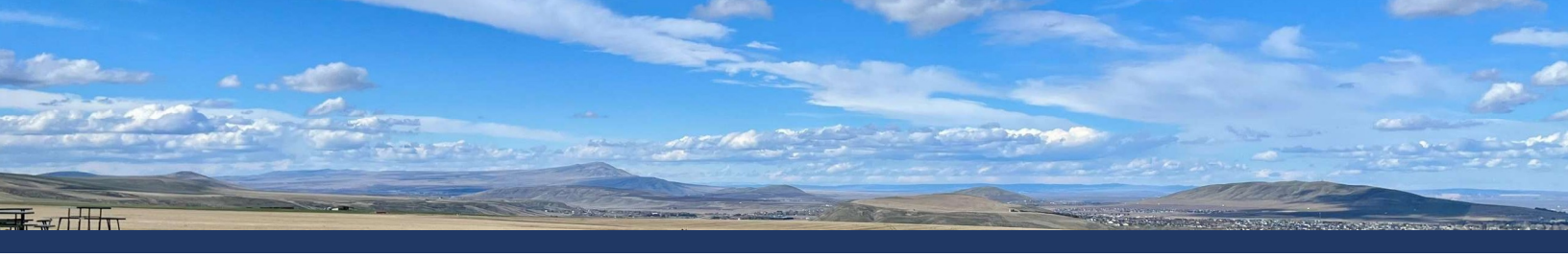


Horse Heaven Wind Farm

Pre-operational Technical Advisory Group

Facilitator Report: Spec-5

Prepared for:

Horse Heaven Wind Farm, LLC.

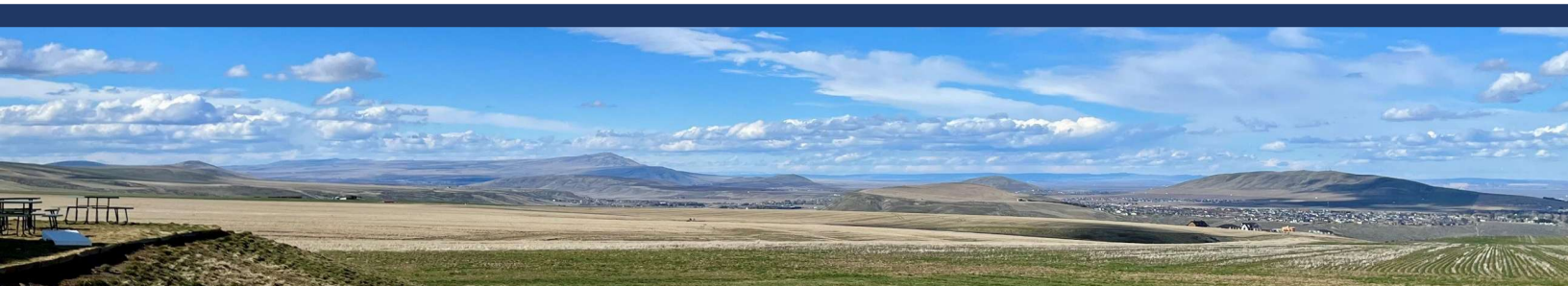
Prepared by:

KEARNS & WEST

TETRA TECH

June 2025

Redacted – For Public Use



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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 includes a mitigation measure (Spec-5) 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 turbines, solar arrays, or battery energy storage facilities) 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, subject to certain conditions.

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 is allowed. 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 could be allowed. The Certificate Holder would then make a final decision on where primary infrastructure is proposed to be built in locations between 0.6 – 2.0 miles of any nest location and make a recommendation for EFSEC to consider, including the evaluations completed by the PTAG.

This Facilitator Report includes a summary of the process the PTAG used to meet the terms of Spec-5 and includes recommendations for the Certificate Holder and EFSEC's consideration for where primary infrastructure is permitted to be built between 0.6 – 2.0 miles of documented ferruginous hawk nest locations.

2.0 Mitigation Measure Spec-5

The EFSEC SCA Mitigation Measure Spec-5, invokes the involvement of the PTAG in the determination of whether ferruginous hawk nests sites remain available and habitat in ferruginous hawk core areas remains viable, and by extension, whether primary infrastructure could be permitted within the area between 0.6 – 2.0 miles of documented ferruginous hawk nest locations. The specifics of Spec-5, which guided the work by the PTAG are as follows:

Spec-5 Ferruginous Hawk:

The Certificate Holder shall not site any wind turbines, solar arrays, or BESS [battery energy storage system] *within a 0.6-mile (1km) radius surrounding ferruginous hawk nests:*

- *Documented in PHS data on the effective date of the SCA,*
- *Identified in the Certificate Holder's nest surveys, and/or*
- *That may be newly established by the species between the SCA effective date and the time of construction.*

The Certificate Holder shall avoid siting wind turbines, solar arrays, and BESS within a 0.6-2-mile radius surrounding documented ferruginous hawk nests, unless the Certificate Holder is able to demonstrate that:

- *Compensation habitat, as described below, will provide a net gain in ferruginous hawk habitat and either:*
    - *The nesting site is no longer available, or*
    - *The foraging habitat within the 2-mile radius is no longer viable for the species.*

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. Project turbines, solar arrays, or BESS shall not be sited within 2 miles of a ferruginous hawk nest without prior approval by EFSEC based on the process described below.

The extent of component encroachment into core habitat in ferruginous hawk territories, defined as the area within a 2-mile radius surrounding documented nests, may vary depending on the type of infrastructure proposed (i.e., turbine, solar array, BESS). If siting of these components within 2 miles of a nest is considered by the Certificate Holder, the Certificate Holder shall develop, in consultation with the PTAG for approval by EFSEC:

1. *A set of habitat parameters to document whether habitat in a core range is considered non-viable. The results of habitat surveys and their relation to these habitat parameters shall be reviewed by the PTAG and approved by EFSEC.*
2. *A description of the current viable nesting habitat, available nesting sites, and a description of documented use of the core habitat by ferruginous hawk available through historic background information or field-based surveys.*
3. *A description of the type and location of infrastructure proposed within the core habitat.*
4. *The proximity of infrastructure to any known nest site or suitable foraging habitat.*

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

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 the Certificate Holder's nest surveys:*
    a. *If Project turbines, solar arrays, or BESS are sited within 2 miles of a ferruginous hawk nest, the infrastructure shall be reviewed by the PTAG and approved by EFSEC.*
    b. *Additional mitigation measures shall 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 diurnally during the breeding and rearing periods when ferruginous hawks are present in Benton County.

   c. *The plan shall explain how and where the Certificate Holder will create new offset habitat to mitigate for direct and indirect habitat loss within the 2-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 hawk.*
3. *A description of pre- and post-monitoring programs that will be conducted to establish:*
   a. *Habitat use within the Lease Boundary.*
   b. *Mapping of ground squirrel colonies and other prey.*
   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 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 will continue through Project operation and decommissioning with review by the TAC and approval by EFSEC.

Exemption from Spec-5 for East BESS: The Certificate Holder intends to locate the East BESS within the footprint of the East Substation, which is itself located within 2 miles of a documented ferruginous hawk nest. The East BESS is exempted from the 0.6-mile and 2-mile buffers described in this measure so long as it remains co-located with the East Substation and remains subject to the other requirements of this measure. While the substation is not subject to buffer requirements of this mitigation measure, absent this exemption, relocation of the BESS would be required. The rationale for this exemption is that the footprint of the East Substation represents an area of permanent disturbance. Relocating the East BESS elsewhere would necessarily result in an increase in permanent habitat disturbance without any accompanying mitigative effect. Applying this 0.6-mile and 2-mile nest buffers to the East BESS would be contrary to the mitigative intent of this measure.

3.0 Ferruginous Hawk Nests Under Review

Spec-5 defines ferruginous hawk nests that need to be further reviewed by the Certificate Holder and the PTAG as those:

- Documented in PHS data on the effective date of the SCA (October 18, 2024),
- Identified in the Certificate Holder's nest surveys, and/or
- That may be newly established by the species between the SCA effective date and the time of construction.

Based on those criteria there were 45 nests that needed to be assessed by the PTAG. Each ferruginous hawk nest location has a unique numerical WDFW PHS identifier. The ferruginous

hawk nest locations that are included in the WDFW PHS database have variable nest monitoring histories. The monitoring history and nesting activity of each nest location is included in Attachment 1. Until 2017, nearly all of the monitoring of ferruginous hawk nesting activity occurred by WDFW staff, members of the Lower Columbia Basin Audubon Society, or the Bureau of Land Management, which owns land along the ridgeline south of Benton City, Washington.

4.0 Considerations for Nest-by-Nest Recommendations

The PTAG developed a nest-by-nest evaluation process to determine whether:

- *The nesting site is no longer available, or*
- *The foraging habitat within the 2-mile radius is no longer viable for the species*

4.1 Nest Site Availability

The PTAG determined all but 1 of the 45 nest sites were still "available," meaning that the supporting nest structure was still present. Most of the nests were ground nests, so the supporting nest structure was a hillside, rock outcrop, or cliff. By definition, those structures are still available for future use, even in situations where the previously documented nest is no longer present or is in poor condition. Where some of the nests are located in trees, the trees are still standing (though some are dead) meaning that the supporting nest structure is still present. So, the availability of a nest site did not factor into decision making regarding Project-related infrastructure for any of the nests.

4.2 Foraging Habitat Viability

The PTAG deliberated over what vegetation types and land uses in the Project Area would support ferruginous hawk foraging. The PTAG relied on information in the WDFW Ferruginous Hawk Management Recommendations (Watson and Azerrad 2024), which acknowledges that in Washington, ferruginous hawk tend to use a mosaic of habitat, consisting of native types (shrubsteppe and grassland), croplands, including both irrigated crops and dryland agriculture, as well as grazing lands. Notably, grazing lands are often comprised of a mosaic of grasslands and shrublands. The management recommendations also note that ferruginous hawks use pasturelands and the margins and edges of croplands.

This was based on a study by Leary et al. (1998), in the Horse Heaven Hills, which radio tagged seven ferruginous hawks and documented all but one of them foraging extensively in irrigated agricultural fields, as well as in native habitat. Leary et al. (1998) also notes that when considering the value of croplands as foraging habitat, the canopy cover of crops during the nesting season may be important. Therefore, crops such as alfalfa may be most suitable, since they are harvested multiple times a year, meaning that at some point during the nesting season the crop canopy cover would be low enough to favor ferruginous hawk foraging. Leary et al. (1998) notes that dryland wheat fields have high plant canopy cover throughout most of the nesting season, since they are

harvested in mid- to late summer. In those instances, ferruginous hawks nesting in areas with a high proportion of dryland wheat would likely travel farther to find prey.

In the Project Area the wheat farming practices typically include approximately one-half of the fields being left fallow every other year, which means that in any given year one-half of the wheat fields could have little to no plant canopy cover, making it more available for ferruginous hawk foraging. This flexibility in habitat use for foraging was further supported in a study in Klickitat County, just southwest of the Project Area, where Watson et al. (2023) found that the diet of ferruginous hawks is comprised primarily of pocket gophers (60 percent) and snakes (20 percent), prey items that could occur across native and agricultural land cover types. Refer to Table 1 below for referenced habitat types from the WDFW Ferruginous Hawk Management Recommendations (Watson and Azerrad 2024).

Table 1. Natural Vegetation and Agricultural Cover Types Associated with Ferruginous Hawk Breeding Habitat (*excerpted from Table 2 in Watson and Azerrad 2024*).

Natural Vegetation Types[1]
Columbia Plateau Scabland Shrubland
Inter-Mountain Basins Big Sagebrush Shrubland
Columbia Plateau Steppe and Grassland
Inter-Mountain Basins Big Sagebrush Steppe
Inter-Mountain Basins Semi-Desert Shrub-Steppe
Columbia Basin Foothill and Canyon Dry Grassland
Columbia Basin Palouse Prairie
Inter-Mountain Basins Active and Stabilized Dune
Inter-Mountain Basins Cliff and Canyon
Agricultural Cover Types[2]
Pasture
Other[3]
[1] Vegetation types associated with ferruginous hawk breeding areas according to the Washington State Wildlife Action Plan (WDFW 2015). [2] Below are the two primary "crop group" where breeding ferruginous hawks may nest or hunt. Source: Washington Department of Agriculture Crop Database [3] "Other" is a crop group that includes fallow irrigated cropland edges, which has value to breeding ferruginous hawks.

The acknowledgment that cropland provides habitat value for ferruginous hawks differs from what is stated in the EFSEC SCA Spec-5, which considers areas that have been altered by landscape-scale development (conversion to cropland, residential development, industrial development) as no longer available for use by ferruginous hawks. When considering foraging habitat viability, the PTAG relied on published literature and WDFW guidance documents to elevate cropland foraging viability, rather than the language in the Spec-5 measure regarding croplands.

The SCA requires that the Certificate Holder consider:

- *A set of habitat parameters to document whether habitat in a core range is considered non-viable. The results of habitat surveys and their relation to these habitat parameters shall be reviewed by the PTAG and approved by EFSEC.*
- *A description of the current viable nesting habitat, available nesting sites, and a description of documented use of the core habitat by ferruginous hawk available through historic background information or field-based surveys.*

The Nest Assessment Worksheets, Section 4.3 of this report, includes a summary of the vegetation types and land uses within the 2.0-mile core area for each nest or group of nests. Due to the size of the core areas and the locations of the nest sites, large portions of the core areas are located outside of the Project Boundary and beyond the Certificate Holder's site control, so no additional field surveys were conducted during the PTAG nest assessment process. The PTAG conducted an in-person site visit to the Project area including many of the areas surrounding the nests. In addition, the PTAG examined air photos, in Google Earth, including historical air photos going back to 1996, to assess changes in land use that could influence habitat viability or habitat quality over time. The PTAG membership includes local tribes, local area residents and agency staff who were also able to share current information about land use and development changes. This information was summarized in the Nest Assessment Sheet for each nest or group of nests. The nest assessments also focused on specific or discrete land uses or activities that could influence the likelihood of ferruginous hawks nesting in the same locations again. This included things such as 1) residential development, 2) informal ATV and other public use or access to trails or property for recreation or dumping, 3) formal and informal shooting ranges, or 4) changes in habitat quality due to past wildfire activity.

The SCA also charged the Certificate Holder and the PTAG to include:

- *A description of the type and location of infrastructure proposed within the core habitat.*
- *The proximity of infrastructure to any known nest site or suitable foraging habitat.*

That information is included in the recommendation summary sheet, included in Section 6.0, but is subject to change as the Project layout is redesigned in response to the EFSEC approved Spec-5 mitigation measure setbacks.

4.3 Nest Assessment Worksheet

In order to systematically assess each nest in a similar fashion, the PTAG used the Nest Assessment Sheet shown in Table 2. The considerations included in the sheet were not meant to be definitive or

disqualifying in terms of the availability of a nest site or viability of habitat in a core area, but rather an intent to evaluate each nest in a similar fashion, asking the same questions, and examining consistent data. Completed Nest Assessment Sheets are included as Attachment 2. There is not one sheet for each nest. Some nests are so close in proximity that the outcomes of the assessment are the same. In those instances, multiple nests may have been included on one Nest Assessment Sheet.

The PTAG did consider whether ferruginous hawks are likely to use the nest locations in the future, based on changes in land use or proximity to human settlement and activity in the core area, since the last time the nest was documented as active. Table 2 shows the Nest Site Assessment Sheet and several of the considerations were aimed at documenting these factors.

Table 2. Ferruginous Hawk Nest Assessment Sheet

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	

5.0 PTAG Deliberation and Recommendation Process

The process for the PTAG to address the requirements in the EFSEC SCA Spec-5 began with an introductory meeting, where the PTAG reviewed its roles and responsibilities and the Rules of Procedure. This introductory meeting was followed by an all-day in-person meeting, which included a combination of presentations, where history of ferruginous hawk nesting in the Project Area was discussed, and a field tour where the PTAG was able to see the extent of the proposed Project, including several locations that would become relevant during discussions about ferruginous hawks. That then set the stage for a series of biweekly meetings, where the PTAG determined how to complete the requests in Spec-5, including the creation of the Nest Assessment process, and discussed and assessed all 45 ferruginous hawk nests in the Project Area. The PTAG met a total of nine times from February to May 2025, including eight 3-hour virtual meetings and one all-day in-person meeting and site tour. A complete list of PTAG members, alternates, and observers and their participation is in Attachment 4.

PTAG Members and Observers on the field tour of the Project Area, March 2025

The Certificate Holder provided the first draft of the Nest Assessment Sheet to the PTAG, in the form of a flow chart. The PTAG tested the flow chart using actual ferruginous hawk nests and offered recommendations for how to modify it. Ultimately it was determined that a Nest Assessment Sheet would work better than a flow chart and "considerations" were more appropriate than "criteria" when determining what the PTAG would recommend regarding primary Project infrastructure around each nest. Once the PTAG agreed on the Nest Assessment considerations, four meetings were spent reviewing the draft assessment sheets for each nest, reviewing on-screen air photos, habitat data, land uses, and past nesting activity to inform whether the PTAG felt that placing new Project-related primary infrastructure between 0.6 – 2.0 miles of a nest would further reduce the likelihood that it would be used by ferruginous hawks in the future. The recommendations that resulted from those discussions are summarized in Section 6.0.

The PTAG was established by EFSEC-approved Rules of Procedure as an advisory panel and does not require consensus-based results. Through discussion and deliberation, the PTAG was able to reach consensus on 40 of the 45 nest locations. For the 5 locations where consensus was not reached, the group had difficulty in determining how best to describe and convey their differing perspectives to the Certificate Holder in this report, ultimately deciding upon the information provided in Section 6.2. The information included in this report is intended to provide the Certificate Holder and EFSEC with enough detail to illustrate the nature of the discussion that

occurred without attributing specific positions to organizations or individuals. The PTAG would also advise the Certificate Holder and EFSEC to review the relevant sections of the detailed meeting minutes, in which the discussions about the 5 nests where consensus was not reached are described in more detail.[1]

6.0 Summary of PTAG Recommendations By Nest

Following discussion about each nest or group of nests, the PTAG made a recommendation regarding whether primary Project infrastructure should be built between 0.6 – 2.0 miles of the documented nest location. Those recommendations are included in Table 3, along with the infrastructure proposed between 0.6 – 2.0 miles for the Option #1 layout that was included in the Application for Site Certification and covered by the SCA. Completed Nest Worksheets for each nest are included in Attachment 2.

The PTAG considered a range of factors for each nest including historical ferruginous hawk activity, structure availability, habitat quality, foraging availability, human disturbance and development, impacts from fire, land use changes over time, and current setbacks for development, fire, and cultural considerations. Since many of the nests are in close proximity to one another, the PTAG realized that many of the same factors that influence one nest would also influence others. In these instances, the PTAG decided that it would be appropriate to consider these nests together as groups and made similar recommendations for the nest locations within these groups.

The Certificate Holder identified the importance of finding a balance between conservation and the state's clean energy goals and shared project considerations with the PTAG including design, operation and economic impacts associated with a range of buffers around nests. The Certificate Holder noted the mitigation obligation for the Project and suggested focusing conservation and mitigation investments outside the Project Area in locations that would have the highest benefit to the species where ferruginous hawk activity has been documented and persisted over time.

6.1 Areas of Agreement

The PTAG reached agreement on their recommendations for 40 of the 45 nests reviewed to allow primary infrastructure within 0.6 - 2.0 miles of the nests (Figure 1). For most of these nests, the PTAG found that the lack of documented ferruginous hawk activity, combined with land use changes over time, human disturbance and changes in habitat quality and availability together with setbacks for fire, development and cultural considerations – were compelling considerations to recommend allowing primary infrastructure within 0.6 - 2.0 miles of the nests. There were a few instances, the Chandler Butte area for example, where the PTAG discussed how to arrange the

[1] Horse Heaven PTAG Meeting 7 Minutes, dated May 16, 2025, Pages 6-14.

buffer area in a different shape rather than a circle to minimize impacts on adjacent habitat outside of the Project Area.

6.2 Areas of Disagreement

The PTAG discussed different recommendations for a cluster of 5 nests, including a newly discovered occupied nest named [redacted], and around [redacted] and [redacted] nests (Figure 1). Many members of the PTAG observed that this portion of the Project Area had more of the habitat quality and attributes known to be suitable for ferruginous hawks, had relatively unchanged land use or human development patterns, and had some of the more recent documented ferruginous hawk activity.

6.2.1 Rationale for Disagreement

The discovery by the Certificate Holder in a spring 2025 survey that ferruginous hawks were occupying a nest that was previously used by a Swainson's hawk nest near [redacted] was further compelling for many of the PTAG members to recommend no primary infrastructure within 2.0 miles for each of these clustered nests. They found it difficult to assess the Spec-5 requirement of a nest site being unavailable or habitat being no longer viable, which was one of the requirements for the PTAG to be able to recommend allowing primary infrastructure within the 0.6 - 2.0 mile buffer, relative to one of the nests being currently active, so chose to disallow primary infrastructure between 0.6 – 2.0 miles for the full 5-nest cluster.

Some PTAG members disagreed with this recommendation, questioning the fidelity of ferruginous hawks to this area due to infrequent nesting activity over a long period of time and the historical competition for nest sites between Swainson's hawks, red-tailed hawks, great horned owls, common ravens, and ferruginous hawks – noting that the [redacted] nest has never been documented as occupied by ferruginous hawks in the PHS database and most recently had been occupied by Swainson's hawks. They were concerned about the long-term Project impact associated with the full 2.0-mile setback given the uncertainty of future land uses with the 2.0-mile area and the lack of regular ferruginous hawk persistence in the area. These PTAG members support primary infrastructure within 0.6 - 2.0 miles for some of this area relative to mitigation investments that will be evaluated in the Project Habitat Mitigation Plan final update (Project Application for Site Certification Appendix L).

Several PTAG members did not offer a recommendation for the 5-nest cluster.

The PTAG discussed ideas and options for the Certificate Holder to consider other locations for primary infrastructure including along I-82, a four-lane highway with a two-lane frontage road. The Certificate Holder described looking for options to move primary infrastructure outside of 2.0 miles of the nests, including field visits to the Project Area for an in-person assessment, but did not find good options for either wind turbines or solar arrays. The primary reason is that there is not much additional land under lease outside of the 2.0-mile buffer and inside the Project Boundary, as the boundary of the Project Area is fixed.

Figure 1. Ferruginous Hawk Nest Buffers in the Project Area

Redacted for Confidentiality Purposes

Table 3. Summary of PTAG Recommendations for Ferruginous Hawk Nest Locations

PHS Nest Number	Territory Name	Primary Infrastructure Proposed Between 0.6 – 2.0 Miles of Nest Location After Exclusions (Option #1)	PTAG Recommendation
[redacted]	[redacted]	No infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in the southeast quadrant of the Core Area in locations outside of other required setback areas. No primary infrastructure will be built between the nest and I-82.
[redacted]	[redacted]	2 Wind Turbine Generators (WTG)	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	2 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	2 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	7 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	3 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	3 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	2 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas

PHS Nest Number	Territory Name	Primary Infrastructure Proposed Between 0.6 – 2.0 Miles of Nest Location After Exclusions (Option #1)	PTAG Recommendation
[redacted]	[redacted]	6 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	6 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	3 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	2 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	3 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	3 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	4 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	4 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	4 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	5 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	4 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas

PHS Nest Number	Territory Name	Primary Infrastructure Proposed Between 0.6 – 2.0 Miles of Nest Location After Exclusions (Option #1)	PTAG Recommendation
[redacted]	[redacted]	19 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	5 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	5 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	11 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	11 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	7 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	7 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	7 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas

PHS Nest Number	Territory Name	Primary Infrastructure Proposed Between 0.6 – 2.0 Miles of Nest Location After Exclusions (Option #1)	PTAG Recommendation
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	No Primary Infrastructure	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas
[redacted]	[redacted]	15 WTG	Many of the PTAG members acknowledged that this area has remained relatively unchanged, and with more recent ferruginous hawk activity, recognize that this is an area worthy of additional protection and recommended that no primary infrastructure be built within 2.0 miles of the nest. Some of the PTAG members disagreed, questioning the fidelity of ferruginous hawk to this area given the general lack of ferruginous hawk activity over time. These PTAG members support primary infrastructure within 2.0 miles. Some other PTAG members did not offer an opinion.
TBD	[redacted]	28 WTG	Many of the PTAG members pointed to the current occupation of the nest as evidence of ferruginous hawk ability to persist in this area with foraging available to the south given that the habitat has remained relatively unchanged. These PTAG members

PHS Nest Number	Territory Name	Primary Infrastructure Proposed Between 0.6 – 2.0 Miles of Nest Location After Exclusions (Option #1)	PTAG Recommendation
			recognized that this is an area worthy of additional protection and recommend that no primary infrastructure be built within 2.0 miles of the nest. Some PTAG members questioned the fidelity of ferruginous hawk to this area given the lack of ferruginous hawk activity over time and the historical competition for nest sites between Swainsons hawks, great horned owls and ferruginous hawks – noting that this nest has never been documented as occupied by ferruginous hawk in the PHS database and until 2025 has been occupied by Swainson's hawk. These PTAG members support primary infrastructure within 2.0 miles specifically on the eastern edge of the core area along I-82, which is a four-lane highway along with a two-lane frontage road (Bofer Canyon). Some PTAG members offered no opinion.
[redacted]	[redacted]	13 WTG, East Solar	Many of the PTAG members acknowledged that this area has remained relatively unchanged and with more recent ferruginous hawk activity recognized that this is an area worthy of additional protection and recommended that no primary infrastructure be built within 2.0 miles of the nest. Some of the PTAG members disagreed, questioning the fidelity of ferruginous hawks to this area given the lack of ferruginous hawk activity over time. These PTAG members support primary infrastructure within 2.0 miles and specifically recommend that infrastructure could be built on the western edge of the core area along I-82, which is a four-lane highway along with a two-lane frontage road (Bofer Canyon). Some PTAG members offered no opinion.
[redacted]	[redacted]	East Solar	Many of the PTAG members acknowledged that this area has remained relatively unchanged, with more recent ferruginous

PHS Nest Number	Territory Name	Primary Infrastructure Proposed Between 0.6 – 2.0 Miles of Nest Location After Exclusions (Option #1)	PTAG Recommendation
			hawk activity in the area, recognized that this is an area worthy of additional protection and recommended that no primary infrastructure be built within 2.0 miles of the nest. Some of the PTAG members disagreed, questioning the fidelity of ferruginous hawks to this area given the lack of ferruginous hawk activity over time. These PTAG members support primary infrastructure within 2.0 miles. Some of the PTAG members offered no opinion.
[redacted]	[redacted]	East Solar	Many of the PTAG members acknowledged that this area has remained relatively unchanged and with more recent ferruginous hawk activity recognized that this is an area worthy of additional protection and recommended that no primary infrastructure be built within 2.0 miles of the nest. Some of the PTAG members disagreed, questioning the fidelity of ferruginous hawks to this area given the lack of ferruginous hawk activity over time. These PTAG members support primary infrastructure within 2.0 miles. Some of the PTAG members offered no opinion.
[redacted]	[redacted]	15 WTG	Allow primary infrastructure between 0.6 – 2.0 miles in locations outside of other required setback areas

7.0 Literature Cited

Leary, A.W., R. Mazaika, M.J. Bechard. 1998. Factors affecting the size of Ferruginous Hawk home ranges. Wilson Bulletin 110:198-205.

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Watson, J. W., R. W. Davies, and P.S. Kolar. 2023. Contrasting home range characteristics and prey of sympatric hawks (Buteo spp.) nesting in the upper Columbia River Basin. Northwestern Naturalist 104:37-47.

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Attachment 1

History of Ferruginous Hawk Nesting Activity Within Two Miles of the Horse Heaven Wind Farm

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Attachment 2

Ferruginous Hawk Nest Assessment Sheets

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nests were last active in 1984 and 1989. The northern 1/3 of the Core Area is subjected to dense urban development, including [redacted], and the area along [redacted]. Density has certainly increased in the area since 1989. There is a [redacted] just above the nests that has likely been there since the nests were active in the 1980's. There is a 500 kV transmission line traversing the ridgeline (oriented north to south) just to the east of this area. Otherwise there have not been dramatic changes to the landscape south of [redacted] since the nest was active.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	The northern 1/3 of the Core Area is north of the [redacted]. This area has become more urbanized since 1992, replacing farmland. There was a fire along the ridge at some point since 2000 that may have changed the natural land covers, outside of cropland and urban areas. In general, the combination of grassland along the ridge and crop patterns have not changed in several decades. The Core Area is comprised of 47% cultivated crops, 25% shrub/scrub, 21% herbaceous, 5% developed, 2% open water.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	Areas that have been divided into parcels near the nests have largely been built out. The northern 1/4 of the Core Area will likely continue to increase in density as residential and commercial development occurs along [redacted] and frontage roads.

Consideration	Notes
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	Nearly all of the portion of the Core Area [redacted] falls under historic fire areas or residential setback areas. In all approximately ¼ of the Core Area is protected by other setbacks.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	There have not been changes in human settlement or habitat quality since the nest was last active in 1989, although it is notable that the nest has not been active for 36 years. It is unclear if something else changed at the nest location making it less desirable. Regardless, no infrastructure will be installed in the northern half of the Core Area, including along the ridgeline, where nesting hawks would spend the majority of their time foraging. Installation of infrastructure between 0.6 – 2.0 miles south of the nest would be in cropland, and area used less frequently for foraging. Based on how nesting hawks are likely to use the landscape installation of infrastructure in the southern half of the Core Area is unlikely to decrease the potential of the nest being used in the future.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nest was last active in 2016. The nest was consistently used from 1978 – 2016 but has not been active since 2016. The northern 1/4 of the Core Area is subjected to dense urban development, including [redacted], and the area along [redacted]. Beginning in 2006 a small development began to be built south of [redacted] and has increased in density over time. It is 170 acres and is 1.5 miles from the nest. There is a [redacted] 0.4 miles from the nest and a [redacted] or [redacted] 0.1 miles from the nest. This is carved out as its own parcel. These were present going back to at least 1996. Beginning in 2006 there was an increase in farm roads or trails in the area north of the nest but that has not changed since the nest was last active in 2016.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	The northern 1/4 of the Core Area is [redacted]. This area has become more urbanized since 1992, replacing farmland. There was a fire along the ridge at some point since 2000 that may have changed the natural land covers, outside of cropland and urban areas. In general, the combination of grassland along the ridge and crop patterns have not changed in several decades. The Core Area is comprised of 46% cultivated crops, 26% shrub/scrub, 21% herbaceous, 5% developed, 2% open water.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	Areas that have been divided into parcels near the nests have largely been built out. The northern 1/4 of the Core Area will likely continue to increase in density as residential and commercial development occurs along [redacted] and frontage roads.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	Nearly all of the portion of the Core Area along the ridge, but south of [redacted] falls under historic fire areas or residential setback areas. In all approximately ¼ of the Core Area is protected by other setbacks.

Consideration	Notes
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	There have not been changes in human settlement or habitat quality since the nest was last active in 2016, although it is notable that the nest was consistently active for more than 20 years and yet has not been active since 2016. It is unclear if something else changed at the nest location making it less desirable. Regardless, no infrastructure will be installed in the northern half of the Core Area, including along the ridgeline, where nesting hawks would spend the majority of their time foraging. Installation of infrastructure between 0.6 – 2.0 miles could occur in the southeast quadrant of the core area.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nests were last active in 1996 – 1999. There is an area immediately north of the nests that has been divided into parcels. In 1999 some houses had been built within 0.25 miles of at least one of the nest. [redacted] is 0.5 miles north of the nests, the area between the nests and the highway has continued to develop since 1999, including houses being built in 2013 within 0.1 miles of the nests.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	The northern half of the Core Areas are [redacted]. This area has become more urbanized since 1999, replacing farmland. There was a fire along the ridge at some point since 2000 that may have changed the natural land covers, outside of cropland and urban areas. The Core Area is comprised of 34% cultivated crops, 30% herbaceous, 19% shrub/scrub, 16% developed, 2% open water, 1% pasture/hay.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	Areas that have been divided into parcels near the nests have largely been built out. The northern half of the Core Areas will likely continue to increase in the density of development similar to what has occurred in the late 1990's.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	Approximately one-third of the Core Area, including half of the area within 0.6 miles of the nests is subject to the historic wildfire exclusion. Nearly all of the norther half of the Core Area is subject to residential exclusion areas.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	An increase in human development density near the nests, including houses being built within 0.1 miles of the nests makes it unlikely that they will be used in the future. Recommend that infrastructure is allowed between 0.6 – 2.0 miles of the nest locations.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nest was last active in 1992. The northeastern third of the Core Area is subjected to dense urban development, including [redacted]. The area between the nest location and [redacted] is used for orchards or vineyards. Though the area has increased in housing density since the mid-1990's the orchards and vineyards have created a buffer between the nest and urbanization. [redacted] is 0.2 miles north of nest location.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	The northern 1/3 of the Core Area is north of the [redacted]. This area has become more urbanized since 1992, replacing farmland. There was a fire along the ridge at some point since 2000 that may have changed the natural land covers, outside of cropland and urban areas. In general crop patterns have not changed in several decades. The Core Area is comprised of 43% cultivated crops, 32% herbaceous, 14% developed 9% shrub/scrub, 1% open water, 1% pasture/hay.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	Areas that have been divided into parcels near the nests have largely been built out. The northern half of the Core Areas will likely continue to increase in the density of development similar to what has occurred in the late 1990's.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	Over half of the Core Area, including nearly all of the area within 0.6 miles of the nest is subject to the historic wildfire exclusion or urban setbacks.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	An increase in urban density in the northern one-third of the Core Area and the nest has not been active since 1992. Recommend that primary infrastructure is allowed within 2.0 miles of the nest location outside of other exclusion areas. These areas are currently cropland.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Height of nesting activity in [redacted] was in 1996, though individual nests were active into 2004. The latest activity was nest [redacted], which was last active in 2010. Traffic on [redacted] has undoubtedly increased as a regional traffic corridor. Informal recreational [redacted] occurs at nearly every traffic pullout along the road as it passes through the [redacted]. The northern half of the Core Area for these nests overlaps with much more intensive human uses on the north side of the ridge, though actual development is limited.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Habitat located along the ridge northwest of the 2-mile buffer has been subdivided into small single-family parcels. Habitat quality south of the ridge, through most of the Core Areas for these nests has remained the same since the peak of nesting in 1996. The Core Area around these three nests is on average: 61% cultivated crops, 8% shrubland, 26% herbaceous, 3% developed, 2% pasture/hay.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	A portion of the 2-mile Core Area along the ridgeline to the north and east of the northernmost nests. has been parceled into smaller single-family lots. These areas are between 0.7 – 1.5 miles from the northernmost nests.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	The 1.0-mile setback from the [redacted] results in no infrastructure within 1.7 miles (west), 2.3 miles (south), and 1.2 miles (east) of the nests. No infrastructure will be built within 2.0 miles north of the nests due to urban developments.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Recommend allowing infrastructure within 2.0 miles of nests as long as it is outside of the 1.0-mile [redacted] setback, as required.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Three of these 5 nests have never been recorded as active. Nest [redacted] has been used most in the past. It was last recorded as active in 1996. Beginning in the early 2000's urbanization started to encroach into the northern half of the 2-mile Core Area, including houses within 0.2 miles of two of the nests. The eastern half of the Core Area is also more urbanized. Overall the northern half of the 2.0-mile Core Area is subject to much more intensive land uses, since it is north of the ridgeline.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Aside from the changes in human settlement patterns described above, and the loss of habitat related to it, habitat quality has largely remained the same since 1996. Cropping patterns and agricultural land uses have been stable. The Core Area is comprised of 48% cultivated crops, 29% herbaceous 17% shrub/scrub, 4% developed 2% pasture/hay.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., large development permitted vs single family parcels).	The eastern half of the Core Area is either currently urbanized or parceled out for planned development. This includes an 800-acre area that has been divided into parcels, which is between 0.3 – 1.0 miles from these 5 nest locations.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	The western half of the Core Areas are protected by the Webber Canyon setback. The northern third of the Core Areas around these nests is protected by residential setbacks. Primary infrastructure is only proposed along the outer, southern edge of the 2.0-mile Core Area.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Nests have not been active since 1996. Future changes in human settlement may further degrade habitat quality east of the nests. Over half of the Core Area is protected by other required setbacks. Recommend that infrastructure is allowed between 0.6 – 2.0 miles of each nest location outside of areas excluded for other purposes.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nest has never been documented as active. Urbanization has started to encroach into the northeastern quadrant of the 2-mile Core Area. The northeast quadrant of the 2-mile Core Area has been parceled into smaller single-family lots. Most of the areas that are currently natural land cover types, along the ridge, have been parceled and will be developed at some point in the future.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Shrubland and grassland habitat is located along the ridge mostly inside of the 2-mile buffer, much of it is over the north side of the ridge where urbanization is occurring. The remainder of the Core Area is dryland wheat. The Core Area is comprised of 75% cultivated crops, 13% shrub/scrub, 10% herbaceous, 2% developed.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	The northwest quadrant of the 2-mile Core Area has been parceled into smaller single-family lots. Just over 900 acres of existing shrubland and grassland in the Core Area has been parceled into buildable lots.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	A portion of the northwest quadrant will not be part of the Project because it is being developed into houses.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Nest has never been documented as active. Shrubland and grassland habitat is limited within and immediately outside of the Core Area. Future changes in human settlement may further degrade habitat quality. Recommend that infrastructure is allowed between 0.6 – 2.0 miles of the nest location.

Nest #[redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nest [redacted] was last active in 1978. Nest [redacted] was last active in 2011. Urbanization has started to encroach into the northern half of the 2-mile Core Area, including houses built in 2023 0.1 mile from the nest locations. Additional roads have been installed and future development is likely to occur in the coming years. Half of the area within 0.6 miles of the nest locations has been parceled into small lots.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Aside from the human settlement changes summarized above the habitat quality has remained largely the same. The area south of the nests has been consistently farmed and crop patterns appear unchanged since nest [redacted] was last active. The Core Area is comprised of 56% cultivated crops, 21% shrub/scrub, 12% herbaceous, 8% developed, 3% pasture/hay.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	The northern half of the 2-mile Core Area has been parceled into smaller single-family lots or is subjected to more intensive human uses since it is along the ridge or just north of the ridge. This includes an area of 800 acres beginning at the historic nest locations and extending out for over one mile. Half of the 0.6-mile buffered area around the nest locations has been parceled and is being actively developed since 2023.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	The middle ¼ of the Core Area is protected by residential setbacks, along the ridge and just north of the ridge in locations that are more densely settled.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Recent developments very close to nest locations combined with an increasing urbanization of the Core Area will influence whether these locations are used in the future. Future changes in human settlement will likely further degrade habitat quality. Recommend that infrastructure is allowed between 0.6 – 2.0 miles of the nest location.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Both nests have only been documented active one year, in 1996. Urbanization has started to encroach into the northeastern quadrant of the 2-mile Core Area. Since the nest was last active in 1996 a portion of the 2-mile buffer has been urbanized. The habitat that remains continues to be degraded by urban encroachment and will be removed in the future.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Shrubland and grassland habitat is located along the ridge but has all been parceled into single family home lots. Half of the Core Area falls north of the ridge in an area that is urban with intermixed irrigated agriculture. The remainder of the Core Area is dryland wheat. The Core Area is comprised of 54% cultivated crops, 21% shrub/scrub, 18% herbaceous, 4% developed, 3% pasture/hay.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	Remaining shrubland and grassland habitat in the northwest and northeast quadrant of the 2-mile Core Area has been parceled into smaller single-family lots.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	Infrastructure is only proposed 0.9 miles west of the nest. The eastern half of the Core Area will not be part of the project because it is east of [redacted] and largely urban.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Nests have only been documented as active once, both in 1996. Shrubland and grassland habitat is limited within and immediately outside of the Core Area. Future changes in human settlement may further degrade habitat quality. Recommend that infrastructure is allowed between 0.6 – 2.0 miles of the nest location.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Beginning in 2005 single family parcels began to be developed within 1.0-mile of the nests. The last time any of the three nests were active was in 2007. By 2012 houses were being built within 0.5 miles of the nests, which is the present-day situation. Evidence of an informal racetrack appears in 2012, 0.1 miles south of the nest locations.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Habitat conditions have not changed drastically since the nests were last active in 2007, except that the northern 1/3 of the Core Area is much more developed, whereas before it was dominated by irrigated agricultural land. The Core Area around these three nests is on average: 54% cultivated crops, 20% shrubland, 17% herbaceous, 6% developed, 3% pasture.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	A portion of the 2-mile Core Area has been parceled into smaller single-family lots. Closest current development is 0.5 miles. The outer edge of the southwestern portion of the Core Area has been parceled into 5-acre lots, and many have been developed.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	Nests In total about 1/3 of the Core Area, including about 1/3 of the 0.6-mile buffer, is protected due to buffers around urban uses. No infrastructure is proposed within 0.6 miles.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	It appears that human settlement has been increasing within 2.0 miles of the nests, including as close as 0.5 miles, since the nests were last active in 2007. Recommend that infrastructure is allowed between 0.6 – 2.0 miles of the nest location.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Most of the nests were last active in the mid-1990's, except [redacted] and [redacted] which were last active in 2012. There has been significant residential settlement within the Core Areas, including within 0.6 miles of these nests. This began in 2011 and currently all but one of these nests ([redacted]) are within 0.2 miles of a house. The Core Areas of these nests include the highest percentage of urban area (14%) of all of the nests in the Project Area. Most of this is immediately north of the nests but since 2021 additional areas immediately southeast of these nests have been parceled out and houses have been built.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	The Core Areas of these nests have experienced the most residential development since 2012, and especially since 2021. This has resulted in the conversion of agricultural land to residential use, increased the human footprint in the Core Area, and decreased habitat value. The Core Area is comprised of 43% cultivated crops, 27% shrub/scrub, 14% herbaceous, 14% developed, 2% pasture/hay.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	Exurban development has occurred in very close proximity to these nests (within 0.2 miles) and more is planned. This includes 800 acres immediately north of the nests and 1,000 acres 0.8 miles southeast of the nests.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	Over half of the Core Areas around these nest includes exclusions for historic wildfire areas or setbacks from residential developments. This includes large portions of the 0.6-mile areas around the nests.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Future changes in human settlement will continue to degrade habitat quality. Recommend that infrastructure is allowed between 0.6 – 2.0 miles of the nest location.

Nest #: 157192 – Coyote Canyon

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nest was last active 2019. No obvious changes in land use dating back to 2019. Nest is in a location which has been used as a [redacted] since the 1970's. The [redacted] is open from November – May, but is closed the rest of the year.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Habitat quality has remained the same. Habitat is located in small drainages between wheatfields and is sporadic within and just outside of the 2.0-mile Core Area. The Core Area is comprised of 66% cultivated crops, 25% shrub/scrub, 6% herbaceous, 2% developed, 1% pasture/hay.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	The northwest quadrant of the 2.0-mile Core Area has been parceled into smaller single-family lots. Several new homes have been built on the outer edge of the 2.0-mile buffer in the northwest as part of the [redacted] as well as [redacted] an active [redacted].
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	A portion of the northwest quadrant will not be part of the Project because it is being developed into houses.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Nest has not been active since 2019. Nest has been occupied by great-horned owls since 2019. Recommend no primary infrastructure is allowed within 2.0 miles of the nest. If the nest becomes active in the future ferruginous hawks would likely forage in grassland habitat north of the nest, outside of the Project Area.

Nest #: TBD – [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nest was active in 2025. There are no human dwellings within the core area. There is a [redacted] near the nest. The nest is transected by the [redacted] and [redacted] on the eastern approx. 25% of the core area.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	According to the National Land Cover Database the Core Area is comprised of 63% shrub/scrub, 27% cultivated crops, 8% herbaceous, 2% developed. However, since 2020 the majority of the shrub/scrub in the southern half of the Core Area has been converted to wheat fields. The majority of land cover in the Core Area now is likely cropland.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	The Core Area includes two large parcels and portions of other large parcels. There are no human dwellings in the Core Area and no apparent plans for changes.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	There are no other setback requirements that overlap the Core Area unless restrictions are placed on primary infrastructure within the Core Areas of the [redacted] or [redacted] nests.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Nest was active in 2025. Nest has been occupied by Swainson's hawk in 2018 – 2019 and 2022 - 2024. Many members of the group recommended that no primary infrastructure is built within 2.0 miles of the nest. Some members of the group recommended that limited infrastructure be allowed on the eastern edge of the core area, along [redacted] due to the likelihood that the nesting hawks are foraging in the shrubsteppe and grassland habitat south of the Project Area and are likely not crossing [redacted].

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nest was last active in 2017. Land use has remained the same. In 2012 a [redacted] was built 0.3 miles from the nest location. That [redacted] was expanded in 2018 and currently includes an area north and south of [redacted], with lots of truck activity on a daily basis.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Habitat quality has remained the same, though human use patterns have changed. The Core Area is comprised of 58% cultivated crops, 25% shrub/scrub, 9% herbaceous, 6% pasture/hay, 2% developed.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	There are no permitted or planned actions that will change suitability for ferruginous hawks in the near future.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	No.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Nest has not been active since 2017. Many members of the group recommended that no primary infrastructure is built within 2.0 miles of the nest. Some members of the group recommended that limited infrastructure be allowed on the northern and western edge of the core area, along [redacted] due to the likelihood that if the nest was active in the future, ferruginous hawks would likely forage south of the nest, in the shrubsteppe and grasslands outside of the Project Area.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	[redacted] was last active in 2006. Nest has been used by common ravens consistently since 2010. No obvious changes in land use since 2006. [redacted] has never been documented as active. Nests are 375 feet apart.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Habitat quality has remained the same. The Core Area is comprised of 42% cultivated crops, 36% shrub/scrub, 13% herbaceous, 7% pasture/hay, 2% developed.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	There are no permitted or planned actions that will change suitability for ferruginous hawks in the near future.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	No.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Nest [redacted] has not been active since 2006. Nest have been used by ravens since 2010. Nest [redacted] has never been active. Many members of the group recommended that no primary infrastructure is built within 2.0 miles of the nest. Some members of the group recommended that limited infrastructure be allowed on the northern edge of the core area, included some portions of the East Solar Arrays, due to the likelihood that if the nest was active in the future, ferruginous hawks would likely forage south of the nest, in the shrubsteppe and grasslands outside of the Project Area.

Nest #: [redacted]

Consideration	Notes
Is **human activity** in the area within 0.6 – 2.0 miles of the nest location largely the same as it was the last time the nest was documented as active by ferruginous hawk, in terms of land use, human settlement, and human activity? Describe recent land use changes since the last documented use by ferruginous hawk and their distance from the nesting structure.	Nest was last active in 1985. The portion of the Core Area that overlaps the urban area of [redacted] has become more densely populated. [redacted] runs through the Core Area, 0.5 mile from the nest location. The [redacted] was built in 2003 and located 1.1 miles from the nest location. In recent years a [redacted] was located nearby resulting in several daily trips by trucks within 0.4 mile of the nest location.
Has **habitat quality** changed within 0.6 – 2.0 miles of the nest location than the last time ferruginous hawks used the area for nesting? Describe recent land use changes since the last documented use by ferruginous hawk, and their distance from the nesting structure, as well as the percentages of vegetation cover in the core area.	Sometime between 1996 and 2003 most of the sagebrush habitat along the hillside was converted to grassland, potentially by a fire. The Core Area is comprised of 46% cultivated crops, 32% herbaceous, 17% shrub/scrub, 4% developed, 1% wetlands.
Are there **permitted or planned actions** within 0.6 – 2.0 miles of the nest location likely to reduce prey abundance and mixed habitat suitability for ferruginous hawk? Describe the extent of development (e.g., 100 house development permitted vs single family parcels).	[redacted] will continue to become more urbanized. Some areas northwest of the nest location have been subdivided into smaller parcels. This includes 245 acres 1.3 miles from the nest location and is located on some of the remaining shrubland and grassland habitat in the Core Area.
Are there **other setback requirements** in the SCA that adequately protect the nest location? Describe in detail.	A portion of the hillside inside of the 2-mile buffer is shown as a historic fire area.
Does the **PTAG recommend** that infrastructure can be built between 0.6 - 2.0 miles around the nest location? If so, describe what should be allowed and justify why?	Nest has not been active since 1985. Current land uses and proximity to urbanization make it unlikely that the Core Area will be used in the future. Recommend infrastructure is allowed between 0.6 – 2.0 miles of the nest.

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Attachment 3

PTAG Member and Alternate Bios

Members

Adam Fyall is Benton County's Sustainable Development Manager, working on behalf of the county commissioners and based in Kennewick with a portfolio including Hanford Site, economic development, legislative, intergovernmental relations, energy, natural resources, and public lands issues. Adam is currently the Chairman of the Yakima Basin Fish & Wildlife Recovery Board, Benton County's representative to the Yakima Basin Integrated Plan Working Group, the statewide county representative to the Washington State Boating Safety Advisory Board, the Eastern Washington county representative on the Washington Invasive Species Council, and President Emeritus of the Tapteal Greenway. A lifelong and fifth-generation Washingtonian, Adam grew up in the Seattle area before moving to Eastern Washington for college and career, now living in Richland. He is a graduate of Central Washington University (BA, Geography, 1994) and the University of Washington (MPA, Public Administration, 2014).

Tim Hayes is an Independent Ecologist. Tim spent 36 years as an environmental scientist in the utility and renewable energy industry focusing on wildlife and natural resources issues, with the last 11 years as the environmental director for a large renewable energy company. Tim retired in 2022 and now lives in Indiana. Tim has a BS in Life Science from Indiana State University.

Don McIvor has been a researcher and instructor in university settings, worked in environmental consulting, and has served as staff scientist for non-profit conservation organizations. The HHCEC is Don's third green energy project in Washington, and he is an independent ecologist on the PTAG.

Colleen Moulton is an energy biologist with the U.S. Fish and Wildlife Service's Migratory Bird and Habitat Program. She has a Master's in Raptor Biology from Boise State University. Prior to joining the Service in 2023, she worked for Idaho Department of Fish and Game for 19 years, primarily serving as their state Avian Ecologist.

Mark Nuetzmann is a wildlife biologist for the Yakama Nation Wildlife Resource Management Program. He has been employed with Yakama Nation over 20 years where his duties include writing Section 7 biological assessments for Bureau of Indian Affairs actions, managing various wildlife projects on-Reservation, and supporting Yakama Nation's priorities related to energy development on Yakama Ceded Lands. Prior to his employment with Yakama Nation, Mark worked for the USFS in Oregon and for WDNR. Mark has a bachelor's degree in Zoology from the University of Washington and a master's degree in biology from Eastern Washington University.

Andrew Pinger is the Environmental and Permitting Director at Scout Clean Energy, a renewable energy developer and operator headquartered in Boulder, CO. Before joining Scout, Andrew worked as an environmental manager for EDP Renewables North America helping to develop wind,

solar, and battery storage projects throughout the United States and Canada. He has a master's degree in biology from Portland State University where his thesis analyzed golden eagle mortality at the Altamont Wind Resource Area. His undergraduate degree is in Journalism from Indiana University.

Troy Rahmig is the Endangered Species Program Manager at Tetra Tech. Troy is an avian ecologist with over 20 years of experience working in endangered species permitting across sectors, including energy, forestry, transportation, water, and urban development. Troy specializes in the assessment of impacts on species from utility-scale renewable energy projects and advises on the avoidance, minimization, and mitigation of those impacts on projects across the U.S.

Michael Ritter, MS, has spent 36 years as a biologist with territorial, Federal, and state (state of Washington for the last 16 years) agencies. Conservation of native habitat and wildlife through cooperative and collaborative relationships to manage endangered species, wetlands, tropical forests, and shrubsteppe ecosystems.

Jessica Wadsworth currently serves on the City of Benton City Council. Additionally, she works as a field representative for Laborers Local 348. She has been involved in this project since its inception and has been actively participating in the meetings and discussions.

Dana C. Ward has a BA in Geoenvironmental Studies (i.e. Biology, Earth Sciences, Ecology). Dana is retired having worked twenty years as an Environmental Scientist with U.S. Department of Energy and former member of the Natural Resource Trustee Council for the 586 sq mi Hanford Site. He currently is a volunteer with U.S. Geological Survey, Breeding Bird Survey Project and has served for over fifty years as a volunteer with the Audubon Society where he is the President of the local chapter Richland, WA.

Andrew Wildbill is the Wildlife Program Manager for the CTUIR Department of Natural Resources. He holds a Bachelor of Science in Fisheries and Wildlife Management from Michigan State University. As the Wildlife Program Manager, Andrew works to preserve, protect, and enhance the traditional ways and lifestyles of the Confederated Tribes by managing all wildlife and subsistence gathering resources in a manner sensitive to the traditional culture. Andrew is an enrolled member of the Confederated Tribes of the Umatilla Indian Reservation.

Christopher Wiley is a 29-year-old 4th generation wheat farmer who has lived in the Horse Heaven Hills for 28 years. He operates Wiley Ranches with his father and is also owner of Bubba Wiley Wheat LLC which leases a neighboring wheat farm. Between the two operations, he manages approximately 6,500 acres of cropland with his family. Chris has a Bachelor of Science degree from Washington State University where he studied Integrated Plant Science, majoring in Field Crop Management. In his free time, Chris also operates the County Well Water District, volunteers for Benton County Fire Dist. 5, and enjoys exploring, hunting, and observing wildlife in the Horse Heaven Hills. Chris lives on Wiley Ranches with his wife, Emma, and his son, JJ.

Jim Woodward is the Clean Energy Program Manager for Product Sales and Leasing at the Washington State Department of Natural Resources.

Alternates

Andrea Brown is a Tribal Attorney in the CTUIR Office of Legal Counsel. She holds a J.D. from the University of Idaho College of Law with an emphasis in Native American Law and a Master of Public Administration from the University of Washington. Andrea works closely with the CTUIR Department of Natural Resources on Treaty rights, natural resources, and cultural resources.

Emily Grabowsky has been with WDFW for over 6 years, first as a Northern Leopard Frog Biologist for 4 years (where she focused on reintroduction and management of northern leopard frogs in the Columbia Basin) and then in her current position as a Solar and Wind Energy Biologist for the last 2 years (working with renewable energy stakeholders to limit impacts to wildlife and habitat throughout WA). Before joining WDFW, Emily completed her master's degree in Biological Sciences at University of Northern Colorado. Her research focused on venom composition and ecology of rattlesnakes. This work incorporated biochemical analyses, behavior assessments, and spatial ecology using species distribution modeling. Prior to that, she worked for Arizona Game and Fish Department as a field technician for various herpetofauna species. Emily received her undergraduate degree in Fish, Wildlife, and Conservation Biology from Colorado State University.

Michelle Huppert is a Solar and Wind Energy Biologist at the Washington Department of Fish and Wildlife.

Dave Kobus joined Scout Clean Energy in October 2018. In his current position, he is responsible for the development of new wind energy projects. He is currently developing the Horse Heaven Clean Energy Center in Benton County Washington. Prior to his current position, Mr. Kobus held relevant supervisory and management positions with Energy Northwest, a Washington State Joint Operating Agency, over a 25-year career. Most recently he was responsible for the development of new electrical generation resources, primarily wind energy projects, and managed all wind prospecting, development and construction activities for Energy Northwest. He was responsible for the development of the 96 MW Nine Canyon Wind Project, as Phases I, II & III, as well as other project sites. He also held positions in Fire Protection Engineering, Nuclear Training, and Quality Assurance at the Columbia Nuclear Generating Station (formerly WNP-2). Prior to joining Energy Northwest, he held relevant supervisory and management positions with Public Service Electric & Gas (New Jersey) at the Salem Generating Station, Consumers Power in Midland Michigan, as well as over 8-years in the US Navy nuclear propulsion program. Mr. Kobus holds a Bachelor of Science degree in Nuclear Technology from the University of New York, Regents and a Master's of Science degree in Engineering Management from Washington State University.

Jeff Kozma is a Wildlife Biologist at the Yakama Nation Fisheries.

Michelle McDowell is the Permits Branch Chief for the Pacific Region Migratory Birds and Habitat Program of the U.S. Fish and Wildlife Service.

Michelle Mercer is the Planning Manager for the Community Development Department Planning Division of Benton County, Washington.

Dr. Ed Rykiel, Ph.D. University of Georgia, Ecology/Zoology, is a retired certified Senior Ecologist of the Ecological Society of America with a specialization in Systems Analysis and Simulation. A few of his publications have been cited many times by researchers in many countries. The International Society for Ecological Modeling awarded him a Lifetime Achievement Award. He was a USGS licensed bird bander for many years and a long-time member of the Lower Columbia Basin Audubon Society.

Mary Williams is a Renewable Energy Biologist for the Pacific Region Migratory Birds and Habitat Program of the U.S. Fish and Wildlife Service.

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Attachment 4

PTAG Member, Alternate, and Observer Participation

PTAG Members

Name	Affiliation	2/28/25	3/13/25	3/21/25	4/4/25	4/18/25	5/2/25	5/16/25	5/23/25	5/30/25	TOTAL
Adam Fyall	Benton County	✓		✓	✓	✓	✓	✓	✓	✓	**8**
Tim Hayes	Independent Biologist	✓	✓	✓		✓	✓	✓	✓	✓	**8**
Don McIvor	Independent Biologist	✓	✓	✓	✓	✓	✓	✓	✓	✓	**9**
Colleen Moulton	U.S. Fish and Wildlife Service	✓	✓ +		✓	✓	✓	✓	✓	✓	**8**
Mark Nuetzmann	Yakama Nation	✓	✓	✓	✓	✓	✓	✓	✓	✓	**9**
Andrew Pinger	Scout Clean Energy	✓	✓	✓	✓	✓	✓	✓	✓	✓	**9**
Troy Rahmig	Tetra Tech	✓	✓	✓	✓	✓	✓	✓	✓	✓	**9**
Mike Ritter	Washington Department of Fish and Wildlife				✓	✓	✓	✓	✓	✓	**6**
Jessica Wadsworth	LiUNA Laborers Local 348	✓	✓	✓	✓	✓		✓	✓	✓	**8**
Dana Ward	Lower Columbia Basin Audubon Society	✓	✓	✓	✓	✓		✓	✓	✓	**8**
Andrew Wildbill	Confederated Tribes of the Umatilla Indian Reservation	✓	✓ +	✓	✓	✓	✓		✓	✓	**8**
Christopher Wiley	Wiley Ranches and Bubba Wiley Wheat	✓	✓	✓	✓	✓	✓	✓	✓	✓	**9**
Jim Woodward	Washington Department of Natural Resources	✓	✓ +			✓		✓	✓	✓	**6**

+ Attended PTAG meeting only, not site tour

PTAG Alternates

Name	Affiliation	2/28/25	3/13/25	3/21/25	4/4/25	4/18/25	5/2/25	5/16/25	5/23/25	5/30/25	TOTAL
Andrea Brown	Confederated Tribes of the Umatilla Indian Reservation			✓	✓	✓	✓	✓	✓	✓	**7**
Emily Grabowsky	Washington Department of Fish and Wildlife	✓	✓	✓	✓		✓	✓	✓	✓	**8**
Michelle Huppert	Washington Department of Fish and Wildlife		✓			✓					**2**
Dave Kobus	Scout Clean Energy	✓	✓	✓	✓	✓	✓	✓	✓	✓	**9**
Jeff Kozma	Yakama Nation	✓									**1**
Michelle McDowell (starting 4/11/25)	U.S. Fish and Wildlife Service										**0**
Michelle Mercer	Benton County		✓				✓				**2**
Dr. Ed Rykiel	Lower Columbia Basin Audubon Society		✓	✓	✓	✓	✓	✓	✓	✓	**8**
Mary Williams (through 4/11/25)	U.S. Fish and Wildlife Service	✓	✓ +	✓	✓						**4**

+ Attended PTAG meeting only, not site tour

PTAG Observers

Name	Affiliation	2/28/25	3/13/25	3/21/25	4/4/25	4/18/25	5/2/25	5/16/25	5/23/25	5/30/25	TOTAL
Don Bain	wpd-USA	✓	✓	✓	✓	✓	✓	✓		✓	**8**
Sean Greene	EFSEC	✓		✓	✓	✓	✓	✓	✓	✓	**8**
Amy Moon	EFSEC		✓ *								**1**
Sara Randolph	EFSEC		✓ *								**1**

** Attended site tour only, not PTAG meeting*

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