COLORADO
Parks and Wildlife
Department of Natural Resources

Southeast Region, Area 14
4255 Sinton Road
Colorado Springs, CO 80907 P
719.227.5200 | F 719.227.5223

Although helpful; this is not a clearance letter but rather a suggestion oh how, what and where. This letter does not indicate that the recommendations have been implemented by the applicant.

May 21, 2018

juwi Inc.
1710 29th Street, Suite 1068
Boulder, CO 80301

Re: Environmental Review for Proposed Palmer Solar Project in El Paso County

To: Stuart Coles

Colorado Parks and Wildlife (CPW) has received the request for consultation on the proposed Palmer Solar Project in El Paso County, Colorado. CPW staff is familiar with the proposed location of the project as well as the area surrounding the site. The proposed project would be 60 MW of PV solar and would utilize approximately 500 acres southeast of Colorado Springs.

CPW has a statutory responsibility to manage all wildlife species in Colorado; as such we encourage protection for Colorado's wildlife species and habitats through responsible energy development and land use planning. Protection of core wildlife areas, quality fisheries and habitat, big game winter range and seasonal migration corridors, and raptor nesting locations are of extreme importance. CPW recommends that all proposed projects be assessed to avoid, minimize, or mitigate impacts to sensitive wildlife habitats and species. That includes species of concern as well as Federal and/or State listed species, big game wildlife (migration corridors, winter range, parturition areas), breeding and nesting habitats for sensitive ground-nesting birds, and nests of raptors sensitive to development in order to prevent loss of habitat or fragmentation of habitat. US Fish and Wildlife Service should be consulted on any Federally-listed Endangered and Threatened Species that might be present at the location.

If the surveys have been done; the applicant should provide them so the DOW or USFW can provide the clearance letters or issue a letter of no concerns.

Has this been done?

For eligible energy resources, new renewable energy projects should follow Colorado PUC Rule 3668 on Environmental Impacts in conducting wildlife surveys, in using these surveys to avoid, minimize and mitigate potential impacts to wildlife and their habitats and work closely with CPW in the design of their project. In selecting sites for construction, CPW recommends that developers focus on options that avoid critical wildlife habitats over the use of mitigation strategies. Areas that exhibit high levels of wildlife use within this project area or are unique or critical habitat to wildlife would

benefit greatly by not placing facility infrastructure, including transmission lines, adjacent to or over such areas. If all options for avoiding impacts are taken and prove insufficient, then minimization and mitigation strategies should be identified and implemented.

Habitat loss and fragmentation CPW recommends that, when selecting sites for construction, the developer focus on options that avoid critical wildlife habitats over the use of mitigation strategies. In general, it is recommended that the developer consolidate facilities and roads to the extent possible, to minimize the amount of land that is disturbed and fragmented. Habitat loss and fragmentation are significant concerns regarding solar development and minimizing the project footprint can help reduce the impacts to wildlife. Riparian and wetland areas are important habitats for a variety of wildlife and need to be connected as much as possible so a layout that maintains access for wildlife to those areas in particular is preferred. CPW recommends that any habitat with water in the Project area remain undisturbed and contiguous with undeveloped land around it.

Wildlife species that can potentially be found on the Project site are: black tailed prairie dog, bobcat, cottontail rabbit, coyote, mule deer, white-tailed deer, elk, pronghorn, red fox, jack rabbit, mountain lion, skunks, variety of small burrowing rodents, a variety of reptiles which include snakes and lizards, and a variety of grassland birds. Golden eagles are present year-round and utilize the area frequently. Golden eagles, as well as Ferruginous hawk, Red-tailed hawk, Prairie falcon, and Swainson's hawk hunt nearby and within the prairie dog colony, and nest in the surrounding area. Fountain Creek is west of the project location and is important habitat to wildlife in the vicinity of the project and has waterfowl usage along the length of open water. This area provides habitat for big game, including mule deer, white tailed deer, and pronghorn, and is especially important during the winter months. Fountain Creek is also considered winter habitat for bald eagles with potential winter concentrations and roost locations in the vicinity. CPW would be happy to work with Juwi and their consultants to help identify potential layouts within the proposed footprint that would avoid or minimize potential impacts to these species and maintain corridors to Fountain Creek to protect wildlife access to this important habitat.

Several small playas are also located just north of the project boundaries and a large playa cluster includes some of the northwest sections of panels. Playas are important habitat for grassland and wetland birds and function as stopover sites for many bird species during migration. Construction methods and placement of infrastructure should be selected to avoid negatively impacting this habitat that is also important to amphibians, reptiles and bats. CPW recommends incorporation of Playa Lakes Joint

Venture Best Management Practices for development near playas to avoid, minimize, or mitigate impacts.

Riparian and stream crossings: The project area includes some riparian habitat, small drainage crossings, and wetlands. There should be minimal impact to any riparian areas or stream bed, both during construction and after, and any stream bed should be handled as a stream crossing whether or not water is present at the time of construction. Minimizing impact to these streams is a priority for CPW and avoidance is best whenever possible. CPW recommends a ground disturbance buffer with minimal activities or operations within 300 feet of any lake, reservoir, wetland or stream. Erosion and sediment control precautions should be in place to avoid deposition into water ways. Destruction of riparian vegetation and truck/heavy machinery stream crossings should be avoided.

CPW further recommends crossing riparian corridors and streams at a perpendicular angle, in order to reduce impacts to natural resources, as well as spanning the corridors with structures located outside the riparian and stream zone. CPW recommends avoiding treed areas of cottonwood and willow, as these areas provide bird and wildlife habitat. During construction, stream crossing by construction vehicles should be avoided. CPW requests that any new service roads that are proposed for construction in conjunction with the project avoid crossing creeks or stream beds to avoid impacts to wildlife and habitat. If any new access or maintenance roads will be constructed that cross stream habitat, CPW would like to be consulted on best management practices and options for construction to minimize impacts. A construction design for any new or reconstructed riparian crossing that actively minimizes barriers to fish passage at all water levels and mitigates any existing barriers where possible would minimize the negative impact of the project on native fish species.

Noxious weed management: Also of importance are revegetation of disturbed soils and the control of noxious weed species through the development of a noxious weed management plan prior to initiating construction activities. The revegetation of disturbed areas and control of invasive weed species are important components of the project and it is critically important that the site be restored back to the native plant community that currently exists on site. It would be very important that any disturbed soil in this area be replanted in native grasses as soon as possible to minimize loss of top soil and the introduction of invasive noxious weeds. CPW prefers that native vegetation be retained on site during the operational lifespan of the project, both as habitat for wildlife and to ensure successful reclamation of the project area. Proper reclamation, from a wildlife perspective, involves not only stabilizing the soil and establishing ground cover, but fostering plant communities with a diversity of species and plant types -grasses, woody plants, and broadleaf forbs- which will fully serve the nutritional needs of wildlife. Strict adherence to the Natural Resources Conservation

Service's recommendations is advised. CPW would appreciate the opportunity to review the project's Noxious Weed Management Plan prior to the start of construction.
Fencing: CPW is aware that the solar project area will likely include security fencing. We have attached our recommendation for "Fencing with Wildlife in Mind" for your consideration and review. We will be happy to discuss any questions you have about fencing of the project when plans are available. For any installed fencing CPW recommends a smooth top to the fence (e.g., no top barbed wire or exposed metal rods) to prevent wildlife from impaling themselves. If wildlife exclusion fencing is installed CPW would request that the solar facility is checked regularly or structures are installed to allow animals to escape, in the event that deer or other wildlife become trapped in the facility. CPW also recommends that any security lighting be designed to minimize light pollution and take into consideration the dark sky initiative to reduce impacts to wildlife.

Transmission lines: CPW preference is for new transmission lines to follow existing transmission line or infrastructure corridors whenever possible to minimize additional impacts on wildlife and habitat fragmentation. The current project description identifies a proposed route for connection. In discussions it was mentioned that the structures associated with this connector line would span the wetland areas and avoid placement of infrastructure in areas that would impact wetlands. CPW supports that plan and appreciates the intention to avoid impacts rather than mitigate when possible. If a longer line is proposed, or a change in route, CPW would like the opportunity to consult in more detail on the final route when it is developed to help identify potential impacts for species in the project area and recommended mitigation measures which, if enacted, should provide a measure to avoid or minimize impacts to wildlife.

Of high concern regarding electrical transmission lines is the potential for raptor electrocution. Through the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, the U.S. Fish and Wildlife Service, in cooperation with the Edison Electric Institute, has developed Best Management Practices to minimize impacts to avian species. CPW recommends that both the "Suggested Practices for Avian Protection on Power Lines, the State of the Art in 2006" and the "Reducing Avian Collisions with Power Lines: The State of the Art in 2012" documents be consulted for proper design considerations to minimize raptor electrocution. These documents can be ordered at the Edison Electric Institute website (www.eei.org) or can be downloaded at the Avian Power Line Interaction Committee website (www.aplic.org). This recommendation is applicable to all segments included in the project.

Migratory birds: Consultation with USFWS is recommended to ensure compliance with the Migratory Bird Treaty Act and the Bald and Golden Eagle Act. The best way to avoid impacts on the nesting efforts of migratory birds is to focus construction activities

was this completed? Where is the documentation?

outside of the breeding season (March 15th –October 31st). If construction must occur during the breeding season, surveys for active nests should be conducted prior to groundbreaking. All migratory birds are protected under the Migratory Bird Treaty Act and removal or disturbance of any migratory bird nest would require consultation with USFWS prior to disturbance.

Raptors: There is suitable habitat on the site for nesting raptors. The consultant identified great horned owl nests on the perimeter and within the project site. CPW records indicate a red-tailed hawk has nested on the site in previous years. CPW recommends the use of preconstruction surveys, as well as continuation of those surveys during construction, to identify all raptor nests within the project area and implement appropriate restrictions. As mentioned previously Bald eagle winter habitat exists along Fountain Creek to the west of the project site. CPW recommends adherence to the recommended buffer distances and timing stipulations identified in the attached document "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors". Recommendations for great horned owls are not specified in that document but given the nest location within the project are we suggest a construction buffer of up to a 1/4 mile around the nests when they are active, generally February 15 to June 15. Removal or relocation of any active raptor nest will require consultation with CPW and US Fish and Wildlife Service prior to disturbance. Both active and potential raptor nest sites, as well as winter night roosts should be considered when evaluating disturbance during construction. These recommendations apply to both the solar field and transmission line construction areas.

identify on WSEO plan map

State Threatened Species and State Species of Concern

Burrowing owl, black tailed prairie dogs, swift fox, and mountain plover are likely to be present on site. While none of these species are federally listed, the burrowing owl is State Threatened and the swift fox, and mountain plover are State Species of Concern. Due to the status of these species, it is recommended that special precautions be taken to avoid adverse impacts to individuals in the project area.

Identify nest sites and buffer on WSEO plan map

Burrowing Owls: There are prairie dog colonies located within the project area and CPW recommends surveys to determine the presence/absence of *burrowing owls (Athene cunicularia)*, a state threatened bird. If development or construction in prairie dog towns occurs from February 1 to October 31, the presence of burrowing owls and whether they are actively nesting should be determined. If nesting burrowing owls are present, no human encroachment should occur within 150 ft of nesting burrows from March 15 to October 31. If burrowing owls merely occupy the site, it is recommended that earthmoving and other disturbance activities be delayed until late fall after they have migrated. Attached is CPW's protocol for surveys (Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls).

Mountain Plover: Portions of the proposed project area are in range of the Mountain Plover (Charadrius montanus), a state species of special concern. The Best Management Practices for mountain plover recommend surveys to identify habitat and plover nests within the project area, and plan construction activity outside of critical nesting periods, April 1st through August 15 where these species are found. Mountain plovers can nest in short-grass prairie, dryland cultivated farms, and prairie dog towns and are likely to be nesting on the project area.

Swift fox: CPW recommends pre-construction surveys to identify and avoid all maternal swift fox den sites. Swift fox live here year-round, breed during December, and raise their young into the next fall. It is recommended that swift fox surveys include daylight searches for den areas and nighttime spotlight searches during August and September. Swift fox is a species of state and federal concern that lives in and around the proposed area.

CPW may have additional recommendations when the final layout and development plans are available for the proposed solar facility. Any surface water or evaporation ponds associated with the project could increase the risk to wildlife on the installation by acting as an attractant to higher risk areas. This location also includes high priority playas, habitat for waterfowl, herons, and pelicans that use the reservoir and associated areas, and bald eagle winter habitat along Fountain Creek. In locations with a potential risk to avian species CPW recommends development of a post-construction monitoring program in accordance with the USGS 2016 report Mortality Monitoring Design for Utility-Scale Solar Power Facilities.

CPW appreciates this opportunity to review the proposed Palmer Solar Project and we look forward to reviewing any other plans (i.e. reclamation plans, building and site plans) or biological surveys or assessments that are developed as the project nears implementation. If you have further questions please contact District Wildlife Manager Adam Gerstenberger at 719-439-9636 or via email at adam.gerstenberger@state.co.us.

Based on this letter ; were the surveys done? Please provide.

Sincerely,

Frank McGee
Area Wildlife Manager

Cc: Adam Gerstenberger, District Wildlife Manager
Karen Voltura, SE Regional Energy Liaison

Markup Summary

dsdparsons (10)

Subject: Callout
Page Label: 1
Author: dsdparsons
Date: 9/19/2018 11:35:44 AM
Color:

Has this been done?

Subject: Callout
Page Label: 1
Author: dsdparsons
Date: 9/19/2018 11:38:44 AM
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Although helpful; this is not a clearance letter but rather a suggestion oh how, what and where. This letter does not indicate that the recommendations have been implemented by the applicant.

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Page Label: 2
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Date: 9/19/2018 11:39:05 AM
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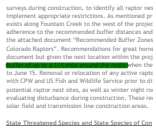
with Juwi and their consultants to help identify potential layouts within the proposed footprint that would avoid or minimize potential impacts to these species and maintain corridors to Fountain Creek to protect wildlife access to this important habitat.



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Author: dsdparsons
Date: 9/19/2018 11:40:15 AM
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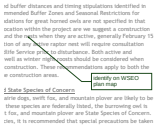
buffer of up to a 1/4 mile around the nests



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identify on WSEO plan map

Subject: Highlight
Page Label: 5
Author: dsdparsons
Date: 9/19/2018 11:40:53 AM
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o human encroachment should occur within 150 ft of nesting burrows from
March 15 to October 31.

Subject: Callout
Page Label: 5
Author: dsdparsons
Date: 9/19/2018 11:51:02 AM
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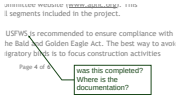
Identify nest sites and buffer on WSEO plan map



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was this completed? Where is the documentation?

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Author: dsdparsons
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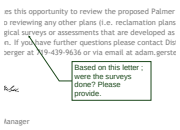
If the surveys have been done; the applicant should provide them so the DOW or USFW can provide the clearance letters or issue a letter of no concerns.



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Based on this letter ; were the surveys done? Please provide.