BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-W-01	**Water**	N.A.	Describe the potential impacts of the Project on Stream ST-510 and any other potential waters of the State.	What Project features would impact streams?	As described in ASC Part 4, Section 4.3.B, the Applicant is designing the Project to avoid and minimize impacts to ephemeral streams to the extent feasible. Specific stream crossing locations are undetermined at this stage in Project design and, upon finalization, will be limited to ephemeral streams within the Project area, if needed. Per ASC Part 4, Section 4.3.C.1, the conceptual design shown on the Project's Preliminary Site Plan (ASC Attachment A, Figure A-1) includes the potential for ephemeral stream crossings or culverts to be installed over ephemeral drainages for Project components such as collector lines and road crossings, but as noted above, specific stream crossing locations are undetermined at this stage in Project design. While not anticipated, if bridge construction is necessary, the abutments would be placed outside of the ordinary high water mark unless no other feasible alternative placement exists. ASC Part 4, Section 4.3.B, states that the State of Washington considers all water bodies to be waters of the state and therefore has jurisdiction over the ephemeral streams found within the Project area. As such, crossings or other work within the ordinary high water marks of ephemeral streams may require a Hydraulic Project Approval (HPA) permit from the WDFW. The Applicant is designing the Project to avoid and minimize impacts to ephemeral streams to the extent feasible. Per WAC 220-660-010, the purpose of the HPA is to ensure that construction or performance of work is done in a manner that protects fish life. As described in Section 4.3.C, because the on-site ephemeral streams are not fish-bearing, the Applicant will engage with WDFW to determine if an HPA is necessary based on final Project design. In addition, the Applicant submitted an Approved Jurisdictional Determination request to the USACE on July 12, 2022. Following a call with the USACE on December 9, 2022, and at the USACE's recommendation, the Applicant requested a Preliminary Jurisdictional Determination (PJD) for aquatic resources within the Project area. If streams cannot be avoided at final design, the Applicant would submit a Joint Aquatic Resources Permit Application to EFSEC to obtain necessary permitting for jurisdictional streams, if needed.
				Would fill, culverts, or bridge abutments/piles be placed in any streams?	See the Applicant's response to the first item under DR-W-01 above.
				Would the stream impacts be temporary or permanent?	If impacts to streams cannot be avoided at final design, potential impacts may be temporary and permanent. ASC Part 4, Section 4.3.C.1, describes potential temporary impacts, which could include sediment and dust from the construction of Project components. Specific stream crossing locations are undetermined at this stage in Project design and, upon finalization, will be limited to ephemeral streams within the Project area, if any. Impacts associated with stream crossings could include excavation (removal and fill) within the stream corridor and below the ordinary high water mark, construction of roadway, and placement of culverts or bridges, if needed. Proposed avoidance, minimization, and mitigation strategies for potential impacts to ephemeral streams are addressed in Part 4, Section 4.3.D.
DR-T-01	**Transportation**	N.A.	The Applicant has identified that a Traffic Control Plan will be prepared and submitted to EFSEC prior to site preparation.	Draft Traffic Control Plan with enough detail for analysis.	The Applicant is working on responses to the transportation data request items DR-T-01 through DR-T-04 and anticipates having responses to these requests in March 2023.
DR-T-02	**Transportation**	N.A.	The Applicant proposes no studies for traffic and transportation.	Please provide a traffic and transportation analysis to Project area.	See the Applicant's response to DR-T-01.
			The assessment provided in Section 4.20 Traffic and Transportation relies on 2020 County data and available imagery from 2017 and street imagery from 2019 with roads being assumed to be in fair to good condition. Traffic counts were not collected in direct association with the Project. Traffic data is not available for all roads in the Project area. It does not appear that the transportation route of materials from the source port (Port of Seattle and/or Port of Tacoma) to the Project area was provided.		See the Applicant's response to DR-T-01.
DR-T-03	**Transportation**	N.A.	The Applicant does not identify railroad crossings or areas of high pedestrian usage (school zones) along transportation route	Provide all railroad crossings and areas of high pedestrian usage (school zones) along transportation route between source (e.g., ports) to Project area.	See the Applicant's response to DR-T-01.
DR-T-04	**Transportation**	N.A.	There are already known intersections that have or will have a failing Level of Service (LOS).	The Applicant has not provided an Applicant-committed measure. Will measures be included in the Traffic Control Plan, and will that plan be provided prior to the DEIS?	See the Applicant's response to DR-T-01.

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				▪ Any cultural resources survey reports for state-owned lands (DNR, etc.)?	This data request will be addressed upon submittal of the Applicant's Cultural Resources Survey Report to EFSEC. The Applicant anticipates submitting the revised draft Cultural Resources Survey Report to DAHP and DNR for review in February 2023.
				▪ Any documentation on the 3 BPA transmission lines that pass through the Gen-tie Micrositing Corridor?	This data request will be addressed upon submittal of the Applicant's Cultural Resources Survey Report to EFSEC.
				▪ Please include documentation for the BPA Pacific Northwest Transmission System.	This data request will be addressed upon submittal of the Applicant's Cultural Resources Survey Report to EFSEC.
				▪ DAHP site forms for:	See the Applicant's response to the first cultural resources request above. DAHP site forms will be submitted with the Applicant's Cultural Resources Survey Report and made available through the DAHP WISSARD database.
				– 22 archaeological sites.	See the Applicant's response to the first cultural resources request above.
				– 3 archaeological/historic property sites (archaeological sites include standing historic buildings and/or structures).	See the Applicant's response to the first cultural resources request above.
				– 3 isolated finds (IFs).	See the Applicant's response to the first cultural resources request above.
				– 3 historic property/built environment sites on adjacent parcels where visual impacts could be of concern.	See the Applicant's response to the first cultural resources request above.
				▪ Any cultural resource surveys of previously unsurveyed areas.	See the Applicant's response to the first cultural resources request above.
				▪ Any archaeological testing or excavation reports.	See the Applicant's response to the first cultural resources request above.
				▪ Any documented correspondence from DAHP regarding the Badger Mountain Project.	See the Applicant's response to the first cultural resources request above.
				▪ Any Avoidance and Protection Plans (APPs).	The Applicant will avoid resources identified in the Cultural Resources Survey Report and an APP will be developed prior to construction with measures for worker training, site marking (and removal of marking post-construction). Tribal representatives will be invited to monitor during work in sensitive areas during construction.
				▪ Any Inadvertent Discovery Plans (IDPs).	The Applicant's IDP will be attached to the Cultural Resources Survey Report provided to EFSEC.
				▪ Any monitoring plans or similar agreements.	Monitoring provisions will be included in the APP, but known sites will be avoided, marked during construction and not monitored unless a new site is discovered per the IDP.
				▪ Any pertinent information that can be appropriately shared, with consent from Tribes, from traditional use studies.	The Applicant submitted the Historic and Ethnographic Context report for Badger Mountain Solar Project to EFSEC on November 4, 2022. This report was prepared by the Confederated Tribes of the Colville Reservation (CCT) History/Archaeology Program. The report provides previously published materials, previously recorded oral historical interviews, oral historical interviews conducted specifically for the Project, and on-the-ground survey data pertaining to the presence and harvestability of plants of traditional cultural significance to the CCT within the proposed Project area. Upon submittal of the report to EFSEC, the Applicant requested that EFSEC coordinate with DAHP regarding how EFSEC should disseminate the report and upload it to the WISAARD database to maintain appropriate confidentiality.
				▪ Any pertinent information that can be appropriately shared, with consent from Tribes, on hunting or fishing rights and tribal plant gathering.	See the Applicant's response to the item above.
DR-WLF-01	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Table 1 lists background resources reviewed as part of the Project.	Was the Washington State *State Wildlife Action Plan* reviewed as part of background information?	The Washington State Wildlife Action Plan is a foundational resource for species information and visionary goals for species conservation in the state. For natural history information, it is very general and covers many species, so often it is not referred to directly as biologists seek more recent site-specific information for individual projects. For example, biologists more often rely on the Washington State Priority Habitats and Species data and observational data on the project site to inform impact assessments and mitigation decisions for a project.
				Was species-specific habitat information available through the USGS reviewed (e.g., GAP analysis project)?	Generally this information is not reviewed or used in project-specific analyses due to its coarse nature. It is intended for regional planning purposes and to illustrate the potential for species to occur across their range. Nonetheless, maps showing species GAP models have been provided in response to this question, along with a table summarizing acres of species modeled habitat in the Project region (10-mile radius), in the Project area, and acres potentially impacted by the Project. See **Attachment WLF-4a-t** and the summary table in **Attachment WLF-4u**.
DR-WLF-02	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Pg 4 describes the field methods.	Provide a map of meander transect locations.	An approximation of meander transect locations, based on GPS data collected during surveys and surveyor recall, is provided in **Attachment WLF-1**.

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DR-WLF-03	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Pg 4 describes the field methods.	Methods description indicates that special habitats and unique features were recorded. Provide locations of identified special habitat features on a map.	As noted in the Wildlife and Habitat Survey Report (Attachment G of the ASC), special habitats and unique features documented during surveys included cliffs, rimrock, rock outcrops, and talus. Areas of cliffs, rimrock, rock outcrops, and talus within the Survey Area were typically found together (grading from rimrock and cliffs to talus slopes) along the western portion of the Solar Array Micrositing Area, as well as a small area along the northeastern portion of the Gen-tie Micrositing Corridor. These areas were combined and mapped as talus habitat (as shown on Figure 2 of the Wildlife Habitat and Survey Report). One area of rock outcrops was also observed in the northeastern portion of the Survey Area (within the Solar Array Micrositing Area). **Attachment WLF-2** provides a figure showing the rock outcrop and talus habitat (which combines the area of rimrock, cliffs, and talus slopes).
DR-WLF-04	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Pg 5 indicates that areas unlikely to support special status species were not surveyed on foot.	Provide a map showing which areas were surveyed on foot and a description of why areas were excluded from the survey.	See response to comment DR-WLF-02. A map of survey locations is provided in **Attachment WLF-1**. The only areas within the Survey Area that were not surveyed by walking meandering transects were areas under active agricultural cultivation.
DR-WLF-05	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Pg 6 Habitat – this section describes broadly the habitat available in the Project area.	The text suggests that background information on habitat was queried beyond the Project area (1 mile). Was a buffer applied to the Project area to describe habitat at a landscape level?	Field-delineated habitat mapping was completed in the Project area. Information for habitat beyond the Project area is derived from National Gap Analysis Project Land Cover Data (USGS 2016) and shown on **Attachment WLF-3** (see response to DR-WLF-05 below).
DR-WLF-06	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Pg 6 Habitat – this section describes broadly the habitat available in the Project area.	Provide a map and description of habitat available adjacent to the Project area to provide context at a landscape level and depict where contiguous habitat exists.	See **Attachment WLF-3**, which shows National Gap Analysis Project Land Cover Data (USGS 2016) within 10 miles of the Project area boundary. The Project area is primarily agricultural land cover, which is consistent with the environs north and east of the Project area. Those areas are categorized as Herbaceous Agricultural Vegetation. West of the Project area is mostly categorized as Cool Semi-Desert Scrub and Grassland. Though it appears in the National Gap Analysis Project Land Cover Data as a contiguous block of Cool Semi-Desert Scrub and Grassland a review of aerial photos reveals that a notable portion, including areas along the Gen-tie Micrositing Corridor, is also in agricultural production.
DR-WLF-07	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Pg 6 Habitat – this section describes broadly the habitat available in the Project area.	Is there a map of the Conservation Reserve Program (CRP) lands in the Project area?	Information regarding land/parcel enrollment in the Conservation Reserve Program is confidential information and is not publicly available. Section 4.2.1.5 of Attachment G of the ASC describes areas potentially enrolled in the Conservation Reserve Program based on information from the Washington State Department of Agriculture, Agricultural Land Use data base (see reference to WSDA 2021 in Attachment G of the ASC).
DR-WLF-08	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Section 4.2.2 describes wildlife observations and potential occurrences in the Project area but does not describe the potential for the Project area to support amphibians.	Provide a discussion on the potential for amphibians to occur in the Project area, location of wetted areas that could support breeding, and potential impacts to amphibians and habitat Are there dugouts or other natural or artificial water features that could support amphibian breeding?	The only salamanders with ranges potentially overlapping the Project are tiger salamander and long-toed salamander. Neither have a special status. The ASC Attachment I Wetland Delineation Report notes only ephemeral drainages, typically ditches along fields, and no wetland or pond features on site.
DR-WLF-09	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Section 4.2.2.2 Mammals describes the observations of mammals and potential for the Project area to support mammals.	Active Burrows were observed in the Project footprint, but the species were not confirmed. Will monitoring occur to confirm use and species?	No additional surveys, pre-construction or otherwise, will be completed for burrowing mammals. Impacts to burrows will be minimized as practicable.
DR-WLF-10	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Section 4.2.2.2 Mammals describes the observations of mammals and potential for the Project area to support mammals.	Pg. 13 indicated that several burrows were observed in the Project area. Provide the number and locations of observed burrows. Provide on a map.	The locations of burrows observed during wildlife and habitat surveys conducted for the Project are provided in **Attachment WLF-9**.
DR-WLF-11	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Section 4.2.2.2 Mammals.	Have the building and structures in the Project area been surveyed for bat presence? Will these structures be removed?	Buildings will not be removed during construction or operation.
DR-WLF-12	**Wildlife**	Attachment G: 2021 Wildlife and Habitat Survey Report	Section 4.2.2.3 Reptiles describes the observation of reptiles and potential for the Project area to support reptiles.	Could talus support snakes and lizards? Could hibernacula be present?	Talus could support both lizards and snakes, particularly for basking and overwintering habitat.
				Provide a discussion on the potential for reptiles, including special status species, to occur in the Project area, location of habitat that could support reptile life requisites, and potential impacts to reptiles and habitat.	Sagebrush lizards are typically associated with sandy soils or sand dunes and in locations where there is a lot of bare ground. The Project area does not have sand dunes or areas of extensive sandy soil, so the potential for sagebrush lizards to occur is low.
DR-WLF-13	**Wildlife**	ASC	4.9B Existing conditions.	Provide a description of habitat available for the 23 special status species with potential to occur in the area.	**Attachments WLF-4a thru -t** show USGS GAP habitat models for the species identified in the ASC for the Project area and for an area within 10 miles of the Project area. **Attachment WLF-4u** is a table summarizing the acres of habitat in those areas and the estimated impacts from the Project on modeled habitat.

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Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-WLF-14	**Wildlife**	ASC	4.9B Existing conditions.	Provide habitat model for suitable habitat for 23 special status species.	See Applicant's Response to WLF-13.
DR-WLF-15	**Wildlife**	ASC	4.9B Existing conditions.	Provide a landscape level discussion of available habitat for special status species.	See Applicant's Response to WLF-13. The table provided as **Attachment WLF-4u** summarizes the acres of USGS GAP habitat modeled within 10 miles of the Project area and inside the Project area proper, and also includes calculations of impacts from Project-related activities for modeled habitat. Notably these USGS GAP models are very coarse and may not account for specific land use or land cover characteristics that may or may not be suitable for individual species. Also, in models such as burrowing owl and prairie falcon, the models do not differentiate between nesting and foraging habitat, so the species life history should also be taken into account when reviewing the model results and related impact estimates.
DR-WLF-16	**Wildlife**	ASC	4.9B Existing conditions – sage grouse.	Has sage grouse habitat been modeled for the Project area?	The *Greater Sage-Grouse Landscape Assessment at the Proposed Badger Mountain Solar Facility* was provided as a supplemental report to EFSEC in December 2022. Sage-grouse habitat is discussed in the report and Appendix A includes a Landscape Scale Suitability assessment for the species.
DR-WLF-17	**Wildlife**	ASC	4.9B Existing conditions – sage grouse.	How much will be lost or disturbed? Provide a map.	See **Attachment WLF-4u** for a summary of sage-grouse habitat modeled by the USGS GAP program. There is 3,538 acres of habitat modeled within 10 miles of the Project area but no habitat modeled within the Project area. Further, sage-grouse habitat concentration areas and least cost path models shown on **Attachment WLF-5**, as modeled by the Arid Land Initiative in 2013, are approximately 7 miles east of the Project area.
DR-WLF-18	**Wildlife**	ASC	4.9B Existing conditions – sage grouse.	Was a sage grouse pellet survey conducted? If so, provide methods, map showing location where survey was conducted, and results.	Two rounds of pellet surveys were conducted (May and October, 2022) to address seasonal variation. This report was provided as supplemental information to EFSEC in December 2022. Another pellet survey is planned for 2023.
DR-WLF-19	**Wildlife**	ASC	4.9B Existing conditions – sage grouse.	Will sage grouse surveys be conducted in a variety of seasons to capture variation in habitat use?	See Applicant's response to WLF-19.
DR-WLF-20	**Wildlife**	ASC	4.9B Existing conditions – sage grouse.	Provide a map that shows the Project in relation to sage grouse HCA and least cost pathway.	See **Attachment WLF-5**. The Project area is shown in relation to the two nearest Greater Sage-grouse HCAs as modeled by the Arid Lands Initiative in 2013. The HCA in the northeast corner of the map is the Mansfield Plateau HCA, which has a Centrality rating of Highest. The HCA in the southern part of the map is the Yakima Training Center HCA, which has as Centrality rating of Very High. The linkage between them has a Centrality rating of Highest among those mapped in the state. The Project area is approximately 7 miles west of the Mansfield Plateau HCA and is not in any modeled Greater Sage-grouse linkages.
DR-WLF-21	**Wildlife**	ASC	4.9B Existing conditions – sage grouse.	Provide a map showing telemetry data of collared grouse compared to the Project area.	Data were reported by WDFW via email communication but were not provided when requested.
DR-WLF-22	**Wildlife**	ASC	4.9B Existing conditions – WAGS.	Has Washington ground squirrel (WAGS) habitat been modeled or mapped or does the application assume that WAGS habitat is limited shrub-steppe habitat?	No model was completed. It was conservatively assumed that shrub-steppe and dwarf shrub-steppe habitat has the potential to support WAGS, particularly areas with deep silty loam soils. This aligns with the USGS GAP model, shown in **Attachment WLF-4r** and the Arid Land Initiative WAGS Habitat Concentration Area and Linkages shown in **Attachment WLF-8**. All of these sources show habitat just west of the Project but very minimal habitat within the Project area (see summary of USGS GAP model data in **Attachment WLF-4u**). The revised layout further minimizes permanent impacts to shrub-steppe within the fenced solar array. Some temporary impacts to shrub steppe could occur during construction within the Gen-tie Micrositing Corridor.
DR-WLF-23	**Wildlife**	ASC	4.9B Existing conditions – WAGS.	Page 159 of the application indicates that 210 acres of shrub-steppe habitat have been mapped in the solar array and 37 acres in the gen tie corridor. However, most (90%) of the Project area is mapped as low-quality WAGS habitat by Wildlife Habitat Connectivity Working Group (WHCWG). Provide specific habitat loss and disturbance numbers.	The Arid Land Initiative completed more detailed connectivity modeling for eleven focal species on the Columbia Plateau in 2012 and 2013. The WAGs model results are shown in **Attachment WLF-8**. There is no overlap in the WAGS HCAs or Linkages. The USGS GAP habitat model, shown in **Attachment WLF-4r** does have some overlap with the Project area along the northwest boundary. The estimated impacts to habitat, based on USGS GAP model data is summarized in **Attachment WLF-4u** showing less than 0.1 acre of permanent, approximately 9 acres of altered within the solar array fence line, and approximately 19 acres of temporary disturbance primarily associated with the overlap of the Gen-tie Micrositing Corridor which will be further minimized through specific siting practices to the extent practicable.
DR-WLF-24	**Wildlife**	ASC	4.9B Existing conditions – WAGS.	Provide a figure showing location of WAGS medium and high-quality habitat in relation to Project components.	WAGS habitat is the same as the shrub-steppe and dwarf shrub-steppe habitat shown in Figure 2 of Attachment G to the ASC (Wildlife and Habitat Survey Report).
DR-WLF-25	**Wildlife**	ASC	4.9B Existing conditions – WAGS.	Are further surveys proposed to confirm abandonment of the known WAGS colony?	No further surveys for WAGS are planned.

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DR-WLF-26	**Wildlife**	ASC	4.9B Existing conditions – Birds.	Does the Columbia River provide stop-over sites for birds? If so, what is the proximity to the Project area	Like all major waterways the Columbia River does provide stopover habitat for migrating birds, particularly waterfowl. The Columbia River is 4.5 miles west of the Project. The City of East Wenatchee is located between the Project and the river. The role that the Project plays in migratory stopover of avian species is summarized in the application under Wildlife Migration Routes.
DR-WLF-27	**Wildlife**	ASC	4.9B Existing conditions – Birds.	Do birds migrate along the Columbia River? If so, discuss how migration could be impacted by the Project?	See response to DR-WLF-26. The Columbia River is not located in the Project area, but instead runs north/south, parallel to the Project. Along that reach the Columbia River is surrounded by the cities of Wenatchee and East Wenatchee, which collectively have 40,000 people. Therefore, it is likely not a high-quality stopover site. Birds using the river as a migratory corridor, flying south to north or north to south, would not intersect with the Project area.
DR-WLF-28	**Wildlife**	ASC	4.9B Existing conditions – Birds.	Will additional existing condition studies be conducted for birds to establish baseline conditions from which changes in bird species richness and abundance can be measured?	Raptor nest surveys were conducted in 2022 and will be conducted again in 2023. No other avian surveys are planned.
DR-WLF-29	**Wildlife**	ASC	4.9B Existing conditions – Fish.	Describe the food and nutrient value ephemeral drainages in the Project area may provide to downstream fish habitat. Will there be changes to these inputs that could impact fish populations	In ASC Attachment I (Wetland Delineation Report), 46 segments of ephemeral streams were delineated within the Project area. Collectively those segments equal 1.4 acres of ephemeral stream (Attachment I, Table 3). ASC Section 4.3.C and Attachment I describe that the Washington Department of Natural Resources lists all streams within the Project area as non-fish bearing or unknown, except for a 55-foot segment of stream ST-329, located at the eastern edge of the Project area. See references to ST-329 in the Wetland Delineation Report (Attachment I to the ASC). The segment of ST-329 within the Project area is disconnected from its downstream channel by active farming of the drainage and is unlikely to contain fish in this reach. The closest perennial stream, which is fish bearing, is 1.5 miles from the Project site. During the field study conducted in April and June, all of the streams were dry and nearly all ran adjacent to or through planted agricultural fields. Any runoff and potential nutrient delivery to downstream sources would occur over short-term periods during heavy rains or potentially during snowmelt runoff, though it is more likely that water infiltrates the soils on site and that much of the water that initiates on site does not reach the nearest perennial stream. Regardless, there will not be changes in the amount or frequency of runoff, and related nutrient transport, that result from the Project because stormwater retention is required on site to offset any effects of new impervious surfaces.
DR-WLF-30	**Wildlife**	ASC	4.9.C Changes to and from existing conditions.	Provide a description of habitat loss specific to the 23 special status species with potential to occur in the Project area	**Attachment WLF-4u** provides a summary of estimated habitat loss from the Project using USGS GAP data. For each species, permanent, altered, and temporary habitat modification is presented.
DR-WLF-31	**Wildlife**	ASC	4.9.C Changes to and from existing conditions.	Can the Project be designed to avoid shrub-steppe habitat located in the western portion of the Project area?	The Project will minimize impacts on shrub-steppe habitat but cannot commit to complete avoidance. The revised layout reduces permanent shrub-steppe impacts to less than an acre (0.6 acre) and minimizes altered disturbances to approximately 17.7 acres within the solar array fence, of which 8 acres will not overlap with the solar array components. There may still be some temporary impacts to the approximately 25.8 acres of shrub-steppe in the Gen-tie Micrositing Corridor, but those will be further minimized through specific siting practices to the extent practicable. An updated table of anticipated impacts to habitat types from the Project's revised layout is provided in **Attachment WLF-10**.
DR-WLF-32	**Wildlife**	ASC	4.9.C Changes to and from existing conditions.	Will abandoned and dilapidated buildings in and adjacent to the Project area be removed or disturbed (e.g., noise and light) by the Project?	See Applicant's response to DR-WLF-11.
DR-WLF-33	**Wildlife**	ASC	4.9.C Changes to and from existing conditions.	What is the corresponding impact to bats and raptors using these buildings?	No effect. See Applicant's response to DR-WLF-11.
DR-WLF-34	**Wildlife**	ASC	4.9.C Changes to and from existing conditions.	Describe the extent of operational lighting and which lights will be turned off. Estimate light trespass and discuss the impacts on wildlife	Project lighting is described in ASC Part 2, Section A.2.3, where it is noted that limited lighting is needed for Project security and occasional after-hours work and maintenance. The Applicant will implement down-shield lighting at the Project collector substation, O&M building, and optional BESS as needed. Outdoor lighting will be sited, limited in intensity, shielded, and hooded in a manner that prevents the lighting from projecting onto adjacent properties and roadways. ASC Part 4, Section 4.9.C.1 describes that evening lighting may be used for periodic work at the O&M building and collector substation during construction and operations. However, lighting at the Project will be generally limited to security lighting; unnecessary lighting would be turned off at night to limit attraction of migratory birds. This includes using lights with timed shutoff, downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights.

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DR-WLF-35	**Wildlife**	ASC	4.9.C Changes to and from existing conditions.	Provide a discussion on if and how the Project might fragment remaining contiguous patches of habitat.	See Applicant's response to WLF-40.
DR-WLF-36	**Wildlife**	ASC	4.9.C Changes to and from existing conditions.	Provide a map showing habitat available at the landscape level and how the Project is sited in that habitat.	USGS GAP habitat models are provided for each species, for which they are available. These are shown in **Attachments WLF-4a thru -t** and summarized in the table shown in **Attachment WLF-4u**.
DR-WLF-37	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – mammals.	An active badger den was documented in the Project area. Describe the impact to these burrows and this species. Provide mitigation for lost burrows.	Impacts to native habitats such as shrub-steppe and dwarf shrub-steppe will be minimized as feasible. Most impacts will occur in agricultural lands. So impacts to burrows, including those potentially used by badger, will be minimized, but they may not be completely avoided. Mitigation is not included specifically for loss of burrows, but mitigation is described in Attachment M to the ASC for habitat loss, including habitat most likely to support badgers.
DR-WLF-38	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – burrowing owls.	Will the burrows in the gen-tie corridor that are suitable for burrowing owl be impacted? If so, what mitigation measures will be implemented to reduce effects?	See Applicant's response to DR-WLF-37.
DR-WLF-39	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – prairie falcon.	Will the barn structure where a pair of prairie falcons was observed be impacted either directly or indirectly (e.g., noise)	See response to DR-WLF-11 regarding the barn structures being retained. Though a pair of prairie falcons was documented on a fence nearby, no nest was confirmed, only the acknowledgement that the barn provides nesting habitat. Regardless, if a nest is confirmed prior to construction the need for no activity buffers during the nesting period will be coordinated with WDFW and EFSEC.
DR-WLF-40	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – movement corridors.	Provide a calculation of the amount of priority linkage area that will be impacted by the Project directly (e.g., within fence line) and indirectly through disturbance.	Landscape Integrity Core Areas (WHCWG) and Habitat Core Areas and Priority Linkage Areas (Arid Lands Initiative) are shown in **Attachments WLF-6a to -6c**. There is no overlap of the Project area for Landscape Integrity Core Areas (see **Attachment WLF-6a**). **Attachments WLF-6b and -6c** present the Composite Models for Habitat Core Areas and Linkages from the Columbia Plateau Ecoregion Connectivity modeling completed in 2012 and the Addendum completed in 2013. These Composite models show the total regional connectivity framework when the individual models for the eleven focal species are combined. There is 1.8 acres of Habitat Core Areas with Low Centrality in the Project area and 390 acres of Priority Linkage Areas with Low Centrality. In each case it is clear that the intended linkage is the canyon and talus slopes just west of the Project, and very likely not the Project area proper due to agricultural uses. Centrality refers to a group of landscape metrics that rank the importance of habitat patches or linkages in providing movement across an entire network, i.e., as gatekeepers of flow across a landscape. Centrality is ranked from Low to Very High. Habitat patches with high centrality are those whose loss could disconnect large portions of the network. Conversely, Habitat Core and Linkage Areas with Low Centrality would be less likely to disconnect large portions of the network, if impacted. Habitat Core Areas and Linkages are ubiquitous in the region, as shown on the figures. That, coupled with the fact that only the edge of the HCAs and Linkages that run west of the Project are mapped inside of the Project area, means that species will still be able to use that HCA and Linkage in the future. Therefore, no impacts are expected beyond the Project boundary as species have ample opportunities to move across the landscape.
DR-WLF-41	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – bats.	Provide a discussion on the potential change in foraging habitat for bats due to the Project.	In this region bats will forage across multiple habitat types, though they are typically drawn to riparian areas or areas with available drinking water (e.g., ponds). No open water will be removed by the Project and there are no features within the Project area that could be noted as particular attractants to foraging bats. Therefore, installation of the Project would have a negligible effect on bat foraging habitat.
DR-WLF-42	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – special status species.	Provide a quantification of direct and indirect habitat loss for special status species with potential to occur in the Project area.	See DR-WLF-30. Habitat Loss is summarized as permanent, temporarily, and altered, rather than direct and indirect. The categories are adapted from the WDFW Wind Power Guidelines and include recent permitting norms around the designation of altered habitat.
DR-WLF-43	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – special status species.	Several special status species were recorded onsite, such as 20 chukar. Provide a species-specific discussion of the potential impacts to special status species including direct habitat loss, indirect habitat loss, potential for mortality, barriers to movement, and habitat fragmentation.	Alongside a summary of USGS GAP modeled habitat for each species, provided in **Attachment WLF-4u**, there is a discussion about potential impacts to each species.
DR-WLF-44	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – habitat.	Calculate the light trespass distance beyond the fence line.	See Applicant's response to DR-WLF-34.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-WLF-45	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – habitat.	Estimate the zone of influence of the Project and provide a calculation of indirect habitat disturbance/ loss.	The Zone of Influence for this solar project is expected to be confined to the Project are boundary. There will be no indirect impacts, including species displacement or loss of habitat value, that extend beyond the Project area boundary. If indirect impacts occur it is anticipated that they will be fully mitigated through application of the habitat mitigation ratios outlined in the WDFW Wind Power Guidelines and recently agreed upon ratios for habitat that is modified (meaning under solar panels), which states that the ratios are intended of mitigate all habitat impacts. It is assumed that means direct and indirect impacts.
DR-WLF-46	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – mortality.	Page 172 states "avian collision with solar modules and associated Project components…., is possible, although the available data on avian mortality at utility scale solar energy sites suggest mortality at PV facilities is comparatively low." Explain what the mortality rate is comparatively low to? Other types of solar facilities?	The paragraph that follows the statement includes a summary of the results from three literature citations, all of which studied observed mortality at PV solar sites. In each study the researchers examined mortality at PV solar sites and compared it to observed mortality in other energy sectors and technologies as well as more commonplace causes of mortality, such as cars and buildings.
DR-WLF-47	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – mortality.	What is the impact to the predator-prey relationship from the proposed fence?	The Project is primarily in agricultural lands, which due to their monoculture vegetation and constant disturbance does not support a robust prey base. The small mammal prey base will remain unchanged by the fence. Small mammals will be able to readily move through the fence and continue to persist under the solar panels. Meso-predators (e.g., coyotes, bobcats) have shown the ability to readily move under or over fences. Large animals (e.g., mule deer) will not be able to move through the fence. While the presence of the fence may slightly change the predator-prey dynamics, due to the amount of available prey habitat in the region, the change is not expected to be disruptive to population dynamics.
DR-WLF-48	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – mortality.	Will the fence design consider mitigation measures to reduce perching?	No measures to reduce perching will be installed on the fences. Measures could be considered through adaptive management if perching becomes a concern.
DR-WLF-49	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – golden eagle.	Golden eagle nests were documented near the Project area. Will a buffer be applied to these nests?	The nearest golden eagle nests are on the west-facing talus slope along the west side of the Project. The nests are on the cliff face and therefore not within line of site of the Project, which will minimize disturbance. A 50-foot setback from the talus slope will be observed, as stated in the ASC. Any additional construction-related set back buffers during the nesting season may be determined through discussions with state and federal agencies, but none are planned at this time.
DR-WLF-50	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – golden eagle.	Golden eagle nests were documented near the Project area. How will these nests be impacted by the Project (e.g., noise, reduction in survival from loss of foraging potential)?	Page 169 of the ASC states: If this territory is occupied during construction, eagles associated with these nests could experience disturbance, particularly early in the breeding season during courtship, nest building, incubation, and brooding. Given the close proximity of the nest to the Project there is some potential for disturbance as a result of construction activity; however, the fact that the nest location on the cliff below the Solar Array Micrositing Area has no line of sight to the Project may minimize this disturbance. Eagles within this territory could also experience a loss of foraging habitat if prey species are reduced within the home range associated with this territory as a result of the Project (Watson et al. 2014). However, the vast majority of the habitat that will be impacted by the Project is agricultural land, which typically provides limited forage value to golden eagles given the low prey availability in agricultural lands.
DR-WLF-51	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – movement corridors.	Provide a map of modeled mule deer habitat and a calculation of loss and disturbance associated with the Project.	See **Attachments WLF-4k** and **WLF-4u**. **Attachment WLF-4k** shows that, with the exception of the Columbia River, the USGS GAP model for mule deer shows all of the area within 10 miles of the Project, and the Project area, as habitat for mule deer. As such, any impacts estimated for the Project would be occurring in mule deer habitat, as summarized in **Attachment WLF-4u**. Further, **Attachment WLF-7** shows modeled Habitat Core Areas and Least Cost Path Linkages for mule deer. There are no HCAs overlapping the Project area, nor are there any Least Cost Linkages passing through it.
DR-WLF-52	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – movement corridors.	Confirm whether the Project overlaps any modeled wildlife corridors.	See Applicant's response to WLF-40.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-WLF-53	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – mortality.	Page 167 notes that raptors will lose foraging habitat. Quantify the amount of suitable foraging habitat that will be lost.	By summarizing the habitat types from the updated Table 2 from the Attachment M - Wildlife Habitat Management and Mitigation Plan (**Attachment WLF-10**), the following qualify as raptor foraging habitat: 32 acres of temporary impact; 20.2 acres of altered habitat; 0.6 acres of permanent. In addition, another 61.8 acres of temporary impacts, 1,142.5 acres of altered area, and 77.7 acres of permanent impacts will occur on agricultural land. Due to its intensive use and ever changing condition agricultural land is highly variable for raptor foraging. At best it may provide low quality foraging habitat during a growing season, but at other times may not provide foraging habitat at all.
DR-WLF-54	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – habitat.	Provide a map of the priority core areas and priority lineages (not just high).	See Applicant's response to WLF-40.
DR-WLF-55	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – habitat.	Provide a description of the indirect impacts to these areas.	Though not called out specifically indirect effects are discussed throughout Section 4.9. Indirect effects are caused by the action but are realized later in time. Those discussed in the ASC include, potential establishment or spread of noxious weeds, which could reduce adjacent habitat quality; disruption of species movement patterns, reduction in available species habitat causing species displacement or generational shifts in habitat use in the region; increased predation from raptors and corvids due to an increase in perch sites, particularly along the gen-tie line.
DR-WLF-56	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – habitat.	Will the Project require removal of any trees?	Very few trees occur in the Project area; therefore, if removal of trees is required, it would be very limited.
DR-WLF-57	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – Sage grouse and WAGS.	Page 167 surmises that impacts to sage grouse and WAGS will be minimal as these species were not observed during field visits. Have species-specific studies been conducted over various seasons to assess seasonal variation in habitat use?	Supplemental reports have been submitted to EFSEC regarding sage-grouse pellet surveys and a landscape level assessment of sage-grouse habitat in the project region. **Attachments WLF-5** and **WLF-4i** show no sage-grouse USGS GAP modeled habitat, HCAs, or Linkages in the Project area. An additional sage-grouse pellet survey is planned for 2023. Conclusions regarding WAGS were based not just on the fact that no individuals were observed during field studies, but that few if any suitable burrows were present in the Project area. Further, **Attachments WFL-4r** and **WLF-8** show not habitat for WAGS in the Project area, with the exception of the Gen-tie Micrositing Corridor. During a meeting between the Applicant and WDFW on March 3, 2021 to discuss planned surveys in the Project area, WDFW noted that they did not have record of WAGS in the Project area and did not request additional WGS surveys.
DR-WLF-58	**Wildlife**	ASC	4.9.C Changes to and from existing conditions – Sage grouse.	Page 167 suggests that sage grouse habitat may be adversely impacted from 0.62 to 6.2 miles from a lek. Calculate the amount of greater sage grouse habitat that may be indirectly impacted by the Project.	These effects are behavioral and not related to habitat loss. No sage-grouse leks have been documented within 6.2 miles of the Project area. The Project is at the outer edge of 6.2 miles from the nearest lek, and the combination of distance and topographic variation between the lek and the Project will minimize any minor and temporary indirect disturbance to the lek. Further, construction activities will not occur during the time of day when lekking is occurring (before dawn).
DR-WLF-59	**Wildlife**	ASC	4.9.C Changes to and from existing conditions –WAGS.	Page 168 makes the statement "If present, this species may experience slightly increased raptor predation pressure as a result of increased perching and nesting structures provided by the overhead gen-tie line; however, this effect does not appear to be large enough to cause long-term effects resulting in abandonment of ground squirrel colonies as thriving colonies have been found adjacent to and under existing transmission lines". Provide a figure showing the location of suitable WAGS habitat, HCA, and known or potential burrows associated with the gen-tie in.	Dwarf shrub-steppe, non-native grassland and forbland, and shrub-steppe habitat types could all be considered suitable habitat for WAGS. The location of those habitat types are shown on Figure 2 of ASC Attachment G - Wildlife and Habitat Survey Report. No known WAGS burrows were discovered in the Project area. Potential WAGS habitat is shown in **Attachment WLF-4r** and is limited to shrub-steppe habitat along the western edge of the Project area. Further, WAGS is not a listed species in Washington and during a meeting with WDFW on March 3, 2021 the species was not identified of concern in the Project area. Burrows observed during wildlife and habitat surveys conducted for the Project are shown in **Attachment WLF-9**; however, the vast majority of burrows observed during surveys appeared inactive and were too large to be considered potential WAGS burrows.
DR-WLF-60	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring.	Will the Project components avoid all talus?	Yes.
DR-WLF-61	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring.	Has the fence design considered guidance for mitigation to sage grouse, such as Sage-Grouse and Fences (usda.gov), WDFW's recommended guidance documents for wildlife fencing and sage-grouse?	Fencing will meet 2017 National Electrical Code (NEC), Article 691.
DR-WLF-62	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring.	Is there an opportunity to develop wildlife corridors through the solar field?	No. The solar arrays have been compressed into as small an area as feasible in order to reduce a larger scale impact. If arrays are spread out and fenced separately, this will have an overall larger footprint on the landscape.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-WLF-63	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring – CRP lands.	Will additional mitigation be provided for loss of CRP land?	As stated in Table 3 in ASC Attachment M - Wildlife Habitat Management and Mitigation Plan, planted grassland, some of which may be enrolled in the CRP program, will be mitigated as follows: permanent impact 1:1 and temporary impact 0.1:1. There is not planted grassland that falls in the altered habitat category. This mitigation will be provided regardless of whether the planted grassland is in CRP.
DR-WLF-64	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring – priority area.	The Project overlaps with the Moses Coulee priority area for sage-grouse. Would additional mitigation be provided to accommodate the loss of priority habitat?	The Greater Sage-grouse Priority Conservation Areas are aimed at recovery and are not regulatory in nature. The habitat mitigation ratios presented in Table 3 in ASC Attachment M - Wildlife Habitat Management and Mitigation Plan are sufficient to guarantee no net loss of habitat functions and values for wildlife, including sage-grouse.
DR-WLF-65	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring.	Describe pre-construction surveys that may be undertaken.	Page 174 of the ASC states that if construction occurs during the bird nesting season, nest clearance surveys will be conducted prior to site disturbance, as feasible. No other preconstruction surveys are planned. Raptor nest surveys would also occur during construction and during the first year of operation.
DR-WLF-66	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring.	Will known raptor nests be buffered?	If active raptor nests are discovered in or near the Project area boundary prior to or during construction, the Applicant will coordinate with WDFW and USFWS on appropriate buffers to minimize disturbance.
DR-WLF-67	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring.	Describe surveys and reporting that will be undertaken during operation.	No additional surveys are planned at the Project facility during operations.
DR-WLF-68	**Wildlife**	ASC	4.9.D Proposed Mitigation and Monitoring.	Can movement corridors be maintained throughout the Project?	See Applicant's response to DR-WLF-62.
DR-WLF-69	**Wildlife**	Attachment L: Raptor nest survey reports	Survey area: the survey area is described as the Project area plus a 2-mile buffer.	Provide rationale for selection of a 2-mile buffer for raptor surveys and not 10 miles.	Both the WDFW Wind Power Guidelines and the USFWS Eagle Conservation Plan Guidance recommend a 2-mile buffer.
DR-WLF-70	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.1 Avoidance and Minimization.	The Applicant commitments include instructing construction personnel on wildlife resources. Elaborate on what type of information would be provided to workers and steps taken to ensure that management plans would be followed.	Staff would be briefed on the areas of high ecological value (e.g., native habitats) and species likely to occur on site. This will include a presentation with photos of species that, if seen, should be avoided. An environmental monitor will be on site at regular intervals to confirm adherence to measures and will provide reports to EFSEC.
DR-WLF-71	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.1 Avoidance and Minimization.	Would the Applicant prepare a construction environmental management plan prior to construction?	Yes. Environmental Compliance Plans are generally required for projects permitted by EFSEC.
DR-WLF-72	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.1 Avoidance and Minimization.	Describe any pre-construction wildlife surveys that would be conducted before, during, and after construction to recorded changes in wildlife habitat use.	See Applicant's response DR-WLF-65.
DR-WLF-73	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.1 Avoidance and Minimization.	Describe mitigation measures (e.g., buffers) that would be implemented around raptor nests.	See Applicant's response DR-WLF-66.
DR-WLF-74	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.1 Avoidance and Minimization.	Will construction temporary laydown areas and temporary roads be placed to avoid shrub-steppe and other priority habitats?	As noted in Section 7.1.of the Draft Wildlife Habitat Management and Mitigation Plan, the Applicant has avoided talus slopes by a minimum of 50 feet and the Project will be designed to minimize impacts to shrub-steppe habitat to the extent feasible. This includes siting temporary laydowns and temporary roads to avoid shrub-steppe and other priority habitats to the extent feasible. Any impacts to those habitats will be mitigated as described in Table 3 of Attachment M.
DR-WLF-75	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.1 Avoidance and Minimization.	Describe mitigation measures to reduce or avoid impacts to burrowing species.	See Applicant's response to DR-WLF-09.
DR-WLF-76	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.2 Restoration.	The Applicant commits to preparing a vegetation and weed management plan; however, Attachment M provides little detail. Provide details on this plan including whether herbicides or pesticides might be used.	The Vegetation and Weed Management Plan will describe methods (e.g., site preparation, seeding methods), success criteria, monitoring, and reporting activities that will be implemented associated with revegetation efforts, as well as methods, monitoring, and reporting activities associated with prevention and control of the introduction and spread of noxious weeds from construction and operation of the Project. The selective use of herbicides may be required for noxious weed control. Only herbicides approved by the U.S. Environmental Protection Agency and Washington Department of Agriculture would be applied and appropriate best management practices would be implemented during application. Selective use of rodenticides may be used in and around the O&M building if a rodent infestation occurs.
DR-WLF-77	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.3 Compensatory Mitigation.	Provide a description of the criteria that would be applied to identify and evaluate potential compensation sites. How would these sites be evaluated for wildlife use?	As directed by the WDFW Wind Power Guidelines (WDFW 2009) and more recent permitting norms, mitigation would be habitat based, meaning the mitigation ratios would be based on habitat types and a mitigation site would need to fulfill the resulting mitigation need for each habitat type. Habitat based mitigation assumes that when similar habitat types replace those that are lost, similar functions and values will be provided, including feeding, breeding, and sheltering for wildlife dependent on those habitat types.
DR-WLF-78	**Wildlife**	Attachment M: wildlife habitat management and mitigation plan	Section 7.3 Compensatory mitigation	Provide a description of the criteria that would be applied to identify and evaluate potential compensation sites. Would wildlife features be included in restoration activities?	See Applicant's response to DR-WLF-77. No specific restoration activities or wildlife features have been identified.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-V-01	**Vegetation**	Rare Plant Survey Report	The results confirm no suitable habitat for later blooming rare plant species with potential to occur in the Study Area (pg. 4); however, several of the habitat types associated with these species, including vernal pools, moist meadows, springs, seeps, and riparian areas, while not occurring on the site can be impacted by conditions upstream that affect surficial flow and groundwater recharge. WAC 463-60-332 (1a) requires the assessment of habitats present on and adjacent to the Project site.	Identify wetland, riparian, and/or aquatic features that occur near the site and confirm whether or not they are connected by surficial flow or groundwater recharge on the site.	The locations of ephemeral streams delineated within the Survey Area, as well as NHD-mapped streams and NWI-mapped wetlands near the site are provided in **Attachment Veg-1**. With the exception of riverine wetlands, which are associated with NHD-mapped streams, the closest NWI-mapped wetland near the site (a small [0.06 acre] freshwater forested/shrub wetland) is approximately 700 feet to the north of the Gen-tie Micrositing Corridor (to the ENE of ST-381 on **Attachment Veg-1**). Based on NHD mapping, none of the stream segments delineated within the Survey Area extend into the off-site NHD stream associated with this wetland; flow from streams delineated within the Survey Area likely doesn't contribute to hydrology of this wetland, if indeed a wetland exists at this site. As shown on **Attachment Veg-1** and described in Table 3 of the Wetland Delineation Report (Attachment I of the ASC), many of the stream segments delineated within the site are short, beginning and ending in the agricultural fields where they are located. Several of the ephemeral stream segments delineated in the Survey Area continue off-site (see **Attachment Veg-1**), intermittently disrupted by farming activities between stream segments. As discussed in response to comment DR-V-04, the Project is sited to avoid and minimize impacts to ephemeral streams and construction and operation of the Project is not expected to impact groundwater, groundwater recharge, or streamflows either on or off-site. Therefore, no indirect impacts to off-site wetlands, riparian, and/or or aquatic features are anticipated from the Project.
DR-V-02	**Vegetation**	Rare Plant Survey Report		Discuss the potential for these habitat components to occur near the site and/or be connected to features (e.g., ephemeral streams) on-site.	See Applicant's response to comment DR-V-01.
DR-V-03	**Vegetation**	Rare Plant Survey Report		Conduct surveys for rare plant species in wetland, riparian, and/or aquatic features identified near the site that are connected by surficial flow or groundwater recharge on the site and discuss the impacts of the Project on any identified populations.	Off-site rare plant surveys will not be conducted. The Applicant does not have access to off-site parcels; in addition, as noted in response to comment DR-V-04, the Project is sited to avoid and minimize impacts to ephemeral streams and construction and operation of the Project are not expected to impact groundwater, groundwater recharge, or streamflows. Therefore, there would be no indirect impacts to any rare plant species that may occur in wetland, riparian, or aquatic features near the site.
DR-V-04	**Vegetation**	Rare Plant Survey Report		Provide additional information on how changes to surface water and groundwater infiltration, as a result of the Project will impact those habitats that can support species at risk off-site.	As noted in Section 4.3.B of the ASC, the Applicant is designing the Project to avoid and minimize impacts to ephemeral streams to the extent feasible. As noted in Section 4.3.D of the ASC, if required, stream crossing designs will minimize permanent impacts and stream crossing structures (i.e., culverts) will be sized to accommodate ordinary high water or other design flow, sediment, and woody debris. In addition, as noted in Section 4.5.C.1 of the ASC, based on the groundwater level of over 20 feet in depth identified in the Geotechnical Engineering Report (Attachment H-2 of the ASC), the Project is not expected to impact groundwater and, with implementation of mitigation measures, the slight increase in impervious surface from construction and operation of the Project is not expected to impact recharge to groundwater or stream flows. These mitigation measures include completing Project construction work in the dry season when no water is present (see Section 4.3.D of the ASC) and implementation of the Project's Erosion and Sediment Control Plan and Stormwater Pollution Prevention Plan. These plans will include measures to prevent and minimize stormwater runoff, flooding, and erosion. In addition, as noted in ASC Section 4.5.C.2, the Project will be designed to have the least impact to stormwater drainage patterns and erosion risk as feasible. Based on the above, the Project is unlikely to result in changes to surface water or groundwater infiltration and is; therefore, unlikely to impact habitats off-site that can support rare plant species. Also see Applicant's response to comment DR-V-01.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-V-05	**Vegetation**	Rare Plant Survey Report	The field surveys and report explicitly focus on rare vascular plants, excluding discussion of non-vascular plants, fungi, and lichens. The report does not include geospatial information to provide reference to where known populations occur (pg. 1).	Why were non-vascular plants, lichen and fungi excluded from the review and survey?	Currently there are no species of fungi listed as rare (i.e., endangered, threatened, or sensitive) in Washington (per WNHP 2022a and pers. comm. with J. Holt of the WNHP on Dec. 13, 2022). Per WNHP 2022b, there are no documented occurrences of rare non-vascular plants in Douglas County. In addition, based on review of available information (WNHP 2021) no rare non-vascular plants have the potential to occur in the Project area. This review is provided in **Attachment Veg-2**. The only rare lichen with potential to occur in the Project area or in Douglas County is naval lichen (*Umbilicaria phase var. coccinea* ; WNHP 2022b). More information on this species is provided in response to comments DR-V-23 and DR-V-24.
DR-V-06	**Vegetation**	Rare Plant Survey Report		Provide the spatial data for rare plant (vascular and non-vascular), lichen, and fungi species known to occur or with potential to occur in the Survey Area or areas near the site.	The spatial data for known occurrences of rare vascular plants, mosses, and lichens within 10 miles of the Project area is provided in **Attachment Veg-3.** As noted in response to comment DR-V-05, currently, there are no species of fungi listed as rare in Washington.
DR-V-07	**Vegetation**	Rare Plant Survey Report	The Study Area is substantial and rare plant surveys were constrained to areas where "high potential" habitat occurs (pg. 2).	Provide the methods for determining "high potential" and the areas identified as such. That is, was it a certain number of known habitat characteristics (hydrology, soils, slope, aspect) and/or a suite of associated species?	The only areas within the Survey Area that were not surveyed were areas under active agricultural cultivation and the approximately 34 acres where site access was not available during the surveys. As noted in the Rare Plant Survey Report prepared for the Project (Attachment F of the ASC), areas that provide marginal potential habitat (i.e., areas dominated by non-native species, or disturbed/developed areas) were surveyed, just with less intensity than areas of high-potential habitat. Due to the variety of rare plant species with potential to occur, all areas of native habitat were considered "high-potential" for rare plants.
DR-V-08	**Vegetation**	Rare Plant Survey Report	The Study Area is substantial and rare plant surveys were constrained to areas where "high potential" habitat occurs (pg. 2).	Provide survey tracks or survey blocks indicating where on the site rare plant surveys actually occurred.	The approximate areas where meandering transects were walked, based on GPS points and surveyor recall, taken during surveys, is provided in **Attachment WLF-1**.
DR-V-09	**Vegetation**	Rare Plant Survey Report	Off-site rare plant, lichen, and fungi populations can provide seed/spore sources for the Study Area if there are conditions on-site that are amenable for establishment.	Please identify those areas on-site where conditions may support rare plant (vascular and non-vascular), lichen, and fungi.	On-site areas that may support rare vascular plants include dwarf shrub-steppe, shrub-steppe, and talus habitats. As noted in response to comment, DR-V-05, there are no species of fungi listed as endangered, threatened, or sensitive in Washington and no rare non-vascular plants have the potential to occur in the Project Survey Area. Areas on site with potential to support naval lichen (the only known rare lichen with potential to occur as noted in response to comment DR-V-05) include areas of talus habitat.
DR-V-10	**Vegetation**	Rare Plant Survey Report	The variables used to rank the "likelihood of occurrence" are provided; however, the relative benchmarks used within those variables are not explained.	Provide a description of each "likelihood of occurrence" bin (unlikely, low, moderate, high).	Additional rationale for the likelihood of occurrence is provided in Table A-1 of the Rare Plant Survey Report prepared for the Project (Attachment F of the ASC). In general, a species was considered ***unlikely to occur*** if: 1) the species is believed to be extirpated in Washington, 2) occurrences of the species in Douglas County are historical, 3) the species known range does not overlap the Survey Area (e.g., local endemic) and/or 4) suitable habitat doesn't occur (e.g., pine-conifer forest). In general, species were considered to have a ***low likelihood of occurrence*** if: 1) documented occurrence overlaps Survey Area; however, occurrence is believed to be historical and suitable habitat unlikely to occur in Survey Area (i.e., Wenatchee larkspur), or 2) limited suitable habitat likely present within Survey Area. In general, species were considered to have a ***moderate likelihood of occurrence*** if: 1) suitable habitat likely to occur within the Project Area, 2) known occurrences of the species have been documented within 10 miles of the Survey Area and suitable habitat likely occurs. In general, species were considered to have a ***high likelihood of occurrence*** if: known occurrences overlap the Survey Area and suitable habitat present within Survey Area.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-V-11	**Vegetation**	Wildlife and Habitat Survey Report	Landscape context is an important consideration when determining impacts to plant communities. The current documents only provide distribution data for plant communities within the Project area and have a hard stop on the Project boundary. The current data does not support an analysis of what impacts the Project is likely to have on vegetation communities as a whole. WAC 463-60-332 (1a) requires the assessment of habitats present on and adjacent to the Project site.	Was an off-site study area buffer used when determining the extent and connectivity of vegetation communities?	As noted in the Wildlife and Habitat Survey Report (Attachment G of the ASC), the locations of WDFW priority habitats (e.g., shrub-steppe, talus) documented within one mile of the Survey Area were reviewed prior to conducting field surveys and while preparing the survey report. The U.S. Geological Survey's SAGEMAP dataset (USGS 2011), which provided locations of potential sagebrush habitat within and adjacent to the Survey Area was also reviewed. Additional off-site vegetation data that has been reviewed is provided in **Attachment WLF-3**.
DR-V-12	**Vegetation**	Wildlife and Habitat Survey Report		Provide any offsite vegetation data used to investigate community/species distribution near the site.	See Applicant's response to comment DR-V-11.
DR-V-13	**Vegetation**	Wildlife and Habitat Survey Report		Provide information on the ecological importance of Shrub-steppe, talus, and dwarf shrub ecosystems.	Shrub-steppe provides habitat for a variety of species of wildlife, including several sagebrush obligate species, such as greater sage-grouse, sagebrush sparrow, and pygmy rabbit, that are state-listed or candidate species, (WDFW 2022). Per Johnson and O'Neil (2001), 184 species of wildlife in Oregon and Washington are known or believed to use shrub-steppe habitat including 47 that are closely associated and 100 that are generally associated. Shrub-steppe also provides habitat for several rare and endemic plants, such as the stat threatened species pauper milkvetch (*Astragalus misellus* var. *pauper*). 149 species of wildlife are known or believed to use dwarf shrub-steppe habitat including 23 species that are closely associated and 86 that are generally associated (Johnson and O'Neil 2001); this includes native ungulates that utilize dwarf shrub-steppe in early spring (Rocchio and Crawford 2015). Dwarf shrub-steppe also provides habitat for rare plants, such as the state sensitive dark-spine ball cactus (*Pediocactus nigrispinus*). Rare plants species, such as the state threatened sticky phacelia (*Phacelia lenta*) and naval lichen (*Umbilicaria phaea* var. *coccinea*) occur in talus and associated cliff crevices, ledges, cracks in basalt outcrops, and adjacent open rocky habitats. In addition, talus slopes and talus-like structures (rock piles, lava stringers) are associated with 22 wildlife species and provide refuge for small mammals like the least chipmunk, hibernacula for a variety of snakes, and some amphibians (e.g., long-toed salamanders and Pacific treefrogs) may be associated with talus (Johnson and O'Neil 2001). Rocky features (individual rocks, talus slopes, outcrops, cliffs, ridges, caves, crevices, etc.) also provide foraging locations, retreat sites from predators, vantage points within territories, and nesting sites, overwintering, and gestation sites for many species of snakes and/or reptiles (Johnson and O'Neil 2001).
DR-V-14	**Vegetation**	Wildlife and Habitat Survey Report	A 0.5 acre minimum mapping unit was used for mapping habitat types (pg. 4).	Provide a rationale for using 0.5 acres as a minimum mapping unit for habitat types.	As noted in the Wildlife and Habitat Survey Report prepared for the Project (Attachment G of the ASC), the approximate minimum mapping acre of 0.5 acre was only implemented in areas of heterogenous vegetation, which typically consisted of areas of multiple native dominated habitats (e.g., dwarf shrub-steppe, shrub-steppe). These areas typically consisted of either fine scale habitat matrices (e.g., inter-mixtures of small <0.5-acre patches of dwarf shrub-steppe habitat and shrub-steppe) or of habitat ecotones (i.e., the transition area between two habitat types (e.g., talus and shrub-steppe). These areas of intermixed and intergraded (ecotone) habitats can be difficult to reliably delineate at a scale of less than 0.5 acre. However, as noted in the Wildlife and Habitat Survey Report (Attachment G of the ASC), patches of habitat less than approximately 0.5 acres were mapped where the habitat types were readily distinguishable (e.g., a patch of shrub-steppe in the middle of an agricultural field).
DR-V-15	**Vegetation**	Wildlife and Habitat Survey Report	One fire complex was identified within the Study Area (pg. 6)	Provide context and a description of what the fire complex means for the site.	The 2008 Badger Mountain Fire, overlapped approximately 75 acres of the Solar Array Micrositing Area and Gen-tie Micrositing Corridor in the northern portion of the Project area. During field surveys conducted for the Project, lower density of shrubs, such as big sagebrush (*Artemisia tridentata*), and higher density of invasive species such as cheatgrass (*Bromus tectorum*), were observed in portions of the area where the fire had occurred as compared to unburned portions of the Survey Area. However, all but one small portion of the Survey Area encompassed by the 2008 Badger Mountain Fire was mapped as shrub-steppe during field surveys due to the observed presence of regenerating big sagebrush and other shrub-steppe plant species. One small area along the Gen-tie Micrositing Corridor within the perimeter of the 2008 Badger Mountain Fire was mapped as non-native grassland and forbland due to the lack of shrub cover and high cover of non-native invasive species such as cheatgrass, bulbous bluegrass (*Poa bulbosa*), and tall tumblemustard (*Sisymbrium altissimum*).
DR-V-16	**Vegetation**	Wildlife and Habitat Survey Report	There are occurrences of shrub-steppe habitat that appear to be associated to with ephemeral streams; however, this link discussing shrub-steppe in the context of the ephemeral streams was not made in the Wetland Delineation Report or the Wildlife and Habitat Report.	Was an analysis conducted linking shrub-steppe communities to the ephemeral streams?	As shown in **Attachment Veg-4**, ephemeral streams are associated with several habitat types in the Project Survey Area including shrub-steppe, non-native grassland and forbland, and agricultural lands. In addition, shrub-steppe habitat within the Project Survey Area was also found in many areas not associated with ephemeral streams. Therefore, shrub-steppe is not linked solely to ephemeral streams within the Project Survey Area.
DR-V-17	**Vegetation**	Wildlife and Habitat Survey Report		Provide spatial data for the water features (including ephemeral streams) and vegetation communities.	The spatial data for water features (including ephemeral streams) and vegetation communities observed within the Survey Area is provided in **Attachment Veg-4**.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-V-18	**Vegetation**	Wildlife and Habitat Survey Report	The unique characteristics of the shrub-steppe and dwarf shrub-steppe are discussed (pg. 8).	If shrub-steppe and dwarf shrub-steppe habitat types are impacted by the Project (Table 2, pg. 8), how will the unique characteristics of this plant community, including soils, be recreated to ensure restoration or compensation success?	Compensatory mitigation is discussed in the Wildlife Habitat Management and Mitigation Plan prepared for the Project (Attachment M of the ASC). For habitat types that require compensatory mitigation, the Applicant will work with WDFW to ensure that any option or combination of options chosen for compensatory mitigation will achieve equivalent or greater habitat quality, value, and function for those habitats being impacted. As noted in Section 4.8.C of the ASC, temporarily disturbed areas will be revegetated in accordance with a Vegetation and Weed Management Plan that will be developed and submitted to EFSEC prior to construction. This plan will describe methods for revegetation, monitoring and reporting activities associated with revegetation efforts and success criteria that must be met in order for revegetation efforts to be deemed successful. Actions that will help ensure restoration success that will be discussed in the plan include site preparation, such as decompaction of soils, if applicable; weed prevention and control efforts that will be implemented; sourcing of seeds from local sources, when possible; and seeding at the appropriate time of year to facilitate germination and establishment of seeded species. If revegetation areas are not meeting these success criteria, remedial actions (e.g., supplemental seeding or planting, weed control, herbivory control) would be implemented. If the success criteria are still not met after implementation of remedial actions, the Applicant will work with EFSEC and the WDFW regarding appropriate steps forward. This may include additional reclamation techniques or strategies or additional compensatory mitigation. Also see Applicant's responses to comments DR-V-26 and DR-V-30.
DR-V-19	**Vegetation**	Wildlife and Habitat Survey Report	The fire regime and history of the Study Area is not discussed.	Discuss the fire regime of the landscape the Study Area occurs on. Is the Project expected to alter the fire regime?	Prior to European settlement, the fire-return interval of shrub-steppe habitat (i.e., the probably historical condition of much of the Project Area prior to agricultural conversion) was likely at intervals of 10 to more than 200 years depending on site characteristics (WDFW 2011). In recent times, wildfires have become more commonly human-caused than natural and current fire-return levels are roughly 10 years, especially in cheatgrass dominated areas (WDFW 2011). Project construction could increase the risk of fire, particularly during hot, dry conditions. The risk of fire from construction of the solar arrays is low as combustible materials are not required for their construction. In addition, as discussed further in the ASC, many best management practices and minimization measures would be implemented to reduce the risk of fire, such as the use of spark arrestors on power equipment, avoiding driving vehicles off roads, allowing smoking in designated areas only (see Section A.5 of the ASC). In addition, the optional BESS would contain a fire suppression and detection system in accordance with fire code and National Fire Protection Association Standards and the Project's O&M area may include a 10,000-gallon water cistern to store water for fire suppression needs (see Sections A.5 and 2.4 of the ASC).The Applicant will also prepare an Emergency Management Plan that contains fire safety measures, which will be developed with input from with the Douglas County Fire Marshal. The risk of fire from construction and operation of the Project, as well as measures that will be taken to mitigate these risks is discussed in further detail in Section 4.13 of the ASC. With implementation of these measures, the Project is not expected to alter the fire regime of the Project Area.
DR-V-20	**Vegetation**	Wildlife and Habitat Survey Report	The fire regime and history of the Study Area is not discussed.	Discuss the fire regime of the landscape the Study Area occurs on. Is there greater risk for fire with the proposed infrastructure?	The risk of fire from the Project is discussed in response to comment DR-V-19.
DR-V-21	**Vegetation**	Invasive Species - No Report	Invasive plants can be spread to the Study Area from off-site populations and spread from existing locations within the Project area. Explicit occurrence data, other than listing them as present, including distribution and density was not provided in the reports.	Provide data on the survey extent for invasive species.	As noted in response to comment DR-V-07, the entire Survey Area, with the exception of areas under active agricultural cultivation and the approximately 34 acres where access was not available, were surveyed during rare plant and habitat surveys. Observations and locations of noxious weeds were documented during these surveys. Although agricultural fields were not traversed, except in limited circumstances (e.g., when needed to reach another portion of the Survey Area that was not under active agricultural cultivation), the edges of agricultural fields were surveyed for noxious weeds. As discussed in Section 4.8.B of the ASC, five species of noxious weeds were documented during surveys. While the locations of other non-native, invasive species (e.g., cheatgrass) were not recorded during the surveys, their presence within the Survey Area is discussed in Section 4.8.B of the ASC.
DR-V-22	**Vegetation**	Invasive Species - No Report		Provide the spatial distribution and density of invasive species at and adjacent to the Study Area.	The spatial distribution, infestation size, and abundance of each noxious weed observed during surveys is provided in **Attachment Veg-5**.
DR-V-24	**Vegetation**	Compiled Application	There is potential for naval lichen (*Umbilicaria phase var. coccinea*) to occur in talus habitats in the Compiled Application (pg. 51).	Discuss potential impacts to naval lichen occurrences within the Study Area and adjacent.	As discussed in response DR-V-24, talus habitat will be avoided by the Project. In addition, there are no known occurrences of naval lichen within or adjacent to the Survey Area; the closest known occurrence is approximately 19 miles to the north along the Columbia River. Therefore, no impacts to naval lichen are anticipated from construction or operation of the Project.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-V-25	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	Staging and work areas associated with the perimeter fence and gen-tie line among others are considered temporary impacts.	Please provide rationale for treating impacts to intact dwarf shrub-steppe and shrub-steppe as temporary.	Per the WDFW (2009) Wind Power Guidelines, "*temporary impacts to habitat are those that are anticipated to end when construction is complete and the impacts have been restored. Temporary impacts include trenching for placement of underground cables, construction staging areas, lay-down areas, and temporary construction access. Temporary impacts also include the portions of road corridors that are used during construction but that are re-vegetated at the end of construction, but do not include the portions of roads that continue to be used for project operations (which are considered permanently affected*)." As noted in the Draft Wildlife Habitat Management and Mitigation Plan prepared for the Project, the impact type (permanent or temporary) and associated mitigation ratios related to temporary and permanently impacts shown in Table 3 of the plan are consistent with the WDFW (2009) Wind Power Guidelines and employ the Guidelines' impact type definitions. As further noted in the plan, the impact definitions and mitigation ratios outlined in WDFW (2009) were employed due to the absence of solar-specific guidelines. This approach is consistent with EFSEC's treatment and recommendations for other permitted solar projects. In addition, as noted in WDFW (2009), the mitigation ratio for temporary impacts to native shrub-steppe lithosols (i.e., dwarf shrub-steppe) is 1:1 due to the increased length of time for restoration of this habitat type. These higher mitigation ratios for temporary impacts to dwarf shrub-steppe were incorporated in the Project's Draft Wildlife Habitat Management and Mitigation Plan.
DR-V-26	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan		Is there supporting evidence that these systems can be restored to their current vegetation trajectory following decommissioning of the staging and work areas?	Only areas that are native shrub steppe or other habitat types will be restored. Most of the Project Area is agricultural land. In those instances the land will be returned to an agricultural condition following disturbance. Although restoration of dwarf shrub-steppe and shrub-steppe habitats presents challenges and can be slow, successful restoration has been shown to be possible. Some of the common challenges associated with shrub-steppe restoration include soil compaction and high weed cover (Benson et al. 2011). The Vegetation and Weed Management Plan will include methods to address these challenges (see response to comment DR-V-18). The Washington State Recreation and Conservation Office's PRISM database includes several successful shrub-steppe restoration projects. For example, see the North Douglas County Shrub-Steppe Restoration Project: (https://secure.rco.wa.gov/prism/search/ProjectSnapshot.aspx?ProjectNumber=08-1584) and the Post Fire Shrub Steppe Habitat Restoration Project (https://secure.rco.wa.gov/prism/search/ProjectSnapshot.aspx?ProjectNumber=16-1678). In addition, Link et al. (2004) provides case studies (e.g., Canoe Ridge) demonstrating successful shrub-steppe restoration. Case studies of successful shrub-steppe restoration are also discussed in Benson et al. (2011) and in the Case History Library noted in that reference (https://wdfw.wa.gov/sites/default/files/2019-10/FinalCaseHistoryLibrary_0.pdf).
DR-V-27	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	With regard to revegetation under solar panels, "caution should be used in applying these results from west of the Cascade Mountains to the drier Columbia Plateau (Hassanpout Adeh et al. 2018)".	Discuss in what context caution should be applied.	The results of the study discussed in Hassanpout Adeh et al. (2018) showed that areas under PV solar panels 1) maintained higher soil moisture; 2) showed a significant increase in late season biomass (90% more biomass); and 3) were significantly more water efficient (328% more efficient). We noted that caution should be used because the study site discussed in Hassanpout Adeh et al. (2018) occurs west of the Cascades in the Willamette Valley ecoregion and the Project is located east of the Cascades in the Columbia Plateau ecoregion. The differences in these two ecoregions, such as differences in average precipitation and temperature, could potentially influence the results of a similar study if conducted in the drier Columbia Plateau. For example, a similar study conducted in the drier Columbia Plateau may not show as dramatic an increase in late season biomass or water efficiency. However, as further discussed in the study, the observed differences in soil moisture, biomass, and water usage/water efficiency, appeared to be due to the changes in microclimate (such as increased relative humidity and decreased solar radiation), as well as the associated changes in potential evapotranspiration under and adjacent to solar panels. Therefore, presumably changes in soil moisture, late season biomass, and water efficiency would also be found for a similar study conducted in the Columbia Plateau, it's just the magnitude of those changes that is unknown. If similar changes are realized under solar panels in the drier climate east of the Cascades it would likely benefit vegetation establishment in that arid environment.
DR-V-28	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	It is stated that when impacts cannot be avoided, they should be "minimized, restored, reduced, or compensated for, in that order of priority".	Discuss how reduction differs from minimization and why it follows restoration.	Per WDFW Policy M-5002, and as included in Section 2.4 of the Draft Wildlife Habitat Management and Mitigation Plan, reduction includes "*reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action* " and minimization includes "*minimizing impacts by limiting the degree or magnitude of the action and its implementation".* This "order of preference", (i.e., reduction follows restoration or rectifying) directly follows WDFW Policy M-5002.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-V-29	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	Avoidance and minimization - the measures omit any reference to vegetation.	Discuss what measures will be used to avoid and minimize impacts to vegetation.	As discussed in Section 7.0 of the Draft Wildlife Habitat Management and Mitigation Plan and Section 4.8 of the ASC, measures to avoid and minimize impacts to vegetation include: 1) siting the Project primarily on agricultural land to minimize impacts to native vegetation; 2) siting the Project to avoid talus slopes by a minimum of 50 feet; 3) siting the Project facilities to minimize impacts to shrub-steppe habitat to the extent feasible; 4) flagging the limits of construction to minimize vegetation removal and ground disturbance; and 5) developing a Vegetation and Weed Management Plan in consultation with EFSEC and the Douglas County Weed Management Task Force prior to construction. This plan will include measures for controlling the establishment and spread of noxious weeds, which will help avoid and minimize impacts to vegetation. In addition, best management practices that would be implemented (as noted in Section 7.0 of the Draft Wildlife Habitat Management and Mitigation Plan and Section 4.8 of the ASC) which would help avoid and minimize impacts to vegetation include: 1) preparing and implementing measures in the Erosion and Sediment Control, Stormwater Pollution Prevention, and Spill Prevention, Control and Countermeasure plans that will be prepared for the Project and 2) minimizing fire hazards by using spark arrestors on power equipment, avoiding driving vehicles off roads, allowing smoking in designated areas only per the requirements of WAC 463-60-352 and preparing an Emergency Management Plan that will contain fire safety measures.
DR-V-30	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	The Vegetation and Weed Management Plan will be the guiding document used for revegetation Areas and controlling noxious species.	Is data available (e.g., primary literature, grey literature, case studies) to support the assertion that the Vegetation and Management Plan will ensure successful revegetation, particularly in the shrub-steppe and dwarf shrub-steppe habitats?	See Applicant's responses to comments DR-V-18 and DR-V-26
DR-V-31	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	The Vegetation and Weed Management Plan will be the guiding document used for revegetation Areas and controlling noxious species.	Will a baseline survey for invasive species be conducted? If not, how will the management plan overcome this data gap?	As noted in response to comment DR-V-21 and DR-V-22, observations of noxious weeds were documented during rare plant and habitat surveys conducted for the Project. The spatial distribution, infestation size, and abundance of each noxious weed observed during surveys is provided in **Attachment Veg-3**.
DR-V-32	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	The Vegetation and Weed Management Plan will be the guiding document used for revegetation Areas and controlling noxious species.	How will noxious species be defined?	Noxious species will include/be defined as those species designated as noxious weeds in Washington State per RCW 17.10 and WAC Chapter 16-750. As noted by the Douglas County Weed Management Task Force (per: https://www.douglascountywa.net/DocumentCenter/View/729/Noxious-Weed-List-PDF), the Douglas County Noxious Weed List comprises all state listed noxious weeds (as described in WAC 16-750).
DR-V-33	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	The Vegetation and Weed Management Plan will be the guiding document used for revegetation Areas and controlling noxious species.	Discuss the role of invasive plant regulations and organizations with respect to the Project.	As noted in response to comment DR-V-32, noxious weeds are designated in accordance with RCW 17.10 and WAC Chapter 16-750. Per RCW 17.10.140, it is the Applicant's duty to control the spread of noxious weeds (as further elaborated in RCW 17.10.140) . As discussed in the Sections A.5, 3.8 and 4.8 of the ASC, the Vegetation and Weed Management Plan developed for the Project will be developed with input from EFSEC and the Douglas County Weed Management Task Force. This Plan will be developed and implemented per Douglas County Code 18.16.320.
DR-V-34	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	The planted grasslands were noted as dead in the Rare Plant Survey Report.	As noted in the Rare Plant Survey Report, the planted grassland was dead at the time of the survey. Have the factors contributing to the die-off been identified?	The area mapped as planted grassland is discussed and shown in Wildlife and Habitat Survey Report (Attachment G of the ASC; Figure 2; and Photo 15 in Appendix D). During surveys in May 2021, this area, which is located under and adjacent to the existing BPA transmission line corridor, appeared to have been recently disturbed. There were abundant tractor tire tracks observed throughout the area and the bunchgrasses appeared to have been cut or mowed.
DR-V-35	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	The planted grasslands were noted as dead in the Rare Plant Survey Report.	How will the Project avoid what appears to be a failed planting project within the Study Area in its restoration/revegetation efforts?	As noted in response to comment DR-V-34, the "failure" of the planted grassland observed during the habitat surveys appear to have been the result of human action. As noted in Section 7.2 of the Draft Wildlife Habitat Management and Mitigation Plan and Section 4.8.D of the ASC, the Applicant will develop a Vegetation and Weed Management Plan with input from EFSEC and the Douglas County Weed Management Task Force prior to construction. This plan will describe methods (e.g., site preparation, seeding methods), success criteria, monitoring, and reporting activities that will be implemented associated with revegetation efforts. Following implementation of revegetation efforts, the Applicant would monitor revegetation areas to determine if the site is on track to meeting predetermined success criteria. Monitoring would likely include assessment of factors such as: species composition, percent cover of native and non-native forbs, grasses and shrubs, percent cover of noxious weeds, and degree of erosion. If it is determined during annual monitoring that the revegetated areas are not meeting or trending toward meeting success criteria, remedial actions would be implemented. These remedial actions may include reseeding the affected area, planting container plants, additional noxious weed control, or other measures as needed.

BADGER MOUNTAIN SOLAR APPLICATION REVIEW - EFSEC COMMENTS TO ORIGINAL APPLICATION					
Item	**Section**	**Report**	**Topic**	**Information Request**	**Applicant Response**
DR-V-36	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	General Inquiry.	Confirm whether the Project is proposing any on-site compensation/ mitigation.	As noted in the Draft Wildlife Habitat Management and Mitigation Plan, two options are currently being proposed for compensatory mitigation: • Conservation Easement Option: A conservation easement would be put in place on land acceptable to EFSEC to preserve the acreage noted in Table 3 of the Draft WHMMP. • Conservation Project Funding Option: The Applicant would provide funding to a conservation project to be designated by EFSEC, in an amount to be calculated based on the cost of an easement for the acreage noted in Table 3 of the Draft WHMMP. As noted in the ASC, the final design is in progress and the Project is being sited to avoid impacts to habitats requiring mitigation to the greatest extent possible. If, following the final design, compensatory mitigation is required, the Applicant will consider on-site and/or off-site locations, provided the locations are acceptable to EFSEC.
DR-V-37	**Vegetation**	Draft Wildlife Habitat Management and Mitigation Plan	General Inquiry.	Discuss the potential for spills to enter habitats and avoidance and mitigation measures that will be employed with respect to spills during construction and the operation of the Project.	As noted in Section 7.1 of the Draft Wildlife Habitat Management and Mitigation Plan, the Applicant will prepare a Spill Prevention, Control, and Countermeasure (SPCC) Plan to be implemented during construction and operation to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release. As noted in Section 4.13 of the ASC, all hazardous materials required for construction will be stored in compliance with a SPCC Plan that follows the EPA Amended Spill Prevention, Control, and Countermeasure Rule issued in 2006 (EPA-550-F-06-008). Further details on hazardous materials that may be required for construction and operation and measures that will be implemented to prevent or mitigate for any spills is provided in Section 4.1.3 of the ASC.

Attachment Gen-1 – References

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Badger Mountain Solar Energy Project

Attachment Veg-1 Wetland and Water Features Within and Adjacent to Survey Area

DOUGLAS COUNTY, WASHINGTON

ST-513
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ST-200
ST-300A

- Survey Area
- Area not Accessible*
- Field Delineated Stream

Habitat Type

- Agriculture
- Developed
- Dwarf Shrub-steppe
- Non-native Grassland and Forbland
- Planted Grassland
- Shrub-steppe
- Talus
- NHD Streams outside Survey Area

NWI Wetland outside Survey Area

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riverine

* Site access was not available during the 2021 survey season. While these areas were not visited on foot in 2021, they were viewed from adjacent accessible parcels and public roads.

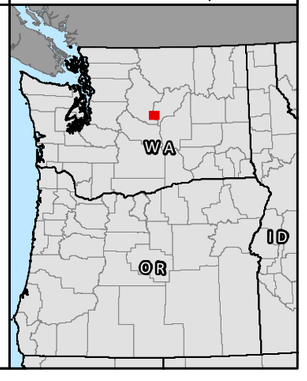
TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map



1:30,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

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NOT FOR CONSTRUCTION

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Attachment Veg-2
Potential for Rare Non-vascular Plants to Occur within Survey Area

Washington Endangered, Threatened, and Sensitive Non-vascular Plants				
Species Name	**Family Name**	**Status[1]**	**Potential to Occur in Project Area**	**Rationale**
Bartramiopsis lescurii	Polytrichaceae	SE	Highly Unlikely	Only known from Snohomish County
Brotherella roellii	Sematophyllaceae	ST	Highly Unlikely	All occurrences in Washington are historical and all specimens were collected prior to 1913. All historic occurrences are from the Cascades or further west.
Encalypta brevicollis	Encalyptaceae	SE	Highly Unlikely	Only known occurrence in the Washington is from Pierce and Lewis counties. Occurrence is historical and was last observed in 1931
Iwatsukiella leucotricha	Pterigynandraceae	SE	Highly Unlikely	Only known from the Northwest Coast Ecoregion
Orthotrichum praemorsum	Orthotrichaceae	SE	Highly Unlikely	Only known from one historical occurrence in Kittitas County
Scouleria marginata	Scouleriaceae	ST	Highly Unlikely	Only known extant occurrence in Washington is from Klickitat County. In addition, it is only known from bedrock or large boulders at the waterline of perennial rivers and streams; which doesn't occur in the Project Area

[1] SE = State endangered

Sources:

WNHP (Washington Natural Heritage Program). 2021. Online Field Guide to the Rare Plants of Washington. Washington Department of Natural Resources Available online at: https://www.dnr.wa.gov/NHPfieldguide

WNHP. 2022a. Washington Natural Heritage Program List of Mosses. Washington Department of Natural Resources. Available online at: https://www.dnr.wa.gov/publications/amp_nh_mosses.pdf

WNHP. 2022b. Washington Natural Heritage Program Element Occurrences. Washington Department of Natural Resources. Available online at: https://www.dnr.wa.gov/NHPdata

Personal communication with Jasa Holt, WNHP, December 13, 2022.

Badger Mountain Solar Energy Project

Attachment Veg-3
WNHP Occurrences within 10-miles of the Survey Area

DOUGLAS COUNTY, WASHINGTON

- Survey Area
- 10-mile Buffer
- County Boundary

WNHP Occurrence

- Chelan rockmat *(Petrophytum cinerascens)*
- coyote tobacco *(Nicotiana attenuate)*
- dwarf evening-primrose *(Eremothera pygmaea)*
- gray cryptantha *(Cryptantha leucophaea)*
- gray stickseed *(Hackelia cinerea)*
- little bluestem *(Schizachyrium scoparium var. scoparium)*
- Palouse milkvetch *(Astragalus arrectus)*
- pasqueflower *(Anemone patens var. multifida)*
- pauper milkvetch *(Astragalus misellus var. pauper)*
- sagebrush stickseed *(Hackelia hispida var. disjuncta)*
- Snake River cryptantha *(Cryptantha spiculifera)*
- snowball cactus *(Pediocactus nigrispinus)*
- sticky phacelia *(Phacelia lenta)*
- Thompson's clover *(Trifolium thompsonii)*
- Wenatchee larkspur *(Delphinium viridescens)*
- Whited's fuzzytongue penstemon *(Penstemon eriantherus var. whitedii)*
- Whited's milkvetch *(Astragalus sinuatus)*

Source: WDNR Washington Natural Heritgage Program, 2022.

TETRA TECH

AVANGRID RENEWABLES

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

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NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

Attachment Veg-4 Habitat Types and Delineated Water Features within the Survey Area

DOUGLAS COUNTY, WASHINGTON

- Survey Area
- Area not Accessible*
- Field Delineated Stream

Habitat Type

- Agriculture
- Developed
- Dwarf Shrub-steppe
- Non-native Grassland and Forbland
- Planted Grassland
- Shrub-steppe
- Talus

* Site access was not available during the 2021 survey season. While these areas were not visited on foot in 2021, they were viewed from adjacent accessible parcels and public roads.

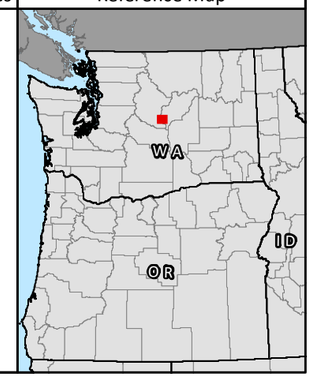
TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map



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Badger Mountain Solar Energy Project

Attachment Veg-5 Noxious Weeds Observed within the Survey Area

DOUGLAS COUNTY, WASHINGTON

Survey Area

Area not Accessible

Noxious Weed

- Canada thistle (*Cirsium arvense*)
- Dalmatian toadflax (*Linaria dalmatica*)
- Diffuse knapweed (*Centaurea diffusa*)
- whitetop (*Lepidium draba*)

Size of Infestation

- <0.1 acres
- 0.1 - 1 acres

Abundance

- Sparse
- Common
- High Cover

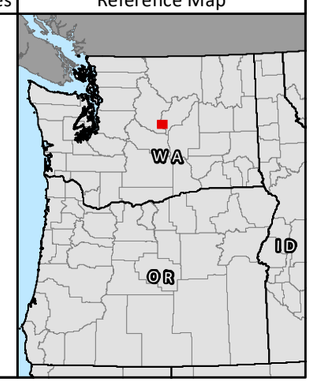
TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary; USDA-NAIP Imagery

Reference Map



1:30,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

Attachment WLF-1 Survey Locations within the Project Area

DOUGLAS COUNTY, WASHINGTON

Survey Area

Area not Accessible*

Habitat Type

- Agriculture
- Developed
- Dwarf Shrub-steppe
- Non-native Grassland and Forbland
- Planted Grassland
- Shrub-steppe
- Talus
- Locations of Meandering Transects

* Site access was not available during the 2021 survey season. While these areas were not visited on foot in 2021, they were viewed from adjacent accessible parcels and public roads.

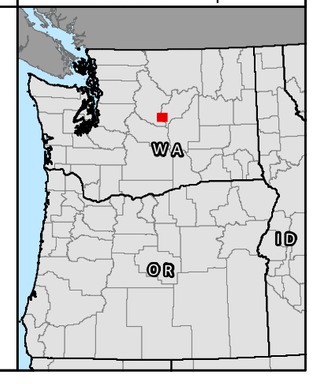
TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary; USDA-NAIP Imagery

Reference Map



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Badger Mountain Solar Energy Project

Attachment WLF-2 Locations of Unique Habitat Features

DOUGLAS COUNTY, WASHINGTON

Survey Area

Area not Accessible*

Rock Outcrop

Habitat Type

Talus

* Site access was not available during the 2021 survey season. While these areas were not visited on foot in 2021, they were viewed from adjacent accessible parcels and public roads.

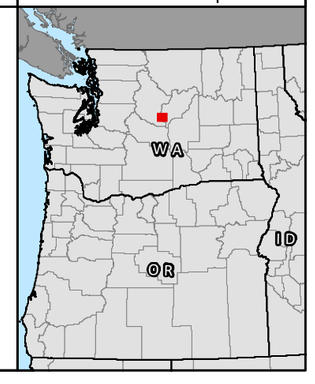
TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map



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Badger Mountain Solar Energy Project

Attachment WLF-3 GAP Land Cover Data within the Project Vicinity

DOUGLAS COUNTY, WASHINGTON

Douglas County

Chelan County

Kittitas County

Grant County

- Survey Area
- County Boundary

GAP Land Cover

- Developed & Urban
- Cool Semi-Desert Scrub & Grassland
- Herbaceous Agricultural Vegetation
- Introduced & Semi Natural Vegetation
- Open Water
- Recently Disturbed or Modified
- Shrub & Herb Wetland
- Temperate & Boreal Forest & Woodland
- Temperate & Boreal Grassland & Shrubland
- Temperate & Boreal Open Rock Vegetation
- Temperate Alpine to Polar

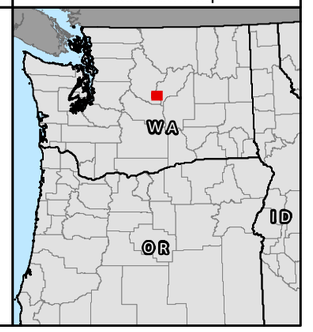
TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery
GAP Landcover

Reference Map



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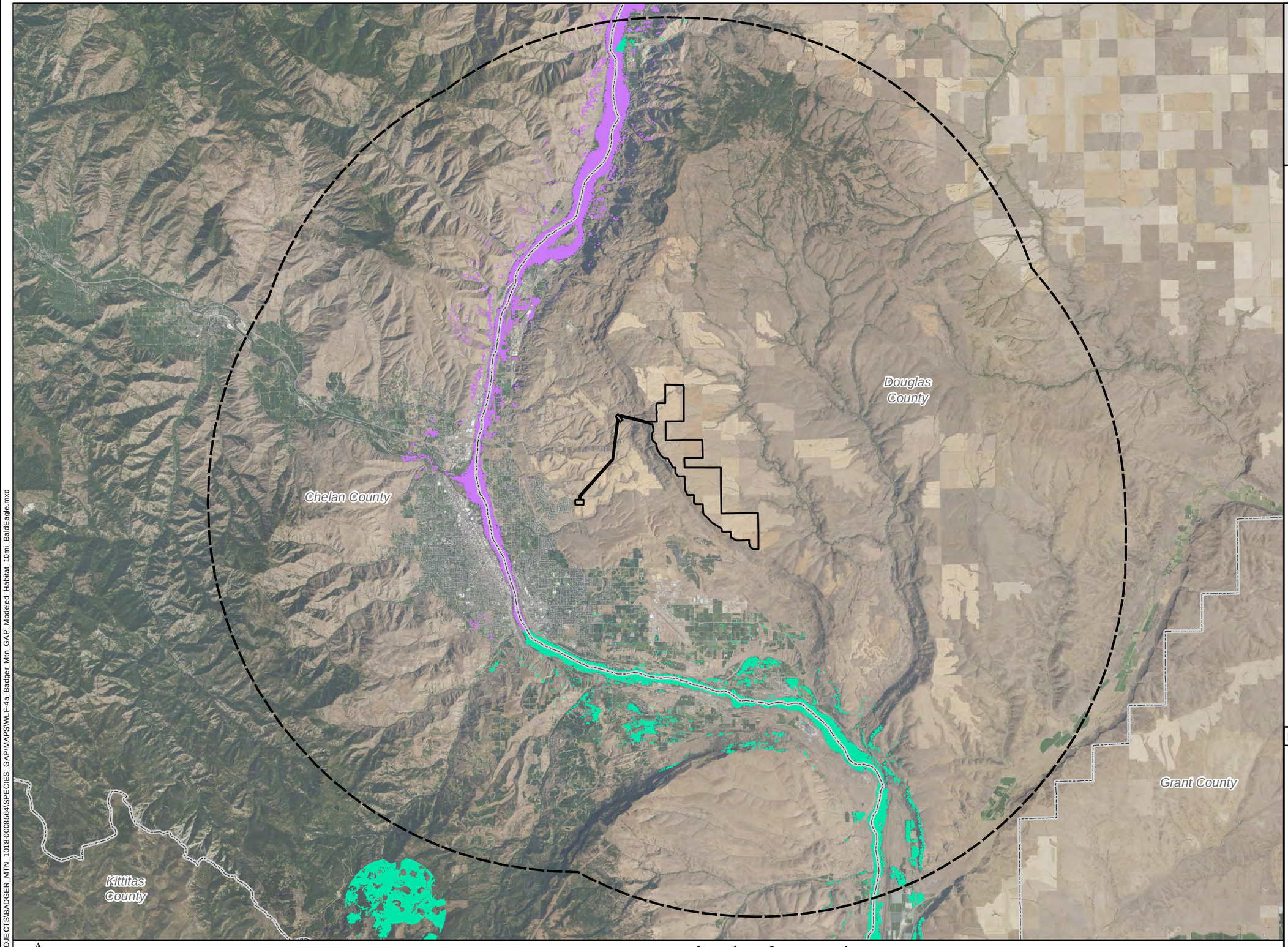
Badger Mountain Solar Energy Project

WLF-4a USGS GAP Modeled Habitat within 10 miles - Bald Eagle

DOUGLAS COUNTY, WASHINGTON



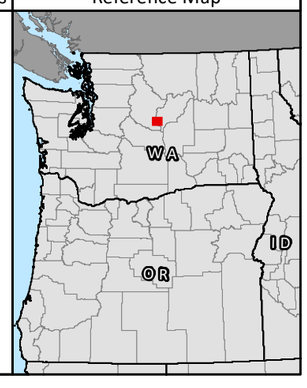
- Survey Area
- 10-mile Buffer
- County Boundary

Bald Eagle Habitat

- Winter
- Year-round

TETRA TECH

AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery	

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Badger Mountain Solar Energy Project

WLF-4b USGS GAP Modeled Habitat within 10 miles - Black-tailed Jackrabbit

DOUGLAS COUNTY, WASHINGTON

Survey Area

10-mile Buffer

County Boundary

Black-tailed jackrabbit Habitat

Year-round

Douglas County

Chelan County

Grant County

Kittitas County

TETRA TECH

AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery	WA, OR, ID

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

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NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

WLF-4c USGS GAP Modeled Habitat within 10 miles - Brewer's Sparrow

DOUGLAS COUNTY, WASHINGTON

Douglas County

Chelan County

Grant County

Kittitas County

- Survey Area
- 10-mile Buffer
- County Boundary

Brewer's sparrow Habitat

- Summer

TETRA TECH

AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery	WA, OR, ID

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

WLF-4d USGS GAP Modeled Habitat within 10 miles - Burrowing Owl

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary

Burrowing owl Habitat
Summer
Year-round

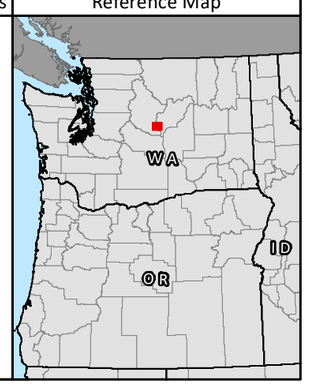
Douglas County
Chelan County
Kittitas County
Grant County

TETRA TECH
AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map



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0 1 2 4 Miles

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Badger Mountain Solar Energy Project

WLF-4e USGS GAP Modeled Habitat within 10 miles - Chukar

DOUGLAS COUNTY, WASHINGTON

Douglas County

Chelan County

Grant County

Kittitas County

Survey Area

10-mile Buffer

County Boundary

Chukar Habitat

Year-round

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA

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1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

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Badger Mountain Solar Energy Project

WLF-4f USGS GAP Modeled Habitat within 10 miles - Elk

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary

Elk Habitat
Year-round

Douglas County
Chelan County
Grant County
Kittitas County

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA
OR
ID

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Badger Mountain Solar Energy Project

WLF-4g USGS GAP Modeled Habitat within 10 miles - Ferruginous Hawk

DOUGLAS COUNTY, WASHINGTON

Douglas County

Chelan County

Grant County

Kittitas County

- Survey Area
- 10-mile Buffer
- County Boundary

Ferruginous Hawk Habitat

- Summer

TETRA TECH

AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery	WA, OR, ID

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

WLF-4h USGS GAP Modeled Habitat within 10 miles - Golden Eagle

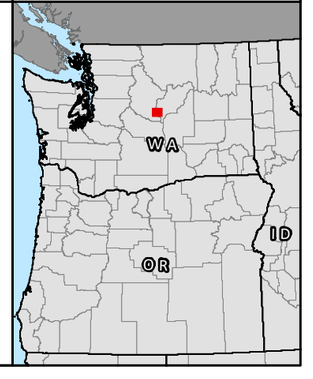
DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary

Golden eagle Habitat
Summer
Year-round

Douglas County
Chelan County
Grant County
Kittitas County

TETRA TECH
AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery	

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

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Badger Mountain Solar Energy Project

WLF-4i USGS GAP Modeled Habitat within 10 miles - Greater Sage-grouse

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary
Greater sage-grouse Habitat
Year-round

Douglas County
Chelan County
Grant County
Kittitas County

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA
OR
ID

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Badger Mountain Solar Energy Project

WLF-4j USGS GAP Modeled Habitat within 10 miles - Loggerhead Shrike

DOUGLAS COUNTY, WASHINGTON

Douglas County

Chelan County

Grant County

Kittitas County

Survey Area

10-mile Buffer

County Boundary

Loggerhead shrike Habitat

Summer

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA

OR

ID

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

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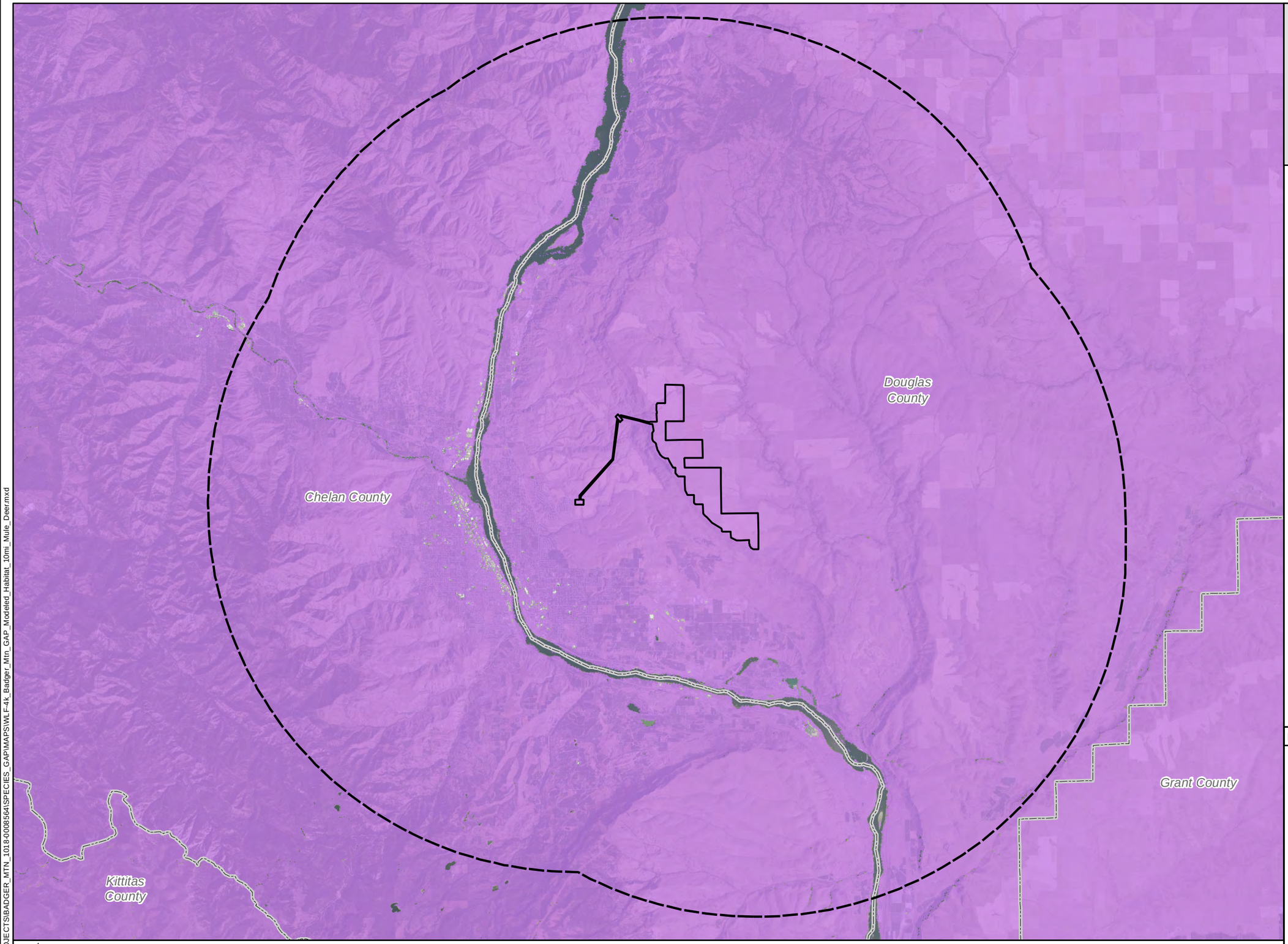
Badger Mountain Solar Energy Project

WLF-4k USGS GAP Modeled Habitat within 10 miles - Mule Deer

DOUGLAS COUNTY, WASHINGTON



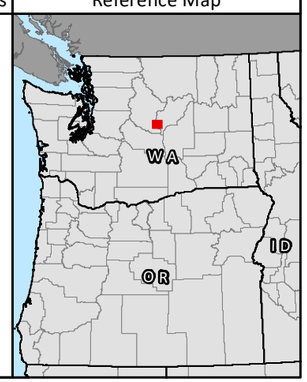
- Survey Area
- 10-mile Buffer
- County Boundary

Mule deer Habitat

- Year-round

TETRA TECH

AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery	

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0 1 2 4 Miles

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Badger Mountain Solar Energy Project

WLF-4l USGS GAP Modeled Habitat within 10 miles - Prairie Falcon

DOUGLAS COUNTY, WASHINGTON

Douglas County

Chelan County

Grant County

Kittitas County

Survey Area

10-mile Buffer

County Boundary

Prairie falcon Habitat

Summer

Year-round

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA

OR

ID

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

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Badger Mountain Solar Energy Project

WLF-4m USGS GAP Modeled Habitat within 10 miles - Ring-necked Pheasant

DOUGLAS COUNTY, WASHINGTON

Douglas County

Chelan County

Grant County

Kittitas County

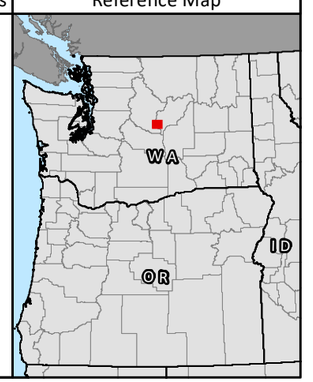
- Survey Area
- 10-mile Buffer
- County Boundary

Ring-necked pheasant Habitat

- Year-round

TETRA TECH

AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery	

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

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Badger Mountain Solar Energy Project

WLF-4n USGS GAP Modeled Habitat within 10 miles - Sage Sparrow

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary
Sage sparrow Habitat
Summer

Chelan County
Douglas County
Grant County
Kittitas County

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA
OR
ID

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Badger Mountain Solar Energy Project

WLF-4o USGS GAP Modeled Habitat within 10 miles - Sage Thrasher

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary
Sage thrasher Habitat
Summer

Douglas County
Chelan County
Grant County
Kittitas County

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary:
USDA-NAIP Imagery

Reference Map

WA
OR
ID

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Badger Mountain Solar Energy Project

WLF-4p USGS GAP Modeled Habitat within 10 miles - Sagebrush Lizard

DOUGLAS COUNTY, WASHINGTON

Douglas County

Chelan County

Grant County

Kittitas County

Survey Area

10-mile Buffer

County Boundary

Sagebrush lizard Habitat

Year-round

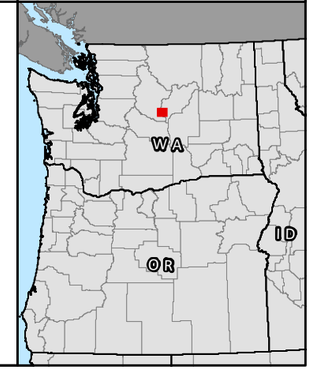
TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map



1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

WLF-4q USGS GAP Modeled Habitat within 10 miles - Townsend's Big-eared Bat

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary
Townsend's big-eared bat Habitat
Year-round

Douglas County
Chelan County
Grant County
Kittitas County

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA
OR
ID

R:\PROJECTS\BADGER_MTN_1018-0008564\SPECIES_GAP\MAPS\WLF-4q_Badger_Mtn_GAP_Modeled_Habitat_10mi_Townsends_Big-eared_Bat.mxd

Badger Mountain Solar Energy Project

WLF-4r USGS GAP Modeled Habitat within 10 miles - Washington Ground Squirrel

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary
Washington ground squirrel Habitat
Year-round

Douglas County
Chelan County
Grant County
Kittitas County

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA
OR
ID

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Badger Mountain Solar Energy Project

WLF-4s USGS GAP Modeled Habitat within 10 miles - White-tailed Deer

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary
White-tailed deer Habitat
Year-round

Chelan County
Douglas County
Grant County
Kittitas County

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA
OR
ID

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Badger Mountain Solar Energy Project

WLF-4t USGS GAP Modeled Habitat within 10 miles - White-tailed Jackrabbit

DOUGLAS COUNTY, WASHINGTON

Survey Area
10-mile Buffer
County Boundary
White-tailed jackrabbit Habitat
Year-round

Douglas County
Chelan County
Grant County
Kittitas County

TETRA TECH
AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

WA
ID
OR

1:160,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

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Common Name	Scientific Name	Federal Status[1]	State Status[2]	Modeled Habitat Within 10 Miles of Project (acres)[2]	Modeled Habitat in Project Area (acres)[1]	Modeled Habitat Impacted by Project			Discussion of Species Impacts *Direct and Indirect Habitat Loss, mortality, barriers to movement, fragmentation*
						Permanent (acres)	Altered (acres)	Temporary (acres)	
Birds									
bald eagle	*Haliaeetus leucocephalus*	BGEPA, BCC	PS	10,248	--	--	--	--	Bald eagle modeled habitat is confined to the Columbia River, 5 miles west of the Project area. No direct or indirect impacts are expected on the species, including habitat loss, mortality, or habitat fragmentation. See Attachment WLF-4a.
Brewer's sparrow	*Spizella breweri*	BCC	--	133,285	86	<0.1	8	26	Brewer's sparrow is a sage-brush obligate species and its modeled nesting habitat is ubiquitous in the Columbia Plateau Ecoregion. Less than 0.1% of the available habitat within 10 miles is within the Project area and approximately 0.01% will be lost or altered by the project. No indirect effects to habitat are expected nor are effects to species movement or habitat fragmentation. See Attachment WLF-4c.
burrowing owl	*Athene cunicularia*	SOC	C,PS	229,768	2,297	78	1,162	95	The USGS GAP data do not differentiate between nesting and foraging habitat for burrowing owl. Therefore, the model shows that burrowing owl could use the entire Project area and most of the region, as shown by WLF-4d, during the summer breeding season. The model is primarily showing foraging habitat. Nesting habitat is much more limited and is tied to habitats where burrowing animals would persist, since burrowing owls are burrow obligates, requiring existing burrows for nesting. The Project area is agricultural land cover with minimal instances of burrowing animals, as such, potential nesting habitat would be limited to the very northwestern edge of the Project and a few locations along the transmission line corridor, where burrows were observed (WLF-9). Nearly the entire 10-mile region around the Project area is habitat and approximately 1% is in the Project area. Approximately 0.6% of available summer habitat in the region will be lost or modified by the Project. No indirect impacts are expected due to the amount of available habitat in the region. See Attachment WLF-4d.
chukar	*Alectoris chukar*	--	PS	179,041	147	<0.1	10	30	Chukar habitat modeled by USGS GAP data connect chukar to vegetated draws, upland forest, or shrub-steppe habitat in the region. The draw just west of the Project area and the very northwestern corner could support chukar. Chukar were observed in the Project area during wildlife surveys. The Project area is notably not modeled as habitat, likely due to its agricultural land cover. Less than 0.1% of habitat in

Common Name	Scientific Name	Federal Status[1]	State Status[2]	Modeled Habitat Within 10 Miles of Project (acres)[2]	Modeled Habitat in Project Area (acres)[1]	Modeled Habitat Impacted by Project			Discussion of Species Impacts *Direct and Indirect Habitat Loss, mortality, barriers to movement, fragmentation*
						Permanent (acres)	Altered (acres)	Temporary (acres)	
									the region overlaps with the Project area. Less than 0.01% of available habitat in the region will be lost or modified by the project. No indirect impacts are expected due to the amount of available habitat in the region. See Attachment WLF-4e.
Columbian sharp-tailed grouse	*Tympanuchus phasianellus columbianus*	SOC	E, PS	--	--	--	--	--	A USGS GAP habitat model does not exist for this species.
dusky grouse	*Dendragapus obscurus*	--	PS	--	--	--	--	--	A USGS GAP habitat model does not exist for this species.
ferruginous hawk	*Buteo regalis*	SOC, BCC	E, PS	185,698	502	7	121	53	Most of the Project area is notably not modeled as habitat, likely due to its agricultural land cover. Small areas of modeled habitat are interspersed in the Project area and shown on the western edge and very northwestern portion in WLF-4g. Approximately 0.3% of habitat in the region overlaps with the Project area. Less than 0.1% of available habitat in the region will be lost or modified by the Project. No indirect impacts are expected due to the amount of available habitat in the region. See Attachment WLF-4g.
golden eagle	*Aquila chrysaetos*	BGEPA, BCC	PS	188,485	148	<0.1	8	30	Golden eagle habitat modeled by USGS GAP data connects the species to vegetated draws or upland forest and shrub-steppe habitat in the region. The draw just west of the Project area and the very northwestern corner is modeled as habitat. There is a known golden eagle nest on the talus slopes in this area. The Project area itself is notably not modeled as habitat, likely due to its agricultural land cover. Less than 0.1% of habitat in the region overlaps with the Project area. Less than 0.01% of available habitat in the region will be lost or modified by the Project. No indirect impacts are expected due to the amount of available habitat in the region. See Attachment WLF-4h.
greater sage-grouse (Columbia Basin DPS)	*Centrocercus urophasianus*	BCC	E, PS	3,538	--	--	--	--	There is no USGS GAP modeled habitat in the Project area. Attachment WLF-5 shows the nearest greater sage-grouse habitat concentration area over six miles east of the Project and the only modeled linkage for the species running north-south about the same distance away. Additional studies have documented some use of the site by greater sage-grouse, though the site remains low habitat quality for the species. Therefore, direct or indirect impacts are expected to be minimal for this species. The Project may disrupt

Common Name	Scientific Name	Federal Status[1]	State Status[2]	Modeled Habitat Within 10 Miles of Project (acres)[2]	Modeled Habitat in Project Area (acres)[1]	Modeled Habitat Impacted by Project			Discussion of Species Impacts *Direct and Indirect Habitat Loss, mortality, barriers to movement, fragmentation*
						Permanent (acres)	Altered (acres)	Temporary (acres)	
									occasional use but is not likely to result in mortality or habitat fragmentation. See Attachment WLF-4i.
loggerhead shrike	*Lanius ludovicianus*	BCC	C, PS	246,946	2,306	78	1,163	96	The USGS GAP habitat model shows nearly all of the habitat within 10 miles of the Project, including the Project area as potential habitat for this species. Breeding habitat on site is limited to the sage-brush habitat along the northwestern edge of the Project area. The rest of the Project area could be considered foraging habitat. However, the Project area represents 1% of all habitat available within 10 miles and only 0.05%will be lost by Project activities. It is anticipated that the species may continue to forage inside the solar arrays. See Attachment WLF-4j.
prairie falcon	*Falco mexicanus*	BCC	PS	237,183	2,291	78	1,161	95	USGS GAP habitat model for prairie falcon does not differentiate between nesting and foraging habitat; therefore, nearly all of the areas within 10 miles of the Project and including the Project area is modeled as habitat. There is potential nesting habitat in the talus slopes just west of the Project but not in the Project area. The rest of the Project area could be foraging habitat. Based on the extent of potential habitat in the region and that only 0.05% of available habitat within 10 miles of the Project will be lost or altered by the Project, there is not expected to be direct or indirect impacts on the species, nor any impacts to species movement or habitat fragmentation. See Attachment WLF-4l.
ring-necked pheasant	*Phasianus colchicus*	--	PS	129,173	2,225	78	1,150	76	The entire Project area is modeled as ring-necked pheasant habitat, which is an introduced game species that is bred and routinely released by WDFW for upland game bird hunting programs. See Attachment WLF-4m.
sagebrush sparrow	*Amphispiza belli*	--	C, PS	69,791	75	<0.1	8	1	Sagebrush sparrow is a sage-brush obligate species and its modeled nesting habitat is ubiquitous in the Columbia Plateau Ecoregion east of the Project area. Approximately 0.1% of the available habitat within 10 miles is within the Project area and approximately 0.02% will be lost or altered by the Project. No indirect effects to habitat are expected nor are effects to species movement or habitat fragmentation. See Attachment WLF-4n.
sage thrasher	*Oreoscoptes montanus*	BCC	C, PS	109,692	98	<0.1	8	16	Sage thrasher is a sage-brush obligate species and its modeled nesting habitat is ubiquitous in the Columbia Plateau Ecoregion. Less than 0.1% of the available

Common Name	Scientific Name	Federal Status[1]	State Status[2]	Modeled Habitat Within 10 Miles of Project (acres)[2]	Modeled Habitat in Project Area (acres)[1]	Modeled Habitat Impacted by Project			Discussion of Species Impacts *Direct and Indirect Habitat Loss, mortality, barriers to movement, fragmentation*
						Permanent (acres)	Altered (acres)	Temporary (acres)	
									habitat within 10 miles is within the Project area and less than 0.01% will be lost or altered by the Project. No indirect effects to habitat are expected nor are effects to species movement or habitat fragmentation. See Attachment WLF-4o.
Mammals									
black-tailed jackrabbit	*Lepus californicus*	--	C, PS	221,784	2,275	78	1,152	94	Black-tailed jackrabbit habitat is modeled by USGS GAP data as nearly everything that is not upland forest within 10 miles of the Project area, including the entire Project area. This species habitat is ubiquitous in the region and habitat lost or altered by the Project will not result in any population level effects. The fence around the facility will be permeable to movement of this species so no indirect effects or habitat fragmentation are expected. See Attachment WLF-4b.
elk	*Cervus elaphus*	--	PS	167,120	132	<0.1	9	26	Elk habitat modeled by USGS GAP data connects the species to vegetated draws or upland forest and shrub-steppe habitat in the region. The draw just west of the Project area and the very northwestern corner could support elk foraging and movement. The Project area is notably not modeled as habitat, likely due to its agricultural land cover. Approximately 0.08% of habitat in the region overlaps with the Project area. Less than 0.01% of available habitat in the region will be lost or modified by the Project. No indirect impacts are expected due to the amount of available habitat in the region. Elk is also a game species that is routinely hunted through WDFW elk tag programs. See Attachment WLF-4f.
Townsend's big-eared bat	*Corynorhinus townsendii*	--	C, PS	246,503	2,278	78	1,161	83	USGS GAP habitat model for this species does not differentiate between roosting and foraging habitat, therefore nearly all of the areas within 10 miles of the Project and including the Project area is modeled as habitat. There is limited potential roosting habitat in the Project area, only a few abandoned structures could support roosting. Those structures will be retained. The rest of the Project area could be foraging habitat. Based on the extent of potential habitat in the region and the fact that only 0.5% of available habitat within 10 miles of the Project will be lost or altered by the Project, there is not expected to be any direct or indirect impacts on the species, nor any impacts to species movement or habitat fragmentation. See Attachment WLF-4q.

Common Name	Scientific Name	Federal Status[1]	State Status[2]	Modeled Habitat Within 10 Miles of Project (acres)[2]	Modeled Habitat in Project Area (acres)[1]	Modeled Habitat Impacted by Project			Discussion of Species Impacts *Direct and Indirect Habitat Loss, mortality, barriers to movement, fragmentation*
						Permanent (acres)	Altered (acres)	Temporary (acres)	
Gray wolf	*Canis lupus*	--	E, PS	--	--	--	--	--	A USGS GAP habitat model does not exist for this species. There are no documented gray wolf packs east or south of the Columbia River. https://wdfw.wa.gov/species-habitats/at-risk/species-recovery/gray-wolf/packs
mule deer	*Odocoileus hemionus hemionus*	--	PS	296,399	2,307	78	1,163	96	With the exception of the Columbia River the USGS GAP habitat model shows all of the habitat within 10 miles of the Project, including the Project area, as potential habitat for this species. The Project area represents 0.8% of all habitat available within 10 miles and only 0.4% will be lost or altered by Project activities. Attachment WLF-7 shows that the Project area is not within a mule deer Habitat Concentration Area or Least Cost Path. Yet, USGS GAP modeling shows the entire region as mule deer habitat. There is minimal resistance or barriers to movement in the region, as meaning the whole region is highly permeable to movement. This is not a pinch point for mule deer movement. There are ample opportunities for the species to move in all directions around the Project. There is, therefore, not expected to be direct or indirect impacts to the species other than habitat loss on the Project area. No habitat fragmentation will occur and no movement corridors will be disrupted. See Attachment WLF-4k.
white-tailed deer	*Odocoileus virginianus*	--	PS	124,539	48	<0.1	<1	7	According to USGS GAP data models there will be minimal permanent impacts to habitat or modification of habitat from the Project. See Attachment WLF-4s.
Washington ground squirrel (WAGS)	*Urocitellus washingtoni*	--	C. PS	57,793	108	<0.1	9	19	WAGS habitat is modeled just west of the Project area. Permanent impacts for the species will be avoided, as areas of shrub-steppe along the western edge of the Project and in the Gen-tie Micrositing Corridor hold the only potential for this species. There may be some minimal temporary impacts in the Gen-tie Micrositing Corridor in instances where shrub steppe habitat cannot be avoided. In addition, Figure WLF-8 shows statewide WAGS data and least cost paths. This modeled habitat identifies the draw west of the Project area as a Potential Concentration Area. The concentration area does not overlap with solar array though the gen-tie line will pass through it. See Attachment WLF-4r.
white-tailed jackrabbit	*Lepus townsendii*	--	C, PS	186,939	148	<0.1	10	30	Habitat modeled by USGS GAP in the Project area is limited, primarily in the Gen-tie Micrositing Corridor and an area in the northeast corner of the Solar Array Micrositing Area. The Project area is predominantly

Common Name	Scientific Name	Federal Status[1]	State Status[2]	Modeled Habitat Within 10 Miles of Project (acres)[2]	Modeled Habitat in Project Area (acres)[1]	Modeled Habitat Impacted by Project			Discussion of Species Impacts *Direct and Indirect Habitat Loss, mortality, barriers to movement, fragmentation*
						Permanent (acres)	Altered (acres)	Temporary (acres)	
									not modeled as habitat despite a large amount of habitat being modeled elsewhere in the region, as shown in WLF-4t. Direct impacts will be minimal and there will be no indirect impacts or habitat fragmentation due to the extensive amount of habitat in the region. See Attachment WLF-4t.
Reptiles & Amphibians									
sagebrush lizard	*Sceloporus graciosus*	--	C, PS	283,409	2,307	78	1,163	96	While the USGS GAP model shows habitat in the Project area, the species is tied to sandy soils and dunes within shrub-steppe environs. Those habitats will be avoided by the Project. See Attachment WLF-4p.

[1] U.S. Fish and Wildlife Service: SOC = Species of Concern, BCC = Bird of Conservation Concern, BGEPA = Bald and Golden Eagle Protection Act.

[2] Washington Department of Fish and Wildlife: E = Endangered, C = Candidate, PS = Priority Species.

[3] U.S. Geological Survey (USGS) - Gap Analysis Project (GAP), 2018. CONUS_2001v1 Habitat Map: U.S. Geological Survey data release, https://gapanalysis.usgs.gov/apps/species-data-download/

Badger Mountain Solar Energy Project

Attachment WLF-5 Greater Sage-grouse Concentration Areas and Linkages

DOUGLAS COUNTY, WASHINGTON

King County
Chelan County
Douglas County
Grant County
Kittitas County
Yakima County

- Survey Area
- County Boundary

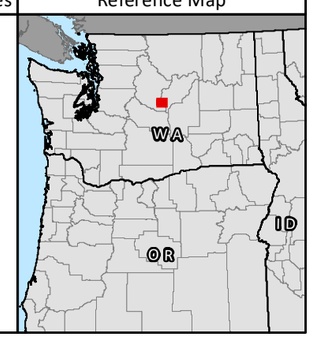
WHCWG Columbia Plateau

Greater Sage Grouse Least Cost Path Rating
- Highest

Greater Sage Grouse Habitat Concentration Area Rating
- Highest
- Very High

TETRA TECH

AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery	

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NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

Attachment WLF-6a Landscape Integrity Modeling

DOUGLAS COUNTY, WASHINGTON

Survey Area
County Boundary
WHCWG (2012) Columbia Plateau
Landscape Integrity Core Area

Douglas County
Chelan County
Grant County
Kittitas County

TETRA TECH
AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery WHCWG Modeling	WA, OR, ID

1:165,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

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NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

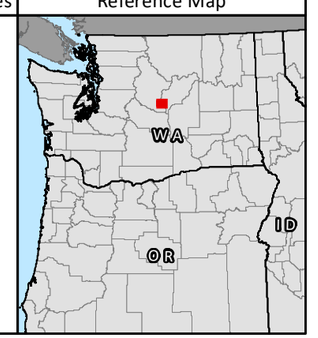
Attachment 6b
HCA Centrality Rating

DOUGLAS COUNTY, WASHINGTON

Survey Area
County Boundary
HCA Centrality Cumulative Rating
(Arid Lands Initiative 2014)
Very High
High
Medium
Low

Douglas County
Chelan County
Grant County
Kittitas County

TETRA TECH
AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery ALI Centrality Ranking Data	

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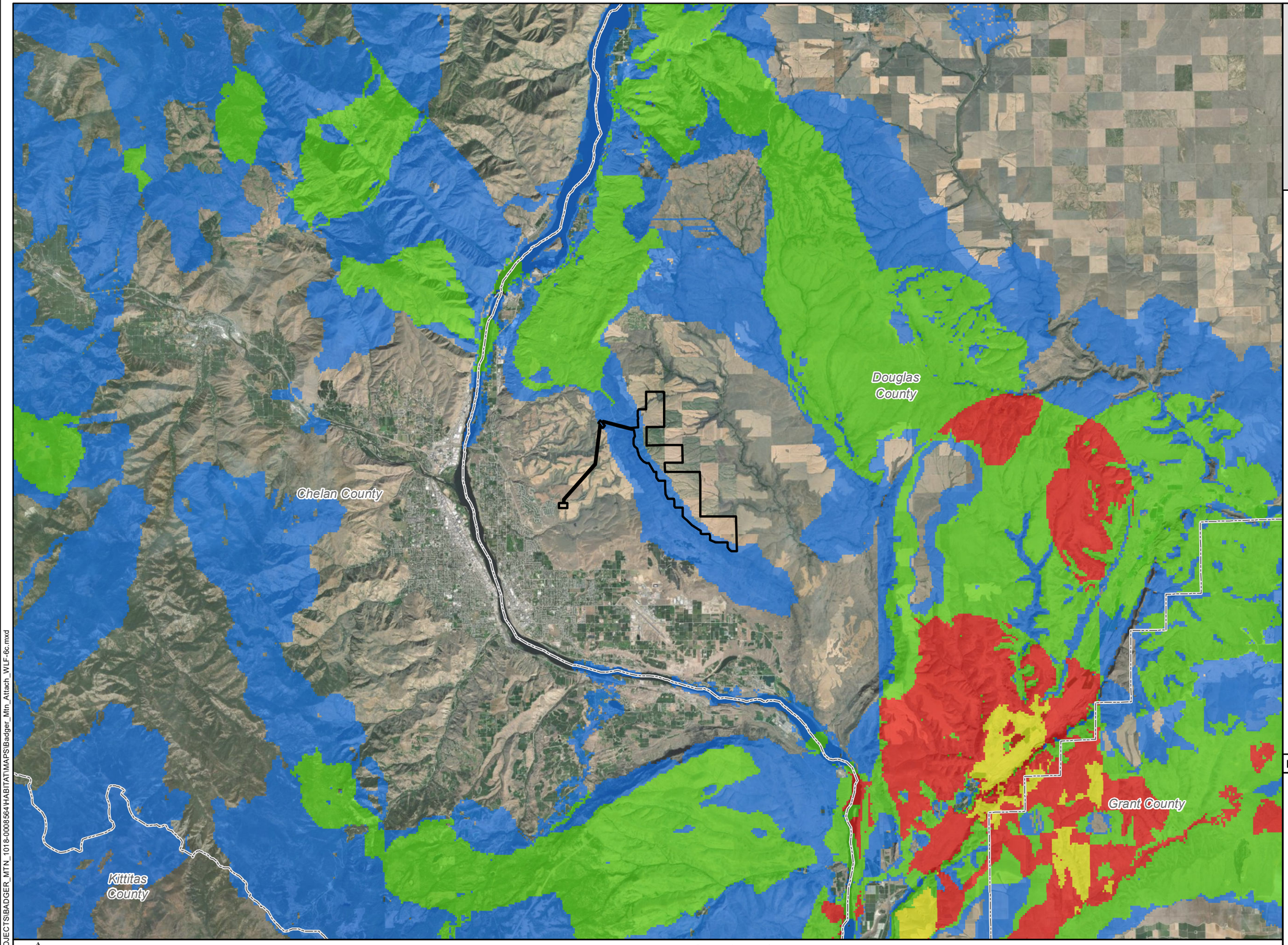
Badger Mountain Solar Energy Project

Attachment 6c
Linkage Centrality Rating

DOUGLAS COUNTY, WASHINGTON



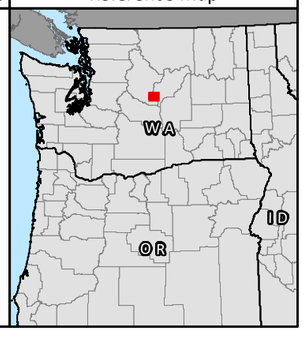
- Survey Area
- County Boundary

Linkage Centrality Cumulative Rating
(Arid Lands Initiative 2014)

- Very High
- High
- Medium
- Low

TETRA TECH

AVANGRID RENEWABLES

Data Sources	Reference Map
Avangrid-Project Boundary; USDA-NAIP Imagery ALI Centrality Ranking Data	

1:165,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

Attachment WLF-7 Mule Deer Concentration Areas and Linkages

DOUGLAS COUNTY, WASHINGTON

Survey

County Boundary

WHCWG Columbia Plateau

Mule Deer Least Cost Path Rating

- Very High
- High
- Medium
- Low

Mule Deer Habitat Concentration Area Rating

- Highest
- High
- Medium

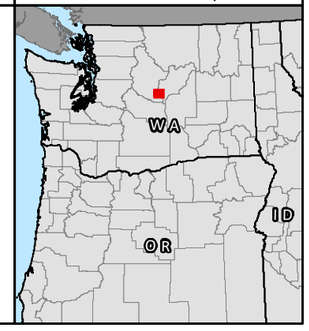
TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary:
USDA-NAIP Imagery
WHCWG Concentration/Linkage Data

Reference Map



Douglas County

Chelan County

Kittitas County

Grant County

1:165,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

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Badger Mountain Solar Energy Project

Attachment WLF-8 Washington Ground Squirrel Concentration Areas and Linkages

DOUGLAS COUNTY, WASHINGTON

Survey

County Boundary

WHCWG Columbia Plateau

Washington Ground Squirrel Least Cost Path Rating

- High
- Medium

Washington Ground Squirrel Habitat Concentration Area Rating

- High
- Medium
- Low

Douglas County

Chelan County

Kittitas County

Grant County

18

19

22

24

25

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery
WHCWG Concentration/Linkage Data

Reference Map

WA

OR

ID

1:165,000 NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

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Badger Mountain Solar Energy Project

Attachment WLF-9 Observed Burrows

DOUGLAS COUNTY, WASHINGTON

Survey Area

Area not Accessible*

Observed Burrow

* Site access was not available during the 2021 survey season. While these areas were not visited on foot in 2021, they were viewed from adjacent accessible parcels and public roads.

TETRA TECH

AVANGRID RENEWABLES

Data Sources

Avangrid-Project Boundary;
USDA-NAIP Imagery

Reference Map

1:30,000

NAD 1983 StatePlane Washington North FIPS 4601 Feet

0 0.5 1 2 Miles

NOT FOR CONSTRUCTION

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Attachment WLF-10. Anticipated Impacts to Habitat Types from the Project (Revised February 2023)

Habitat Type	Acres in Solar Array Micrositing Area[1/]	Acres in Gen-tie Micrositing Corridor[1/]	Temporary Impacts (Acres)[2/]	Altered Habitat Impacts (Acres)[3/]	Permanent Impacts (Acres)[4/]
Dwarf shrub-steppe	15.5	0.0	0.3	1.7	0.0
Shrub-steppe	140.9	37.0	25.8	17.7	0.6
Talus	4.2	1.7	0.0	0.0	0.0
Planted grassland[5/]	0.0	12.3	4.6	0.0	<0.01
Non-native grassland and forbland	11.7	1.7	1.3	0.8	<0.01
Agricultural	2,012.0	63.3	61.8	1,142.5	77.7
Developed	7.3	0.7	0.6	0.0	0.2
Total[6/]	**2,191.6**	**116.7**	**94.4**	**1,162.6**	**78.5**

1. The Applicant's wildlife and habitat assessment analyzed the entire Project area, about 2,309 acres including the Solar Array Micrositing Area and Gen-tie Micrositing Area. While Project disturbances are anticipated to occur within the preliminary Project layout shown on ASC Attachment A, Figure A-1, the Project may impact areas anywhere within the approximately 2,309 acre Project area and mitigation treatments in this WHMMP will be adjusted to account for final Project disturbance areas prior to construction. The Project is anticipated to impact approximately 1,336 acres (temporary, altered habitat and permanent impact) within the Project area.

2. Temporary impacts include:

Work area (150 feet wide, 75 feet either side of center) along the 3.7-mile-long overhead 230-kV gen-tie line with avoidance of talus habitat.

Work area (8 feet either side) along the Project service roads within the Project area and outside the solar array perimeter fence.

Work area (10 feet from the outside) along the solar array, O&M area, collector substation area, switchyard area, and optional BESS area perimeter fence lines.

Temporary staging areas outside the solar array perimeter fence.

3. Altered impacts include lands within the solar array perimeter fence minus the footprint of areas occupied by Project components and structures listed below.

4. Permanent impacts include the footprint of the area occupied by the following Project components and structures: solar array posts, inverter and transformer pads, Project service roads (20 feet wide outside the solar array perimeter fence, 16 feet wide within the solar array perimeter fence), O&M building area, collector substation area, switchyard area, optional BESS area, perimeter fence, and overhead 230-kV gen-tie line poles.

5. Following field surveys, areas mapped as planted grassland were identified as potentially enrolled in the Conservation Reserve Program (WSDA 2021).

6. Totals may not sum exactly due to rounding.