



COLORADO

Parks and Wildlife

Department of Natural Resources

Southeast Region, Area 14
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February 1, 2021

Claire Gerrish, Project Planner

Juwi Inc

1710 29th Street, Suite 1068

Boulder, CO 80301

cgerrish@juwiamericas.com

Re: CPW Environmental Review for Proposed Pike Solar Project in El Paso County, Colorado

Dear Ms. Gerrish,

Colorado Parks and Wildlife (CPW) has received and appreciates the request for comments on the proposed Pike 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. Juwi Inc is proposing to build a ground mounted 175MW solar energy facility within the 3,269 acre project site southeast of the town of Fountain. There is minimal existing development in the vicinity of the proposed project other than the Palmer Solar facility located west of this proposed project.

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 (USFWS) should be consulted on any Federally-listed Endangered and Threatened Species that might be present at the location.



For eligible energy resources, Colorado PUC Rule 3668 on Environmental Impacts requires that new renewable energy projects conduct wildlife surveys, use 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. The proposed location is categorized as rangeland and currently identified as being used for livestock grazing. The proposed array layout provided to CPW is somewhat fragmented and depending on the fence plan that could result in greater impacts compared to a more consolidated layout. 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, 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. Burrowing owl nesting locations have been identified by CPW and Pinyon Environmental on the site. It does appear that the arrays will avoid most of the identified prairie dog colonies on site and CPW appreciates all efforts to avoid impacts to these colonies.

Williams Creek crosses through the center of the project area. The initial layout provided to CPW indicates low potential for impact to the creek with proposed arrays apparently avoiding the drainage. CPW recommends a ground disturbance buffer of

300 feet from the ordinary high water mark of any wetland or stream and larger buffers, up to ½ mile, from lake and reservoir boundaries depending on the aquatic resources present. In addition to aquatic species, Williams Creek also provides habitat for raptors, turkey, and other avian species. CPW recommends the final layout of the solar field and placement of the fencing be designed to avoid impacts to this drainage and associated habitats. Riparian areas are important habitats for a variety of wildlife and any riparian areas within the project area or in the vicinity may be of particular concern given the limited availability of this habitat in the area and the proportionally high use of the habitat by many different species. CPW would be happy to work with the developer and their consultant to help identify potential layouts within the proposed footprint that would avoid or minimize potential impacts to these species. Species specific recommendations are provided in the last section of this letter.

Riparian and stream crossings: While the project area is primarily shortgrass prairie, there is limited riparian habitat, including some cottonwoods, and a number of small drainages crossing through the project site. 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. 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: 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 or spread of invasive noxious weeds. Revegetation of disturbed soils and the control of noxious weed species through the development of a noxious weed management plan is highly recommended prior to initiating construction activities. The construction plan should address the existing conditions, treatment of invasive weeds on site, and best management practices to prevent the spread of noxious weeds. The revegetation of disturbed areas and control of invasive weed species are important components of the project and it is highly preferred that the site be restored to a native plant community. 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 include security fencing. The typical specifications for security fencing make this fence type exclusionary for most wildlife. In these cases CPW requests that the project design adhere to the recommendations for exclusionary fencing that are safe for wildlife. The CPW document "Fencing with Wildlife in Mind" is available at our website and we would be happy to answer questions about fencing specific to this project. For any installed fencing CPW recommends an 8 foot fence with a smooth top to the fence (e.g., no top barbed wire or exposed metal rods) to prevent wildlife from impaling themselves. CPW would like the opportunity to review fencing plans when final plans are available. If wildlife exclusion fencing is installed CPW would request that efforts also be taken to avoid entrapping wildlife within the facility during construction of the fence and that the solar facility is checked regularly post-construction, or structures are installed to allow animals to escape, in the unlikely event that a 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 lighting initiatives 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 does not include a connection location or transmission corridor but there are transmission corridors nearby. If there are connection points in the vicinity of the proposed project, a short connection line would not likely impact wildlife resources in the area. However, longer routes to connect the project or changes in the final plans that result

in a large transmission corridor could increase the impacts from the development. CPW would like the opportunity to consult on the connection when details are known 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 outside of the breeding season (March 15th - August 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 active migratory bird nest would require consultation with CPW and USFWS prior to disturbance.

Raptors: There is suitable habitat in the vicinity of the project for nesting raptors. Within the project site 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. CPW recommends adherence to the recommended buffer distances and timing stipulations identified in the CPW document “Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors” available at the CPW website. 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.

State Threatened Species and State Species of Concern

Burrowing owl, black tailed prairie dogs, swift fox, and mountain plover have the potential to be present on site and habitat for these species was identified in the Biological Resources Report provided to CPW. 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. CPW provides the following species specific recommendations and supports the Mitigation Recommendations in the Biological Resources Report.

Burrowing Owls: Burrowing owls are listed as State Threatened, and nest in active or inactive prairie dog (black-tailed or white-tailed) burrows. If development is proposed to occur in a prairie dog colony that has been active within the past 10 years, CPW recommends the adherence to CPW's Burrowing Owl survey protocol if development occurs during the spring or summer months (Feb 1 to Oct 31). If nesting burrowing owls are present, no human encroachment or surface disturbance should occur within a 200-meter buffer of nesting burrows from March 15 to August 15. If burrowing owls occupy the site, CPW recommends that earthmoving and other disturbance activities be delayed until late fall after they have migrated.

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, or 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; all of which could be located on the project site. If the initial site disturbance is planned to occur between April and August CPW recommends pre-construction surveys using USFWS protocols in suitable nesting habitat and any active mountain plover nests should be flagged. CPW recommends no surface disturbance (other than existing agricultural activities) within 300 feet of active nest sites until young are hatched, independent, and fledged (April 1 - August 15).

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. CPW recommends pre-construction surveys for active den sites and no human encroachment, surface disturbance, or construction activity within 0.25-mile of an active maternal den site from March 15 through June 15.

CPW may have additional recommendations when the final layout and development plans are available for the proposed solar facility. There are technology-specific factors associated with avian fatality risk at solar facilities and the final site plans

could influence the potential risk for birds at the location. Currently there are no surface water or evaporation ponds existing nearby and none were identified in the information provided to CPW that will be located on the project site. The presence of surface water and ponds can increase the risk to wildlife on the installation either due to toxicity issues or by acting as an attractant and thus increase the potential risk of collision with panels. In locations with high avian migration and use and where there is 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 Pike Solar Project and we look forward to reviewing any other plans (i.e. racking layout, reclamation plans, changes to this plan, etc.) or biological surveys or assessments that are developed as the project nears implementation. If you have any questions regarding this letter, please contact District Wildlife Manager Philip Gurule at philip.gurule@state.co.us or Southeast Regional Energy Liaison Karen Voltura at 719-227-5232 or karen.voltura@state.co.us.

Sincerely,

A handwritten signature in cursive script, appearing to read "Frank McGee".

Frank McGee
CPW Area 14 Wildlife Manager



Karen Voltura
Energy Liaison and Land Use Specialist, Southeast Region
Colorado Parks and Wildlife
4255 Sinton Rd.
Colorado Springs, CO 80907
Karen.voltura@state.co.us

Re: Development Review of Pike Solar Project

Dear Ms. Karen Voltura,

Pursuant to our phone call on November 9, 2020, Pike Solar LLC will be permitting for the Pike Solar Project in El Paso County, we formally request a development review from Colorado Parks and Wildlife (CPW). The Pike Solar Project, as described in the attached memo, is a 175-megawatt solar energy photovoltaic generation facility sited in southern El Paso County east of Interstate 25 and Fountain Creek. The project will provide affordable and clean energy to El Paso County and Colorado residents and businesses, while helping the State of Colorado meet its requirements for renewable energy.

Pike Solar is working with El Paso County on an application for a Wind/Solar Energy Overlay (WSE-O) and 1041 Permit. As part of these applications, we would like to include a letter from CPW that outlines findings from a development review.

To help facilitate a CPW review, please find a Project Memo and Exhibit “A” map for the Pike Solar Project included with this letter. We are requesting that CPW review the current Pike Solar Project layout and associated reports and provide recommendations pertaining to the following wildlife considerations:

- Migratory Birds considered under the US Migratory Bird Treaty Act
- Migratory birds and eagles considered under the Bald and Golden Eagle Protection Act (BGEPA)
- State of Colorado Sensitive Species
- Preference, expectations, and requirements for future CPW involvement in project-related activities

Pike Solar LLC is a wholly owned subsidiary of juwi, Inc (“juwi”). juwi prioritizes coordination with State and Federal agencies in its development work to achieve optimum project design and responsible construction practices. We have conducted a voluntary wildlife and resource assessment with qualified third-party consultants. We included the result in this letter for CPW review.

Please let me know if you have any questions regarding the attached memo and its enclosures or if you would like additional information to assist CPW’s review. Additionally, we welcome the opportunity for a virtual meeting if CPW would like to discuss in this project in more detail.

Sincerely,

Claire Gerrish, Project Planner
juwi Inc.
303.996.4154
cgerrish@juwiamericas.com



Project Memo

Project Name: Pike Solar

Project Applicant: Pike Solar LLC and juwi, Inc.

Project Contact: Claire Gerrish (juwi Inc.), Project Planner

Date of Memo: 11/10/2020

Project Overview:

- Size: 175 megawatt (AC)
- Technology: Photovoltaic Panels on Single Axis Trackers
- Battery Energy Storage System: 25 MW X 4 Hour
- Key infrastructure: Perimeter/security fencing, access roads, 1 substation, arrays, Operations and Maintenance Shed, Inverters, Transformers, underground electrical (distribution) line between areas
- Design: Majority of the site will consist of steel poles rammed into the ground with solar arrays connected and standing, at a minimum, approximately 3 feet off the ground
- Acres: 1,170 acres project footprint
- Location: portions of Sections 11, 12, 13, 14, 23, 24, 25, 26, 36 Township 16S, Range 65W and portions of Sections 7 18, 19, 30, 31 Township 16S R64W
- Access:
 1. Access from the north off Squirrel Creek Road on unnamed road heading south
 2. Access from the west via Birdsall Road off Old Pueblo Road to an unnamed temporary construction road heading east

Site Overview:

- Current use: Combination of grazing and vacant land with transmission lines and other electrical infrastructure
- Description of lands: Project area is generally flat with some rolling hills. Irrigation ditches and arroyos flow generally south and east towards Fountain Creek. Vegetative cover includes blue gramma dominated shortgrass prairie and cholla/saltbush shrublands. The area is used as rangeland for livestock and to grow hay.
- Historic use: rangeland use
- Elevation: 5,385-5,585 feet
- El Paso County Zoning: Rural-residential 5 (RR-5), Agricultural-5 (A-5) and Agricultural-35 (A-35)
- Construction period for the complete site: 21-24 months
- Targeted Construction Start: November 2021
- Targeted Construction Finish: December 2023

Permitting Overview and requested CPW involvement:

- El Paso County and Local Permits
 - o Wind/Solar Energy Overlay (WSEO Rezone Amendment)
 - Status: Beginning phases
 - CPW component: Pike Solar LLC asks for development review/recommendations/concurrence for this Application
 - o 1041 Permit
 - Status: Run concurrently with 1041
 - CPW component: Incorporate Letter used for WSEO Application into 1041 Application
 - o Site Plan Review
 - Status: Following WSEO and 1041
 - CPW component: Incorporate potential requirements/recommendations into design and construction activities



Pike Solar LLC and juwi, Inc. respectfully requests CPW determination regarding the below third-party reports and recommendations.

- Biological Resources Report dated November 2, 2020 and depicted on Exhibit “A”
 - o No Federally Listed Species listed within Project Area
 - o State Threatened Species:
 - Burrowing Owl
 - o State Species of Concern:
 - Black-Tailed Prairie Dog
 - Mountain Plover
 - Swift Fox
 - Ferruginous Hawk
 - Bald Eagle
 - Northern Leopard Frog

- Environmental Site Assessment (ESA) Phase 1:
 - o Findings indicate no recognized environmental conditions (RECs) on site pursuant to the report rendered on October 21, 2020; no action recommended.

- Noxious Weed Management Plan:
 - o Pending final consultant analysis. Pike Solar LLC and juwi, Inc. will supply in December 2020.



Exhibit "A"

