

**REGULAR MEETING OF THE  
ARAPAHOE COUNTY PLANNING COMMISSION  
TUESDAY, FEBRUARY 2, 2016 @ 6:30 P.M.**

**GENERAL BUSINESS ITEMS**

APPROVAL OF THE MINUTES FROM JANUARY 5, 2016	VOTE: Approved
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**REGULAR ITEMS**

<b>ITEM 1:</b>	Z15-003, Denver Jewish Senior Living / Preliminary Development Plan (PDP) – Continued from January 19, 2016		
LOCATION:	2451 and 2453 S. Wabash Street; west and adjacent to Denver Jewish Day School	VOTE:	
ACREAGE:	2.304 acres	4	IN FAVOR
EXISTING ZONING:	Agricultural-2 (A-2)	2	OPPOSED
PROPOSED USE:	Senior Housing Planned Unit Development (SH-PUD)	1	ABSENT
APPLICANT:	Buccaneer Development, Inc.	0	ABSTAIN
CASE MANAGERS:	Planner, Molly Orkild-Larson; Engineer, Sarah White		
REQUEST:	Assisted Living and Memory Care Facility for residents 55 years and older.	<input type="checkbox"/> CONTINUED TO:	
MOTION SUMMARY:	Approval with staff findings and changes in conditions. BOCC action required.		
<b>ITEM 2:</b>	U15-001, QUINCY SOLAR GARDENS [SUNSHARE] / USE BY SPECIAL REVIEW (USR)		
LOCATION:	2.3 miles east of Quincy and Watkins Rd	VOTE:	
ACREAGE:	20 Acres	5	IN FAVOR
EXISTING ZONING:	A-1	1	OPPOSED
PROPOSED USE:	A-1	1	ABSENT
APPLICANT:	Jon Sullivan, Sunshare	0	ABSTAIN
CASE MANAGERS:	Planner: Sherman Feher; Engineer, Spencer Smith		
REQUEST:	Request for Use by Special Review for a solar garden.	<input type="checkbox"/> CONTINUED TO:	
MOTION SUMMARY:	Approval with staff findings and changes in conditions. BOCC action required.	Date: _____	

**ANNOUNCEMENTS:**

- The next regular Planning Commission meeting is scheduled for February 16, 2016.
- Planning Commission agendas, Board of County Commissioner agendas, and other important Arapahoe County information may be viewed online at [www.arapahoe.gov](http://www.arapahoe.gov) or you may contact the Planning Division at 720-874-6650.

**PLANNING COMMISSION MEMBERS:**

<b>Mark Brummel - Absent</b>	<b>Richard Rader - Present</b>	<b>Paul Rosenberg, Chair Pro-Tem - Present</b>
<b>Diane Chaffin - Present</b>	<b>Jane Rieck - Present</b>	<b>Richard Sall - Present</b>
<b>Brian Weiss, Chair - Present</b>		

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**MINUTES OF THE REGULAR MEETING OF THE  
ARAPAHOE COUNTY PLANNING COMMISSION  
TUESDAY, JANUARY 5, 2016**

<b>ATTENDANCE</b>	<p>A regular meeting of the Arapahoe County Planning Commission was called and held in accordance with the statutes of the State of Colorado and the Arapahoe County Land Development Code. The following Planning Commission members confirmed their continued qualification to serve:</p> <p>Brian Weiss, Chair; Paul Rosenberg, Chair Pro-Tem; Mark Brummel; Richard Rader; Richard Sall, Diane Chaffin.</p> <p>Also present were: Robert Hill, Senior Asst. County Attorney; Chuck Haskins, Engineering Services Division Manager; Spencer Smith, Engineer; Bill Skinner, Senior Planner; Jason Reynolds, Current Planning Program Manager; Jan Yeckes, Planning Division Manager, and members of the public.</p>
<b>CALL TO ORDER</b>	<p>Chair Weiss called the meeting to order at 6:30 p.m. and noted a quorum of the Board was present.</p>
<b>DISCLOSURE MATTERS</b>	<p>There were no Planning Commission (PC) member conflicts with the matters before them.</p>
<b>GENERAL BUSINESS ITEMS:</b>	
<b>APPROVAL OF THE MINUTES</b>	<p><b>The motion was made by Mr. Rosenberg and duly seconded by Mr. Sall to accept the minutes from the December 1, 2015 Planning Commission meeting, as presented.</b></p> <p><b>The motion passed 5-0-1; Mr. Weiss, Abstain.</b></p>
<b>BUSINESS ITEMS</b>	
<b>Item 1:</b>	<p><b>Case No. L15-004, Cherry Creek Academy – Jayson Reynolds, Current Planning Program Manager</b></p> <p>Mr. Reynolds presented a PowerPoint, a copy of which was retained for the record. He reported a public charter school in the Cherry Creek school district planned to expand their parking lot into the existing playground area, relocate the playground to the north side of the athletic field, perform some drainage improvements, and convert the athletic field to artificial turf. He explained, under state statute, schools must advise local jurisdictions of their plans and the PC may comment on the</p>

	<p>proposal. Mr. Reynolds reported no meeting notice was required; however, staff mailed letters to all addresses abutting the school property on E. Fair Lane, as well as, to several nearby Homeowner’s Associations (HOAs). He stated staff had received no responses from either neighbors or the HOAs. Mr. Reynolds asked the PC to recommend additional landscaping along the north side of the relocated playground, to potentially mitigate noise and stray objects.</p> <p>The applicant agreed to the condition.</p> <p>Representatives of Cherry Creek Academy were present to address any questions.</p> <p>No members of the public attended the meeting.</p> <p><b>It was moved by Mr. Brummel and duly seconded by Ms. Chaffin to recommend approval of Case No. L15-004, Cherry Creek Academy, with staff recommendations, as presented.</b></p> <p><b>The vote was:</b></p> <p><b>Mr. Weiss, Yes; Mr. Rosenberg, Yes; Ms. Chaffin, Yes; Mr. Rader, Yes, Mr. Sall, Yes; Mr. Brummel, Yes.</b></p>
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**REGULAR ITEMS**

<p><b>Item 1:</b></p>	<p><b>Case No. P15-007, Copperleaf #12 / Final Development Plan (FDP)</b></p> <p>Bill Skinner, Senior Planner, introduced the case and summarized the proposal. He stated KB Homes was proposing 124 paired home units at a density of about 10 units per acre. He reported the project would be similar to the Parkside Villas project in the Four Square Mile area. He said no members of the public contacted staff during the project. Mr. Skinner reported, as part of the project, the master developer would install a sidewalk connection south to E. Radcliff Parkway to provide connectivity to the elementary school.</p> <p>The PC asked about a connection north to E. Quincy Avenue and after discussions, the applicant agreed to provide that connection as well.</p> <p>The applicant also provided an overview of the project, saying it would provide 4 acres of common open space (30% of the site). The project would contain one east-west public street with on-street</p>
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parking; the rest of the streets would be private. The applicant shared some conceptual building architecture, noting it was still pending approval by the architectural review committee.

The PC asked about the State's water comments. Staff explained the applicant was in the process of securing a will-serve letter from East Cherry Creek Valley, which would be required, before the plat was approved. It was noted, in the past, the State found will-serve letters from districts to be satisfactory.

Commissioners Rosenberg, Rader, and Chaffin asked questions about the distribution and amount of visitor parking on the property.

The applicant pointed out they were exceeding the County's minimum requirement as they would be providing 0.5 visitor parking spaces per unit, rather than 0.25 spaces per unit.

Staff indicated more visitor parking was available on the north side of the project; however, even the south side met the minimum parking requirement.

Commissioner Chaffin asked about including more ADA visitor parking.

The applicant indicated they were providing some ADA spots, even though none were required for this type of development.

The PC expressed concern that commercial wasn't developing in Copperleaf, as promised.

The developer responded they need more rooftops to attract the commercial.

Commissioner Rader suggested adding more visitor parking adjacent to the detention pond.

The applicant indicated that would be difficult to accomplish given utilities in the area.

Mr. Weiss opened the public hearing.

There were no public comments.

The public hearing was closed.

**It was moved by Mr. Brummel and duly seconded by Mr. Sall to recommend Case No. P15-007, Copperleaf #12 / FDP,**

	<p><b>favorably to the Board of County Commissioners, based on the findings and conditions of the staff report and with an additional condition requiring construction of the off-site sidewalk north to Quincy, as discussed.</b></p> <p><b>The vote was:</b></p> <p><b>Mr. Weiss, Yes; Mr. Rosenberg, No; Ms. Chaffin, Yes; Mr. Rader, No, Mr. Sall, Yes; Mr. Brummel, Yes.</b></p>
<b>APPROVAL OF 2016 MEETING DATES</b>	<p>There were discussions regarding 2016 PC meeting dates. It was noted March 1st was the Democratic Caucus and October 24th was Rosh Hashanah. It was recommended the PC meet on March 8th as an alternative date in March.</p> <p>It was noted the Election of Board Officers would be conducted after February 9, 2016, once the Board of County Commissioners reappointed certain PC Members.</p> <p>There were discussions regarding bylaws, quorums, and board vacancies. Ms. Yeckes stated there would be time for more detailed discussions, during a review of the PC bylaws, at a future meeting.</p> <p>There were additional discussions related to the County's ability to limit annexations, such as the large one the City of Aurora was contemplating.</p>
<b>APPROVAL OF 2016 AGENDA POSTING LOCATIONS</b>	<p><b>The motion was made and duly seconded to approve the posting location for PC meeting agendas.</b></p> <p><b>The motion passed 5-0-1; Mr. Rosenberg, Abstain.</b></p>
<b>APPRECIATION LUNCHEON</b>	<p>The annual PC appreciation dinner was discussed. It was noted, typically, the dinner was held prior to a PC meeting in the early part of the new year. The PC stated they preferred having the dinner on a meeting night and suggested A Perfect Landing restaurant as a possible venue.</p>
<b>ADJOURNMENT</b>	<p>There being no further business to come before the Planning Commission, the meeting was adjourned.</p>

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**SUBJECT: Z15-003 – DENVER JEWISH SENIOR LIVING PRELIMINARY DEVELOPMENT PLAN**

**MOLLY ORKILD-LARSON, SENIOR PLANNER**

**JANUARY 25, 2016**

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**CONTINUANCE FROM JANUARY 19, 2016**

The Denver Jewish Senior Living Preliminary Development Plan was heard by the Planning Commission (PC) on January 19, 2016. During this hearing, the applicant requested a continuance in order to address comments and concerns regarding the facility's building height and parking. The PC continued the hearing to February 2, 2016.

The applicant has provided staff with additional material to address the concerns regarding building height and parking for the proposed facility and justification for their findings.

**Building Height**

During the hearing there was much discussion regarding the proposed height of the assisted living/memory care building. After further review of industry standards for this type of facility and receiving feedback from another senior care designer/architect (Rosemann & Associates), the applicant believes the proposed 47' height is appropriate for this type of use as required by the marketplace.

The applicant indicates that the site's context mitigates potential impacts on nearby uses. The proposed location of the facility is buffered from other residential development by a school to the north and east, a golf course to the east, undeveloped land used for stormwater detention and Cherry Creek trail corridor to the north, south, and west. In addition, there are other residential developments in the surrounding area that have similar approved maximum building heights including: Hunter's Run Final Development Plan (FDP) - 45', Highline Glen FDP – 45', and Cherry Creek Country Club House – 55'.

The applicant also states that the 4SQM Subarea Plan doesn't specify any particular height limitations but rather encourages "new residential zone districts...be crafted to address issues such as density of development, building mass, scale and building height to encourage compatibility with adjacent properties..." The applicant believes their application accomplishes this strategy.

## **Parking**

The Land Development Code (LDC) parking requirement for a nursing home, or similar extended-care facility, is one parking space per two employees plus one parking space per two beds, which would require this development to have 62 parking spaces (108 beds and 16 employees per shift).

The applicant believes the amount of parking needed for assisted living/memory facilities is less than what the County requires. The applicant's architect, H+L Architects, provided staff with Comparable Parking Ratios study that documents the parking of other assisted living/memory care facilities in the surrounding area. The letter provided the number of each facility's units and parking spaces, along with the number of parking space used during peak weekday and weekends. The research indicates the average parking ratio of used spaces is 0.32, or approximately one parking space per three beds.

To address the concerns heard at the January 19<sup>th</sup> hearing, the applicant proposes the following solution that they believe is appropriate for this development and its' site constraints. Based on the Comparable Parking Ratio study, the applicant has requested, as per Section 12-1207.C of the LDC, to reduce the required amount of parking for the application. The Planning Division Manager has the ability to reduce the parking, if justified, up to 10%. The Planning Division Manager has reviewed the letter requesting a 10% parking reduction and has approved this request bringing the parking requirement down to 56 spaces. To adhere to this adjusted parking requirement, the applicant proposes 28 on-site parking spaces and will enter into a joint parking agreement with Denver Jewish Day School for 28 spaces instead of 7 to 10 spaces on the school property.



January 25, 2016

Molly Orkild-Larson, Senior Planner  
Arapahoe County  
6924 S. Lima St.  
Centennial, CO 80112

RE: Denver Jewish Senior Living Preliminary Development Plan Planning Commission Items

Dear Ms. Orkild-Larson:

Based on the discussion at the January 19 Planning Commission hearing, there were two discussion items we believe require additional clarification and or adjustment: parking & building height.

#### **Parking**

There were several comments regarding our proposed parking ratio and plan. Based on that discussion, we have requested and received support from the Denver Jewish Day School (see attached January 21, 2016 letter from the DJDS) to increase the number of spaces to be included in the joint parking agreement that will be required in the FDP phase of the project. This would increase our original request from 33 parking spaces to 56 (with some spaces being met through the joint parking agreement). We have submitted a request for a parking reduction for the Denver Jewish Senior Living application per Chapter 12-1207 General Provisions, paragraph C.

#### **Building Height**

There was considerable discussion regarding building height. We appreciate the concerns regarding precedence for the Four Square Mile Area; however, after careful review, the team has determined that the 47' building height is critical to the success of the development and to the needs of its future residents. Both industry standards and the actual site context support this request.

Industry Standards -In addition to the input from the project architect, H+L Architecture, we obtained a second opinion after the public hearing from another leading architect within the senior care design community industry (Rosemann & Associates). Based on feedback from both respected architects in the industry and a review of similar projects currently under development, 47' is appropriate for an assisted living/memory care community as required by the marketplace. Bank financing, operator criteria and consumer preferences are critical factors in the success of the development; therefore it is important to adhere to industry appropriate standards related to the criteria within the PDP. Attached is a page from the Rosemann designed Village at Belmar Construction Plans showing an industry appropriate elevation. It is important to note that the 47' includes the rooftop equipment.



Site Context – The Four Square Mile Sub Area Plan does not specify any particular building height limitations. The Four Square Mile Sub Area Plan cites that “new residential zone districts...be crafted to address issues such as density of development, building mass, scale and building height to encourage compatibility with adjacent developed properties” (Four Square Mile Area Sub-Area Plan, Page 2).

The site sits in a unique situation with a school and golf course to the east, current and future detention to the west, the Highline Canal Trail to the south and Wabash St./townhomes to the north. In addition, the area around the Denver Jewish Senior Living site has a number of approved and built developments of similar height:

Hunter’s Run Apartments FDP Approval for 45’

Highline Glen FDP Approval for 45’

Cherry Creek Country Club FDP Approval for 55’ (structure at 49.5/chimney at 55’)

Denver Jewish Day School PDP Approval for 45’, FDP Approval for 35’

Therefore, our request is consistent with already approved structures in our immediate vicinity. As shown in our building section example rooftop equipment for assisted living/memory care (which is different than for traditional multifamily) is requiring 5’ making the actual roofline more likely to be approximately 42’ – 44’. Our request of 47’ is a reduction from the 55’ building height requested as part of our initial submittal. The Denver Jewish Day School is the closest neighbor to the proposed senior living community. DJDS supports and is party to this application including the requested building height.

Thank you for this opportunity to clarify both the parking and height requirement.

Sincerely,

Susan Stanton  
Principal

Attachments:

Industry Appropriate Building Section - Village at Belmar  
Denver Jewish Day School - DJSL Revised Parking Letter



January 25, 2016

Jason Reynolds, Planning Manager  
Arapahoe County  
6924 S. Lima St.  
Centennial, CO 80112

Dear Jason:

We respectfully request a parking reduction for the Denver Jewish Senior Living application per Chapter 12-1207 General Provisions, paragraph C. The Arapahoe County Code does not specifically address the assisted living/memory care use being requested. While the final details typically addressed in the Final Development Plan phase are not part of this submittal, Buccaneer and its team developed a site plan and proforma to establish our requests as part of the SH-PUD. We are using the PUD form as it is intended to alter criteria within the code specific to the site. For purposes of this analysis, the plan assumes 102 units and 108 beds. In addition, it assumes a 1:7 staffing ratio totaling 15.4 employees. There are two categories within the code that discuss senior housing:

Group Homes (.33 spaces per bedroom plus 1 space per caregiver/employee)	Requires 51 Spaces
*Nursing Home (1 space per 2 bedrooms and 1 space per 2 employees)	Requires 62 spaces per staff

\*Staff has indicated that the nursing home criteria is the applicable requirement. Based our own research, we believe the nursing home requirement of 62 spaces is excessive as it pertains to the proposed use of assisted living/memory care. Our research indicates that the proposed assisted living/memory care facility is more likely to actually utilize 33 parking spaces. H+L, a respected healthcare and senior living architectural firm, conducted a site survey of nine comparable operating facilities in the metro Denver region (See Parking Ratio Study). The average actual parked ratio was .32 spaces per unit as studied via field observation/site visits conducted during peak hours and weekends. Therefore, our original proposal was for .32 spaces/unit with .25 spaces/unit be provided on site with an additional .07 spaces met through a formal joint parking agreement with the school.

In order to address the comments and concerns heard at the January 19 Planning Commission Hearing, we have worked to find a solution that addresses the concerns voiced and is appropriate to the project and site constraints. We, therefore, request that the Planning Division manager reduce our parking requirement of 62 spaces by 10%, as allowed in the code, to 56 parking spaces. Our preliminary sketch plan indicates we can accommodate 28 spaces on site without requesting a variance to the 35% open space requirement. The Denver Jewish Day School has agreed via letter to enter into a joint parking agreement to allow the Denver Jewish Senior Living to utilize an additional 28 spaces. Thank you for your consideration of this request.

Sincerely,

Susan Stanton  
Principal

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**Head of School/CEO**  
Avi Halzel, MAEd

**Principal, Lower Division**  
Elana K. Shapiro

**Principal, Upper Division**  
Bryan M. Hay

**School Rabbi,**  
**Dean of Judaic Studies**  
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*The mission of our Jewish  
community day school is to  
educate Jewish students  
through an integrated secular  
and Jewish studies program to  
thrive in college and beyond  
and act ethically and  
purposefully in the world.*

January 21, 2016

Molly Orkild-Larson  
Senior Planner  
Arapahoe County  
6924 South Lima Street  
Centennial CO 80112

December 16, 2015

Ms. Molly Orkild Larson,

On behalf of the Denver Jewish Day School, we understand that the developer of the Denver Jewish Senior Living Project may require a joint parking agreement to utilize parking available on the school site. The developer has estimated that up to 28 spaces may be required to meet the parking count found during the developer/architect site survey conducted by H+L architecture. On behalf of the school we agree to enter into an agreement with the developer related to joint parking on the DJDS site.

We understand the County will be looking for a more formal agreement during the FDP phase of the project entitlements.

Thank you for your consideration.

Avi Halzel  
Head of School/CEO





## Denver Jewish Senior Living Comparable Parking Ratios

Based on the design of many assisted living facilities across the country, we have observed that many of the municipalities have differing parking requirements. Our recent research of various City and County parking regulations have resulted in many jurisdictions moving to a smaller parking ratio of .25 spaces for this occupancy. Due to that fact that the residents of these Assisted Living facilities do not drive, other municipalities are moving in that direction by variance or through a TOD designation.

To further assist Arapahoe County in evaluating our proposal, we have conducted site visits during peak hours and weekends at comparable facilities. Many of these sites were visited multiple times.

Facility Name & Address	Number of units	Number of spaces provided	Spaces/unit	Number of spaces used – observed	Spaces/unit utilization
Brookdale Highline 1640 S. Quebec Way	96	34	.35	16	.16
Brookdale DTC 4901 S. Monaco Street	96	40	.41	20	.21
Brookdale Aurora 1860 S. Potomac	76	62	.71	30	.48
New Dawn 2000 S. Blackhawk	48	25	.52	18	.37
Peakview Centennial 6021 S. Liverpool	85	60	.70	38	.44
MorningStar @ Jordan 14301 E. Arapahoe Road	88	58	.68	33	.37
Villagio of Aurora	138	81	.58	N/A	N/A
Spectrum Highpoint 6383 E. Girard Place	97	69	.71	41	.42
Anthem Chelsea Place 14055 E. Quincy	60	26	.43	8	.13
Averages			.56		.32

Based on the examples of comparable parking regulations as well as the parking lot survey, we still support our initial application of .25 spaces per unit based on other codes, however, could understand if the County would like for us to find an additional .07 space through a joint agreement with the Denver Jewish Day School to provide a backup of 7 to 10 spaces for peak days and unforeseen circumstances. The exact count we expect would be determined at FDP phase when the number of units is more defined.

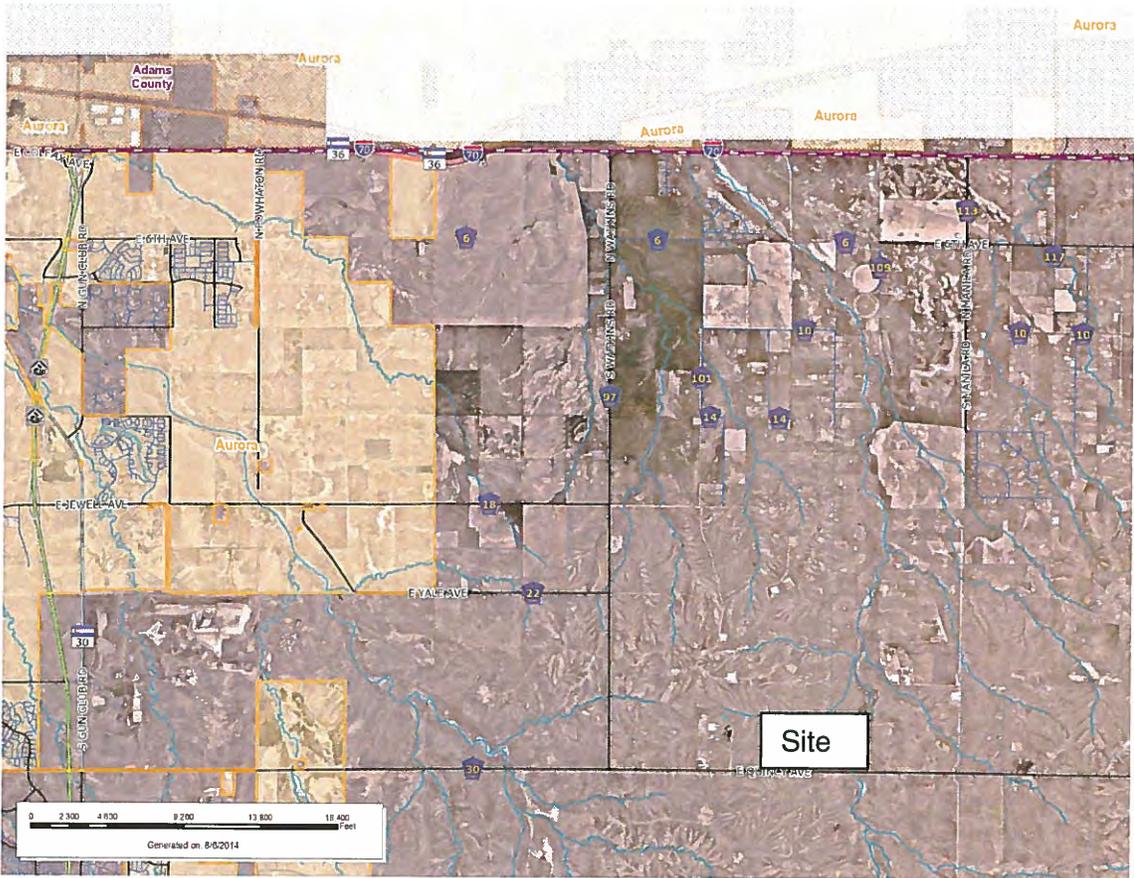
**ARAPAHOE COUNTY PLANNING COMMISSIONERS**  
**PUBLIC HEARING**  
**February 2, 2016**  
**6:30 PM**

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**SUBJECT: U15-001 - USE BY SPECIAL REVIEW : QUINCY SOLAR GARDEN**  
**J. SHERMAN FEHER, SENIOR PLANNER** **January 19, 2016**

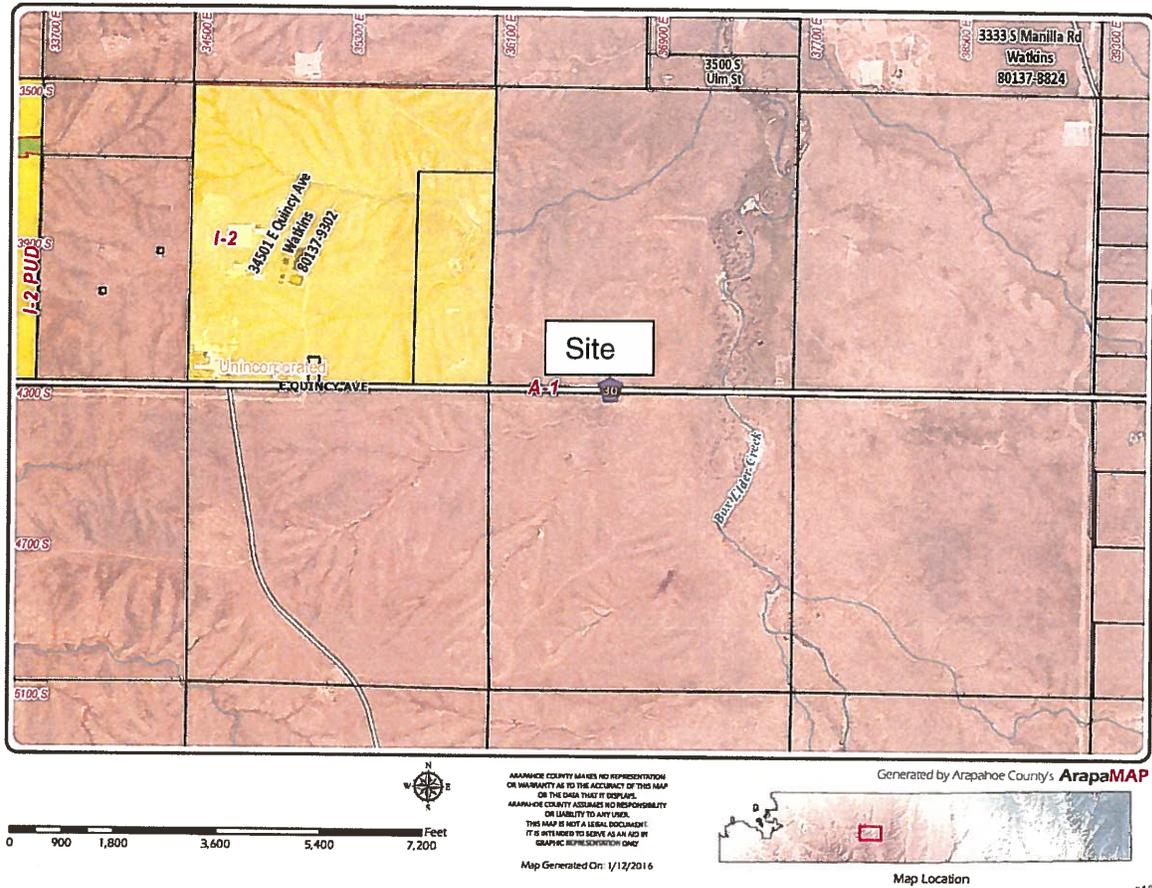
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**VICINITY:** This proposal is in Commissioner's District #3. The site is located approximately 2.3 miles east of the intersection of Watkins Road and Quincy Avenue.



**Vicinity Map**

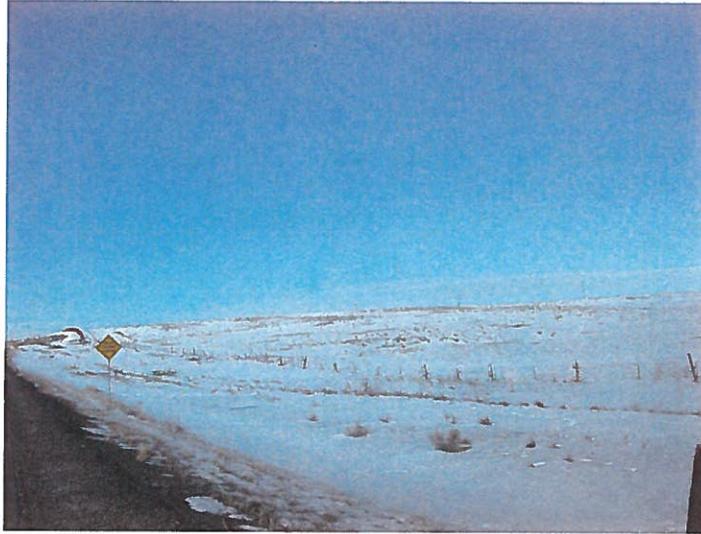
**Zoning:** The zoning in this area is generally A-1 zone(Agricultural) with an I-2 zone (Heavy Industrial) nearby.



**Zoning Map**

**ADJACENT SUBDIVISIONS, ZONING, AND LAND USES:**

- North - No subdivisions; A-1; Agriculture
- South - No subdivisions; A-1; Agriculture
- East - No subdivisions; A-1; Agriculture and Floodplain
- West - No subdivisions; I-2; Agriculture and Business/Industrial Park



Looking WNW  
over Site



Looking Northeast  
over Site

**PROPOSAL:**

The applicant, Sunshare LLC., with authorization from the property owner, Stephen Tebo, are requesting approval for a Use by Special Review (USR) for a solar garden power plant, known as the Quincy Solar Garden. Sunshare LLC seeks to construct an approximate 2 MW solar photovoltaic power plant consisting of approximately 6,000 to 7,000 modules on 20 acres.

**RECOMMENDATIONS AND FINDINGS:**

Staff: Staff recommends that the Use by Special Review application be APPROVED, subject to the findings and conditions of approval outlined herein.

---

**I. BACKGROUND**

The existing zoning is A-1(Agricultural). Arapahoe County has a 1041 Permit process for Major Facilities of a Public Utility. Because there are some electrical and other utility-like facilities which are owned by private companies, a Use by Special Review process was approved by the BOCC that required similar submittal requirements and approval criteria for these facilities.

**II. DISCUSSION**

**Comprehensive Plan:**

The proposed Use by Special Review application is in conformance with the Arapahoe County Comprehensive Plan, in that it provides for development of power energy facilities within the “Tier 3 (Rural)” Land Use Area.

Other related policies and strategies related to this case include Policy PFS 1.6: Consider Power Energy Needs to Support Growth and Development of the Region and Strategy NCR 4.2(a): Support Energy Conservation Programs and Education. The County will support programs and education to reduce energy consumption, solar energy research and other clean energy programs,.....

**Use by Special Review:**

**Submittal Requirements:**

The applicant has complied with all of the submittal requirements outlined in the USR provisions of the Land Development Code, Sections 13-903 and 13-904.

**Referral Comments:**

The following are referral comments, as well as the applicant’s response to the comments (in italics).

County Engineer	-	Comments on GESC, grading, and access profile. <i>Applicant has addressed comments.</i>
Mapping	-	Comment regarding acreage size difference. <i>Applicant has corrected the discrepancy.</i>

Sheriff's Department	-	No comments
Zoning Administrator	-	Comments on landscaping. <i>Applicant plans on using berms for landscaping buffer, but does not intend to have landscaping plants, because plants would not provide adequate buffer from road because of topography.</i>
Assessor		No response
Army Corps of Engineers		Comments regarding 404 Permits and floodplains. <i>No wetlands were determined to be on site.</i>
Arapahoe County Weed Control		A noxious weed control plan is necessary for this project. <i>This will be a condition of approval.</i>
CDOT		No response
Colorado Parks and Wildlife		No response, although applicant has worked with CPW. Issue of most concern is burrowing owls.
REAP		REAP is supportive of this application.
Bennett Fire District		No response
Deer Trail Conservation District		No response
Tri-County Health		Comments on renewable energy, wastewater service, and solid waste. <i>The applicant will provide portable sanitation service. The applicant will also provide covered dumpsters during construction.</i>
Xcel		No response
Urban Drainage		No comments
East End Advisory Committee		Janet Cook: Great project; Arnold Hollingsworth: good project; and Carl Kroh: no comments; Mary Garin, M.J. Carter, and Ken Crismon did not respond.

### **Approval Criteria**

The Use by Special Review (USR) approval criteria for a Major Electrical, Natural Gas, and Petroleum-Derivative Facilities of a Private Company shall comply with all of the regular approval criteria for a USR in the Land Development Code, Section 13-900, as well as the criteria set forth in the 1041 Regulations, Part V, Sections A and C, along with Appendix A. All of these criteria shall be used in determining whether such Use by Special Review should be approved.

#### 1. Ordinance Review and Additional Background Information

Section 13.901 of the Land Development Code, Use by Special Review, of the zoning regulations states that the, "Use By Special Review" process and procedure.... Provides (for) Board of County Commissioner review and approval of certain uses, which, although permitted within specific zoning districts, may contradict the purpose of these Regulations..... providing for the public peace, health, safety and welfare."

- a. Recognize the limitations of existing and planned infrastructure, by thoroughly examining the availability and capability of water, sewer, drainage, and transportation systems to serve present and future land uses.

*Permanent water and sewer capability is not necessary for this project. Temporary wastewater facilities will be provided during construction. The applicant will need to obtain an access permit from the County Public Works and Development Department. This will be a condition of approval.*

- b. Assure compatibility between the proposed development, surrounding land uses, and the natural environment.

*The proposed solar farm is generally compatible with the surrounding agricultural uses. There are potential impacts to wildlife and wildlife habitat. These impacts on wildlife and wildlife habitat are likely to be minimal. A condition of approval will address this issue by requiring compliance with the Colorado Department of Parks and Wildlife regulations.*

- c. Allow for the efficient and adequate provision of public services. Applicable public services include, but are not limited to, police, fire, school, park, and libraries.

*Public services appear to be minimal; schools, parks, and libraries are not applicable to this application. Emergency medical services may be needed, mostly during the construction phase. The Sheriff's Department had no submit comments.*

- d. Enhance convenience for the present and future residents of Arapahoe County by ensuring that appropriate supporting activities, such as employment, housing, leisure-time, and retail centers are in close proximity to one another.

*This project enhances convenience for present and future residents by providing renewable electric energy to the XCEL grid.*

- e. Ensure that public health and safety is adequately protected against natural and man-made hazards which include, but are not limited to, traffic noise, water pollution, airport hazards, and flooding.

*Most natural and man-made hazards appear to be unlikely; public health and safety appear to be adequately protected.*

- f. Provide for accessibility within the proposed development, and between the development and existing adjacent uses. Adequate on-site interior traffic circulation, public transit, pedestrian avenues, parking and thoroughfare connections are all factors to be examined when determining the accessibility of a site.

*Accessibility will be directly from Quincy Avenue. The applicant will need to obtain an access permit from the County Public Works and Development Department.*

- g. Minimize disruption to existing physiographic features, including vegetation, streams, lakes, soil types and other relevant topographical elements.

*Disruption to the existing physiographic features resulting from the proposed solar garden site will be minimized by minimal surface grading and good design and construction practices. There are no lakes or streams on the proposed site.*

- h. Ensure that the amenities provided adequately enhance the quality of life in the area, by creating a comfortable and aesthetically enjoyable environment through conventions such as, the preservation of mountain views, the creation of landscaped open areas, and the establishment of recreational activities.

*The solar garden will have some visual impact, but it should not significantly disrupt mountain views.*

- i. Enhance the usable open spaces in Arapahoe County, and provide sufficient unobstructed open space and recreational area to accommodate a project's residents and employees.

*Open space is not applicable to this project.*

## 2. Additional Approval Criteria

In addition to the regular approval criteria for a USR found in Section 13-901 of the Land Development Code, the criteria set forth in Part V, Sections A and C,

along with Appendix A in the 1041 Regulations are used to determine if the Use by Special Review should be approved.

A permit may be approved if the proposed activity complies with the following general criteria and any additional applicable criteria in Section V. C. In determining whether the proposed activity complies with the criteria, the Planning Commission and Board of County Commissioners may take into consideration, the construction, operation and cumulative impacts of the proposed activity.

A. General Approval Criteria [See applicant's response to approval criteria in application report. Staff response to approval criteria in italics below]

1. Documentation that prior to site disturbance associated with the Proposed Project, the applicant can and will obtain all necessary property rights, permits and approvals. The Board may, at its discretion, defer making a final decision on the application until outstanding property rights, permits and approvals are obtained.

*The applicant can and will obtain all necessary property rights, permits and approvals prior to construction. The applicant plans on leasing the property for the solar garden. The applicant has permission from the owner to process this application.*

2. The Proposed Project considers the relevant provisions of the regional water quality plans.

*There are apparently no regional water quality plans for this area.*

3. The applicant has the necessary expertise and financial capability to develop and operate the Proposed Project consistent with all requirements and conditions.

*The applicant has provided the Planning Division with some general information that indicates that they have developed similar projects in Colorado.*

4. The Proposed Project is technically and financially feasible.

*The Proposed Project appears to be technically and financially feasible.*

5. The Proposed Project is not subject to significant risk from natural hazards.

*The Proposed Project does not appear to be subject to a significant risk from natural hazards.*

6. The Proposed Project is in general conformity with the applicable comprehensive plans.

*The Proposed Project is in general conformity with the Arapahoe County Comprehensive Plan which allows for Power Energy Facilities in “Tier 3 (Rural)” designated areas of the County.*

7. The Proposed Project will not have a significant adverse effect on the capability of local government to provide services or exceed the capacity of service delivery systems.

*This Proposed Project is anticipated to have minimal impacts on provision of services from Arapahoe County and other special districts.*

8. The Proposed Project will not create an undue financial burden on existing or future residents of the County.

*This Proposed Project will be privately financed and will have minimal demand for public services in Arapahoe County.*

9. The Proposed Project will not significantly degrade any substantial sector of the local economy.

*The Proposed Project will not significantly degrade the agricultural sector in this area with only 20 acres removed from agricultural use.*

10. The Proposed Project will not unduly degrade the quality or quantity of recreational opportunities and experience.

*The Proposed Project will not reduce or limit the quality or quantity of recreational opportunities and experience in the area.*

11. The planning, design and operation of the Proposed Project will reflect principals of resource conservation, energy efficiency and recycling or reuse.

*The Proposed Project is designed to minimize adverse impacts to resources.*

12. The Proposed Project will not significantly degrade the environment. Appendix “A” includes the considerations that will be used to determine whether there will be significant degradation of the environment. For purposes of this section, the term environment shall include:

- a. Air quality.
- b. Visual quality.
- c. Surface water quality.
- d. Groundwater quality.
- e. Wetlands, flood plains, streambed meander limits, recharge areas, and riparian areas.
- f. Terrestrial and aquatic animal life.

- g. Terrestrial and aquatic plant life.
- h. Soils and geologic conditions.

*The applicant has sited and designed the Project to minimize environmental impacts. There do not appear to be any Federal and State Threatened and Endangered Species or State Species of Concern on the subject site with the possible exception of the burrowing owl. If during construction any of these species is found then the applicant in collaboration with Colorado Parks and Wildlife will need to mitigate and minimize any potential impact to these species.*

13. The Proposed Project will not cause a nuisance.

*The Proposed Project will possibly cause minor nuisances during construction but will not cause undue nuisances after construction.*

14. The Proposed Project will not significantly degrade areas of paleontological, historic, or archaeological importance.

*The applicant has determined that the Proposed Project does not appear to be near any cultural and historic resources. The applicant will follow the state protocol to avoid or minimize the impact to any areas of paleontological, historic, or archaeological importance in the Project area.*

15. The Proposed Project will not result in unreasonable risk of releases of hazardous materials. In making this determination as to such risk, the Board's consideration shall include:

- a. Plans for compliance with Federal and State handling, storage, disposal and transportation requirements.

*The applicant will comply with Federal and State hazardous materials regulations.*

- b. Use of waste minimization techniques.

*The applicant will strive to use waste minimization techniques.*

- c. Adequacy of spill prevention and response plans. The applicant intends to comply with all local, state, and federal laws and regulations related to hazardous materials, including spill prevention and response plans.

*The applicant intends to comply with all regulations related to hazardous material.*

16. The benefits accruing to the County and its citizens from the proposed activity outweigh the losses of any resources within the County, or the losses of opportunities to develop such resources.

*The applicant feels that this Proposed Project enhances the productive use of resources within the County through the use of renewable energy.*

17. The Proposed Project is the best alternative available based on consideration of need, existing technology, cost, impact and these regulations.

*The Proposed Project appears to be a good alternative based on consideration of need, existing technology, cost, impact and these regulations.*

18. The Proposed Project will not unduly degrade the quality or quantity of agricultural activities.

*The Proposed Project is likely to degrade the quality or quantity of agricultural activities to a limited extent by removing 20 acres from available agricultural land, but the Proposed Project will not unduly degrade the quality and quantity of total agricultural activities in Arapahoe County.*

19. Cultural Resources. The Proposed Project will not significantly interfere with the preservation of cultural resources, including historical structures and sites, agricultural resources, the rural lifestyle and the opportunity for solitude in the natural environment.

*The applicant has determined that the Proposed Project appears to not be near any cultural and historic resources. If any cultural or historic resources are found during construction of this Proposed Project, the applicant will work with the State and County to avoid or minimize the impact to any areas of paleontological, historic, or archaeological importance in the Project area.*

*With the exception of some slight disruption of solitude in the natural environment during construction, the Proposed Project will not significantly disrupt the solitude of the natural environment.*

20. Land Use. The Proposed Project will not cause significant degradation of land-use patterns in the area around the Proposed Project.

*The Proposed Project will not likely cause significant degradation of land-use patterns in the area.*

21. Compliance with Regulations and Fees. The applicant has complied with all applicable provisions of these regulations and has paid all applicable fees.

*The applicant has sought to comply with all applicable Use by Special Review regulations and because of State regulations for solar power projects, the applicant does not have to pay the full Planning and Engineering fees.*

B. Additional Criteria Applicable to Major Facilities of a Public Utility (Private Company)

In addition to the general criteria set forth in Section V, Part A of the 1041 Permit Regulations, above, the following additional criteria shall apply to major facilities of a public utility (private company):

1. Areas around major facilities of a public utility (private company) shall be administered so as to minimize disruption of the service provided by the public utility (private company).

*Areas around the solar garden will be administered so as to minimize disruption of the service provided by the applicant.*

2. Areas around major facilities of a public utility (private company) shall be administered so as to preserve desirable existing community and rural patterns.

*Once the solar garden is constructed, the Proposed Project will be administered so as to preserve desirable existing community and rural patterns.*

3. Where feasible, major facilities of a public utility (private company) shall be located so as to avoid direct conflict with adopted local comprehensive, State and regional master plans.

*The Proposed Project appears to avoid direct conflict with adopted local comprehensive, State, and regional master plans.*

4. Where feasible, major facilities of a public utility (private company) shall be located so as to minimize dedication of new right-of-way and construction of additional infrastructure (e.g., gas pipelines, roads, and distribution lines.)

*The Proposed Project is located so as to minimize dedication of new right-of-way and construction of additional infrastructure.*

### **III. STAFF FINDINGS: USE BY SPECIAL REVIEW**

Staff has visited the site and reviewed the plans, supporting documentation and referral comments, as well as citizen input in response to this application. Based upon review of the Comprehensive Plan, development regulations, and analysis of referral comments, our findings include:

1. The proposed Use by Special Review application is in conformance with the Arapahoe County Comprehensive Plan, in that it provides for development of public facilities and services within the “Rural” Land Use Area.
2. The proposed Use by Special Review application appears to be consistent with the Use by Special Review Section of the Arapahoe County Land Development Code.
3. This application appears to meet all of the approval criteria for this Use by Special Review, provided all of the conditions of approval are met.
4. There are a few Engineering conditions that need to be done prior to the signing of the USR mylar and before any construction takes place.
5. If the Proposed Project is discovered to impact any cultural and historic resources, the applicant will need to avoid or minimize the impact to any areas of paleontological, historic, or archaeological importance.
6. If the Proposed Project is discovered to impact any Federal and State Threatened and Endangered Species or State Species of Concern within the area of the solar garden, the applicant will need to mitigate and minimize any potential impact to these species.

### **IV. RECOMMENDATION FOR USE BY SPECIAL REVIEW:**

Considering the findings and other information provided herein, staff recommends approval of Case Number, U15-001, the Quincy Solar Garden, Use By Special Review, subject to the following conditions:

1. The applicant will modify the plans as requested by the Public Works & Development Department, prior to the signing of the mylars and before the commencement of any construction activities relating to this project.
2. The applicant agrees to address all Engineering Services Division comments and concerns, as identified within their reports, prior to signed mylars. The applicant will need to obtain an access permit.
3. The applicant will strive to avoid any areas of paleontological, historic, or archaeological importance. If avoidance is not possible, further testing will be conducted, with landowner’s permission, to determine the site’s eligibility for historic status and a treatment plan will be developed that will be followed to protect eligible sites. The applicant will notify the County of any plans or activities to deal with historic, paleontological or archaeological sites that cannot be avoided by the construction of the solar garden.

4. The applicant will strive to avoid any Federal and/or State Threatened and Endangered Species, as well as State Species of Concern, that exist in areas where the solar garden will be constructed. If any Federal and/or State Threatened and Endangered Species or any State Species of Concern, is found to exist in areas where the solar garden will be constructed, then the applicant will collaborate with Colorado Parks and Wildlife and Arapahoe County to mitigate and minimize any potential impact to these species.
5. The applicant will need to provide the County with a noxious weed control plan for the site.

This favorable recommendation is based, in part, upon the findings that:

- The proposal is in conformance with the Arapahoe County Comprehensive Plan.
- The proposal is in conformance with Arapahoe County Land Development Code, specifically the Use by Special Review Regulations.
- 

**V. DRAFT MOTION FOR USE BY SPECIAL REVIEW:**

**A. Approval Motion:** In the case of U15-001 – Quincy Solar Garden, Use by Special Review, we have read the staff report and received testimony at the public hearing. We find ourselves in agreement with staff findings for the Use by Special Review application including all plans and attachments as set forth in the staff report dated January 19, 2016, and vote to recommend approval to the Board of County Commissioners, subject to the following conditions:

1. The applicant will modify the plans as requested by the Public Works & Development Department, prior to the signing of the mylars and before the commencement of any construction activities relating to this project.
2. The applicant agrees to address all Engineering Services Division comments and concerns, as identified within their reports, prior to signed mylars. The applicant will need to obtain an access permit.
3. The applicant will strive to avoid any areas of paleontological, historic, or archaeological importance. If avoidance is not possible, further testing will be conducted, with landowner's permission, to determine the site's eligibility for historic status and a treatment plan will be developed that will be followed to protect eligible sites. The applicant will notify the County of any plans or activities to deal with historic, paleontological or archaeological sites that cannot be avoided by the construction of the solar garden.
4. The applicant will strive to avoid any Federal and/or State Threatened and Endangered Species or any State Species of Concern, that exist in areas where the solar garden will be

constructed. If any Federal and/or State Threatened and Endangered Species, as well as State Species of Concern, is found to exist in areas where the solar garden will be constructed, then the applicant will collaborate with Colorado Parks and Wildlife and Arapahoe County to mitigate and minimize any potential impact to these species.

5. The applicant will provide the County with a noxious weed control plan for the site.

***Staff provides the following Draft Motions listed below as general guidance in preparing an alternative motion if the Planning Commission reaches a different determination:***

Recommend Denial

In the case of U15-001, Quincy Solar Garden Use by Special Review, we have read the staff report. We do not find ourselves in agreement with staff findings and recommend denial of this application based on the following findings:

1. *State new findings in support of denial as part of the motion.*

Continue to Date Certain:

In the case of U15-001, Quincy Solar Garden Use by Special Review, I move to continue the hearing to [*date certain*], 6:30 p.m., to obtain additional information and to further consider the information presented.

**Attachments**

Application, USR Report with USR Exhibit  
Referral Comments  
Engineering Staff Report



**Public Works and Development  
Planning Division**  
6924 S. Lima St.  
Centennial, CO 80112  
Phone: 720-874-6650 Fax: 720-874-6611  
[www.arapahoegov.com](http://www.arapahoegov.com)

**Land Development Application for:  
Administrative Amendments,  
Technical Amendments,  
Commercial Mobile Radio Service, and  
Administrative Oil & Gas Use by Special Review**

Land development application materials received after 2pm shall be date stamped, as received, the following business day.

APPLICANT/REPRESENTATIVE:  SunShare/Jon Sullivan	ADDRESS: 1441 18th Street, Suite 400 Denver, CO 80202  PHONE: 303-296-0919 FAX: EMAIL: jon@mysunshare.com	SIGNATURE: NAME: Jon Sullivan TITLE: Director of Project Development
OWNER(S) OF RECORD:  Stephen D. Tebo	ADDRESS: PO Box T Boulder, CO 80306  PHONE: 303-447-8326 FAX: EMAIL: Jdixon@teboproperties.com	SIGNATURE: (See Statement of Authorization) NAME: Stephen D Tebo TITLE: Owner of Record
ENGINEERING FIRM:  Enertia Consulting Group, LLC	ADDRESS: 1529 Market Street, Suite 200 Denver, CO 80202  PHONE: 720-473-3131 FAX: EMAIL: sean.ohearn@enertiagc.com	CONTACT PERSON:  Sean O'Hearn

Pre-Submittal Case Number: Q 15-062 Pre-Submittal Planner: Sherman Feher Pre-Submittal Engineer: Spencer M. Smith

Parcel ID no. (AIN no.)	031584418 (2069-00-0-00-013)
Address:	N/A (No Legal Address)
Subdivision Name & Filing:	N/A

	EXISTING	PROPOSED
Zoning:	AG 1 <i>A-1</i>	AG 1
Case/Project/Subdivision Name:	N/A	Quincy Solar Garden
Site Area (Acres):	630.02	40.00
Floor Area Ratio (FAR):	N/A	N/A
Density (Dwelling Units/Acre):	N/A	N/A
Building Square Footage:	N/A	N/A
Disturbed Area (Acres):	N/A	27
Related Case Numbers: (Final/Preliminary Development Plan and/or Plat)	<i>Q15-062 7-2-15</i>	

CASE TYPE			
Administrative Replat	Administrative Amendment to a Final Development Plan	<input checked="" type="checkbox"/> <i>1041 USR</i>	Technical Amendment
Administrative Amendment to a Administrative Site Plan	Administrative Amendment to a Location & Extent	<input type="checkbox"/> <i>Solar 1041</i>	Administrative Site Plan
Administrative Oil & Gas Use by Special Review	Administrative Amendment to a Preliminary Development Plan	<input type="checkbox"/>	Plat Correction
Commercial Mobile Radio Service (CMRS)	Administrative Amendment to a Planned Sign Program	<input type="checkbox"/>	Subdivision Exemption

**THIS SECTION FOR OFFICE USE ONLY**

Case No:	Planning Manager: <i>SF</i>	Engineering Manager: <i>Spencer</i>
Planning Fee: Y N \$	Engineering Fee: Y N \$	

This application shall be submitted with all applicable application fees. Submittal of this application does not establish a vested property right in accordance with C.R.S. 24-68-105(1). Processing and review of this application may require the submittal of additional information, subsequent reviews, and/or meetings, as outlined in the Arapahoe County Land Development Code.

**RECEIVED**

**AUG 16 2015**

**ARAPAHOE COUNTY  
PLANNING DIVISION**

*SF*  
*OK*  
*8/20/15*

Letter of Intent



Planning

Arapahoe County  
Public Works and Development  
6924 S. Lima Street  
Centennial, CO 80112

**RE: Use by Special Review (USR) based on 1041 Guidelines**

**Enclosed:**

**Letter of Intent**

RECEIVED

AUG 12 2015

ARAPAHOE COUNTY  
PLANNING DIVISION

Dear Arapahoe County Public Works and Development:

SunShare is developing a 40 acre solar garden project as part of Xcel's Energy Community Solar Gardens program. SunShare has recently developed similar solar projects in Arapahoe County, Denver County, Adams County, Jefferson County, and El Paso County. The Arapahoe County location on East Quincy Ave was selected due to its proximity to Xcel's distribution infrastructure, flat land grade, and access to the sun (no shading obstructions). SunShare is excited to bring more clean and renewable energy to Arapahoe County and look forward to working with the community to make the project a success.

SunShare is currently in the planning and development stages of a 40 acre solar garden on East Quincy Ave, east of E-470, in unincorporated territory. The project will lease 40 acres of property owned by Tebo Properties. The parcel number is PIN: 031584418, AIN: 2069-00-0-00-013. Full legal description of the property is attached with this submittal. Historically the 632 acre parcel has been used to graze livestock in addition to having an oil and gas well pad. We are leasing 40 acres of the larger parcel in order to build our solar garden project.

The approximately 16,000 solar modules will be mounted on single axis trackers. This means the solar panels will be facing east in the morning, be flat at noon, and be facing west in the afternoon- following the path of the sun. The maximum height of the solar equipment will be approximately 8'. The entire project will be surrounded by an 8' chain link fence. No grading of the land is expected.

Construction will likely begin Q4 2015 and will last approximately 16-20 weeks. Construction crews will be a combination of general labor workers, certified electricians, and an on-site general contractor. There will be a security guard on watch during certain phases of construction. Once complete there will be no full time personnel on site. There will be a small maintenance crew (1-4 people) visiting on a quarterly basis.

We have provided a vicinity map, site plan, and example aesthetic to help understand our project proposal. SunShare will work hard to make the project a success with Arapahoe County. Please let us know if there is anything we can do to expedite the approval process.

RECEIVED

Sincerely,

Jon Sullivan  
Director of ~~Project Development~~  
[jon@mysunshare.com](mailto:jon@mysunshare.com)  
(303) 718-3291



January 5<sup>th</sup>, 2016

Mr. Sherman Feher, Planner  
Arapahoe County Public Works and Development  
6924 South Lima Street  
Centennial, CO 80112

**RE: Point-by-Point Response Letter to Phase II Agency Referral  
Comments for Use by Special Review U15-001 (Quincy Solar  
Garden)**

Dear Mr. Feher:

Please find below Quincy Solar Garden LLC's (Applicant's) responses to each of the agency referral comments received regarding the application for a Use by Special Review Permit for the proposed Quincy Solar Garden (Project).

1. **Arapahoe County Assessor (Beverly Reynolds): No Comments**
2. **Arapahoe County Engineering (Spencer Smith): With Comments**  
*All Engineering Comments are addressed by separate enclosed engineer's letter*
3. **Arapahoe County Mapping (Pat Hubert): With Comments**  
Comment: Why is there an acreage difference (20ac vs. 40ac) between the lease area and the legal descriptions?

Response: Applicant had originally planned a larger lease area before the utility provided approval for a smaller project size. The acreage discrepancy has been corrected on the submitted Use by Special Review Plan.

4. **Arapahoe County Planning (Russell Johnson): With Comments**



Comment: A noxious weed management plan is necessary for this project.

Response: Applicant will develop a noxious weed management plan for the Project for implementation prior to construction. The plan will conform to Arapahoe County noxious weed management requirements.

**5. Arapahoe County Sheriff (Glenn Thompson): No Comments**

**6. Arapahoe County Zoning (Tammy King): With Comments**

Comment: No landscaping shown per 13.904N of LDC

Response: The submitted Use by Special Review Plan shows the general location and typical details of the proposed landscaping features, such as earthen berms and fencing, which are proposed for the Project.

**7. Colorado Parks and Wildlife (Travis Harris): No Comments**

**8. Bennett Fire District (Caleb Connor): No Comments**

**9. REAP I-70 (Matt Reay / Jack Keever): With Comments**

Comment (Jack Keever): The REAP Board of Directors has adopted a policy of supporting the orderly development of energy industries. REAP supports this application to establish a Community Solar Garden approximately 2.3 miles east of the intersection of East Quincy Ave. and South Watkins Road.

Response: Acknowledged, with thanks.

**10. Tri-County Health Dept. (Sheila Lynch): With Comments**

Comment (Laurel Broten, MPH): Alternative energy supplies generally do not contribute to air and water pollution and can have a positive impact on the environment. TCHD commends the applicant for bringing forward a proposal that promotes the use of renewable energy.

Response: Acknowledged, with thanks.



Comment (Laurel Broten, MPH): The application describes a construction period of sixteen to twenty weeks. However, the application does not indicate whether there are existing wastewater facilities available to workers during construction or whether the facilities will need to be provided. TCHD has no objection to the use of portable toilets during the construction phase, provided the units are properly cleaned and maintained. While TCHD cannot require the use of hand sinks, we recommend that the applicant provide those for the workers, as it will reduce the potential for the transmission of disease.

Response: There is no wastewater service available at the site. There is also no municipal water service available at the site. Applicant will require the use of portable toilet facilities with portable (no municipal water required) hand washing sinks through the construction phase.

Comment (Laurel Broten, MPH): Rodents, such as mice and rates, carry diseases which can be spread to humans through contact with rodents, rodent feces, urine or saliva, or through rodent bites. As rodents are attracted to trash, TCHD strongly recommends that all trash dumpsters on site during construction are equipped with a closeable lid and with regular collection and disposal at an approved landfill.

Response: Applicant will make best efforts to follow TCHD's recommendations regarding trash disposal. The majority of trash generated onsite will be construction-related and a closeable lid may not be applicable for all disposal streams.

11. **Deer Trail Conservation District (Sheryl Walles): No Comments**
12. **CDOT / State Hwy. Dept. Region 1 (Rick Solomon): No Comments**
13. **XCEL Energy (Donna George): No Comments**
14. **US Army Corp. of Engineers (Kiel Downing): With Comments**



Comment: USACE's standard comment letter indicated that if wetlands were observed onsite, the USACE should be provided with a Pre-Construction Notification to determine if a USACE permit is necessary.

Response: The proposed Project site was surveyed by a licensed environmental surveyor conducting a Phase I ESA. According to the report, no wetland conditions were observed onsite.

**15. Urban Drainage (David Mallory): No Comments**

**16. East End Advisory Committee (various): With Comments**  
Comment (Janet Cook): Great Project.

Response: Acknowledged, with thanks.

Comment (Arnold Hollingsworth): This application looks good and has merit for both them and the community; I feel it should be granted.

Response: Acknowledged, with thanks.

Please advise if there are any further comments or issues to be addressed regarding this application.

Sincerely,

Luke Rickard  
Project Developer, SunShare

# Planning Commission Summary Report

**Date:** January 21, 2016 *SMS*

**To:** Arapahoe County Planning Commission

**Through:** Sherman Feher  
Planning Division, Case Planner

**Through:** Chuck Haskins, PE  
Engineering Services Division, Manager

**From:** Spencer M. Smith, PE  
Engineering Services Division, Case Engineer

**Case name:** U15-001 – Quincy Solar Garden - USR

## Purpose and Recommendation

The purpose of this report is to communicate the Engineering Staff findings, comments, and recommendations regarding the land use application identified above.

## Engineering Staff has reviewed the land use application and has the following findings:

1. The site will access E. Quincy Ave. at an existing field access that will be improved to meet County criteria. A ROW access permit will need to be obtained for the access prior to construction.

The applicant has been in contact with and received approval from the applicable parties to cross the existing Bronco pipeline with the proposed site access.

The existing ROW on E. Quincy Ave. along this project frontage is 110'. The ultimate ROW width for E. Quincy Ave. is 114' per the County's 2035 Transportation Plan. The County has requested that the property owner dedicate the additional 2' of ROW along the property frontage with this USR.

2. The applicant presented two waiver requests to the County's Technical Review Committee (TRC) on October 21, 2015. The first waiver request was in regards to the stormwater detention requirement (Arapahoe County Stormwater Management Manual (AC SWMM), Section 13.1.5). Arapahoe County criteria requires stormwater detention for a project adding more than 5,000 square feet of impervious area. This project will be adding approximately 6,900 square feet. Given the project's rural location, proximity to Box Elder Creek and the minimal amount of stormwater runoff generated from the additional 1,900 square feet of impervious area, the TRC was in favor of granting the waiver.

The second waiver request was in regards to the water quality capture volume requirement (AC SWMM, Section 14.4.2). County criteria requires water quality capture volume be provided for any project that has a total imperviousness for any given acre of the site greater than 10%. The proposed project exceeds this criteria by 5% where the access road is located (approximately 15% imperviousness). TRC was in favor of granting this waiver, but would still require that the site provide a water quality

enhancement. A grass buffer along the east side of the property will provide for sediment removal prior to entering Box Elder Creek to the east. Rather than disturb the existing ground and vegetation to install a new grass buffer, the TRC prefers that the existing vegetation serve as the grass buffer. During construction, if the County inspector determines that the existing vegetation is not sufficient, the applicant may be required to enhance the area.

Both of these waivers are consistent with what was approved for Sunshare's Jewell Avenue Solar Garden project (Arapahoe County Case # U14-003).

**Engineering Staff is recommending the land use application(s) favorably subject to the following conditions:**

1. Applicant addresses all Arapahoe County Engineering Services Division comments.
2. Applicant obtains all necessary approvals from the Bennett Fire District and permits (ROW Access, GES) from the County.



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**DEC 02 2015**  
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**PLANNING DIVISION**

**Public Works and Development**  
6924 S. Lima Street Centennial, Colorado 80112 Phone: 720-874-6650; FAX 720-874-6611  
[www.co.arapahoe.co.us](http://www.co.arapahoe.co.us)

**Planning Division**  
**Phase II Referral Routing**

<b>Case Number / Case Name:</b>	<b>U15-001, Quincy Solar Garden [Sunshare] / Use by Special Review</b>
<b>Planner:</b>	<b>Sherman Feher</b>
<b>Engineer:</b>	<b>Spencer Smith</b>
<b>Date:</b>	<b>11/23/2015</b>
<b>Date to be returned:</b>	<b>12/23/2015</b>

Arapahoe County Agencies		Citizen's Organizations		
<input checked="" type="checkbox"/>	Assessor / Arapahoe County	Beverly Reynolds		
<input type="checkbox"/>	Attorney / Arapahoe County	Robert Hill	<input type="checkbox"/> CCNA-Cherry Creek Neighborhoods Ass.	
<input type="checkbox"/>	Building / Arapahoe County	Steve Byer	<input type="checkbox"/> CECON-(Within Centennial)	
<input checked="" type="checkbox"/>	Engineering / Arapahoe County	Spencer Smith	<input type="checkbox"/> Four Square mile Neighborhood	
<input checked="" type="checkbox"/>	Mapping / Arapahoe County	Pat Hubert	<input type="checkbox"/> South Metro Chamber of Commerce	
<input type="checkbox"/>	Oil & Gas / Arapahoe County	Diane Kocis	<b>Conservation District</b>	
<input type="checkbox"/>	Open Space / Arapahoe County	Shannon Carter	<input checked="" type="checkbox"/> Deer Trail Conservation District	Sheryl Wailes
<input checked="" type="checkbox"/>	Planning / Arapahoe County	Sherman Feher	<input type="checkbox"/> West Arapahoe Conservation District	Tasha Chevarria
<input checked="" type="checkbox"/>	Sheriff / Arapahoe County	1 to Brian McKnight 1 to Glenn Thompson	<b>Transportation</b>	
<input type="checkbox"/>	Weed Control / Arapahoe County	Russell Johnson	<input checked="" type="checkbox"/> CDOT / State Highway Dept- Region 1	Rick Solomon
<input checked="" type="checkbox"/>	Zoning / Arapahoe County	Tammy King	<input type="checkbox"/> E-470 Authority	Peggy Davenport
<b>Referral Agencies</b>			<input type="checkbox"/> RTD	Chris Quinn
<input type="checkbox"/>	Architectural Review Committee		<input type="checkbox"/>	
<input type="checkbox"/>	Airport or Military Base		<b>Utilities: Gas, Electric &amp; Phone</b>	
<input type="checkbox"/>	CGS Colorado Geological Survey-Soils		<input type="checkbox"/> Centurylink/Phone	Charles Place
<input type="checkbox"/>	City / Town		<input type="checkbox"/> Conoco Phillips / Gas Pipeline	
<input checked="" type="checkbox"/>	Colorado Parks and Wildlife	Travis Harris	<input checked="" type="checkbox"/> XCEL	Donna George
<input type="checkbox"/>	County		<input type="checkbox"/> IREA	
<input type="checkbox"/>	DRCOG		<b>Water / Sanitation / Stormwater / Wetlands</b>	
<input checked="" type="checkbox"/>	Bennett Fire District	Caleb Connor	<input type="checkbox"/> ACWWA	
<input type="checkbox"/>	Metro District		<input checked="" type="checkbox"/> U.S. Army Corp. of Engineer	Kiel Downing
<input type="checkbox"/>	Post Office Growth Coordinator	J. Hernandez	<input type="checkbox"/> CCBWQA	
<input checked="" type="checkbox"/>	Reap I-70 Regional Economic Advancement Partnership	Matt Reay Jack Keever	<input type="checkbox"/> Colorado Division of Water Resources	Joanne Williams
<input type="checkbox"/>	Recreation District / Park District (External)		<input type="checkbox"/> SEMSWA	Paul Danley
<input type="checkbox"/>	School District		<input type="checkbox"/> ECCW&S	Chris Douglass
<input type="checkbox"/>	Special District		<input checked="" type="checkbox"/> Urban Drainage	David Mallory
<input checked="" type="checkbox"/>	Tri-County	Sheila Lynch	<input checked="" type="checkbox"/> Other / 5 Sets East End Adv. Committee	<i>Kron</i>
<input type="checkbox"/>	HOA/Homeowners Associations			

The enclosed case has been submitted to the Arapahoe County Planning Office for consideration. Because of the possible effect of the proposed development upon your area, the case is being referred for your comment. Please examine this request and, after review, check the appropriate line and return to the Arapahoe County Planning Office on or before the date indicated above.

	COMMENTS:	SIGNATURE
<input checked="" type="checkbox"/>	Have NO Comments to make on the case as submitted	<i>Carol Cook</i>
<input type="checkbox"/>	Have the following comments to make related to the case:	



Public Works and Development  
 6924 S. Lima Street Centennial, Colorado 80112 Phone: 720-874-6650; FAX 720-874-6611  
 www.co.arapahoe.co.us

Planning Division  
 Phase II Referral Routing

<b>Case Number / Case Name:</b>	<b>U15-001, Quincy Solar Garden [Sunshare] / Use by Special Review</b>
<b>Planner:</b>	<b>Sherman Feher</b>
<b>Engineer:</b>	<b>Spencer Smith</b>
<b>Date:</b>	<b>11/23/2015</b>
<b>Date to be returned:</b>	<b>12/23/2015</b>

Arapahoe County Agencies			Citizen's Organizations		
<input checked="" type="checkbox"/>	Assessor / Arapahoe County	Beverly Reynolds	<input type="checkbox"/>	CCNA-Cherry Creek Neighborhoods Ass.	
<input type="checkbox"/>	Attorney / Arapahoe County	Robert Hill	<input type="checkbox"/>	CECON-(Within Centennial)	
<input type="checkbox"/>	Building / Arapahoe County	Steve Byer	<input type="checkbox"/>	Four Square mile Neighborhood	
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<input checked="" type="checkbox"/>	Zoning / Arapahoe County	Tammy King	<input type="checkbox"/>	RTD	Chris Quinn
<b>Referral Agencies</b>			<b>Utilities: Gas, Electric &amp; Phone</b>		
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<input type="checkbox"/>	Airport or Military Base		<input type="checkbox"/>	Conoco Phillips / Gas Pipeline	
<input type="checkbox"/>	CGS Colorado Geological Survey-Soils		<input checked="" type="checkbox"/>	XCEL	Donna George
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<input type="checkbox"/>	School District		<input checked="" type="checkbox"/>	Other / 5 Sets East End Adv. Committee	
<input type="checkbox"/>	Special District				
<input checked="" type="checkbox"/>	Tri-County	Sheila Lynch			
<input type="checkbox"/>	HOA/Homeowners Associations				

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<input type="checkbox"/>	COMMENTS:	SIGNATURE
<input checked="" type="checkbox"/>	Have NO Comments to make on the case as submitted	<i>[Signature]</i> 11/30/15
<input type="checkbox"/>	Have the following comments to make related to the case:	

## Sherman Feher

---

**From:** Arnold Hollingsworth <[ajguitar2@yahoo.com](mailto:ajguitar2@yahoo.com)>  
**Sent:** Wednesday, December 02, 2015 9:33 AM  
**To:** Sherman Feher  
**Subject:** case number/name U15-001, Quincy Solar Garden (sunshare) / USR

Sherman, this application looks good and has merit both for them and the community I feel it should be granted. Arnold Hollingsworth east end advisory committee. [ajguitar2@yahoo.com](mailto:ajguitar2@yahoo.com)

U15-001



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, OMAHA DISTRICT  
DENVER REGULATORY OFFICE, 9307 SOUTH WADSWORTH BOULEVARD  
LITTLETON, COLORADO 80128-6901

**RE: Section 404 of the Clean Water Act Initial Comments**

To whom it concerns:

In accordance with Section 404 of the Clean Water Act, the Corps of Engineers regulates the discharge of dredged or fill material, and any excavation associated with a dredged or fill project, either temporary or permanent, into waters of the United States (WOUS). You should notify this office if the project proposed falls within these regulated activities because the project may require a Department of the Army Section 404 permit.

A WOUS may include ephemeral and/or perennial streams, wetlands, lakes, ponds, drainage ditches and irrigation ditches. A wetland delineation must be conducted, and verified by the Corps of Engineers, using the methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*: (using applicable Regional Supplement) to determine wetlands based on the presence of three wetland indicators: hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland delineations must be conducted in the field by a qualified environmental consultant and any aquatic resource boundaries must be identified accordingly. Once the aquatic resources have been identified, only this office can determine if they are WOUS. Please note that development of the upland areas, avoiding stream and wetland resources, does not require authorization from this office.

Nationwide Permits (NWP) authorize common types of fill activities in WOUS that will result in a minimal adverse effect to the environment. Descriptions of the 52 types of nationwide permit activities and their general conditions can be found on our website:

<http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Colorado.aspx>.

Some fill activities require notifying the Corps before starting work. Also, some types/sizes of work may require additional information or mitigation.

Regional General Permits (RGP) authorize specific types of fill activities in WOUS that will result in a minimal adverse effect to the environment. Descriptions of the 4 types of regional general permit activities and their general conditions can be found on our website:

<http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Colorado/RegionalGeneralPermits.aspx>. These fill activities require notifying the Corps before starting work, and possibly other

local or state agencies. Also, some types/sizes of work may require additional information or mitigation. Please note several of the RGP's are applicant and location specific.

Individual permits may authorize fill activities that are not covered under the NWP or Regional General Permits (RGP's). This permit will be processed through the public interest review procedures, including public notice and receipt of comments. An alternative analysis (AA) must be provided with this permit action. The AA must contain an evaluation of environmental impacts for a range of alternatives. These alternatives should include the preferred action, no action alternative, and other action alternatives that would be the identified project purpose. Other action alternatives should include other practicable (with regards to cost, logistics, and technology) that meet the overall project purpose. The alternatives could include offsite alternatives and alternative designs. When evaluating individual permit applications, the Corps can only issue a permit for the least environmentally damaging practicable alternative (LEDPA). In some cases, the LEDPA may not be the applicant's preferred action. The individual permit application form and form instructions can be found on our website: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/ObtainPermit.aspx>.

If the activity requires a Department of the Army permit as a result of any impacts to WOUS or any earth disturbances within that resource, a federal action will occur. For the Corps to make a permit decision, the applicant must provide enough information to demonstrate compliance with Section 106 of the National Historic Preservation Act (NHPA) and Section 7 of the Endangered Species Act (ESA).

The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to WOUS to the maximum extent practicable at the project site. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal. Any loss of an aquatic site may require mitigation. Mitigation requirements will be determined during the Department of the Army permitting review.

If the information that was submitted could impact WOUS, which are jurisdictional resources, this office should be notified. If a section 404 permit is required, work in an aquatic site should be identified by the proponent of the project and be shown on a map identifying the Quarter Section, Township, Range and County, Latitude and Longitude, Decimal Degrees (example 39.55555; -104.55555) and the dimensions of work in each aquatic site.

If there are any questions, please call the Denver Regulatory Office at 303-979-4120.

Sincerely,

A handwritten signature in black ink, appearing to read "Kiel Downing", with a long horizontal flourish extending to the right.

Kiel Downing  
Chief, Denver Regulatory Office

Enclosures:  
-PCN Requirements



## Pre-Construction Notification (PCN) Requirements

(Nationwide Permit General Condition No. 31  
from the February 21, 2012 Federal Register)

**US Army Corps of Engineers,  
Omaha District, Denver Regulatory Office  
9307 South Wadsworth Blvd,  
Littleton, CO 80128  
Phone: (303) 979-4120**

**Website: <http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Colorado.aspx>**

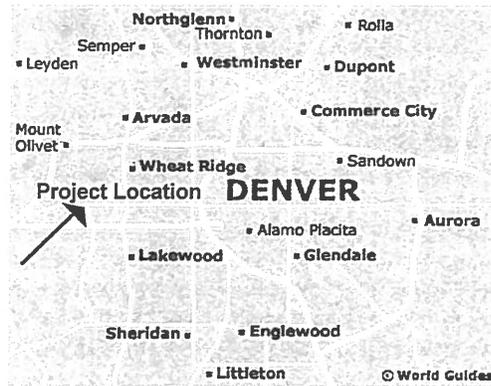
### Contents of Pre-Construction Notification:

The PCN must be in writing and include the following information:

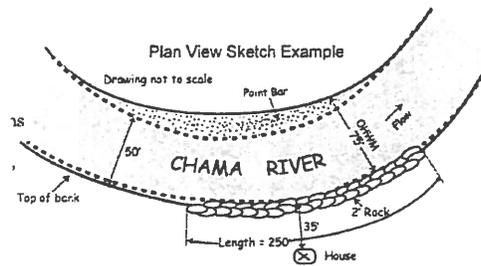
- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
- (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
- (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and
- (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(8) Attach map and sketches- examples shown here.

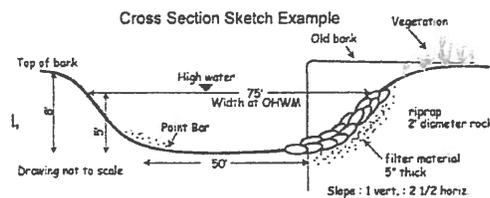
**Location Map:** Photocopy from road or topo map; indicate site location, any landmarks, etc.



**Plan View Sketch:** “Bird’s-eye view”; include all features- distances, length and width; dimensions of features and stream/wetlands.



**Cross Section Sketch:** “Cut away view”; include heights, widths of structures, channel, wetland, bank slopes, etc.





December 23, 2015

Sherman Feher  
Arapahoe County Planning Division  
6924 S Lima St  
Centennial CO 80112

RE: Quincy Solar Garden [Sunshare]  
Case No. U15-001  
TCHD No. 3736

Dear Mr. Feher:

Thank you for the opportunity to review and comment on the Use by Special Review application for Quincy Solar Garden located 2.3 miles east of the intersection of E Quincy Ave. and S Watkins Rd. Tri-County Health Department (TCHD) staff has reviewed the application for compliance with applicable environmental and public health regulations and principles of healthy community design. After reviewing the application, TCHD has the following comments:

**Renewable Energy**

Alternative energy supplies generally do not contribute to air and water pollution and can have a positive impact on the environment. TCHD commends the applicant for bringing forward a proposal that promotes the use of renewable energy.

**Wastewater Service for Construction Trailers**

The application describes a construction period of sixteen to twenty weeks. However, the application does not indicate whether there are existing wastewater facilities available to workers during construction or whether the facilities will need to be provided. TCHD has no objection to the use of portable toilets during the construction phase, provided the units are properly cleaned and maintained. While TCHD cannot require the use of hand sinks, we recommend that the applicant provide those for the workers, as it will reduce the potential for the transmission of disease.

**Solid Waste**

Rodents, such as mice and rats, carry diseases which can be spread to humans through contact with rodents, rodent feces, urine, or saliva, or through rodent bites. As rodents are attracted to trash, TCHD strongly recommends that all trash dumpsters on site during construction are equipped with a closeable lid and with regular collection and disposal at an approved landfill.

Quincy Solar Garden [Sunshare], U15-001  
December 23, 2015  
Page 2 of 2

Please feel free to contact me at (720) 200-1585 or [lbroten@tchd.org](mailto:lbroten@tchd.org) if you have any questions about TCHD's comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'L Broten', with a stylized flourish at the end.

Laurel Broten, MPH  
Land Use and Built Environment Specialist  
Tri-County Health Department

CC: Sheila Lynch, Brad Turpin, Steve Chevalier, TCHD

erman Feher

---

**From:** jack keever <jakreap@aol.com>  
**Sent:** Thursday, December 03, 2015 8:18 AM  
**To:** Sherman Feher  
**Cc:** Gary.Duke@guarantybankco.com; tom.henley@xcelenergy.com  
**Subject:** U15-001, Quincy Solar Garden (Sunshare)

Dear Sherman;

The Reap Board Of Directors has adopted a policy of supporting the orderly development of energy industries. Reap supports this application to establish a Community Solar Garden approximately 2.3 miles east of the intersection of East Quincy Avenue and South Watkins Road.

Thank you for referring this application to Reap.

Sincerely,

Jack Keever



Public Works and Development  
 6924 S. Lima Street Centennial, Colorado 80112 Phone: 720-874-6650; FAX 720-874-6650  
 www.co.arapahoe.co.us

Planning Division  
 Phase II Referral Routing

RECEIVED  
 DEC 10 2015  
 ARAPAHOE COUNTY  
 PLANNING DIVISION

**Case Number / Case Name:** U15-001, Quincy Solar Garden [Sunshare] / Use by Special Review  
**Planner:** Sherman Feher  
**Engineer:** Spencer Smith  
**Date:** 11/23/2015  
**Date to be returned:** 12/23/2015

Arapahoe County Agencies			Citizen's Organizations		
<input checked="" type="checkbox"/>	Assessor / Arapahoe County	Beverly Reynolds	<input type="checkbox"/>	CCNA-Cherry Creek Neighborhoods Ass.	
<input type="checkbox"/>	Attorney / Arapahoe County	Robert Hill	<input type="checkbox"/>	CECON-(Within Centennial)	
<input type="checkbox"/>	Building / Arapahoe County	Steve Byer	<input type="checkbox"/>	Four Square mile Neighborhood	
<input checked="" type="checkbox"/>	Engineering / Arapahoe County	Spencer Smith	<input type="checkbox"/>	South Metro Chamber of Commerce	
<input checked="" type="checkbox"/>	Mapping / Arapahoe County	Pat Hubert	<b>Conservation District</b>		
<input type="checkbox"/>	Oil & Gas / Arapahoe County	Diane Kocis	<input checked="" type="checkbox"/>	Deer Trail Conservation District	Sheryl Wailes
<input type="checkbox"/>	Open Space / Arapahoe County	Shannon Carter	<input type="checkbox"/>	West Arapahoe Conservation District	Tasha Chevarria
<input checked="" type="checkbox"/>	Planning / Arapahoe County	Sherman Feher	<b>Transportation</b>		
<input checked="" type="checkbox"/>	Sheriff / Arapahoe County	1 to Brian McKnight 1 to Glenn Thompson	<input checked="" type="checkbox"/>	CDOT / State Highway Dept- Region 1	Rick Solomon
<input type="checkbox"/>	Weed Control / Arapahoe County	Russell Johnson	<input type="checkbox"/>	E-470 Authority	Peggy Davenport
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<input type="checkbox"/>	CGS Colorado Geological Survey-Soils		<input checked="" type="checkbox"/>	XCEL	Donna George
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<input checked="" type="checkbox"/>	Reap I-70 Regional Economic Advancement Partnership	Matt Reay Jack Keever	<input type="checkbox"/>	ECCVW&S	Chris Douglass
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<input type="checkbox"/>	School District		<input checked="" type="checkbox"/>	Other / 5 Sets East End Adv. Committee	Janet Cook
<input type="checkbox"/>	Special District				
<input checked="" type="checkbox"/>	Tri-County	Sheila Lynch			
<input type="checkbox"/>	HOA/Homeowners Associations				

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COMMENTS:	SIGNATURE
<input type="checkbox"/> Have NO Comments to make on the case as submitted	
<input checked="" type="checkbox"/> Have the following comments to make related to the case:	
Great Project	Janet Cook



Public Works and Development  
 6924 S. Lima Street Centennial, Colorado 80112 Phone: 720-874-6650; FAX 720-874-6611  
[www.co.arapahoe.co.us](http://www.co.arapahoe.co.us)

Planning Division  
 Phase II Referral Routing

<b>Case Number / Case Name:</b>	<b>U15-001, Quincy Solar Garden [Sunshare] / Use by Special Review</b>
<b>Planner:</b>	<b>Sherman Feher</b>
<b>Engineer:</b>	<b>Spencer Smith</b>
<b>Date:</b>	<b>11/23/2015</b>
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COMMENTS:	SIGNATURE
<input type="checkbox"/> Have NO Comments to make on the case as submitted	
<input checked="" type="checkbox"/> Have the following comments to make related to the case: <i>13.904 N of CDC</i>	<i>No Landscaping shown per</i>



# PHASE I INTERNAL ROUTING FORM

From: Planning

To: Planning, Engineering, Mapping, Zoning, Building, Oil & Gas, Weed

Case Planner: Sherman

Case Engineer: Spencer

Planning Case No: U15-001

Engineering Case No:

Case Name: Quincy Solar Garden /Sunshare USR

PPI# /Location: 2069-00-0-00-013

Date submitted: 08-19-2015

(If submitted before 2 p.m.)

Date assigned & entered in ACCELA:08-20-2015

(3rd working day from submittal, after review for completeness)

DRC Meeting Date: 09-27-2015

(Wednesday, at least 5 working days from assignment)

Internal review-Due date to Planner: <sup>09/09/2015</sup> ~~09-04-2015~~

(10 working days from assignment)

Phase II: Yes No

Comment:

*A noxious weed management plan is necessary for this project.*

*Russell Johnson  
Arapahoe Count Weed Control Specialist*



## USE BY SPECIAL REVIEW: U15-001 – LETTER OF INTENT - QUINCY SOLAR GARDEN

January 5<sup>th</sup>, 2016

Mr. Sherman Feher, Planner  
Arapahoe County Public Works and Development  
6924 South Lima Street  
Centennial, CO 80112

**RE: Use by Special Review (USR) based on 1401 Guidelines for a Community Solar Garden**

Enclosed:

- 1041 Part C Application Submittal Requirement Checklist
- Point-by-Point Response Letter
- Site Development & GESC Plans
- Engineering/Environmental Studies and Supporting Documents

Dear Mr. Feher:

This letter is intended to provide Arapahoe County Public Works and Development with anticipated project scope and information related to the proposed Quincy Solar Garden located approximately 2.3 miles east of the intersection of East Quincy Avenue and South Watkins Road. Based on this information, Quincy Solar Garden LLC, a wholly-owned subsidiary of SunShare LLC ("Applicant") respectfully requests the granting of a Use by Special Review Permit under Arapahoe County 1401 Regulations Part C. We provide with this letter a summary of the project's main considerations and address all 1041, Part C Application Submittal Requirements and Approval Criteria point by point with verifying documentation as needed.

Sincerely,

Luke Rickard  
Project Developer, SunShare



## I. Project Summary

Applicant and Xcel Energy are contractually partnering to provide up to 2 MWdc of new solar garden capacity in Arapahoe County per House Bill 10-1342, commonly known as the Colorado Community Solar Gardens Act. However, electric capacity may increase based on technological efficiencies gained in solar equipment but will not change the aesthetic of the project. SunShare is also developing similar projects in Douglas County, Adams County, and Jefferson County. The Arapahoe County location was selected due to its proximity to Xcel's transmission infrastructure, relatively flat land grade, and access to the sun (no shading obstructions). Applicant is excited to bring clean and renewable energy to Arapahoe County and looks forward to working with the community to make the project a success. There will be tax revenue to the County; additionally, the construction phase will bring positive economic traffic to local businesses such as restaurants, gas stations, and construction supply.

Applicant is currently in the planning and development stages of a solar garden approximately 2.3 miles east of the intersection of East Quincy Avenue and South Watkins Road in unincorporated Arapahoe County. The solar garden will be installed north of Quincy Ave, and south of Xcel distribution lines, east of an existing gas well. The project will lease 20 acres of property owned by Stephen D. Tebo. The parcel number is PIN: 031584418, AIN: 2069-00-0-00-013. Full legal description of the property is included in the site development plan with this submittal.

Historically this land has been undeveloped or used for grazing; it is zoned A-1. It is surrounded by oil and gas infrastructure including pipelines, wells, and pump jacks. The property is also close to electric distribution and transmission lines, which is why we selected this site for this project. Proximity to electrical infrastructure is important for utility grid interconnection and for the compatibility of the solar garden use with surrounding uses.

The approximately 7,000 solar modules will be mounted on single axis trackers. This means the solar panels will be facing east in the morning, be flat at noon, and be facing west in the afternoon- following the path of the sun. The approximate maximum height of the solar collection equipment above finish



grade will be 8' at full tilt. The entire project will be surrounded by a 6-8' chain link fence.

Construction will likely begin Q1 2016 and will last approximately 16 to 20 weeks. Construction crews will be a combination of general laborers and certified and journeymen electricians under an on-site general contractor. There will be a security guard on watch during certain phases of construction. Once complete, there will be no full time personnel on site. There will be a small maintenance crew (1-4 people) visiting on a monthly/quarterly basis.

The Project lease area is 20 acres and includes: solar panels mounted on steel I-beams; concrete pad mounted transformer and inverter; an access drive with emergency turnaround cul-de-sac; and perimeter fence with gate. Access driveway and gate will conform to Bennett Fire Protection District and other applicable local emergency services requirements. There will be minor, surgical "cut/fill" grading in specific areas of the land in order to equalize finish grade for technology performance reasons, but the overall path of surface drainage across the property will remain. Any large shrubs within the project site boundaries will be removed prior to construction; the existing prairie grass vegetation will be mowed but not removed to prepare the site for construction except in those areas where cut/fill grading is planned.



## II. Approval Criteria

### A. General Approval Criteria

#### 1. Prior to Construction

Prior to beginning construction Applicant will obtain:

- Fully executed and recorded lease agreement
- Clear title to the land
- Executed and recorded utility and access easements
- Surface use agreements from the mineral owner and mineral lessee(s)
- Utility agreements to interconnect our solar facility (Interconnection Agreement)
- Grading Erosion and Sediment Control (GESCC) Permit (if required)

These items are part of SunShare's standard practice for each and every project.

#### 2. Regional Water Quality

Applicant is taking measures to ensure that the proposed construction and operation activities do not negatively impact water quality in the area or in draining to Box Elder Creek to the east. These include limiting area grading activities as much as possible, maintaining or restoring native vegetation within the project boundaries, and keeping existing water flow characteristics on the parcel intact.

Applicant met with the Arapahoe County Public Works Technical Review Committee (TRC) on October 28, 2015 to discuss Applicant's variance request for waiver of the Stormwater Detention Requirement (AC SWMM 13.1.5 (SDR)) and variance request for waiver of the Water Quality Capture Volume Requirement (AC SWMM 14.4.2 (WQCVR)). Both requests for waiver were considered and supported by the TRC. The SDR waiver request was supported by the TRC's consideration that the construction of a detention pond and outlet structure would result in more earthwork, ground disturbance, and potential sources of sediment transport than the presented design. The WQCVR waiver request was supported by the TRC's finding that simple over-seeding and mulching of the existing vegetation between the solar array fields and the eastern project boundary would create a grass buffer sufficient to remove sediment from site runoff. SunShare will fulfill



these findings and requirements utilizing these or additional best practices identified by Arapahoe County staff.

3. Necessary Expertise & Financial Capability: N/A – Applicable to Major Permit Review only

4. Technical and Financial Feasibility of Project: N/A – Applicable to Major Permit Review only

5. Natural Hazard Risk

Applicant does not consider the project to be at significant risk to the following natural hazards: hurricane, earthquake, landslide, avalanche and forest fire. The following natural hazards have some potential to affect the project: flood, tornado, hail and grass fire.

The project has been designed to be outside of the designated 100-year floodplain for the adjacent Box Elder Creek. Given that the operational life of the project is not expected to exceed 30 years, Applicant considers the risk to the project from flood to not be significant. Additional measures that can be taken to protect the project from flood include the installation of the solar modules at least four feet six inches (4' 6") from finish grade and locating all electrical equipment such as combiner boxes, inverter stations and transformers on the western side of the project uphill from the creek.

Although tornados could possibly occur at the project site, Applicant does not believe the risk to be significant. The project is located well away from densely populated areas; should a tornado occur, collateral damage to the surrounding area is considered to be negligible. Solar PV technology is designed and manufactured to be resistant to all but the most severe hailstorms. Grass fires in the surrounding area could potentially enter the project boundary and damage the solar equipment; however, Applicant does not believe this risk to be significant enough to affect project viability.

Applicant will design the Project to meet or exceed all applicable local and national codes and standards. This means that the project systems and equipment will be designed to withstand the required snow loads, wind loads, seismic conditions, and all other applicable requirements or



conditions. Should a natural event's impact exceed design criteria or emergency services' control and damage the equipment, Applicant has insurance coverage that will allow for the equipment to be replaced.

#### 6. Compatibility with Comprehensive Plan

The Comprehensive Plan provides for "power energy facilities" in rural designated areas of the County. Our project is consistent with the Comprehensive Plan. See the following section C.3 for more detail in this regard.

#### 7. Impact to Local Government Services

Applicant believes that the proposed use will not affect the ability of the local government to provide any or all of its services, and that it will not exceed the response capacity of the local emergency services.

8. Undue Financial Burden: N/A – Applicable to Major Permit Review only

9. Degradation of Local Economy: N/A – Applicable to Major Permit Review only

#### 10. Impact to Recreational Opportunities

Applicant does not anticipate any impact to recreational opportunities in the area. The proposed project is not close to any open space, public parks, or other recreational areas. Our project is in a rural undeveloped area and will be quiet and have a low profile. Only monthly/quarterly maintenance visits are expected during commercial operation.

#### 11. Resource Conservation

The proposed use fits very closely with the spirit and goals of resource conservation initiatives. By producing clean renewable energy from the sun for more than 20 years with minimal maintenance, the project essentially reduces dependence on conventional fuels such as coal or natural gas; both resources which cannot be replenished. The generation of clean power onto the distribution grid and closer to the point of consumption than traditional power generation sources can aid the utility during peak consumption hours



without the need to turn to additional conventional fuel-fired power sources during these times.

## 12. Degradation of Environment

Applicant believes that the proposed use will not result in any significant measurable degradation of the natural environment, especially when compared to conventional power fuel sources such as coal or natural gas.

- **Air Quality:** The daily operation of the solar facility will not produce any noxious emissions that could affect air quality. During construction, Applicant and Applicant's contractor will employ best-practice measures to control airborne dust. Grading activities will be performed during the wetter months if possible, to reduce the likelihood of airborne dust generation. The use of a limited number of gasoline- or diesel-powered machines during construction is not expected to have a significant impact to air quality during the brief construction period.
- **Visual Quality:** The presence of the solar facility will be noticeable from Quincy Ave. For westbound travelers, the solar facility will be mostly screened by the trees lining Box Elder Creek until travelers are directly across from the facility. For eastbound travelers, the facility will be briefly visible. Applicant will make efforts to retain or restore the existing vegetation onsite around and between the solar arrays, as well as within the graded areas. The solar arrays will be arranged symmetrically and mostly following the existing land contours. The height above grade of the solar modules at maximum tilt is not expected to exceed eight feet; thus the solar arrays will be shorter in height than the existing oil and gas infrastructure, or the industrial warehouse buildings also featured in the area. The visual character of that stretch of Quincy Ave. is dominated by a significant power transmission corridor featuring large high tension electric power transmission and distribution lines, and features an electrical substation behind a chain link fence. Applicant does not believe that the Project will cause significant degradation to the visual quality of the area in excess of that already caused by the existing electrical utilities in the area.
- **Surface Water Quality:** Applicant will take all necessary steps to protect surface water quality. Key to this is the retention of the



existing vegetation across the majority of the project area and the installation of a grass buffer between the array fields and Box Elder Creek. Arapahoe County Public Works TRC has approved Applicant's plan to preserve surface water quality. Once these measures have been installed and established, no degradation of surface water quality is expected.

- **Ground Water Quality:** A geotechnical exploration of the Project site was conducted with test drilling depths up to 19 feet. No groundwater was encountered at any of the test drilling sites. Embedment depths for the structural supports to the solar arrays are not expected to exceed 10 feet. Applicant does not expect any degradation of ground water or underground aquifers due to the presence of the project in the area.
- **Wetland, Floodplain, Streambed, Recharge Areas, Riparian Areas:** Applicant commissioned a Phase I Environmental Assessment (ESA) and an ecological survey for the Project site. No wetlands were observed onsite. The Box Elder Creek 100 year floodplain boundary is outside of the proposed Project boundary. No streambed or recharge areas were identified within the Project boundary. Riparian habitat was observed along Box Elder Creek to the east of the project and outside of the Project boundary. Applicant does not anticipate any significant degradation to these environmental zones due to the proposed use.
- **Terrestrial and Aquatic Animal Life:** An active prairie dog colony was observed on the project site. The Colorado Dept. of Parks and Wildlife recommends the humane removal of prairie dogs immediately prior to development. The Project is not expected to negatively impact the prairie dog colony outside of the project boundaries and Applicant will take measures to protect the electrical equipment from damage during the operational period. The ecological survey did raise the possibility of Preble's meadow jumping mouse habitat within the project boundary; however further observation and review by the US Fish and Wildlife Service determined no habitat present or concerns for the wildlife. No additional endangered species or their habitat were observed within the Project boundary. The Project is not considered to pose a threat to aquatic animal life.
- **Terrestrial and Aquatic Plant Life:** Applicant will be retaining the existing vegetation onsite as much as possible. No protected plant



species were observed onsite. The Project does not pose a risk to aquatic plant life.

- Soils and Geologic Conditions: Applicant conducted a geotechnical exploration of the site. The soils are suitable for the proposed use. Applicant will minimize the extent of area grading activities for the solar array locations to the necessary minimum. No degradation of the soils or geology currently at the site is expected due to the proposed use.

### 13. Cause of Nuisance

Applicant does not anticipate this use causing a nuisance. The operating technology is mostly silent and is emissions free. The construction period will be short and will generate only sporadic delivery traffic. Off-site impacts will be kept to a minimum during construction. There will be no permanent staff onsite during operations; maintenance activities are expected to be limited to monthly/quarterly visits with a single light vehicle.

### 14. Archaeological/Paleontological/Historical

Applicant does not believe that the use will significantly degrade any areas of paleontological, archaeological or historic importance. See attached letter from the Colorado Historic Society stating that no records of such nature were associated with the proposed project location.

### 15. Hazardous Chemical Risk

Applicant does not anticipate that the project represents any unreasonable risk regarding the release of known hazardous materials either during construction or during operation, as these are generally not a feature of the project during either period.

- No chemicals are needed for construction of the facility or for its operation.
- Construction operations will minimize waste. There will be temporary dumpsters onsite during construction for construction waste. Temporary sanitary facilities will also be located onsite during construction. Any fuel spillage during construction will be contained and cleaned, and the spoils will be removed from the site and disposed of properly.
- Should liquid-immersed transformers be required for this project, Applicant will make best efforts to secure transformers that use non-



toxic and biodegradable oils or fluids. All transformer equipment will be new and free from defects and will meet all applicable codes and testing standards. All applicable requirements set forth in 40 CFR 110 and 112 will be adhered to.

After the operational life of the facility is over, Applicant will decommission the facility. This will involve the safe removal of all structural steel and aluminum, conductors, inverters, transformers, concrete and fencing. Applicant will restore the site to as close to its original condition as is feasible after decommissioning. Applicant anticipates that the structural and electrical conductor components could be recycled; there could also be a secondary market for used solar collection equipment where Applicant would seek to sell the solar modules.

#### 16. Benefits & Losses: N/A – Applicable to Major Permit Review Only

#### 17. Project as Best Alternative

Colorado State law has mandated that investor-owned utilities source 30% of their energy supply from renewable energy. The community solar garden program has been set up by the Colorado legislature and provides another avenue for utilities to move toward compliance with this mandate. Applicant and the utility will work together to deploy this renewable energy technology for the benefit of the local community and the utility's customers.

The proposed use will support the State's need to diversify fuel sources for power generation, and can potentially benefit the utility and electric grid reliability by providing clean power closer to the point of consumption. The proposed solar technology is tried, tested and proven; and installation costs have fallen significantly over the past decade. Solar PV is one of the most cost-effective methods of deploying renewable energy given the available solar resource in the area.

The proposed use has limited short-term impact to the surrounding area during construction, almost no impact to the surrounding area or other uses during operation, and very little long-term impact after decommissioning as the land can easily be returned to its previous state after use. The Arapahoe



County Comprehensive Plan allows for installation of energy project on rural land and in this zoning.

### 18. Impact to Agricultural Activities

There are currently limited agricultural activities taking place on the subject land parcel, mostly intermittent grazing. The land is not high-yield agricultural land. Any agricultural activities taking place on the parcel currently can resume outside of the project fence line after project completion and during facility operation. Applicant may continue an agricultural use within the site, such as honeybee or sheep grazing, during the operational term of the facility. After facility decommissioning and equipment removal, agricultural activities could resume on the project site if desired.

### 19. Cultural Resource Preservation

Applicant does not believe that the project will significantly interfere with the preservation of cultural resources such as historical structures or sites or archaeological resources. The Colorado Historical Society found no record of any such cultural resources in the area. The impact of the project to agricultural resources, the rural lifestyle, and the opportunity for solitude in the natural environment will be negligible due to the solar technology's quiet, automated operation and opportunity for complete removal at the end of the operational term.

### 20. Impact to Land Use Patterns

The Project will not significantly degrade the land-use pattern of the surrounding areas in any way. There will be a solar easement on the surrounding land parcel designed to prevent future shading of the solar arrays by future development, but with the setbacks requested by County planning staff the risk of such shading is remote in any case. Current land use patterns in the area surrounding the Project may continue unaffected by the presence of the Project at the proposed location.

### 21. Compliance with Regulations and Fees

Applicant warrants that all applicable Federal, State and County regulations will be complied with and that all necessary fees will be paid.



## B. Additional Criteria: N/A (Water/Sewer Projects Only)

## C. Additional Criteria Applicable to Major Facilities of a Public Utility (Private Company/Use By Special Review)

### 1. Impact to Service from Area Uses

No negative impact to the utility service is expected due to the Project's presence in the area. Applicant will work closely with the utility for the detailed design and planning of the Project. Interconnection of the facility to the electrical distribution grid will be performed under the supervision of authorized utility personnel and in accordance with the utility-approved design and procedures. The electrical equipment installed at the facility will be designed to minimize negative impacts to the utility's service in the area. Should a service disruption due to equipment malfunction occur, the utility or facility operator will have the ability to disconnect the facility from the distribution grid until such time that functionality is restored and the facility can be reconnected.

### 2. Preservation of Desirable Existing Community and Rural Patterns

Applicant believes that the surrounding areas to the Project could easily be administered in such a way as to preserve desirable existing community and rural patterns without significant impact to either the operational facility or to the community in the surrounding area. Other than the industrial park to the west, no existing community uses in the immediate area have been identified; future community use outside of the project fence line should reasonably be able to occur without significant negative impact to the project. Similarly rural land use patterns in the area could continue outside of the project fence line without significant impact to the operational facility. The project is not expected to negatively affect the existing oil/gas operations in the immediate area in any way.



### 3. Conflict with Local Comprehensive, State and Regional Master Plans

The Project is located within the area designated as “Rural Area – Tier III” within the Arapahoe County Comprehensive Plan. The purpose of the Tier III is to promote “conservation of agriculture and open lands” (III-3). There is also an expressed preference for cluster development, with development “grouped together on a portion of the parcel, while a larger portion of the parcel is conserved for agriculture or open land” (III-3). Our proposed use meets these requirements exactly, being located on the southern end of the parcel, close to the existing oil and gas developments. As shown by the proposed plan sets, the remainder of the parcel (all areas outside of the fence line) will remain open to the existing agricultural use, which is intermittent grazing. These activities will not interfere with facility operation in any way. Furthermore, Applicant is pursuing plans to co-locate livestock grazing at the project site during operations, thus continuing an agricultural use within the fenced 20 acres and preserving the agricultural character of the designated area.

According to the Comprehensive Plan, non-residential uses in the Rural Area will be discouraged “unless they are agriculture-related or are public facilities and services” (III-3). Public Facilities are defined in the Comprehensive Plan as “...utility lines, power substations, power energy facilities...” (III-12). Applicant believes that the proposed use meets the definition of power energy facilities, as a facility that produces electric power. The proposed use is also similar in character to utility lines and power substations, both of which are in close proximity to the proposed Project. This site was chosen for its proximity to a substation. Our conversations with the utility indicate that the substation is close to capacity and that future solar developments in the area after this one will be severely limited. Additionally, the Plan states that “Public Facilities should be accessible by the population served” (III-12). While electrical code regulations will not allow the free ingress of the public into an energy facility in the same way that power substation access is restricted to the public, a Solar Garden meets the spirit of that requirement by directly benefitting the subscribers to the garden, many of which could be drawn from the local area. Lastly, the Plan states that “Groundwater supply and availability will be a significant factor” (III-3) in limiting development density in the Tier III area. The proposed use will not impact groundwater



quality in any way, and will not draw from groundwater resources during operation.

Applicant does not believe that the proposed use is in conflict with the County Comprehensive Plan. Rather, the proposed use meets many of the criteria for development in the Tier III area. Applicant is not aware of any conflict with any State or Regional Master Plans. The Project will comply with all applicable zoning/use regulations and County requirements.

#### 4. Right-of-Way and Infrastructure

The Project will comply with all applicable ROW requirements. Impact to traffic along Quincy Ave. during normal operations is expected to be minimal, and light during construction. Estimated traffic generation by the project is summarized in the following table as provided in the engineer's traffic impact letter provided with this application.

Project Phase (Time Period)	Vehicle Type	Estimated Gross Vehicle Weight	Number of Vehicles Per Day	Maximum and Average Vehicle Trips Per Day
<b>Site Preparation (approx. 4-6 weeks)</b>	Equipment Hauling Trucks	30,000-65,000 lbs	0-2	0-4
	Passenger Vehicles	2,000-10,000 lbs	2-5	4-10
	Fuel Delivery	20,000-30,000 lbs	1	2
				<b>Max - 16/Ave - 6</b>
<b>Material and Equipment Delivery (approx. 4 weeks)</b>	Conex Container and Delivery Trucks	30,000-50,000 lbs	5-15	10-30
	Equipment Hauling Trucks	20,000-40,000 lbs	0-4	0-8
				<b>Max - 38/Ave - 10</b>
<b>Solar Garden Installation (4-5 months)</b>	Passenger Vehicles	2,000 to 10,000 lbs	5-15	20-30
	Fuel Truck	20,000 to 30,000 lbs	1	2
	Material Delivery Truck	20,000 to 30,000 lbs	1	2
				<b>Max - 34/Ave - 24</b>
<b>Operations (ongoing once operational)</b>	Utility Vehicle	2,000 to 10,000 lbs	1 per month or less	
				<b>Max - 2/Ave - 0</b>

The Project will not place a significant burden on transportation, community services, sanitary sewer, water or electric utility infrastructure.



### III. Submittal Requirements

#### A. Application Fee

Applicant has paid all necessary fees for the 1041 Permit Review. No notification from County staff regarding payment of consultants' fees related to this review has been received at time of writing. The County should be advised that total permitting and review fees for solar projects 2 MWdc or less in capacity are limited to \$1,000 per Project, per C.R.S. 30-28-113 (1) (b) (II).

#### B. Information Describing the Applicant

Applicant will be the Owner of the Project. Applicant is a privately held limited-liability corporation registered in Colorado. Applicant's parent company, SunShare LLC, is a privately held limited liability company with roots in Denver and Colorado Springs. SunShare has a demonstrated history of success in developing similar projects in the Colorado Front Range area and has offices in Minneapolis, MN. SunShare currently has around 50 employees engaged in the development, financing, construction, subscription management and operation of Community Solar Gardens in both Colorado and Minnesota.

Applicant:

Quincy Solar Garden LLC  
1441 18<sup>th</sup> Street, Suite 400  
Denver, CO 80202

Contact: Luke Rickard

Phone: 303.296.0919

Fax: 720.606.2869

Email: [lrickard@mysunshare.com](mailto:lrickard@mysunshare.com)

Applicant is leasing the land for this project from the land owner, Stephen D. Tebo. The land owner's address is:

3111 28th Street  
Boulder, CO 80301



Individuals who will play a role in the development and management are listed below along with a summary of their experience. Applicant has not yet selected a prime contractor for this project.

Luke Rickard, Solar Project Developer, SunShare: Mr. Rickard has a decade of experience in the renewable energy industry, and has planned and executed solar and traditional energy projects both at the utility and distributed generation level.

Jon Sullivan, Director of Project Development, SunShare: Mr. Sullivan is a NABCEP-certified solar installer with more than a decade of renewable energy experience as an installer and instructor. Mr. Sullivan holds an MBA in Energy Development from Daniels College at Denver University.

J. Sean O’Hearn, PE, PG: Managing Partner, Enertia Consulting Group: Mr. O’Hearn is the Engineer of Record (EOR) for the permitting and planning documents and studies for this Project. He has decades of engineering experience in energy development and construction projects in Colorado and elsewhere.

SunShare has brought more than 10 MW of similar Community Solar Garden projects to construction and operation in Colorado in the past few years. This was achieved through a mixture of balance sheet and investor financing. We anticipate similar success in the development, financing and operation of this Project.

### C. Information Describing the Project

The Project will be a photovoltaic solar generation facility that utilizes single-axis tracking technology to maximize solar production. Detailed plans and specifications appropriate for the conceptual level of project design at this time have been provided in the USR review plan set.

Applicant considered other land sites in the County before selecting this one. This site was selected for its relatively flat land grade, proximity to utility infrastructure, and distance from other developments potentially incompatible with this use. Applicant evaluated various design solutions before selecting the design presented in the USR review plan set. Applicant expects to begin construction permitting applications in the first quarter of 2016 and complete construction some time in the third quarter of 2016.



Operation would be for twenty years from date of completion, with the possibility of fixed-term extensions to the operation period subject to technology viability.

The Project will provide the residents and businesses of Arapahoe County with the opportunity to source locally-produced clean renewable energy. The need for additional renewable energy generation sources has been clearly established by state policy and utility programs. Applicant will develop and install this Project under Xcel Energy's Solar Community program.

The Project is the definition of resource conservation. Just by operating, this project will aid in the conservation of natural fuel resources such as fuel and natural gas. Distributed generation of power also allows utilities to conserve the generation of electricity. In addition, the use of the project will place no burden on local water sources, thus conserving those for future uses and generations. Lastly, Applicant will conserve as much of the existing vegetation on the project site as possible and will re-seed with a native grass and wildflower mix to conserve as much of the natural animal habitat as possible. Upon de-commissioning, the solar generation equipment will be entirely removed and the land returned to its original state. Applicant will evaluate and pursue any opportunities for recycling or "grey market" use of facility components (commodity materials, solar PV modules etc.) as may be available on the market at the time of decommissioning.

#### D. Property Rights, Permits and Other Approvals

Prior to beginning construction Applicant will obtain:

- Fully executed and recorded lease agreement
- Clear title to the land
- Executed and recorded utility and access easements
- Surface use and/or Right-of-Way crossing agreements from the mineral owner and mineral lessee(s)
- Utility agreements to interconnect our solar facility (Interconnection Agreement)
- Grading Erosion and Sediment Control (GESC) Permit
- Arapahoe County Use By Special Review Permit
- All required Arapahoe County Structural, Electrical, and Construction Permits



Applicant has executed a lease agreement with the landowner. There are no Federal or State permits required for this Project.

Applicant has included with this application copies of communications with the Army Corps of Engineers, US Fish & Wildlife, and the CO Historical Society.

The project will not require any water for daily operation. Water used for module cleaning must be de-ionized and will be sourced from outside the project area. Any water required during construction will be sourced from water trucks. Applicant does not anticipate at this time that construction water will be necessary.

### E. Regional Water Quality Management Plan

Applicant met with the Arapahoe County Public Works Technical Review Committee (TRC) on October 28, 2015 to discuss Applicant's variance request for waiver of the Stormwater Detention Requirement (AC SWMM 13.1.5 (SDR)) and variance request for waiver of the Water Quality Capture Volume Requirement (AC SWMM 14.4.2 (WQCVR)). Both requests for waiver were considered and supported by the TRC. The SDR waiver request was supported by the TRC's consideration that the construction of a detention pond and outlet structure would result in more earthwork, ground disturbance, and potential sources of sediment transport than the presented design. The WQCVR waiver request was supported by the TRC's finding that simple over-seeding and mulching of the existing vegetation between the solar array fields and the eastern project boundary would create a grass buffer sufficient to remove sediment from site runoff. SunShare will fulfill these findings and requirements utilizing these or additional best practices identified by Arapahoe County staff.

### F. Financial Feasibility of the Project

N/A: only applicable to Major Permit Review

### G. Land Use

The current use pattern on the subject parcel and surrounding parcels is intermittent to medium-frequency agricultural, with some oil and gas



exploration and production. The Project will not significantly degrade the land use pattern of the surrounding areas in any way. There will be a solar easement on the surrounding land parcel designed to prevent future shading of the solar arrays by future development, but with the setbacks requested by County planning staff the risk of such shading is remote in any case. Current land use patterns in the area surrounding the Project may continue unaffected by the presence of the Project at the proposed location.

There are currently limited agricultural activities taking place on the subject land parcel, mostly intermittent grazing. The land is not high-yield agricultural land. Any agricultural activities taking place on the parcel currently can resume outside of the project fence line after project completion and during facility operation. Applicant may continue an agricultural use within the site, such as honeybee or sheep grazing, during the operational term of the facility. After facility decommissioning and equipment removal, agricultural activities could resume on the project site if desired.

The Project is located within the area designated as "Rural Area – Tier III" within the Arapahoe County Comprehensive Plan. The purpose of the Tier III is to promote "conservation of agriculture and open lands" (III-3). There is also an expressed preference for cluster development, with development "grouped together on a portion of the parcel, while a larger portion of the parcel is conserved for agriculture or open land" (III-3). Our proposed use meets these requirements exactly, being located on the southern end of the parcel, close to the existing oil and gas developments. As shown by the proposed plan sets, the remainder of the parcel (all areas outside of the fence line) will remain open to the existing agricultural use, which is intermittent grazing. These activities will not interfere with facility operation in any way. Furthermore, Applicant is pursuing plans to co-locate livestock grazing at the project site during operations, thus continuing an agricultural use within the fenced 20 acres and preserving the agricultural character of the designated area.

According to the Comprehensive Plan, non-residential uses in the Rural Area will be discouraged "unless they are agriculture-related or are public facilities and services" (III-3). Public Facilities are defined in the Comprehensive Plan as "...utility lines, power substations, power energy facilities..." (III-12).



Applicant believes that the proposed use meets the definition of power energy facilities, as a facility that produces electric power. The proposed use is also similar in character to utility lines and power substations, both of which are in close proximity to the proposed Project. This site was chosen for its proximity to a substation. Our conversations with the utility indicate that the substation is close to capacity and that future solar developments in the area after this one will be severely limited. Additionally, the Plan states that “Public Facilities should be accessible by the population served” (III-12). While electrical code regulations will not allow the free ingress of the public into an energy facility in the same way that power substation access is restricted to the public, a Solar Garden meets the spirit of that requirement by directly benefitting the subscribers to the garden, many of which could be drawn from the local area. Lastly, the Plan states that “Groundwater supply and availability will be a significant factor” (III-3) in limiting development density in the Tier III area. The proposed use will not impact groundwater quality in any way, and will not draw from groundwater resources during operation.

Applicant does not believe that the proposed use is in conflict with the County Comprehensive Plan. Rather, the proposed use meets many of the criteria for development in the Tier III area. Applicant is not aware of any conflict with any State or Regional Master Plans. The Project will comply with all applicable zoning/use regulations and County requirements.

## H. Local Government Services

Applicant believes that the proposed use will not affect the ability of the local government to provide any or all of its services, and consequently that it will not exceed the response capacity of the local emergency services. The unoccupied nature of the facility during normal operation will place no significant burden on such services as roads, schools, water/wastewater treatment, water supply, emergency services, transportation, infrastructure, housing or law enforcement.

Bennett Fire District (BFD) has jurisdiction over the project area. Fire ignition at these facilities is rare and is fairly simple to manage with very few easily combustible materials and no combustible fuels present onsite. BFD has granted permits for these facilities in the past and Applicant does not anticipate fire response for the Project to be outside of BFD’s capabilities to



respond to. BFD will also provide emergency medical services to the project site, should they be needed.

## I. Financial Burden on County Residents

N/A: only applicable to Major Permit Review

## J. Local Economy

N/A: only applicable to Major Permit Review

## K. Recreational Opportunities

N/A: only applicable to Major Permit Review

## L. Environmental Impact Analysis

### 1. Air Quality

The daily operation of the solar facility will not produce any noxious emissions that could affect air quality. During construction, Applicant and Applicant's contractor will employ best-practice measures to control airborne dust. Grading activities will be performed during the wetter months if possible, to reduce the likelihood of airborne dust generation. The use of a limited number of gasoline- or diesel-powered machines during construction is not expected to have a significant impact to air quality during the brief construction period. Given the environmentally-friendly nature of the development and the limited duration and scope of construction, maps of ambient air quality are not deemed necessary for this Project.

### 2. Visual Quality

The presence of the solar facility will be noticeable from Quincy Ave. For westbound travelers, the solar facility will be mostly screened by the trees lining Box Elder Creek until travelers are directly across from the facility. For eastbound travelers, the facility will be briefly visible. Applicant will make efforts to retain or restore the existing vegetation onsite around and between the solar arrays, as well as within the graded areas. The solar arrays will be arranged symmetrically and mostly following the existing land contours. The height above grade of the solar modules at maximum tilt is not expected to exceed eight feet; thus the solar arrays will be shorter in height than the existing oil and gas infrastructure, or the industrial



warehouse buildings also featured in the area. The visual character of that stretch of Quincy Ave. is dominated by a significant power transmission corridor featuring large high tension electric power transmission and distribution lines, and features an electrical substation behind a chain link fence. Applicant does not believe that the Project will cause any degradation to the visual quality of the area in excess of that already caused by the existing electrical utilities in the area.

### 3. Surface Water Quality

Applicant will take all necessary steps to protect surface water quality. Key to this is the retention of the existing vegetation across the majority of the project area and the installation of a grass buffer between the array fields and Box Elder Creek. Arapahoe County Public Works TRC has approved Applicant's plan to preserve surface water quality. Once these measures have been installed and established, no degradation of surface water quality is expected.

### 4. Groundwater Quality and Quantity

A geotechnical exploration of the Project site was conducted with test drilling depths up to 19 feet. No groundwater was encountered at any of the test drilling sites. Embedment depths for the structural supports to the solar arrays are not expected to exceed 10 feet. Applicant does not expect any degradation of ground water or underground aquifers due to the presence of the project in the area.

### 5. Wetlands and Riparian Areas

Applicant commissioned a Phase I Environmental Assessment (ESA) and an ecological survey for the Project site. No wetlands were observed onsite. The Box Elder Creek 100 year floodplain boundary is outside of the proposed Project boundary. No streambed or recharge areas were identified within the Project boundary. Riparian habitat was observed along Box Elder Creek to the east of the project and outside of the Project boundary. Applicant does not anticipate any significant degradation to these environmental zones due to the proposed use.



## 6. Terrestrial and Aquatic Animals and Habitat

An active prairie dog colony was observed on the project site. The Colorado Dept. of Parks and Wildlife recommends the humane removal of prairie dogs immediately prior to development. The Project is not expected to negatively impact the prairie dog colony outside of the project boundaries and Applicant will take measures to protect the electrical equipment from damage during the operational period. The ecological survey did raise the possibility of Preble's meadow jumping mouse habitat within the project boundary; however further observation and review by the US Fish and Wildlife Service determined no habitat present or concerns for the wildlife. No additional endangered species or their habitat were observed within the Project boundary. The Project is not considered to pose a threat to aquatic animal life.

## 7. Terrestrial and Aquatic Plant Life

Applicant will be retaining the existing vegetation onsite as much as possible. No protected plant species were observed onsite. The Project does not pose a risk to aquatic plant life.

## 8. Soils, Geologic Conditions and Natural Hazards

Applicant conducted a geotechnical exploration of the site. The soils are suitable for the proposed use. Applicant will minimize the extent of area grading activities for the solar array locations to the necessary minimum. No degradation of the soils or geology currently at the site is expected due to the proposed use.

Applicant does not consider the project to be at significant risk to the following natural hazards: hurricane, earthquake, landslide, avalanche and forest fire. The following natural hazards have some potential to affect the project: flood, tornado, hail and grass fire.

The project has been designed to be outside of the designated 100-year floodplain for the adjacent Box Elder Creek. Given that the operational life of the project is not expected to exceed 30 years, Applicant considers the risk to the project from flood to not be significant. Additional measures that can be taken to protect the project from flood include the installation of the solar modules at least four feet six inches (4' 6") from finish grade and locating all



electrical equipment such as combiner boxes, inverter stations and transformers on the western side of the project uphill from the creek.

Although tornados could possibly occur at the project site, Applicant does not believe the risk to be significant. The project is located well away from densely populated areas; should a tornado occur, collateral damage to the surrounding area is considered to be negligible. Solar PV technology is designed and manufactured to be resistant to all but the most severe hailstorms. Grass fires in the surrounding area could potentially enter the project boundary and damage the solar equipment; however, Applicant does not believe this risk to be significant enough to affect project viability.

Applicant will design the Project to meet or exceed all applicable local and national codes and standards. This means that the project systems and equipment will be designed to withstand the required snow loads, wind loads, seismic conditions, and all other applicable requirements or conditions. Should a natural event's impact exceed design criteria or emergency services' control and damage the equipment, Applicant has insurance coverage that will allow for the equipment to be replaced.

## M. Nuisances

Applicant does not anticipate this use causing a nuisance. Nuisances described in the 1401 regulations include noise, glare, dust, fumes, vibration and odor.

The operating technology is mostly silent and is emissions free. If feasible, efforts will be made to mitigate the visual impact of the project. The construction period will be short and will generate only sporadic delivery traffic. Off-site impacts will be kept to a minimum during construction. There will be no permanent staff onsite during operations; maintenance activities are expected to be limited to monthly/quarterly visits with a single light vehicle. The solar modules are designed and manufactured with anti-reflective coatings to absorb as much sunlight as possible and minimize glare. Any glare that could occur is unlikely to cause a nuisance given the remote location of the project.



## N. Areas of Paleontological, Historic or Archaeological Importance

Applicant does not believe that the use will significantly degrade any areas of paleontological, archaeological or historic importance. See attached letter from the Colorado Historic Society stating that no records of such nature were associated with the proposed project location.

## O. Hazardous Materials Description

Applicant does not anticipate that the project represents any unreasonable risk regarding the release of known hazardous materials either during construction or during operation, as these are generally not a feature of the project during either period.

- No chemicals are needed for construction of the facility or for its operation.
- Construction operations will minimize waste. There will be temporary dumpsters onsite during construction for construction waste. Temporary sanitary facilities will also be located onsite during construction. Any fuel spillage during construction will be contained and cleaned, and the spoils will be removed from the site and disposed of properly.
- Should liquid-immersed transformers be required for this project, Applicant will make best efforts to secure transformers that use non-toxic and biodegradable oils or fluids. All transformer equipment will be new and free from defects and will meet all applicable codes and testing standards. All applicable requirements set forth in 40 CFR 110 and 112 will be adhered to.

After the operational life of the facility is over, Applicant will decommission the facility. This will involve the safe removal of all structural steel and aluminum, conductors, inverters, transformers, concrete and fencing. Applicant will restore the site to as close to its original condition as is feasible after decommissioning. Applicant anticipates that the structural and electrical conductor components could be recycled; there could also be a secondary market for used solar collection equipment where Applicant would seek to sell the solar modules.



## **P. Balance Between Benefits and Losses**

N/A: only applicable to Major Permit Review

## **Q. Monitoring and Mitigation Plan**

Applicant will utilize all industry best practices to mitigate dust and other offsite impacts during construction and will comply with the provisions and conditions of all use and construction permits. Monitoring of this mitigation during construction will be accomplished by Applicant's Prime Contractor and by Arapahoe County inspection staff.

No mitigation is anticipated to be necessary for the operational phase of the project. The project will be monitored remotely for production verification and system performance diagnostics.

## **R. Transportation Impacts**

Transportation impact due to the project is expected to be low during the construction phase and negligible during operation. Further analysis is provided in the Traffic Report attached to this application and summarized above under the discussion of the Approval Criteria.

## **S. Benefit/Cost Analysis**

N/A: only applicable to Major Permit Review

## **T. Engineering Studies**

Engineering and environmental studies have been submitted for consideration along with this application as listed below:

- Site Development Plan (USR Permit Exhibit)
- Grading, Erosion and Sediment Control (GESC) Plan
- Engineer's GESC Report
- Engineer's Drainage Letter
- Engineer's Traffic Impact Letter
- Phase I Environmental Study
- Ecological Survey
- Geotechnical Study results

Additional documents submitted along with this application that support the engineering study findings and the environmental studies are as follows:



- Arapahoe County Engineering Technical Review Committee Letter
- Fish & Wildlife Service Response Letter
- Colorado Historical Society Record Search Results
- US Army Corps of Engineers Response Letter (Former Lowry Bombing and Gunning Range)

## U. Referrals to Outside Agencies and Response to Referral Comments

All required referral packet contents and envelopes were provided along with this application. If comments were provided, Applicant's responses can be found in the enclosed Point-by-Point Response Letter. The following agencies received referrals:

- Arapahoe County Assessor (Beverly Reynolds): no comments
- Arapahoe County Engineering (Spencer Smith): with comments
- Arapahoe County Mapping (Pat Hubert): with comments
- Arapahoe County Planning (Russell Johnson): with comments
- Arapahoe County Sheriff (Glenn Thompson): no comments
- Arapahoe County Zoning (Tammy King): with comments
- Colorado Parks and Wildlife (Travis Harris): no comments
- Bennett Fire District (Caleb O'Connor): no comments
- REAP I-70 (Matt Reay / Jack Keever): with comments
- Tri-County Health Dept. (Sheila Lynch): with comments
- Deer Trail Conservation District (Sheryl Walles): no comments
- CDOT / State Hwy. Dept. Region 1 (Rick Solomon): no comments
- XCEL Energy (Donna George): no comments
- US Army Corp. of Engineers (Kiel Downing): with comments
- Urban Drainage (David Mallory): no comments
- East End Adv. Committee (various): with comments

## IV. Additional Submittal Requirements Applicable to Major Facilities of a Public Utility (Private Company/Use By Special Review)

### A. Map and Description of areas around the proposed major facilities of a public utility

Two maps of the surrounding area are provided on the USR Plan Set included with this application. The project location is surrounded by oil and



gas infrastructure including pipelines, wells, and pump jacks. The property is also close to electric distribution and transmission lines, which is why we selected this site for this project. Proximity to electrical infrastructure is important for utility grid interconnection and for the compatibility of the solar garden use with surrounding uses. Surrounding uses appear to be intermittent to medium-frequency agricultural use and oil/gas exploration.

### **B. Description of how facilities will affect existing community patterns**

The Project will not significantly degrade the land use pattern of the surrounding areas in any way. There will be a solar easement on the surrounding land parcel designed to prevent future shading of the solar arrays by future development, but with the setbacks requested by County planning staff the risk of such shading is remote in any case. Current land use patterns in the area surrounding the Project may continue unaffected by the presence of the Project at the proposed location.

### **C. Description of applicable adopted comprehensive plans and whether facilities comply with those provisions**

The Project is located within the area designated as “Rural Area – Tier III” within the Arapahoe County Comprehensive Plan. The purpose of the Tier III is to promote “conservation of agriculture and open lands” (III-3). There is also an expressed preference for cluster development, with development “grouped together on a portion of the parcel, while a larger portion of the parcel is conserved for agriculture or open land” (III-3). Our proposed use meets these requirements exactly, being located on the southern end of the parcel, close to the existing oil and gas developments. As shown by the proposed plan sets, the remainder of the parcel (all areas outside of the fence line) will remain open to the existing agricultural use, which is intermittent grazing. These activities will not interfere with facility operation in any way. Furthermore, Applicant is pursuing plans to co-locate livestock grazing at the project site during operations, thus continuing an agricultural use within the fenced 20 acres and preserving the agricultural character of the designated area.



According to the Comprehensive Plan, non-residential uses in the Rural Area will be discouraged “unless they are agriculture-related or are public facilities and services” (III-3). Public Facilities are defined in the Comprehensive Plan as “...utility lines, power substations, power energy facilities...” (III-12). Applicant believes that the proposed use meets the definition of power energy facilities, as a facility that produces electric power. The proposed use is also similar in character to utility lines and power substations, both of which are in close proximity to the proposed Project. This site was chosen for its proximity to a substation. Our conversations with the utility indicate that the substation is close to capacity and that future solar developments in the area after this one will be severely limited. Additionally, the Plan states that “Public Facilities should be accessible by the population served” (III-12). While electrical code regulations will not allow the free ingress of the public into an energy facility in the same way that power substation access is restricted to the public, a Solar Garden meets the spirit of that requirement by directly benefitting the subscribers to the garden, many of which could be drawn from the local area. Lastly, the Plan states that “Groundwater supply and availability will be a significant factor” (III-3) in limiting development density in the Tier III area. The proposed use will not impact groundwater quality in any way, and will not draw from groundwater resources during operation.

Applicant does not believe that the proposed use is in conflict with the County Comprehensive Plan. Rather, the proposed use meets many of the criteria for development in the Tier III area. Applicant is not aware of any conflict with any State or Regional Master Plans. The Project will comply with all applicable zoning/use regulations and County requirements.

#### **D. Projections/forecasts of need for electricity or natural gas and the basis for the projections and forecasts**

The State of Colorado legislature has enacted numerous statutes over the past decade or more that cite the need for more power to be produced from renewable energy sources. This project will produce power under the Community Solar Gardens program enacted by HB 10-1342 and will provide power directly to consumers.



### E. Expected effect and impact on nearby property owners and on current land uses, compared with alternate locations

Applicant expects very little effect on nearby property owners as the Project is many acres removed from neighboring property boundaries. The associated impact with this limited effect is considered to be negligible. Current land uses can continue outside of the Project's fenced boundary without interruption or interference from the Project. Alternate locations considered were closer to populated areas or, in some cases, further from utility distribution architecture. We believe that this location presents less impact to surrounding areas and their uses than potential alternative locations in Arapahoe County.

### F. Provide a Water Supply Plan

No water is required for daily facility operations. Water during construction, if needed, will be supplied by truck. Any water for PV module washing during operation will be de-ionized water supplied by truck. Module washing activities are expected to be very infrequent.

# GENERAL ECOLOGICAL RESOURCES SURVEY

---

**50 Acres within Section 4,  
Township 5 South, Range 64 West  
Arapahoe County, Colorado 80127**

---



**PREPARED FOR:**



1774 Platte Street  
Denver, Colorado 80202

**WESTERN ENVIRONMENT AND ECOLOGY, INC.**

2217 West Powers Avenue  
Littleton, Colorado 80120  
(303) 730 3452 (phone)  
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[www.westernenvironment.com](http://www.westernenvironment.com)

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**50 Acres within Section 4,  
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**Western Environment and Ecology, Inc.  
Project Number: 642-010-02**

**PREPARED FOR:**



Simply smart solar.

1774 Platte Street  
Denver, Colorado 80202

**July 29<sup>th</sup>, 2015**

Prepared by:

A handwritten signature in blue ink, appearing to read "Austin Curry".

Austin Curry  
Staff Scientist

Reviewed by:

A handwritten signature in blue ink, appearing to read "Greg D. Sherman".

Greg D. Sherman P.G.  
President

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## 1.0 INTRODUCTION

Western Environment and Ecology, Inc. (Western Environment) was retained by Mr. Luke Rickard, Director of Project Development for SunShare, to conduct a general survey of ecological resources, including threatened and endangered species, wetlands, and other significant habitats, on approximately 50 acres within unincorporated Arapahoe County, Colorado. Mr. Rickard indicated that this study was in response to potential development of the site.

The objectives of this study were to (1) establish presence/absence and potential habitat of any federal or state threatened and endangered species on the property, (2) identify any wetlands or other ecologically sensitive areas on and adjacent to the property, and (3) make practical recommendations based on the results of the study.



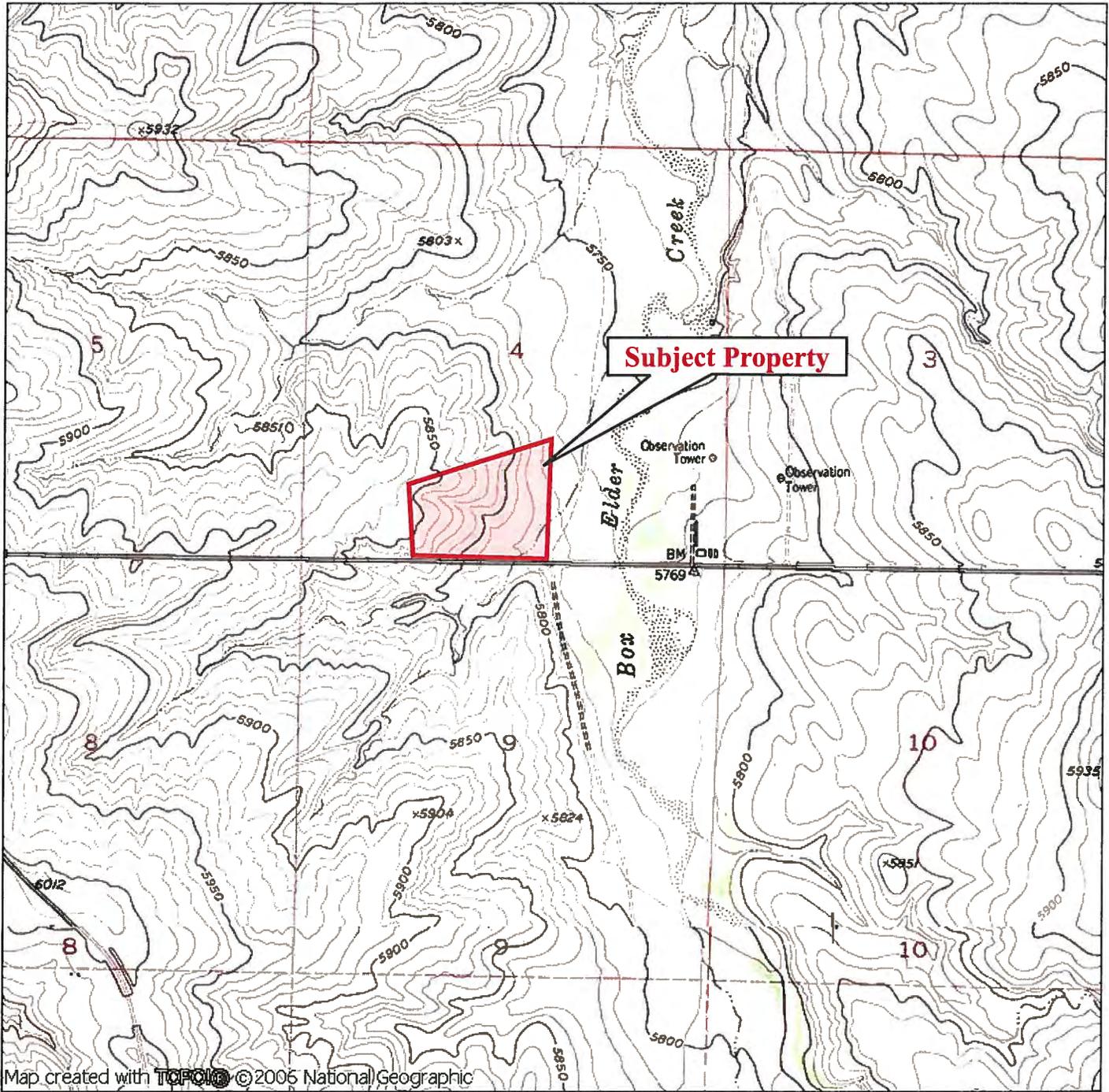
Prairie dog colony

## 2.0 STUDY AREA

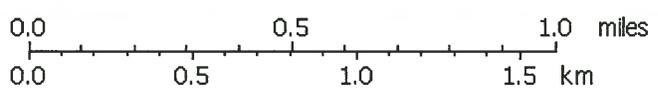
The project site consists of 50 acres within Section 4, Township 5 South, Range 64 West, within unincorporated Arapahoe County, Colorado (Figure 1). The subject area is located 2.5 miles east of the intersection of East Quincy Avenue and South Watkins Road. The Aurora City Limits are located one mile to the west of the proposed SunShare Project. Box Elder Creek is located approximately 900 feet to the east.

The site was vacant at the time of the investigation. The vegetation coverage of the site was dominated by grazed native and introduced grasses, such as smooth brome (*Bromus inermis*). Additionally, native and non-native weeds including; Prickly Pear Cactus (*Opuntia*), Canada thistle (*Cirsium arvense*), Mullein (*Verbascum thapsus*) and Yucca (*Yucca glauca*) were observed throughout the site. No woody vegetation was present on the property. The site is generally flat, with a gentle slope east toward Box Elder Creek.

The site occurs at an elevation of approximately 5,790 feet above sea level (USGS Watkins 7.5 Minute Quadrangle, 1994). Review of the FEMA Flood Insurance Maps (attached) indicate the project is not within a recognized flood zone (Figure 2). The US Resource Conservation Service classifies the site soils as Nunn Loam and Loamy Alluvial Land. The area geology includes alluvial sands overlying the Tertiary Age Upper Dawson Arkose (Ogden Tweto, 1979).



Map created with TOPOID © 2006 National Geographic



TN MN  
B°  
06/16/15

Western environment  
and ecology, inc.  
2217 West Powers Avenue  
Littleton, Colorado 80120

Figure 1 - Location Map  
50.0 Acres of Section 4,  
Township 5 South, Range 64 West,  
Arapahoe County, Colorado



Scale in feet

0

1000

Western environment  
and ecology, inc.  
2217 West Powers Avenue  
Littleton, Colorado 80120

Figure 2 - Site Map  
50.0 Acres of Section 4,  
Township 5 South, Range 64 West,  
Arapahoe County, Colorado

### 3.0 METHODS

Species that are federally or state listed as threatened or endangered, including federally proposed and candidate species, occurring or having historically occurred in Arapahoe County were considered for this study (Table 1). The county classification was determined by following the Colorado Field Office of the U.S. Fish and Wildlife Service's county checklist (USFWS, 2011). The list was narrowed based on habitat requirements of the species relative to existing habitats on the project.

The property was surveyed on July 24<sup>th</sup>, 2015. Information was collected on topography, ecosystems, and species of flora and fauna found on and adjacent to the property. Photographs were taken, and emphasis was placed on potential habitat of threatened and endangered species, and the presence of wetlands.



View of the culvert south of the property

Table 1. Common name, scientific name, and status of federal and state threatened and endangered species that could occur or historically occurred in the Colorado Piedmont (CDOW, 2008; USFWS, 2008).

Common Name	Scientific Name	Status <sup>1</sup>
<b>Birds</b>		
Bald eagle	<i>Haliaeetus leucocephalus</i>	ST
Whooping crane	<i>Grus americana tabida</i>	FE, SE
Least Tern	<i>Sterna antillarum</i>	FE, SE
Mountain plover	<i>Charadrius montanus</i>	FPT, SC
Piping plover	<i>Charadrius melodus</i>	FT, ST
Mexican spotted owl	<i>Strix occidentalis lucida</i>	FT, ST
Plains Sharp-Tailed Grouse	<i>Tympanuchus phasianellus jamesii</i>	SE
Western burrowing owl	<i>Athene cunicularia</i>	ST
Lesser Prairie Chicken	<i>Tympanuchus pallidicinctus</i>	ST
Ferruginous Hawk	<i>Buteo regalis</i>	SC
<b>Mammals</b>		
Black-footed ferret	<i>Mustela nigripes</i>	FE, SE
Preble's meadow jumping mouse	<i>Zapus hudsonius preblei</i>	FT, ST
Canada Lynx	<i>Lynx canadensis</i>	FT, SE
Kit Fox	<i>Vulpes macrotis</i>	SE
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	SC
<b>Amphibians</b>		
Boreal Toad	<i>Bufo boreas boreas</i>	SE
Northern Leopard Frog	<i>Rana pipiens</i>	SC
<b>Plants</b>		
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	FT
Colorado butterfly plant	<i>Gaura neomexicana coloradensis</i>	FT
<b>Insects</b>		
Pawnee montane skipper	<i>Hesperia leonardus montana</i>	FT

<sup>1</sup>Status Codes: FE = Federally Endangered, FT = Federally Threatened, FPT = Federally Proposed as Threatened, FC = Federal Candidate, SE = State Endangered, ST = State Threatened, SC = State Concerned

## 4.0 RESULTS AND DISCUSSION

### 4.1 Wetlands

No perennial waters, wetlands or obvious wetland habitat was observed on the project. An intermittent drainage was present in the southeastern corner of the property, however, no wetland vegetation was observed associated with the drainage. Vegetation on the site was limited to short heavily grazed grasses and weeds, such as Prickly Pear Cactus (*Opuntia*), Canada thistle (*Cirsium arvense*), Mullein (*Verbascum thapsus*) and Yucca (*Yucca glauca*). These are predominantly upland or facultive upland plants. Site soils are primarily sandy alluvium. No near surface (18") water was observed on or adjacent to the site.

The U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill materials into Waters of the U.S. under the authority of Section 404 of the Clean Water Act. Waters of the U.S. include ephemeral, intermittent and perennial streams, their surface connected wetlands and adjacent wetlands, certain lakes, ponds, drainage ditches and irrigation ditches that have a nexus to interstate commerce.

Western Environment evaluated, to the best of our ability based upon site conditions at the time of the survey, the three components of a jurisdictional wetland as defined in the US Army Corp of Engineers, (ACOE) Wetland Delineation Manual (1987). These components are: 1) Vegetation, 2) Soil and 3) Hydrology. The ACOE Manual defines *Nonwetlands* as "including upland areas that are neither deepwater aquatic habitats, wetlands, nor other special aquatic sites. They are seldom or never inundated, or if frequently inundated, they have saturated soils for only brief periods during the growing season, and, if vegetated, they normally support a prevalence of vegetation typically adapted for life only in aerobic soil conditions."

**While Box Elder Creek, adjacent to the east, is considered Waters of the U.S., it is the opinion of Western Environment that the proposed development, as shown n Figure 2, does not impact waters subject to Corps regulations under Section 404 of the Clean Water Act.**

#### **4.2 Wildlife Species Eliminated from Consideration as Occurring on the Project**

The following threatened and endangered species that have historically been thought to occur in Arapahoe County were immediately ruled out of serious consideration for this project based on available habitat: Mexican spotted owl, whooping crane, least tern, Canada lynx, kit fox, black-footed ferret, boreal toad, and Colorado butterfly plant.

The Mexican spotted owl was eliminated because it requires forests that are not present on the project. The whooping crane was also eliminated due to rarity in Colorado, and no known nesting or feeding habitat exists on or adjacent to the property. Less than 20 sightings of whooping cranes along the eastern plains and mountainous regions of Colorado have been recorded since 1931 (Andrews and Righter, 1992). The least tern inhabits sandy shorelines of reservoirs, lakes, and rivers with bare sandy shorelines. This shore bird is a casual to very rare spring and fall migrant on the northeastern plains of Colorado, and is unlikely to occur on the subject project.

The Canada lynx is a rare forest-dwelling species of northern latitudes that feeds primarily on snowshoe hares. No lynx habitat or its prey exist on the subject site. The kit fox is only known to occur on Colorado's desert slopes ranging from Montrose to Grand Junction. The black-footed ferret, which was eradicated from the Colorado Piedmont, has only been recently reintroduced in small numbers in northern Larimer and Weld Counties. These are experimental populations under study by the US Fish and Wildlife Service.

Colorado's only alpine species of toad, the boreal toad, has been found in spruce-fir forests and alpine meadows at elevations between 7,000 and 12,000 feet. The toad also requires lakes, marshes, ponds, or bogs with shallow water for breeding. These habitats do not exist on the property.

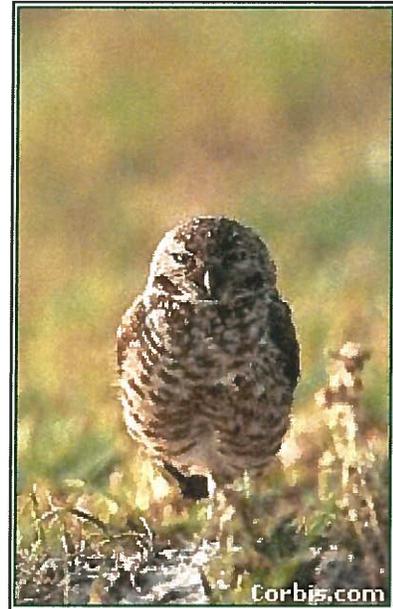
The Colorado butterfly plant has only been found in northern Larimer County in recent years and is generally associated with streams that do not exist onsite (Colorado Native Plant Society 1997).

### 4.3 Species Included in Survey

#### Western Burrowing Owl (*Athene cunicularia*)

##### *State Threatened*

The burrowing owl is found primarily in eastern Colorado as a summer resident. Two aspects of the biology of the western burrowing owl appear to influence both its regional and local abundance: 1) it prefers areas of short vegetation, and 2) it rarely, if ever, digs its own burrows. This migratory species is most often seen in Colorado during the summer months. Historically, burrowing owls were common wherever there were prairie dog colonies in northeastern Colorado. **During the inspection, an active prairie dog colony was observed on the property (Figure 2). This migratory species is most often seen in Colorado during the summer months. No burrowing owls were seen site at the time of this survey. However, Colorado Division of Wildlife (CDOW) requests that a burrowing owl survey be performed if construction is planned in active or abandoned prairie dog colonies during the owl's nesting season (March 1<sup>st</sup> to November 1<sup>st</sup>). If burrowing owls are observed on the site, the CDOW recommends that no disturbance take place within 150 feet of an active nest.**



Western burrowing owl, photo acquired on [www.corbis.com](http://www.corbis.com).

#### Bald Eagle (*Haliaeetus leucocephalus*)

##### *State Threatened*

The bald eagle was removed from the Federal Endangered and Threatened Species List on July 9<sup>th</sup>, 2007. No bald eagles or bald eagle nests were observed on the property. Western Environment reviewed the Natural Diversity Information Source (NDIS) and identified an active bald eagle nest approximately 6.15 miles northwest of the project. There is no permanent water or large trees on the property, therefore, it is unlikely that any bald eagles use the site. However, cottonwood trees occur adjacent to the Box Elder Creek, and could, as all trees can, provide

roosting site for eagles migrating between food sources. In winter, bald eagles are transient and use areas that provide feeding and roosting opportunities.

### **Mountain Plover (*Charadrius montanus*)**

#### ***State Concerned Species***

Typical habitat characteristics of the mountain plover are a mixture of short vegetation, bare ground, and a flat topography at both breeding and wintering locations. This small shorebird breeds in Colorado, and in parts of its breeding range the species commonly shows a preference for prairie dog towns and sites that are heavily grazed by domestic livestock. Prairie dog grazing promotes the short grasses that the plover prefers, and their digging creates areas of bare soil important for plover nesting. Plovers breed in Eastern Colorado from approximately April 1<sup>st</sup> through August 1<sup>st</sup>. Mountain plovers were proposed for federal listing as threatened on February 16<sup>th</sup>, 1999 (USFWS, 1999b), however the U.S. Fish and Wildlife Service withdrew the proposal on September 8<sup>th</sup>, 2003. The Mountain plover is a migratory bird and protected under the Migratory Bird Treaty Act. Harassment or destruction of the species or its nest is a federal offense. **Therefore, to ensure avoidance of the species, development within grazed sites or prairie dog colonies should not begin without a pre-construction inspection during plover breeding months from April to November.**

### **Piping Plover (*Charadrius melodus*)**

#### ***Federally Threatened, State Threatened***

This small shorebird can be found on very sparsely vegetated beaches, mudflats and sandy areas near water on shores and islands. Piping Plovers usually arrive in Colorado in late April or early May, and leave when the nesting cycle is completed, or by late August. Nesting populations have been documented in eastern Colorado along the South Platte and Arkansas River drainages. Food sources for Piping Plovers include insects, crustaceans and other small aquatic animals. Plovers feed along beaches, especially in areas where waves have washed up debris (CDOW, 1994). **Due to the lack of sandbars or mud-flats in the vicinity of the project, Piping Plover are unlikely to occur.**

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**Plains Sharp-Tailed Grouse (*Tympanuchus phasianellus jamesii*)**

***State Endangered***

The Plains Sharp-Tailed Grouse historically occurred on Colorado's eastern grasslands. Grouse habitat is characterized by rolling hills with Gambles oak, sage brush, service berries and grassy glades. This grouse is a resident from Alaska east to the Hudson Bay, and south to northern New Mexico. Currently, Colorado populations occur in Douglas County, northern and eastern Weld County, and Logan County east of Sterling. **No known populations of the Plains Sharp-Tailed Grouse are known to occur in proximity to the subject project (CDOW, 2011).**

**Lesser Prairie Chicken (*Tympanuchus pallidicinctus*)**

***State Threatened***

Historically, this bird occupied the grasslands of Texas, Oklahoma, New Mexico, Kansas and southeastern Colorado. It prefers sandy grassland areas abundant in midgrasses, sandsage and yucca. The majority of Colorado breeding pairs occur in the southeastern portion of the state in Baca, Prowers, Kiowa and Cheyenne Counties, and for the most part, on the Comanche National Grasslands near Campo. **No known populations of the Lesser Prairie Chicken are known to occur in proximity to the subject project (CDOW, 2011).**

**Ferruginous Hawk (*Buteo regalis*)**

***State Concerned***

This hawk is known to occur throughout eastern Colorado and in northwestern Colorado. In Colorado, the species is a common winter resident, but is considered an uncommon summer resident on the eastern plains (Andrews and Righter, 1992). Areas that could be potential nesting sites include large trees, rock outcrops, manmade structures such as windmills and power poles, or the ground. **At the time of the survey no nests were observed on or adjacent to the property.** These birds often can be seen associated with prairie dog colonies, which they utilize for foraging. This hawk, as are all birds of prey, is federally protected under the Migratory Bird Species Act.

### **Preble's Meadow Jumping Mouse**

*(Zapus hudsonius preblei)*

*Federally Threatened, State Threatened*

Typical Preble's habitat has been described as "well-developed plains riparian vegetation with relatively undisturbed grassland and a water source in close proximity," and "dense herbaceous vegetation consisting of a variety of grasses, forbs and thick shrubs" (Armstrong et al., 1997). Although any vegetation could offer cover and hibernacula for Preble's, the species is mostly known from habitat containing shrub cover, such as willow or narrow-leaf cottonwood.



Preble's meadow jumping mouse

Preble's are known to regularly range outward into adjacent uplands to feed and hibernate. For this reason, the U.S. Fish and Wildlife Service generally requires a 300 foot development buffer from the edge of the 100 year flood plain. **Riparian habitat suitable to Preble's was observed along Box Elder Creek east of the project. Western Environment reviewed flood insurance maps from the Federal Emergency Management Agency (attached), which show the 100 year flood plane of Box Elder Creek borders the eastern boundary of the project (Figure 2). The US Fish and Wildlife Service recommends a 300 foot buffer between the 100 year flood plane and any development. As indicated on Figure 2, this impacts the proposed development.**

### **Black-tailed Prairie Dog (*Cynomys ludovicianus*)**

*Former Candidate for Federal Listing, State Concerned*

The U.S. Fish and Wildlife Service was petitioned to list the black-tailed prairie dog as a threatened species in July of 1998. The agency determined on February 3<sup>rd</sup>, 2000, that listing the species was warranted, but it was precluded because other species were in greater need of

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protection (USFWS, 2000). The black-tailed prairie dog was added to the candidate list, and the species' status was reviewed annually. On August 12<sup>th</sup>, 2004 the USFWS determined that the black-tailed prairie dog no longer meets the Endangered Species Act definition as threatened, and was removed as a candidate for federal listing. **Active prairie dog colonies currently occupy the site (Figure 2). The Colorado Department of Parks and Wildlife recommends “humane removal” of prairie dogs immediately prior to development. Removal strategies may include trapping and relocation, or donation to the U.S. Fish and Wildlife Service black-footed ferret recovery program or an approved raptor rehabilitation program as a food source. Additional options include the extermination of the prairie dogs by an approved pest control firm.**

**Ute Ladies'-Tresses Orchid (*Spiranthes diluvialis*)  
*Federally Threatened***

This orchid usually occurs in “...old stream channels, alluvial terraces, wet meadows, and other sites where the soil is saturated to within 18" of the surface at least temporarily during the growing seasons” (USFWS, 1992). The eastern Colorado populations of species are located in mesic riparian meadows in relict tall grass prairie areas near Boulder Creek, South Boulder Creek, and Saint Vrain Creek in Boulder County, Colorado, and in mesic meadows in the riparian woodland understory along Clear Creek in Jefferson County, Colorado (USFWS 50 CFR Part 17). One population was historically identified in Weld County east of Greeley near Crow Creek in 1856, but is now considered extirpated. Soil conditions and vegetation composition of known *Spiranthes* sites suggest that wetlands regulated by the



Ute Ladies'-Tresses Orchid

Corps under the Clean Water Act qualify as potential *Spiranthes* habitat. Orchid surveys are required in Boulder and Jefferson Counties, and in the 100-year flood plains and perennial tributaries of the South Platte River, Fountain Creek, and the Yampa Rivers if construction is expected to impact these areas (USFWS 1992). Generally, these surveys must be completed during blooming season (July 20 to August 31). It should be noted that the survey is only required in areas where proposed construction activities are to occur in potential *Spiranthes* habitat, and only when a Federal permit (for instance a permit to place fill materials into a Waters of the U.S. under Section 404 of the Clean Water Act) or Federal funding is utilized for an activity in those habitats. If a Federal permit or funding is needed for an activity on the project, the agency responsible for issuing the permit or providing the funds would consult the Service to determine how the action may affect the species or its designated critical habitat. The Service would then work with the agency and/or landowner to modify the project and minimize impacts. **No perennial waters occur on the property, nor is *Spiranthes* designated Critical Habitat. It is the opinion of Western Environment that *Spiranthes* does not inhabit the project.**

**Pawnee montane skipper (*Hesperia leonardus montana*)**

***Federally Threatened***

This butterfly occurs in dry, open Ponderosa pine woodlands at an elevation range of 6,000 to 7,000 feet within the Pikes Peak Granite formation. Assessment of the skipper indicates that the insect's habitat is centered near Deckers, Colorado, with their range estimated to be 37.9 square miles (USFWS, 1998). The adult butterflies emerge from their pupae in late July for feeding and mating. The females then deposit their eggs on the leaves of blue grama grass, the larval food supply. Little is known about the larval and pupal stages of the species. Recent surveys of the skipper suggest that their populations may be at an all time high (recorded) after the Hayman Fire of 2002 (Colorado Natural Heritage Program, January 2005). This is likely due to the necessity of fire to remove trees, and promote herbaceous grass growth including blue grama and gayfeather on the forest floor. **The subject project does not occur in known Pawnee montane skipper habitat.**

### Other Wildlife

During the site visit, a desert horned lizard (*Phrynosoma platyrhinos*) and several cottontail rabbits (*Sylvilagus*) were observed on the subject property.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

At the time of the survey, no threatened or endangered species or their obvious habitat were seen on the subject site. Additionally, no wetlands or Waters of the U.S. subject to regulation under Section 404 of the Clean Water Act occur on the project.

- The U.S. Fish and Wildlife Service considers Preble's Meadow Jumping Mouse habitat to occur within approximately 300 feet from the edge of a 100 flood plain. However, based upon the poor quality of the over-grazed upland habitat, Western Environment does not consider the project to be Preble's habitat. Therefore, we recommend requesting a "Finding of No Effect" letter from the U.S. Fish and Wildlife Service, indicating that development of this property would not adversely affect Preble's.
- Due the presence of active prairie dog colonies on and adjacent to the site, Western Environment recommends that Mountain Plover (*Charadrius montanus*) and Western Burrowing Owl (*Athene cunicularia hypugaea*) surveys be conducted immediately prior to project development.
- The CDPW recommends that prairie dogs be "humanely removed" prior to development. This may include relocation, donation, or euthanasia by licenced pest control firms. (Note: Western Burrowing Owl and Mountain Plover surveys must be performed prior to any activities)

No ecological issues were identified with the site.

## 6.0 LITERATURE CITED

- Andrews, R. and R. Righter. 1992. Colorado birds: a reference to their distribution and habitat. Denver Museum of Natural History. Denver. 442 pp.
- Armstrong, D.M., M.E. Bakeman, A. Deans, C.A. Meaney, and T.R. Ryon. 1997. Conclusions and recommendations *in*: Report on habitat findings on the Preble's meadow jumping mouse. Edited by M. E. Bakeman. Report to USFWS and Colorado Division of Wildlife.
- Bechard, M.J., Knight, D.G., Smith, and R.E. Fitzner. 1990. Nest sites and habitats of sympatric hawks (*Buteo spp.*) Washington Journal of Field Ornithology 61:159-170.
- Colorado Division of Wildlife. 1999. Endangered, Threatened, and Special Concern Wildlife Colorado Division of Wildlife. November 2003. Conservation Plan for Grassland Species in Colorado. Colorado Grassland Species Working Group. November 2003. Denver, Co.
- Colorado Division of Wildlife. 2006. Natural Diversity Information Source Maps. Last Updated September, 2006.
- Colorado Native Plant Society. 1997. Rare plants of Colorado, 2<sup>nd</sup> edition. Falcon Press® Publishing Co., Inc. and Rocky Mountain Nature Association in cooperation with Colorado Native Plant Society. Helena, Montana and Estes Park, Colorado. 105 pp.
- Colorado Natural Heritage Program. January 2005. Pawnee Montane Skipper Post-fire Habitat Assessment Survey, September 2004.
- Fitzgerald, J.P., C.A. Meaney, and D.M. Armstrong. 1994. Mammals of Colorado. Denver Museum of Natural History and University Press of Colorado. Niwot, Colorado. 467 pp.
- Graul, W.D. 1975. Breeding biology of the mountain plover. Wilson Bulletin 87:6-31.
- Hoogland, John L. 1995. The Black-tailed Prairie Dog. The University of Chicago Press, Chicago and London.
- Jennings, W.F. 1989. Final report. Species studied: *Eustoma grandiflorum*, *Spiranthes diluvialis*, *Malaxis brachypoda*, *Hypoxis hirsuta*, *Physaria bellii*, *Aletes humilis*. Unpublished report prepared for the Nature Conservancy under the Colorado Natural History Small Grants Program. The Nature Conservancy, Boulder, Colorado. 48 pp.

- Jennings, W.F. 1990. Final report. Species studied: *Spiranthes diluvialis*, *Sisyrinchium pallidum*. Unpublished report prepared for The Nature Conservancy under the Colorado Natural History Small Grants Program. The Nature Conservancy, Boulder, Colorado. 29 pp.
- Jones, S.R. 1998. Burrowing owl. Pages 220-221 in H.E. Kingery, ed. Colorado breeding bird atlas. Colorado Bird Atlas Partnership. Denver.
- Kingery, H.E. 1998. Colorado breeding bird Atlas. Colorado Bird Atlas Partnership. Denver.
- Long, Kim. Prairie Dogs, A Wildlife Handbook, Johnson Books, Boulder, 2002.
- National List of Plant Species That Occur in Wetlands, Region 4, 5, and 8, Resource Management Group, Inc., Michigan, 1994.
- Nichols, F.E. and J.A. Daley. 1995. 1995 Prairie Dog Counts on the Cathy Fromme Prairie. Professional report submitted to the Fort Collins Natural Resources Department. 8p.
- Remote Sensing Research. 1996. 1996 Coyote Ridge Prairie Dog Study. Professional report submitted to the City of Fort Collins Natural Resources Department.
- Sibley, David Allen. 2000. The Sibley Guide to Birds. Alfred A. Knopf, Inc. New York.
- Tileston, J.V., and R.R. Lechleitner. 1966. Some Comparisons of the Black-tailed and White-tailed Prairie Dogs in North-central Colorado. American Midland Naturalist 75:292-316.
- U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey of Adams County, Colorado. Historical Replica, October 1974.
- U.S. Department of Agriculture, NRCS. 2001. The PLANTS Database, Version 3.1 (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA
- U.S. Department of Agriculture. No date. Midwestern wetland flora: Field office guide to plant species. USDA Soil Conservation Service, Midwest National Technical Center, Lincoln, Nebraska. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page <http://www.npwrc.usgs.gov/resource/othrdata/plntguid/plntguid.htm> (Version 16JUL97).
- U.S. Fish and Wildlife Service, Region 6, Pawnee Montane Skipper Butterfly Recovery Plan. September, 1998
- U.S. Fish and Wildlife Service Ecological Services Colorado Field Office, Federally Listed and Candidate Species and Their Status in Colorado, August 21, 2001.
- U.S. Fish and Wildlife Service. 1999. Interim Survey Guidelines for Preble's Meadow Jumping Mouse.

U.S. Fish and Wildlife Service. 1992. Interim Survey Requirements for *Spiranthes Diluvialis*.

U.S. Fish and Wildlife Service. 1999b. Services proposes to list mountain plover as threatened.  
News Release 99-02.

U.S. Fish and Wildlife Service. Fish and Wildlife Service Proposes to Remove the Preble's  
Meadow Jumping Mouse from the Endangered Species List, News Release. Jan. 28,  
2005.

Whitson, Tom, et al. 2000. Weeds of the West. Western Society of Weed Science, Newark, CA.



U.S. Fish and Wildlife Service

# National Wetlands Inventory

Jul 22, 2015



POWERED BY  
**esri**



## Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

**HISTORY COLORADO**  
**Office of Archaeology and Historic Preservation**  
**1200 Broadway, Denver, Colorado 80203**

Mr. Preston Hartman  
SunShare, LLC  
1441 18<sup>th</sup> Street, Suite 400,  
Denver, CO 80202

July 27, 2014

Re: Quincy Solar Garden  
File Search No. 18948

At your request, the Office of Archaeology and Historic Preservation has conducted a search of the Colorado Inventory of Cultural Resources located in the following area:

PM	T	R	S
6th	5S	64W	4

0 sites and 0 surveys were located in the designated area(s).

If information on sites in the project area was found, detailed information follows the summary. If no sites or districts were found, but surveys are known to have been conducted in the project area, survey information follows the summary. We do not have complete information on surveys conducted in Colorado, and our site files cannot be considered complete because most of the state has not been surveyed for cultural resources. There is the possibility that as yet unidentified cultural resources exist within the proposed impact area.

Therefore, in the event there is Federal or State involvement, we recommend that a professional survey be conducted to identify any cultural resources in the project area, which are eligible to be listed in the National Register of Historic Places. We look forward to consulting with you regarding the effect of the proposed project on any eligible cultural resource in accordance with the Advisory Council on Historic Preservation Procedures and the Preservation and Protection of Historic and Cultural Resources (36 CFR 800). Please provide this office with the results of the cultural resource survey for our review of professional adequacy and compliance with regulations.

If you have any questions, please contact the Office of Archaeology and Historic Preservation at (303) 866-3395 or 3392. Thank you for your interest in Colorado's cultural heritage.

Richard Wilshusen  
Deputy State Historic Preservation Officer for Archaeology  
State Archaeologist

Kevin Black  
Assistant State Archaeologist

\*Information regarding significant archaeological resources is excluded from the Freedom of Information Act. Therefore, legal locations of these resources must not be included in documents for public distribution.

18948\_s/18948\_sy

# WESTERN ENVIRONMENT AND ECOLOGY, INC

August 3<sup>rd</sup>, 2015

Drue DeBerry  
U.S. Fish and Wildlife Service  
Ecological Services  
Colorado Field Office  
P.O. Box 25486, DFC (MS 65412)  
Denver, Colorado 80225-0486

0770102  
2015740911 Em. Austin Curry

U.S. FISH AND WILDLIFE SERVICE	
<input checked="" type="checkbox"/> NO CONCERNS	AUG 25 2015
<input type="checkbox"/> CONCUR NOT LIKELY TO ADVERSELY AFFECT	
<input type="checkbox"/> NO COMMENT	
DRUE L. DEBERRY, ACTING COLORADO FIELD SUPERVISOR	DATE

8/25/15

Subject: **Preble's Meadow Jumping Mouse Habitat Exclusion**, 50 acres within Section 4, Township 5 South, Range 64 West, within unincorporated Arapahoe County, Colorado. Western Environment and Ecology, Inc. Project Number: 642-010-02

Dear Mr. DeBerry,

Western Environment and Ecology, Inc. (Western Environment), on behalf SunShare, completed a Preble's habitat assessment of the above mentioned property on July 24<sup>th</sup>, 2015. The assessment was completed in response to the potential development of the property for a solar garden (see attached site plans). This project encompasses approximately 50 acres within Section 4, Township 5 South, Range 64 West, within unincorporated Arapahoe County, Colorado (Figure 1). The subject area is located 2.5 miles east of the intersection of East Quincy Avenue and South Watkins Road. Box Elder Creek, which contained flowing water, was located approximately 900 feet to the east. At the time of the survey the property was vacant. The project occurs outside of the USFWS Denver Metropolitan area Block Clearance Zone (BCZ). Review of the Federal Emergency Management Agency (FEMA) Flood Insurance Maps show the eastern boundary of the subject site exists within approximately 300 feet of the Box Elder Creek 100-year flood plain (Figure 2).

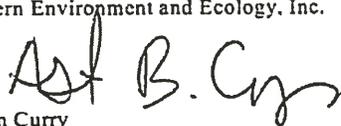
The vegetation present on the site was dominated by short native and introduced grasses indicative of over grazing, including; cheatgrass (*Bromus tectorum*) and mat grama (*Bouteloua simplex*). Additionally, native and non-native weeds including; Canada thistle (*Cirsium arvense*), mullein (*Verbascum thapsus*), as well as upland vegetation, such as prickly pear cactus (*Opuntia*) and yucca (*Yucca glauca*) were observed throughout the site (see attached photos). No woody vegetation was present on the property.

The Box Elder Creek, located east of the property contained riparian habitat. Typical Preble's habitat, as described by Armstrong et al. (1997, p. 77), is "well-developed plains riparian vegetation with relatively undisturbed grasslands and a water source in close proximity." Armstrong also indicated a preference for "dense herbaceous vegetation consisting of a variety of grasses, forbs and thick shrubs." The wetland vegetation along the Box Elder Creek included non-native and introduced grasses with sparse coyote willows (*Salix exigua*) and large cottonwood trees (*Populus*).

It is the opinion of Western Environment that, while the project is adjacent to the Box Elder Creek, without woody vegetation cover, such as trees or low shrubs, the site does not contain Preble's habitat.

Based on habitat information and the attached photos, Western Environment seeks concurrence from the Service that the subject project, as shown on the attached figure, will have "No Significant Impact on Preble's Habitat." I look forward to receiving your response.

Sincerely,  
Western Environment and Ecology, Inc.

  
Austin Curry  
Staff Scientist  
[austin@westernenvironment.com](mailto:austin@westernenvironment.com)

cc: Luke Rickard, SunShare

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# Phase I Environmental Site Assessment

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50 Acres in Section 4, Township 5 South, Range 64 West  
Arapahoe County, Colorado 80127

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Prepared For:



1774 Platte Street  
Denver, Colorado 80202

**WESTERN ENVIRONMENT AND ECOLOGY, INC.**

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## APPENDICES

APPENDIX A	References List
APPENDIX B	Aerial Photography Documentation
APPENDIX C	Environmental Inquiry Request/Supporting Documentation
APPENDIX D	Western Environment and Ecology, Inc, Statement of Qualifications

## **2.0 SITE DESCRIPTION**

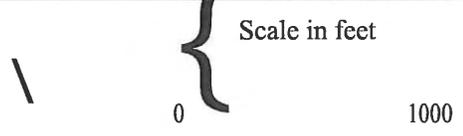
This Phase I Environmental Site Assessment was conducted for a 50.0 acre site located in unincorporated Arapahoe County, Colorado (Figure 1). The subject property is located within Section 4, Township 5 South, Range 64 West (Figure 2). The property is zoned Agricultural-1 and is currently undeveloped.

The subject area is located approximately 2.5 miles east of the intersection of East Quincy Avenue and South Watkins Road. The City Limits of Aurora is one mile to the west of the proposed SunShare Project. Box Elder Creek is located approximately 900 feet to the east. High tension power lines are present to the south across Quincy Avenue. Three phase power lines border the project to the north.

The site occurs at an elevation of approximately 5,790 feet above sea level (USGS Watkins 7.5 Minute Quadrangle, 1994). Review of the FEMA Flood Insurance Maps (attached) indicate the project is not within a recognized flood zone. The US Resource Conservation Service classifies the site soils as Nunn Loam and Loamy Alluvial Land. The area geology includes alluvial sands overlying the Tertiary Age Upper Dawson Arkose (Ogden Tweto, 1979)]

Records from the Colorado Oil and Gas Conservation Commission identified a producing oil well located approximately 1,000 feet west of the property. The well, Tebo 4 #1H, is operated by the Conoco Phillips Company. Well logs show that Tebo 4 #1H was drilled to a depth of 9,800 feet on December 26<sup>th</sup>, 2013. All inspections of the facility, including the most recent inspection performed on July 23<sup>rd</sup>, 2014, have recorded no violations associated with the site.

Records from the Colorado Division of Water Resources indicated that a permitted water well is located on a property to the west of the proposed project. The lithology log from the well (Permit # 200285) identified clay and tan loam from the surface to 19 feet in depth. Yellow and green clay was found from 19 to 33 feet, where gray shale and sandstone was encountered. A static groundwater level was present at 160 feet below the surface.



Western environment  
and ecology, inc.  
2217 West Powers Avenue  
Littleton, Colorado 80120

Figure 2 - Site Map  
50.0 Acres of Section 4,  
Township 5 South, Range 64 West,  
Adams County, Colorado

### **3.1 Results**

No results were located within the minimum search distance. However, industrial activity, and water storage ponds were observed approximately one mile west of the property. This parcel of land, owned by East Quincy Holding LLC, has been divided into several industrial buildings leased to multiple companies addressed at 34501 East Quincy Avenue. Known tenants include Autoliv, Conoco-Phillips, Darma Technologies Inc, and Pure Cycle Corporation. Autoliv, which is no longer using the site, manufactured air bags and air bag explosives. Conoco-Phillips, now closed, used the site for office and administration. Darma Technologies Inc. is a computer consultant. Pure Cycle Corporation is a water supply company, treating water and supplying hydraulic fracturing fluid to Conoco-Phillips.

#### **3.1.2 The Former Lowery Bombing and Gunnery Range**

The project site is located within Former Lowry Bombing and Gunnery Range (FLBGR). The FLBGR encompasses approximately 92 square miles. This site was opened in 1942 as an Army Airfield, and was used during and after World War II to conduct armament and bombing training. From 1942 to 1963 the Air Force, Army, Navy and Air National Guard used the range for various training exercises. These activities resulted in the FLBGR containing large amounts of exploded and unexploded munitions. In 1991, the FLBGR was established as a Formerly Used Defense Site (FUDS). The primary federal agency responsible for FUDS sites is the Department of Defense, working through the U.S. Army Corps of Engineers (Corps). The regional Corps district, as well as the geographic FUDS district project manager, provide construction support services to identify and remove potential hazards associated with development. The FLBGR is located in the Corps, Omaha District office.

When notified of a forthcoming change in land use the Corps, in conjunction with the Colorado Department of Public Health and the Environment (CDPHE) will perform a hazard evaluation for the property. Following this evaluation, a decision will be made concerning the status of the land use change with regard to the risk of the property owner encountering unexploded ordnances (UXO) during the course of excavation. In the event that a perceived risk is present, one or more options will be offered to the landowner. These options include anomaly avoidance, UXO investigation and clearance consistent with the approved project schedule, or recommendation to the landowner to initiate his/her own UXO investigation and clearance with

#### 4.0 SITE INSPECTION / INTERVIEWS

The purpose of a site inspection is to obtain information indicating the likelihood of identifying recognized environmental condition (REC's) in connection with the property. During a site visit to the site on June 19<sup>th</sup>, 2015, Western Environment personnel visually and physically observed the property to the extent not obstructed by bodies of water, vegetation, adjacent buildings, or other obstacles and debris.

At the time of the inspection the subject property was used for cattle grazing. East Quincy Avenue bordered the site on the south. The adjacent properties were also vacant. High tension power lines were present along East Quincy Avenue to the south of the subject property. Three phase power lines were located to the north. An oil well and ancillary equipment were observed to the west (Figure 2).



View to north showing foundations and prairie dog borrows.

## **5.0 CONCLUSIONS**

Western Environment and Ecology, Inc. performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 of 50.0 acres within Section 4 Township 5 South, Range 64 West Arapahoe County, Colorado. Any exceptions to, or deletions from, this practice are described in Section 5.1 of this report. **This assessment has revealed no evidence of recognized environmental conditions (REC) in connection with the subject property except:**

- **The US Army Corps of Engineers should be consulted regarding clearing the site of potential unexploded military ordinance.**

### **5.1 Deviations/Data Gaps**

No Sanborn Fire Maps or City Directories were available for review. Also, no environmental issues request made due to time constraints and the lack of available data. It is the opinion of Western Environment that this lack of information does not constitute a Data Failure as defined by ASTM E-1527-13, Section 8.3.2.3.

**APPENDIX A**  
**Reference List**

## Summary

Flood Zones Hazard Map

Federal Emergency Management Agency (FEMA)

	< 1/4	1/4 - 1/2	1/2 - 1
National Priorities List (NPL)			
CERCLIS List			
CERCLIS NFRAP			
RCRA CORRACTS Facilities			
RCRA non-CORRACTS TSD Facilities			
Emergency Response Notification System (ERNS)			
US Toxic Release Inventory			1
US RCRA Generators (CESQG, SQG, LQG)			1
US ACRES (Brownfields)			
US NPDES			
CO Underground Storage Tanks			
CO Superfund - National Priorities List			
CO Uranium Mill Tailings Sites			
CO Solid Waste Sites			

## ***National Priorities List (NPL)***

**This database returned no results for your area.**

The Superfund Program, administered under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is an EPA Program to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. The NPL (National Priorities List) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. The boundaries of an NPL site are not tied to the boundaries of the property on which a facility is located. The release may be contained within a single property's boundaries or may extend across property boundaries onto other properties. The boundaries can, and often do change as further information on the extent and degree of contamination is obtained.

## ***CERCLIS NFRAP***

**This database returned no results for your area.**

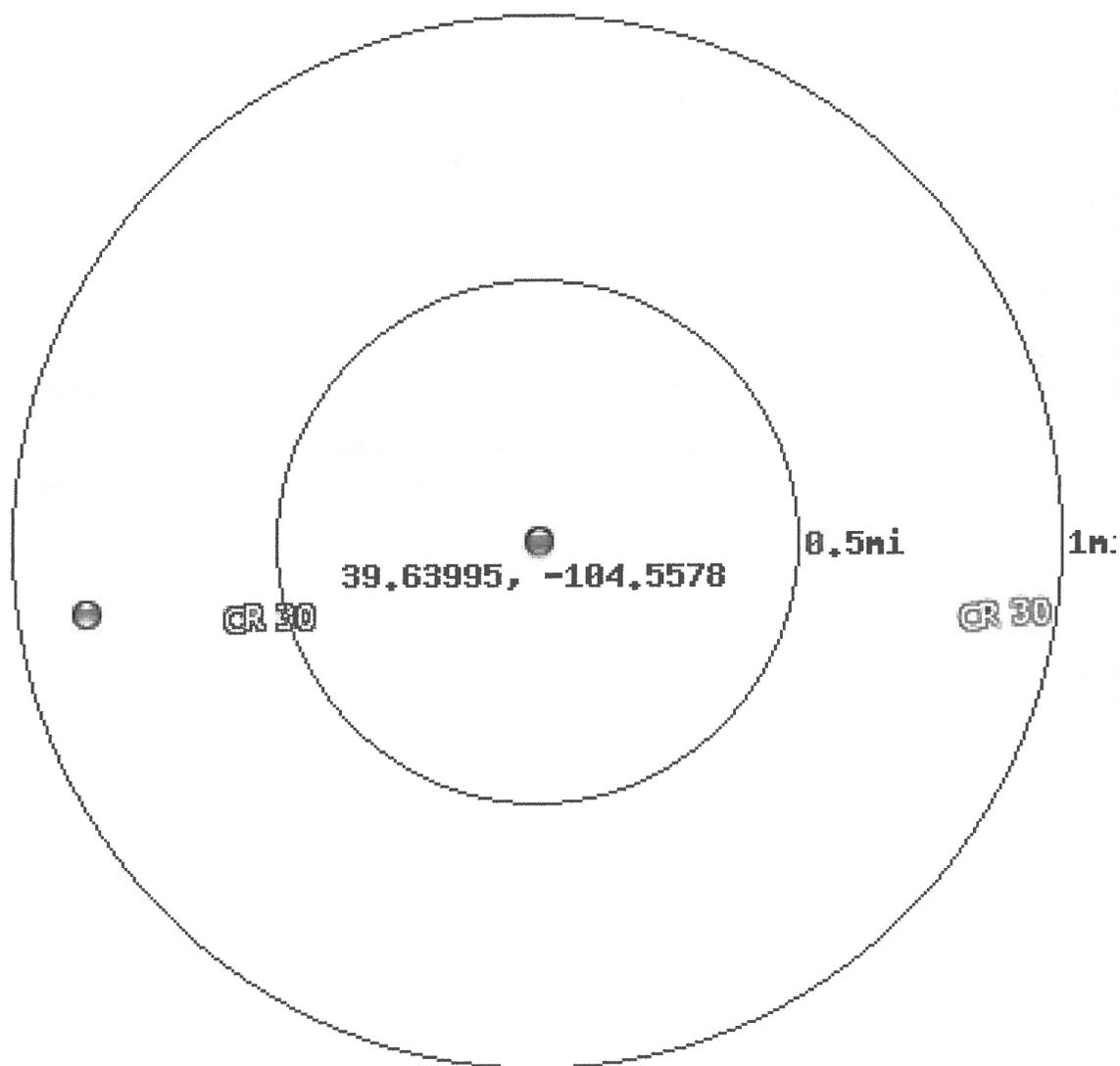
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" NFRAP have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the site being placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed these NFRAP sites from CERCLIS to lift unintended barriers to the redevelopment of these properties. This policy change is part of EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens promote economic redevelopment of unproductive urban sites.

## ***RCRA non-CORRACTS TSD Facilities***

**This database returned no results for your area.**

The United States Environmental Protection Agency (EPA) regulates hazardous waste under the Resource Conservation and Recovery Act (RCRA). The EPA's RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste. RCRA Permitted Treatment, Storage, Disposal Facilities (RCRA-TSD) are facilities which treat, store and/or dispose of hazardous waste.

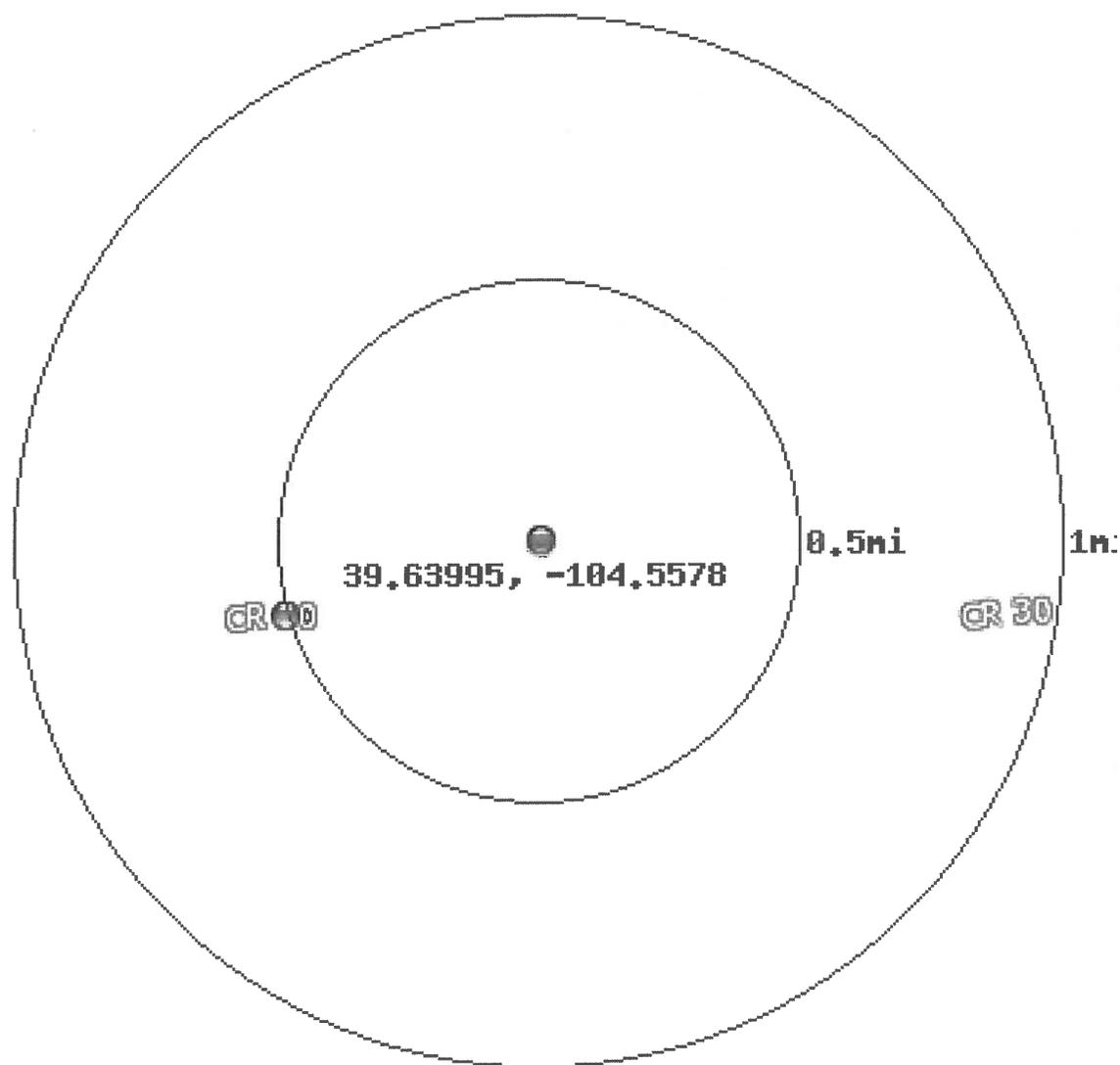
## US Toxic Release Inventory



**This database returned 1 results for your area.**

The Toxics Release Inventory (TRI) is a publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. TRI reporters for all reporting years are provided in the file.

## US RCRA Generators (CESQG, SQG, LQG)



**This database returned 1 results for your area.**

The United States Environmental Protection Agency (EPA) regulates hazardous waste under the Resource Conservation and Recovery Act (RCRA). EPA maintains a database of facilities, which generate hazardous waste or treat, store, and/or dispose of hazardous wastes.

Conditionally Exempt Small Quantity Generators (CESQG) generate 100 kilograms or less per month of hazardous waste, or 1 kilogram or less per month of acutely hazardous waste.

Small Quantity Generators (SQG) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Large Quantity Generators (LQG) generate 1,000 kilograms per month or more of hazardous waste, or more than 1 kilogram per month of acutely hazardous waste.

## ***US ACRES (Brownfields)***

**This database returned no results for your area.**

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. The Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an online database for Brownfields Grantees to electronically submit data directly to The United States Environmental Protection Agency (EPA)

## ***CO Underground Storage Tanks***

**This database returned no results for your area.**

Underground Storage Tanks (UST) containing hazardous or petroleum substances are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The Colorado Department of Labor and Employment/Division of Oil and Public Safety maintains a list of registered aboveground and underground storage tanks.

## ***CO Uranium Mill Tailings Sites***

**This database returned no results for your area.**

There were nine uranium mill tailings sites in Colorado designated for cleanup under the federal Uranium Mill Tailings Radiation Control Act. These nine sites, know commonly as UMTRA sites, were remediated jointly by the State of Colorado and the U.S. Department of Energy during the late 1980's and early 1990's. Mill tailings were removed from 8 of the mill sites and relocated in engineered disposal cells. A disposal cell is designed to encapsulate the material, reduce radon emanation, and prevent the movement of water through the material. At one site, Maybell, CO, the tailings were stabilized in-place at the mill site. After remediation of the tailings was completed, the State and DOE began to investigate the residual impacts to groundwater at the mill sites. The groundwater phase of the UMTRA program is on-going.

**APPENDIX B**  
**Aerial Photography Documentation**

**APPENDIX C**

**Environmental Issues Inquiry and Supporting Documentation**

Western Environment and Ecology, Inc.  
**Owner Questionnaire** for a Phase I Environmental Site Assessment, ASTM 1527-13

**3. Specialized knowledge or experience of the person seeking to qualify for the LLP**

As the owner of the subject property, do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or adjoining property so that you would have specialized knowledge of the chemicals, processes, etc., used by this type of business?

no specialized knowledge

If yes, please describe this specialized knowledge or experience:

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**4. Relationship of the purchase price to the fair market value of the subject property if it were not contaminated.**

Has the purchase price of this property been lowered below fair market value because of any contamination or some type of environmental issue? NOT aware of a reduction

If yes, please describe the reasons for the lower purchase price:

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**5. Commonly known or reasonably ascertainable information about the property.**

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as the owner:

A. Do you know the past uses of the property? (if "Yes", what?)

no

B. Do you know of chemicals that are present or once were present at the property? no

Western Environment and Ecology, Inc.  
Owner Questionnaire for a Phase I Environmental Site Assessment, ASTM 1527-13

8. Are you aware or have you ever been notified that another property around yours has caused or had an environmental impact to your property.

\_\_\_\_\_ not aware  
If yes, please describe which property and a brief description of the issue: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. Are there any prior environmental reports (Phase I Environmental Site Assessments) concerning the subject property or related addresses? not aware

If yes, can you provide copies of these reports or know where there are copies of these reports? \_\_\_\_\_  
\_\_\_\_\_

**Additional Information**

How long have you owned the subject property? approx 10 YEARS  
Description of current activity on the subject property? Ag  
\_\_\_\_\_

Do you have any knowledge of past ownership or activity on the subject property that would be of environmental concern? no Knowledge  
\_\_\_\_\_

What is the reason the Phase I is being conducted? \_\_\_\_\_

List all parties who will rely on the Phase I ESA report:  
\_\_\_\_\_  
\_\_\_\_\_

Completed by:

Signature:   
Printed Name: JAMES DIXON  
Date: 6/19/15

Answers are to the best knowledge  
of James Dixon

Western Environment and Ecology, Inc.  
**User Questionnaire** for a Phase I Environmental Site Assessment, ASTM 1527-13

Subject Property Address or Description:

**50 Acres within Section 4, Township 5 South, Range 64 West, Arapahoe County, Colorado**

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, The user of a Phase I Environmental Site Assessment must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that “all appropriate inquiry” is not complete.

**1. Environmental cleanup liens that are filed or recorded against the site:**

Are you aware of any environmental cleanup liens against the subject property that are filed or recorded under federal, tribal, state, or local law?     No    

If yes, please describe the lien and provide supporting documentation:

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**2. Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry:**

Are you aware of any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the subject property and/or have been filed or recorded in a registry under federal, tribal, state, or local law?     No    

If yes, please describe the AUL and provide supporting documentation:

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Western Environment and Ecology, Inc.

**User Questionnaire** for a Phase I Environmental Site Assessment, ASTM 1527-13

- C. Do you know of any petroleum based products that are present or were once present on the subject property (in 5-gal or greater size containers, barrels, or tanks)? No
- D. Do you know of any spills or other chemical releases that have taken place at the property? No
- E. Do you know of any environmental cleanups that have taken place at the property? No

If yes, please describe the information:

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**6. Do you know of any special permits need for the operation of the business or businesses that have occupied the subject property?**

- **Waste water discharge permit?** No
- **Air emissions permit?** No
- **Any other type of permits?** No

**7. The degree of obviousness of the presence of contamination at the property, and the ability to detect the contamination by appropriate investigation.**

As the potential user of the subject property, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

None known

If yes, please describe the information:

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Western Environment and Ecology, Inc.  
**User Questionnaire** for a Phase I Environmental Site Assessment, ASTM 1527-13

Additional Notes:

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FORM NO. 7  
GWS 32  
11 / 90

**PUMP INSTALLATION AND TEST REPORT**  
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER

For Office Use Only

1. WELL PERMIT NUMBER 200285

2. OWNER NAME(S) UNIVERSITY OF DENVER  
Mailing Address 2050 E ILIFF AVE  
City, St. Zip DENVER, CO 80210  
Phone 871-2809

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APR 10 1997

WATER RESOURCES  
STATE ENGINEER  
GWS32-94-03 COLO.

3. WELL LOCATION AS DRILLED: SE 1/4 SE 1/4, Sec. 5 Twp. 5S, Range 64W  
DISTANCES FROM SECTION LINES:  
283 ft. from SOUTH Sec. line. and 535 ft. from EAST Sec. line.  
(north or south) (east or west)  
SUBDIVISION: \_\_\_\_\_ LOT \_\_\_\_\_ BLOCK \_\_\_\_\_ FILING(UNIT) \_\_\_\_\_  
STREET ADDRESS AT WELL LOCATION: \_\_\_\_\_

4. PUMP DATA: Type SUBMERSIBLE Installation Completed 3/12/97  
Pump Manufacturer GOULDS Pump Model No. 7GS10412  
Design GPM 7 at RPM 3450, HP 1, Volts 130 Full Load Amps 9.80  
Pump Intake Depth 260 Feet, Drop/Column Pipe Size 1.00 Inches, Kind PVC  
ADDITIONAL INFORMATION FOR PUMPS GREATER THAN 50 GPM:  
TURBINE DRIVER TYPE:  Electric  Engine  Other \_\_\_\_\_  
Design Head \_\_\_\_\_ feet, Number of Stages \_\_\_\_\_, Shaft Size \_\_\_\_\_ inches

5. OTHER EQUIPMENT:  
Airline Installed  Yes  No, Orifice Depth ft. \_\_\_\_\_, Monitor Tube Installed  Yes  No, Depth ft. \_\_\_\_\_  
Flow Meter Mfg. INST BY CUST Meter Serial No. \_\_\_\_\_  
Meter Readout  Gallons,  Thousand Gallons,  Acre feet,  Beginning Reading \_\_\_\_\_

6. TEST DATA:  Check box if Test data is submitted on Supplemental Form.  
Total Well Depth 300 Date 3/12/97  
Static Level 160 Time \_\_\_\_\_  
Date Measured 3/12/97 Rate (GPM) 8  
Pumping Lvl. 215

7. DISINFECTION: Type HTH Amt. Used 2 CUPS

8. Water Quality analysis available.  Yes  No

9. Remarks \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge.  
[Persuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

CONTRACTOR Norden Pump Service, Inc. Phone (303) 688-3794 Lic. No. 861  
Mailing Address P.O. Box 268 Castle Rock, CO 80104

Name/Title (Please type or print) <u>Ralph Norden, President</u>	Signature <u>Ralph Norden</u>	Date <u>4/7/97</u>
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FORM NO.  
GWS-25

OFFICE OF THE STATE ENGINEER  
COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203  
(303) 866-3581

8

APPLICANT

WELL PERMIT NUMBER <b>200285</b>			
DIV. 1	CNTY. 3	WD 1	DES. BASIN MD

Lot: Block: Filing: Subdiv:

UNIVERSITY OF DENVER  
2050 E ILIFF AVE  
DENVER CO 80210-

(303)871-2809

APPROVED WELL LOCATION  
ARAPAHOE COUNTY

SE 1/4 SE 1/4 Section 5  
Twp 5 S RANGE 64 W 6th P.M.

DISTANCES FROM SECTION LINES

283 Ft. from South Section Line  
535 Ft. from East Section Line

PERMIT TO CONSTRUCT A WELL

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT

CONDITIONS OF APPROVAL

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(I) and the policy of the State Engineer dated 4/9/85 for appropriation of ground water tributary to the South Platte River system.
- 4) The use of ground water from this well is limited to drinking and sanitary facilities as described in CRS 37-92-602(1)(c), for a commercial business, described as a research center. Water from this well shall not be used for lawn or landscape irrigation or for any other purpose outside the business building structure.
- 5) Plain casing shall be installed and properly grouted to a minimum depth of 200 feet to prevent diversion of water above this depth. The total depth of this well shall not exceed 910 feet, which corresponds to the base of the Denver aquifer.
- 6) The maximum pumping rate shall not exceed 15 GPM.
- 7) The maximum annual amount of ground water to be withdrawn shall not exceed 1/3 acre-foot (108,600 gallons).
- 8) Approved as the only well on a site of 40 acres described as SE1/4 of the SE1/4 Section 5, Township 5 South, Range 64 West, Sixth Principal Meridian.
- 9) The return flow from the use of the well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located. The maximum consumptive use of ground water shall not exceed 10 percent.
- 10) A totalizing flow meter must be installed on this well and maintained in good working order. Permanent records of all diversions must be maintained by the well owner (recorded at least annually) and submitted to the Division Engineer upon request.
- 11) This well shall be constructed not more than 200 feet from the location specified on this permit.

Note: To insure a maximum productive life of this well, perforated casing should be set through the entire producing interval of the approved zone or aquifer indicated above. *RAN 12-26-96*

APPROVED  
RAN

*Hal D. Simpson*  
State Engineer

*RA Nielsen*  
By

Receipt No. 0408576A

DATE ISSUED DEC 26 1996

EXPIRATION DATE DEC 26 1998

## GENERAL PURPOSE APPLICATION - GENERAL INSTRUCTIONS

This form (GWS-45) should be used for the following well uses: commercial, industrial, agricultural irrigation, municipal, feed lots, central water supply systems, recreation, snowmaking, geothermal, recovery wells and any other uses not otherwise noted in the following list:

RESIDENTIAL use wells - Use Application Forms GWS-44, GWS-49 or GWS-50  
LIVESTOCK watering on a farm, ranch, range, or pasture (not feedlots) - Use Forms GWS-44 or GWS-50  
MONITORING/OBSERVATION wells - Use Application Form GWS-46  
GRAVEL PITS - Use Application Form GWS-27  
REGISTRATION of an existing well - Use Form GWS-12 (must have been in use prior to May 8, 1972)

**FEES** This application must be submitted with the required \$60 non-refundable filing fee.  
Checks should be payable to COLORADO DIVISION OF WATER RESOURCES.

Applications are evaluated in chronological order. Please allow approximately six weeks for processing.

Applications must be completed clearly, and legibly, in BLACK INK or typed. ALL ITEMS in the application must be completed. Incomplete applications may be returned to the applicant for more information. Do not change or alter the application in any way.

THE LOCATION of the well in item 4 must be correctly and accurately described. The county, quarter/quarter, section, township and range location of the well, principal meridian and location of the well in feet from section lines must be provided.  
NOTE: Distances are not necessarily the same distances as the distances from (your) property lines.

For additional assistance in describing the location of your well, review the publication entitled "How to Determine Well Locations" which was provided with your packet, or can be requested from any Colorado Division of Water Resources office.

Indicate in item 5 or provide as an attachment a complete LEGAL DESCRIPTION of the tract on which the well will be located. Indicate the total number of acres and the owner of that land.

Check the applicable box(es) in item 6 indicating the GENERAL USE of the well AND provide a detailed description of use of the well as an attachment to the application.

If the well is to withdraw water from the DAWSON, DENVER, ARAPAHOE, LARAMIE-FOX HILLS OR DAKOTA AQUIFERS, documentation of claimed landownership or consent of the landowner may be required. Please contact the Division of Water Resources for further information. A copy of the Statewide Nontributary Ground Water Rules are available upon request for \$3.

Indicate in item 8, or provide as an attachment a complete LEGAL DESCRIPTION of the land area on which water from the well will be used. Indicate the total number of acres described and the owner of that land. If agricultural irrigation is a proposed use, provide an accurate map of the land area with proposed irrigated areas drafted or accurately drawn. Section numbers and section lines must be indicated on the map.

Completely describe all OTHER WATER RIGHTS, including wells and surface water rights, used on the described land area. Describe the total land areas irrigated by other wells or water rights. Applicable well permit, well registration or water court case numbers must be indicated. This information may be provided in an attachment.

An ORIGINAL signature must be on each application. The applicant's authorized agent may sign the application if a letter signed by the applicant is submitted with the application authorizing them to act as agent for the purpose of obtaining a well permit.

IF YOU HAVE ANY QUESTIONS regarding any item in the well permit application form, please call the Division of Water Resources Ground Water Information Desk at (303) 866-3587, Ground Water Management District or the nearest Division of Water Resources Field Office located in Greeley (970-352-8712), Pueblo (719-542-3368), Alamosa (719-589-6683), Montrose (970-249-6622), Glenwood Springs (970-945-5665), Steamboat Springs (970-879-0272) or Durango (970-247-1845).

DETAILED INSTRUCTIONS ARE AVAILABLE UPON REQUEST

COLORADO DIVISION OF WATER RESOURCES, 1313 SHERMAN STREET, ROOM 821, DENVER CO 80203  
PHONE: (303) 866-3587 (Information), (303) 866-3581 (Main), (303) 866-3447 (Well and Water Rights Records); (303) 866-3589 (Fax)

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DEC 18 1996

WATER RESOURCES  
STATE ENGINEER  
COLO.

# interoffice

MEMORANDUM

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**to:** Colorado Division Of Water Resources  
**cc:**  
**from:** Dave Mann  
**re:** Well Permit Applications  
**date:** November 6, 1996

We are applying for two Commercial Exempt well permits as our water usage will be very limited on both wells. Essentially there will be only 2 sinks and a bathroom on each well with a maximum total of 4 personnel for both wells. There will be no outside irrigation on either well. Also enclosed is a page of the lease agreement with OEA Inc and The University of Denver stating we are able to install water wells. If there are any questions please give me a call.

Sincerely



David Mann  
(303)871-2809

From the desk of...

**Dave Mann**  
Denver Research Institute  
2050 E. Iliff Avenue  
Denver, CO 80210

tel: (303) 871-2809  
fax: (303) 871-2716

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DEC 18 1996

The printed portions of this form have been approved by the Colorado Real Estate Commission. (CRS 3-7-96)

THIS FORM HAS IMPORTANT LEGAL CONSEQUENCES AND THE PARTIES SHOULD CONSULT LEGAL AND TAX OR OTHER COUNSEL BEFORE SIGNING IT. STATE ENGINEER DOLO.

VACANT LAND/FARM AND RANCH CONTRACT TO BUY AND SELL REAL ESTATE

1. PARTIES AND PROPERTY. OEA, Inc., a Delaware corporation, September 20, 19 96

agrees to buy, and the undersigned seller(s) [Seller], agrees to sell, on the terms and conditions set forth in this contract, the following described real estate in the County of Arapahoe, Colorado, to wit:

See Exhibit A, attached hereto and incorporated herein

known as No. \_\_\_\_\_, together with all interest of Seller in vacated streets and alleys adjacent thereto, all easements and other appurtenances thereto, all improvements thereon and all attached fixtures thereon, except as herein excluded (collectively the Property).

2. INCLUSIONS/EXCLUSIONS. The purchase price includes the following items (a) if attached to the Property on the date of this contract: lighting, heating, plumbing, ventilating, and air conditioning fixtures, TV antennas, water softeners, smoke/fire/burglar alarms, security devices, inside telephone wiring and connecting blocks/jacks, plants, mirrors, floor coverings, intercom systems, built-in kitchen appliances, sprinkler systems and controls, built-in vacuum systems (including accessories), and garage door openers including n/a remote controls; (b) if on the Property whether attached or not on the date of this contract: storm windows, storm doors, window and porch shades, awnings, blinds, screens, curtain rods, drapery rods, fireplace inserts, fireplace screens, fireplace grates, heating stoves, storage sheds, all keys and (c) n/a

(d) Water Rights. Purchase price to include the following water rights: None

(e) Growing Crops. With respect to the growing crops Seller and Buyer agree as follows: None

The above-described included items (Inclusions) are to be conveyed to Buyer by Seller by bill of sale, special warranty deed or other applicable legal instrument(s) at the closing, free and clear of all taxes, liens and encumbrances, except as provided in Section 12. The following attached fixtures are excluded from this sale: N/A

3. PURCHASE PRICE AND TERMS. The purchase price shall be \$ 215,000.00, payable in U.S. dollars by Buyer as follows: (Complete the applicable terms below.)

(a) Earnest Money. \$ \_\_\_\_\_ in the form of \_\_\_\_\_, as earnest money deposit and part payment of the purchase price, payable to and held by \_\_\_\_\_, broker, in its trust account on behalf of both Seller and Buyer. Broker is authorized to deliver the earnest money deposit to the closing agent, if any, at or before closing. The balance of \$ \_\_\_\_\_ (purchase price less earnest money) shall be paid as follows:

(b) Cash at Closing. \$ 215,000, plus closing costs, to be paid by Buyer at closing in funds which comply with all applicable Colorado laws, which include cash, electronic transfer funds, certified check, savings and loan teller's check, and cashier's check (Good Funds). Subject to the provisions of Section 4, if the existing loan balance at the time of closing is \_\_\_\_\_

Best Copy Available

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DEC 18 1996

STATE ENGINEER  
COLO.

IN WITNESS WHEREOF, the parties hereto have executed this Lease as of the day and year first-above written.

LESSOR:

OEA, Inc.

By: Paul J. Martin

Its: Vice President / Treasurer

LESSEE:

Denver University (Colorado Seminary)

By: Craig Woodley

Its: Vice Chancellor for Business & Finance

STATE OF Colorado )  
 )  
COUNTY OF Denver ) ss.

The foregoing instrument was acknowledged before me this 15<sup>th</sup> day of October, 1996, by Paul J. Martin Vice President of OEA, Inc.

Witness my hand and official seal.

My commission expires: 1-21-98

SACHA BROWN  
NOTARY PUBLIC  
STATE OF COLORADO

Sacha Brown  
Notary Public

**APPENDIX D**

**WESTERN ENVIRONMENT AND ECOLOGY, INC.**

**Statement of Qualifications**

“We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental professional as defined in 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.”

**REAL ESTATE TRANSFER ENVIRONMENTAL AUDITS**

**WESTERN ENVIRONMENT AND ECOLOGY, INC.**

**GREG D. SHERMAN, P.G.**

**President**

**PROFESSIONAL CAPABILITIES:**

Mr. Sherman has more than 39 years of professional experience. He is currently President of **WESTERN ENVIRONMENT AND ECOLOGY, INC.** Prior to his current position, he was the Principal Geologist with SEACOR in its Lakewood, Colorado office and Project Director with Roy F. Weston also in Lakewood.

Duties performed in these capacities involved responsibility for CERCLA RI/FS studies and RCRA investigations. His professional assignments include project management and technical direction of the design and installation of the 2,000-foot long the 881 Hillside Groundwater Interception trench at the Rocky Flats Nuclear Weapons Plant in Jefferson County, Colorado. Mr. Sherman was Field Operations Manager for the installation of 75 groundwater extraction wells and vapor extraction and sparging points. This work was completed on the Stanford Research Park Superfund site in Palo Alto, California. Recently, he has concentrated on VOC remediation system design and installation utilizing on-site re-injection of treated groundwater and enhanced oxygenation systems. Mr. Sherman was lead investigator for the City of Wheat Ridge regarding the characterization of the Jay Street Park. This project, which was submitted to the Colorado Voluntary Clean-Up Program, received a grant from the Colorado Department of Public Health and Environment for innovative use of a Brownsfields site. Mr. Sherman and Western Environment and Ecology, Inc. was selected by the Cities of Aurora and Lakewood as their approved USEPA Brownsfields contractor.

Mr. Sherman is past Chairman of the Rocky Mountain Section of the Association of Engineering Geologists. He has served as Chairman of Executive Enterprises Seminars on Sampling and Data Analysis. He has extensive experience in geotechnical and geological investigations, groundwater studies, UST testing and evaluation, construction materials testing and mineral resource evaluation.

Mr. Sherman is recognized in the region as one of the leading experts in underground storage tank management and mine subsidence. He has placed special emphasis on the application of geophysical techniques to environmental and geotechnical investigations. Clients for these projects range from Federal, state and local governments to private industry and commercial developments. The project types included petroleum distribution facilities, nuclear power plants, highways and streets, dams and reservoirs, transmission lines, sewage treatment plants and sewage systems, hazardous and industrial waste disposal areas, and mining facilities, as well as residential and commercial developments. Mr. Sherman has performed geotechnical and geological investigations in Alaska, Arizona, California, Colorado, Idaho, Illinois, Montana, New Mexico, New York, Nevada, North Dakota, South Dakota, Texas, Utah and Wyoming. Additionally, he has international evaluation experience in the Middle East and Mexico.

**PUBLICATIONS/PRESENTATIONS**

Sherman Greg D., "Mine Subsidence Assessment, Boulder-Weld Coal Field, Using British National Coal Board Methods" The Mountain Geologist, Volume 46, Number 1 January 2009.

Sherman Greg D. and Brian R. Partington., "Abandoned Mine Subsidence Prediction Using British National Coal Board Methods, Boulder/Weld Coal Field, Denver, Colorado" Proceedings for the International Association of Engineering Geologists, 2006 Meeting Nottingham, United Kingdom. September 2006.

Sherman, Greg D., "Sampling and Data Analysis"; Executive Enterprises Seminar, Chairman, May 1992.

Sherman, Greg D., "Statistical Design of Sampling Plans"; Executive Enterprises Seminar, June 1990.

Sherman, Greg D., "Impact of the EPA UST Regulations"; Tri-State Petroleum Marketer, December 1988.

Sherman, Greg D., "Variables Effecting Volumetric Leak Detection Methods for Underground Storage Tanks"; Paper given to the Colorado Section, American Society of Civil Engineers, 1988.

Sherman, Greg D., "The Impact of Underground Storage Tank Regulations on Industry"; Extended Abstracts, American Institute of Chemical Engineers, National Meeting, 1988.

Sherman, Greg D., "Assessment of Subsidence Damage to Existing Structures in Louisville, Lafayette, Colorado"; Proceedings of the Colorado Governor's Conference on Subsidence, 1985.

Sherman, Greg D., "Geology and Mining History of the Boulder/Weld Coal Field"; Paper given at Denver Coal Club Meeting, 1985.

Sherman, Greg D., "The New Mexico Gold Belt Regional Structural Implications"; Proceedings of the Western Mining Association, 1982 Convention.

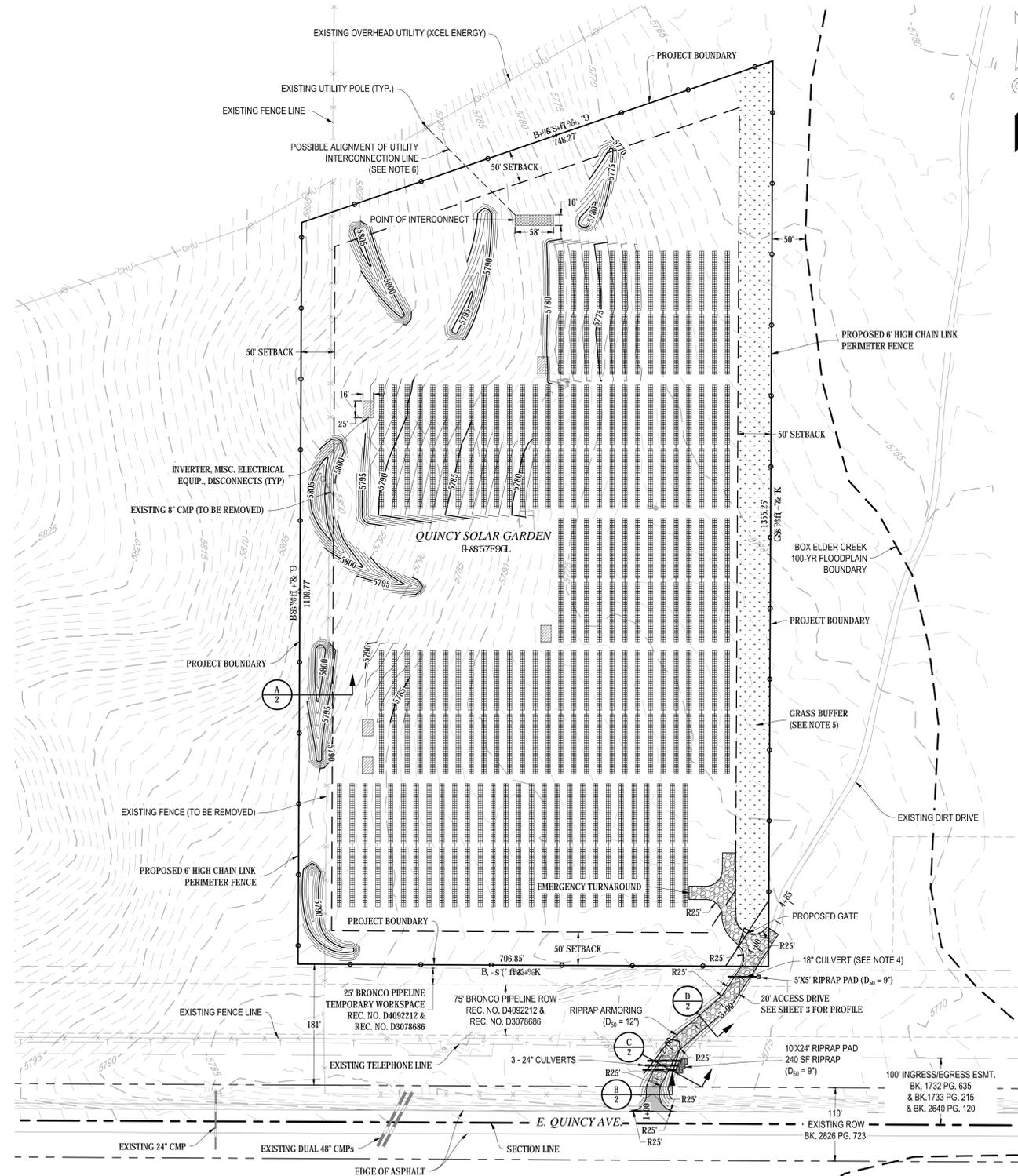
Sherman, Greg D., "Colorado Front Range Uranium Deposits, A Possible Origin": in review.

Sherman, Greg D., "Origin of Monoclinial Folding Near Livermore, Colorado"; The Mountain Geologist, April 1976



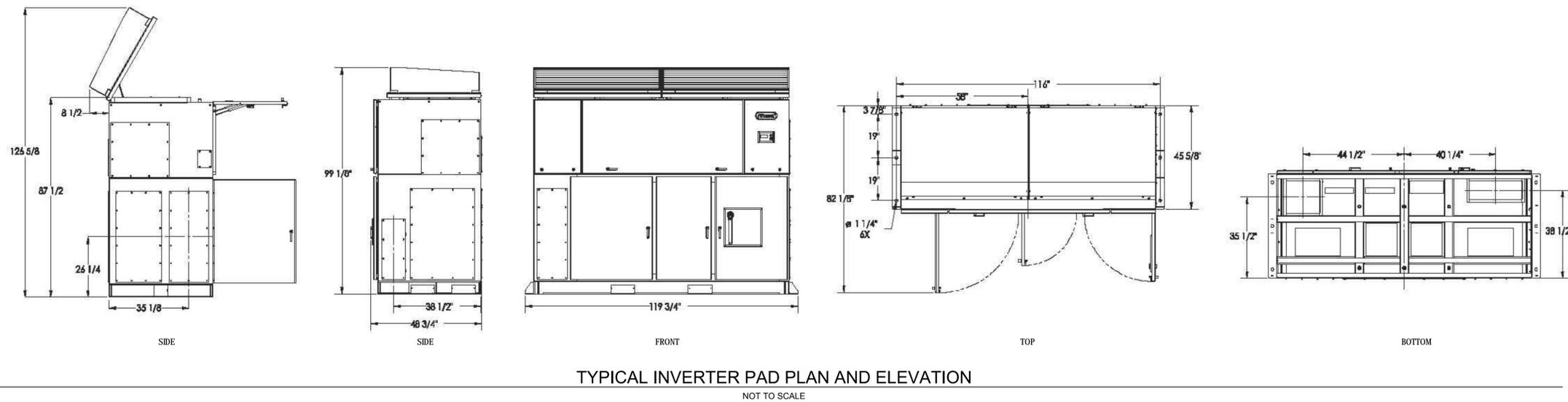
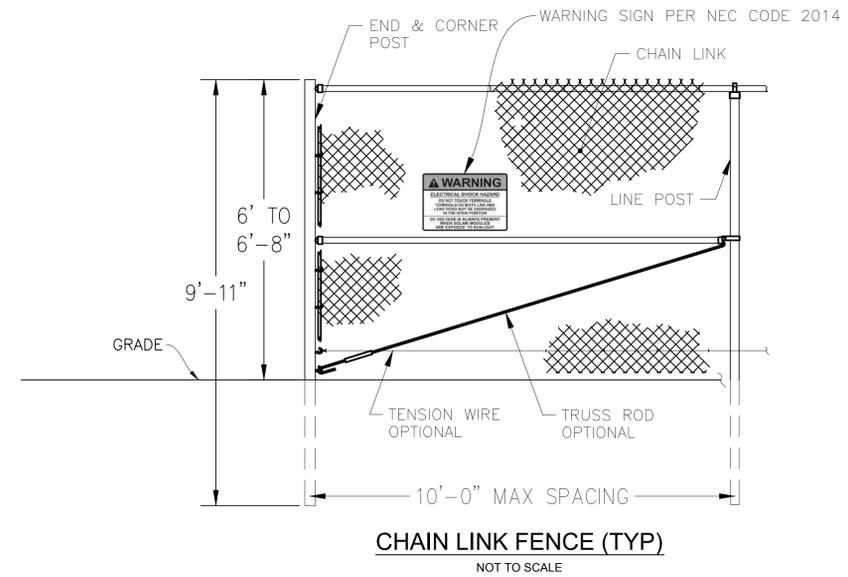
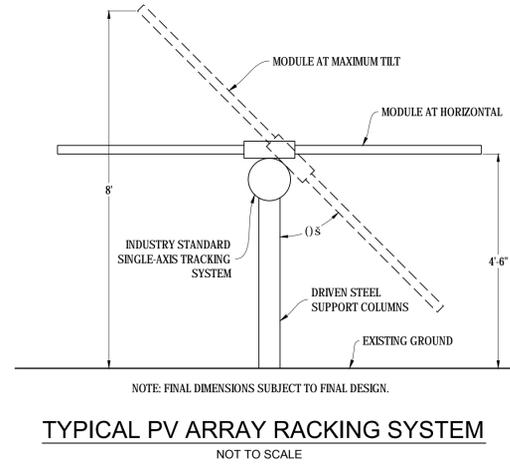
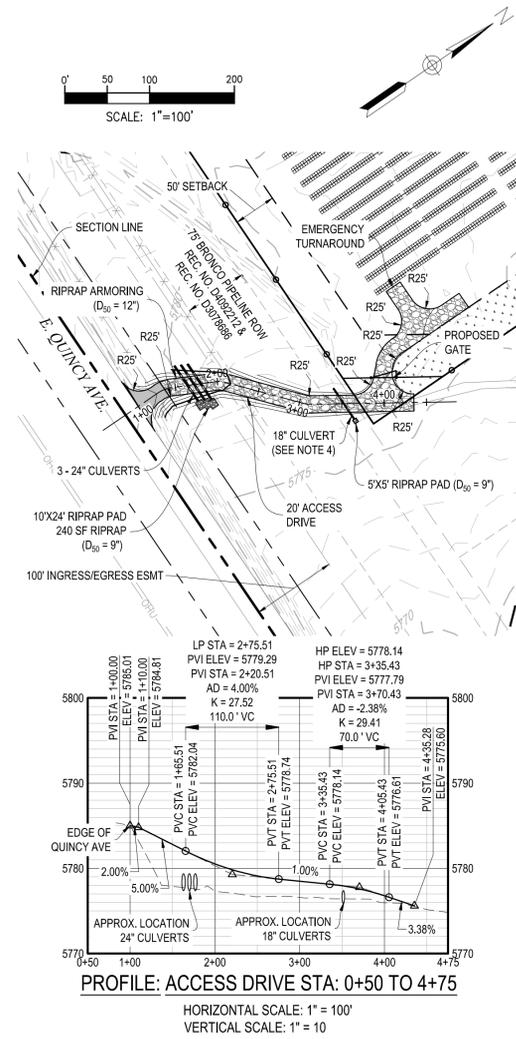
# QUINCY SOLAR GARDEN USE BY SPECIAL REVIEW

LOCATED IN SECTION 4, TOWNSHIP 5 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN,  
COUNTY OF ARAPAHOE, STATE OF COLORADO



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LOCATED IN SECTION 4, TOWNSHIP 5 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN,  
COUNTY OF ARAPAHOE, STATE OF COLORADO



NO.	DATE	DSGN	BPC	DR	BPC	CHK	JSO	APVD	JSO

**ENERTIA**  
CONSULTING GROUP  
1529 MARKET STREET, SUITE 200  
DENVER, COLORADO 80202



QUINCY SOLAR GARDEN  
ARAPAHOE COUNTY, COLORADO

TYPICAL DETAILS

VERIFY SCALE  
BAR IS ONE INCH ON  
ORIGINAL DRAWING.

DATE	JANUARY 05, 2015
FILE	3 DTL
DWG	DTL
SHEET	3 OF 3

CASE NUMBER: U15-001



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