avoidance area within the drip-line of trees in work areas should 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 would be provided to EFSEC, along with a statement justifying why avoidance cannot be achieved, and a mitigation plan. The mitigation plan would include replanting trees within the Lease Boundary to maintain the diversity of habitat structures provided by trees and would require approval by EFSEC prior to proceeding. This mitigation measure avoids physical disturbance to trees, which provides structural diversity for wildlife habitat.

Veg-2: Pre-Disturbance Surveys for Special Status Plant Species: Surveys for special status plant surveys would be conducted prior to clearing activities in areas of increased potential, including all Priority Habitat and areas identified by the Applicant as potential habitat for woven spore lichen. Surveys would be conducted by a qualified professional. Surveys would be conducted prior to both construction and decommissioning activities. All findings would be documented and provided to EFSEC. 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 prior to construction and decommissioning.

Veg-3: Special Status Plant Species Education: The environmental orientation provided to workers on site would include information on special status plant species. This would include diagnostic characteristics, suitable habitat descriptions, and photos of special status plant species with potential to occur within the Lease Boundary. A protocol would be established for any chance find by workers, who would notify the

environmental monitor on site prior to proceeding with work. This mitigation measure minimizes impacts on special status plant species by educating workers in identification and suitable habitat.

Veg-4: As-Built Report and Offset Calculation: Within 60 days of completing construction, the Applicant would provide an as-built report that documents the amount of temporary and permanent disturbance associated with the Project. This would include associated maps and georeferenced spatial files. The as-built report would be factored into the final calculation of habitat offset based on the Applicant-provided ratios. The acreages of modified habitat planted for the Project under the solar arrays would also be included in this report. EFSEC would determine the number of years that vegetation monitoring of temporary disturbance and modified habitat would be conducted and the success criteria for revegetation. The success criteria would include measurable parameters that the Applicant would measure to determine whether successful revegetation has occurred. The Applicant would 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 would be eligible for offset by the Applicant at the respective ratios. Any areas of modified habitat or temporary disturbance that do not meet the success criteria after completion of revegetation monitoring would be considered permanent disturbance, and this would be added to the offset requirement. This mitigation measure addresses habitat offset, by providing a final calculation of offset requirements based on actual disturbance.

Veg-5: Operation and Decommissioning Dust Control Plan: A dust control plan would be prepared for Project operation and decommissioning, similar to the dust control plan presented by the Applicant. The plan would minimize impacts on vegetation from dust during the operations and decommissioning stages of the Project. This mitigation measure minimizes indirect impacts from dust during operation and decommissioning.

Veg-6: Decommissioning Legislated Requirements: Mitigation measures that would be applied during decommissioning would follow the applicable legislated requirements at the time of decommissioning. 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 (DSRP), required by WAC 463-72-050 would include a description of revegetation to be undertaken during decommissioning. The DSRP would be prepared and submitted for approval by EFSEC for final revegetation prior to Project decommissioning for the temporary and permanent disturbance areas, including modified habitat. The DSRP would be a living document. It would include the methods, success criteria, monitoring, and reporting for revegetation at the end of the Project life. It would also include provisions for adaptive management and would be updated based on any lessons learned from implementing the Revegetation Plan created for the temporary disturbance from Project construction (Appendix N, Horse Heaven Wind Farm, LLC 2021a). This mitigation measure provides specifications on the Detailed Site Restoration Plan for decommissioning.

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 would be prepared. This Plan would include monitoring of the area for three years following decommissioning of the Project. This mitigation measure addresses noxious weeds during

decommissioning. It is designed to minimize the introduction and spread of noxious weeds during decommissioning.

Wildlife and Habitat

Wild-1[11]**:** Upon completion of the two-year bird and bat post-construction fatality monitoring program, the Applicant would review the results with EFSEC and WDFW and determine whether additional monitoring and mitigation measures are necessary. The mitigation measure allows for continued monitoring and adaptive management of potential Project related wildlife mortalities.

Wild-2: All trash containers would be wildlife proof. The mitigation measure reduces potential human-wildlife conflicts thereby reducing potential Project related wildlife mortalities.

Wild-3: The Applicant would provide EFSEC a summary of the consultation undertaken with the USFWS regarding eagle mortality. The mitigation measure allows for continued monitoring and adaptive management of potential Project related impacts to eagles.

Wild-4: The Applicant would avoid the use of pesticides, including rodenticides, during Project construction and operation. If the use of pesticides is required, the Applicant would develop a management plan for submission to and approval by EFSEC that describes how the Applicant would avoid and/or otherwise minimize potential impacts on wildlife, including all potentially impacted special status species. The mitigation measure reduces potential impacts on habitat and wildlife mortality while allowing for adaptive management of potential Project related impacts.

Wild-5: The Applicant would limit construction disturbance by identifying sensitive areas on mapping and flagging any sensitive areas including wildlife features, such as wildlife colonies, active nests, dens, and wetlands in the field. The Applicant would conduct ongoing environmental monitoring during construction to ensure that flagged areas are avoided. The mitigation measure reduces potential loss of habitat and wildlife mortality.

Wild-6: The Applicant would maintain a database of road mortalities through construction and operation as part of the operational procedures. The Applicant would review road-based mortalities annually and propose additional mitigation for areas, under the control of the Applicant, with frequent mortalities or wildlife crossing observations. Additional mitigation measures may include speed control, signage, temporary road closures (e.g., during migration periods), or wildlife passageways. The mitigation measure allows for continued monitoring and adaptive management of potential Project related wildlife mortalities.

Wild-7: The Applicant would schedule construction activities to occur during daylight hours, when feasible, to reduce disturbance of nocturnal species and the need for nighttime lighting. The mitigation measure reduces disturbance to wildlife (i.e., indirect loss).

Wild-8: Wind turbine buffer zones would be established around all known raptor nests and be a minimum of 0.25 miles. The Applicant would prepare a Raptor Nest Monitoring and Management Plan for review by EFSEC and the TAC if buffer zones cannot be maintained. The mitigation measure reduces potential

[11] Wild-: Identifier of numbered mitigation item for Wildlife

impacts on habitat and raptor mortality while allowing allow for adaptive management of potential Project related impacts.

Wild-9: Vegetation clearing and grubbing would 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, would be undertaken. The mitigation measure avoids or reduces potential bird mortality.

Hab-1[12]**:** The Applicant would locate Project components, including roads and powerlines, outside of modeled movement corridors to the extent feasible. Rationale would be provided to EFSEC for siting components within movement corridors, and a Corridor Mitigation Plan would 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 to accommodate wildlife movement for linear Project components (e.g., roads, powerlines)
- Proposed restoration in movement corridors following Project decommissioning

The 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: Transmission line crossings of canyons and draws would be minimized. Where crossings are required, the Applicant would provide EFSEC with rationale for the crossings and propose additional mitigation measures to reduce potential barriers to movement and wildlife collisions. The 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 would be situated out of native shrub-steppe habitat. Where temporary disturbance of shrub-steppe habitat is required, the Applicant would provide EFSEC with rationale and propose additional mitigation measures to reduce habitat loss. The mitigation measure avoids and reduces impacts to habitat while allowing for adaptive management of potential Project related habitat loss.

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

- Providing input to, and review of, Project wildlife and habitat management plans (e.g., ferruginous hawk management plan),
- Review and provide advice to EFSEC on of pre-design and pre-construction data collection requirements to address Project mitigation measures and conditions of management plans

[12] Hab-: Identifier of numbered mitigation item for Habitat

- Review and provide advice to EFSEC on the final Project design
- Advising on thresholds to be applied to the Project that would trigger the requirement for additional mitigation measures
- Advising on the monitoring of mitigation effectiveness and reviewing monitoring reports
- Advising on additional or new mitigation measures that would be implemented by the Applicant 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 mitigation measure avoids and reduces impacts to wildlife and habitat including habitat loss, wildlife disturbance, barriers to movement, and wildlife mortality; and allows for continued monitoring and adaptive management of potential Project related impacts.

Hab-5: As noted by the Applicant, 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 Applicant, 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 Applicant would develop an Indirect Habitat Loss Management Plan that addresses potential indirect habitat loss resulting from the Project. The Applicant would work with EFSEC and the Project TAC during the development of the Indirect Habitat Loss Management Plan (IHLMP) for review. EFSEC and the TAC would review the IHLMP prior to its implementation. The IHLMP would be provided to the TAC for review 90 days prior to construction.

The objectives of the IHLMP would be to identify Project-specific ZOI and required mitigation based on the Project-specific ZOI. The Project-specific ZOI would be developed based on Project conditions and may differ from the ZOI presented in the Draft EIS. The IHLMP would 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 would 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 would also include a series of compensatory site-selection criteria, developed in consultation with the TAC. The selection criteria would be used to evaluate candidate habitat compensation habitats.

Habitats that achieve more of the criteria would be identified as the preferential sites. Selection criteria would include, at a minimum:

- Proximity to the Lease Boundary (e.g., hierarchy of preferences with respect to location—namely, 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, habitat concentration areas, areas of high prey abundance)
- Proximity to Project infrastructure

The 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: **Final Design:** The Applicant would work with the TAC and EFSEC on the development of the final Project layout and design including the application of Applicant commitments and recommended mitigation measures. The mitigation measure avoids and reduces potential habitat loss and disturbance to wildlife (indirect habitat loss).

Hab-7: All roadways constructed for the Project during the construction and operation phases would be removed and restored during decommissioning. The Applicant would provide EFSEC with rationale and propose additional mitigation measures if roadways are not decommissioned post-operation. The mitigation measure restores habitat post-operation and reduces habitat loss.

In addition to the wildlife and habitat mitigation measures the following measures developed for the Vegetation chapter are applicable to wildlife and habitat.

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

Veg-4: As-Built Report and Offset Calculation: Within 60 days of completing construction, the Applicant would provide an as-built report that documents the amount of temporary and permanent disturbance associated with the Project. This would include associated maps and georeferenced spatial files. The as-built report would be factored into the final calculation of habitat offset based on the Applicant-provided ratios. The acreages of modified habitat planted for the Project under the solar arrays would also be included in this report. EFSEC would determine the number of years that vegetation monitoring of

temporary disturbance and modified habitat would be conducted and the success criteria for revegetation. The success criteria would include measurable parameters that the Applicant would measure to determine whether successful revegetation has occurred. The Applicant would 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 would be eligible for offset by the Applicant at the respective ratios. Any areas of modified habitat or temporary disturbance that do not meet the success criteria after completion of revegetation monitoring would be considered permanent disturbance, and this would be added to the offset requirement. The mitigation measure addresses habitat offset by requiring a final calculation of offset requirements based on actual disturbance.

Veg-7: Detailed Site Restoration Plan: The Detailed Site Restoration Plan (DSRP) would include a description of revegetation to be undertaken during decommissioning. The DSRP would be prepared and submitted for approval by EFSEC for the final revegetation following Project decommissioning for the temporary and permanent disturbance areas, including modified habitat. The DSRP would be a living document. It would include the methods, success criteria, monitoring, and reporting for revegetation at the end of the Project's life. It would also include provisions for adaptive management and would be updated based on learnings from implementing the Revegetation Plan created for the temporary disturbance from Project Construction (Appendix N; Horse Heaven Wind Farm, LLC 2021a). This mitigation measure provides specifications on the Detailed Site Restoration Plan for decommissioning.

Recommended Mitigation Measures for Special Status Species

Table ES-6 summarizes the mitigation measures recommended by EFSEC that are specific to special status species. These measures, in combination with those described above, would reduce potential Project-related impacts on these species.

Table ES-6: Recommended Mitigation Measures for Special Status Species

Mitigation Identifier	Species Name	Species-specific Mitigation
Spec-1[13]	Striped whipsnake Sagebrush lizard	The Applicant would 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 would be contacted prior to undertaking these surveys. If these species are identified through pre-construction surveys, the Applicant would prepare a Reptile Management Plan to reduce potential impacts on habitat, mortality, and barriers to movement. The Reptile Management Plan would describe: ▪ How the Applicant would avoid suitable habitat, including where the species were observed ▪ How the Applicant would implement management recommendations in Larsen (1997) ▪ How the Applicant would maintain rodent burrows in suitable reptile habitat (e.g., shrub-steppe) ▪ Additional mitigation measures that would be implemented to reduce potential mortality of these species during the construction and operation stages of the Project The Reptile Management Plan would be reviewed by the TAC and approved by EFSEC prior to initiation of construction. Survey results and proposed adaptive management would be reviewed by the TAC prior to implementation (see Hab-4). The mitigation measure avoids and reduces potential striped whipsnake and sagebrush lizard habitat loss and mortality while allowing for adaptive management through Project construction and operation.
Spec-2	American white pelican	The Applicant would maintain a database of American white pelicans observed flying over or landing in the Project Lease Boundary. Observational data would be reviewed with the TAC annually, and adaptive management strategies would be applied as needed. The mitigation measure allows for adaptive management of potential American white pelican mortality through Project operation.
Spec-3	Eagles	The Applicant would obtain any required federal approvals. The Applicant would 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 would 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. 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 The mitigation measure avoids and reduces potential disturbance of eagle nests and eagle mortality.

[13] Spec – Identifier for numbered mitigation measure for Special Status Species (Wildlife)

Table ES-6: Recommended Mitigation Measures for Special Status Species

Mitigation Identifier	Species Name	Species-specific Mitigation
Spec-4	Burrowing owl	The Applicant would conduct burrowing owl surveys within areas of direct loss (permanent, temporary, and modified) and associated ZOIs. The results of these surveys would be provided to the TAC and EFSEC and used to inform the final Project layout. Active burrows would be retained and satellite burrows with characteristics used by burrowing owls would be avoided where feasible to maintain habitat capacity. Apply WDFW-recommended seasonal buffers (0.5 miles) (Larsen et al. 2004) for burrowing owl nests to avoid disturbing nesting burrowing owls, if present. Seasonal buffers (February 15 to September 25) would be applied during construction and for temporary disturbances, such as periodic maintenance, during operation. If active burrowing owls are identified in the Lease Boundary, the Applicant would develop a species-specific management plan that describes: ▪ The location of active burrows ▪ How active burrows would be avoided through re-alignment or reconfiguration of Project features ▪ Additional mitigation measures that would be applied where disturbance to active burrows is expected (e.g., construction of artificial burrows) ▪ Ongoing monitoring of active burrows The Burrowing Owl Management Plan would be reviewed by the TAC and approved by EFSEC prior to initiation of construction. Survey results and proposed adaptive management would be reviewed by the TAC prior to implementation (see Hab-4). The Applicant would monitor access roads for burrowing owl use and mortalities. Mortalities would be reported to the TAC and EFSEC within 5 days of the observation. Incidental observations of burrowing owl use would be provided to the TAC on an annual basis. The mitigation measure avoids and reduces potential loss of burrowing owl habitat, disturbance to burrowing owls, and burrowing owl mortality, while allowing for adaptive management through Project construction and operation.
Spec-5	Ferruginous hawk	The Applicant would avoid siting Project components within 2 miles of ferruginous hawk nests documented in PHS data and in Horse Heaven Wind Farm, LLC (2021a) to preserve foraging habitat. In the event that a Project component is sited within the 2-mile buffer, the Applicant would, in consultation with the TAC and approved by EFSEC, develop a Project-specific ferruginous hawk mitigation and management plan that includes: 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 (2021a): a. If Project components are sited within 2 miles of a ferruginous hawk nest, the infrastructure would be reviewed by the TAC and approved by EFSEC. b. Additional mitigation measures would be developed to reduce potential ferruginous hawk strikes with turbines, including curtailing turbine operation within the 2-mile core habitat of any actively occupied nests during the breeding and rearing periods when ferruginous hawks are present in Benton County.

Table ES-6: Recommended Mitigation Measures for Special Status Species

Mitigation Identifier	Species Name	Species-specific Mitigation
		c. The plan would explain how and where the Applicant would 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 (2021a). 2. A description of how construction activities would be undertaken to avoid sensitive timing periods for ferruginous hawk. 3. A description of pre- and post-monitoring programs, that would be conducted at active ferruginous hawk territories to establish: a. Habitat use in the Lease Boundary. b. Mapping of ground squirrel colonies and other prey items. c. Identification of potential flyways between nest sites and foraging habitat and monitoring of potential flyways to inform final turbine siting and orientation. d. Ongoing monitoring of nest occupation and success. 4. A description of restoration activities that would be undertaken in disturbed areas to enhance ferruginous hawk habitat during Project decommissioning. 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 through Project construction and operation.
Spec-6	Great blue heron Sandhill crane Tundra swan	The Applicant would maintain a database of incidental observation of great blue heron, sandhill crane, and tundra swan foraging in the Lease Boundary during operation. Observational data and proposed adaptive management strategies would be reviewed with the TAC annually (see Hab-4). The Applicant would reduce the use of overhead power lines, where possible. The Applicant would apply buffers recommended in Larsen et al (2004)[(a)] sandhill crane feeding areas (0.5 miles) and roosting areas (0.3 miles), if documented in the Lease Boundary. 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 through Project construction and operation.
Spec-7	Loggerhead shrike Sagebrush sparrow Sage thrasher Vaux's swift	The Applicant would maintain connectivity between natural habitat patches to reduce potential habitat loss and fragmentation. The Applicant would restore areas with shrubs, where feasible, to reduce potential habitat loss. The Applicant would avoid the use of insecticides and herbicides to reduce potential mortality and loss of prey items. The Applicant would retain trees, shrubs, and hedgerows, as feasible, to reduce habitat loss. The Applicant would consult with the TAC and EFSEC if suitable habitat for loggerhead shrike, sagebrush sparrow, and sage thrasher cannot be avoided. If suitable habitat cannot be avoided, the Applicant would, in consultation with the TAC and approved by EFSEC, develop nest set back buffers that are supported by literature to be applied during clearing and grubbing activities. The Applicant would 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 Applicant would

Table ES-6: Recommended Mitigation Measures for Special Status Species

Mitigation Identifier	Species Name	Species-specific Mitigation
		conduct pre-clearing surveys for active nests and maintain appropriate setback buffers around active nests. Observational data and proposed adaptive management strategies would be reviewed with the TAC annually (see Hab-4). The mitigation measure avoids and reduces potential habitat loss, habitat fragmentation, and mortality to avoid and reduce impacts to loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift. The measure allows for adaptive management through Project construction and operation.
Spec-8	Prairie falcon	The Applicant would conduct pre-construction surveys for prairie falcon nests for construction work proposed during the prairie falcon nesting season 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 would be reviewed with the TAC annually (see Hab-4). The mitigation measure avoids and reduces potential disturbance to prairie falcon, and prairie falcon mortality, while allowing for adaptive management through Project construction and operation.
Spec-9	Ring-necked pheasant	The Applicant would 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 would be reviewed with the TAC annually (see Hab-4). The mitigation measure reduces potential loss of ring-necked pheasant habitat and allows for adaptive management through Project construction and operation.
Spec-10	Black-tailed jackrabbit White-tailed jackrabbit	The Applicant would conduct surveys for jackrabbit in suitable habitat identified through GAP predictive mapping. If jackrabbits are identified, the Applicant would 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 would be reviewed with the TAC annually (see Hab-4). The 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 through Project construction and operation.
Spec-11	Townsend's big-eared bat	The Applicant would restrict bat access to open water if the water could be contaminated. The Applicant would retain old buildings, outbuildings, and trees where feasible. The Applicant would report mortalities of Townsend's big-eared bat to EFSEC and the TAC. Bat mortality data and adaptive management strategies would be reviewed with the TAC annually (see Hab-4). The mitigation measure reduces potential loss of Townsend's big-eared bat habitat and mortality and allows for adaptive management through Project construction and operation.

Table ES-6: Recommended Mitigation Measures for Special Status Species

Mitigation Identifier	Species Name	Species-specific Mitigation
Spec-12	Townsend's ground squirrel	The Applicant would conduct surveys for Townsend's ground squirrel colonies in areas of the Project disturbance footprint (including ZOI) to inform final design. The Applicant would consider how to 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 would be shown on Project mapping, and a species-specific management plan would be developed for areas where avoidance is not feasible. This plan would provide rationale for why colonies cannot be avoided and would provide additional mitigation measures, such as colony relocation and reconstruction of habitat features. The plans would be provided and discussed with the TAC, and approved by EFSEC, if avoidance of identified ground squirrel colonies is not feasible. Observational data and adaptive management strategies would be reviewed with the TAC annually. The 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 Applicant would limit fencing where feasible (e.g., around solar arrays). Final fencing layouts and design, including use of non-barbed-wire security fencing, would be provided to the TAC and EFSEC with rationale for fencing requirements. The Applicant would design and implement a study of seasonal pronghorn antelope occurrence and use of the Lease Boundary pre-construction and during operation to document the change, if any, of pronghorn antelope presence, abundance, and habitat use in the Lease Boundary. The TAC would review and provide input to the study design. The results of the study would be used to develop adaptive management measures to respond to changes in pronghorn antelope habitat use. Survey results and proposed adaptive management would be reviewed by the TAC prior to implementation (see Hab-4) The Applicant would maintain a database of pronghorn antelope observations, including details such as numbers, location, age, and sex, and would make this database available to WDFW, EFSEC, and the Yakama Nation. The mitigation measure reduces potential disturbance to pronghorn antelope and barriers to pronghorn antelope movement, while allowing for adaptive management through Project construction and operation.

Notes:
[a] Larsen et al. (2004) recommends buffers around great blue heron colonies, which do not occur in the Lease Boundary and does not provide recommended buffers for Tundra swan.
ASC = Application for Site Certification; EFSEC = Washington Energy Facility Site Evaluation Council; TAC = Technical Advisory Committee; USFWS = U.S. Fish and Wildlife Service; WDFW = Washington Department of Fish and Wildlife; ZOI = zone of influence

Summary of Milestones and Timing

Table ES-7 summarizes wildlife and habitat mitigation milestones and the timing of when milestones would be met.

Table ES-7: Summary of Milestones

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

PCFM = post-construction fatality monitoring; TAC = Technical Advisory Committee

Energy and Natural Resources

ENR-1[14]**:** The Applicant would 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.

ENR-2: The Applicant would install high-efficiency electrical fixtures and appliances in the O&M facility, BESSs, and substations to reduce energy needs for the Project's operations stage.

ENR-3: The Applicant would install high-efficiency security lighting to reduce energy needs for the Project's operations stage.

ENR-4: The Applicant would install low-water-use flush toilets in the O&M facilities to reduce the Project's water requirements during its operations stage.

ENR-5: The Applicant would capture and recycle wash water to reduce the Project's water requirements during its operations stage.

ENR-6: To retrieve as much of the natural resources used in construction and operation of the Project as possible, the Applicant would demolish or remove all Project-related equipment and facilities from the Lease Boundary. If the Applicant 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.

ENR-7: To minimize the need for future extraction of natural resources, the Applicant would recycle all components of the Project that have the potential to be used as raw materials in commercial or industrial applications.

Land and Shoreline Use

LSU-1[15]**:** To limit conflicts between the Project and farmers and ranchers, the Applicant would prepare a livestock management plan with property owners and livestock owners to control the movement of animals within the Lease Boundary during construction and operation.

LSU-2: To limit conflicts between the Project and farmers, the Applicant would 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 would establish work windows that would allow farmers uninterrupted access to their fields for dryland wheat planting and harvesting.

LSU-3: To limit conflicts between the Project and ranchers, the Applicant would be responsible for ensuring that arrangements for the removal of all livestock have been made during Project construction and decommissioning.

LSU-4: After construction is completed, the Applicant would restore all temporary disturbance areas to their preconstruction status. This would allow the areas of temporary disturbance within the Lease Boundary to return to their preconstruction agricultural production levels as soon as possible.

[14] ENR-: Identifier of numbered mitigation item for Energy and Natural Resources

[15] LSU-: Identifier of numbered mitigation item for Land and Shoreline Use

LSU-5: Prior to decommissioning, the Applicant would submit a Detailed Site Restoration Plan, per WAC 463-72-050, for restoring the site to its preconstruction character. This would assist in preventing conversion of a land use that is not in alignment with the Lease Boundary's current designation. The Applicant would 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 Applicant would submit a request to EFSEC for an alternative land use that would 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 Applicant provide additional mitigation to offset impacts from a permanent conversion of the land.

Historic and Cultural Resources

CR-1: Traditional Cultural Properties Mitigation: Ongoing engagement with affected Tribes is recommended to facilitate the locations of TCPs, to better quantify, and mitigate any potential impacts on them. Tribal review of site/engineering plans would provide input to guide design and avoidance, without confidential disclosure of locations. This engagement should also include opportunities 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 through Project redesign and/or refinement and/or the maintenance of safe access to TCPs and/or other places of cultural significance. 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 participation with affected groups. The CTUIR (2021a, 2021b) proposed several mitigation strategies. Potential mitigation strategies include:

- Enabling 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)
- 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. Engagement with Tribes on appropriate rehabilitation (closure) strategies for the safe guarding of viewshed and cultural landscapes
- Tribal representatives to be included during any ground-disturbing activities (Cultural Resource Monitor)
- Develop an agreement with the Tribes in anticipation of a time when the wind farm would be considered for disassembly to restore the landscape and viewshed

CR-2: Archaeological and Architectural Resources Mitigation: Table ES-8 sets out proposed mitigation measures for archaeological and architectural resources potentially impacted by the Project. Any mitigation strategies should be detailed in an agreement document between EFSEC, DAHP, the Tribes, and the Project proponent.

Recommended mitigation measures are intended to minimize impacts on cultural resources with high sensitivity (unevaluated resources, precontact isolates, precontact sites, historic archaeological resources, and TCPs), primarily through avoidance. If avoidance is not possible, the recommended mitigation clarifies which resources would require a DAHP permit prior to disturbance. Recommended

mitigation measures also identify instances where engagement with DAHP, Tribes, and/or landowners would be warranted.

Table ES-8: Summary of Recommendations for Archaeological and Architectural Resources Potentially Impacted by the Project

Resource ID	Resource Type	Eligibility for Protection/Listing (NRHP)	Recommendations
▪ 45BN2092 ▪ 45BN2146	Archaeological Resources (Precontact Isolates)	Confirmed isolates, not protected by RCW 27.53	▪ Any potential disturbance will not require a DAHP permit. ▪ Avoidance, through successful implementation of the APP preferred. ▪ In the event that the resources cannot be avoided. Further engagement with Tribes, DAHP, and landowners recommended.
▪ 45BN261 ▪ 45BN2090 ▪ 45BN2153 (precontact component)	Archaeological Resources (Precontact Archaeological Sites)	Protected by RCW 27.53	▪ Avoidance, through implementation of the APP. ▪ In the event resources cannot be avoided, a DAHP permit must be obtained to disturb them. ▪ In the event that the resources cannot be avoided. Further engagement with Tribes, DAHP, and landowners recommended.
▪ 45BN2081 ▪ 45BN2082 ▪ 45BN2083 ▪ 45BN2084 ▪ 45BN2091 ▪ 45BN2138 ▪ 45BN2144 ▪ 45BN2150 ▪ 45BN2155 ▪ 45BN2163	Archaeological Resources (Historic Isolates)	Not eligible for NRHP listing	▪ Negligible predicted impacts on resources. ▪ Avoidance not required. ▪ No further measures are recommended.
▪ 45BN2139 ▪ 45BN2156	Archaeological Resource (Historic Sites)	Not eligible for NRHP listing	▪ Negligible predicted impacts on resources. ▪ Avoidance not required. ▪ No further measures are recommended.

Table ES-8: Summary of Recommendations for Archaeological and Architectural Resources Potentially Impacted by the Project

Resource ID	Resource Type	Eligibility for Protection/Listing (NRHP)	Recommendations
▪ 45BN205 ▪ 45BN2085 ▪ 45BN2086 ▪ 45BN2087 ▪ 45BN2088 ▪ 45BN2089 ▪ 45BN2093 ▪ 45BN2140 ▪ 45BN2141 ▪ 45BN2142 ▪ 45BN2143 ▪ 45BN2145 ▪ 45BN2147 ▪ 45BN2148 ▪ 45BN2149 ▪ 45BN2151 ▪ 45BN2152 ▪ 45BN2153 (historic component) ▪ 45BN2154 ▪ 45BN2157 ▪ 45BN2158 ▪ 45BN2159 ▪ 45BN2160 ▪ 45BN2161 ▪ 45BN2162	Archaeological Resources (Historic Sites)	Unevaluated (potentially eligible for NRHP listing)	▪ Avoidance, through implementation of the APP. ▪ In the event resources cannot be avoided, the sites should be evaluated for their significance and eligibility for listing, with next steps determined in conjunction with DAHP.
▪ Farmstead ▪ Transmission Line 721665 ▪ 3152-S4 ▪ Roadway 667765	Architectural Resources	Evaluated as not eligible for NRHP listing	▪ Negligible predicted impacts on resources. ▪ Avoidance not required. ▪ No further measures are recommended.
▪ Transmission Line 721666 ▪ Grain Elevator 722995	Architectural Resources	Eligible for listing in the NRHP	▪ High predicted impacts. ▪ Avoidance required. ▪ No further measures are recommended.

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

Visual Aspects, Light and Glare

Visual Aspects Mitigation

VIS-1[16]**:** 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. Siting the turbines further away would reduce the level of visual contrast and prominence (CESA 2011; BLM 2013).

VIS-2: Do not place piggyback advertising, cell antennas, commercial messages, or symbols on proposed wind turbines, as these have the potential to introduce additional visual contrast and would seem out of place in this natural-appearing agricultural landscape (BLM 2013).

VIS-3: Maintain clean nacelles and towers to avoid any spilled or leaking fluids accumulating dirt, which would contrast with the clean, white/gray wind turbines and result in increased visual contrast within the landscape (BLM 2013).

VIS-4: Use color-treated solar collectors and support structures to minimize color contrast with the existing landscape (BLM 2013).

VIS-4: Use color-treated solar collectors and support structures to minimize color contrast with the existing landscape (BLM 2013).

VIS-5: Avoid complete removal of vegetation beneath solar arrays during construction, where possible, to reduce contrast between the exposed soil and adjacent undisturbed areas during project operation. If site grading requires the removal of vegetation, the area will be revegetated and maintained during project operation (BLM 2013).

VIS-6: Install opaque fencing to directly screen views of the solar arrays where sited adjacent to viewpoints or residences. To allow the proposed fencing to blend into the setting, color-treat the fencing to minimize color contrast with the existing landscape (BLM 2013).

VIS-7: Design BESS to blend with the adjacent agricultural character, including selecting materials and paint colors to reduce contrast with the existing setting. By mimicking design characteristics of agricultural structures in the area, the BESS facilities would appear consistent with the area's agricultural setting, including the overall visual scale of those existing structures (BLM 2013).

VIS-8: Maximize the span length across highways and other linear viewing locations to decrease visual contrast at the highway crossings. 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 would be reduced (BLM 2013).

VIS-9: Choose the type of proposed transmission structure (H-frame or monopole) to best match the adjacent transmission lines and to minimize visual clutter from the introduction of different structure types into the landscape, which would result in increased visual contrast (BLM 2013).

Shadow Flicker Mitigation

[16] Vis-: Identifier of numbered mitigation item for Visual Aspects

SF-1[17]**:** The Applicant would attempt to avoid, minimize, and mitigate shadow flicker at nearby 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 stop the blades during brief periods when conditions result in a perceptible shadow flicker.

SF-2: The Applicant would set up a complaint resolution procedure that will 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 would 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.

Light Mitigation

LIG-1[18]**:** The Project would be constructed with LEED-certified building exterior(s) and security lighting to minimize vertical and horizontal illuminance to keep the lighting on site and to reduce impacts at the Lease Boundary and beyond.

Noise and Vibration

N-1[19]**:** Avoid laydown and equipment storage/parking areas closer than 2,500 feet from the nearest NSR location. These laydown and storage areas will have more noise sources for longer periods of time than other areas; therefore, setting these locations further from NSR locations will limit the sound level and the duration that such equipment can impact an NSR.

N-2: Limit large, noise-generating equipment operations, such as earth-moving equipment, cranes, and trucks, as outlined in Table 4.11-7, 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. This measure would ensure that a typical workday would not include pile-driver operations or blasting during the 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 would be atypical. The purpose is to limit noise impacts during sensitive hours while allowing contractors some flexibility.

N-3: Monitor noise during nighttime operations (between 10 p.m. and 7 a.m.), when operations have the potential to impact NSRs to ensure that operations do not exceed state noise limits.

N-4: Update the Applicant's noise complaint resolution procedure to better address and respond to noise complaints. These updates should include the following: 1) Set up a 24-hour "noise hot line" or other form of communication that the public can use to report any undesirable noise conditions associated with the construction of the Project, with the ability to log the date and time of a complaint. This line of communication would be maintained through the end of construction; 2) Make an attempt to contact the

[17] SF-: Identifier of numbered mitigation item for Shadow Flicker

[18] LIG-: Identifier of numbered mitigation item for Light

[19] N-: Identifier of numbered mitigation item for Noise

complainant within 24 hours; 3) Require that any complaints and their resolution be reported to EFSEC during monthly reports to the Council.

N-5: Establish a noise complaint resolution procedure similar to that proposed for construction and decommissioning to better address and respond to noise complaints.

N-6: Maintain operation of the "noise hot line" (or similar) until the Project has been operational for at least one year at which time this can be reassessed to continue or be terminated.

Recreation

R-1[20]**:** To mitigate the loss of recreational activities due to the Project, the Certificate Holder would coordinate with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within the Lease Boundary (e.g., multi-use trails).

R-2: To mitigate the loss of uninterrupted views of scenic viewpoints, the Certificate Holder would provide a minimum of five informational boards approved by DNR and EFSEC at viewpoints associated with scenic areas of interest. These boards should include photographs of the viewshed prior to the construction of the Project and provide information regarding the decommissioning and reclamation of the Project's footprint.

R-3: To mitigate the loss of safe recreation use for recreation enthusiasts, the Certificate Holder would 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 Project area while keeping recreation enthusiasts safe. This plan should identify potential hazards within the Project Area (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 would 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.

Public Health and Safety

Veg-1: Tree Avoidance: Construction would avoid removing or disturbing trees within the Project Lease Boundary. Disturbance to trees includes any disturbance, including topping, within the drip-line of the tree (i.e., the area from the edge of the outermost branches), which preserves an intact root system. Disturbance within the drip-line of the tree should be avoided as this can lead to tree mortality. The avoidance area within the drip-line of trees in work areas should 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 would be provided to EFSEC, along with a statement justifying why avoidance cannot be achieved, and a mitigation plan. The mitigation plan would include replanting trees within the Lease Boundary to maintain the diversity of habitat structures provided by trees and would

[20] R-: Identifier of numbered mitigation item for Recreation

require approval by EFSEC prior to proceeding. This mitigation measure avoids physical disturbance to trees, which provide structural diversity for wildlife habitat.

Transportation

TR-1[21]**:** To ensure safe practices during the transportation of materials during construction and decommissioning, the load movement team would review the procedures to be followed if the load should become lodged at a crossing and would review the emergency contact numbers for each crossing daily—that is, before starting travel for the day.

TR-2: To mitigate potential collisions at train crossings, the Applicant would 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.

TR-3: To ensure that no changes have occurred since the traffic analysis originally provided prior to construction, a third-party engineer would provide a traffic analysis prior to decommissioning. The traffic analysis would 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.

TR-4: To ensure that no changes have occurred since the route survey originally provided prior to construction, all railroad crossing and grade changes would 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 would include anticipated traffic counts. Since this measure cannot be required by EFSEC, it cannot be fully considered effective mitigation for the purpose of this analysis.

TR-5: The analysis of impacts from decommissioning is based on existing laws and regulations at the time when the ASC was submitted to EFSEC. To ensure that no changes have occurred to laws and regulations used in this analysis, the Applicant would 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 would review impacts from decommissioning traffic and be submitted to WSDOT for review and comment prior to decommissioning activities. Since this measure would require the participation of other agencies to be implemented, it cannot be considered fully effective mitigation for the purpose of this analysis. EFSEC would work with the identified agencies to facilitate cooperation in implementing this mitigation measure.

Public Services and Utilities

ENR-5: The Applicant would capture and recycle wash water to reduce the Project's water requirements during the operations stage.

[21] TR-: Identifier of numbered mitigation item for Transportation

ENR-7: To minimize the need for future extraction of natural resources, the Applicant would recycle all components of the Project that have the potential to be used as raw materials in commercial or industrial applications.

Additionally, EFSEC has identified the following mitigation measure that addresses the disposal of non-recyclable project components:

PSU-1[22]**:** To address the potential for the inappropriate disposal of Project waste, the Applicant would dispose of all non-recyclable Project components in an appropriately licensed waste disposal facility.

Socioeconomics

Socio-ec-1[23]**:** Prior to decommissioning, the Applicant would provide a new housing analysis that would include up-to-date housing information to determine if current socioeconomic analysis and Project impacts on housing are appropriate or if additional mitigation is needed to address temporary housing availability.

[22] PSU-: Identifier of numbered mitigation item for Public Services and Utilities

[23] Socio-ec-: Identifier of numbered mitigation item for Socioeconomics

Attachment ES-3-2

Tables ES-3a through ES-3c and Tables ES-4a through ES-4c

Summary of Potential Impacts of the Comprehensive Project and by Project Component during Construction, Operations and Decommissioning

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Table ES-3a

Summary of Potential Impacts of Comprehensive Project during Construction of the Proposed Action

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Table ES-3a: Summary of Potential Impacts of Comprehensive Project during Construction of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Earth Resources (Section 4.2)	Geology	Adverse impacts on geology would occur from the installation of deep turbine foundations.	Low	Constant	Probable	Limited	No mitigation identified	None identified
Earth Resources (Section 4.2)	Soils	The disturbance to natural soil profiles could result in a temporary increase in localized soil erosion. These activities are likely to include site clearing, excavation, and backfilling. The construction and erection of turbine tower foundations would disturb soil resources as the contractor excavates unsuitable material from the Project area.	Low	Short Term	Unavoidable	Confined	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Topography	Construction activities that would impact topography include excavation, grading, and cut-and-fill-slope development. Limited grading and/or placement of additional fill may be needed to obtain necessary grades for access roads, building foundations, and leveling the ground. Surface disturbance from construction-related activities would impact topography around each turbine.	Low	Short Term	Unavoidable	Confined	**Geo-1:** Avoid construction during wet periods.	None identified
Earth Resources (Section 4.2)	Earthquakes	Prolonged earthquake-induced ground shaking could cause minor damage to infrastructure if shaking has an intensity and duration that exceeds code-based structural seismic design levels.	Negligible	Temporary	Feasible	Confined	**Geo-1:** Avoid construction during wet periods.	None identified
Earth Resources (Section 4.2)	Landslide Hazards and Ground Instability	The Project site includes areas susceptible to landslides and bluff failures. Existing ground instability, high rainfall rates, and strong earthquake shaking could cause landslides.	Low	Temporary	Unlikely	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified

Notes:
Table continues below, notes apply to remainder of table
[a] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[b] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[c] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC; ASC = Application for Site Certification; BESS = battery energy storage system; BMP = best management practice; dBA = A-weighted decibels; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; mph = miles per hour; NRHP = National Register of Historic Places; NSR = noise sensitive receptor; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter; SWPPP = stormwater pollution prevention plan; TAC = Technical Advisory Committee; Tribes = Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Wanapum Tribe; USFWS = U.S. Fish and Wildlife Service; WDFW = Washington Department of Fish and Wildlife; ZOI = zone of influence

Table ES-3a: Summary of Potential Impacts of Comprehensive Project during Construction of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Earth Resources (Section 4.2)	Volcanic Activity	Hazards from ashfall to construction activities would include the following: ▪ Accumulation of ash on structures ▪ Clogging of electronics, machinery, and filters ▪ Suspension of abrasive fine particles in air and water ▪ Accumulation of ash on transportation routes and vegetation	Negligible	Temporary	Unlikely	Confined	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Air Quality (Section 4.3)	Air Quality	Adverse impacts on air quality may occur during construction from $PM_{2.5}$, PM_{10}, and fugitive dust	Low	Short Term	Probable	Confined	**A-1:** Limit speeds to less than 15 mph on dirt roads.	None identified
Water Resources (Section 4.4)	Physical Disturbance	Project construction would require temporary and permanent disturbance, which could impact surface water and wetlands, surface runoff/absorption, floodplains, and groundwater.	Low	Short Term (for temporary disturbance) Long Term (for permanent disturbance)	Unavoidable	Confined	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-4:** Culvert Installation BMPs. **W-6:** Wetland SWPPP. **W-7:** Clear-span 100-Year Floodplain.	None identified
Water Resources (Section 4.4)	Change in Water Quality	Project construction could result in a change to water quality of waterways that intersect or are located adjacent to Project construction activities.	Low	Temporary	Unlikely	Local	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-5** Employee Training. **W-6:** Wetland SWPPP. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Change in Hydrology – Temporary Disturbance	Temporary disturbance from Project construction within ephemeral and intermittent streams could result in changes to the hydrology of waterways.	Low	Short Term	Unlikely	Limited	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-4:** Culvert Installation BMPs.	None identified
Water Resources (Section 4.4)	Change in Hydrology – Permanent Disturbance	Project construction would require a culvert installation on one intermittent stream that could result in changes to the hydrology of the stream.	Low	Long Term	Unavoidable	Limited	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-4:** Culvert Installation BMPs.	None identified
Water Resources (Section 4.4)	Introduction of Hazardous Substances	Project construction could result in the introduction of hazardous substances that could impact surface water and wetlands, floodplains, and groundwater.	Low	Temporary	Unlikely	Local	**W-7:** Employee Training. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)[24]	Public Water Supply	Project construction activities would rely on water supplied by the City of Kennewick Public Works.	Medium	Temporary	Feasible	Regional	**W-9:** Minimize Water Use.	None identified

[24] Blue highlight identifies Impacts of Medium and High magnitude.

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Vegetation (Section 4.5)	Loss of Extent of Priority Habitat – Temporary Disturbance	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	High	Short Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat - Permanent Disturbance	Site clearing associated with permanent disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	High	Long Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent Other Habitat – Temporary Disturbance	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with other habitat.	Low	Short Term	Unavoidable	Confined	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Other Habitat – Permanent Disturbance	Site clearing associated with permanent disturbance would result in direct loss of acreage associated with other habitat.	Low	Long Term	Unavoidable	Confined	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Special Status Plant Species	Site clearing associated with the construction of the Project would result in direct loss of populations of special status plant species or their habitat.	Medium	Constant	Feasible	Local	**Veg-2:** Pre-Disturbance Surveys for Special Status Plant Species. **Veg-3:** Special Status Plant Species Education. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Habitat Degradation	Construction activities could result in habitat degradation from introduction of hazardous material, surface runoff, introduction and spread of invasive plants or noxious weeds, and deposition of dust.	Low	Long Term	Feasible	Local	No mitigation identified	None identified
Vegetation (Section 4.5)	Habitat Fragmentation	Construction activities could result in habitat fragmentation from fire.	Low	Long Term	Feasible	Local	No mitigation identified	None identified
Wildlife and Habitat (Section 4.6)	Habitat Loss	The Project would result in the direct loss of habitat through construction of the Wind Energy Micrositing Corridor and associated transportation routes. The Project may also result in indirect habitat loss through increased noise, light, and human presence during construction.	Medium	Short Term for temporary disturbances (e.g., construction laydown areas) Constant for permanent footprint loss (e.g., turbine footprint)	Unavoidable	Local	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance.	None identified

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Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	The Project may result in mortality of smaller animals (e.g., birds, herptiles, small mammals) during clearing and ground preparation works. Wildlife-vehicle collisions may occur during Project construction due to increased traffic.	Low	Short Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** schedule construction during daylight hours. **Wild-8:** Establish buffers around raptor nests. **Wild-9:** Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design.	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	Turbines, power lines, roadways, and other linear infrastructure could create barriers to wildlife movement and fragment habitat. Barriers and fragmentation created during construction would predominantly remain through operation.	Low	Long Term	Probable	Confined	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3**: Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: striped whipsnake and sagebrush lizard	Impacts on shrub and shrub-steppe habitat may result in loss of suitable reptile habitat. Mortality of reptile species could occur during construction from heavy machinery and land clearing and grubbing.	Low	Constant	Feasible	Confined	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-3**: Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-1:** Implement striped whipsnake and sagebrush lizard–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: American white pelican	Construction of the Project may disturb American white pelicans moving over the Lease Boundary.	Negligible	Short Term	Unlikely	Limited	**Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-2:** Implement American white pelican–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: bald eagle	Construction of the Project could disturb bald eagles, resulting in avoidance of the Project site.	Negligible	Short Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction. disturbance by identifying sensitive areas. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance. **Spec-3:** Implement eagle-specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: burrowing owl	Construction may result in direct and indirect habitat loss and the destruction of burrows (active, inactive, and potential). Mortality may occur during vegetation and ground-disturbing works.	Medium	Short Term (disturbance, mortality) Constant (habitat loss)	Feasible (mortality) Probable (disturbance) Unavoidable (Habitat loss)	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-7:** Schedule construction during daylight hours. **Wild-8**: Establish buffers around raptor nests. **Wild-9**: Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-3**: Temporary laydown areas **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-4**: Implement burrowing owl–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	Construction of turbines and associated roads and power lines may result in the direct and indirect loss of habitat in core and range ferruginous hawk habitat. Nesting success could be impacted by construction activities proximal to the nest or activities change prey abundance.	High	Short Term (disturbance) Constant (habitat loss)	Probable (disturbance) Unavoidable (habitat loss)	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-8**: Establish buffers around raptor nests. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-5**: Implement ferruginous hawk specific–mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: golden eagle	Construction of the Project could disturb golden eagles, resulting in avoidance of the Project site, though golden eagle nesting has not been reported within 10 miles of the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-2**: Use wildlife-proof trash containers. **Wild-3**: Review USFWS eagle mortality consultation. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Veg-1:** Tree Avoidance. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: great blue heron and sandhill crane	Construction may disturb birds flying over the Lease Boundary, resulting in bird flight paths being diverted around the area. Construction may result in the loss of foraging habitat.	Negligible	Short Term (construction disturbance, construction mortality) Long Term (habitat loss)	Feasible (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Spec-6**: Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: loggerhead shrike	Construction may result in direct and indirect (disturbance) habitat loss. Mortality may occur from interactions with machinery and destruction of nests.	Low	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (Habitat loss)	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-7:** Schedule construction during daylight hours. **Wild-9**: Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-2:** Minimize transmission line crossings. **Hab-3**: Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: prairie falcon	Construction of the Project is predicted to result in the direct loss of suitable foraging habitat for prairie falcon. Disturbance from construction activities may result in disturbance to prairie falcons.	Medium	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (Habitat loss)	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-8**: Establish buffers around raptor nests. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3**: Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree avoidance. **Spec-8**: Implement prairie falcon–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: ring-necked pheasant	Construction of the Project is predicted to result in the direct loss of suitable foraging habitat for ring-necked pheasant. Disturbance from construction activities may result in indirect habitat loss. Access roads may result in collisions with ring-necked pheasants.	Low	Short Term (construction disturbance, construction mortality) Long Term (habitat loss)	Probable (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-9**: Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-9**: Implement ring-necked pheasant–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: sagebrush sparrow sage thrasher	Construction may result in direct and indirect habitat loss. Mortality may occur from interactions with machinery and destruction of nests.	Low	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (Habitat loss)	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-7:** Schedule construction during daylight hours **Wild-9**: Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-2:** Minimize transmission line crossings. **Hab-3**: Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	Construction may result in the disturbance and loss of suitable foraging habitat and disruption of birds flying over the Lease Boundary.	Low	Short Term (construction disturbance, construction mortality) Long Term (habitat loss)	Feasible (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Spec-6**: Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Vaux's swift	Construction of the Project could disturb Vaux's swift in flight over the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: black-tailed jackrabbit white-tailed jackrabbit	Construction of the Project is predicted to result in the direct loss of suitable habitat for jackrabbit. Disturbance from construction activities may result in indirect habitat loss. Access roads may result in collisions with jackrabbits, barriers to movement, and increased fragmentation.	Low	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-3**: Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-10:** Implement black and white-tailed jackrabbit–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's big-eared bat	Construction activities could disturb Townsend's big-eared bat foraging in the Lease Boundary.	Negligible	Short Term	Feasible	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-7:** Schedule construction during daylight hours. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-11:** Implement Townsend's big-eared bat–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: Townsend's ground squirrel	Construction of the Project and associated access roads is predicted to result in the loss of suitable Townsend's ground squirrel habitat and destruction of colonies. Mortality may occur during construction work proximal to colonies and along access roads.	Medium	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-3**: Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-12:** Implement Townsend's ground squirrel–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: pronghorn antelope	Construction is predicted to result in direct loss of pronghorn antelope habitat. Activity associated with construction may result in indirect habitat loss. Increased traffic on existing and new access roads may result in pronghorn antelope mortality.	Medium	Short Term (construction disturbance) Constant (habitat loss)	Probable (disturbance) Unavoidable (habitat loss)	Confined	**Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-3**: Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-13:** Implement pronghorn antelope–specific mitigation.	None identified
Energy (Section 4.7)	Consumption of Raw Materials and Commodities	The Project's construction would require metal and concrete for turbine, solar array, BESS, substations, and building construction and fuel for construction equipment and vehicles and various raw materials for manufacturing. The Project's construction water requirements would amount to approximately 3% of the annual water produced by Kennewick. Impact magnitude would increase from low to medium if the City of Kennewick Utility Services Division of Public Works is required to make adjustments to their water management plans.	Low to Medium (i.e., will increase if the City of Kennewick Utility Services Division of Public Works is required to make adjustments to their water management plans)	Short Term	Unavoidable	Local to Regional	**ENR-1:** Executed water supply agreement.	None identified

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Land and Shoreline Use (Section 4.8)	Agriculture	Similar to Turbine Option 1 and solar arrays.	Low (decreased productivity) Medium (operational changes)	Temporary (brief access modifications) Short Term (seasonal restrictions)	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan. **LSU-3:** Arrange for the removal of livestock.	None identified
Historic and Cultural Resources (Section 4.9)	Not Eligible Archaeological Historic Period Isolates and Sites	Impacts resulting in the partial or complete loss of non-sensitive resources of limited historical value.	Negligible	Constant	Probable	Confined	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Unevaluated Archaeological Historic Period Isolates and Sites	Resources to be avoided through application of the APP. Without evaluation, magnitude of impact is high but is unlikely to occur due to the APP. Potential for the unplanned and accidental loss of unevaluated resources.	Medium	Constant	Unlikely	Confined	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Not Eligible or Unevaluated Archaeological Precontact Period Isolates and Sites	Resources to be avoided through application of the APP. Impacts on environmental setting—visual, air quality and noise may occur.	High	Constant	Unlikely	Confined	**CR-2:** Archaeological and Architectural Resources Mitigation	Significant for partial or complete loss of archaeological isolates**.** However, discussions with affected Tribes and DAHP could provide more detailed information about the impacts and potential mitigation. This may change the impact significance rating.
Historic and Cultural Resources (Section 4.9)	Not Eligible Architectural Resources	Impacts resulting in the partial or complete loss of non-sensitive resources of limited historical value. Impacts on environmental setting of resources (visual etc.).	Negligible	Short Term	Probable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Eligible Architectural Resources	Impacts on environmental setting of resources (visual etc.).	High	Short Term	Unavoidable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified

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Historic and Cultural Resources (Section 4.9)	Unknown/ Unidentified/Unevaluated Historic and Cultural Resources	Impacts potentially resulting in the partial or complete loss of significant resources that are unknown, unidentified, or unevaluated for the NRHP.	High	Constant	Feasible	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Traditional Cultural Properties	Impacts resulting in the partial or complete loss of resources. Impacts on environmental setting - inability to view cultural landscapes.	High	Constant	Probable	Regional	**CR-1:** Traditional Cultural Properties Mitigation	Significant for partial or complete loss of traditional cultural properties and resources. However, discussions with affected Tribes could provide more detailed information about the impacts and potential mitigation. This may change the impact significance rating.
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	Activities would attract attention and would modify the existing landscape setting. Due to the additive effect of the different Project features, these impacts would affect a larger area.	Medium	Short Term	Probable	Regional	No mitigation identified	None identified
Visual Aspects, Light and Glare (Section 4.10)	Light	Activities would be completed mainly during daytime hours without the need for nighttime lighting.	Negligible	Temporary	Unlikely	Limited	No mitigation identified	None identified
Visual Aspects, Light and Glare (Section 4.10)	Glare	Activities could generate glare from construction equipment or solar panels.	Low	Temporary	Feasible	Confined	No mitigation identified	None identified
Noise and Vibration (Section 4.11)	Noise and Vibration – Construction Equipment	Most noise sensitive receptors would receive sound levels below 55 dBA during construction, with the potential to be up to 10 dBA over baseline. One noise sensitive receptor could receive sound levels at 55 dBA during construction of one turbine.	Medium	Temporary	Probable	Limited	**N-1:** Avoid laydown and equipment storage/parking areas near NSRs. **N-2:** Limit the use of noise-generating equipment to daytime hours (7 a.m. to 10 p.m.) and loud equipment to working hours (7 a.m. to 6 p.m.). **N-3:** Monitor noise during nighttime operations (10 p.m. to 7 a.m.) with the potential to impact NSRs. **N-4:** Set up a 24-hour “noise hot line” or similar and update the Applicant’s noise complaint resolution procedure to include contacting and reporting details.	None identified
Noise and Vibration (Section 4.11)	Noise and Vibration – Blasting	Sound levels can reach up to 140 dBA at blast locations and 90 dBA at 500 feet.	Low	Temporary	Feasible	Limited	**N-2:** Limit blasting to working hours (7 a.m. to 6 p.m.).	None identified

Table ES-3a: Summary of Potential Impacts of Comprehensive Project during Construction of the Proposed Action

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Recreation (Section 4.12)	Recreation – Use	Construction of the comprehensive Project would result in a high impact due to the restriction of access to public land and recreational activities that occur on public land within the Project's construction area. The impact would be long term for the duration of the life of the Project, unavoidable, and local.	High	Long Term	Unavoidable	Local	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails). **R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest. **R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe	None identified
Recreation (Section 4.12)	Recreation – Recreational Experience	Indirect impacts related to visual resources and noise could occur at recreation sites.	High	Long Term	Unavoidable	Regional	**R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest.	None identified
Recreation (Section 4.12)	Recreation – Public Health and Safety	The Project's potential to affect the health and safety of recreationists using the area for paragliding, hang gliding, or biking would result in a medium impact.	Medium	Long Term	Unavoidable	Regional	**R-3:** Work with the Northwest Paragliding Club to provide and maintain a plan to keep recreationists safe.	None identified
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	Fire resulting from Project construction is unlikely, but wildfire risk in the area is considered high. For instance, combustible materials and lubricants are contained in the nacelle of the turbines. Diesel-powered generators may be used during construction. Use of these materials could pose a fire risk.	Medium	Temporary	Feasible	Limited	**Veg-1:** Pre-approval from EFSEC before topping or removal of trees that pose a hazard to collector lines	None identified
Public Health and Safety (Section 4.13)	Smoke and Haze (Public Health)	Fire resulting from Project construction is unlikely, but wildfire risk in the area is considered high. For instance, combustible materials and lubricants are contained in the nacelle of the turbines. Diesel-powered generators may be used during construction. Use of these materials could pose a fire risk.	Medium	Temporary	Feasible	Regional	**Veg-1:** Pre-approval from EFSEC before topping or removal of trees that pose a hazard to collector lines	None identified
Public Health and Safety (Section 4.13)	Release of Hazardous Materials	Hazardous materials, including diesel fuel, lubricating oils, hydraulic fluid, paints, and solvents would be used and stored on site. Spill kits would be maintained, minimizing the risk of a release if a spill were to occur.	Medium	Temporary	Unlikely	Limited	**Veg-1:** Pre-approval from EFSEC before topping or removal of trees that pose a hazard to collector lines	None identified

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Transportation (Section 4.14)	Vehicular Traffic	Traffic volumes would increase measurably during transportation of material and equipment for the construction of the turbines. The potential for traffic volumes and slower, oversized roads would likely decrease level of service for intersections near the Lease Boundary and highways/ freeways. The increase in traffic volumes and the size of construction material may decrease roadway safety at intersections near the Project or on railroad crossings.	Medium	Short Term	Unavoidable	Regional	**TR-1:** Daily transport communication, including emergency numbers. **TR-2:** Operation Lifesaver safety presentation and training.	None identified
Public Services and Utilities (Section 4.15)	Wastewater	The amount of wastewater produced from the maximum number of temporary workers on site (467), while measurable, would not impact the ability of the local utility to treat the community's sewage.	Low	Short Term	Unavoidable	Local	No mitigation identified	None identified
Public Services and Utilities (Section 4.15)	Municipal Solid Waste	Solid waste from the Project's construction would consist of various quantities of non-hazardous construction wastes. The landfills identified in the ASC maintain substantial capacity that would be sufficient to serve the Project and the region, simultaneously.	Low	Constant	Unavoidable	Local to Regional (depending on location of landfill)	**ENR-7:** Recycle all applicable components. **PSU-1:** Use of a licensed waste disposal facility.	None identified
Public Services and Utilities (Section 4.15)	Safety	The impact on human health and wellbeing would result from a reduction in potable water in the surrounding community or the capability to management wastewater and construction debris.	Negligible	Temporary (accident) Constant (storage)	Unlikely	Limited to Regional (depending on location of disposal facility)	No mitigation identified	None identified

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Socioeconomics (Section 4.16)	Housing Availability	Phase 1 is anticipated to directly support an average monthly workforce of 300, and Phases 2a and 2b are anticipated to support an average monthly force of 267 and 271, respectively. The majority of construction workers would be sourced locally; however, the Project's construction would require the temporary and short-term relocation of non-local construction workers into the region. As reported in the 2019 American Community Survey 5-Year Estimate, rental vacancy rate in Benton County was 5.1%, with 1,660 units available for rent.	Negligible	Temporary to Short Term	Feasible	Regional	No mitigation identified	None identified
Socioeconomics (Section 4.16)	People of Color and Low-Income Populations	Disproportionate impacts on people of color and low income communities.	Negligible	Short Term	Unlikely	Confined to Regional	No mitigation identified	None identified

Notes:
[a] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[b] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[c] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.

Applicant = Horse Heaven Wind Farm, LLC; ASC = Application for Site Certification; BESS = battery energy storage system; BMP = best management practice; dBA = A-weighted decibels; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; mph = miles per hour; NRHP = National Register of Historic Places; NSR = noise sensitive receptor; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter; SWPPP = stormwater pollution prevention plan; TAC = Technical Advisory Committee; Tribes = Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Wanapum Tribe; USFWS = U.S. Fish and Wildlife Service; WDFW = Washington Department of Fish and Wildlife; ZOI = zone of influence

Table ES-3b

Summary of Potential Impacts of Comprehensive Project during Operation of the Proposed Action

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Table ES-3b: Summary of Potential Impacts of Comprehensive Project during Operation of the Proposed Action

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Earth Resources (Section 4.2)	Geology	Impacts on the underlying basalt bedrock are not expected to include deep excavations that encounter geologic resources.	Negligible	Temporary	Feasible	Limited	No mitigation identified	None identified
Earth Resources (Section 4.2)	Soils	It is anticipated that no new ground disturbance would occur. Access roads and cleared areas could be susceptible to increased soil erosion from a lack of stabilizing vegetation or hard cover and prior disturbance of the local soil profile. Soil erosion, because of operations, would be limited to gravel-surfaced areas, including the apron constructed around each turbine.	Low	Temporary	Feasible	Limited	**Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Topography	Facility operation would not require further excavation of existing ground surfaces or additional grading. Furthermore, it is anticipated that ground improvement techniques used during the construction stage would mitigate soils susceptible to erosion by improving their engineering performance and reducing their potential for settlement.	Negligible	Temporary	Unlikely	Limited	No mitigation identified	None identified
Earth Resources (Section 4.2)	Earthquakes	Prolonged earthquake ground shaking could cause minor damage to infrastructure if the intensity and duration of the shaking exceed code-based structural seismic design levels.	Low	Temporary	Feasible	Confined	No mitigation identified	None identified
Earth Resources (Section 4.2)	Landslide Hazards and Ground Instability	Existing ground instability, high rainfall rates, and strong earthquake shaking could cause landslides.	Low	Temporary	Feasible	Limited	**Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Volcanic Activity	Ashfall and ash accumulation have the potential to reduce the photovoltaic-generated power of the solar panel as well as damage the solar arrays' components	Low	Temporary	Unlikely	Confined	No mitigation identified	None identified

Notes:
Table continues below, notes apply to remainder of table
[a] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[b] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[c] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC; BESS = battery energy storage system; dBA = A-weighted decibels; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; FAA = Federal Aviation Administration; FTE = full-time equivalent KOP = key observation point; LEED = Leadership in Energy and Environmental Design; mph = miles per hour; O&M = operations and maintenance; TAC = Technical Advisory Committee; USFWS = U.S. Fish and Wildlife; ZOI = zone of influence

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Air Quality (Section 4.3)	Air Quality	Adverse impacts on air quality may result from operation and maintenance activities (primarily vehicular emissions).	Negligible	Short Term	Probable	Confined	**A-1:** Limit speeds to less than 15 mph on dirt roads.	None identified
Water Resources (Section 4.4)	Panel Washing	Project operations would require water to wash solar array panels, which would infiltrate the surrounding ground and could impact water resources.	Negligible	Temporary	Unlikely	Confined	**W-9:** Minimize Water Use. **W-10:** Panel Washing.	None identified
Water Resources (Section 4.4)	Surface Water Runoff from Impervious Surfaces	Project operations would increase impervious surfaces, which could lead to increased water runoff to water resources.	Low	Temporary	Unlikely	Local	No mitigation identified	None identified
Water Resources (Section 4.4)	Introduction of Hazardous Substances	Project operations could result in the accidental release of hazardous substances that could impact water resources.	Negligible	Temporary	Unlikely	Limited	**W-5:** Employee Training. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Impacts on Public Water Supply	Project operations would rely on water from public water supply for operations.	Low	Temporary	Feasible	Regional	**W-9:** Minimize Water Use. **W-10:** Panel Washing.	None identified
Vegetation (Section 4.5)	Vegetation Maintenance	During Project operation, vegetation may require maintenance, such as cutting or removal, for areas under the solar arrays, or along roadways.	Negligible	Long Term	Probable	Confined	No mitigation identified	None identified
Vegetation (Section 4.5)	Habitat Degradation	Project operations could result in habitat degradation from the introduction of hazardous substances, introduction and spread of noxious weeds and invasive plants, and deposition of dust.	Low	Long Term	Feasible	Local	**Veg-5:** Operation and Decommissioning Dust Control Plan.	None identified
Vegetation (Section 4.5)	Habitat Fragmentation	Project operations could result in habitat fragmentation from edge effects and fire.	Low	Long Term	Feasible	Local	**Veg-5:** Operation and Decommissioning Dust Control Plan.	None identified
Wildlife and Habitat (Section 4.6)[25]	Habitat loss	The Project would result in the direct loss of habitat through operation of the turbines and associated infrastructure. The Project may result in indirect habitat loss through degradation of habitat in ZOI created by disturbances (e.g., noise, light) from turbines and associated infrastructure.	Medium	Constant	Unavoidable	Local	**Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance. **Veg-4:** As-built report and offset calculation.	None identified

[25] Blue highlight identifies Impacts of Medium and High magnitude.

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Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	The Project may result in mortality of aerial species (birds and bats) through collisions with turbines, strikes with power lines, windows, and weather towers. Other sources of mortality on wildlife, including non-aerial species, include vehicle collisions and changes in food availability.	Medium	Long Term	Probable	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design.	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	The operation of turbines, power lines, roadways, and other linear infrastructure could result in barriers to wildlife movement and fragment habitat. Barriers and fragmentation created during construction would predominantly remain through operation.	Medium	Long Term	Probable	Confined	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Striped whipsnake and sagebrush lizard	Impacts on shrub and shrub-steppe habitat may result in loss of suitable reptile habitat. Increased road networks in the Lease Boundary could increase the risk of mortality for sagebrush lizard and striped whipsnake. Roadways may create barriers to reptile movement and further fragment reptile habitat.	Low	Constant	Feasible	Confined to Local	**Wild-6**: Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-1:** Implement striped whipsnake and sagebrush lizard–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: American white pelican	American white pelicans have the potential for collision with turbines and electrocution with overhead transmission lines. American white pelicans could collide with solar arrays as literature suggests water-associated birds may attempt to land on solar arrays if they are mistaken for water (lake effect).	Medium	Long Term	Unlikely	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-2**: Implement American white pelican–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: bald eagle	Bald eagles are estimated to be the 17th most likely large bird to collide with the turbines, with an estimated exposure index of 0.01. Further, turbines could create barriers to bald eagle movement over the Lease Boundary.	Low	Long Term	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-2**: Use wildlife-proof trash containers. **Wild-3**: Review USFWS eagle mortality consultation. **Wild-4**: Avoid use of pesticides and rodenticides. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: burrowing owl	Permanent habitat loss from turbine footprint and roads would persist through operation. Operation of turbines could result in indirect burrowing owl habitat loss. Burrowing owls are not expected to collide with turbines, but are susceptible to road-based mortality. Further, changes in prey distribution and abundance may change foraging.	Medium	Constant	Unavoidable	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-6**: Maintain database of road mortalities. **Wild-8**: Establish buffers around raptor nests. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-4**: Implement burrowing owl–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	Operation of the turbines could result in mortality due to collisions with turbines and power lines. Change in prey abundance may reduce hawk survivorship. Operation may also reduce the re-occupancy of nesting territories due to disturbance.	High	Constant	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-6**: Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-5**: Implement ferruginous hawk–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: golden eagle	Golden eagles are estimated to be the 22nd most likely large bird to collide with the turbines. Further, turbines could create barriers to golden eagle movement over the Lease Boundary.	Medium	Long Term	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-2**: Use wildlife-proof trash containers. **Wild-3**: Review USFWS eagle mortality consultation. **Wild-4**: Avoid use of pesticides and rodenticides. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: great blue heron and sandhill crane	The operation of wind turbines may result in great blue heron and sandhill crane mortality and disturbance.	Medium	Long Term	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-6**: Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: loggerhead shrike	Direct and indirect habitat loss would persist throughout Project operation. Loggerhead shrike mortality may occur due to strikes with turbines.	Medium	Constant	Unavoidable	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-6**: Maintain database of road mortalities. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: prairie falcon	Direct habitat loss would persist throughout Project operation. Operation of the turbines may disturb prairie falcons foraging in the Lease Boundary. Operation of the turbines may result in mortality of prairie falcons. Changes in prey density may change habitat suitability and survivorship of prairie falcons.	Medium	Constant	Unavoidable	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-6**: Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-8**: Implement prairie falcon–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: ring-necked pheasant	Direct habitat loss would persist through Operation. Operation of the turbines may also result in indirect habitat loss. Ring-necked pheasant mortality may occur due to Project operation. Access roads may result in collisions with ring-necked pheasants.	Low	Long Term	Unavoidable	Confined	**Wild-6**: Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-9**: Implement ring-necked pheasant–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: sagebrush sparrow and sage thrasher	Direct and indirect habitat loss would persist throughout Project operation.	Medium	Constant	Unavoidable	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-6**: Maintain database of road mortalities. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift specific–mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	Operation of turbines may result in the continued loss and disturbance of foraging habitat. Operation of Option 1 may result in tundra swan mortality through collision with turbines.	Low	Long Term	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Veg-4:** As-built report and offset calculation. **Spec-6**: Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Vaux's swift	Vaux's swifts migrating over the Lease Boundary are susceptible to strikes during migration.	Low	Long Term	Feasible	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: black-tailed jackrabbit and white-tailed jackrabbit	Operation of the turbines may result in indirect loss of jackrabbit habitat and mortality along access roads. Direct habitat loss is expected to persist throughout operation.	Medium	Constant	Unavoidable	Confined	**Wild-4**: Avoid use of pesticides and rodenticides **Wild-6**: Maintain database of road mortalities **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-10:** Implement black and white-tailed jackrabbit–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's big-eared bat	Townsend's big-eared bat mortality may occur due to Project operation. Operation may result in indirect loss of foraging habitat.	Low	Long Term	Probable	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program **Wild-4:** Avoid use of pesticides and rodenticides **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-11:** Implement Townsend's big-eared bat–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's ground squirrel	Townsend's ground squirrel mortality may continue along access roads during operation. Operation of the solar arrays may alter Townsend's ground squirrel behavior by providing shelter. Mortality may occur along access roads.	Medium	Constant	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides **Wild-6:** Maintain database of road mortalities **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-12:** Implement Townsend's ground squirrel–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: pronghorn antelope	Operation of the Project may result in direct and indirect habitat loss to pronghorn antelope. Pronghorn antelope mortality may occur along maintenance roads.	Medium	Constant	Unavoidable	Confined	**Wild-6**: Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-13:** Implement pronghorn antelope–specific mitigation.	None identified

Table ES-3b: Summary of Potential Impacts of Comprehensive Project during Operation of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Energy (Section 4.7)	Consumption of Raw Materials and Commodities	Project maintenance may require generator-specific lubricants and fluids produced outside the Project vicinity. O&M vehicles would need an ongoing supply of fuel purchased locally. Water for the Project's O&M facility and solar panel washing would be purchased from a local vendor and sourced from Kennewick. Aggregate for access road maintenance would be obtained locally.	Low to Medium	Long Term	Unavoidable	Local to Regional	**ENR-1:** Executed water supply agreement. **ENR-2:** Install high-efficiency electrical fixtures and appliances. **ENR-3:** Install high-efficiency security lighting. **ENR-4:** Install low-water-use flush toilets. **ENR-5:** Capture and recycle wash water.	None identified
Land and Shoreline Use (Section 4.8)	Agriculture	Impacts on agricultural activities from operation of the comprehensive Project would be similar to those presented for Turbine Option 1 and the solar arrays. However, when considering the impact of the comprehensive Project, the possibility for a conflict between the planned management of agricultural activities within the Lease Boundary and Project operations increases when compared with any individual component.	Low (decreased productivity) Medium (operational changes)	Long Term	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan.	None identified
Historic and Cultural Resources (Section 4.9)	Eligible Architectural Resources	Impacts on environmental setting—visual, air quality and noise.	High	Constant	Unavoidable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Traditional Cultural Properties	Impacts on environmental setting – visual, air quality, noise, and loss of access.	High	Constant	Probable	Regional	**CR-1:** Traditional Cultural Properties Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Unknown/ Unidentified Historic and Cultural Resources	Impacts potentially resulting in the partial or complete loss of significant (previously unidentified) resources**.**	High	Constant	Feasible	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	The proposed wind turbines, and comprehensive Project, would dominate views from many KOP locations, and the landscape would appear strongly altered.	High	Long Term	Unavoidable	Regional	**VIS-1**: Relocate turbines located within the foreground distance. **VIS-2**: No advertising, cell antennas, commercial messages, or symbols placed on wind turbines. **VIS-3**: Maintain clean nacelles and towers.	Significant for visual impacts
Visual Aspects, Light and Glare (Section 4.10)	Shadow Flicker	Wind turbines would create shadow flicker that would impact Project participants.	Medium	Long Term	Probable	Confined	**SF 1:** The Applicant would attempt to avoid, minimize and mitigate shadow flicker at nearby residences. **SF 2:** The Applicant would set up a complaint resolution procedure.	None identified

Table ES-3b: Summary of Potential Impacts of Comprehensive Project during Operation of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Visual Aspects, Light and Glare (Section 4.10)	Light	Lighting for security purposes and to conform with FAA requirements would be visible outside the Lease Boundary but would have limited effect in terms of light trespass and sky glow degradation.	Low	Long Term	Unavoidable	Local	**LIG 1:** Use LEED-certified building exterior(s) and security lighting.	None identified
Visual Aspects, Light and Glare (Section 4.10)	Glare	Solar panels at all modeled receptors and vehicular routes are predicted to not experience glare as a result of Project operations; glare would not exceed FAA notice criteria, and a formal filing is not necessary.	Low	Long Term	Unavoidable	Confined	No mitigation identified	None identified
Noise and Vibration (Section 4.11)	Noise and Vibration – Operational Noise	Noise would be generated by the operation of wind turbines, inverters, transformers, and the corona effect.	Medium	Long Term	Unavoidable	Local	**N-5:** Establish a noise complaint resolution procedure similar construction. **N-6:** Maintain operation of the "noise hot line" for one year of Project operation.	None identified
Recreation (Section 4.12)	Recreation – Use	Operation of the comprehensive Project would result in a high impact due to the restriction of access to public land and recreational activities that occur on public land near the Project. The impact would be long term for the duration of the life of the Project, unavoidable, and local.	High	Long Term	Unavoidable	Local	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails). **R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest. **R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe	None identified
Recreation (Section 4.12)	Recreation – Recreational Experience	Impacts on noise receptors would be limited, while visual impacts would occur regionally.	Low	Long Term	Unavoidable	Regional	**R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest.	None identified
Recreation (Section 4.12)	Recreation – Public Health and Safety	The Project's potential to affect the health and safety of recreationists using the area for paragliding and hang gliding would results in a medium impact during the life of the Project. Impacts on recreationists would occur beyond neighboring receptors.	Medium	Long Term	Unavoidable	Regional	**R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe	Significant for paragliding and hang gliding public safety and health.
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	Lithium-ion batteries used for the BESSs may pose a risk of fire and explosion during operation because they may overheat, but the BESSs would include a fire suppression system.	Low to Medium (based on seasonal fire weather conditions)	Temporary	Feasible	Limited	No mitigation identified	None identified

Table ES-3b: Summary of Potential Impacts of Comprehensive Project during Operation of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Public Health and Safety (Section 4.13)	Release of Hazardous Materials	Project elements include small amounts of oil and batteries, but a release is unlikely to occur during operations.	Negligible	Temporary	Unlikely	Limited	No mitigation identified	None identified
Transportation (Section 4.14)	Vehicular Traffic	Operation of the solar arrays may require water trucks to deliver wash water to clean the panels. A decrease in level of service is not expected, nor is roadway safety expected to decrease.	Low	Long Term	Probable	Local	**TR-2:** Operation Lifesaver safety presentation and training	None identified
Public Services and Utilities (Section 4.15)	Wastewater	Wastewater from the O&M facilities would be discharged to an on-site septic system. It is anticipated that the operations stage would use less than 5,000 gallons of water per day and that wastewater would be generated from kitchen and bathroom use.	Low	Long Term	Unavoidable	Local	**ENR-5:** Capture and recycle wash water.	None identified
Public Services and Utilities (Section 4.15)	Municipal Solid Waste	Operation of the Project is expected to generate approximately one or two dumpsters of waste per week at the O&M facilities.	Low	Constant	Unavoidable	Local to Regional (depending on location of landfill)	**PSU-1:** Use of a licensed waste disposal facility.	None identified
Socioeconomics (Section 4.16)	Housing Availability	The Proposed Action would generate or support up to 58 FTEs. A team of 16 to 20 personnel would be employed to operate and maintain Project components. As reported in the 2019 American Community Survey 5-Year Estimate, rental vacancy rate in Benton County was 5.1%, with 1,660 units available for rent.	Negligible	Long Term	Feasible	Regional	No mitigation identified	None identified
Socioeconomics (Section 4.16)	People of Color and Low-Income Populations	Disproportionate impacts on people of color and low income communities.	Negligible	Long Term	Unlikely	Confined	No mitigation identified	None identified

Notes:
[a] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[b] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[c] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC; BESS = battery energy storage system; dBA = A-weighted decibels; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; FAA = Federal Aviation Administration; FTE = full-time equivalent KOP = key observation point; LEED = Leadership in Energy and Environmental Design; mph = miles per hour; O&M = operations and maintenance; TAC = Technical Advisory Committee; USFWS = U.S. Fish and Wildlife; ZOI = zone of influence

Table ES-3c

Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

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Table ES-3c: Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Earth Resources (Section 4.2)	Geology	The likelihood of a foundation removal encountering bedrock is low. If bedrock were to be impacted during the decommissioning stage, then it would likely have already been encountered during the construction stage.	Low	Temporary	Probable	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7**: Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Soils	Decommissioning activities associated with the Project could impact and disturb the soil profile, due to excavating foundations and utilities, removing unsealed areas, restoring the original ground profile, and rehabilitating vegetation.	Low	Short Term	Unavoidable	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7**: Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Topography	The Applicant would restore the original topographic profile in areas of previous development.	Low	Short Term	Probable	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7**: Detailed Site Restoration Plan	None identified
Earth Resources (Section 4.2)	Earthquakes	Prolonged earthquake ground shaking could cause minor damage to infrastructure if the intensity and duration of the shaking exceed structural seismic design levels.	Negligible	Temporary	Feasible	Confined	**Geo-1:** Avoid construction during wet periods. **Veg-7**: Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Landslide Hazards and Ground Instability	Existing ground instability, high rainfall rates, and strong earthquake shaking could cause landslides.	Low	Temporary	Feasible	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7**: Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Volcanic Activity	Hazards from ashfall to decommissioning activities would include the following: ▪ Accumulation of ash on structures ▪ Clogging of electronics, machinery, and filters ▪ Suspension of abrasive fine particles in air and water ▪ Accumulation of ash on transportation routes and vegetation	Negligible	Temporary	Unlikely	Confined	**Geo-1:** Avoid construction during wet periods. **Veg-7**: Detailed Site Restoration Plan.	None identified

Notes:
Table continues below, notes apply to remainder of table
[a] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[b] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[c] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
EFSEC = Energy Facility Site Evaluation Council; mph = miles per hour; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; PM_{10} = particulate matter less than 10 microns in diameter

Table ES-3c: Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Air Quality (Section 4.3)	Air Quality	Adverse impacts on air quality may occur during decommissioning from $PM_{2.5}$, PM_{10}, and fugitive dust	Low	Short Term	Probable	Confined	**A-1:** Limit speeds to less than 15 mph on dirt roads.	None identified
Water Resources (Section 4.4)	Physical Disturbance	Project decommissioning would result in physical disturbance that could impact surface water and wetlands, runoff and absorption capacity, floodplains, and groundwater resources.	Low	Short Term	Unavoidable	Confined	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-6:** Wetland SWPPP.	None identified
Water Resources (Section 4.4)	Change in Water Quality	Project decommissioning would require temporary disturbance, which could impact water quality.	Low	Temporary	Unlikely	Local	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-5:** Employee Training. **W-6:** Wetland SWPPP. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Change in Hydrology	Project decommissioning would require temporary disturbance to some ephemeral and intermittent streams but would restore the disturbance areas following decommissioning.	Low	Short Term	Unlikely	Limited	**W-3:** Check Dams.	None identified
Water Resources (Section 4.4)	Introduction of Hazardous Substances	Project decommissioning could result in the introduction of hazardous substances to water resources.	Low	Temporary	Unlikely	Local	**W-5:** Employee Training. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Impacts on Public Water Supply	Project decommissioning could result in impacts on public water supply.	Low	Temporary	Unlikely	Regional	**W-9:** Minimize Water Use.	None identified
Vegetation (Section 4.5)[26]	Loss of Extent of Priority Habitat – Temporary Disturbance	Decommissioning of the Project would require temporary disturbance areas to remove Project components, which would result in direct loss of WDFW Priority Habitat.	High	Short Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified

[26] Blue highlight identifies Impacts of Medium and High magnitude.

Table ES-3c: Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

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Vegetation (Section 4.5)	Loss of Extent Other Habitat – Temporary Disturbance	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with other habitat.	Low	Short Term	Unavoidable	Confined	**Veg-1:** Tree Avoidance. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Loss of Extent Special Status Plant Species	Site clearing associated with decommissioning of the Project would result in direct loss of populations of special status plant species or their habitat.	Low	Constant	Unlikely	Local	**Veg-2:** Pre-Disturbance Surveys for Special Status Plant Species. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Habitat Degradation	Project decommissioning could result in habitat degradation from the introduction of hazardous material, surface runoff, introduction or spread of invasive plant or noxious weeds, and the deposition of dust.	Low	Long Term	Feasible	Local	**Veg-5:** Operation and Decommissioning Dust Control Plan. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Habitat Fragmentation	Project decommissioning could result in habitat fragmentation from fire.	Low	Long Term	Feasible	Local	**Veg-6:** Decommissioning Legislated Requirements.	None identified
Wildlife and Habitat (Section 4.6)	Habitat loss	The Project would result in temporary loss of habitat during decommissioning. No new permanent habitat loss is expected, and restoration activities are expected to replace and/or enhance habitat loss created during construction and operation.	Negligible	Short Term	Unavoidable	Local	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-7:** Roadway decommissioning. **Veg-1:** Tree Avoidance. **Veg-7:** Detailed Site Restoration Plan.	None identified

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Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	Sources of wildlife injuries and mortalities during decommissioning include collisions with equipment; removal of nuisance wildlife; destruction of nests, dens, and burrows; and habitat loss. The risk of mortalities would be limited to the duration of decommissioning.	Negligible	Short Term	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-2**: Use wildlife-proof trash containers. **Wild-3**: Review USFWS eagle mortality consultation. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit activity disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-7:** Schedule activities during daylight hours. **Wild-8**: Establish buffers around raptor nests.	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	Decommissioning would remove Project-related barriers to movement and reduce habitat fragmentation by removing infrastructure and revegetating disturbed areas.	Negligible	Short Term	Feasible	Confined	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-7:** Roadway decommissioning. **Veg-7:** Detailed Site Restoration Plan.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: striped whipsnake and sagebrush lizard	Ground disturbance and machinery use during Project decommissioning could result in mortality of striped whipsnake and sagebrush lizard.	Negligible	Short Term	Feasible	Confined	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning **Veg-7:** Detailed Site Restoration Plan. **Spec-1:** Implement striped whipsnake and sagebrush lizard–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: American white pelican	Decommissioning of the Project may disturb American white pelicans moving over the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Hab-4:** Develop TAC. **Spec-2**: Implement American white pelican–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: bald eagle	Decommissioning of the Project could disturb bald eagles, resulting in avoidance of the Project site.	Negligible	Short Term	Feasible	Confined	**Wild-2**: Use wildlife-proof trash containers. **Wild-3**: Review USFWS eagle mortality consultation. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Veg-1:** Tree Avoidance. **Hab-4:** Develop TAC. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: burrowing owl	Decommissioning may result in mortality from machinery operation over the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-7:** Schedule activity to daylight hours. **Wild-8**: Establish buffers around raptor nests. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Detailed Site Restoration Plan. **Spec-4**: Implement burrowing owl–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	Decommissioning may result in mortality from machinery operation over the Lease Boundary.	Negligible	Short Term	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-8**: Establish buffers around raptor nests. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Detailed Site Restoration Plan. **Spec-5**: Ferruginous hawk–specific mitigation	None identified
Wildlife and Habitat (Section 4.6)	Special status species: golden eagle	Decommissioning of the Project could disturb golden eagles, resulting in avoidance of the Project site, though golden eagle nesting has not been reported within 10 miles of the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-2**: Use wildlife-proof trash containers. **Wild-3**: Review USFWS eagle mortality consultation. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Veg-1:** Tree Avoidance. **Hab-4:** Develop TAC. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: great blue heron and sandhill crane	Decommissioning activities may disturb birds flying over the Lease Boundary, resulting in bird flight paths being diverted around the area.	Negligible	Short Term	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Hab-4:** Develop TAC. **Spec-6**: Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: loggerhead shrike \	Decommissioning may disturb birds foraging and nesting in the Lease Boundary. Machinery could result in mortality of birds and destruction of nests.	Negligible	Short Term	Feasible	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-7:** schedule activities to daylight hours. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning. **Veg-7:** Detailed Site Restoration Plan. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: prairie falcon	Disturbance from decommissioning activities may result in disturbance to prairie falcons.	Negligible	Short Term	Unlikely	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-8**: Establish buffers around raptor nests. **Veg-1:** Tree Avoidance. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Detailed Site Restoration Plan. **Spec-8**: Implement prairie falcon–specific mitigation.	None identified

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Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Wildlife and Habitat (Section 4.6)	Special status species: ring-necked pheasant	Disturbance from decommissioning activities may result in indirect habitat loss. Access roads may result in collisions with ring-necked pheasants.	Negligible	Short Term	Feasible	Confined	**Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning **Veg-7:** Detailed Site Restoration Plan. **Spec-9**: Implement ring-necked pheasant–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: sagebrush sparrow and sage thrasher	Decommissioning may disturb birds foraging and nesting in the Lease Boundary. Machinery could result in mortality of birds and destruction of nests.	Negligible	Short Term	Feasible	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Wild-7:** Schedule activities to daylight hours. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning. **Veg-7:** Detailed Site Restoration Plan. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	Decommissioning may disturb tundra swans flying over and foraging in the Lease Boundary.	Negligible	Short Term	Feasible	Confined	**Wild-1**: Review 2-year raptor and bat monitoring program. **Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Hab-4:** Develop TAC. **Spec-6**: Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

Table ES-3c: Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Wildlife and Habitat (Section 4.6)	Special status species: Vaux's swift	Decommissioning of the Project could disturb Vaux's swifts in flight over the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: black-tailed jackrabbit and white-tailed jackrabbit	Disturbance from decommissioning activities may result in indirect habitat loss. Access roads may result in collisions with jackrabbits.	Negligible	Short Term	Feasible	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas **Wild-6**: Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning **Veg-7:** Detailed Site Restoration Plan. **Spec-10:** Implement black and white-tailed jackrabbit–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's big-eared bat	Decommissioning activities could disturb Townsend's big-eared bat foraging in the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-7:** Schedule construction during daylight hours. **Hab-4:** Develop TAC. **Spec-11:** Implement Townsend's big-eared bat–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's ground squirrel	Mortality may occur during decommissioning and along access roads.	Negligible	Short Term	Feasible	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Detailed Site Restoration Plan. **Spec-12:** Implement Townsend's ground squirrel–specific mitigation.	None identified

Table ES-3c: Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Wildlife and Habitat (Section 4.6)	Special status species: pronghorn antelope	Decommissioning is predicted to result in indirect habitat loss. Increased traffic on existing and new access roads may result in pronghorn antelope mortality.	Negligible	Short Term	Feasible	Confined	**Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning. **Veg-7:** Detailed Site Restoration Plan. **Spec-13:** Implement pronghorn antelope–specific mitigation.	None identified
Energy (Section 4.7)	Consumption of Raw Materials and Commodities	Energy consumption, predominantly in the form of gasoline, diesel fuel, and electricity, would be required to operate equipment such as cranes, trucks, tools, and vehicles used to dismantle and remove most Project facilities and reclaim disturbed areas. Backfilling void spaces created by the removal of foundations would require construction aggregate.	Low	Temporary to Short Term	Unavoidable	Local	**ENR-6:** Demolition or removal of all Project related equipment and facilities. **ENR-7:** Recycle all components of the Project.	None identified
Land and Shoreline Use (Section 4.8)	Agriculture	Impacts would be less than those described for the construction stage as dryland wheat production located within the solar array project area would have previously been taken out of management.	Low	Temporary (brief access modifications) Short Term (seasonal restrictions)	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan. **LSU-3:** Arrange for the removal of livestock. **LSU-4**: Confirm that site restoration activities are in alignment with the Applicant's decommissioning plan. **LSU-5:** Requirements for requesting an alternative land use as part of decommissioning.	None identified
Historic and Cultural Resources (Section 4.9)	Eligible Architectural Resources	Impacts on environmental setting—visual, air quality and noise.	High	Short Term	Probable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Traditional Cultural Properties	Impacts on environmental setting – visual, air quality, noise, and loss of access.	High	Short Term	Probable	Regional	**CR-1:** Traditional Cultural Properties Mitigation	None identified

Table ES-3c: Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Historic and Cultural Resources (Section 4.9)	Unknown/ Unidentified Historic and Cultural Resources	Impacts potentially resulting in the partial or complete loss of significant (previously unidentified) resources.	High	Constant	Unlikely	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	Activities would attract attention and would modify the existing landscape setting. Due to the additive effect of the different Project features, these impacts would affect a larger area.	Low	Temporary (brief access modifications) Short Term (seasonal restrictions)	Unavoidable	Limited (small area) Regional (decreased productivity)	No mitigation identified	None identified
Visual Aspects, Light and Glare (Section 4.10)	Light	Activities would be completed mainly during daytime hours without the need for nighttime lighting.	Negligible	Temporary	Unlikely	Limited	No mitigation identified	None identified
Visual Aspects, Light and Glare (Section 4.10)	Glare	Activities could generate glare from construction equipment or solar panels.	Low	Temporary	Feasible	Confined	No mitigation identified	None identified
Noise and Vibration (Section 4.11)	Noise and Vibration – Decommissioning Equipment	Most noise sensitive receptors would receive sound levels below 55 dBA during construction, with the potential to be up to 10 dBA over baseline. One noise sensitive receptor could receive sound levels at 55 dBA during construction of one turbine.	Medium	Temporary	Probable	Limited	**N1:** Avoid laydown and equipment storage/parking areas near NSRs. **N2:** Limit the use of noise-generating equipment to daytime hours (7 a.m. to 10 p.m.) and loud equipment to working hours (7 a.m. to 6 p.m.). **N-3:** Monitor noise during nighttime operations (10 p.m. to 7 a.m.) with the potential to impact NSRs. **N-4:** Set up a 24-hour “noise hot line” or similar and update the Applicant’s noise complaint resolution procedure to include contacting and reporting details.	None identified
Recreation (Section 4.12)	Recreation – Use	Decommissioning of the comprehensive Project would result in a high impact due to the restriction of access to public land and recreational activities that occur on public land near the Project. The impact would be short term for the duration of decommissioning, unavoidable, and local.	High	Short Term	Unavoidable	Local	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails). **R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest. **R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe.	None identified

Table ES-3c: Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Recreation (Section 4.12)	Recreation – Recreational Experience	Indirect impacts related to visual resources and noise could occur at recreation sites. Impacts on noise receptors would occur locally, while visual impacts would occur at a regional spatial extent.	High	Short Term	Unavoidable	Regional	**R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest.	None identified
Recreation (Section 4.12)	Recreation – Public Health and Safety	The Project's potential to affect the health and safety of recreationists using the area for paragliding, hang gliding, or biking would result in a medium impact.	Medium	Short Term	Unavoidable	Regional	**R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe	None identified
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	Combustible materials and lubricants are contained in the nacelle of the turbines. Diesel-powered generators may be used during decommissioning. Use of these materials could pose a fire risk.	Medium	Temporary	Feasible	Limited	No mitigation identified	None identified
Public Health and Safety (Section 4.13)	Smoke and Haze (Public Health)	If a fire were to occur during turbine decommissioning, indirect impacts could include smoke or haze, and a potential reduction in emergency response services.	Medium	Temporary	Feasible	Regional	No mitigation identified	None identified
Public Health and Safety (Section 4.13)	Release of Hazardous Materials	Project elements include small amounts of oil, which could be released during decommissioning.	Medium	Temporary	Unlikely	Limited	No mitigation identified	None identified
Transportation (Section 4.14)	Vehicular Traffic	Decommissioning will require the removal and transportation of the dismantled pieces of the turbines, expected to be smaller than the pieces that arrived during the construction stage. The increase in traffic volumes is not expected to decrease level of service or cause a decline in roadway safety.	Low	Short Term	Unavoidable	Regional	**TR-1:** Daily transport communication, including emergency numbers. **TR-2:** Operation Lifesaver safety presentation and training. **TR-3:** Traffic Analysis. **TR-4:** Railroad crossing and grade change survey. **TR-5:** Traffic and Safety Management Plan.	None identified
Public Services and Utilities (Section 4.15)	Wastewater	The amount of wastewater produced from the temporary workers on site, while measurable, would not impact the ability of the local utility to treat the community's sewage.	Low	Short Term	Unavoidable	Local	No mitigation identified	None identified

Table ES-3c: Summary of Potential Impacts of Comprehensive Project during Decommissioning of the Proposed Action

Section	Topic	Description of Impact[a]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[b]	Significant Unavoidable Adverse Impacts[c]
Public Services and Utilities (Section 4.15)	Municipal Solid Waste	After dismantling of the facility, high-value components would be removed for scrap value. The remaining materials would be reduced to transportable size and removed from the site for disposal. Existing facilities would maintain capacity to receive the Project's non-recyclable waste and continue to serve their communities.	Low	Constant	Unavoidable	Local to Regional	**ENR-7**: Recycle all applicable components. **PSU-1**: Use of a licensed waste disposal facility.	None identified
Socioeconomics (Section 4.16)	Housing Availability	The majority of construction workers would be sourced locally; however, the Project's construction would require temporary and short-term relocation of construction workers into the region.	Negligible	Temporary to Short Term	Feasible	Regional	**Socio-ec-1:** Updated housing analysis to confirm temporary or short-term availability.	None identified
Socioeconomics (Section 4.16)	Wellbeing	Decommissioning of the Project would restore property tax revenues for Benton County and the Tax Area to pre-Project conditions as the Project's added value would be removed from the parcels that make up the Lease Boundary's valuation. For example, smaller collections would impact operational budgets for schools, school districts, and fire stations within Benton County and the Tax Area.	Medium	Long Term	Feasible	Regional	No mitigation identified	None identified
Socioeconomics (Section 4.16)	People of color and Low-Income Populations	Disproportionate impacts on people of color and low income communities.	Negligible	Temporary to Long Term	Unlikely	Regional	No mitigation identified	None identified

Notes:
[a] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[b] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[c] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
EFSEC = Energy Facility Site Evaluation Council; mph = miles per hour; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; PM_{10} = particulate matter less than 10 microns in diameter

Table ES-4a

Summary of Potential Impacts by Component during Construction of the Proposed Action

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Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Earth Resources (Section 4.2)	Soils	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	The disturbance to natural soil profiles could result in a temporary increase in localized soil erosion. These activities are likely to include site clearing, excavation, and backfilling. The construction and erection of turbine tower foundations would disturb soil resources as the contractor excavates unsuitable material from the Project area.	Low	Short Term	Unavoidable	Confined	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Topography	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction activities that would impact topography include excavation, grading, and cut-and-fill-slope development. Limited grading and/or placement of additional fill may be needed to obtain necessary grades for access roads, building foundations, and leveling the ground. Surface disturbance from construction-related activities would impact topography around each turbine.	Low	Short Term	Unavoidable	Confined	**Geo-1:** Avoid construction during wet periods.	None identified
Earth Resources (Section 4.2)	Earthquakes	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Prolonged earthquake-induced ground shaking could cause minor damage to infrastructure if shaking has an intensity and duration that exceeds code-based structural seismic design levels.	Negligible	Temporary	Feasible	Confined	**Geo-1:** Avoid construction during wet periods.	None identified
Earth Resources (Section 4.2)	Landslide Hazards and Ground Instability	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	The Project site includes areas susceptible to landslides and bluff failures. Existing ground instability, high rainfall rates, and strong earthquake shaking could cause landslides.	Low	Temporary	Unlikely	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified

Notes:
Table continues below, notes apply to remainder of table
[a] Components were combined in the same cell if they received the same impact ratings for the identified topic.
[b] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[c] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[d] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC; ASC = Application for Site Certification; BESS = battery energy storage system; BMP = best management practice; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; EIS = Environmental Impact Statement; NRHP = National Register of Historic Places; SWPPP = stormwater pollution prevention plan; TAC = Technical Advisory Committee; Tribes = Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Wanapum Tribe; USFWS = U.S. Fish and Wildlife Service; WDFW = Washington Department of Fish and Wildlife; ZOI = zone of influence

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Earth Resources (Section 4.2)	Volcanic Activity	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Hazards from ashfall to construction activities would include the following: ▪ Accumulation of ash on structures ▪ Clogging of electronics, machinery, and filters ▪ Suspension of abrasive fine particles in air and water ▪ Accumulation of ash on transportation routes and vegetation	Negligible	Temporary	Unlikely	Confined	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Water Resources (Section 4.4)	Physical Disturbance	Turbine Option 1 Turbine Option 2	Project construction would require temporary and permanent disturbance, which could impact surface water and wetlands, surface runoff/absorption, floodplains, and groundwater.	Low	Short Term (for temporary disturbance) Long Term (for permanent disturbance)	Unavoidable	Confined	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-4:** Culvert Installation. BMPs. **W-6:** Wetland SWPPP. **W-7:** Clear-span 100-Year Floodplain.	None identified
Water Resources (Section 4.4)	Physical Disturbance	Solar Arrays	Project construction would require temporary and permanent disturbance, which could impact surface water and wetlands, surface runoff/absorption, floodplains, and groundwater.	Low	Short Term	Unavoidable	Confined	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-4:** Culvert Installation BMPs. **W-6:** Wetland SWPPP. **W-7:** Clear-span 100-Year Floodplain.	None identified
Water Resources (Section 4.4)	Physical Disturbance	BESSs Substations	Project construction would require temporary and permanent disturbance, which could impact surface water and wetlands, surface runoff/absorption, floodplains, and groundwater.	Low	Short Term (for temporary disturbance) Long Term (for permanent disturbance)	Unavoidable	Limited	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-6:** Wetland SWPPP.	None identified
Water Resources (Section 4.4)	Change in Water Quality	Turbine Option 1 Turbine Option 2	Project construction could result in a change to water quality of waterways that intersect or are located adjacent to Project construction activities.	Low	Temporary	Unlikely	Local	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-5** Employee Training. **W-6:** Wetland SWPPP. **W-8:** Spill Response Equipment.	None identified

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Water Resources (Section 4.4)	Change in Water Quality	Solar Arrays	Project construction could result in a change to water quality of waterways adjacent to Project construction activities.	Negligible	Temporary	Unlikely	Local	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-5:** Employee Training. **W-6:** Wetland SWPPP. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Change in Hydrology – Temporary Disturbance	Turbine Option 1 Turbine Option 2	Temporary disturbance from Project construction within ephemeral and intermittent streams could result in changes to the hydrology of waterways.	Low	Short Term	Unlikely	Limited	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-4:** Culvert Installation BMPs.	None identified
Water Resources (Section 4.4)	Change in Hydrology – Permanent Disturbance	Turbine Option 1 Turbine Option 2	Project construction would require a culvert installation on one intermittent stream that could result in changes to the hydrology of the stream.	Low	Long Term	Unavoidable	Limited	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-4:** Culvert Installation BMPs.	None identified
Water Resources (Section 4.4)	Introduction of Hazardous Substances	Turbine Option 1 Turbine Option 2	Project construction could result in the introduction of hazardous substances that could impact surface water and wetlands, floodplains, and groundwater.	Low	Temporary	Unlikely	Local	**W-7:** Employee Training. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Introduction of Hazardous Substances	Solar Arrays BESSs Substations	Project construction could result in the introduction of hazardous substances that could impact surface water and wetlands, floodplains, and groundwater.	Negligible	Temporary	Unlikely	Limited	**W-3:** Concrete Wash-out Area. **W-5:** Employee Training **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Public Water Supply	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Project construction activities would rely on water supplied by the City of Kennewick Public Works.	Low	Temporary	Feasible	Regional	**W-9:** Minimize Water Use.	None identified
Vegetation (Section 4.5)[27]	Loss of Extent of Priority Habitat – Temporary Disturbance	Turbine Option 1 Turbine Option 2	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	High	Short Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified

[27] Blue highlight identifies Impacts of Medium and High magnitude.

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat – Temporary Disturbance	East Solar Field	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	Medium	Short Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat – Temporary Disturbance	Sellards Solar Field	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	Low	Short Term	Feasible	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat – Temporary Disturbance	County Well Solar Field BESSs Substations	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	Negligible	Short Term	Unlikely	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat -Permanent Disturbance	Turbine Option 1 Turbine Option 2	Site clearing associated with permanent disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	Low	Long Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat -Permanent Disturbance	East Solar Field	Site clearing associated with permanent disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	High	Long Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat –Permanent Disturbance	County Well Solar Field Sellards Solar Field BESSs Substations	Site clearing associated with permanent disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	Negligible	Long Term	Unlikely	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent Other Habitat – Temporary Disturbance	Turbine Option 1 Turbine Option 2	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with other habitat.	Low	Short Term	Unavoidable	Confined	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent Other Habitat – Temporary Disturbance	Solar Arrays BESSs Substations	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with other habitat.	Negligible	Short Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Other Habitat – Permanent Disturbance	East Solar Field	Site clearing associated with permanent disturbance would result in direct loss of acreage associated with other habitat.	Low	Long Term	Unavoidable	Confined	**Veg-1:** Tree Avoidance. **Veg-4:** As-Built Report and Offset Calculation.	None identified

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Vegetation (Section 4.5)	Loss of Extent of Other Habitat – Permanent Disturbance	Turbine Option 1 Turbine Option 2 County Well Solar Field Sellards Solar Field BESSs Substations	Site clearing associated with permanent disturbance would result in direct loss of acreage associated with other habitat.	Negligible	Long Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Special Status Plant Species	Turbine Option 1 Turbine Option 2	Site clearing associated with the construction of the Project would result in direct loss of populations of special status plant species or their habitat.	Medium	Constant	Feasible	Local	**Veg-2:** Pre-Disturbance Surveys for Special Status Plant Species. **Veg-3:** Special Status Plant Species Education. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Special Status Plant Species	East Solar Field	Site clearing associated with the construction of the Project would result in direct loss of populations of special status plant species or their habitat.	Medium	Constant	Unlikely	Local	**Veg-2:** Pre-Disturbance Surveys for Special Status Plant Species. **Veg-3:** Special Status Plant Species Education. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Special Status Plant Species	Sellards Solar Field	Site clearing associated with construction of the Project would result in direct loss of populations of special status plant species or their habitat.	Low	Constant	Unlikely	Local	**Veg-2:** Pre-Disturbance Surveys for Special Status Plant Species. **Veg-3:** Special Status Plant Species Education. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Vegetation (Section 4.5)	Loss of Extent of Special Status Plant Species	County Well Solar Field BESSs Substations	Site clearing associated with construction of the Project would result in direct loss of populations of special status plant species or their habitat.	Negligible	Constant	Unlikely	Local	**Veg-2:** Pre-Disturbance Surveys for Special Status Plant Species. **Veg-3:** Special Status Plant Species Education. **Veg-4:** As-Built Report and Offset Calculation.	None identified
Wildlife and Habitat (Section 4.6)	Habitat Loss	Turbine Option 1 Turbine Option 2	The Project would result in the direct loss of habitat through construction of the Wind Energy Micrositing Corridor and associated transportation routes. The Project may also result in indirect habitat loss through increased noise, light, and human presence during construction.	Medium	Short Term for temporary disturbances (e.g., construction laydown areas) Constant for permanent footprint loss (e.g., turbine footprint)	Unavoidable	Local	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance.	None identified

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Habitat Loss	Solar Arrays	The Project would result in the direct loss of habitat, including modified habitat, through construction of the solar arrays and associated transportation routes. The Project may also result in indirect habitat loss through increased noise, light, and human presence during construction.	Medium	Short Term for temporary disturbances (e.g., construction laydown areas) and modified habitat under the solar fields. Constant for permanent footprint loss.	Unavoidable	Confined	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance.	None identified
Wildlife and Habitat (Section 4.6)	Habitat Loss	BESSs Substations	The Project would result in the direct loss of habitat through construction of the BESSs, substations, and associated transportation routes. The Project may also result in indirect habitat loss through increased noise, light, and human presence during construction.	Low	Short Term for temporary disturbances (e.g., construction laydown areas) Long Term for permanent footprint loss.	Unavoidable	Limited	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance.	None identified

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Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	Turbine Option 1 Turbine Option 2	The Project may result in mortality of smaller animals (e.g., birds, herptiles, small mammals) during clearing and ground preparation works. Wildlife-vehicle collisions may occur during Project construction due to increased traffic.	Low	Short Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** schedule construction during daylight hours. **Wild-8:** Establish buffers around raptor nests. **Wild-9:** Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design.	None identified

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Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	Solar Arrays	The Project may result in mortality of smaller animals (e.g., birds, herptiles, small mammals) during clearing and ground preparation works. Wildlife-vehicle collisions may occur during Project construction due to increased traffic.	Low	Short Term	Feasible	Limited	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** Schedule construction during daylight hours. **Wild-8:** Establish buffers around raptor nests. **Wild-9:** Time vegetation clearing to avoid nesting season and mitigation of nesting birds. **Hab-4:** Develop TAC.	None identified
Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	BESSs Substations	The Project may result in mortality of smaller animals (e.g., birds, herptiles, small mammals) during clearing and ground preparation works. Wildlife-vehicle collisions may occur during Project construction due to increased traffic.	Negligible	Short Term	Feasible	Limited	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** Schedule construction during daylight hours. **Wild-8:** Establish buffers around raptor nests. **Wild-9:** Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-4:** Develop TAC.	None identified

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Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	Turbine Option 1 Turbine Option 2	Turbines, power lines, roadways, and other linear infrastructure could create barriers to wildlife movement and fragment habitat. Barriers and fragmentation created during construction would predominantly remain through operation.	Low	Long Term	Probable	Confined	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design.	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	Solar Arrays	Solar arrays may impact wildlife movement and fragment habitat by bisecting movement corridors. Solar arrays would be fenced, which is expected to create a barrier to movement of larger wildlife around the arrays.	Low	Long Term	Unavoidable	Confined	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design.	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	BESSs Substations	BESSs and substations may create barriers to wildlife movement in the adjacent area.	Negligible	Long Term	Unavoidable	Limited	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: striped whipsnake and sagebrush lizard	Turbine Option 1 Turbine Option 2 Solar Array BESSs Substations	Impacts on shrub and shrub-steppe habitat may result in loss of suitable reptile habitat. Mortality of reptile species could occur during construction from heavy machinery and land clearing and grubbing.	Low	Constant	Feasible	Confined	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-1:** Implement striped whipsnake and sagebrush lizard–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: American white pelican	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction of the Project may disturb American white pelicans moving over the Lease Boundary.	Negligible	Short Term	Unlikely	Limited	**Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-2:** Implement American white pelican–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: bald eagle	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction of the Project could disturb bald eagles, resulting in avoidance of the Project Site.	Negligible	Short Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction. disturbance by identifying sensitive areas. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance. **Spec-3:** Implement eagle-specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: burrowing owl	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction may result in direct and indirect habitat loss and the destruction of burrows (active, inactive, and potential). Mortality may occur during vegetation and ground-disturbing works.	Medium	Short Term (disturbance, mortality) Constant (habitat loss)	Feasible (mortality) Probable (disturbance) Unavoidable (Habitat loss)	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** Schedule construction during daylight hours. **Wild-8:** Establish buffers around raptor nests. **Wild-9:** Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-4:** Implement burrowing owl–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	Turbine Option 1 Turbine Option 2 BESSs Substations	Construction of turbines and associated roads and power lines may result in the direct and indirect loss of habitat in core and range ferruginous hawk habitat. Nesting success could be impacted by construction activities proximal to the nest or activities change prey abundance.	High	Short Term (disturbance) Constant (habitat loss)	Probable (disturbance) Unavoidable (habitat loss)	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-8:** Establish buffers around raptor nests. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-5:** Implement ferruginous hawk–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	Solar Arrays	Three historic nesting locations would be directly impacted at the East Solar Array.	Medium	Constant	Unavoidable	Limited	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-8:** Establish buffers around raptor nests. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-5:** Implement ferruginous hawk–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: golden eagle	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction of the Project could disturb golden eagles, resulting in avoidance of the Project site, though golden eagle nesting has not been reported within 10 miles of the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Veg-1:** Tree Avoidance. **Spec-3:** Implement eagle-specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: great blue heron and sandhill crane	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction may disturb birds flying over the Lease Boundary, resulting in bird flight paths being diverted around the area. Construction may result in the loss of foraging habitat.	Negligible	Short Term (construction disturbance, construction mortality) Long Term (habitat loss)	Feasible (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: loggerhead shrike	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction may result in direct and indirect (disturbance) habitat loss. Mortality may occur from interactions with machinery and destruction of nests.	Low	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (Habitat loss)	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** Schedule construction during daylight hours. **Wild-9:** Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on Final Project layout and design. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: prairie falcon	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction of the Project is predicted to result in the direct loss of suitable foraging habitat for prairie falcon. Disturbance from construction activities may result in disturbance to prairie falcons.	Medium	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (Habitat loss)	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-8:** Establish buffers around raptor nests. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree avoidance. **Spec-8:** Implement prairie falcon–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: ring-necked pheasant	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction of the Project is predicted to result in the direct loss of suitable foraging habitat for ring-necked pheasant. Disturbance from construction activities may result in indirect habitat loss. Access roads may result in collisions with ring-necked pheasants.	Low	Short Term (construction disturbance, construction mortality) Long Term (habitat loss)	Probable (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-9:** Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-9:** Implement ring-necked pheasant–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: sagebrush sparrow sage thrasher	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction may result in direct and indirect habitat loss. Mortality may occur from interactions with machinery and destruction of nests.	Low	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (Habitat loss)	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** Schedule construction during daylight hours. **Wild-9:** Time vegetation clearing outside of nesting season and provide mitigation for nesting birds. **Hab-2:** Minimize transmission line crossings. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction may result in the disturbance and loss of suitable foraging habitat and disruption of birds flying over the Lease Boundary.	Low	Short Term (construction disturbance, construction mortality) Long Term (habitat loss)	Feasible (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: Vaux's swift	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction of the Project could disturb Vaux's swift in flight over the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species**:** black-tailed jackrabbit white-tailed jackrabbit	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction of the Project is predicted to result in the direct loss of suitable habitat for jackrabbit. Disturbance from construction activities may result in indirect habitat loss. Access roads may result in collisions with jackrabbits, barriers to movement, and increased fragmentation.	Low	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6**: Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-3**: Temporary laydown areas **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-10:** Implement black and white-tailed jackrabbit–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's big-eared bat	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction activities could disturb Townsend's big-eared bat foraging in the Lease Boundary.	Negligible	Short Term	Feasible	Confined	**Wild-4**: Avoid use of pesticides and rodenticides. **Wild-7:** Schedule construction during daylight hours. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-11:** Implement Townsend's big-eared bat–specific mitigation.	None identified

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Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's ground squirrel	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction of the Project and associated access roads are predicted to result in the loss of suitable Townsend's ground squirrel habitat and destruction of colonies. Mortality may occur during construction work proximal to colonies and along access roads.	Medium	Short Term (construction disturbance, construction mortality) Constant (habitat loss)	Probable (disturbance, mortality) Unavoidable (habitat loss)	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-12:** Implement Townsend's ground squirrel–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: pronghorn antelope	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Construction is predicted to result in direct loss of pronghorn antelope habitat. Activity associated with construction may result in indirect habitat loss. Increased traffic on existing and new access roads may result in pronghorn antelope mortality	Medium	Short Term (construction disturbance) Constant (habitat loss)	Probable (disturbance) Unavoidable (habitat loss)	Confined	**Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-3:** Temporary laydown areas **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-13:** Implement pronghorn antelope–specific mitigation.	None identified
Energy (Section 4.7)	Consumption of Raw Materials and Commodities	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	The installation of a turbine would require steel for support structures, fuel for construction equipment and vehicles, and concrete for foundations. The manufacturing of concrete within the Project vicinity would require water sourced locally.	Low	Temporary (for a single component) Short Term (for the entire component)	Unavoidable	Local to Regional (depending on component)	**ENR-1:** Executed water supply agreement.	None identified

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Land and Shoreline Use (Section 4.8)	Agriculture	Turbine Option 1 Turbine Option 2 BESSs Substations	It may be necessary to remove cattle from areas where blasting or heavy equipment operations take place. Project construction could delay agricultural activities for short durations on adjacent properties. Reduced access to fields within the Lease Boundary could impact existing dryland agricultural management programs. Limited but measurable acreage would be taken out of wheat production.	Negligible (farm plan modifications) Low (decrease productivity)	Temporary (brief access modifications) Short Term (seasonal restrictions)	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan. **LSU-3:** Arrange for the removal of livestock.	None identified
Land and Shoreline Use (Section 4.8)	Agriculture	Solar Arrays	It may be necessary to remove cattle from areas where heavy equipment operations take place. Project construction could delay agricultural activities for short durations on adjacent properties. Reduced access to fields within the Lease Boundary could impact existing dryland agricultural management programs. Temporarily and permanently impacted dryland agricultural acreage from solar array construction would equate to approximately 0.3% of the state's annual wheat production.	Low	Temporary (brief access modifications) Short Term (seasonal restrictions)	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan. **LSU-3:** Arrange for the removal of livestock.	None identified
Historic and Cultural Resources (Section 4.9)	Not Eligible Archaeological Historic Period Isolates and Sites	Turbine Option 1 Turbine Option 2 Solar Arrays	Impacts resulting in the partial or complete loss of non-sensitive resources of limited historical value.	Negligible	Constant	Probable	Confined	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Unevaluated Archaeological Historic Period Isolates and Sites	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Resources to be avoided through application of the APP. Without evaluation, magnitude of impact is high but is unlikely to occur due to the APP. Potential for the unplanned and accidental loss of unevaluated resources.	Medium	Constant	Unlikely	Confined	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Historic and Cultural Resources (Section 4.9)	Not Eligible or Unevaluated Archaeological Precontact Period Isolates and Sites	Turbine Option 1 Turbine Option 2	Resources to be avoided through application of the APP. Impacts on environmental setting—visual, air quality and noise may occur.	High	Constant	Unlikely	Confined	**CR-2:** Archaeological and Architectural Resources Mitigation	Significant for partial or complete loss of archaeological isolates. However, discussions with affected Tribes and DAHP could provide more detailed information about the impacts and potential mitigation. This may change the impact significance rating.
Historic and Cultural Resources (Section 4.9)	Not Eligible Architectural Resources	Turbine Option 1 Turbine Option 2 Solar Arrays	Impacts resulting in the partial or complete loss of non-sensitive resources of limited historical value. Impacts on environmental setting of resources (visual etc.).	Negligible	Short Term	Probable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Eligible Architectural Resources	Turbine Option 1 Turbine Option 2 Solar Arrays	Impacts on environmental setting of resources (visual etc.).	High	Short Term	Unavoidable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Evaluated, Recommended Not Eligible Architectural Resources	Solar Arrays	Impacts resulting in the partial or complete loss of non-sensitive resources believed to be of limited historical value. Impacts on environmental setting – visual, air quality, and noise.	Low	Short Term	Probable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Unknown/ Unidentified/Unevaluated Historic and Cultural Resources	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Impacts potentially resulting in the partial or complete loss of significant resources that are unknown, unidentified, or unevaluated for the NRHP.	High	Constant	Feasible	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Traditional Cultural Properties	Turbine Option 1 Turbine Option 2 Solar Arrays Substations BESSs	Impacts resulting in the partial or complete loss of resources. Impacts on environmental setting - inability to view cultural landscapes.	High	Constant	Probable	Regional	**CR-1:** Traditional Cultural Properties Mitigation	Significant for partial or complete loss of traditional cultural properties and resources. However, discussions with affected Tribes could provide more detailed information about the impacts and potential mitigation. This may change the impact significance rating.
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	Turbine Option 1 Turbine Option 2	Activities would attract attention and would modify the localized existing landscape setting.	Medium	Short Term	Probable	Local	No mitigation identified	None identified

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Recreation (Section 4.12)	Recreation – Use	Turbine Option 1 Turbine Option 2	Construction of the turbines would limit recreational activities that occur on public land in areas near construction, as well as impede cyclists' use of established routes during the transportation of equipment and materials.	Medium	Short Term	Unavoidable	Local	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails).	None identified
Recreation (Section 4.12)	Recreation – Use	Solar Arrays	Construction of the Sellards Solar Field would restrict access to a parcel of DNR-administered land within the Lease Boundary resulting in a high impact.	High	Long Term	Unavoidable	Limited	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails).	None identified
Recreation (Section 4.12)	Recreation – Recreational Experience	Turbine Option 1 Turbine Option 2 Solar Arrays	Indirect impacts related to visual resources and noise could occur at recreation sites.	High	Long Term	Unavoidable	Regional	**R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest.	None identified
Recreation (Section 4.12)	Recreation – Public Health and Safety	Turbine Option 1 Turbine Option 2 Solar Arrays	The Project's potential to affect the health and safety of recreationists using the area for paragliding, hang gliding, or biking would result in a medium impact.	Medium	Long Term	Unavoidable	Regional	**R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe.	None identified
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	Turbine Option 1 Turbine Option 2	Fire resulting from Project construction is unlikely, but wildfire risk in the area is considered high. For instance, combustible materials and lubricants are contained in the nacelle of the turbines. Diesel-powered generators may be used during construction. Use of these materials could pose a fire risk.	Medium	Temporary	Feasible	Limited	**Veg-1:** Pre-approval from EFSEC before topping or removal of trees that pose a hazard to collector lines	None identified
Public Health and Safety (Section 4.13)	Smoke and Haze (Public Health)	Turbine Option 1 Turbine Option 2	Fire resulting from Project construction is unlikely, but wildfire risk in the area is considered high. For instance, combustible materials and lubricants are contained in the nacelle of the turbines. Diesel-powered generators may be used during construction. Use of these materials could pose a fire risk.	Medium	Temporary	Feasible	Regional	**Veg-1:** Pre-approval from EFSEC before topping or removal of trees that pose a hazard to collector lines	None identified
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	Solar Arrays BESSs Substations	Fire resulting from solar array, substations, and BESSs construction is unlikely, but wildfire risk in the area is considered high.	Medium	Temporary	Unlikely	Limited	**Veg-1:** Pre-approval from EFSEC before topping or removal of trees that pose a hazard to collector lines	None identified

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Public Health and Safety (Section 4.13)	Smoke and Haze (Public Health)	Solar Arrays BESSs Substations	If a fire were to occur during construction of the solar arrays, substations, or BESSs, indirect impacts could include smoke or haze, and a potential reduction in emergency response services.	Medium	Temporary	Unlikely	Regional	**Veg-1:** Pre-approval from EFSEC before topping or removal of trees that pose a hazard to collector lines	None identified
Public Health and Safety (Section 4.13)	Release of Hazardous Materials	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Hazardous materials, including diesel fuel, lubricating oils, hydraulic fluid, paints, and solvents would be used and stored on site. Spill kits would be maintained, minimizing the risk of a release if a spill were to occur.	Medium	Temporary	Unlikely	Limited	**Veg-1:** Pre-approval from EFSEC before topping or removal of trees that pose a hazard to collector lines	None identified
Transportation (Section 4.14)	Vehicular Traffic	Turbine Option 1 Turbine Option 2	Traffic volumes would increase measurably during transportation of material and equipment for the construction of the turbines. The potential for traffic volumes and slower, oversized roads would likely decrease level of service for intersections near the Lease Boundary and highways/ freeways. The increase in traffic volumes and the size of construction material may decrease roadway safety at intersections near the Project or on railroad crossings.	Medium	Short Term	Unavoidable	Regional	**TR-1:** Daily transport communication, including emergency numbers. **TR-2:** Operation Lifesaver safety presentation and training.	None identified
Transportation (Section 4.14)	Vehicular Traffic	Solar Arrays	Traffic volumes would increase measurably during transportation of material and equipment during the construction of the solar arrays and would likely decrease level of service for intersections near the Lease Boundary. The increase in traffic volumes may decrease roadway safety at intersections near the Project or on railroad crossings.	Medium	Short Term	Unavoidable	Local	**TR-1:** Daily transport communication, including emergency numbers. **TR-2:** Operation Lifesaver safety presentation and training.	None identified
Transportation (Section 4.14)	Vehicular Traffic	BESSs Substations	Traffic volumes may increase, but a decrease in level of service is not expected, nor is there the potential for roadway safety to decrease.	Low	Temporary	Probable	Local	**TR-1:** Daily transport communication, including emergency numbers. **TR-2:** Operation Lifesaver safety presentation and training.	None identified

Table ES-4a: Summary of Potential Impacts by Component during Construction of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Public Services and Utilities (Section 4.15)	Municipal Solid Waste	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Solid waste from the Project's construction would consist of various quantities of non-hazardous construction wastes. The landfills identified in the ASC maintain substantial capacity that would be sufficient to serve the Project and the region, simultaneously.	Low	Constant	Unavoidable	Local to Regional (depending on location of landfill)	**ENR-7:** Recycle all applicable components. **PSU-1:** Use of a licensed waste disposal facility.	None identified

Notes:
[a] Components were combined in the same cell if they received the same impact ratings for the identified topic.
[b] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[c] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[d] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC; ASC = Application for Site Certification; BESS = battery energy storage system; BMP = best management practice; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; EIS = Environmental Impact Statement; NRHP = National Register of Historic Places; SWPPP = stormwater pollution prevention plan; TAC = Technical Advisory Committee; Tribes = Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Wanapum Tribe; USFWS = U.S. Fish and Wildlife Service; WDFW = Washington Department of Fish and Wildlife; ZOI = zone of influence

Table ES-4b

Summary of Potential Impacts by Component during Operation of the Proposed Action

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Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Earth Resources (Section 4.2)	Soils	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	It is anticipated that no new ground disturbance would occur. Access roads and cleared areas could be susceptible to increased soil erosion from a lack of stabilizing vegetation or hard cover and prior disturbance of the local soil profile. Soil erosion, because of operations, would be limited to gravel-surfaced areas, including the apron constructed around each turbine.	Low	Temporary	Feasible	Limited	**Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Landslide Hazards and Ground Instability	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Existing ground instability, high rainfall rates, and strong earthquake shaking could cause landslides.	Low	Temporary	Feasible	Limited	**Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Volcanic Activity	Turbine Option 1 Turbine Option 2 BESSs Substations	Hazards from ashfall to operational activities would include the following: ▪ Accumulation of ash on structures ▪ Clogging of electronics, machinery, and filters ▪ Suspension of abrasive fine particles in air and water ▪ Accumulation of ash on transportation routes and vegetation	Negligible	Temporary	Unlikely	Confined	**Veg-7:** Detailed Site Restoration Plan.	None identified
Water Resources (Section 4.4)	Panel Washing	Solar Arrays	Project operations would require water to wash solar array panels, which would infiltrate the surrounding ground and could impact water resources.	Negligible	Temporary	Unlikely	Confined	**W-9:** Minimize Water Use. **W-10:** Panel Washing.	None identified

Notes:
Tables continues below, notes apply to remainder of table
[a] Components were combined in the same cell if they received the same impact ratings for the identified topic.
[b] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[c] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[d] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC;BESS = battery energy storage system; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; FAA = Federal Aviation Administration; FTE = full-time equivalent; KOP = key observation point; LEED = Leadership in Energy and Environmental Design; O&M = operations and maintenance;
TAC = Technical Advisory Committee; USFWS = U.S. Fish and Wildlife Service; ZOI = zone of influence

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Water Resources (Section 4.4)	Introduction of Hazardous Substances	Turbine Option 1 Turbine Option 2	Project operations could result in the accidental release of hazardous substances that could impact water resources.	Negligible	Temporary	Unlikely	Limited	**W-5:** Employee Training. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Impacts on Public Water Supply	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Project operations would rely on water from public water supply for operations.	Low	Temporary	Feasible	Regional	**W-9:** Minimize Water Use. **W-10:** Panel Washing.	None identified
Vegetation (Section 4.5)	Habitat Degradation	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Project operations could result in habitat degradation from the introduction of hazardous substances, introduction and spread of noxious weeds and invasive plants, and deposition of dust.	Low	Long Term	Feasible	Local	**Veg-5:** Operation and Decommissioning Dust Control Plan.	None identified
Vegetation (Section 4.5)	Habitat Fragmentation	Turbine Option 1 Turbine Option 2 Solar Arrays	Project operations could result in habitat fragmentation from edge effects and fire.	Low	Long Term	Feasible	Local	**Veg-5:** Operation and Decommissioning Dust Control Plan.	None identified
Vegetation (Section 4.5)	Habitat Fragmentation	BESSs	Project operations could result in habitat fragmentation from edge effects and fire.	Low	Long Term	Feasible	Local	**Veg-5:** Operation and Decommissioning Dust Control Plan.	None identified
Vegetation (Section 4.5)	Habitat Fragmentation	Substations	Project operations could result in habitat fragmentation from edge effects and fire.	Low	Long Term	Unlikely	Local	**Veg-5:** Operation and Decommissioning Dust Control Plan.	None identified
Wildlife and Habitat (Section 4.6)[28]	Habitat loss	Turbine Option 1 Turbine Option 2	The Project would result in the direct loss of habitat through operation of the turbines and associated infrastructure. The Project may result in indirect habitat loss through degradation of habitat in ZOI created by disturbances (e.g., noise, light) from turbines and associated infrastructure.	Medium	Constant	Unavoidable	Local	**Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance. **Veg-4:** As-built report and offset calculation.	None identified

[28] Blue highlight identifies Impacts of Medium and High magnitude.

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Habitat loss	Solar Arrays	The Project would result in the direct loss of habitat through operation of the solar arrays and associated infrastructure. The Project may result in indirect habitat loss through degradation of habitat in ZOI created by disturbances from solar arrays and associated infrastructure.	Medium	Constant	Unavoidable	Confined	**Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance. **Veg-4:** As-built report and offset calculation.	None identified
Wildlife and Habitat (Section 4.6)	Habitat Loss	BESSs Substations	The Project would result in the direct loss of habitat through operation of the BESSs and substations. The operation of the BESSs and substations may also result in indirect habitat loss through degradation of habitat in the 0.5-mile ZOI created by disturbances from these features.	Negligible	Long Term	Unavoidable	Limited	**Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-1:** Tree Avoidance. **Veg-4:** As-built report and offset calculation.	None identified
Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	Turbine Option 1 Turbine Option 2	The Project may result in mortality of aerial species (birds and bats) through collisions with turbines, strikes with power lines, windows, and weather towers. Other sources of mortality on wildlife, including non-aerial species, include vehicle collisions and changes in food availability.	Medium	Long Term	Probable	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-6:** Work with EFSEC on final Project layout and design.	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	Solar Arrays	Bird species, particularly water-associated species, may collide with solar arrays. Mortality of other species, such as herptile, could occur depending on conditions under the solar facilities.	Low	Long Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC.	None identified
Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	BESSs Substations	Wildlife mortality may occur due to collisions with infrastructure, including BESSs and substations.	Negligible	Long Term	Unlikely	Limited	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC.	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	Turbine Option 1 Turbine Option 2	The operation of turbines, power lines, roadways, and other linear infrastructure could result in barriers to wildlife movement and fragment habitat. Barriers and fragmentation created during construction would predominantly remain through operation.	Medium	Long Term	Probable	Confined	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	Solar Arrays	The east solar field is situated on a movement corridor and may impact wildlife movement. Fencing around solar arrays is expected to create barriers for larger mammals. Herptiles, small mammals, and small birds are expected to be able to continue to access vegetation around the arrays through the fencing.	Medium	Long Term	Probable	Confined	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	BESSs Substations	BESSs and substations may create barriers to wildlife movement in the adjacent area.	Low	Long Term	Feasible	Limited	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Striped whipsnake and sagebrush lizard	Turbine Option 1 Turbine Option 2 Solar Array BESSs Substations	Impacts on shrub and shrub-steppe habitat may result in loss of suitable reptile habitat. Increased road networks in the Lease Boundary could increase the risk of mortality sagebrush lizard and striped whipsnake. Roadways may create barriers to reptile movement and further fragment reptile habitat.	Low	Constant	Feasible	Confined to Local	**Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-1:** Implement striped whipsnake and sagebrush lizard–specific mitigation.	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Special status species: American white pelican	Turbine Option 1 Turbine Option 2 Solar Arrays	American white pelicans have the potential for collision with turbines, and electrocution with overhead transmission lines. American white pelicans could collide with solar arrays as literature suggests water-associated birds may attempt to land on solar arrays if they are mistaken for water (lake effect).	Medium	Long Term	Unlikely	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-2:** Implement American white pelican–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: American white pelican	BESSs Substations	Interactions with BESSs and substations are not expected.	Negligible	Long Term	Unlikely	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-2:** Implement American white pelican–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: bald eagle	Turbine Option 1 Turbine Option 2	Bald eagles are estimated to be the 17th most likely large bird to collide with the turbines, with an estimated exposure index of 0.01. Further, turbines could create barriers to bald eagle movement over the Lease Boundary.	Low	Long Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-3:** Implement eagle-specific mitigation.	None identified

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Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Special status species: bald eagle	Solar Arrays BESSs Substations	Solar arrays, BESSs, substations, and other ground-based disturbances could reduce foraging habitat for bald eagles, though the Lease Boundary is not expected to provide key or important bald eagle habitat.	Negligible	Long Term	Unavoidable	Confined	**Wild-2**: Use wildlife-proof trash containers. **Wild-3**: Review USFWS eagle mortality consultation. **Wild-4**: Avoid use of pesticides and rodenticides. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: burrowing owl	Turbine Option 1 Turbine Option 2	Permanent habitat loss from turbine footprint and roads would persist through operation. Operation of turbines could result in indirect burrowing owl habitat loss. Burrowing owls are not expected to collide with turbines but are susceptible to road-based mortality. Further, changes in prey distribution and abundance may change foraging.	Medium	Constant	Unavoidable	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Wild-8:** Establish buffers around raptor nests. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-4:** Implement burrowing owl–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: burrowing owl	Solar Arrays BESSs Substations	Areas under solar arrays may continue to provide habitat for burrowing owls, depending on conditions under the arrays. Habitat altered by the BESSs and substations would be lost throughout operation. Increased traffic on roads used to access solar arrays, BESSs, and substructures may result in burrowing owl mortality.	Medium	Constant	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Wild-8:** Establish buffers around raptor nests. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-4:** Implement burrowing owl–specific mitigation.	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	Turbine Option 1 Turbine Option 2	Operation of the turbines could result in mortality due to collisions with turbines and power lines. Change in prey abundance may reduce hawk survivorship. Operation may also reduce the re-occupancy of nesting territories due to disturbance.	High	Constant	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-5:** Implement ferruginous hawk–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	Solar Arrays	Solar arrays may change prey structures, resulting in impacts on adult and young survivorship.	Medium	Constant	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-5:** Implement ferruginous hawk–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	BESSs Substations	Operation of the BESSs and substations may result in loss of potential foraging habitat for ferruginous hawk.	Negligible	Constant	Unavoidable	Limited	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-5:** Implement ferruginous hawk–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: golden eagle	Turbine Option 1 Turbine Option 2	Golden eagles are estimated to be the 22nd most likely large bird to collide with the turbines. Further, turbines could create barriers to golden eagle movement over the Lease Boundary.	Medium	Long Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-3:** Implement eagle-specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: golden eagle	Solar Arrays BESSs Substations	Solar arrays, BESSs, substations, and other ground-based disturbances could reduce foraging habitat for golden eagles, though the Lease Boundary is not expected to provide key or important golden eagle habitat.	Negligible	Long Term	Unavoidable	Confined	**Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: great blue heron and sandhill crane	Turbine Option 1 Turbine Option 2	The operation of wind turbines may result in great blue heron and sandhill crane mortality and disturbance.	Medium	Long Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: great blue heron and sandhill crane	Solar Arrays BESSs Substations	Habitat loss during construction to accommodate the solar arrays, BESSs, and substations would continue through operation.	Negligible	Long Term	Unavoidable	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: loggerhead shrike	Turbine Option 1 Turbine Option 2	Direct and indirect habitat loss would persist throughout Project operation. Loggerhead shrike mortality may occur due to strikes with turbines.	Medium	Constant	Unavoidable	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: loggerhead shrike	Solar Arrays	Direct and indirect habitat loss would persist throughout Project operation.	Low	Constant	Unavoidable	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: loggerhead shrike	BESSs Substations	Direct and indirect habitat loss would persist throughout Project operation.	Negligible	Constant	Unavoidable	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: prairie falcon	Turbine Option 1 Turbine Option 2	Direct habitat loss would persist throughout Project operation. Operation of the turbines may disturb prairie falcons foraging in the Lease Boundary. Operation of the turbines may result in mortality of prairie falcons. Changes in prey density may change habitat suitability and survivorship of prairie falcons.	Medium	Constant	Unavoidable	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-8:** Implement prairie falcon–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: prairie falcon	Solar Arrays	Solar arrays may change prey dynamics in the Lease Boundary (e.g., sheltering under arrays), thereby reducing habitat suitability and survivorship of prairie falcons.	Low	Constant	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-8:** Implement prairie falcon–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: prairie falcon	BESSs Substations	Direct habitat loss at the BESSs and substations would persist throughout operation.	Negligible	Constant	Unavoidable	Limited	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-8:** Implement prairie falcon–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: ring-necked pheasant	Turbine Option 1 Turbine Option 2	Direct habitat loss would persist through Operation. Operation of the turbines may also result in indirect habitat loss. Ring-necked pheasant mortality may occur due to Project operation. Access roads may result in collisions with ring-necked pheasants.	Low	Long Term	Unavoidable	Confined	**Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-9:** Implement ring-necked pheasant–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: ring-necked pheasant	Solar Arrays BESSs Substations	Direct habitat loss would persist throughout operation. Access roads may result in collisions with ring-necked pheasants.	Negligible	Long Term	Unavoidable	Confined	**Wild-6:** Maintain database of road mortalities **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-9:** Implement ring-necked pheasant–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: sagebrush sparrow and sage thrasher	Turbine Option 1 Turbine Option 2 Solar Arrays	Direct and indirect habitat loss would persist throughout Project operation.	Medium	Constant	Unavoidable	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: sagebrush sparrow and sage thrasher	BESSs Substations	Direct and indirect habitat loss would persist throughout Project operation.	Negligible	Long Term	Unavoidable	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	Turbine Option 1	Operation of turbines may result in the continued loss and disturbance of foraging habitat. Operation of Option 1 may result in tundra swan mortality through collision with turbines.	Low	Long Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Veg-4:** As-built report and offset calculation. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	Turbine Option 2	Operation of turbines may result in the continued loss and disturbance of foraging habitat. Turbine Option 2 is predicted to have an exposure index of 0.	Negligible	Long Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	Solar Arrays	Operation of the solar array may result in continued loss of foraging habitat. Tundra swans may be killed if attempting to land on solar arrays.	Low	Long Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	BESSs Substations	Operation of the BESSs and substations may result in continued loss of foraging habitat.	Negligible	Long Term	Unavoidable	Limited	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-1:** Avoid corridors. **Hab-2:** Minimize transmission line crossings. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Vaux's swift	Turbine Option 1 Turbine Option 2	Vaux's swift migrating over the Lease Boundary are susceptible to strikes during migration.	Low	Long Term	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Vaux's swift	Solar Arrays BESSs Substations	No effects on Vaux's swift from these facilities are expected.	Negligible	Long Term	Unlikely	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: black-tailed jackrabbit and white-tailed jackrabbit	Turbine Option 1 Turbine Option 2	Operation of the turbines may result in indirect loss of jackrabbit habitat and mortality along access roads. Direct habitat loss is expected to persist throughout operation.	Medium	Constant	Unavoidable	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-10:** Implement black and white-tailed jackrabbit–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: black-tailed jackrabbit and white-tailed jackrabbit	Solar Arrays	Solar arrays could provide shelter for jackrabbits reducing predation. Mortality may along access roads may occur.	Low	Constant	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-10:** Implement black and white-tailed jackrabbit–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: black-tailed jackrabbit and white-tailed jackrabbit	BESSs Substations	Operation of the turbines may result in direct loss of jackrabbit habitat and mortality along access roads.	Negligible	Long Term	Unavoidable	Limited	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-10:** Implement black and white-tailed jackrabbit–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's big-eared bat	Turbine Option 1 Turbine Option 2	Townsend's big-eared bat mortality may occur due to Project operation. Operation may result in indirect loss of foraging habitat.	Low	Long Term	Probable	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-11:** Implement Townsend's big-eared bat–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's big-eared bat	Solar Arrays	Townsend's big-eared bat may collide with solar arrays during operation.	Low	Long Term	Unlikely	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-11:** Implement Townsend's big-eared bat–specific mitigation.	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's big-eared bat	BESSs Substations	Interaction with BESSs and substations are not predicted.	Negligible	Long Term	Unlikely	Limited	**Wild-4:** Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Spec-11:** Implement Townsend's big-eared bat–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's ground squirrel	Turbine Option 1 Turbine Option 2 Solar Arrays	Townsend's ground squirrel mortality may continue along access roads during operation. Operation of the solar arrays may alter Townsend's ground squirrel behavior by providing shelter. Mortality may occur along access roads.	Medium	Constant	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-12:** Implement Townsend's ground squirrel–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's ground squirrel	BESSs Substations	Direct habitat loss would persist through operation. Mortality may occur along access roads during operation of BESSs and substations.	Negligible	Constant	Feasible	Limited	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-12:** Implement Townsend's ground squirrel–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: pronghorn antelope	Turbine Option 1 Turbine Option 2	Operation of the Project may result in direct and indirect habitat loss to pronghorn antelope. Pronghorn antelope mortality may occur along maintenance roads.	Medium	Constant	Unavoidable	Confined	**Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-13:** Implement pronghorn antelope–specific mitigation.	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Wildlife and Habitat (Section 4.6)	Special status species: pronghorn antelope	Solar Arrays	Pronghorn antelope would be precluded from solar arrays during operation due to fencing. Pronghorn antelope mortality may occur along maintenance roads.	Medium	Constant	Unavoidable	Confined	**Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation. **Spec-13:** Implement pronghorn antelope–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: pronghorn antelope	BESSs Substations	Pronghorn antelope would be precluded from BESSs and substations. Pronghorn antelope mortality may occur along maintenance roads.	Negligible	Long Term	Unavoidable	Limited	**Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-6:** Work with EFSEC on final Project layout and design. **Veg-4:** As-built report and offset calculation **Spec-13:** Implement pronghorn antelope–specific mitigation.	None identified
Energy (Section 4.7)	Consumption of Raw Materials and Commodities	Turbine Option 1 Turbine Option 2 Substations	Turbine maintenance may require generator-specific lubricants and fluids produced outside the Project vicinity. O&M vehicles would need an ongoing supply of fuel purchased locally. Water for the Project's O&M facility would be purchased from a local vendor and sourced from Kennewick. Aggregate for access road maintenance would be obtained locally.	Low	Long Term	Unavoidable	Local to Regional	**ENR-1:** Executed water supply agreement. **ENR-2:** Install high-efficiency electrical fixtures and appliances. **ENR-3:** Install high-efficiency security lighting. **ENR-4:** Install low-water-use flush toilets. **ENR-5:** Capture and recycle wash water.	None identified
Energy (Section 4.7)	Consumption of Raw Materials and Commodities	Solar Arrays BESSs	Using water to wash solar panels would impact the amount of available water that Kennewick would have to address future demands. O&M vehicles would need fuel purchased locally. Aggregate for access road maintenance would be obtained locally.	Low	Long Term	Unavoidable	Local	**ENR-1:** Executed water supply agreement. **ENR-2:** Install high-efficiency electrical fixtures and appliances. **ENR-3:** Install high-efficiency security lighting. **ENR-4:** Install low-water-use flush toilets. **ENR-5:** Capture and recycle wash water.	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Land and Shoreline Use (Section 4.8)	Agriculture	Turbine Option 1 Turbine Option 2 BESSs Substations	Although livestock would be able to graze up to turbines and associated structures, limited but measurable acreage would remain out of agricultural production.	Negligible	Long Term	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan.	None identified
Land and Shoreline Use (Section 4.8)	Agriculture	Solar Arrays	Exclusionary fencing would be installed around the solar arrays. Exclusionary fencing would prevent the solar array project areas from being used for agricultural activities throughout the Project's operations stage. The loss of available farmland would result in a reduction in dryland wheat production and, potentially, a loss in grazing areas for livestock.	Low	Long Term	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan.	None identified
Historic and Cultural Resources (Section 4.9)	Eligible Architectural Resources	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Impacts on environmental setting—visual, air quality and noise.	High	Constant	Unavoidable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Traditional Cultural Properties	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Impacts on environmental setting – visual, air quality, noise, and loss of access.	High	Constant	Probable	Regional	**CR-1:** Traditional Cultural Properties Mitigation	Significant for partial or complete loss of traditional cultural properties and resources. However, discussions with affected Tribes could provide more detailed information about the impacts and potential mitigation. This may change the impact significance rating.
Historic and Cultural Resources (Section 4.9)	Unknown/ Unidentified Historic and Cultural Resources	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Impacts potentially resulting in the partial or complete loss of significant (previously unidentified) resources.	High	Constant	Feasible	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	Turbine Option 1 Turbine Option 2	The proposed wind turbines, and comprehensive Project, would dominate views from many KOP locations, and the landscape would appear strongly altered.	High	Long Term	Unavoidable	Regional	**VIS-1:** Relocate turbines located within the foreground distance. **VIS-2:** No advertising, cell antennas, commercial messages, or symbols placed on wind turbines. **VIS-3:** Maintain clean nacelles and towers.	Significant for Visual Aspects.
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	Solar Arrays Substations Transmission Lines	The proposed solar arrays (all options), substations, and transmission lines would attract attention and would modify the existing landscape setting.	Medium	Long Term	Unavoidable	Regional	**VIS-4:** Use color-treated solar collectors and support structures. **VIS-5:** Avoid complete removal of vegetation beneath solar arrays. **VIS-6:** Install color-treated, opaque fencing to screen views of the solar arrays. **VIS-9:** Choose the type of transmission structure to best match the adjacent transmission lines.	None identified
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	County Well & Bofer Canyon Solar Arrays	The proposed solar arrays (County Well and Bofer Canyon siting areas) would dominate views from some KOP locations, and the landscape would appear strongly altered in localized areas where there are limited existing landscape modifications.	High	Long Term	Unavoidable	Local	**VIS-4:** Use color-treated solar collectors and support structures. **VIS-5:** Avoid complete removal of vegetation beneath solar arrays. **VIS-6:** Install color-treated, opaque fencing to screen views of the solar arrays.	None identified
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	Transmission Lines	The proposed transmission lines would dominate views from KOP 13 and the landscape would appear strongly altered in this localized area where there are limited existing landscape modifications.	High	Long Term	Unavoidable	Local	**VIS-6:** Maximize the span length across highways and other linear viewing locations. **VIS-7:** Choose the type of transmission structure to best match the adjacent transmission lines.	None identified
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	BESSs	The BESSs would attract attention from some KOP locations and would modify the localized existing landscape setting.	Medium	Long Term	Unavoidable	Local	**VIS-8:** Design BESS to blend with the adjacent agricultural character.	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Visual Aspects, Light and Glare (Section 4.10)	Shadow Flicker	Turbine Option 1 Turbine Option 2	Wind turbines would create shadow flicker that would impact Project participants.	Medium	Long Term	Probable	Confined	**SF-1:** The Applicant would attempt to avoid, minimize and mitigate shadow flicker at nearby residences. **SF-2:** The Applicant would set up a complaint resolution procedure.	None identified
Visual Aspects, Light and Glare (Section 4.10)	Light	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations Transmission Lines	Lighting for security purposes and to conform with FAA requirements would be visible outside the Lease Boundary but would have limited effect in terms of light trespass and sky glow degradation.	Low	Long Term	Unavoidable	Local	**LIG-1:** Use LEED-certified building exterior(s) and security lighting.	None identified
Recreation (Section 4.12)	Recreation – Use	Turbine Option 1 Turbine Option 2	Turbines would limit recreational activities (i.e., paragliding) that occur on public land near areas of operation.	Low	Long Term	Unavoidable	Local	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails).	None identified
Recreation (Section 4.12)	Recreation – Use	Solar Arrays	Operation of the Sellards Solar Field would restrict access to a parcel of DNR-administered land within the Lease Boundary.	High	Long Term	Unavoidable	Limited	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails).	None identified
Recreation (Section 4.12)	Recreation – Recreational Experience	Turbine Option 1 Turbine Option 2 Solar Arrays	Impacts on noise receptors would be limited, while visual impacts would occur regionally.	Low	Long Term	Unavoidable	Regional	**R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest.	None identified
Recreation (Section 4.12)	Recreation – Public Health and Safety	Turbine Option 1 Turbine Option 2 Solar Arrays	The Project's potential to affect the health and safety of recreationists using the area for paragliding and hang gliding would results in a medium impact during the life of the Project. Impacts on recreationists would occur beyond neighboring receptors.	Medium	Long Term	Unavoidable	Regional	**R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe	Significant for paragliding and hang gliding public safety and health.
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	Substations	Substation transformers have a minimal risk of fire or explosion during construction.	Medium	Temporary	Feasible	Limited	No mitigation identified	None identified

Table ES-4b: Summary of Potential Impacts by Component during Operation of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	BESSs	Lithium-ion batteries used for the BESSs may pose a risk of fire and explosion during operation because they may overheat, but the BESSs would include a fire suppression system.	Low to Medium (based on seasonal fire weather conditions)	Temporary	Feasible	Limited	No mitigation identified	None identified
Transportation (Section 4.14)	Vehicular Traffic	Solar Arrays	Operation of the solar arrays may require water trucks to deliver wash water to clean the panels. A decrease in level of service is not expected, nor is roadway safety expected to decrease.	Low	Long Term	Probable	Local	**TR-2:** Operation Lifesaver safety presentation and training	None identified
Public Services and Utilities (Section 4.15)	Wastewater	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Wastewater from the O&M facilities would be discharged to an on-site septic system. It is anticipated that the operations stage would use less than 5,000 gallons of water per day and that wastewater would be generated from kitchen and bathroom use.	Low	Long Term	Unavoidable	Local	**ENR-5:** Capture and recycle wash water.	None identified
Public Services and Utilities (Section 4.15)	Municipal Solid Waste	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Operation of the Project is expected to generate approximately one or two dumpsters of waste per week at the O&M facilities.	Low	Constant	Unavoidable	Local to Regional (depending on location of landfill)	**PSU-1:** Use of a licensed waste disposal facility.	None identified

Notes:
[a] Components were combined in the same cell if they received the same impact ratings for the identified topic.
[b] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[c] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[d] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC;BESS = battery energy storage system; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; FAA = Federal Aviation Administration; FTE = full-time equivalent; KOP = key observation point; LEED = Leadership in Energy and Environmental Design; O&M = operations and maintenance; TAC = Technical Advisory Committee; USFWS = U.S. Fish and Wildlife Service; ZOI = zone of influence

Table ES-4c

Summary of Potential Impacts by Component during Decommissioning of the Proposed Action

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Table ES-4c: Summary of Potential Impacts by Component during Decommissioning of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Earth Resources (Section 4.2)	Geology	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	The likelihood of a foundation removal encountering bedrock is low. If bedrock were to be impacted during the decommissioning stage, then it would likely have already been encountered during the construction stage.	Low	Temporary	Probable	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Soils	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning activities associated with the Project could impact and disturb the soil profile, due to excavating foundations and utilities, removing unsealed areas, restoring the original ground profile, and rehabilitating vegetation.	Low	Short Term	Unavoidable	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Topography	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	The Applicant would restore the original topographic profile in areas of previous development.	Low	Short Term	Probable	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Earthquakes	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Prolonged earthquake ground shaking could cause minor damage to infrastructure if the intensity and duration of the shaking exceed structural seismic design levels.	Negligible	Temporary	Feasible	Confined	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Earth Resources (Section 4.2)	Landslide Hazards and Ground Instability	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Existing ground instability, high rainfall rates, and strong earthquake shaking could cause landslides.	Low	Temporary	Feasible	Limited	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified

Notes:
Table continues below, notes apply to remainder of table
[a] Components were combined in the same cell if they received the same impact ratings for the identified topic.
[b] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[c] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[d] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC; BESS = battery energy storage system; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; SWPPP = stormwater pollution prevention plan; TAC = Technical Advisory Committee; TUSFWS = U.S. Fish and Wildlife Service; WDFW = Washington Department of Fish and Wildlife; ZOI = zone of influence

Table ES-4c: Summary of Potential Impacts by Component during Decommissioning of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Earth Resources (Section 4.2)	Volcanic Activity	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Hazards from ashfall to decommissioning activities would include the following: ▪ Accumulation of ash on structures ▪ Clogging of electronics, machinery, and filters ▪ Suspension of abrasive fine particles in air and water ▪ Accumulation of ash on transportation routes and vegetation	Negligible	Temporary	Unlikely	Confined	**Geo-1:** Avoid construction during wet periods. **Veg-7:** Detailed Site Restoration Plan.	None identified
Water Resources (Section 4.4)	Physical Disturbance	Turbine Option 1 Turbine Option 2 Solar Arrays	Project decommissioning would result in physical disturbance that could impact surface water and wetlands, runoff and absorption capacity, floodplains, and groundwater resources.	Low	Short Term	Unavoidable	Confined	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-6:** Wetland SWPPP.	None identified
Water Resources (Section 4.4)	Physical Disturbance	BESSs Substations	Project decommissioning would result in physical disturbance that could impact surface water and wetlands, runoff and absorption capacity, floodplains, and groundwater resources.	Low	Short Term	Unavoidable	Limited	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-6:** Wetland SWPPP.	None identified
Water Resources (Section 4.4)	Change in Water Quality	Turbine Option 1 Turbine Option 2	Project decommissioning would require temporary disturbance, which could impact water quality.	Low	Temporary	Unlikely	Local	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-5:** Employee Training. **W-6:** Wetland SWPPP. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Change in Water Quality	Solar Arrays	Project decommissioning would require temporary disturbance areas to access and remove Project components located near ephemeral and intermittent streams and could result in changes to water quality.	Negligible	Temporary	Unlikely	Local	**W-1:** Least Risk Fish Windows. **W-2:** Minimize Work in Heavy Rain. **W-3:** Check Dams. **W-5:** Employee Training. **W-6:** Wetland SWPPP. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Change in Hydrology	Turbine Option 1 Turbine Option 2	Project decommissioning would require temporary disturbance to some ephemeral and intermittent streams but would restore the disturbance areas following decommissioning.	Low	Short Term	Unlikely	Limited	**W-3:** Check Dams.	None identified

Table ES-4c: Summary of Potential Impacts by Component during Decommissioning of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Water Resources (Section 4.4)	Introduction of Hazardous Substances	Turbine Option 1 Turbine Option 2	Project decommissioning could result in the introduction of hazardous substances to water resources.	Low	Temporary	Unlikely	Local	**W-5:** Employee Training. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Introduction of Hazardous Substances	Solar Arrays BESSs Substations	Project decommissioning could result in the introduction of hazardous substances to water resources.	Negligible	Temporary	Unlikely	Limited	**W-5:** Employee Training. **W-8:** Spill Response Equipment.	None identified
Water Resources (Section 4.4)	Impacts on Public Water Supply	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Project decommissioning could result in impacts on public water supply.	Low	Temporary	Unlikely	Regional	**W-9:** Minimize Water Use.	None identified
Vegetation (Section 4.5)[29]	Loss of Extent of Priority Habitat – Temporary Disturbance	Turbine Option 1 Turbine Option 2	Decommissioning of the Project would require temporary disturbance areas to remove Project components, which would result in direct loss of WDFW Priority Habitat.	High	Short Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat – Temporary Disturbance	East Solar Field	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	Medium	Short Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat – Temporary Disturbance	County Well Solar Field BESSs Substations	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	Negligible	Short Term	Unlikely	Limited	**Veg-1:** Tree Avoidance. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified

[29] Blue highlight identifies Impacts of Medium and High magnitude.

Table ES-4c: Summary of Potential Impacts by Component during Decommissioning of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Vegetation (Section 4.5)	Loss of Extent of Priority Habitat – Temporary Disturbance	Sellards Solar Field	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with WDFW Priority Habitat.	Low	Short Term	Feasible	Limited	**Veg1:** Tree Avoidance. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Loss of Extent Other Habitat – Temporary Disturbance	Turbine Option 1 Turbine Option 2	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with other habitat.	Low	Short Term	Unavoidable	Confined	**Veg-1:** Tree Avoidance. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration. Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Loss of Extent Other Habitat – Temporary Disturbance	Solar Arrays BESSs Substations	Site clearing associated with temporary disturbance would result in direct loss of acreage associated with other habitat.	Negligible	Short Term	Unavoidable	Limited	**Veg-1:** Tree Avoidance. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Loss of Extent Special Status Plant Species	Turbine Option 1 Turbine Option 2 East Solar Field	Site clearing associated with decommissioning of the Project would result in direct loss of populations of special status plant species or their habitat.	Low	Constant	Unlikely	Local	**Veg-2:** Pre-Disturbance Surveys for Special Status Plant Species. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Loss of Extent Special Status Plant Species	Sellards Solar Field County Well Solar Field BESSs Substations	Site clearing associated with decommissioning of the Project would result in direct loss of populations of special status plant species or their habitat.	Negligible	Constant	Unlikely	Local	**Veg-2:** Pre-Disturbance Surveys for Special Status Plant Species. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified

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Vegetation (Section 4.5)	Habitat Degradation	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Project decommissioning could result in habitat degradation from the introduction of hazardous material, surface runoff, introduction or spread of invasive plant or noxious weeds, and the deposition of dust.	Low	Long Term	Feasible	Local	**Veg-5:** Operation and Decommissioning Dust Control Plan. **Veg-6:** Decommissioning Legislated Requirements. **Veg-7:** Detailed Site Restoration Plan. **Veg-8:** Decommissioning Noxious Weed Management Plan.	None identified
Vegetation (Section 4.5)	Habitat Fragmentation	Turbine Option 1 Turbine Option 2	Project decommissioning could result in habitat fragmentation from fire.	Low	Long Term	Feasible	Local	**Veg-6:** Decommissioning Legislated Requirements.	None identified
Vegetation (Section 4.5)	Habitat Fragmentation	Solar Arrays BESSs Substations	Project decommissioning could result in habitat fragmentation from fire.	Low	Long Term	Unlikely	Local	**Veg-6:** Decommissioning Legislated Requirements.	None identified
Wildlife and Habitat (Section 4.6)	Habitat loss	Turbine Option 1 Turbine Option 2	The Project would result in temporary loss of habitat during decommissioning. No new permanent habitat loss is expected, and restoration activities are expected to replace and/or enhance habitat loss created during construction and operation.	Negligible	Short Term	Unavoidable	Local	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-7:** Roadway decommissioning. **Veg-1:** Tree Avoidance. **Veg-7:** Decommissioning revegetation plan.	None identified
Wildlife and Habitat (Section 4.6)	Habitat loss	Solar Arrays	The Project would result in temporary loss of habitat during decommissioning. No new permanent habitat loss is expected, and restoration activities are expected to replace and/or enhance habitat loss created during construction and operation.	Negligible	Short Term	Unavoidable	Confined	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-7:** Roadway decommissioning. **Veg-1:** Tree Avoidance. **Veg-7:** Decommissioning revegetation plan.	None identified
Wildlife and Habitat (Section 4.6)	Habitat loss	BESSs Substations	The Project would result in temporary loss of habitat during decommissioning. No new permanent habitat loss is expected, and restoration activities are expected to replace and/or enhance habitat loss created during construction and operation.	Negligible	Short Term	Unavoidable	Limited	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Hab-7:** Roadway decommissioning. **Veg-1:** Tree Avoidance. **Veg-7:** Decommissioning revegetation plan.	None identified

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Wildlife and Habitat (Section 4.6)	Mortality of non-special status species	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Sources of wildlife injuries and mortalities during decommissioning include collisions with equipment; removal of nuisance wildlife; destruction of nests, dens, and burrows; and habitat loss. The risk of mortalities would be limited to the duration of decommissioning.	Negligible	Short Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit activity disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** Schedule activities during daylight hours. **Wild-8:** Establish buffers around raptor nests.	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	Turbine Option 1 Turbine Option 2 Solar Arrays	Decommissioning would remove Project-related barriers to movement and reduce habitat fragmentation by removing infrastructure and revegetating disturbed areas.	Negligible	Short Term	Feasible	Confined	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan.	None identified
Wildlife and Habitat (Section 4.6)	Barriers to movement and fragmentation	BESSs Substations	Decommissioning would remove Project-related barriers to movement and reduce habitat fragmentation by removing infrastructure and revegetating disturbed areas.	Negligible	Short Term	Feasible	Limited	**Wild-5:** Limit activity disturbance by identifying sensitive areas. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: striped whipsnake and sagebrush lizard	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Ground disturbance and machinery use during Project decommissioning could result in mortality of striped whipsnake and sagebrush lizard.	Negligible	Short Term	Feasible	Confined	**Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan. **Spec-1:** Implement striped whipsnake and sagebrush lizard–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: American white pelican	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning of the Project may disturb American white pelicans moving over the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Hab-4:** Develop TAC. **Spec-2:** Implement American white pelican–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: bald eagle	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning of the Project could disturb bald eagles, resulting in avoidance of the Project site.	Negligible	Short Term	Feasible	Confined	**Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Veg-1:** Tree Avoidance. **Hab-4:** Develop TAC. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: burrowing owl	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning may result in mortality from machinery operation over the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** Schedule activity to daylight hours. **Wild-8:** Establish buffers around raptor nests. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan. **Spec-4:** Implement burrowing owl–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: ferruginous hawk	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning may result in mortality from machinery operation over the Lease Boundary.	Negligible	Short Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-8:** Establish buffers around raptor nests. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan. **Spec-5:** Ferruginous hawk–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: golden eagle	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning of the Project could disturb golden eagles, resulting in avoidance of the Project site, though golden eagle nesting has not been reported within 10 miles of the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-2:** Use wildlife-proof trash containers. **Wild-3:** Review USFWS eagle mortality consultation. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit construction disturbance by identifying sensitive areas. **Veg-1:** Tree Avoidance. **Hab-4:** Develop TAC. **Spec-3:** Implement eagle-specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: great blue heron and sandhill crane	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning activities may disturb birds flying over the Lease Boundary, resulting in bird flight paths being diverted around the area.	Negligible	Short Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Hab-4:** Develop TAC. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: loggerhead shrike	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning may disturb birds foraging and nesting in the Lease Boundary. Machinery could result in mortality of birds and destruction of nests.	Negligible	Short Term	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** schedule activities to daylight hours. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: prairie falcon	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Disturbance from decommissioning activities may result in disturbance to prairie falcons.	Negligible	Short Term	Unlikely	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-8:** Establish buffers around raptor nests. **Veg-1:** Tree Avoidance. **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan. **Spec-8:** Implement prairie falcon specific–mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: ring-necked pheasant	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Disturbance from decommissioning activities may result in indirect habitat loss. Access roads may result in collisions with ring-necked pheasants.	Negligible	Short Term	Feasible	Confined	**Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning **Veg-7:** Decommissioning revegetation plan **Spec-9:** Implement ring-necked pheasant–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: sagebrush sparrow and sage thrasher	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning may disturb birds foraging and nesting in the Lease Boundary. Machinery could result in mortality of birds and destruction of nests.	Negligible	Short Term	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Wild-7:** Schedule activities to daylight hours. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: tundra swan	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning may disturb tundra swans flying over and foraging in the Lease Boundary.	Negligible	Short Term	Feasible	Confined	**Wild-1:** Review 2-year raptor and bat monitoring program. **Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Hab-4:** Develop TAC. **Spec-6:** Implement great blue heron, sandhill crane, and tundra swan–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: Vaux's swift	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning of the Project could disturb Vaux's swifts in flight over the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Hab-4:** Develop TAC. **Spec-7:** Implement loggerhead shrike, sagebrush sparrow, sage thrasher, and Vaux's swift–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: black-tailed jackrabbit and white-tailed jackrabbit	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Disturbance from decommissioning activities may result in indirect habitat loss. Access roads may result in collisions with jackrabbits.	Negligible	Short Term	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities. **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan. **Spec-10:** Implement black and white-tailed jackrabbit–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's big-eared bat	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning activities could disturb Townsend's big-eared bat foraging in the Lease Boundary.	Negligible	Short Term	Unlikely	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-7:** Schedule construction during daylight hours. **Hab-4:** Develop TAC. **Spec-11:** Implement Townsend's big-eared bat–specific mitigation.	None identified
Wildlife and Habitat (Section 4.6)	Special status species: Townsend's ground squirrel	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Mortality may occur during decommissioning and along access roads.	Negligible	Short Term	Feasible	Confined	**Wild-4:** Avoid use of pesticides and rodenticides. **Wild-5:** Limit disturbance by identifying sensitive areas **Wild-6:** Maintain database of road mortalities **Hab-4:** Develop TAC. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan. **Spec-12:** Implement Townsend's ground squirrel–specific mitigation.	None identified

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Wildlife and Habitat (Section 4.6)	Special status species: pronghorn antelope	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning is predicted to result in indirect habitat loss. Increased traffic on existing and new access roads may result in pronghorn antelope mortality.	Negligible	Short Term	Feasible	Confined	**Wild-5:** Limit disturbance by identifying sensitive areas. **Wild-6:** Maintain database of road mortalities **Hab-4:** Develop TAC. **Hab-5:** Manage ZOI. **Hab-7:** Roadway decommissioning. **Veg-7:** Decommissioning revegetation plan. **Spec-13:** Implement pronghorn antelope–specific mitigation.	None identified
Energy (Section 4.7)	Consumption of Raw Materials and Commodities	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Energy consumption, predominantly in the form of gasoline, diesel fuel, and electricity, would be required to operate equipment such as cranes, trucks, tools, and vehicles used to dismantle and remove most Project facilities and reclaim disturbed areas. Backfilling void spaces created by the removal of foundations would require construction aggregate.	Low	Temporary to Short Term	Unavoidable	Local	**ENR-6:** Demolition or removal of all Project related equipment and facilities. **ENR-7:** Recycle all components of the Project.	None identified
Land and Shoreline Use (Section 4.8)	Agriculture	Turbine Option 1 Turbine Option 2 BESSs Substations	Similar to the construction stage	Negligible (farm plan modifications) Low (decreased productivity)	Temporary (brief access modifications) Short Term (seasonal restrictions	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan. **LSU-3:** Arrange for the removal of livestock. **LSU-4:** Confirm that site restoration activities are in alignment with the Applicant's decommissioning plan. **LSU-5:** Requirements for requesting an alternative land use as part of decommissioning.	None identified

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Land and Shoreline Use (Section 4.8)	Agriculture	Solar Arrays	Impacts would be less than those described for the construction stage as dryland wheat production located within the solar array project area would have previously been taken out of management.	Low	Temporary (brief access modifications) Short Term (seasonal restrictions)	Unavoidable	Limited (small area) Regional (decreased productivity)	**LSU-1:** The Applicant would prepare a livestock management plan. **LSU-2:** The Applicant would prepare a dryland farming management plan. **LSU-3:** Arrange for the removal of livestock. **LSU-4**: Confirm that site restoration activities are in alignment with the Applicant's decommissioning plan. **LSU-5:** Requirements for requesting an alternative land use as part of decommissioning.	None identified
Historic and Cultural Resources (Section 4.9)	Eligible Architectural Resources	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Impacts on environmental setting—visual, air quality and noise.	High	Short Term	Probable	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Traditional Cultural Properties	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Impacts on environmental setting – visual, air quality, noise, and loss of access.	High	Short Term	Probable	Regional	**CR-1:** Traditional Cultural Properties Mitigation	None identified
Historic and Cultural Resources (Section 4.9)	Unknown/ Unidentified Historic and Cultural Resources	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Impacts potentially resulting in the partial or complete loss of significant (previously unidentified) resources.	High	Constant	Unlikely	Local	**CR-2:** Archaeological and Architectural Resources Mitigation	None identified
Visual Aspects, Light and Glare (Section 4.10)	Visual Aspect	Turbine Option 1 Turbine Option 2	Activities would attract attention and would modify the localized existing landscape setting.	Medium	Short Term	Probable	Local	No mitigation identified	None identified
Recreation (Section 4.12)	Recreation – Use	Turbine Option 1 Turbine Option 2	Decommissioning would result in impacts on recreationists who use the Project's study area for recreational activities. Paragliders, hang gliders, and cyclists would be affected by the decommissioning of the Project.	Low	Short Term	Unavoidable	Local	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails). **R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe.	None identified

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Recreation (Section 4.12)	Recreation – Use	Solar Arrays	Decommissioning of the Sellards Solar Field would restrict access to a parcel of DNR-administered land within the Lease Boundary, resulting in a high impact.	High	Short Term	Unavoidable	Limited	**R-1:** Work with DNR and Benton County to identify new recreational activities and/or improve existing recreational activities within Lease Boundary (e.g., multi-use trails).	None identified
Recreation (Section 4.12)	Recreation – Recreational Experience	Turbine Option 1 Turbine Option 2 Solar Arrays	Indirect impacts related to visual resources and noise could occur at recreation sites. Impacts on noise receptors would occur locally, while visual impacts would occur at a regional spatial extent.	High	Short Term	Unavoidable	Regional	**R-2:** Provide informational boards, as approved by DNR and EFSEC, at viewpoints associated with scenic areas of interest.	None identified
Recreation (Section 4.12)	Recreation – Public Health and Safety	Turbine Option 1 Turbine Option 2 Solar Arrays	The Project's potential to affect the health and safety of recreationists using the area for paragliding, hang gliding, or biking would result in a medium impact.	Medium	Short Term	Unavoidable	Regional	**R-3:** Work with the local and regional clubs to provide and maintain a plan to keep recreationists safe	None identified
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	Turbine Option 1 Turbine Option 2	Combustible materials and lubricants are contained in the nacelle of the turbines. Diesel-powered generators may be used during decommissioning. Use of these materials could pose a fire risk.	Medium	Temporary	Feasible	Limited	No mitigation identified	None identified
Public Health and Safety (Section 4.13)	Fire (Worker Health and Safety)	Solar Arrays Substations BESSs	Fire resulting from decommissioning BESSs, solar arrays, and substations is unlikely, but wildfire risk in the area is considered high.	Medium	Temporary	Unlikely	Limited	No mitigation identified	None identified
Public Health and Safety (Section 4.13)	Smoke and Haze (Public Health)	Turbine Option 1 Turbine Option 2	If a fire were to occur during turbine decommissioning, indirect impacts could include smoke or haze, and a potential reduction in emergency response services.	Medium	Temporary	Feasible	Regional	No mitigation identified	None identified
Public Health and Safety (Section 4.13)	Smoke and Haze (Public Health)	Solar Arrays Substations BESSs	If a fire were to occur during decommissioning of the solar arrays, substations, or BESSs, indirect impacts could include smoke or haze, and a potential reduction in emergency response services.	Medium	Temporary	Unlikely	Regional	No mitigation identified	None identified
Public Health and Safety (Section 4.13)	Release of Hazardous Materials	Turbine Option 1 Turbine Option 2 Solar Arrays Substations BESSs	Project elements include small amounts of oil, which could be released during decommissioning.	Medium	Temporary	Unlikely	Limited	No mitigation identified	None identified

Table ES-4c: Summary of Potential Impacts by Component during Decommissioning of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Transportation (Section 4.14)	Vehicular Traffic	Turbine Option 1 Turbine Option 2	Decommissioning will require the removal and transportation of the dismantled pieces of the turbines, expected to be smaller than the pieces that arrived during the construction stage. The increase in traffic volumes is not expected to decrease level of service or cause a decline in roadway safety.	Low	Short Term	Unavoidable	Regional	**TR-1:** Daily transport communication, including emergency numbers. **TR-2:** Operation Lifesaver safety presentation and training. **TR-3:** Traffic Analysis. **TR-4:** Railroad crossing and grade change survey. **TR-5:** Traffic and Safety Management Plan.	None identified
Transportation (Section 4.14)	Vehicular Traffic	Solar Arrays	Decommissioning will require the removal and transportation of the solar arrays and supporting infrastructure. The increase in traffic volumes is not expected to decrease level of service or cause a decline in roadway safety.	Low	Short Term	Unavoidable	Local	**TR-1:** Daily transport communication, including emergency numbers. **TR-2:** Operation Lifesaver safety presentation and training**.** **TR-3:** Traffic Analysis. **TR-4:** Railroad crossing and grade change survey. **TR-5:** Traffic and Safety Management Plan.	None identified
Transportation (Section 4.14)	Vehicular Traffic	BESSs Substations	Decommissioning will require the removal and transportation of the BESSs and substations. The increase in traffic volumes is not expected to decrease level of service or cause a decline in roadway safety.	Low	Short Term	Probable	Local	**TR-1:** Daily transport communication, including emergency numbers. **TR-2:** Operation Lifesaver safety presentation and training. **TR-3:** Traffic Analysis. **TR-4:** Railroad crossing and grade change survey. **TR-5:** Traffic and Safety Management Plan.	None identified
Public Services and Utilities (Section 4.15)	Municipal Solid Waste	Turbine Option 1 Turbine Option 2 Solar BESSs Substations	After dismantling of the facility, high-value components would be removed for scrap value. The remaining materials would be reduced to transportable size and removed from the site for disposal. Existing facilities would maintain capacity to receive the Project's non-recyclable waste and continue to serve their communities.	Low	Constant	Unavoidable	Local to Regional	**ENR-7:** Recycle all applicable components. **PSU-1:** Use of a licensed waste disposal facility.	None identified

Table ES-4c: Summary of Potential Impacts by Component during Decommissioning of the Proposed Action

Section	Topic	Component[a]	Description of Impact[b]	Magnitude of Impact ▪ Negligible ▪ Low ▪ Medium ▪ High	Duration of Impact ▪ Temporary ▪ Short Term ▪ Long Term ▪ Constant	Likelihood of Impact ▪ Unlikely ▪ Feasible ▪ Probable ▪ Unavoidable	Spatial Extent or Setting of Impact ▪ Limited ▪ Confined ▪ Local ▪ Regional	Mitigation[c]	Significant Unavoidable Adverse Impacts[d]
Socioeconomics (Section 4.16)	Housing Availability	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	The majority of construction workers would be sourced locally; however, the Project's construction would require the temporary and short-term relocation of construction workers into the region.	Negligible to Low	Temporary to Short Term	Feasible	Regional	**Socio-ec-1:** Updated housing analysis to confirm temporary or short-term availability.	None identified
Socioeconomics (Section 4.16)	Wellbeing	Turbine Option 1 Turbine Option 2 Solar Arrays BESSs Substations	Decommissioning of the Project would restore property tax revenues for Benton County and the Tax Area to pre-Project conditions as the Project's added value would be removed from the parcels that make up the Lease Boundary's valuation. For example, smaller collections would impact operational budgets for schools, school districts, and fire stations within Benton County and the Tax Area.	Medium	Long Term	Feasible	Regional	No mitigation identified	None identified

Notes:
[a] Components were combined in the same cell if they received the same impact ratings for the identified topic.
[b] Design features, best management practices, and other actions proposed by the Applicant to avoid or minimize environmental impacts were assumed to be part of the Proposed Action and were taken into account when identifying the impacts.
[c] Mitigation measures listed here are additional actions that EFSEC could impose to further reduce the impacts. See Section 4.1 for details.
[d] Significant unavoidable impacts are those that would remain even after all identified additional mitigation measures have been required by EFSEC.
Applicant = Horse Heaven Wind Farm, LLC; BESS = battery energy storage system; DNR = Washington State Department of Natural Resources; EFSEC = Washington Energy Facility Site Evaluation Council; SWPPP = stormwater pollution prevention plan; TAC = Technical Advisory Committee; TUSFWS = U.S. Fish and Wildlife Service; WDFW = Washington Department of Fish and Wildlife; ZOI = zone of influence