

To: Washington State Energy Facility Site Evaluation Council
From: Horse Heaven Wind Farm, LLC
Date: May 1, 2026
Subject: Spec-13 Pronghorn Study Plan – After Action Report

INTRODUCTION

In early 2026 Horse Heaven Wind Farm, LLC (Certificate Holder) commenced a first of its kind research project on pronghorn (*Antilocapra americana*) in Washington. The study was required by the Site Certification Agreement (SCA) issued by the Washington State Energy Facility Site Evaluation Council (EFSEC), as described in Mitigation Measure Spec-13 of the SCA, which reads:

Spec-13 Pronghorn Antelope: *The Certificate Holder shall design and implement a study of seasonal pronghorn antelope occurrence and use of the Lease Boundary before construction and during operation to document the change, if any, of pronghorn antelope presence, abundance, and habitat use within the Lease Boundary. The PTAG will review and provide input to the study design. The results of the study will be used to develop adaptive management measures to respond to changes in pronghorn antelope habitat use. Survey results and proposed adaptive management will be reviewed by the PTAG and TAC prior to implementation.*

SUMMARY OF STUDY DESIGN AND EXECUTION

In order to meet the spirit of Spec-13 the Certificate Holder developed a two-part study, comprised of GPS-collaring and aerial surveys, that would allow for the assessment of “seasonal occurrence and use” of the Project Area “before construction and during operation” and allow for the documentation of “presence, abundance, and habitat use.” Aerial surveys for pronghorn have not yet commenced but will generally follow the methods used by WDFW when conducting bi-annual minimum herd counts in the Horse Heaven Hills. The remainder of this memorandum is focused on the GPS-collaring study.

The Certificate Holder initiated a GPS-collaring study of pronghorn in the Horse Heaven Hills, within the area where the Horse Heaven Clean Energy Center (Project) is proposed. The study itself is not a new concept. Pronghorn have been studied in the western U.S. for decades and in Washington for over 15 years. What has made the study a first of its kind is the fact that it is to be carried out by a private entity, rather than a state agency or tribal government, and exclusively on private land. Now that the study is underway the Certificate Holder is taking the opportunity to examine the process of initiating the study, including the support that was required and decision making that ensued, with

the intention of providing lessons learned so that similar studies, if requested in the future, can be better informed.

Pronghorn Collaring

At the outset of the study, the Certificate Holder planned to attempt to collar 10 pronghorn. This objective was set based on a recent and similar GPS-collaring study examining pronghorn use around solar facilities, which had a similar sample size (Sawyer et al. 2025). During discussions with the pronghorn study working group (described below) it was determined that deployment of more collars would increase sample size and inference, so 30 collars were ordered and on hand during the two days that collaring occurred.

In total, over the course of two days of collaring, 23 pronghorn were captured and collared; 16 females and seven males. No injuries or mortalities occurred during collaring. During the first day of collaring 20 pronghorn were collared; 13 females and seven males. The original focus was to collar female pronghorn exclusively, however during the day of collaring it was determined that if male pronghorn could be caught and collared that would be acceptable. The decision was made due to the limited number of pronghorn in the Project Area at the time, and an interest in collaring more animals to increase sample size.

Following the first day of collaring the issue of collaring male pronghorn was revisited. There was concern from WDFW biologists that the collars would become too tight around the necks of male pronghorn in the fall, when male neck sizes increase seasonally, during the rut. For studies that focus on male animals, there is the option to include collar expansion kits on collars that can flex throughout the year, expanding in the fall when necks are larger and then retracting during the rest of the year. Through discussion the decision was made not to include the expansion kits on the collars because 1) pronghorn are small animals and are sensitive to any extra weight on the collar, which can influence their behavior and make them susceptible to predation and, 2) since this is intended to be a long-term study, there was concern that the expansion kits could wear out over time, leaving the collars too loose. Loose collars are also dangerous for animals since they can then get caught on fences, or animals can get their feet caught in them when scratching.

Without the expansion kits on the collars, it was determined that the collars presented a long-term risk to male pronghorn and the decision was made to attempt to capture the collared males and remove the collars. On March 14, 2026, the capture team was again deployed. Three of the collared males were captured and the collars were removed. It was determined that the remaining collared males were likely outside of the Project Area, on lands that the Certificate Holder did not have access to. Once the search of collared males was exhausted, the capture team was able to capture and collar three more females.

Of the original 23 pronghorn that were collared 17 remain in the study: 14 females and three males. Collars were removed from three males and mortalities were recorded for three others: two females and one male.

Recorded Mortalities

Since collaring occurred on February 27, 2026, and again on March 14, 2026, three mortalities of collared animals have occurred: two females and one male. WDFW considers any mortality that occurs within 30 days of the collaring event to be attributed to collaring. Two mortalities occurred within 48 hours of the first collaring event, and a third occurred within one week of the event. All three mortalities were associated with collaring, likely due to stress induced from collaring or changes in behavior that resulted from collaring that made individual pronghorn more susceptible to predation. In all three cases the mortality location was visited within 24 hours of the mortality signal, and the carcasses were heavily scavenged. Therefore, the cause of death was not apparent and there was no option to do a necropsy. Two of the collars were recovered at the locations where mortality signals occurred. The third collar was not retrieved but was tracked to a location where there is a known coyote den. The assumption is that the collar is underground in the den.

No additional mortalities have been recorded and all collared pronghorn have now had their collars on for more than 30 days, so any mortalities that occur will more likely be due to other causes than the collaring itself.

Expected Study Duration

The collars that are currently on 17 pronghorn can last at least six years, and maybe longer. The collars are affixed with batteries with a long life, plus the ability to be recharged with small solar panels on the back of each collar. Due to the ability for the solar panels to recharge the batteries, it is possible that the life of the collars will outlast the life of the animals that they are on. The study is planned for at least six years, two years prior to construction, two years of construction, and two years of operation. Longer will be better but will depend on whether the animals survive that long and if the collars continue to function.

No subsequent collaring is planned. Provided the collared animals live long enough to interact with construction activities and an operating facility, the Project will have the data needed to determine if an impact on habitat use has occurred, as required by Spec-13. If WDFW or the Yakama Nation wants to deploy more collars on pronghorn in the Project Area, the Project would support that effort and could make the remaining collars purchased for this study available. Any additional costs incurred for subsequent collaring would need to be covered by WDFW, the Yakama Nation, or other interested parties.

SUPPORTING PARTNERS

The study was developed by the Certificate Holder and its consulting biologists and was coordinated with, and reviewed by, the Pre-operational Technical Advisor Group (PTAG) and EFSEC, as required by Spec-13. The Certificate Holder also convened a working group comprised of over 10 WDFW resource specialists and three Yakama Nation biologists. This separate working group met twice and reviewed the study plan twice. It was through this working group that the most useful information was provided and from which working relationships developed between the Certificate Holders consultants, WDFW biologists, and Yakama Nation biologists that ultimately led to the successful execution of the collaring. This would not have occurred if the Project team only met with the PTAG, as required. The contributions by WDFW resource staff and Yakama Nation biologists proved to be absolutely critical in final study design, WDFW approvals, and on-the-ground support during the collaring itself.

There were two key events that occurred that required special attention by WDFW staff. First, was the approval and issuance of a Scientific Collecting Permit, which was needed to handle and collar animals in the State of Washington. This permit was expedited by the permitting office with support from WDFW resource specialists. Second, the WDFW veterinary services office had to be consulted since animals were going to be netted and collared. A vet was not required to be on site during the collaring because animals were not being tranquilized. However, since a private entity had not executed a collaring study of this nature, procedures needed to be drafted for how it was to be done safely. The procedures were drafted by the WDFW vet in coordination with WDFW resource specialists. Two WDFW biologists and two Yakama Nation biologists were on site during the first day of collaring to advise of any injuries or mortalities, of which there were none. WDFW staff have also supported the attempted recovery of the three collars from animals that perished.

LESSONS LEARNED

In conclusion the Certificate Holder would like to provide some lessons learned for the future of this pronghorn collaring study and for any studies like this that may be recommended or required by EFSEC in the future.

Scope of Spec-13

Spec-13 is a sweeping mitigation measure that requires the assessment of “seasonal occurrence and use” of the Project Area “before construction and during operation” and the documentation of “presence, abundance, and habitat use.” Combined these metrics would require an expansive, complex, and long-term study design that is well beyond the capabilities of a single Project like the Horse Heaven Clean Energy Center, which is limited geographically to the Project Lease Boundary by land owner agreements. Further, when wide ranging studies occur on private lands there are logistical

complications that are unavoidable. More specifically for a study on an animal like pronghorn, that moves many miles in a day and utilize nearly the entirety of the Horse Heaven Hills throughout the year, studying them within the confines of a Lease Boundary is only revealing part of the story. If EFSEC is interested in studies like this, it could create a research fund, that WDFW or another entity could hold, that individual Projects could contribute to, as mitigation, and collectively that funding could be used for larger scale studies to answer these questions.

WDFW Involvement in Horse Heaven Pronghorn Study Implementation

The Certificate Holder is committed to completion of the study as required in Spec-13, but does acknowledge that more formal involvement by WDFW resource experts would be beneficial and would welcome EFSEC approval of WDFW oversight of the study into the future. While the Certificate Holder would continue to fund the study and would remain involved in implementation, WDFW resource experts routinely implement similar studies and is responsible for the data retention and sharing. They would be more equipped, as the state resource agency, to coordinate with landowners and tribal governments more broadly, house and analyze the data, and potentially even leverage funding from the Certificate Holder to attract more funding for an expanded study. The Certificate Holder would retain all funding and reporting responsibilities to comply with Spec-13, but study implementation would be more efficient and thorough, if it were overseen by WDFW.

Data Relevance and Mitigation Planning

The intent of the study is to determine whether pronghorn are negatively impacted by the presence of new energy infrastructure on the landscape. The study will be useful to inform whether the wind energy infrastructure causes pronghorn to use the Project Area differently, but there have been many studies that have documented pronghorn behavioral responses to fixed infrastructure, like wind turbine generators, and based on similarities between this Project and others that have been studied, the Certificate Holder expects pronghorn to continue using the majority of the Project Area in a similar manner as before the Project.

The Certificate Holder does acknowledge that the fencing that must be placed around the solar areas, for the purpose of safety and security, will exclude species like pronghorn by design. So at least some of the area where pronghorn currently move and forage will be unavailable to them once the solar areas are constructed. A study is not needed to determine if that will impact the species. During discussions with WDFW and Yakama Nation biologists while planning the collaring study it was suggested that a study is not needed to know that pronghorn will not be able to access the fenced solar areas, and that instead of spending more on a study, perhaps more mitigation from the outset would be a better approach. The language in Spec-13 does not allow for that approach, but the

Project acknowledges that this is the case and it may be prudent to begin discussing what that mitigation might look like, rather than waiting several years for the results of the study.

The Project could enter into discussions with WDFW resource experts and Yakama Nation biologists about actions that could be taken to improve habitat quality or reduce risks for pronghorn in or near the Project Area. These could include, but not be limited to, actions such as habitat enhancement of private lands, other research projects, or signage or other efforts to reduce vehicle collisions. The Project could fund those actions, and they could be implemented by WDFW, the Yakama Nation, or other entities, as necessary as the solar areas are being fenced, so there is not a gap in time between when the habitat loss occurs and when mitigation actions occur.

Future Collaring Studies

Studies like this come with significant risk to people since low flying helicopter use is required, and to animals, since capturing, handling, and collaring stresses them. This is dangerous work that should not be taken lightly.

Due to the complexities involved with a study of this magnitude and one that requires species permits to handle, collar, and tag animals, the Certificate Holder recommends that studies of this nature, if required by EFSEC in the future, are facilitated by WDFW. WDFW's involvement in the Horse Heaven pronghorn collaring study was by necessity through its representatives on the PTAG, and resource specialists only got involved at the request of the Certificate Holder, largely after the fact. Many of the issues identified were only discovered and rectified by WDFW staff because staff members with specialized expertise were going above and beyond what was required, due to their dedication to the resource. Without their dedication and time commitment, this study would not have been as successful from the outset.

If future studies like this are recommended or required by EFSEC, the Certificate Holder encourages EFSEC staff to engage closely with WDFW resource experts when writing the mitigation measures. Further, EFSEC could simply require that a study is funded by a Certificate Holder and develop language in the mitigation measure that outlines the framework for the study, by involving WDFW resource experts, and then include a funding amount that the Certificate Holder would provide either WDFW or a tribal government, to execute the study on the Certificate Holders behalf. WDFW has more flexibility on where a study can occur, can seek or provide matching funds to expand the study to its necessary scope, and draw upon experience on other similar studies occurring in the state on other species. The Certificate Holder could remain involved in the study, even provide their own expertise and consultant support, but the execution of the study would be fully in the hands of WDFW resource experts that routinely complete studies in the state and have all of the mechanisms, safeguards, and land access in place to do so.