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*Submitted electronically via EDARP: [www.epcdevplanreview.com](http://www.epcdevplanreview.com)*

July 24, 2018

**RE:** Palmer-Williams Creek Wind and Solar Energy Overlay (WSEO) Application

Dear Ms. Parsons and El Paso County Planning and Community Development Department,

Please find a complete application for a Wind and Solar Energy Overlay (WSEO) in El Paso County included with this letter. The Palmer-Williams Creek WSEO is jointly proposed by two co-applicants to allow for future project-level permitting for the Palmer Solar Project and Williams Creek Substation. While the creation of an Overlay does not in itself authorize project development or establish Overlay entitlement, the applicants have determined that it is generally important to outline the relationship and interests of the respective parties at the onset of the permitting process. The proposed Palmer-Williams Creek WSEO includes the following components:

- **Component 1:** A solar energy generation project proposed by Palmer Solar LLC on land owned by Woodmoor Water and Sanitation District No. 1. Component 1 herein is referred to as the “Palmer Solar Project”, “Palmer Solar” or “Solar Project.”
- **Component 2:** A utility substation proposed by JSI Construction Group LLC as agent of Colorado Springs Utilities on land owned by City of Colorado Springs. Component 2 herein is referred to as the “Williams Creek Substation”, “Williams Creek”, or “Substation Project.”

Thank you for your full consideration of this application. The undersigned companies (collectively, “Applicant”) are eager to begin formal review with the Planning and Community Development Department and El Paso County.

Sincerely,

Stuart Coles, Project Planner  
Palmer Solar LLC  
JSI Construction Group LLC as agent of Colorado Springs Utilities  
720.245.2922  
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## I. Introduction to the Palmer Solar Project and Williams Creek Substation Project

Palmer Solar LLC proposes to construct, operate, and decommission the Palmer Solar Project, a solar facility capable of generating up to 60 alternating current (AC) megawatts (MW) of photovoltaic (PV) solar energy. The proposed Solar Project consists of ground-mounted solar arrays and associated infrastructure sited within approximately 622 acres of the WSEO on land owned by Woodmoor Water and Sanitation District No. 1 in El Paso County (herein called the “County”).

Colorado Springs Utilities proposes to construct, operate, and decommission the Williams Creek Substation, a utility substation sized to accommodate new electrical power from the Palmer Solar Project onto the existing Colorado Springs Utilities transmission system. The Williams Creek Project consists of a new three-breaker ring bus switchyard planned by Colorado Springs Utilities; sited within an 89-acre area of City of Colorado Springs-owned land in the County (jointly, the WSEO acreage proposed is 711 acres).<sup>1, 2</sup>

The Palmer Solar Project will be built with proven and bankable technology, building off Applicant’s experience building facilities in fourteen (14) states across the United States. The Solar Project will be a single-axis PV tracking system that connects directly to the Colorado Springs Utilities’ existing 230-kilovolt (kV) transmission system. In its first year of operation, the facility will have a generating capacity of approximately 151,728 MWh: directly powering local homes, business, and institutions.

If approved by El Paso County, the proposed Palmer Solar Project will be the newest generation resource for Colorado Springs Utilities, an enterprise of the City of Colorado Springs, Colorado. More than 85% of the population of the County is directly or indirectly served by Colorado Springs Utilities’ Electric System. Recent project approvals and planning efforts have shown ample coordination and collaboration between El Paso County and Colorado Springs Utilities, including the field of renewable energy. The Clear Spring Ranch Solar Project, approved by the County in 2016, was the first utility-scale solar energy project permitted and constructed under both entities.

Like the Clear Springs Ranch Project, the Palmer Solar Project will support the long-term, energy planning efforts of Colorado Springs Utilities. In its 2016 Electric Integrated Resource Plan, Colorado Springs Utilities sets forward a strategic plan for generation resource acquisition, including for renewable energy. Driven by scenario modeling, cost modeling, and customer/public involvement; the approved Plan identifies a renewable energy goal of 20 percent renewables by 2020.<sup>3</sup>

In December of 2016, Colorado Springs Utilities released a Request for Proposals (RFP) for a Renewable Energy Solicitation. This Solicitation accepted proposals for new generation resources up to 150,000MWh/year that met the Colorado Renewable Portfolio Standards (RPS) requirements, including solar

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<sup>1</sup> Colorado Springs Utilities is a charter-created municipal enterprise of the City of Colorado Springs, Colorado. The City owns and operates the Colorado Springs Utilities, which includes the electric light and power system, in accordance with the home rule charter of the City. Accordingly, Colorado Springs Utilities and City of Colorado Springs act in coordination as it pertains to issues covered by such charter.

<sup>2</sup> Not all portions of the WSEO will host infrastructure (see WSEO Plan).

<sup>3</sup> See Colorado Springs Utilities Electric Integrated Resource Plan: <https://www.csu.org/CSUDocuments/2016eirp.pdf>

and wind energy projects. Some of the reasons stated by Colorado Springs Utilities to consider renewable energy additions through the 2016 Solicitation included:<sup>4</sup>

- Achieving Colorado Springs Utilities 2020 Energy Vision renewable energy goals
- Responding to recent and historical trend of customer surveys indicating interest in Colorado Springs Utilities expanding its renewable energy portfolio
- A desire by Colorado Springs Utilities customer base to move beyond the Renewable Portfolio Standard (RPS)
- The potential for an increased Colorado RPS or a national RPS

The Palmer Solar Project was originally proposed to Colorado Springs Utilities as part of its 2016 Request for Proposal (RFP) for new renewable energy generation resources to serve Utilities' customers. Through this competitive solicitation, it was selected as the best option to meet resource planning needs by Colorado Springs Utilities and the energy needs of its customer base. The Applicant has since completed pre-development activities, including site studies, energy agreements, and design modeling to meet the Palmer Solar Project schedule and milestones.

Colorado Springs Utilities, as the identified purchaser of the Solar Project's power, entered into a Power Purchase Agreement (PPA) with Palmer Solar LLC on June 6<sup>th</sup>, 2018. The PPA lays the foundation for the Palmer Solar Project and establishes expectations for power generation and delivery onto the utility's electrical grid. The PPA for the Palmer Solar Project establishes terms and conditions for delivery of power, including Colorado Springs Utilities' agreement to purchase electricity generated from the Palmer Solar Project for 20 years at a minimum. Both groups are in the process of finalizing the Interconnection Agreement (expected August of 2018). Relevant interconnection studies, with support of Palmer Solar LLC, have also been completed by Colorado Springs Utilities in compliance with State and Federal standards.

Following the selection of the Palmer Solar Project and the finalization of the PPA, Colorado Springs Utilities selected JSI Construction Group LLC to be the authorized agent for permitting and building the Williams Creek Substation; a necessary component for delivering the energy generated from the Palmer Solar Project onto the grid. The Williams Creek Substation will be owned and operated by Colorado Springs Utilities.

## II. Project locations and overview

Palmer Solar and the Williams Creek Substation will be located on Water and Sanitation District-owned and City-owned land, respectively, in El Paso County, Colorado approximately 1.25 miles east of I-25 along Birdsall Road and approximately 4 miles south of the town of Fountain, Colorado. The land in the proposed location is primarily vacant, undeveloped, and relatively flat. The Overlay covering both components encompasses 711 acres.

Current zoning for the Overlay area is Residential Rural-5 (RR-5). The surrounding land is primarily used for livestock grazing, with dispersed residential development along the western boundary (all zoned as RR-5). As shown in the Overlay Map (Appendix A – Overlay Plan), the Solar Project will be divided into two main project areas (an eastern and western section); both of which are sited on land owned by Woodmoor Water and Sanitation District No. 1. The El Paso County Assessor lists these parcels as 5600-00-0122 and 5600-00-

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<sup>4</sup> See example 2016 RFP Scope of Work:

<https://legacy.rockymountainbidsystem.com/Bids/Attachments.asp?TN=134735&GroupID=1028>

0137. The Williams Creek Substation is sited on land owned by Colorado Springs Utilities listed as 56000-00-123. All land falls within Township 16S, Range 65W, Section 22, 26, 27, 28 and 35.

Palmer Solar has a favorable geography and development context. It's in the second highest zone for annual solar radiation in Colorado as determined by the National Renewable Energy Laboratory in Golden, Colorado. The gently-sloped topography of the property and its avoidance of sensitive environmental features make it a viable location for PV technology.

The location of the proposed Solar Project is particularly attractive because of its position on the Colorado Springs Utilities grid. As demonstrated in interconnection studies, the technology and targeted generation capacity of Palmer Solar will be compatible with Colorado Springs Utilities electrical infrastructure. The identified point of interconnection will be on the existing 230-kV Colorado Springs Utilities' system, which is identified as the Fuller to Ray D Nixon 230-kV transmission line (running East-West from the Ray D Nixon facility and heading north at the location of the proposed Solar Project). Since the Colorado Springs Utilities grid is relatively small (as compared to non-municipally owned utilities in the State), the proposed Project location represents an important opportunity to add renewables directly on the Utilities' system.

Main components of the proposed 60MW (AC) Palmer Solar Project will include:

- Single-axis tracker arrays with photovoltaic modules
- Power infrastructure including inverters and transformers for grid interconnection
- A 34.5-kV overhead line within the project boundary to connect the two array areas
- A project substation near existing transmission infrastructure
- Two access points on existing roads
- An operations and maintenance area with a small shed
- Private, interior maintenance roads (gravel)
- Drainage controls designed to minimize surface runoff flows to existing primary drainages
- Perimeter security fencing surrounding project
- Exterior fire and vegetation break surrounding security fence

Solar modules will be the predominate feature of the Palmer Solar Project; set on metal frames and mounting structures. These modules are manufactured at an off-site location and delivered to the site in an assembly-ready condition. The mounting system proposed is a single-axis tracker, which is engineered for optimum generation. The tracking arrays will follow the sun; facing east in the morning, lying flat at noon, and facing west in the afternoon. Foundations for this technology consist of embedded posts or piles. From soil testing on site, post anchoring with concrete will not be necessary since posts can be driven to depths in native soil that adequately secure the photovoltaic technology.

Since the Solar Project is laid out into two distinct areas, an overhead distribution line in a 100-foot wide corridor is required to move power from the western area to the point of interconnection. The 34.5kV interconnection line will consist of overhead poles. These structures will be at least 30 feet off the ground, as required by surface lease agreement and the National Electric Safety Code (NESC). The distance between the poles will generally be between 400 and 600 feet. To minimize impact of the distribution line, the proposed route follows existing transmission infrastructure.

The Palmer Solar Project requires a project substation sited on lands owned by Woodmoor Water and Sanitation District No. 1. The purpose of which is to collect power from the two array areas and convert the voltage from 34.5-kV to 230-kV. It is proposed on the east side to minimize the distance between the project substation and the point of interconnection on the Colorado Springs Utilities system. The project substation will require a control building, transformers, circuit breakers and switches, support structures, dead-end towers, SCADA communication system, and overhead electrical bus work. The appearance will resemble other substations in El Paso County and Colorado.

The unnamed project substation will have an interconnecting powerline that feeds the utility substation (the future Williams Creek Substation), which is the identified point of interconnection for the Solar Project. Colorado Springs Utilities is the ultimate decision-maker regarding design elements for the Substation on its existing system. A contract between Colorado Springs Utilities and JSI Construction Group LLC allows for JSI Construction Group LLC to build this new point of interconnection on the existing Colorado Springs Utilities transmission network. The new Williams Creek Substation, sited on land owned by the City of Colorado Springs, will accommodate the Palmer Solar Project and may potentially serve other needs of Utilities in the future.

An Operations and Maintenance (O&M) storage shed will be constructed to store materials and equipment. It will be approximately 960 square feet in size, have a maximum height of 20 feet and have a concrete foundation. The shed will be utilized to store PV facility replacement parts and spare materials. The small shed will be unoccupied.

Access to the Project (as shown in Appendix H – Traffic Impact Study) is proposed at two locations depicted on the Site Plan. The first access point is from the west off existing Birdsall Road, which intersects with Old Pueblo Road. The second access point is from the east off an unnamed roadway that intersects with Squirrel Creek Road.

Construction is proposed in a single phase and is estimated to take between 9 months and 12 months.

### III. Proposed Wind and Solar Energy Overlay

To move forward with the Palmer Solar Project and William Creek Substation, Palmer Solar LLC and Colorado Springs Utilities are requesting approval of the Palmer-Williams Creek Wind and Solar Energy Overlay (WSEO) for the area included in the project footprint. The purpose of the proposed WSEO is to allow construction, operation, maintenance, and decommissioning of a utility-scale solar energy facility; specifically, the Palmer Solar Project.

Principal uses for the proposed WSEO include solar panels and substations, while accessory uses include transmission and distribution lines (overhead or underground), operations and maintenance facilities, DC and AC inverters, MET stations, medium-voltage transformers, circuit breakers and disconnect switches, communication systems, access roads, and fencing, and other structures needed to support identified principal uses in the Overlay. Elevation plans are included in Appendix B –Elevations Plans.

Section 4.3.5 of the El Paso Land Development Code requires WSEO Dimensional and Density Standards. The requested Palmer-Williams Creek WSEO Dimensional and Density Standards are as follows:

Table 1: Dimensional Standards for Palmer-Williams Creek WSEO						
	<b>Minimum Setbacks for Structures (Principal and Accessory)</b>	<b>Max Height of Solar Panels</b>	<b>Max Height of Transmission Line Poles</b>	<b>Maximum Height of MET Stations</b>	<b>Maximum Height of Inverters/ Transformers</b>	<b>Maximum Height of Substation Facilities</b>
<i>Palmer-Williams Creek WSEO</i>	25	14	90	14	14	75
<i>Underlying Zoning (RR-5)</i>	25	30	30	30	30	30

The Palmer-Williams Creek WSEO does not include minimum lot size or maximum lot coverage requirements.

Structure elevations, access, accessory structures, signage, lighting, project phasing, and other standards necessary to administer Palmer Solar and the proposed plan are included in this document and Appendices. In accordance with the Land Development Code Site Specific Development Plan, this LOI includes the following information:

- Owner/applicant and consultant, including addresses and telephone numbers
- Site location, size, and zoning
- Request and justification
- Existing and proposed facilities, structures, roads, etc.
- Deferral and waiver requests (if applicable) and justification
- The purpose and need for the change in zone classification
- The total number of acres in the requested area
- The total number of residential units and densities for each dwelling unit type
- The number of industrial or commercial sites proposed
- Approximate floor area ratio of industrial and/or commercial uses
- The number of mobile home units and densities
- Typical lot sizes: length and width
- Type of proposed recreational facilities
- If phased construction is proposed, how will it be phased
- Anticipated schedule of development
- How water and sewer will be provided
- Proposed uses, relationship between uses and densities
- Areas of required landscaping
- Proposed access locations
- Approximate acres and percent of land to be set aside as open space

## **1. Project Owner/Application**

### Project Owner/Applicant:

Palmer Solar, LLC  
1710 29<sup>th</sup> Street, Suite 1068  
Boulder, CO 80301

Colorado Springs Utilities  
2855 Mesa Road  
Colorado Springs, CO 80904

### Point of Contact: \*

Stuart Coles, Project Planner  
1710 29<sup>th</sup> Street, Suite 1068  
Boulder, CO 80301  
Phone: 720.245.292

\* Woodmoor Water and Sanitation District No. 1 and Palmer Solar LLC have provided appropriate documentation to El Paso County for representation pertaining to the Palmer Solar Project. Likewise, an agreement is in place authorizing JSI Construction Group's Point of Contact to represent Colorado Springs Utilities in permitting for identified portions of its land and for proposed uses identified within this document; specifically limited to the proposed Colorado Springs Utilities Williams Creek substation and associated development actions.

## **2. Site Location, Size, and Zoning**

*Location:* The proposed Overlay includes portions of parcel 5600-00-0122, 5600-00-0137, 56000-00-123 owned by Woodmoor Water and Sanitation District No. 1 and City of Colorado Springs (see Appendix A – WSEO Overlay Plan). These parcels of land in unincorporated El Paso County, Colorado are largely vacant, undeveloped, and relatively flat. It is approximately 1.25 miles east of I-25 along Birdsall Road and approximately 4 miles south of the town of Fountain, Colorado.

*Size:* The total area of the proposed WSEO (comprised of the Palmer Solar Project and Williams Creek Substation): 711 acres.

*Zoning:* All parcels are zoned as Rural Residential-5. A portion of parcel 5600-00-0122 exhibits overlap with a commercial Airport Overlay, which does not preclude designation of a WSEO. Consistency and conformance with underlying zoning is addressed below. A WSEO can be reasonably applied to the existing base zoning.

## **3. Request and Justification**

Beyond the context and drivers for the Solar Project and Substation Project described in the Introduction, the proposed Overlay is consistent with the El Paso County Master Plan. The El Paso County Master Plan is comprised of guiding documents for land use and zoning. It includes topic-specific and location-specific elements, including: El Paso County Policy Plan (CPP), Small Area Plans, the Parks Master Plan, and the

Master Plan for Mineral Extraction. This application addresses relevant components of El Paso County plans and offers a detailed discussion on the consistency of the Palmer-Williams Creek WSEO with the Master Plan. The sections below reflect the order of applicable goals and policies as they appear in the CPP.

### **CPP 1.0 Small Area Plans**

El Paso County is divided into discrete planning areas to help facilitate compatible land-use decisions. Termed as Small Area Plans, these planning areas have been in place since the 1970s and are important features of the County's comprehensive planning efforts. The Solar Project and Substation Project are located within the Proposed Fountain Valley Small Area Plan boundary. As a proposed Small Area Plan, a formal land-use plan has not been completed for this area. Accordingly, this WSEO application exclusively addresses the County Policy Plan and the Zoning Map for this portion of unincorporated El Paso County.

### **CPP 2.0 Natural Systems**

- *Goal 2.1: Preserve, enhance and restore the environment to acceptable health standards.*

Renewable energy systems have the benefit of supplying power to the local energy grid without contributing to regional haze, pollution, or greenhouse gas emissions. Population growth in El Paso County is expected to continue and likely increase over the coming years and decades. The proposed Palmer Solar Project and Williams Creek Substation Project will help address growing populations by contributing to Utilities' energy portfolio, while not incurring major environmental costs to the County's air, water, land, or waste. No major regulatory approvals with State or Federal environmental agencies have been identified for the Solar Project or Substation Project. The Solar Project and Substation Project will further responsible development that meets acceptable health standards.

Project design and construction methods seek to minimize environmental impacts to the greatest degree possible. However, as discussed below, there will be localized impacts from development, including modifications to minor ravine (non-wetland) features<sup>5</sup> and wildlife habitat. The sections below address the relevant policy components of CPP Section 2.0 Natural Systems by topic:

#### **CPP 2.1 Air Quality**

- *Policy 2.1.1 Meet the Federal Clean Air and Clean Water Acts and its amendments*

During the construction phase, there will be particulate emissions from fugitive dust and internal combustion engine exhaust. However, these emissions will be short-term and at no time will exceed National Ambient Air Quality Standard levels or County standards for air quality. In advance of construction, an Air Pollutant Emission Notice (APEN) will be filed with Colorado Department of Public Health and the Environment (required for projects disturbing over 25 acres). Potential air quality impacts will be minimized through best management practices for dust suppression and emission reduction, and commitments to comply with State

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<sup>5</sup> Dirt-moving and project infrastructure is proposed in and around existing channels on the eastern portion of the site. These areas were identified by National Wetlands Inventory (NWI) dataset, which is a national geospatial layer that provides coarse data of potential wetlands. NWI areas in the WSEO were surveyed twice by professional biologists and were not found to meet criterion for jurisdictional wetland as defined by the US Army Core of Engineers.



of Colorado and Federal regulations. Best management practices for air quality include speed limits within the site (11 miles per hour) and suspending major soil disturbing activities during high-wind events.

Once completed, the proposed developments will not generate emissions or pollution. Solar facilities are a beneficial energy generation resource in part, because of their contribution to pollution and emission reduction goals. The Solar Project's construction, as an alternative to additional conventional resources, represents avoided emissions. Since the solar arrays will have native grasses underneath, dust will not be a major concern for local air quality during operations.

### **CPP 2.1 Hazardous Materials**

- *Policy 2.1.3 Meet regulations and monitoring for the transportation and storage of hazardous materials and wastes.*
- *Policy 2.1.5 Encourage the practice of appropriate management techniques for handling and disposal of hazardous materials and wastes.*
- *Policy 2.1.6 Encourage the control, reduction, and elimination of hazardous materials and wastes at their sources.*

A Phase I Environmental Site Assessment was conducted for the area. The Phase I assessment revealed no evidence of Recognized Environmental Conditions (RECs), Controlled RECs, or Historical RECs in connection with the property.

The risk of release of hazardous materials is low as there will not be a significant amount of temporary or permanent hazardous materials on-site at any one time. The control and release of petroleum products held for construction equipment will abide by a Spill Prevention, Control, and Countermeasure (SPCC) Plan. All potentially hazardous materials will be transported, stored, and handled in accordance with applicable regulations. Project developers and site crew have training in emergency response.

### **CPP 2.1 Noise**

- *Policy 2.1.7 Encourage the adoption of noise level standards which limit or mitigate adverse impacts to surrounding land-owners*
- *Policy 2.1.8 Carefully consider all proposed land uses adjacent to interstate highways, railroads, military training areas, and in designated flight zones to protect them from associated disruptive noise levels.*

The proposed Solar Project is a quiet use of the land that requires no on-site employees. Modern PV technology produces minimal amount of noise once operational.

Noise impacts are limited to construction phases and steps will be taken to limit the amount of noise during this time. This includes noise-suppression techniques, posted site rules, and use of modern equipment. Construction on the eastern portion of the Solar Project will be over a mile-and-a-half from residences near Old Pueblo Road and therefore, is not expected to rise above ambient levels. Construction on the western portion of the Solar Project will produce noise during construction, particularly for post driving and placing of PV racking systems. Added precautions will be taken to minimize sound disturbance to nearby residences.

Work across the site will take place during working hours between 7:00 a.m. and 6:00 p.m. on Monday through Saturday, with Sundays being utilized infrequently. Any construction personnel on site outside of these times will receive strict guidance on noise expectations.

The Applicant will develop additional noise plans, as required, to mitigate noise from construction and to comply with County ordinance.

### **CPP 2.1 Water Quality**

- *Policy 2.1.1 Meet the Federal Clean Air and Clean Water Acts and its amendments*
- *Policy 2.1.9 Encourage approaches to land use that promote innovative techniques to protect water quality and encourage mitigation to reduce pollution from non-point sources such as run-off from roads, parking lots and lawn chemicals.*

A Drainage Report has been completed based on current design at the time of the WSEO application. The Applicant has engaged Kimley Horn, a very experienced consultancy for development and engineering services, out of their Colorado Springs office to complete Drainage and Grading Plans in compliance with County regulations and manuals. While the Solar Project overlaps with some minor drainage features east of Calhan Reservoir, it will not impact historic flows of minor or major drainage basins in the Project vicinity. The Solar Project minimizes downstream flow onto adjacent properties and retains the property's natural hydrography using ditches and diversion techniques. Kimley Horn concluded in its Drainage Report that:

“The proposed drainage patterns will match the existing drainage conditions and historic patterns discussed in the previous section of this report. Overlot grading of specific areas within the Site will be required to facilitate the construction of the solar arrays on adequate slopes. The overlot grading will follow the existing topography and will not alter the historic drainage patterns.”<sup>6</sup>

Following input during the WSEO and 1041 Permit review, a Final Drainage Report for the Solar Project and Substation Project will be completed for the El Paso County Site Plan Review.

Water is further addressed in this application in CPP 3.0: Water Resources.

### **CPP 2.2 Wildlife and Vegetation Impacts**

- *Goal 2.2 Protect the flora and fauna found in the County's five life zones and transitional communities.*
- *Policy 2.2.1. Encourage a coordinated and systematic planning approach to identify, locate and protect critical areas of wildlife habitat from all five life zones and transitional communities.*
- *Policy 2.2.3 Evaluate the impact from proposed developments on watersheds and wildlife habitat with appropriate governmental agencies early in the development process.*
- *Policy 2.2.4 Provide incentives to encourage development to incorporate sensitive planning that ensures the protection of watersheds and wildlife habitat*
- *Policy 2.2.7 Comply with requirements of the federal Endangered Species Act*
- *Policy 2.2.8 Encourage the protection and preservation of state listed endangered and threatened species, species of special concern, and species with immediate conservation needs*

### **Wildlife**

The Applicant has taken a conservative approach to wildlife by considering resources within the Overlay boundary as well as a larger footprint surrounding the Solar Project and Substation Project. Based upon a

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<sup>6</sup> See Conceptual Drainage Report included in WSEO application.

thorough review of publicly available datasets and field studies, development will be sited in an area that does not contain regionally-significant habitat or ecological resources. The properties have been used for cattle grazing and ranching activities for almost a century. These historic uses have noticeably altered the natural condition of the property. Noxious weeds, rangeland and electrical infrastructure, and the large water-retention facility (Calhan Reservoir) demonstrate major ecological modifications and habitat degradation.

The site was selected as a suitable site across the suite of available land in the Colorado Springs Utilities' service area because it demonstrates low-conflict features with natural resources. The Solar Project and Substation Project do not overlap with floodplains or designated critical habitat for Threatened and Endangered species. Moreover, the Overlay is outside all Potential Conservation Areas (including Critical Wetland Areas) in El Paso County, as identified by the Colorado Natural Heritage Program's County-wide survey and analysis.<sup>7</sup> It is also outside Candidate Open Space Lands identified by the El Paso County Parks, Trails and Open Space Master Plan.

Ecology & Environment, Inc. (E&E) was contracted to complete a Wetlands and Wildlife Memo to review existing wildlife and potential habitat on site. The Applicant has also undertaken early and voluntary coordination with the Colorado Parks and Wildlife (CPW) Energy team and Southern Field Office. Results of field surveys and desktop review by E&E and CPW can be found in Appendix J and Appendix M respectively. In both reviews, no major constraints were identified due to wildlife impacts.

The Applicant recognizes that even as a low-impact site, a project of this scale will have impacts on wildlife. The area proposed for development is agricultural and vacant, and provides forage for big game, birds, and small mammals that are adapted to rangeland settings. The Solar Project and Substation Project will result in the loss of terrestrial habitat in the area for certain species, mainly for mammals (including potential habitat for deer). Construction may also likely lead to the mortality of common animal species, such as small, ground-dwelling mammals and reptiles. Construction and design elements incorporate recommendations provided by CPW. These plans and elements include (but are not limited to):

- Adhering to "Suggested Practices for Avian Protection on Power Lines"
- Undertaking preconstruction surveys to ensure that birds protected by the Migratory Bird Treaty Act or species protected under the Endangered Species Act are not on site. Applicant will abide by setback distances identified by CPW for raptor and sensitive species.
- Co-locating the Solar Project's distribution line with existing transmission infrastructure
- Installing motion-detected night lighting with reduced lumen and shielding methods
- During construction phases, adhering to construction buffers in the event of active nests of protected or sensitive raptor species identified by CPW
- Educating construction personnel on local wildlife and ways to avoid potential impacts to species
- Developing a Weed Management Plan
- Committing to a site decommissioning and restoration plan following facility operation

Early outreach with CPW resulted in recommendations for construction and design that are included above. Furthermore, the Applicant has provided responses to CPW's May 2018 development review to detail development plans and incorporation of wildlife recommendations. The Applicant will continue coordination with CPW as it finalizes site designs and construction plans.

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<sup>7</sup> See *Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties*: [http://county.pueblo.org/sites/default/files/documents/Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties%2C Colorado%2C by CNHP.pdf](http://county.pueblo.org/sites/default/files/documents/Survey%20of%20Critical%20Wetlands%20and%20Riparian%20Areas%20in%20El%20Paso%20and%20Pueblo%20Counties%2C%20Colorado%2C%20by%20CNHP.pdf)

Pre-construction surveys, targeted for spring of 2019, will be important for determining construction approaches, including phased development, timing stipulations, and the use of buffers; adhering to wildlife best management practices. The Applicant recognizes that there is a potential need to adapt construction plans for wildlife, including the active Great Horned Owl nest on the northwest portion of the site. Additionally, there is a potential that sensitive species, like burrowing owl and swift fox (see CPW correspondence) will be found on the eastern portion of the site. The following construction stipulations are possible based on existing and potential conditions:

- *Buffers for active nests of raptor species:* A ¼ mile buffer for all nests, generally February 15 to June 15
- *Burrowing Owls:* If nesting burrowing owls are present, no human encroachment within 150 feet of nesting burrows from March 15 to October 31
- *Mountain Plover:* Undertake construction activities outside critical nesting periods where species are found
- *Swift fox/kit fox:* avoid surface disturbance within 1/4 mile of den sites while young are den dependent (approximate dates: kit fox Feb 1 to May 1; swift fox March 15-June 15).

### Vegetation

Vegetation on the sites are typical to the Central Shortgrass Prairie ecosystem (including blue gramma dominated shortgrass, cholla cactus, and saltbush shrublands). Site studies have not documented any sensitive or listed plant species and CPW did not raise concerns on this issue.

Construction will result in short-term impacts to vegetation, including removal of plant cover during land-clearing activities and grading. To address any losses to vegetation on site, a native seed mix (approved by El Paso County Environmental Department) will be applied promptly. Passive revegetation from seedbanks along boundaries will also assist in natural revegetation. Monitoring of ground cover and vegetation during and after construction will drive active management, including mowing and control of noxious weeds.

In terms of long-term impacts, the Solar Project requires minimal amount of impervious surface as posts, which host PV panels, are mounted directly into the ground. Disturbance on the ground is limited to where posts and other infrastructure are located (such as roads, substation, and O&M shed). Impervious surface is estimated to be less than 1% of the total Overlay area. Cumulative impacts to vegetation in the region and to the larger ecosystem is negligible.

Following decommissioning, the site will be restored to a condition available for a range of uses, including agricultural and grazing, open space, or other uses as determined by the landowner and County.

### Noxious Weeds

Per El Paso County requirements, a detailed Noxious Weed Management Plan was created to address County and State requirements for noxious weeds (see Appendix F – Noxious Weed Management Plan). The Plan is driven by an on-site survey with species and location-specific management actions. To meet standards of the El Paso County Environmental Department and best practices for weed control, a comprehensive inventory of the area was completed in June of 2018 by Pinyon Environmental, Inc. This was done to fully capture the presence and extent of noxious weeds during the growing season. Deferring weed inventories and management plans until Winter or Spring months before construction would likely result in an incomplete picture of site conditions.

Management actions for noxious plant species in the Noxious Weed Management Plan are tailored to individual species and address goals put forward in the El Paso County Noxious Weed Management Plan as well as listed (A, B, and C) species on the State of Colorado Noxious Weed List. Implementation of standard Best Management Practices for utility-scale solar projects will help identify, prevent, and treat the spread of invasive species on site and to adjacent properties.

### Wetlands

As part of the pre-development actions, a wetlands review of the area was completed by a team of qualified professional environmental consultants from E&E. The review included desktop analysis and two separate field surveys of the entire site that resulted in two reports (included in Appendix J and Appendix K).

In areas proposed for solar arrays and substation, the Project does not exhibit any overlap or impact Waters of the US and wetlands would not be impacted from development. There are non-jurisdictional hydrologic features (ditches) located on the eastern portion of the proposed project. Solar arrays would have some overlap with these features. As detailed in the report from E&E, these features do not meet the criterion for jurisdictional waters. Permitting with or approvals from the US Army Corps of Engineers (USACE) are not required for impacts to these features. The natural hydrologic conditions would be retained throughout the project, as determined by Kimley Horn in the Conceptual Drainage Report.

Wetlands and potential wetlands are exclusively identified in the central portion of the Woodmoor Water and Sanitation District No. 1 property; immediately downstream from the Calhan Reservoir. This area, while not within the main footprint of the Solar Project, was included in the review because a distribution line is required between the two main array areas.

The hydrographic connections to Calhan Reservoir that flow south (in the direction of Fountain Creek) would imply the property wetland and streams as delineated and connected Waters of the U.S. Given the presence of the planned overhead line in the area, it is important to describe the following permitting scenarios with USACE as possible pathways for construction activity planned within the boundaries of the wetland and streams:

- No impact or fill material placed in the boundaries
  - o No USACE notification, consultation or requirement
- Less than 1/10th Acre permanent fill material placed with boundaries
  - o No notification or consultation with the USACE is necessary
  - o Follow USACE Nationwide Permit General Conditions
- Greater than 1/10th Acre Impact permanent fill material placed with boundaries
  - o Notification and consultation with the USACE is required
  - o Follow USACE Nationwide Permit General Conditions

As part of the professional wetlands review, E&E completed a jurisdictional delineation to avoid wetlands impacts during construction and operations. All Solar Project activity will take place in uplands, including the upland swale identified in Appendix K – Wetland Report. Poles will be placed well-outside of wetland areas. Construction in these areas are not regulated by the USACE and therefore, do not require USACE notification or consultation. The Southern Colorado Regulatory Office of USACE reviewed the portion of the Project with potential impacts to wetlands (the transmission line interconnecting the two sites) and made a formal determination that a Department of the Army Nationwide Permit is not required. The project will

not result in the discharge of dredged/fill material into waters of the United States (see Jurisdictional Determination Action No. SPA-2018-00184-SCO). This formal determination is also included in Appendix K – Wetlands Report.

Importantly, there are two existing, high-voltage transmission lines that traverse these wetlands, immediately adjacent to the proposed distribution line. By siting the distribution line in this area, the Solar Project incorporates El Paso County policy and CPW’s recommendations for collocation of utility infrastructure wherever possible.

### **CPP 3.0 Water Resources**

- *Policy 3.1.7 Carefully analyze each new development’s proposed use of water.*
- *Policy 3.3.2 Consider the water requirements for natural areas adjacent to proposed developments*
- *Policy 3.3.4 Implement appropriate measures to protect and/or mitigate effects of point and non-point sources of pollution to surface water*
- *Policy 3.3.6 Evaluate the consequences to surface water from new development including run off of natural soils, as well as chemical compounds that may result from the proposed uses including pesticides, herbicides and hydrocarbons*

Long-term water supply is not required or necessary for the Solar Project or Substation Project. The Solar Project requires only a small amount of water during the operational phase for panel washing. Panel washing will occur on a ‘as-needed’ basis and is not expected to exceed two times a year. For washing during operations and maintenance, water will be provided by an off-site provider.

### **CPP 4.0 Historic Resources**

- *Goal 4.1 Encourage preservation and enhancement of historical resources.*
- *Policy 4.1.1 Support a systematic inventory to identify and categorize historic sites, structures and artifacts*
- *Policy 4.1.6 Encourage reporting of all artifacts unearthed during construction of roadcuts, utility lines, outside storage, water tanks and buildings.*

A desktop survey of historical and cultural resources of the area was completed as part of site due diligence and project preparation. The results, incorporated into a professionally-consulted Cultural Resources Survey, are included in Appendix J. Results show no major concerns pertaining to historic features; as none of the resources identified in the review (a desktop data review of resources within the survey boundary and a 1-mile buffer) are on the National Register of Historic Places.

The desktop review concluded that there are cultural sites and isolated finds within the Project area, including a 1-mile buffer. The sites included a prehistoric open camp (5EP4846) and a segment of the Chilcott Ditch (5EP3296.1). Both sites are recommended as not eligible for inclusion in the NRHP. Importantly, the area considered in the cultural review encompassed a significantly larger area than what is proposed in the WSEO.

The final boundary, proposed here within, overlaps with a single feature. This feature (5EP.3296.1) is identified as a historic ditch and is not eligible for inclusion in the NRHP. The historic resource slightly overlaps (less than .1 acres) with the proposed corridor for the overhead transmission line. Like the transmission lines that exists on the landscape currently, the feature will be avoided through pole placement and micro-siting (shown in Resource Map of Appendix A – WSEO Plan). The poles will span the feature and the line will be slightly north of it. The location of all other features identified by consultants are included in Appendix J – Wildlife, Wetlands, and Cultural Resource Surveys.

The Project boundary proposed is unlikely to have prehistoric or historic resources. As recommended by E&E, the professional environmental consultant that completed the review of historic resources, any discovery of prehistoric or historic resources or artifacts will be immediately reported to applicable authorities (including El Paso County and Colorado State Historic Preservation Office). E&E did not recommend additional analysis or field studies based on concerns for cultural or historic resources.

### **CPP 5.0 Economic Development**

- *Goal 5.1 Maintain a land use environment which encourages quality economic development that is compatible with surrounding land uses.*
- *Policy 5.1.1 Encourage economic development that enhances a sense of community, provides vigor to the economy and considers the environment while contributing to the overall health of the County.*
- *Policy 5.1.6 Promote economic development alternatives, such as locating in industrial parks, which place the lowest strain on available infrastructure*

Construction will support economic development in El Paso County. The Solar Project and Substation Project will result in construction jobs and materials procurement in El Paso County as well as secondary economic impacts to local businesses in Fountain and Colorado Springs (service industry, hotels, etc.). An estimated peak of 250 workers will be employed daily during construction (on and off-site). Therefore, it is a short-term regional growth opportunity for the economy in El Paso County for 2019.

The Solar Project, as a local form of energy generation, will also support businesses in El Paso County and help meet growing energy demand. The production of renewable energy provides alternative and diversified energy choices for the local economy and Colorado Springs Utilities. Consumers and business owners in the area have a stated interest and preference for renewable energy generation to be part of the local power portfolio in the coming years. At completion, the project will power as many as 15,000 homes and business in the area. The Solar Project and Substation Project will also produce job opportunities over the life of the project, including Operations and Maintenance jobs, vegetation management, site security, and other operational jobs as needed.

The Solar Project is compatible with the Colorado Springs Utilities' electrical grid and does not require additional County infrastructure, such as public roads, water utilities, or additional emergency response capacity.

### **CPP 6.0 Growth and Land Use**

- *Goal 6.1.b Support growth and development in the unincorporated County in a manner which reasonably limits long term public costs, provides for the development of supporting infrastructure, preserves environmental quality, provides economic opportunities, and otherwise enhances the quality of life.*
- *Policy 6.1.1: Allow for a balance of mutually supporting interdependent land uses, including employment, housing and services in the more urban and urbanizing areas of the County.*
- *Policy 6.1.3: Encourage new development which is contiguous and compatible with previously developed areas in terms of factors such as density, land use and access.*

The area is characterized by utility infrastructure that provide services to the citizens of Fountain and El Paso County. Utility uses in the area include the Colorado Springs Utilities Pump Station, Calhan Reservoir water storage site owned by Woodmoor Water and Sanitation District No. 1, Lower Fountain Metro Sewage facility, the nearby Broadacre Landfill, and the distant Ray Nixon Power Plant. Electrically, the area hosts

multiple high-voltage transmission lines owned by three separate utilities as well as low voltage distribution lines. These features, particularly the existing transmission lines, allow for colocation of utility infrastructure and show compatibility with existing development in this portion of the County.

The Solar Project and Substation Project are proposed in a rural area with minimal residential character and surrounding residences. Adjacent properties are primarily used for rangeland activities, while the west side of the Solar Project boundary supports low-density residential development alongside Old Pueblo Road. Operations on neighboring parcels will not be dislocated by the facility. Moreover, the west side of the Solar Project incorporates sizable buffers from property lines and residences to help to reduce visual impacts to residential properties.

- *Policy 6.1.6: Direct development toward areas where the necessary urban-level supporting facilities and services are available or will be developed concurrently.*

The site was selected because Colorado Springs Utilities' transmission infrastructure is available as a point of interconnection.

- *Policy 6.1.8: Encourage incorporating buffers or transitions between areas of varying use or density where possible.*

The Solar Project incorporates the current setback of the RR-5 zone, which is 25 feet. While the final layout is dependent on additional review by the County, the actual distance of the setback from parcel lines with residential properties on the west side generally ranges from 198-feet to 394-feet. The site has topographic features (small mounds) and a gradient that helps limit views of the eastern portion of the Solar Project from nearby residents. For residents and commuters alongside Old Pueblo Road, a significant portion of the facility is concealed from view due to its remote location and topography. Additionally, a seven-foot-tall fence will be installed around the perimeter of the Solar Project that meets standards for protective arrangements in electric supply stations defined by the National Electrical Safety Code.

- *Policy 6.1.10: Ensure that new development will not create a disproportionately high demand on public services and facilities by virtue of its location, design or timing.*

Pressure on public services from the Solar Project and Substation Project is expected to be minimal for construction, operations, and decommissioning phases of the project. Additional demand is not anticipated to stress service capacity or infrastructure that could not be met by current conditions.

Once operational, there will be little additional traffic in the area since the facilities do not require on-site workers on a regular basis. No special or additional emergency response capacity will be required as part of the construction of the facilities. A Fire Plan, resulting from coordination with the Hanover Fire Department, was created to address and minimize potential fire risks.

- *Policy 6.1.11: Plan and implement land development so that it will be functionally and aesthetically integrated within the context of adjoining properties and uses.*

The Solar Project will be added to utility infrastructure as a predominate development form in the area, including high-voltage transmission lines, a sewage facility, and a pump station. Following construction, a native seed mix will be applied to areas of disturbance. Solar arrays are low in height and generally follow the contours of the landscape.



- *Policy 6.1.15: Recognize the need for new development and redevelopment to respond to changes in demographic, market and technological conditions.*
- *Policy 6.1.16: Allow for new and innovative concepts in land use design and planning if it can be demonstrated that off-site impacts will not be increased, and the health, safety and welfare of property owners and residents will be protected.*

Solar energy facilities are a new development type in El Paso County. The PV technology planned for the facility consists of proven technology to minimize risk and impacts. The facility is designed to be low-impact with ground resources, water, and adjoining properties. Based upon preliminary drainage studies and plans, there will be little to no additional impact to groundwater resources. Existing and historic drainage patterns will be retained.

In terms of safety, the Solar Project and Substation Project will be protected by a perimeter fence. Access will be controlled at each access point. The layout of the Solar Project will allow for vehicular access on the perimeter of the arrays and between PV modules for security, operations, and maintenance.

A Fire Prevention and Protection Plan has been prepared for the Solar Project and Substation Project. Vegetation will be mowed or removed during growing season to minimize fire risk. Modules are designed to be resistant to fire and the solar module racking system uses non-combustible steel and aluminum. The Applicant has been in communication with Hanover Fire District to discuss design features, access, and safety of the proposed facilities and adjacent property owners. Construction will follow site-specific recommendations, including additional fire monitoring during heightened fire danger. The Solar Project's design allows for firetruck access and vegetation management around its perimeter (see Appendix N – Fire Prevention & Protection Plan).

- *Policy 6.2.1: Fully consider the potential impact of proposed zone changes and development on the integrity of existing neighborhoods.*

The addition of solar panels on the Woodmoor Water and Sanitation District No. 1 property will result in some visual impacts to residential properties on the west side of the Solar Project. The Solar Project follows existing contours of the land and the height of the panels are not higher than 8 feet from grade. The Applicant hosted an Open House in April of 2018 where visual impacts were voiced as a potential concern. Following this meeting, the Applicant more than tripled the size of setbacks in some places and rearranged solar arrays to decrease visual contrast. As it stands, the proposed Solar Project has a sizable buffer from the parcel boundary of neighboring residential properties (greater than 500 feet in places). Visual renderings (Appendix K – Visual Impact Study) show the Solar Project is not visible from City of Fountain neighborhoods to the north.

- *Policy 6.2.10: Utilize buffer zones to provide mutually compatible transitions between neighborhoods and adjoining development with differing uses or densities.*

The Project was modified to increase buffer distance on the west-side of the facility.

- *Policy 6.6.6: Consider the development of cooperative building, zoning and infrastructure standards in areas that interface with municipalities and military properties.*

The Project is in unincorporated El Paso County and is not adjacent to a municipality or military property. The Federal Aviation Administration (FAA) reviewed potential impacts to nearby military facilities and

operations. A Determination of No Hazard to air navigation was secured for the Project (see Appendix R—Determination of No Hazard).

### **CPP 7.0 Special and Unique Land Uses**

- *Policy 7.5.1: Encourage the multiple uses of utility sites and corridors where feasible and appropriate.*

A major factor in the selection of the property was colocation with existing utility infrastructure and transmission corridors. The Project will not require a new transmission system. The distribution line between the two Project areas is a medium-voltage power feeder that will be stepped up to the higher transmission voltage by a transformer at the Solar Project's substation.

### **CPP 8.0 Parks, Trails, and Open Space**

Land included in the WSEO are not open to the public. Additionally, Calhan Reservoir is not used for public recreation activities. No trails or recreation areas are adjacent to the Project. The area is outside the current El Paso County park system, including areas covered by the Fountain Creek Regional Park Master Plan. Furthermore, the area is not identified as a Potential Regional Park, Potential Nature Center, or Candidate Open Space by the El Paso County Parks, Trails and Open Space Master Plan.

The 2013 El Paso County Parks, Trails and Open Space Master Plan does identify a proposed bicycle route on the western side of the project area. However, unlike other Proposed Primary Regional Trails, this proposed route does not have an identified name or development schedule. Furthermore, the Project is not incompatible with a potential bicycle route as both uses can take place in the area through micro-siting or other land development options.

### **CPP 9.0 Transportation**

As stated previously in the Introduction, access to the Project is from Birdsall Road and Squirrel Creek Road. A traffic analysis was completed in preparation for the Solar Project and Substation Project (Appendix J—Traffic Impact Analysis). At the start of construction, approximately 25 personnel will be onsite during the civil construction activities. This will ramp up to approximately 250 construction workers during peak construction activities with an additional 15 delivery trucks and 10 water trucks per day. After the Palmer Solar Project has been constructed, the number of trips generated by the solar plant is expected to be significantly less than during the construction period. The Substation Project and the Solar Project will be unmanned, with only weekly site visits by operational personnel, not expected to exceed 10 trips per month.

- *Policy 9.1.1 Identify and preserve the functional integrity of the corridors necessary to meet the County's potential future surface transportation needs.*

The Solar Project and Substation Project do not exhibit any features that conflict with existing transportation designations or uses by County, State, or Federal plans. In addition, the Solar Project and Substation Project do not conflict with El Paso County's Adopted 2040 Major Transportation Corridor Plan and are outside the Pikes Peak Area Council of Government's boundary for regional transportation planning. For these reasons, the proposed developments are largely compatible with existing and future transportation uses in El Paso County.

Based on a review of long-term El Paso County planning documents, however, the Solar Project falls in the vicinity of a 2060 Corridor Preservation expressway. The 2060 Corridor Preservation Map provided by El Paso County identifies a new expressway between Interstate-25 and Squirrel Creek Road. As stated in the plan:

“Right-of-ways on these corridors should be preserved and development setback should be required to respond to potential development and growth as it occurs. The preservation plan *does not imply that all of the facilities will be improved to the level indicated.* If anticipated developments do not happen, a particular long-range roadway expansion may not be needed.” (Emphasis added)

The proposed Solar Project overlaps with a small portion of the identified 2060 Corridor. Given the long planning horizon for this corridor, there are several potential solutions to support local development, including micro-siting of the corridor further north. It is also important to note that as part of decommissioning actions for the Solar Project, the land is returned to a natural condition suitable for a range of development activities, including roadways. The schedule of the facility may align with long-term transportation planning in El Paso County.

- *Policy 9.3.1 Place a high priority on maintaining the environmental condition when planning or building roads.*

No new public roads will be required for the Solar Project or Substation Project. The Operations and Maintenance roads are private and are already in use for transportation across the site.

- *Policy 9.3.4 Provide for noise attenuation and visual screening along major transportation corridors by incorporating techniques including setbacks, buffers, berms, and vegetation treatments.*

The Overlay does not include major transportation corridors. However, setbacks, buffers, natural berms, and vegetation treatment will be present along the west access of the Solar Project.

#### **CPP 10.0 Water and Wastewater Facilities**

- *Policy 10.2.2 Carefully consider the availability of water and wastewater services prior to approving new development.*

El Paso County’s Water Master Plan has demonstrated that use and availability of water is a frequent resident concern and is commonly expressed in public hearings regarding land use decisions.<sup>8</sup> The proposed Solar Project is a low water-use development. Water from an off-site source is required for construction (including dust suppression, soil compaction, and revegetation). However, operational requirements are minimal and limited to occasional panel washing (if needed). Water will be brought in from local water purveyors.

#### **CPP 11.0 Drainage and Flood Protection**

- *Policy 11.1.4 Require development plans to effectively address both quantitative and qualitative impacts of drainage within the project site*
- *Policy 11.1.8 Promote planning approaches which allow for interim solutions for drainage problems in less developed basins*
- *Policy 11.4.7 Limit new development in and modification of flood plains in accordance with regionally adopted flood-plain regulations*

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<sup>8</sup> <https://planningdevelopment.elpasoco.com/wp-content/uploads/ResourcesReference/MasterPlan/RFP-17-063-Water-Master-Plan-DSD.pdf>

FIRM Panel 080059 indicates that the Solar Project and Substation Project will not be in a special flood hazard area (sited in Zone X which covers areas outside of 500-year floodplains). Therefore, a floodplain use permit is not required. Erosion and sediment control will be accomplished through the application of Best Management Practices (BMPs) detailed in a Stormwater Management Plan (SWMP) that will be developed at the time of the Site Plan Review.

The Solar Project requires minimal impervious surfaces. Grading work will follow waterflows of major and minor basins and meet compliance with the El Paso County Drainage Criteria Manual. Since water will follow existing flows and patterns, no major changes are expected following construction.

### **CPP 12.0 Other Services and Utilities**

- *Goal 12.4 Reduce the adverse impacts and maximize the efficiency of energy generation, transmission and distribution systems.*
- *Policy 12.4.1: Ensure that electric, natural gas, petroleum and other facilities (generation, distribution, pipelines and storage) are located in a manner which is safe, environmentally sensitive and which does not unreasonably burden particular property owners with adverse impacts.*
- *Policy 12.4.3: Promote energy efficiency through careful siting, design and landscaping, especially the use of passive solar.*
- *Policy 12.4.5: Encourage the use of existing easements for utility installation in order to reduce negative impacts in other areas.*
- *Policy 12.4.7: Allow for the effective use of renewable energy resources especially where it minimizes the local impacts on neighboring properties and non-renewable energy use.*

The Solar Project is colocated with existing transmission infrastructure owned by Colorado Springs Utilities and other utility providers in Colorado. As a renewable energy system, the new energy generation resource will meet Utilities' needs, while limiting emissions and pollution in El Paso County. Furthermore, the Solar Project and Substation Project will not disrupt the operations of adjacent property owners. The site was selected in part because of lack of conflict with sensitive areas and resources in Colorado, such as Threatened or Endangered Species or Potential Conservation Areas.

### **CPP 13.0 Housing**

The proposed Overlay does include a housing component.

### **CPP 14.0 Public Finance District**

- *Policy 14.1.2: Encourage coordination among existing and potential future special districts, municipalities, utilities, and other entities in order to provide needed facilities and services in the most cost-effective, equitable and environmentally sensitive way possible.*

A PPA has been signed for the Palmer Solar Project. This agreement provides a development partnership between Palmer Solar LLC and Colorado Springs Utilities to provide electricity in a cost-effective and environmentally-sensitive way.

### **CPP 15.0 Land Development Regulations**

The WSEO is a unique planning tool created by El Paso County for utility-scale solar and wind energy generation projects. This application adheres to the process laid out for the WSEO designation. Moreover, the Applicant has attended pre-application meetings with El Paso County, provided opportunities for public engagement, and committed to continued coordination with El Paso County, the public, and other agencies throughout the approval process (WSEO, 1041, and Site Plan Review).

Letters were mailed to property owners in March 2018 notifying them of the project and providing contact information for any questions about the project. The Applicant has met with the owners of these residences and has incorporated their recommendations in the Solar Project design. Based on the feedback received at the Open House meeting in April 2018, the following adjustments were made to the Solar Project to address potential concerns raised by El Paso County citizens:

- Increased setbacks beyond 25 feet on western boundary
- Better demonstration of Solar Project avoidance of topographic features in map products
- Removing arrays south of Birdsall Road
- Further committing to best management practices for fire prevention
- Further committing to retention of existing surface and water runoff conditions

The Solar Project and Substation Project will abide by all relevant El Paso County land development regulations and conditions of approval.

#### **4. Existing and proposed facilities, structures, roads, etc.**

Existing uses: The area within the WSEO boundary includes Colorado Springs Utilities transmission lines, a private road, and rangeland infrastructure. The eastern half of the Solar Project includes a distribution line owned by Mountain View Electric and underground sewage/water lines. These features are accounted for and/or avoided.

Proposed uses: Principal uses for the WSEO include solar panels and substations. Accessory uses include transmission and distribution lines (overhead or underground), operations and maintenance facilities, DC and AC inverters, MET stations, medium-voltage transformers, circuit breakers and disconnect switches, communication systems, access roads, and fencing, and other structures needed to support identified principal uses.

#### **5. Deferral and waiver requests (if applicable) and justification**

The Applicant requests the following deferrals:

- *Interconnection Agreement:*
  - o Timing: Defer until executed Agreement (expected by December 2018).
  - o Justification: To meet development schedule, the Applicant requests that El Paso County review the application in advance of the Interconnection Agreement. The Applicant expects the Agreement to be finalized within the review period of the WSEO application and before the Board of County Commissioners meeting. However, Applicant requests that the County accept proof of Interconnection Agreement at any time throughout the permitting process, including the 1041 and Site Plan Review. A letter from Colorado Springs Utilities is included in the application package to demonstrate progress on the Interconnection Agreement. The

Applicant will provide relevant updates as needed to the Planning and Community Development Department regarding timing of a finalized agreement.

- *Colorado Department of Health and the Environment Permits (including Colorado Air Pollution Emission Notice and Construction Stormwater Permit)*
  - o Timing: Defer until the time of Site Plan Review and Approval
  - o Justification: Securing the APEN does not take a substantial amount of time with the State of Colorado and the Applicant prefers to provide clarity on construction schedule. The Applicant has successfully secured, maintained, and closed-out listed environmental permits with the State of Colorado for past projects.
- *Development Mitigation Agreement:*
  - o Section 4.3.5(D)(2) of the El Paso County Land Development Ordinance states that a WSEO requires a zoning applicant to put forward a development mitigation agreement and associated fee for impacts to County infrastructure; namely roads. To address this component of the El Paso County policy, a Road Condition Survey was completed by the Applicant for the proposed Haul Route and submitted to the Planning and Community Development Department as part of the application package. Photographs and videos were taken of existing roads and a written narrative was prepared by a third-party consultant to describe conditions.

The Applicant requests a waiver of any mitigation bonds tied to roadwork or improvement of public roads. Anticipated impacts from construction are expected to be minimal. The impact on traffic and roads will be short-term (about 9 months) and not significant, since County roads are designed in this area to accommodate estimated increases. Applicant commits to repairing and restoring any road features whose condition deterioration is tied to construction traffic. Applicant will communicate and coordinate with the County on all traffic related issues pertaining to safety and well-being of citizens and commuters. Applicant requests that a decision on a Development Mitigation Agreement is deferred until the Site Plan Review and a waiver is considered at that time.

## **6. The purpose and need for the change in zone classification**

Purpose: The purpose of the WSEO is to allow for the primary and accessory uses listed in the application. The Palmer Solar Project will be a reliable, economical, and responsible energy resource for the region.

Need: The Palmer Solar Project will provide solar-generated electricity from a site in El Paso County to meet Colorado Springs Utilities' existing and future electricity needs. The zoning overlay is necessary to allow for construction of the Palmer Solar Project, which is necessary for Colorado Springs Utilities' to meet goals outlined in its Integrated Resource Plan. Important drivers for the Solar Project and Substation Project include: affordable and reliable technology, the Colorado Renewable Energy Standard, Colorado Springs Utilities Integrated Resource Management Plan, and demand in El Paso County.

## **7. The total number of acres in the requested area**

The total area of the proposed WSEO is 711 acres.

## **8. The total number of residential units and densities for each dwelling unit type**

There are no residential units or dwellings included in the WSEO application.

## **9. The number of industrial or commercial sites proposed**

One solar energy generation facility (including project-side substation) and one utility substation is proposed for the WSEO. Project maximums based on current schedule and design assumptions:

- Site Capacity: 60 MW (AC) at Point of Interconnection
- Maximum number of 34.5 kV overhead power line poles: 30
- Maximum length of 34.5 kV overhead power line (feet): 6045 ft
- Maximum number of 230 kV overhead power line poles: 5
- Maximum length of 230 kV overhead power line (feet): 1700 ft
- Maximum MET Towers: 2
- Maximum Fence length: 40,000 LF for solar site, 800 LF for Palmer Substation, 3300 LF for Williams Creek Substation
- Maximum number of solar rows: 3804
- Maximum number of power stations: 21
- Number of substations: 2 (Palmer Substation and Williams Creek Substation)
- Number of access points: 2
- Number of temporary parking/staging areas: 8 (these areas will be used for operations and maintenance temporary parking)

#### **10. Approximate floor area ratio of industrial or commercial uses**

The only structure proposed is the Operations and Maintenance shed. The dimensions for the unmanned shed are approximately 24' x 20' (see Appendix B—Elevations Plans).

#### **11. The number of mobile home units and densities**

There are no mobile home units included in this WSEO application.

#### **12. Typical lot sizes: length and width**

There are no new proposed lots included in this WSEO application. Any future lots will be subject to underlying zoning standards.

#### **13. Type of proposed recreational facilities**

There are no proposed recreational facilities included in this WSEO application.

#### **14. If phased construction is proposed, how will it be phased**

The Solar Project and Substation Project will be constructed concurrently in one phase.

#### **15. Anticipated schedule of development**

The schedule is ultimately determined by permitting with El Paso County. Construction is currently targeted for the first quarter of 2019 in a single phase, as indicated below.

<b>Milestone</b>	<b>Start</b>	<b>Finish</b>
1. Permit Approvals	July 2018	February 2019
2. Pre-construction (surveys, engineering)	November 2017	February 2019
3. Site Improvements, Substation and Project Construction	March 2019	November 2019
3.1 Civil Construction (site grading, roads)	March 2019	September 2019
3.2 Post Rack Module Install	April 2019	November 2019
3.3 Electrical Install	April 2019	November 2019
3.4 Construction of Interconnection Facilities (including Williams Creek Substation)	April 2019	September 2019
4. Initial Energization	October 2019	
5. Plant Commercial Operation		December 2019
6. Seeding and close out Stormwater Permit	March 2019	July 2020

#### **16. How water and sewer will be provided**

No water or sewer service is needed for the operation of the Solar Project or Substation Project. Water needed for construction will be trucked in from a local water provider within El Paso County. Temporary lavatory facilities will be provided and maintained during construction.

#### **17. Proposed uses, relationship between uses and densities**

Dimensional standards are described in Section III of this application (see page 6).

The solar PV system will be composed of photovoltaic modules that convert the sun's radiant energy into electricity. The modules will be mounted on horizontal single-axis tracking racks that rotate from east to west to track the sun over the course of each day. The modules will be electrically connected in series strings to achieve a system DC design voltage of 1500V DC. Cables from the module strings will be run via cable trays or messenger wire to DC combiner boxes located strategically throughout the field. The DC combiners will connect multiple arrays in parallel, from which point the electricity will be conducted via cables to the inverters, which convert the DC power generated by the modules to grid-synchronized AC power. Step-up transformer(s) will raise the inverter AC output voltage, and the Solar Project output will pass through an AC collection system to a substation and ultimately to the point of interconnection.

A plant monitoring and control system will maximize energy generation while minimizing the downtime associated with planned and forced outages. The system will also provide for the necessary control and dispatching functionality required by sophisticated utilities and grid operators. The supervisory control and data acquisition ("SCADA") system delivers a high-level overview of plant operations in addition to environmental sensing and real-time electrical data associated with subsystems down to the individual array. More importantly, the system is designed to provide operators with an alert of important events including communications outages, inverter failures, and breaker trips.

#### **18. Areas of required landscaping**

Required landscaping will be limited to vegetation management: reseeding, mowing, and control of noxious weeds. The Applicant has identified an initial seed mix for active revegetation. The seed mix includes common low-lying grass species that have a high likelihood of reestablishment following disturbance to address dust and fire prevention on the site. Given the rural and agrarian nature of the adjacent properties, seedbanks in the area will assist in passive revegetation.



**19. Proposed access locations**

Access is proposed in two locations: from the west side off Birdsall Road and from the east off an unnamed road that connects with Squirrel Creek Road (see Haul Route Plan in Appendix H – Traffic Memo).

**20. Approximate acres and percent of land to be set aside as open space, not to include parking, drive, and access roads**

No open space designations are set aside within the boundary of the WSEO. A significant portion of the Woodmoor Water and Sanitation District No. 1 property will be off-limits to future solar energy development and kept in rangeland condition.

### Appendices\*

- A – WSEO Overlay Plan
- B – Elevation Plans
- C – Geotechnical Report
- D – Lighting Plan
- E – Noise Plan
- F – Noxious Weed Management Plan
- G – Preliminary Drainage Report
- H – Traffic Memo
- I – Visual Impact Analysis
- J – Wildlife, Wetlands, and Cultural Resource Surveys
- K – Wetlands Delineation Report
- L – Fire Prevention & Protection Plan
- M – Colorado Parks and Wildlife Consultation Letter
- N – Operations and Maintenance Plan
- O – Decommissioning Plan
- P – Determination of No Hazard from Federal Aviation Administration
- Q – Road Condition Survey

\* Note: this list does not represent the full extent of application materials. Appendices are limited to those materials referenced here within.