

Horse Heaven Wind Farm

Ferruginous Hawk Nest Mitigation Plan

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1.0 Introduction

The Washington Energy Facility Site Evaluation Council's (EFSEC) Site Certification Agreement (SCA) for the Horse Heaven Wind Farm included a mitigation measure (Spec-5 Ferruginous Hawk) aimed at avoiding, minimizing, and mitigating impacts on the state endangered ferruginous hawk (*Buteo regalis*) during facility construction and operations. Spec-5 required that no primary facility infrastructure (i.e., wind turbine generators (WTGs), solar arrays, or battery energy storage facilities¹) are built within 2.0 miles of any ferruginous hawk nests documented in the Washington Department of Fish and Wildlife's (WDFW) Priority Habitats and Species (PHS) database, documented by the Certificate Holder's pre- construction raptor nest surveys, or established by the species prior to construction.

Spec-5 does allow the Certificate Holder to propose primary infrastructure between 0.6 – 2.0 miles of ferruginous hawk nest locations, but requires an assessment of nest site availability and habitat viability, in order to inform whether the proposed primary infrastructure should be allowed. In the Horse Heaven SCA habitat considered no longer available for ferruginous hawk would include habitat that has been altered by landscape-scale development (conversion to cropland, residential development, industrial development) rendering the territory non-viable. This could include habitats that have been altered such that insufficient native or foraging habitat remains.

Those nest site assessments are required to be reviewed by a Pre-operational Technical Advisory Group (PTAG), which will then make a recommendation to the Certificate Holder regarding where primary infrastructure should be allowed, and ultimately EFSEC would consider the evaluations completed by the PTAG and make a final decision on where primary infrastructure may be built in locations between 0.6 miles and 2.0 miles of any nest location.

Spec-5 further requires that in the event that a Project component is proposed for siting within the 2.0-mile buffer, the Certificate Holder shall, in consultation with the PTAG, develop a Project-specific ferruginous hawk mitigation and management plan (plan) for approval by EFSEC.

As described in the Horse Heaven SCA Spec-5 the plan shall include:

1. A description of efforts to site Project infrastructure to avoid core habitat, identified as the area within 2.0 miles of nests documented in PHS data and the Certificate Holder's nest surveys:
 - a. If Project wind turbines, solar arrays, or BESS are sited within 2.0 miles of a ferruginous hawk nest, the infrastructure shall be reviewed by the PTAG and approved by EFSEC.¹
 - b. Additional mitigation measures shall be developed to reduce potential ferruginous hawk strikes with wind turbines, including curtailing wind turbine operation within the 2-mile core habitat of any actively occupied nests diurnally during the breeding and rearing periods when ferruginous hawks are present in Benton County.

¹ There is an exception from this requirement for the battery energy storage system that is proposed adjacent to the substation, just east of I-82.
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- c. The plan shall explain how and where the Certificate Holder will create new offset habitat to mitigate for direct and indirect impacts within the 2.0-mile core area of ferruginous hawk nests documented in PHS data and the Certificate Holder's nest surveys.
2. A description of when construction activities will be undertaken to avoid sensitive timing periods for ferruginous hawks.
3. A description of pre- and post-monitoring programs that will be conducted to establish:
 - a. Habitat use within the Lease Boundary.
 - b. Mapping of ground squirrel colonies and other prey.
 - c. Identification of potential flyways between nest sites and foraging habitat and monitoring of potential flyways to inform final wind turbine siting and orientation.
 - d. Ongoing monitoring of nest use and territory success.
4. A description of restoration activities that will be undertaken during Project decommissioning to enhance ferruginous hawk habitat in disturbed areas. Results of ferruginous hawk monitoring programs and adaptive management.

This Ferruginous Hawk Mitigation Plan has been completed to fulfill this requirement.

2.0 PTAG Review of Project Design

The PTAG provided recommendations on where primary infrastructure could be sited, relative to documented ferruginous hawk nest locations. Those recommendations were included in the Horse Heaven Spec-5 Facilitator Report, which supported the EFSEC Council decision on Resolution 357, *Horse Heaven Wind Farm Site Certificate Agreement Implementation (Resolution 357)*. These recommendations, along with other exclusion areas identified in the Horse Heaven SCA (i.e., historic fire setbacks, residential setbacks, and cultural resource setbacks) will require exclusions on areas of the originally proposed Project. The Certificate Holder will revise the Project design to avoid the required setback areas included in the Horse Heaven SCA and any additional setbacks approved by EFSEC regarding ferruginous hawk core areas. As required by the Horse Heaven SCA, the PTAG will review any revised Project design to confirm it is consistent with Spec-5, and to ensure that it minimizes potential impacts to ferruginous hawks to the extent practicable.

While the PTAG was reviewing ferruginous hawk nest information that led to their recommendations in the Spec-5 Facilitator Report, the group also reviewed the required Ferruginous Hawk Nest Mitigation Plan (Mitigation Plan) because it was required by Spec-5 should any primary infrastructure be allowed within 2.0 miles of ferruginous hawk nest locations. PTAG comments were considered, discussed, and integrated into the draft Mitigation Plan. However, at the time, the PTAG decided that it was pre-decisional to attach the Mitigation Plan to the Spec-5 Facilitator Report because it made assumptions about what EFSEC Council might ultimately decide. Now that EFSEC Council has released Resolution 357 regarding determinations about where primary infrastructure can be built, this Mitigation Plan can be submitted as required. No Horse Heaven Wind Farm

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substantive changes have been made to the Mitigation Plan since the PTAG reviewed it in May 2025, except the impact numbers associated with primary infrastructure within 2.0 miles of ferruginous hawk nest locations, reflecting the EFSEC Council's decision in Resolution 357 have now been included.

3.0 Impacts and Mitigation

The Horse Heaven SCA requires the Certificate Holder to quantify the impacts by Project infrastructure, in locations that are within 2.0 miles of ferruginous hawk nests, in order to allow the PTAG and EFSEC to evaluate whether those impacts are adequately mitigated. EFSEC Council Resolution 357 determined where primary infrastructure can be built within 2.0 miles of ferruginous hawk nest locations. The anticipated infrastructure that is allowed within 2.0 miles of ferruginous hawk nest locations, as the result of that resolution, are the basis for the assessment in this Plan.

Avoidance and Minimization of Habitat Within Core Areas

Due to the determinations in EFSEC Council Resolution 357 primary infrastructure cannot be built within 0.6 miles of 38 ferruginous hawk historical nest locations or within 2.0 miles of four ferruginous hawk nest locations, which had been utilized at some point within the last 10 years. The Certificate Holder committed to no primary infrastructure within 2.0 miles of one nest location, which was active in 2025, meaning that the total number of nest locations subject to a 2.0-mile buffer is five. In a sixth location EFSEC Council chose not to make a determination because the Certificate Holder had not proposed any infrastructure within 2.0 miles of the historical nest location in the Project application, effectively retaining the potential for a 2.0-mile no primary infrastructure buffer around that nest, in the future. The result of the EFSEC Council resolution and Certificate Holder commitments resulted in 53 WTGs being removed from locations where primary infrastructure is now disallowed due to buffers on ferruginous hawk nest locations.

In most cases, secondary infrastructure, such as roads and underground collection lines associated with those WTGs, will also be removed. Because the Project still needs to be connected across the ferruginous hawk exclusion areas some roads and underground collection lines will still be needed, as will previously proposed overhead transmission lines. In these cases, all attempts will be made to co-locate facilities (e.g., roads, underground collection, or overhead transmission lines) whenever possible.

Core Area Impact Calculations

EFSEC approved primary infrastructure between 0.6 – 2.0 miles in 38 ferruginous hawk nest locations in Council Resolution 357. Since ferruginous hawk nest locations are typically close together, it is not uncommon for infrastructure proposed in one location to actually be within the core area of several ferruginous hawk nests. The total acres of impact that would occur in ferruginous hawk core areas is provided in Table 1. Impact calculations include both permanent

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and temporary impacts and are summarized by land cover type, in order to allow for an examination of whether the impacts would result in impacts to ferruginous hawks, resulting in a mitigation need.

Table 1. Impacts Within Ferruginous Hawk Buffers¹ by Land Cover Type

Vegetation Type	Permanent Impacts (acres)	Temporary Impacts (acres)
Agricultural Land	61	557
Developed/Disturbed	1	7
Grassland ²	23	105
Shrubland ³	4	31
Total	89	700

¹ Reflects impacts located within ferruginous hawk nest buffers as allowed by the Site Certificate and through follow-on action by EFSEC on Spec-5.

² Includes eastside grassland, planted grassland, and non-native grassland.

³ Includes rabbitbrush shrubland and sagebrush shrub-steppe.

Mitigation and Monitoring of Impacts in Core Areas

Mitigation of impacts in ferruginous hawk core areas will be consistent with mitigation outlined in the Horse Heaven Wind Farm Draft Habitat Mitigation Plan (HMP), provided as Appendix L in the Project's ASC. The Draft HMP includes mitigation ratios for each habitat type and specifies that the mitigation will occur in a location that is within the core area of a ferruginous hawk nest location.

[Washington Administrative Code Chapter 197-11-768 outlines the types of actions that can be considered as "mitigation" by the Certificate Holder and EFSEC, broadly defined as avoidance, minimization, restoration, preservation, compensation, and monitoring with adaptive management.](#)

Note that mitigation does not have to occur within the core area of a ferruginous hawk nest in the Horse Heaven Hills. Mitigation could occur within the core area of a nest located somewhere else, outside of the Project Area. The Draft HMP includes three mitigation options: 1) conservation easement, 2) mitigation payment to WDFW, or 3) mitigation payment to a local conservation entity.

Mitigation Actions

The preferred option in the Draft HMP was to execute a conservation easement over lands that could mitigate the loss of functions and values of habitat that are permanently or temporarily impacted by the Project. Since then, the Certificate Holder has engaged in discussions with local conservation districts to determine if there are areas outside of the Project Area where mitigation dollars could be allocated (i.e., dollars that are equivalent to placing a conservation easement on lands, as described in the HMP) in order to implement more meaningful habitat protection and management in the ecosystem. In either case, mitigation actions will be completed within home ranges of existing or historic ferruginous hawk nests, preferably within Core Area, provided opportunities exist. Based on the mitigation ratios included in the Draft HMP, and agreed to by WDFW and EFSEC, Table 2 summarizes the acres of habitat mitigation that would occur as a result of impacts within ferruginous hawk core areas. Refer to Table 1 for impact acres in ferruginous hawk core areas.

Mitigation actions will include a combination of protection of an area, either directly or through a third-party entity (e.g., resource conservation district or non-profit) that supports sufficient habitat and that will achieve the mitigation acreage target, based on the mitigation ratios (Table 1). Mitigation actions can include a combination of protection of existing habitat and restoration of degraded habitat back to a higher quality habitat condition. The activities needed to improve and maintain habitat quality will depend on the baseline conditions of the location, but will generally include 1) management of noxious weeds, 2) management of informal and illegal trespassing that degrades habitat quality, 3) restoration or enhancement of grassland or shrubsteppe vegetation communities, and 4) management to reduce fire risk.

Table 2. Summary of Mitigation Acres by Vegetation Type Needed to Offset Habitat Impacts Within Ferruginous Hawk Buffers¹

Vegetation Type	Permanent Impacts Mitigation Ratio ²	Permanent Impact Mitigation Acres	Temporary Impacts Mitigation Ratio ²	Temporary Impacts Mitigation Acres	Total Mitigation Acres
Agricultural Land	0:1	0	0:1	0	0
Developed/Disturbed	0:1	0	0:1	0	0
Grassland ³	1:1	23	0.1:1	10	33
Shrubland ⁴	2:1	8	0.5:1	16	24
Total	--	31	--	26	57

¹ Reflects impacts located within ferruginous hawk nest buffers as allowed by the Site Certification Agreement and EFSEC Resolution 357 regarding Spec-5.

² Ratios are consistent with those approved by EFSEC and WDFW in the Habitat Mitigation Plan.

³ Includes eastside grassland, planted grassland, and non-native grassland.

⁴ Includes rabbitbrush shrubland and sagebrush shrub-steppe.

Artificial Nest Platforms

The Draft HMP also describes the potential for installation of artificial nesting platforms (ANPs) in locations where nesting locations are limited. The Certificate Holder could install ANPs either in a mitigation area or in a location where WDFW has high confidence that the ANP could be used by ferruginous hawks. This would include locations where ferruginous hawks had been documented nesting in the past and the supporting nest structure was no longer available. Typically, this would be in situations where the ferruginous hawk was nesting in a tree, which had blown down or been removed. In the Project Area ferruginous hawks have been documented nesting in trees, but it is rare. At some point those trees will die and fall down and there is no recruitment of new trees into those locations. Those would offer opportunities to install an ANP, to replace the tree, as long as the ANP is sited in a location acceptable to landowners. ANPs could also be installed in other locations, outside of the Project Area or even outside of Benton County, in locations where they are needed and where landowners are willing to host them. [In the event of a disagreement between WDFW and the Certificate Holder on the placement of an ANP, EFSEC will review relevant information, including historic nesting data, vegetative land cover, and prey species estimates, and determine whether the ANP should or should not be installed.](#)

Monitoring of Management Actions

Implementation of habitat mitigation activities will be accompanied by a monitoring program. The monitoring program will aim to document the effectiveness of mitigation actions over time in order to ensure that the impacts within core areas are fully offset. In existing shrubsteppe and grassland habitats, monitoring will include documentation of management activities, such as ongoing invasive species control, maintenance of fire breaks, and any overseeding of existing habitat in order to increase vegetation cover or diversity. In areas that will be restored from agricultural uses to shrubsteppe or grassland, monitoring will include changes in vegetation cover and diversity over time, ongoing invasive species management, any necessary reseeded in locations that were less successful, and documentation of changes in wildlife use as the landscape transitions from agricultural use to more natural grassland or shrubsteppe habitat. [The specifics of this monitoring plan, including its length, will be described in the habitat mitigation plan currently being developed for EFSEC approval.](#)

Restoration of Habitat Following Decommissioning

A [decommissioning](#) plan was completed in support of the ASC. The requirements for site restoration following decommissioning are included in that plan. In summary, following decommissioning all Project infrastructure will be removed, potentially with the exception of some roads that will be retained for farm use or long-term fire management and control. Once Project infrastructure is removed the land will be returned to pre-project conditions. In most cases this will result in the land being returned to an agricultural condition, but in locations where non-agricultural land uses or vegetation types were removed by the Project, those vegetation types will

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be restored. [An initial site restoration plan will be submitted to EFSEC for approval at least 90 days prior to the beginning of construction, with a detailed site restoration plan submitted within 90 days of the end of operations. The duration of post-restoration monitoring and criteria for determining the success of restoration will be further outlined in those plans.](#)

4.0 Monitoring of Ferruginous Hawk Nesting Activity

The Certificate Holder has conducted annual raptor nest surveys in the Project Area from 2017 through 2025, with the exception of two years (2020 and 2021) due to the Covid-19 Pandemic. These surveys will also be conducted for three of the first five years of Project operations. These surveys are conducted twice within each study year, once in March or early April and a second time in late- April or May. This allows surveyors to detect both early and late season nesting species. These surveys are only intended to document the presence or absence of nesting activity and not to fully document nesting outcomes or productivity. This survey methodology is consistent with standard practices for the renewable energy industry nationally, and also consistent with WDFW protocols for Washington State. The surveys consist of general searching for raptor nesting activity, combined with targeted surveys of known ferruginous hawk nest locations in order to document any activity at those locations. Nesting activity is recorded, including species using a nest, any observed behaviors, especially those indicative of nesting activity, and nest condition.

5.0 Minimization of Ferruginous Hawk Mortality Through Operational Changes

In instances where an active ferruginous hawk nest is observed, Project-related activities will be modified to avoid human disturbance to the nesting birds and reduce the risk of wind turbine strikes. Project activities would be modified during construction and operational phases of the Project.

Construction

If an active ferruginous hawk nest is documented during the construction phase of the Project any construction activities within 2.0 miles of the active nest, or within line of sight of the nest, whichever is greater, will be maintained as a no-activity buffer, while the nest is active. The nest will be considered active as long as at least one adult is tending the nest or incubating eggs, the nest contains nestlings, or fledged young and adults are in the vicinity of the nest during the post-fledging period. Once a nest fails or fledglings leave the nest and are no longer seen in the nesting tree (i.e., are free flying and foraging on their own), construction activities may resume within the no-activity buffer. The nest status will be determined [based on regular monitoring](#) by a qualified biologist [and](#) in coordination with WDFW and EFSEC.

Operations

If an active ferruginous hawk nest is documented during the operational phase of the Project, any wind turbine generators within 2.0 miles of the active nest will be curtailed during daylight hours (i.e., time of day when ferruginous hawks are foraging and could be at risk of wind turbine strike) for as long as the nest remains active. [The nest status will be determined based on regular monitoring by a qualified biologist and in coordination with WDFW and EFSEC.](#) There could be two exceptions to this requirement.

The first exception to this requirement would be if a qualified biologist, in coordination with WDFW and EFSEC, established through field observations, determines that the nesting ferruginous hawks were routinely foraging in locations that do not overlap with wind turbine locations. This could be all of the wind turbines within 2.0 miles of a nest location or a subset, depending on behavioral patterns of the nesting ferruginous hawks.

The second exception to the requirement would be if technology could be deployed that would automatically shut wind turbines down if a ferruginous hawk was observed within some predetermined distance. These automated technologies are routinely used for other species, such as eagles and condors. At present, some technologies do not have the ability to differentiate species and instead rely on size and shape of birds to trigger a curtailment. That means that other similarly sized raptor species could also trigger a shutdown of wind turbines. This overly conservative approach would be protective of ferruginous hawks. Through machine learning, future technology may be able to better differentiate by species based on photographic images.

If automated curtailment technology was used, it would initially be accompanied by a human observer in contact with remote operations staff with the ability to shut down WTGs, as a safeguard against any system failures, until or unless it has been well established through research that automatic curtailment was effective for ferruginous hawks. Any use of automated curtailment would be coordinated with WDFW and EFSEC.

6.0 Post-construction Mortality Monitoring

The Certificate Holder is required to conduct post-construction mortality monitoring at the facility, during operations, as described in Horse Heaven SCA Mitigation Measure Wild-1 Post-construction Bird and Bat Fatality Monitoring Program. The details of this monitoring plan are outlined in the revised Bird and Bat Conservation Strategy, which is provided under separate cover. As required by Wild-1, at a minimum the Certificate Holder will conduct post-construction mortality monitoring in three of the first five years of operations.

7.0 Reporting

Results of ferruginous hawk nest surveys, and any associated adaptive management measures implemented to minimize impacts on nesting ferruginous hawks during construction or operation of the facility, will be shared with the PTAG or Technical Advisory Committee (TAC), whichever is convened at the time the report is completed. The PTAG will cease to exist just prior to operations and will be replaced by the TAC. In addition, the results of post-construction mortality monitoring will be shared with the TAC, which will work with the Certificate Holder and EFSEC on any necessary adaptive management actions in response to the monitoring results.