State of Washington
DEPARTMENT OF FISH AND WILDLIFE
Pasco District Office, Habitat Program • 2620 North Commercial Avenue, Pasco, WA 99301

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Ms. Hafkemeyer,

The Washington Department of Fish Wildlife (WDFW) mission is to preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities. To achieve this, we engage in land use decision processes, provide technical assistance to local governments, and collaborate with a variety of stakeholders and developers to ensure that land use actions are implemented in a manner that avoids or mitigates expected impacts. For any action that has the potential to impact wildlife and ecosystems, it is imperative that WDFW be considered as early as possible as a partner in site selection and project development.

WDFW is confident that renewable energy projects can generally be sited to avoid impacts to priority habitats and species or be designed and implemented to mitigate the loss of functional habitat and ecological connectivity and provide opportunity for recovery of listed species. To achieve this, it is important that solar projects coordinate early with WDFW before significant resources are invested in the project.

WDFW's input at the earliest stages of project development will provide vital ecological, wildlife, and habitat information and data that can be used to determine site suitability and project feasibility. In conducting this crucial step, developers may reduce and avoid investments in unnecessary surveys, leases, and other aspects of initial project development. This step may provide more certainty regarding project location and layout, impact avoidance and minimization, mitigation (if necessary), and permitting, or result in an alternate site selection.

For at least the last 10 years, WDFW has been actively engaged in working with private landowners and other agencies to address wildland fires and habitat connectivity within the Black Rock Valley; the landscape on either side of Highway 24 between the Department of Energy lands to the east and the town of Moxee to the west.

The Black Rock Valley is situated between the Department of Army Yakima Training Center to the north, the Rattlesnake Hills to the south, and the Department of Energy and Hanford Reach National Monument to the east and southeast. These areas represent some of the largest remaining functional blocks of shrubsteppe habitat in southcentral Washington, and the Black Rock Valley provides the only

ecological connectivity between them. WDFW's long-term goals and objectives are to work with landowners and developers to:

- prevent the fragmentation of habitats and isolation of plant and animal populations,
- maintain connectivity by siting projects in already converted or in active agriculture where impacts to priority habitats and species is minimized, and
- maintain ecological connectivity within the Black Rock Valley where these large functional blocks of native habitats converge.

Landscape/Wildlife Connectivity

Both the Ostrea and High Top solar projects are proposed to be constructed within an important habitat/wildlife connectivity corridor and both will impact native shrubsteppe habitat. Figure 1 shows the location of High Top and Ostrea in relation to several other solar projects, as well as shows private, federal, and state landownership. Presently, there is little resistance (i.e. any type of development) on this landscape for animal movement, and both individually and cumulatively, the proposed solar projects will result in the loss of priority habitats, dependent species, and negatively impact connectivity, as well as result in short- and long-term behavioral changes and impact populations dynamics across a large landscape.

The eastern portion of the Ostrea project is essentially surrounded by federal lands that already form a corridor to/from the Yakima Training Center (YTC) with little resistance and development in the area should be avoided and solar resources moved to central and northern areas of the High Top site (Figure 2). We understand that additional solar development at the High Top site will result in the loss of shrubsteppe habitat and impact wild life species, but establishing a significant habitat/wildlife corridor provides long-term conservation and connectivity.

Specifically related to the Wildlife Connectivity Analysis (WCA) conducted as an addendum to the general wildlife surveys for the High Top and Ostrea projects, WDFW offers the following. First, we would like to thank the project for using both The Arid Lands Initiative's Spatial Conservation Priorities report and the Washington Wildlife Habitat Connectivity Working Group's Washington Connected Landscapes Project: Statewide Analysis. Regarding the connectivity working group report, WDFW would prefer to see results used in a similar but updated work for the Columbia Plateau entitled Washington Connected Landscapes Project: Analyses of the Columbia Plateau Ecoregion. The two reports show similar connectivity pathways, but the more site-specific analysis can define critical connectivity paths at a finer landscape scale. Specific notable changes between the two analyses for this area include that this area is a connectivity path for Mule Deer, Black-tailed Jackrabbit, White-tailed Jackrabbit and Townsend's Ground Squirrel in addition to Elk and Greater Sage-grouse. Figures 3-5 provide selected Habitat Concentration Areas (HCAs) and Least Cost Pathways (LCP) from these analysis in relation to the High Top and Ostrea solar projects.

Except for updating some of the HCAs and LCPs to reflect the Columbia Plateau Analysis, WDFW agrees with the maps presented showing the HCAs and LCP regarding the project location. WDFW does not agree with the landscape scale assessment which was derived from some of the ALI report. This area has been impacted by several large-scale fires in recent years, most notably the Range 12 fire in 2016. Thus, the landscape is in a state of recent recovery and as such is not appropriate to perform this analysis on this immediate landscape. When the ALI report was written in 2014 (before the latest fire), this project

area was identified as being within the Black Rock Valley Priority Linkage Area (PLA) and had high contributions to Shrubsteppe and high contributions to the Greater Sage-grouse and Townsend's Ground Squirrel HCAs. Thus, WDFW contends that if these landscapes were allowed to recover from the fires, the habitat quality in these areas would be high and of significant contribution to the connectivity and ALI targets.

WDFW agrees with the WCA that while both projects are in the significant connectivity area between the YTC and the U.S Fish and Wildlife Service Hanford Reach National Monument and Department of Energy Hanford Site, Ostrea is more centrally located directly with the center of connectivity. Without functional connectivity through this landscape, combined with other solar projects to the west, east, and northeast, these projects could reduce or eliminate wildlife connectivity for the various species such as Elk, Greater Sage-grouse, Mule Deer, Black-tailed Jackrabbit and Townsend's Ground Squirrel. While the report notes that Greater Sage-grouse LCP are not within the project area, the only remaining population of sage-grouse in south-central Washington is located directly to the north of the project on the YTC and historically this area did see some movement of grouse as they moved on and off the YTC. This entire landscape is part of the recovery areas for Greater Sage-grouse in south-central Washington.

Literature on widths of connectivity for various species is sparse. Both Shirk et. al. (2015) and Washington Department of Transportation (2022) provide information on ways to better understand connectivity from a wildlife species perspective and both note that anthropogenic changes to landscapes influence habitat use and movement. Both Elk and Greater Sage-grouse are very wary of any fencing or restrictions in their movement paths and wildlife connectivity widths for Elk could be needed as wide as 1-2 miles in width and potentially even larger for Greater Sage-grouse (studies for the Vantage to Pomona transmission line concluded that towers even miles away from known movement areas could have a negative effect). The narrow-unfenced corridors currently proposed within the project, could provide some use to various wildlife, but the project connectivity report fails to site any literature that concludes that these corridor widths are sufficient for wildlife connectivity for these species, including smaller species such as Townsend's Ground Squirrel or Black-tailed Jackrabbit.

Thus, WDFW concludes that the current proposed wildlife corridors are insufficient to provide wildlife connectivity. Wildlife connectivity for all the priority species listed above must be included in a layout for WDFW to be supportive of this project.

WDFW supports renewable energy, and the proposed High Top and Ostrea (and other future) solar projects will need to be sited and oriented in such a way as to maintain functional connectivity across the landscape as well as mitigate for impacts to connectivity and shrubsteppe habitat. Figure 6 shows examples of areas where no development should occur and examples of where permanent habitat connectivity corridors could be established.

Based on the landscape connectivity discussion present above, as well as cumulative impacts to this landscape from present and future solar development, <u>WDFW requests that meetings be established between EFSEC, the applicant and WDFW to attempt to reconfigure the project layout to analyze if an approximately 2-mile-wide corridor could be established, and the project layout worked around the corridor.</u>

Sensitive Wildlife Species

WDFW appreciates the information related to potential and actual wildlife observations on the proposed project sites. We rely on this type of information to fill in the gaps in our own databases and to further support our mission as well as to further justify establishing significant landscape connectivity across this landscape.

The project identified potential inactive Townsends's Ground Squirrel and Burrowing Owl burrows along edges and within the interior of the proposed solar areas. We look forward to working with the project to address impacts to these areas through micro-siting adjustments, changes in project layout, or incorporation of some areas into larger habitat/wildlife connectivity corridors. Where impacts cannot be minimized or avoided to these burrow areas, suitable mitigation will need to be implemented.

Our own data bases (2006 – present) also show the importance of this landscape to wildlife including White-tailed Jack Rabbit, Greater Sage-grouse (State Endangered Species), Burrowing Owl, and Ferruginous Hawk (State Endangered Species) (Figure 7). There is a simple reason that WDFW has recorded no wildlife detections within the proposed project sites – we have never had access to these private lands.

It is important to understand that the Priority Habitats and Species (PHS) data that is available to the public and to a variety of development projects, including solar, is "…meant to serve as a starting point to identify priority habitats and species. It is not meant to replace or preempt more detailed field-based, site-level mapping. Site-specific surveys are usually needed to rule out the presence of priority habitats or species. PHS maps do not provide an official agency determination of the potential impacts to fish and wildlife of a specific project."

Habitat Mapping

It should be noted that there have been numerous fires across this landscape over the last 15 years which have impacted native shrubsteppe habitat; the most recent being the Range 12 Fire in 2016. While the shrub layer is mostly absent, WDFW still considers these burned areas as shrubsteppe habitat in various stages of recovery, with mitigation of at least 2:1 is required.

On June 21, WDFW biologists conducted a site visit to the proposed Ostrea and High Top solar projects. The purpose of this visit was to implement the protocol for identifying and mapping shrubsteppe habitat as described in Azerrad et. al. 2011, Appendix 7. (This document was updated in 2020 to ensure consistency with an update made to the PHS shrubsteppe definition to address the role of fire in shrubsteppe ecosystems). Biologists used vegetation maps prepared by the project as well as various aerial imagery and identified areas of potential shrubsteppe outside of the shrubsteppe areas mapped by the project and selected two areas within the Ostrea project; one on the southeast and the other on the east. They also used the locations of PHS wildlife species (Townsend's Ground Squirrels, Burrowing Owl, etc.) that the project had recorded as an aid in identifying where shrubsteppe habitat may be present. This rather quick single day site visit and survey revealed two important findings:

Figures

Figure 1. The location of Hightop (green) and Ostrea (white) in relation to the proposed Blackrock (west) and Wautoma (east) solar projects, and an unnamed solar project to the northeast. Additionally, the figure shows private, federal, and state landownership and how this open landscape provides connectivity. The proposed solar projects are directly within this wildlife/habitat connectivity corridor that will result in the loss of priority habitats, dependent species, and negatively impact connectivity.

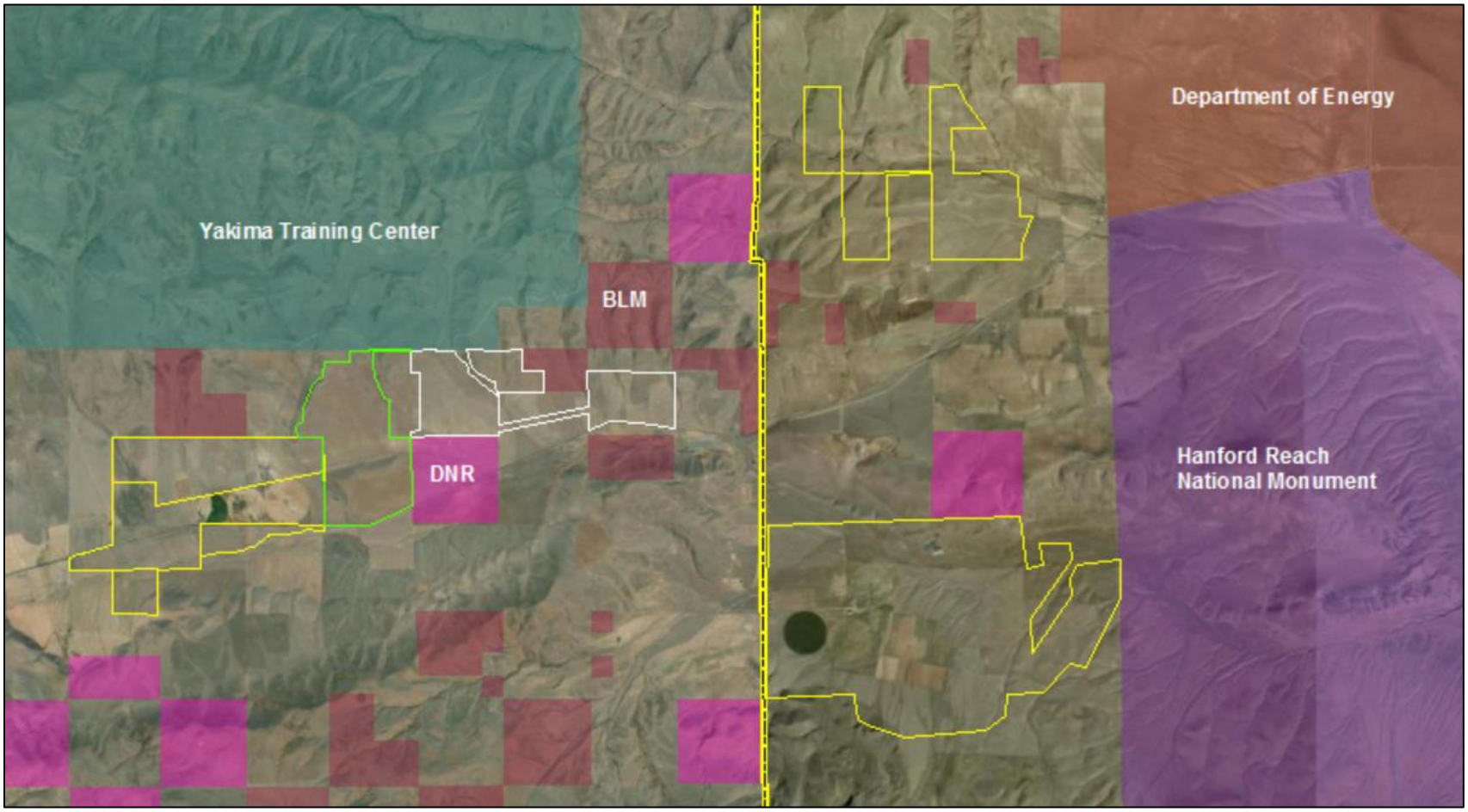

Figure 2. Buildable areas (yellow polygons: approximate) and re-siting of east Ostrea into High Top. This will provide wildlife/habitat connectivity. (See also Figure 6).

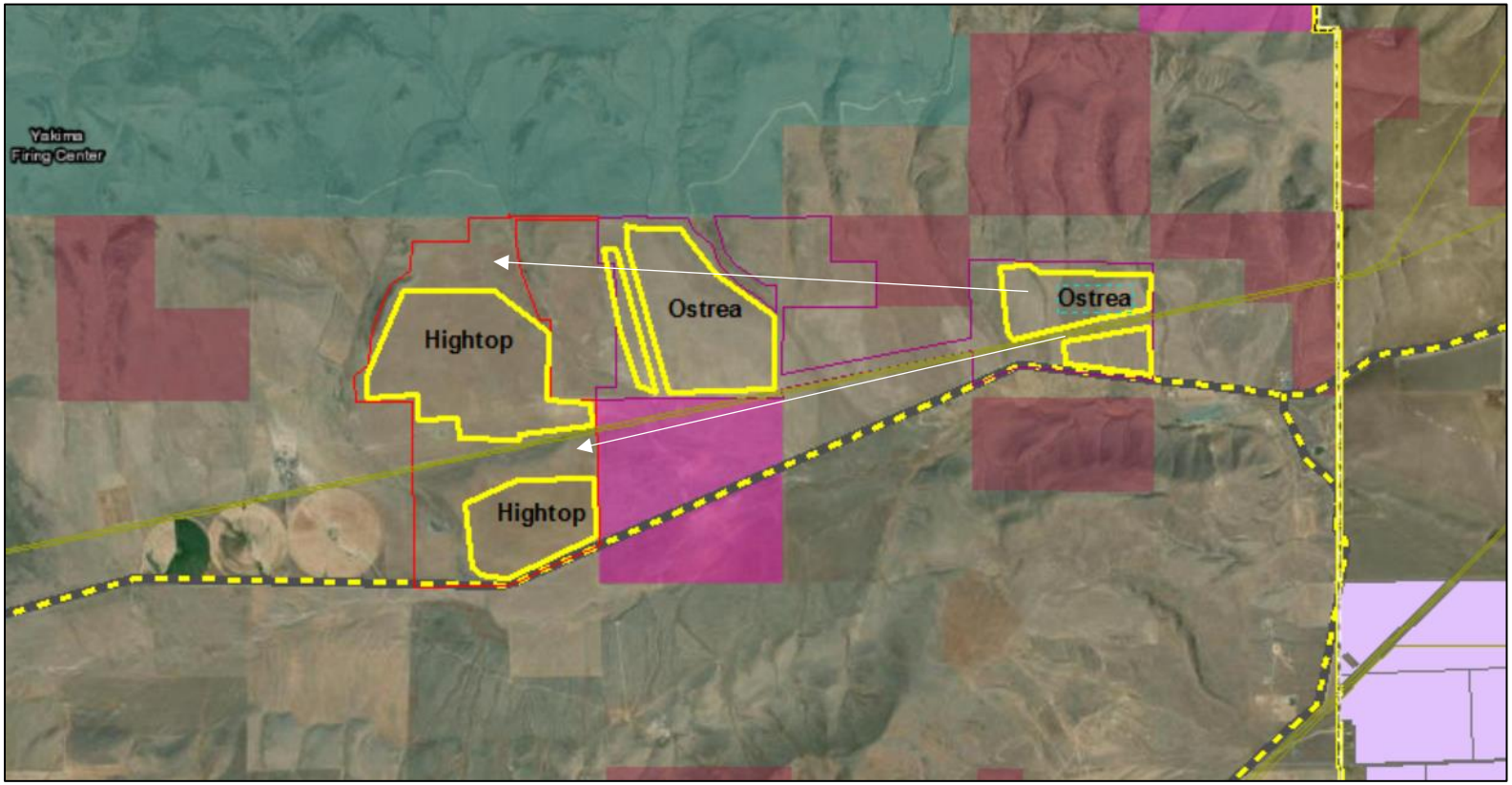

Figure 3. Arid Lands Initiative (ALI) cores areas (dark green) and linkage areas (light green) and the location of the proposed High Top (green) and Ostrea (white) solar projects within the ALI linkage (connectivity) habitats.

Figure 4. Columbia Plateau and Statwide Habitat Concentration Areas (grays and browns) for Mule Deer and Elk and Least Cost Pathways for Elk from the Statewide Connectivity Analysis.

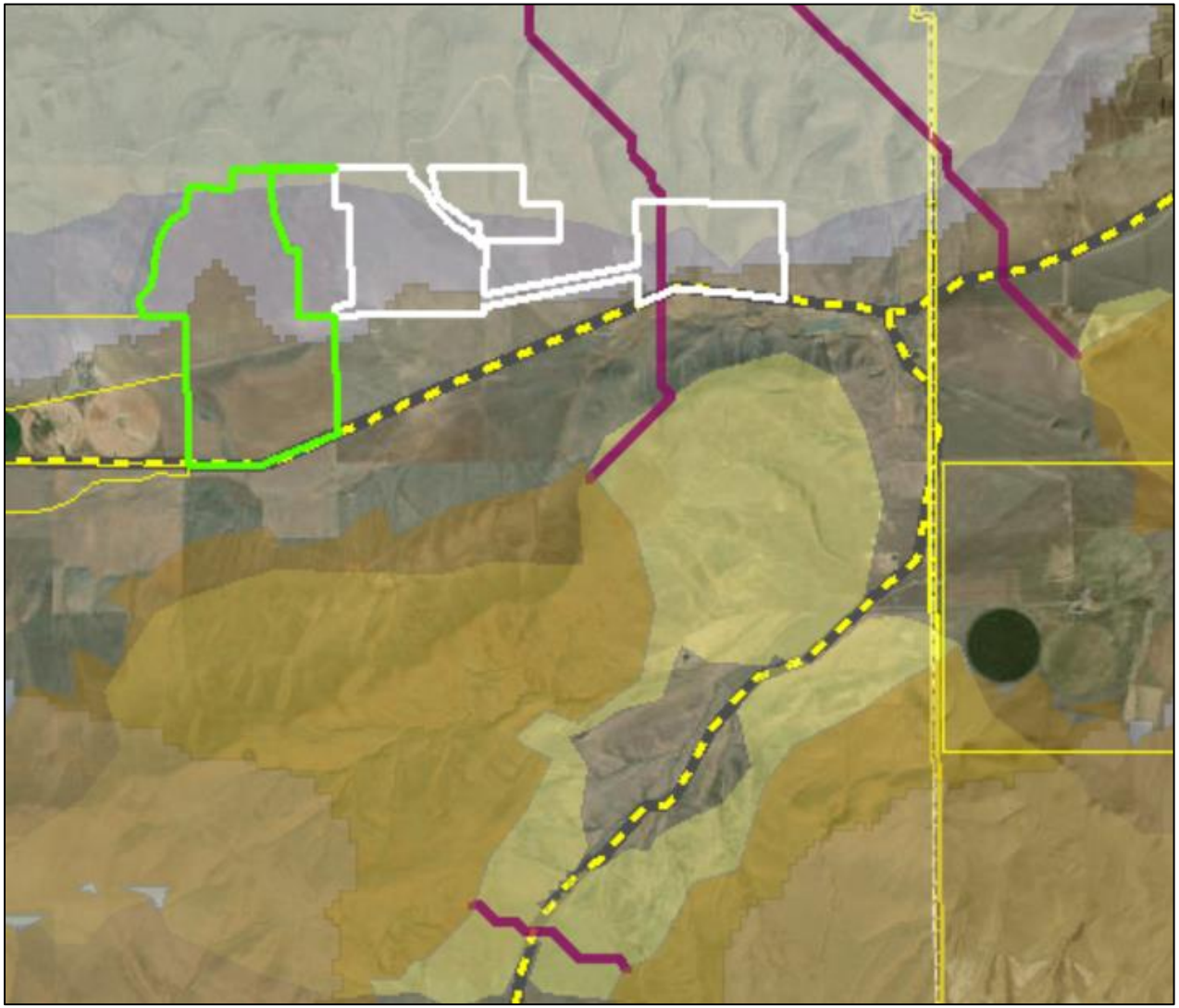

Figure 5. Columbia Plateau and Statwide Habitat Concentration Areas, with significant overlap, for Townsend's Ground Squirrel (light blue) and White-tailed Jackrabbit (light green) and Least Cost Pathways for Townsend's Ground Squirrel (dark green), White-tailed Jackrabbit (red), and Black-tailed and White-tailed Jackrabbit (blue) from the Statewide Connectivity Analysis.

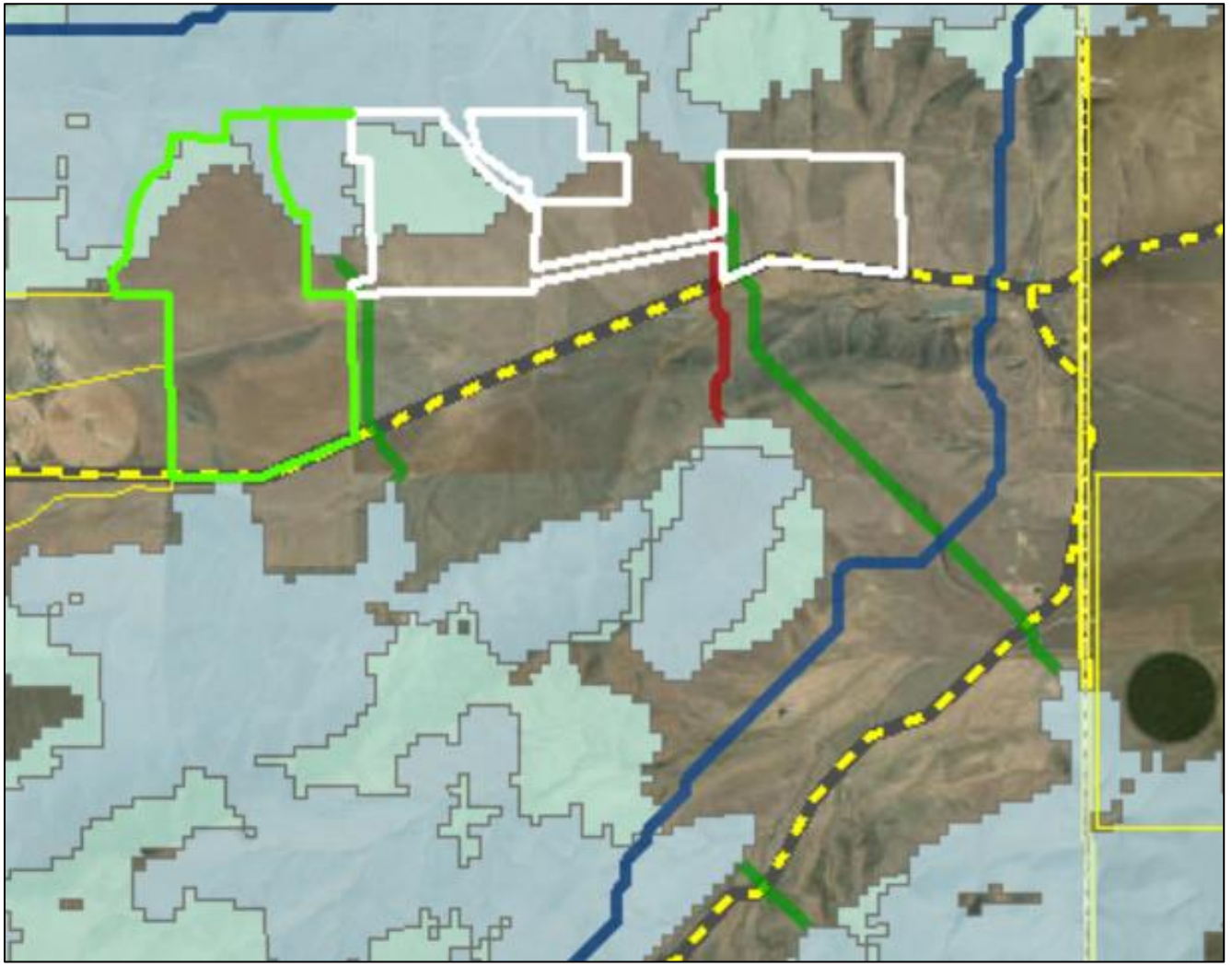

Figure 6. Examples of areas where no development should occur and examples of where permanent habitat connectivity corridors could be established. The arrows DO NOT represent the actual width of corridors.

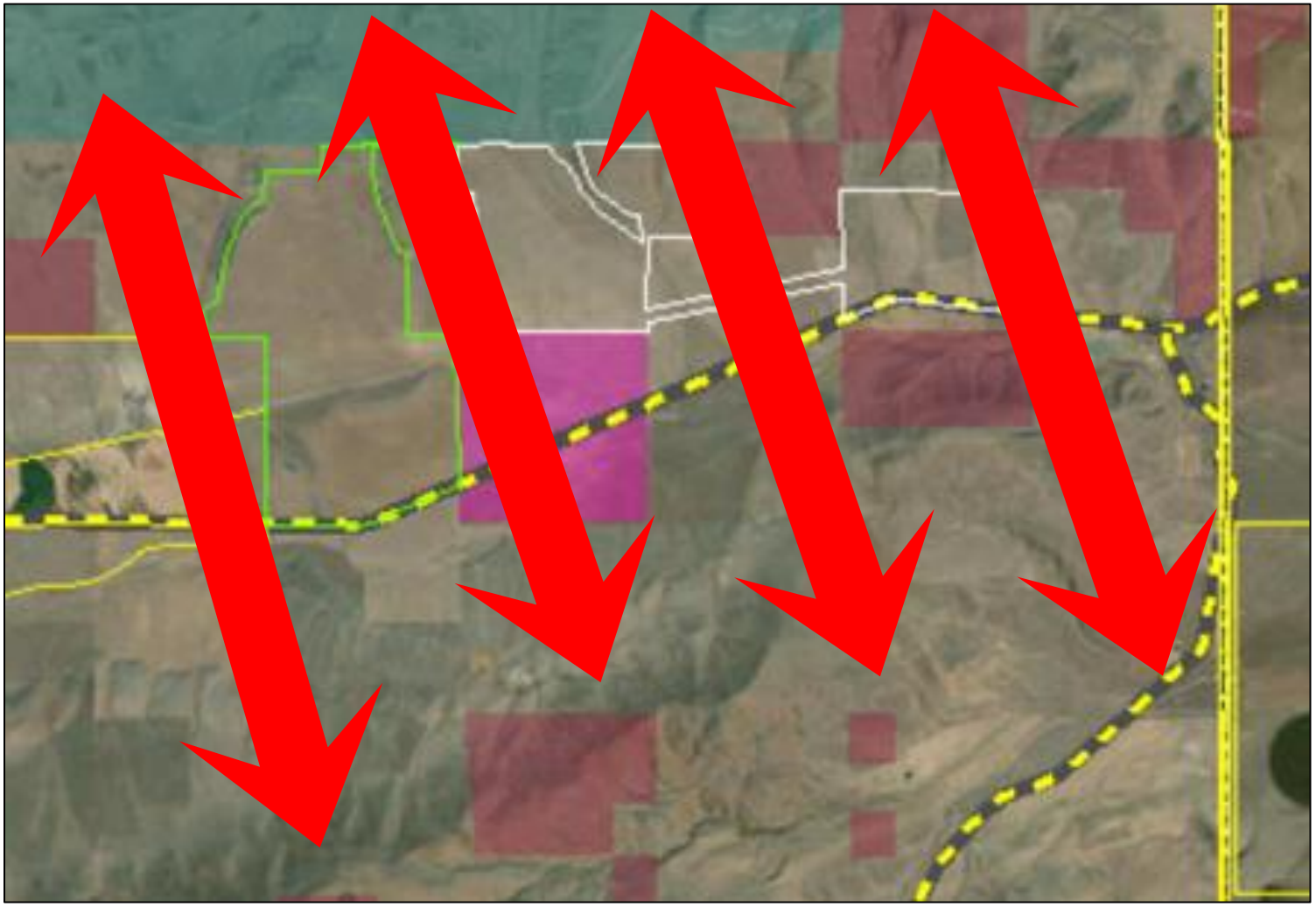

Figure 7. WDFW biotic detections (2006-present) and general locations of proposed High Top (green) and Ostrea (white) solar projects

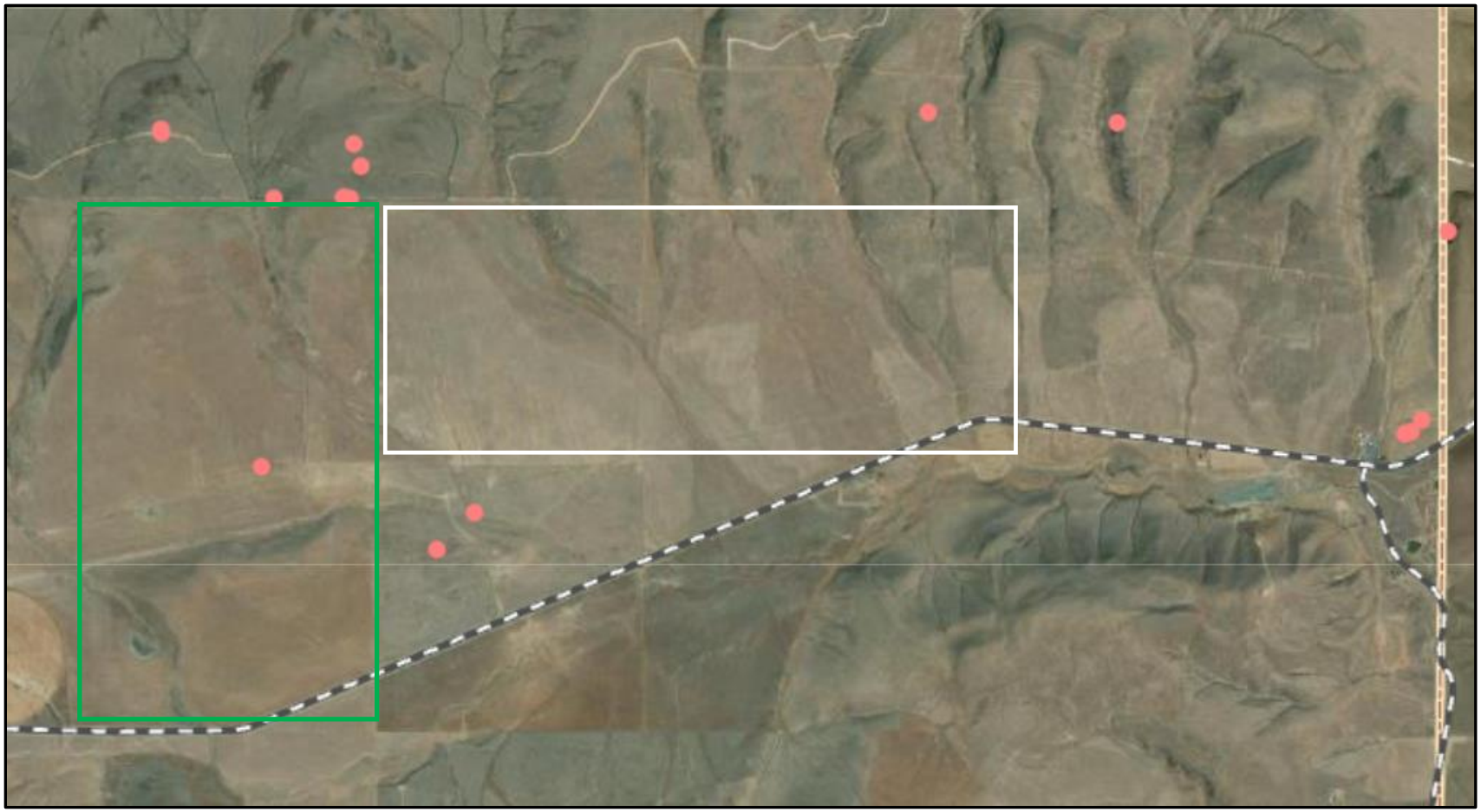

Figure 8. Mariposa Lilies, bunch grasses, and burned sage brush stumps documented by WDFW within habitat mapped as Cheatgrass Dominated Pasture and Mixed Environs on the Ostrea Solar project site.

1. WDFW documented the presence of bunch grasses, burned sagebrush stumps, native forbs, and in one area, Mariposa Lilies (Figure 8) in areas that the project did not map as shrubsteppe, and
2. More on-site time is required by the project to fully document the extent of un-mapped shrubsteppe habitat.

We acknowledge, based on aerial imagery from the 1980's, that dryland farming occurred within the proposed project area, but did not occur for an extended time period. This activity likely resulted in the removal of native vegetation from farmable areas, but not in the swales, draws and canyons that generally run north/south. It is in these areas that native shrubsteppe habitat can still be found (although burned) and it is likely that the intervening decades of no farming (but occasional grazing) and natural succession has contributed to the slow spread of native shrubsteppe vegetation out of these stepper areas and into the once farmed landscape. These areas are not mapped as shrubsteppe on the habitat maps prepared by the project.

Based on these findings, we recommend that the project re-map shrubsteppe habitat. Re-mapping will provide the correct areas and acreage of shrubteppe habitat to aid in the siting/micrositing of the project to avoid and minimize impacts as well as provide acres of impacts that will form the basis on mitigation discussions.

In closing, WDFW is committed to working with developers to avoid and minimize impacts to native habitats and connectivity and we welcome other concepts that integrate meaningful landscape connectivity and impact avoidance and minimization with industrial solar development. Finally, WDFW requests that this application be put on hold until landscape connectivity and habitat mapping have been resolved.

Please contact me at 509-380-3028 or at Michael.Ritter@dfw.wa.gov with any questions.

Sincerely,

Michael Ritter

Michael Ritter
Area Habitat Biologist
Statewide Technical Lead: Wind and Solar

Literature Cited

Azerrad, J. M., K. A. Divens, M. F. Livingston, M. S. Teske, H. L. Ferguson, and J. L. Davis. 2011. Management recommendations for Washington's priority habitats: managing shrubsteppe in developing landscapes. Washington Department of Fish and Wildlife, Olympia, Washington.

Shirk, A.J., M.A. Schroeder, L.A. Robb, and S.A. Cushman. 2015. Empirical validation of landscape resistance models: insights from the Greater Sage-Grouse (*Centrocercus urophasianus*). Landscape Ecol.

Washington State Department of Transportation. 2022. Wildlife Habitat Connectivity Considerations in Fish Barrier Removal Projects.