

---

## **Attachments**

**Attachment A**

---

Valley Fever Discussion

## VALLEY FEVER Blythe II Solar Project Potential Risks

### Background

Valley Fever (coccidioidomycosis or “cocci”) is an illness caused by a fungus called *Coccidioides* which lives in the top 2 to 12 inches of soil in certain areas of California. Infection with Valley Fever results from directly inhaling spores of the fungus from soil or airborne dust. The fungus usually infects the lungs causing flu-like symptoms. Most of the time symptoms get better on their own. More severe forms of the illness are rare but can be very serious.

Valley Fever infection can occur year-round and tends to occur in areas with dry dirt and desert-like weather conditions that allow the fungus to grow. Cases of Valley Fever have been reported from most counties in California. Over 75% of reported cases have been in people who live in the San Joaquin (Central) Valley. In California, the number of reported Valley Fever cases has increased greatly since the year 2000 in part likely due to greater awareness in the medical community and changes in the definition and reporting requirements.

Anyone can get Valley Fever, including young and healthy people. People who live, work, or travel in areas with high rates of Valley Fever may be at a higher risk of breathing in spores and getting infected than others. People at additional risk include those who:

- Participate in recreational activities where dirt and soil are disturbed
- Work in jobs where dirt and soil are disturbed, including construction, farming, military work, and archaeology.

Valley Fever is not contagious and cannot be spread from one person to another. Persons at increased risk for severe disease include African-Americans, Filipinos, Hispanics, pregnant women, adults 60 years of age and older, and people with weakened immune systems. Located on the Blythe Airport, there are no residences, schools, or other sensitive areas with at risk populations located near the Blythe II Solar Project site. In Riverside County, males are three times more likely to contract the disease possibly due to increased occupational exposure from professions that require more outdoor work in dry, dusty conditions such as construction, agriculture, land development, and landscaping.

About 60 percent of people infected with Valley Fever will develop no symptoms and will fight off the infection naturally. The people who get sick usually develop a flu-like illness 1 to 3 weeks after exposure to the fungus. These symptoms can last a month or more but most people recover fully. Most people who have been infected become immune and will not get the infection again. The disease can cause severe lung problems that can result in hospitalization or death if left untreated.

Riverside County has had a relatively low to moderate incidence of Valley Fever relative to other parts of California as shown on **Figure 1** below (CDHP, 2013). In Riverside County, there have been just over three cases for every 100,000 people (Riverside County DPH 2012). The highest incidence of Valley Fever in Riverside County between 2006 and 2010 occurred in the western portion of the County as shown in **Figure 2** (Riverside County DPH, 2013). The Blythe II Solar Project is located in the eastern portion of Riverside County.

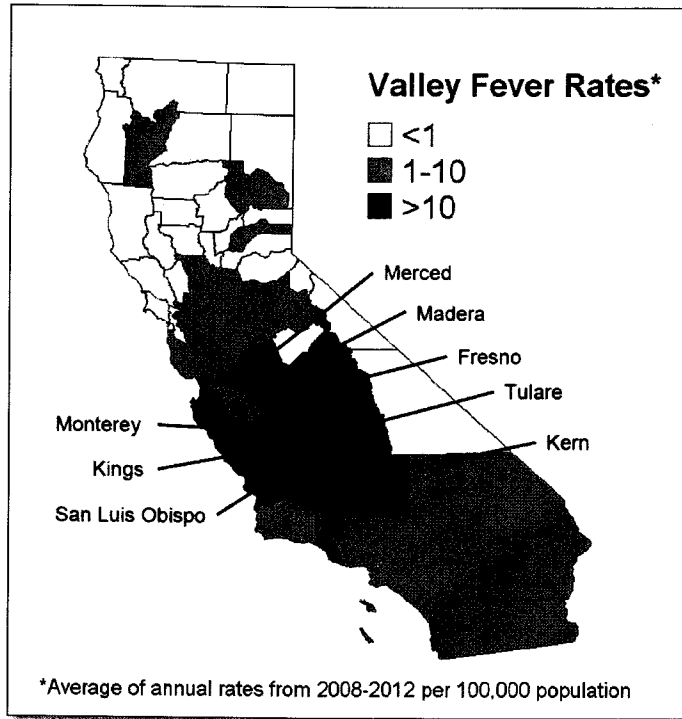


Figure 1

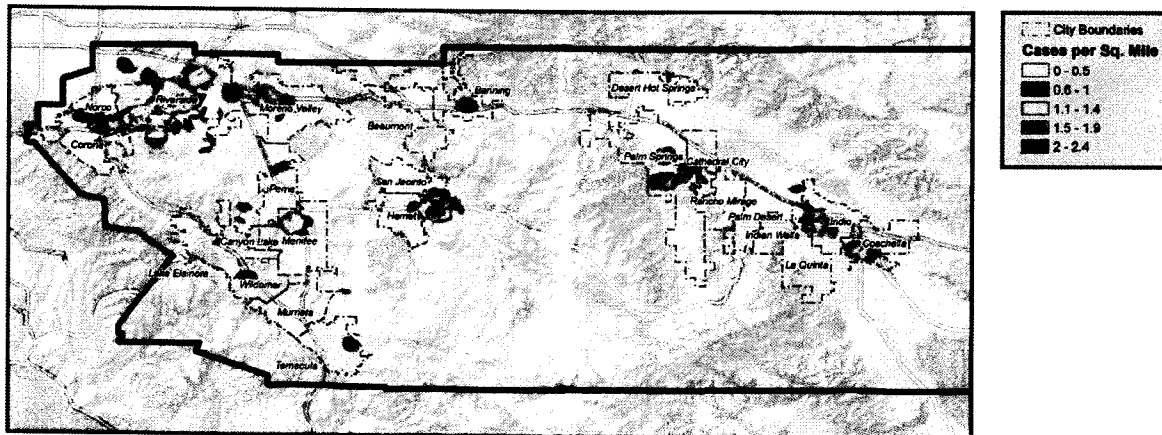


Figure 2. Valley Fever cases per square mile (hot spot analysis) Riverside County 2006-2010.

Although it can be difficult to prevent Valley Fever, the best way to reduce risk is to avoid breathing in dirt or dust in areas where Valley Fever can occur. This can be accomplished by controlling the amount of air-borne dust, increasing the awareness of workers who could be at risk, and providing personal protective equipment to workers potentially at risk (CDHP-OHB, 2014).

The Blythe II Solar Project will employ several measures to reduce fugitive dust generated by the Project. The following measures would be applied for the Project:

- **DUST CONTROL** - All necessary measures to control dust shall be implemented by the developer during grading. A PM<sub>10</sub> (dust control) plan may be required at the time a grading permit is issued.
- **PREVENT DUST & BLOWSAND** - Graded but undeveloped land shall be maintained in a condition so as to prevent a dust and/or blowsand nuisance and shall be provided with wind and water erosion control measures as approved by the Building and Safety Department and the State air quality management authorities. At minimum: 1) All active areas (including haul roads) shall be watered as needed to minimize fugitive dust production in conformance with applicable regulations; and, 2) Vehicles onsite shall not travel at speeds greater than 15 miles per hour.
- **DUST CONTROL** - All active areas (including haul roads) shall be watered as needed to minimize fugitive dust production in conformance with applicable regulations. Vehicles onsite shall not travel at speeds greater than 15 miles per hour.
- **BLOWSAND & DUST CONTROL** - The permittee shall institute blowsand and dust control measures during grading and shall note or show the measures to be used on their grading plans. These measures shall include, but not be limited to:
  - a) The use of water application during any construction activities;
  - b) provisions that comply with the directives of the Director of the Building and Safety Department with regards to the applicable sections of Ordinance No. 484 (Blowsand Control) and Ordinance No. 742 (Control of Fugitive Dust/PM10 in Urban Areas).
- **PARKING DUST TREATMENT** - The drive aisles shall be improved with a non-toxic chemical soil stabilization (or equivalent treatment), to prevent the emission of fugitive dust and/or blowsand.

In addition, the Project will have to comply with the applicable Mojave Desert Air Quality Management District (MDAQMD) rules, including the fugitive dust control measures as required under MDAQMD Rule 403, implementation of Project BMPs, adherence to OSHA requirements, and reducing vehicle speeds during high wind conditions.

Also, a Worker Environmental Awareness Program (WEAP) will be incorporated into the final construction requirements and would specifically address impacts associated with fugitive dust and Valley Fever among other topics. The WEAP would be implemented to ensure worker safety and minimize worker hazards during construction and operation. The program would include a personal protective equipment (PPE) program, an Emergency Action Plan (EAP), and an Injury and Illness Prevention Program (IIPP) to address health and safety issues associated with normal and unusual (emergency) conditions. Construction related safety programs and procedures would include a respiratory protection program, among other things. Construction would be undertaken sequentially in accordance with a Construction Plan that would include the final design documents, work plan, health and safety plans, permits, project schedule, and operation and maintenance manuals.

Collectively, these measures will reduce fugitive dust emissions from the project during construction and operations and will reduce the already low associated potential risk of exposure to Valley Fever.

### **Literature Cited**

California Department of Industrial Relations (CDIR). 2015. Advice to Employers and Employees Regarding Work-related Valley Fever. <http://www.dir.ca.gov/dosh/valley-fever-home.html>

California Department of Public Health (CDPH). 2013. Valley Fever Fact Sheet.

CDPH, Occupational Health Branch (OHB). 2013. Preventing Work-Related Coccidioidomycosis (Valley Fever). <http://www.cdph.ca.gov/programs/hesis/Documents/CocciFact.pdf>

Center for Infectious Diseases - Division of Communicable Disease Control – Infectious Diseases Branch, 2014. Epidemiologic Summary of Coccidioidomycosis in California, 2009 – 2012

Riverside County Department of Public Health (RCDPH). 2012. Impact of Valley Fever in Riverside County, 2006-2010. Epidemiology and Program Evaluation – Volume 6.

**Attachment B**  
**Glare Analysis**

---

**GLARE ANALYSIS**  
**FOR**  
**BLYTHE II PV SOLAR PROJECT**  
**LOCATED AT THE**  
**BLYTHE AIRPORT IN BLYTHE, CALIFORNIA**

---

The Blythe II Solar Project is a proposed 20 MW photovoltaic (PV) solar project proposed to be located on approximately 156 acres of land at the Blythe Airport (BLH) near Blythe, California. **Figure 1** shows the location of the proposed solar project in relation to the airport and runways.

An analysis of potential glare hazards near airports is required by the Federal Aviation Administration (FAA). On October 23, 2013, the FAA published interim policy in the Federal Register for proposals by sponsors of federally obligated airports to construct solar energy systems on airport property (78-FR-63276). Airport sponsors and project proponents must comply with the procedures in this policy to demonstrate to the FAA that a proposed solar energy system will not result in an ocular impact that compromises the safety of the air transportation system at airports.

**METHODOLOGY**

FAA adopted the *Solar Glare Hazard Analysis Plot* shown in **Figure 2** below as the standard for measuring the ocular impact of any proposed solar energy system on an airport under FAA jurisdiction. To obtain FAA approval, the airport sponsor and proponent are required to demonstrate that the proposed solar energy system meets the following standards:

1. There would be no potential for glint or glare in the existing or planned Airport Traffic Control Tower (ATCT) cab, and
2. There would be no potential for glare or “low potential for after-image” (shown in green in Figure 2) along the final approach path for any existing landing threshold or future landing thresholds (including any planned interim phases of the landing thresholds) as shown on the current FAA-approved Airport Layout Plan (ALP). The final approach path is defined as two (2) miles from fifty (50) feet above the landing threshold using a standard three (3) degree glidepath.

Ocular impact must be analyzed over the entire calendar year in one (1) minute intervals from when the sun rises above the horizon until the sun sets below the horizon.



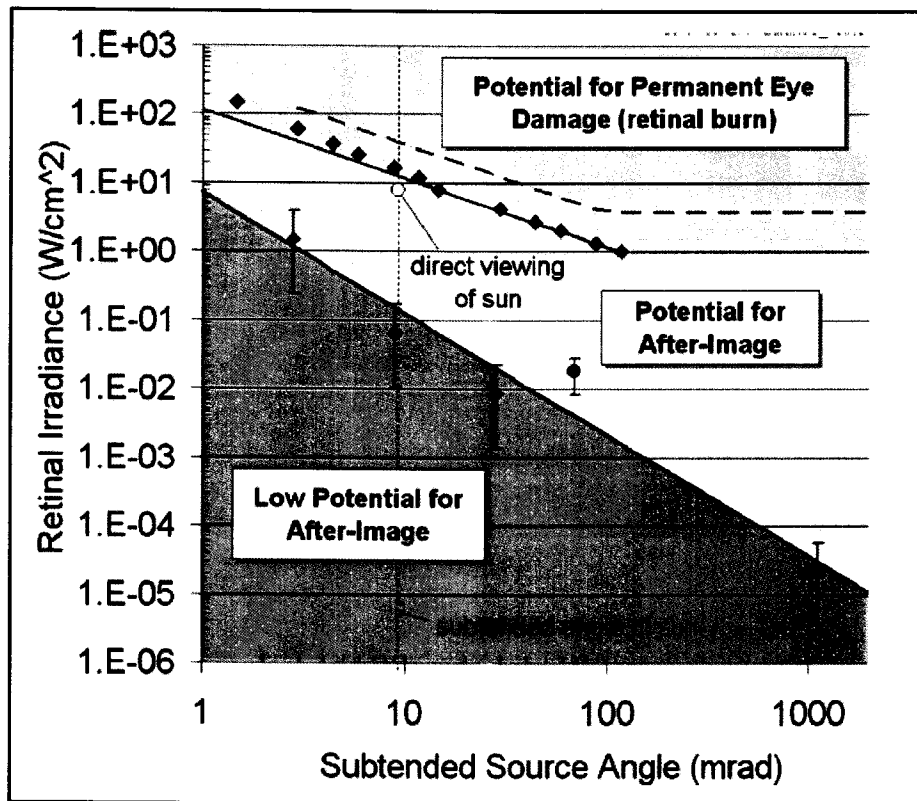


Figure 2  
OCULAR HAZARD PLOT

To conduct the analysis to determine the potential for ocular impact, in cooperation with the DOE, the FAA is requiring the use of the *Solar Glare Hazard Analysis Tool* (SGHAT) developed by Sandia National Laboratories. If glare is found, the tool calculates the retinal irradiance and subtended source angle (size/distance) of the glare source to predict potential ocular hazards ranging from temporary afterimage to retinal burn. The results are presented in a simple, easy-to-interpret plot that specifies when glare will occur throughout the year, with color codes that are consistent with the hazard plot indicating the potential ocular hazard.

The SGHAT tool determines when and where solar glare can occur throughout the year from a user-specified PV array as viewed from user-prescribed observation points. The potential ocular impact from the observed glare is also determined.

The Blythe Airport does not have a control tower, so the glare hazard analysis for the Blythe II Solar Project focused on the approach path for the landing thresholds of each of the four runway approaches at the airport.

The following inputs were used to set up the SGHAT tool:

- The site layout plan for the Blythe II Solar Project (**Figure 3**) that includes PV panels with anti-reflective coating (ARC) and a single-axis tracking panel mounting system
- The six (6) outlying corners of the panel array were used to identify the geoposition of the project
- Four (4) points to identify each of the four (4) flight paths originating at the runway threshold paint bar at the end of each runway

The additional detailed inputs used in the analysis are shown on the pages of the Solar Glare Hazard Analysis Flight Path Report generated by the SGHAT tool that is included in **Attachment A**.

## **RESULTS**

The analysis shows that glare from the Blythe II Solar Project could occur for each of the four runway approaches at the Blythe Airport but the potential glare hazard would be low (with low potential for after image) in all cases.

While the glare hazard would be low for each runway approach, the time of year, time of day, and the distances where glare could occur would be different of each runway because of its different orientation relative to the solar project. This is discussed below and shown graphically in **Attachment A**:

- Southbound Approach to BLH Runway 17 – Low intensity glare could be seen at the landing threshold and a half mile away during the late afternoon during winter months.
- Westbound Approach to BLH Runway 26 – Low intensity glare could be seen at the landing threshold during the late afternoon and at 0.75 to 2 miles in the early morning during summer months.
- Northbound Approach to BLH Runway 35 – Low intensity glare could be seen at the landing threshold and near during the late afternoon during summer months.
- Eastbound Approach to BLH Runway 8 – Low intensity glare could be seen at all approach distances during the late afternoon during summer months and during spring and fall.

## **CONCLUSION**

The Blythe II Solar Project would generate low intensity glare. Because it will be built as a single-axis tracking project with panels that track the sun during the course of the day, the glare would be visible at any of the runway approaches at the Blythe Airport for only very short periods of time during the early morning and later afternoon and only during parts of the year. .

Because the generated glare would be of low intensity and occur for only short periods, the Blythe II Solar Project would not create a significant glare hazard to pilots landing at all runways at the Blythe Airport. Therefore, the Project would not result in an ocular impact that would compromise the safety of air traffic at the airport.

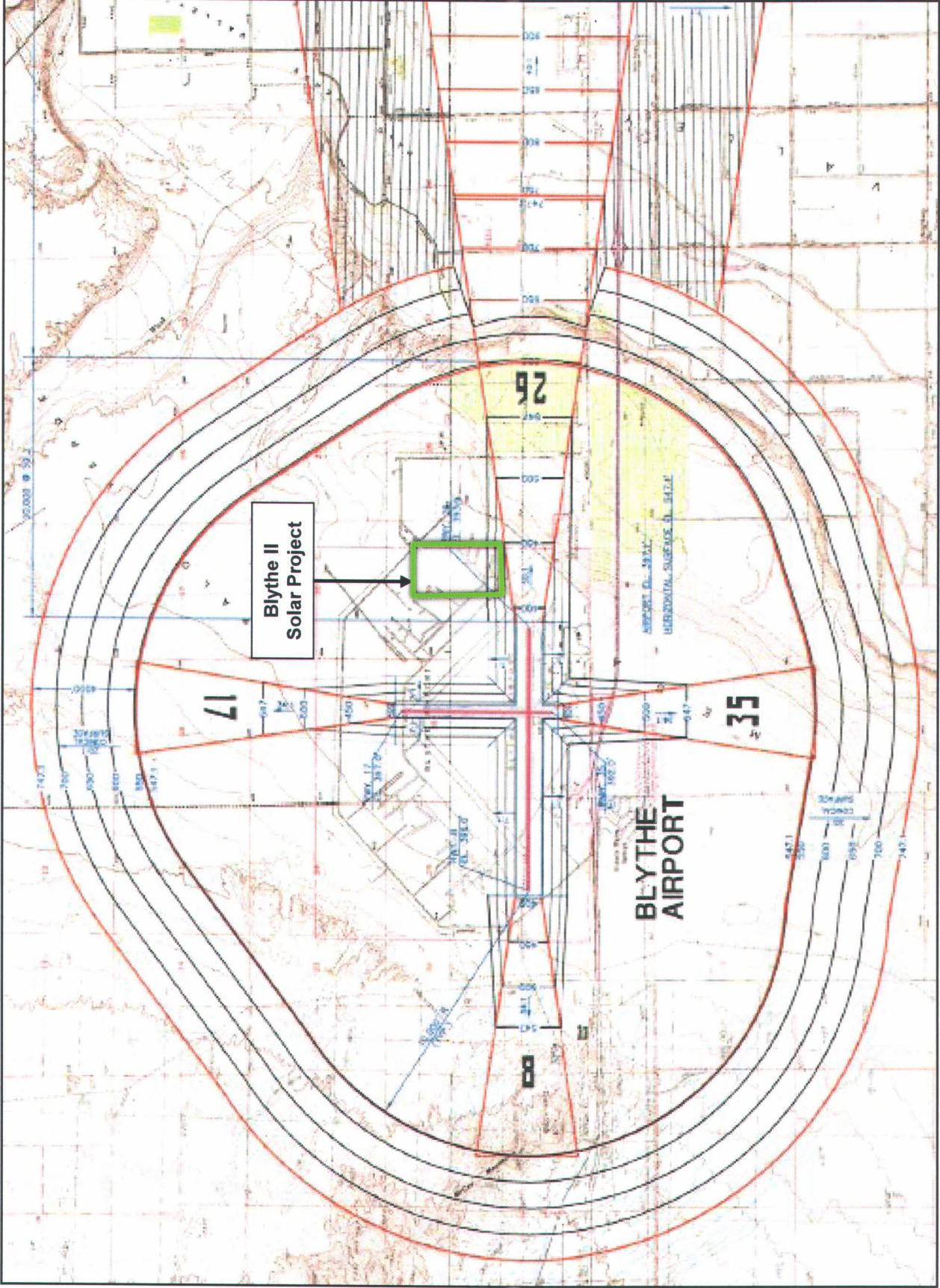


Figure 1  
**Blythe II Solar Project**  
Project Location Relative to Blythe Airport Runways



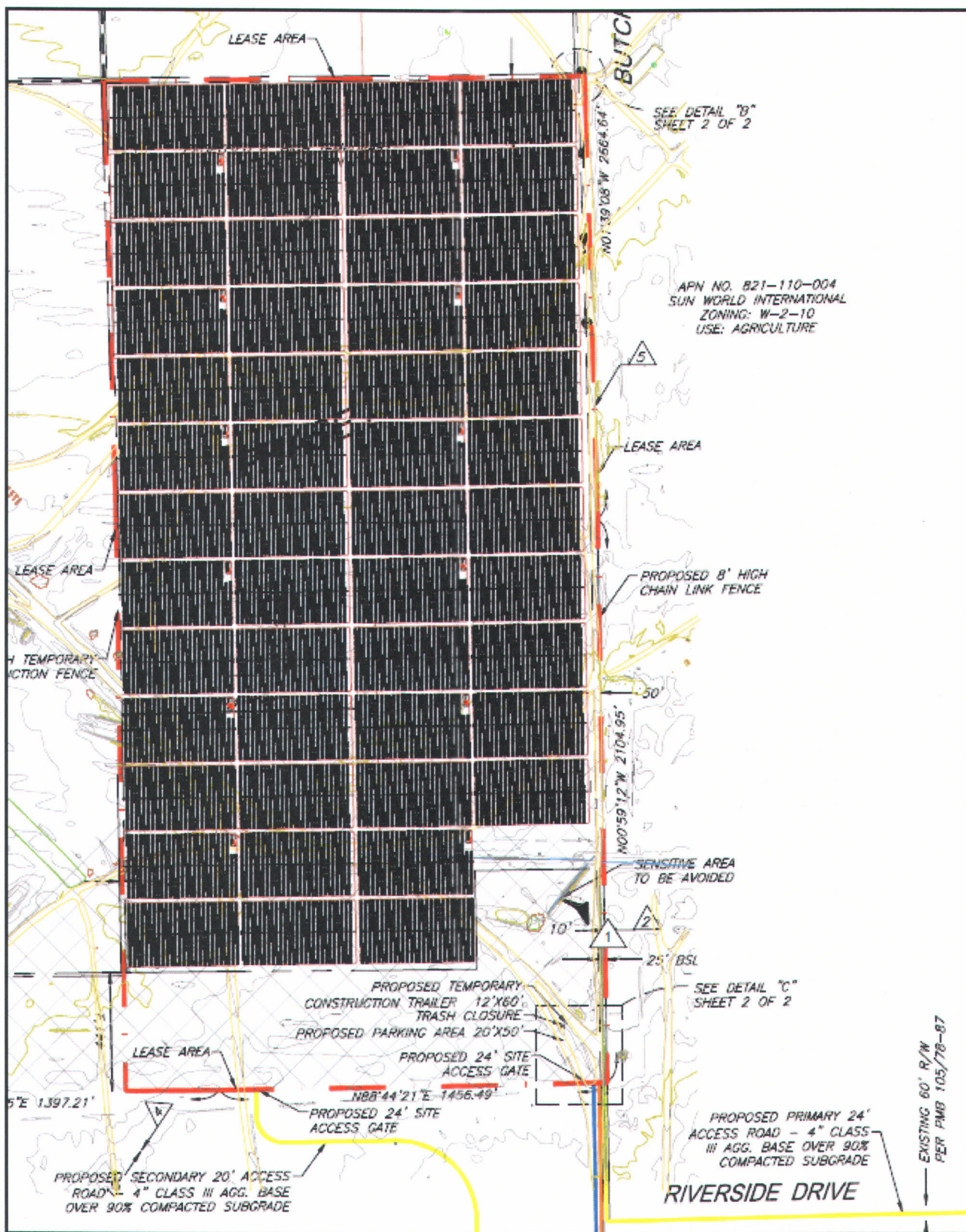


Figure 3  
Blythe II Solar Project  
Proposed Site Layout

**ATTACHMENT 1**

**SOLAR GLARE HAZARD ANALYSIS FLIGHT PATH REPORT  
FROM SGAHT TOOL**

# Solar Glare Hazard Analysis Flight Path Report

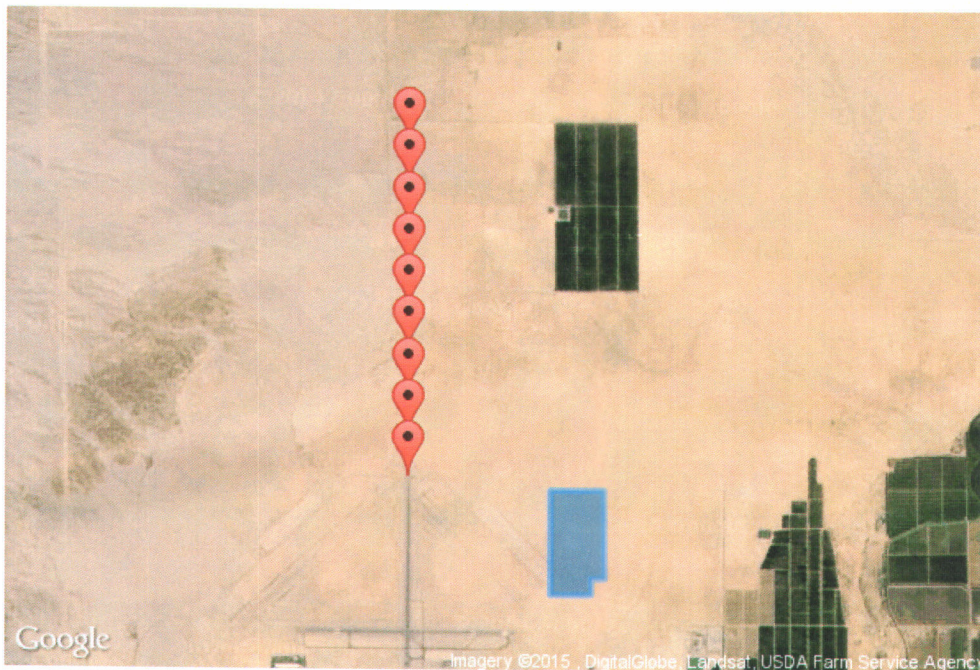
Generated April 9, 2015, 2:17 p.m.

Flight path: BLH Runway 17

Southbound Landing Approach

Glare found

 Print



## Analysis & PV array parameters

Analysis name	BLH Solar Site Part A
PV array axis tracking	single
Tilt of tracking axis (deg)	0.0
Orientation of tracking axis (deg)	179.0
Offset angle of module (deg)	0.0
Limit rotation angle?	True
Maximum tracking angle (deg)	90.0
Rated power (kW)	0.0
Vary reflectivity	True
PV surface material	Light textured glass with ARC

Timezone offset	-8.0
Subtended angle of sun (mrad)	9.3
Peak DNI (W/m <sup>2</sup> )	1000.0
Ocular transmission coefficient	0.5
Pupil diameter (m)	0.002
Eye focal length (m)	0.017
Time interval (min)	1
Correlate slope error with material	False
Slope error (mrad)	10.0

## Flight path parameters

Direction (deg)	180.0
-----------------	-------



Glide slope (deg)	3.0
Consider pilot visibility from cockpit	True
Max downward viewing angle (deg)	30.0
Azimuthal viewing angle (deg)	180.0

## PV array vertices

<b>id</b>	<b>Latitude (deg)</b>	<b>Longitude (deg)</b>	<b>Ground Elevation (ft)</b>	<b>Height of panels above ground (ft)</b>	<b>Total elevation (ft)</b>
1	33.619921217	-114.69771	391.82	6.0	397.82
2	33.62131	-114.69772	392.07	6.0	398.07
3	33.62133	-114.69629	391.61	6.0	397.61
4	33.62897	-114.69639	393.61	6.0	399.61
5	33.62896	-114.70204	395.25	6.0	401.25
6	33.61991	-114.70198	393.62	6.0	399.62

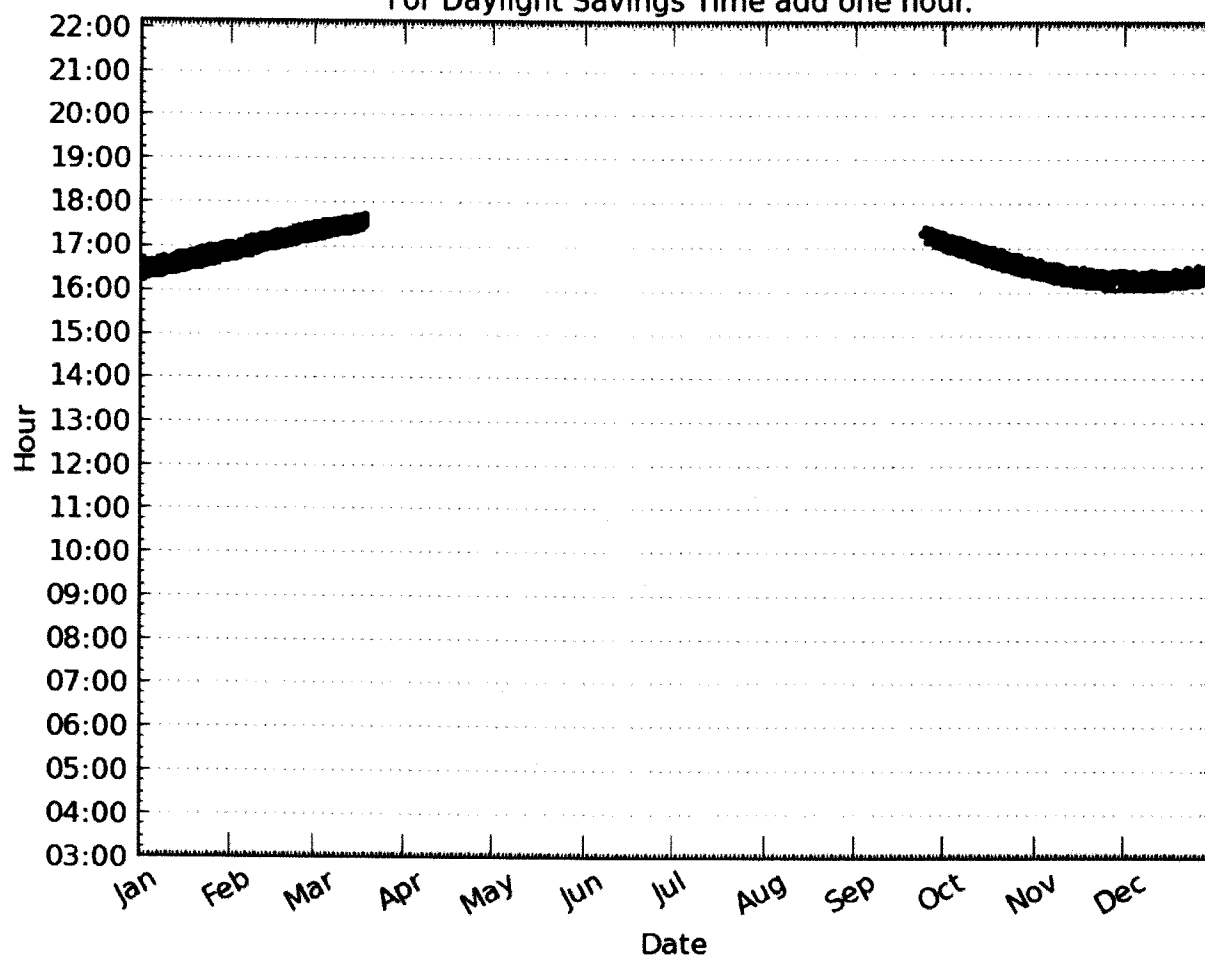
## Flight Path Observation Points

	<b>Latitude (deg)</b>	<b>Longitude (deg)</b>	<b>Ground Elevation (ft)</b>	<b>Eye-level height above ground (ft)</b>	<b>Glare?</b>
Threshold	33.6300193543	-114.716752142	397.55	50.0	Yes
1/4 mi	33.6336330978	-114.716752142	397.22	119.5	Yes
1/2 mi	33.6372468414	-114.716752142	399.19	186.72	Yes
3/4 mi	33.6408605849	-114.716752142	401.63	253.46	No
1 mi	33.6444743285	-114.716752142	404.77	319.49	No
1 1/4 mi	33.648088072	-114.716752142	407.09	386.35	No
1 1/2 mi	33.6517018156	-114.716752142	410.47	452.15	No
1 3/4 mi	33.6553155591	-114.716752142	414.41	517.4	No
2 mi	33.6589293027	-114.716752142	418.02	582.96	No

## Glare occurrence plots

# Threshold

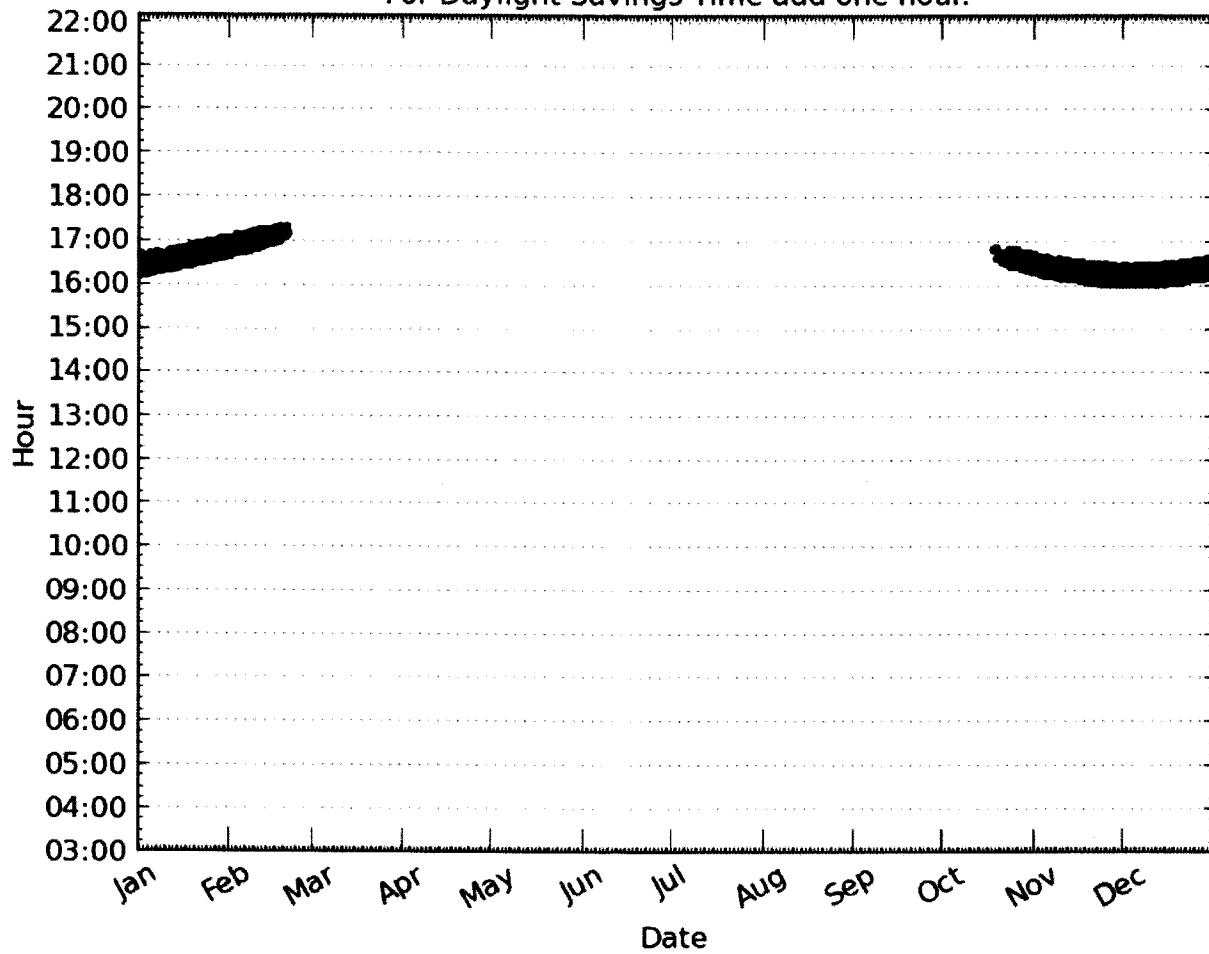
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1/4 mi

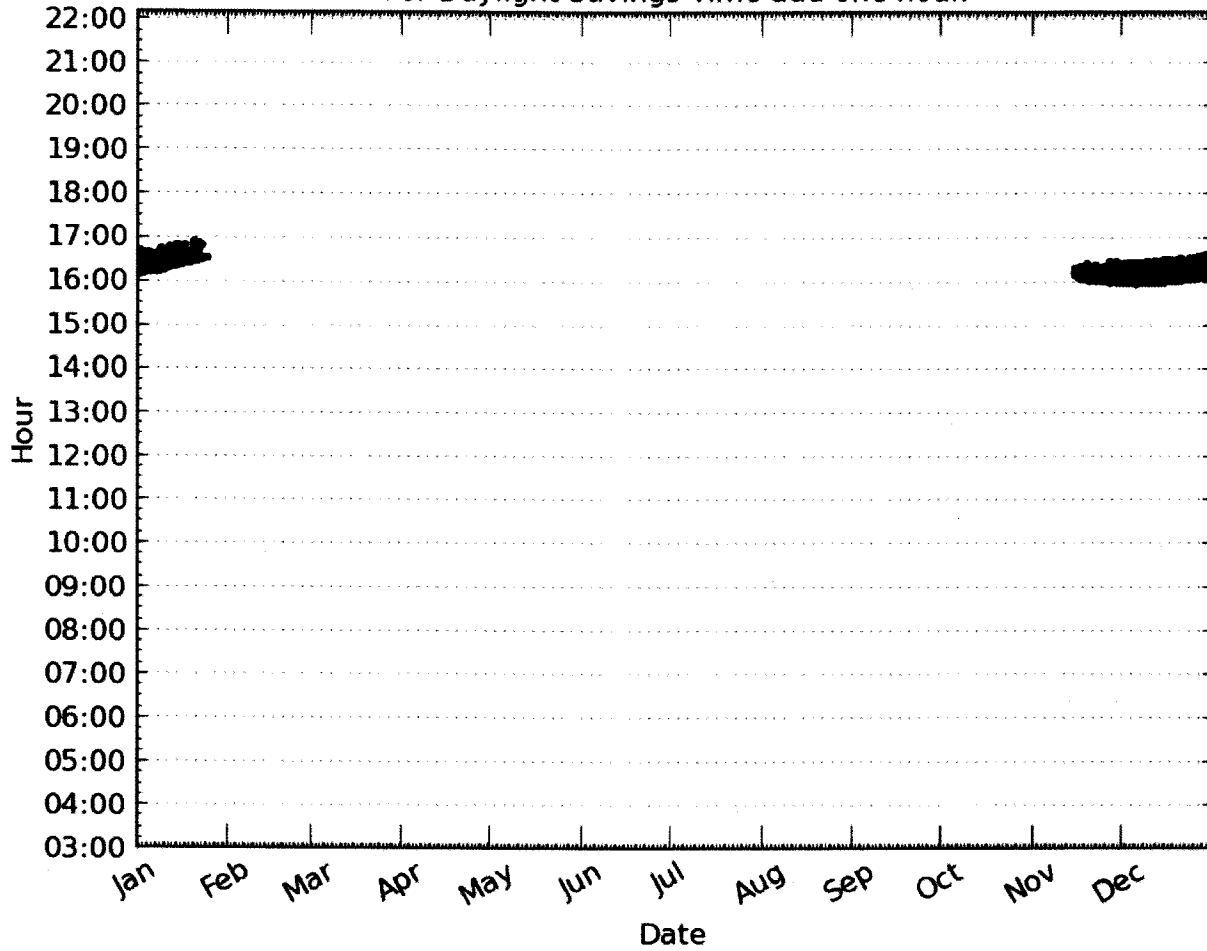
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.







- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1/2 mi

1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



-  Glare beyond 50 deg from pilot line-of-sight
-  Low potential for temporary after-image
-  Potential for temporary after-image
-  Potential for permanent eye damage

# Solar Glare Hazard Analysis Flight Path Report

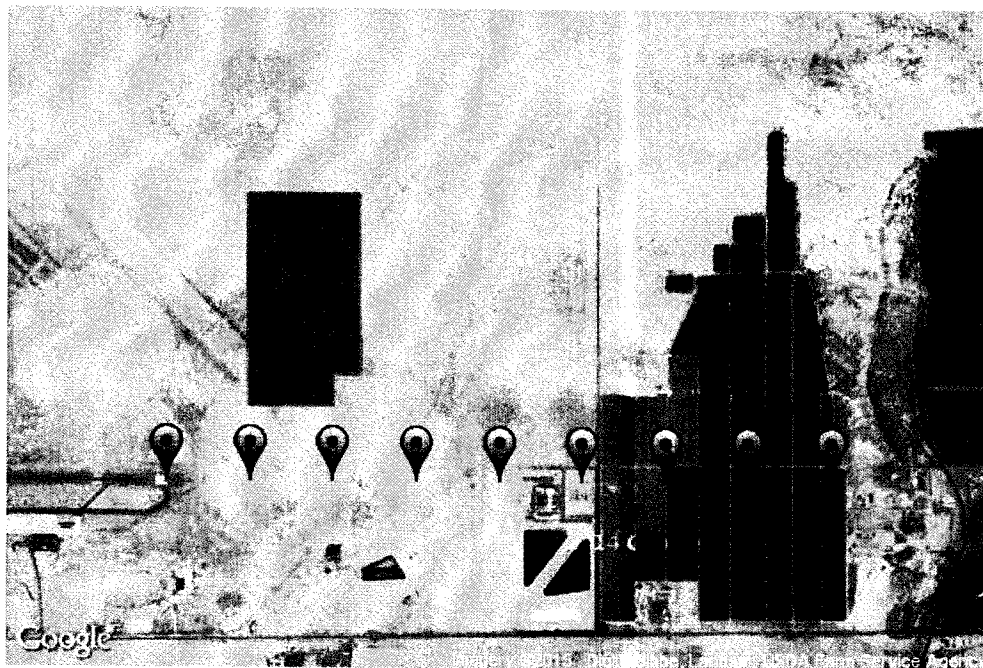
Generated April 9, 2015, 2:18 p.m.

Flight path: BLH Runway 26

Westbound Landing Approach

## Glare found

 Print



## Analysis & PV array parameters

Analysis name	BLH Solar Site Part A
PV array axis tracking	single
Tilt of tracking axis (deg)	0.0
Orientation of tracking axis (deg)	179.0
Offset angle of module (deg)	0.0
Limit rotation angle?	True
Maximum tracking angle (deg)	90.0
Rated power (kW)	0.0
Vary reflectivity	True
PV surface material	Light textured glass with ARC
Timezone offset	-8.0
Subtended angle of sun (mrad)	9.3
Peak DNI (W/m <sup>2</sup> )	1000.0
Ocular transmission coefficient	0.5
Pupil diameter (m)	0.002
Eye focal length (m)	0.017
Time interval (min)	1
Correlate slope error with material	False
Slope error (mrad)	10.0

## Flight path parameters

Direction (deg)	270.0
-----------------	-------

Glide slope (deg)	3.0
Consider pilot visibility from cockpit	True
Max downward viewing angle (deg)	30.0
Azimuthal viewing angle (deg)	180.0



## PV array vertices

<b>id</b>	<b>Latitude (deg)</b>	<b>Longitude (deg)</b>	<b>Ground Elevation (ft)</b>	<b>Height of panels above ground (ft)</b>	<b>Total elevation (ft)</b>
1	33.619921217	-114.69771	391.82	6.0	397.82
2	33.62131	-114.69772	392.07	6.0	398.07
3	33.62133	-114.69629	391.61	6.0	397.61
4	33.62897	-114.69639	393.61	6.0	399.61
5	33.62896	-114.70204	395.25	6.0	401.25
6	33.61991	-114.70198	393.62	6.0	399.62

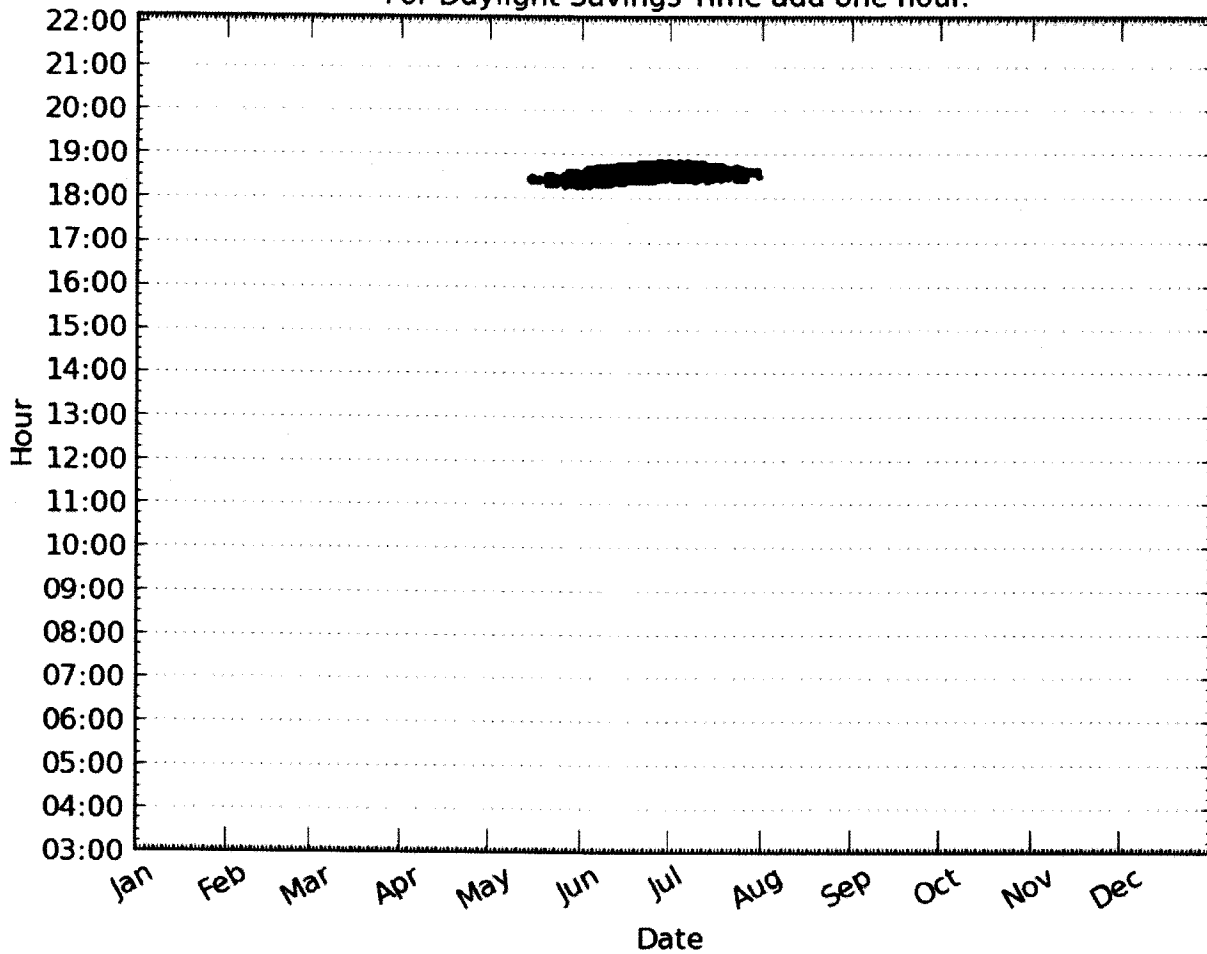
## Flight Path Observation Points

	<b>Latitude (deg)</b>	<b>Longitude (deg)</b>	<b>Ground Elevation (ft)</b>	<b>Eye-level height above ground (ft)</b>	<b>Glare?</b>
Threshold	33.6165332419	-114.7062639	392.59	50.0	Yes
1/4 mi	33.6165332419	-114.701919354	392.45	119.31	No
1/2 mi	33.6165332419	-114.697574808	388.81	192.14	No
3/4 mi	33.6165332419	-114.693230262	365.34	284.78	Yes
1 mi	33.6165332419	-114.688885715	339.71	379.58	Yes
1 1/4 mi	33.6165332419	-114.684541169	336.67	451.82	Yes
1 1/2 mi	33.6165332419	-114.680196623	339.61	518.05	Yes
1 3/4 mi	33.6165332419	-114.675852077	340.74	586.11	Yes
2 mi	33.6165332419	-114.671507531	341.98	654.03	Yes

## Glare occurrence plots

# Threshold

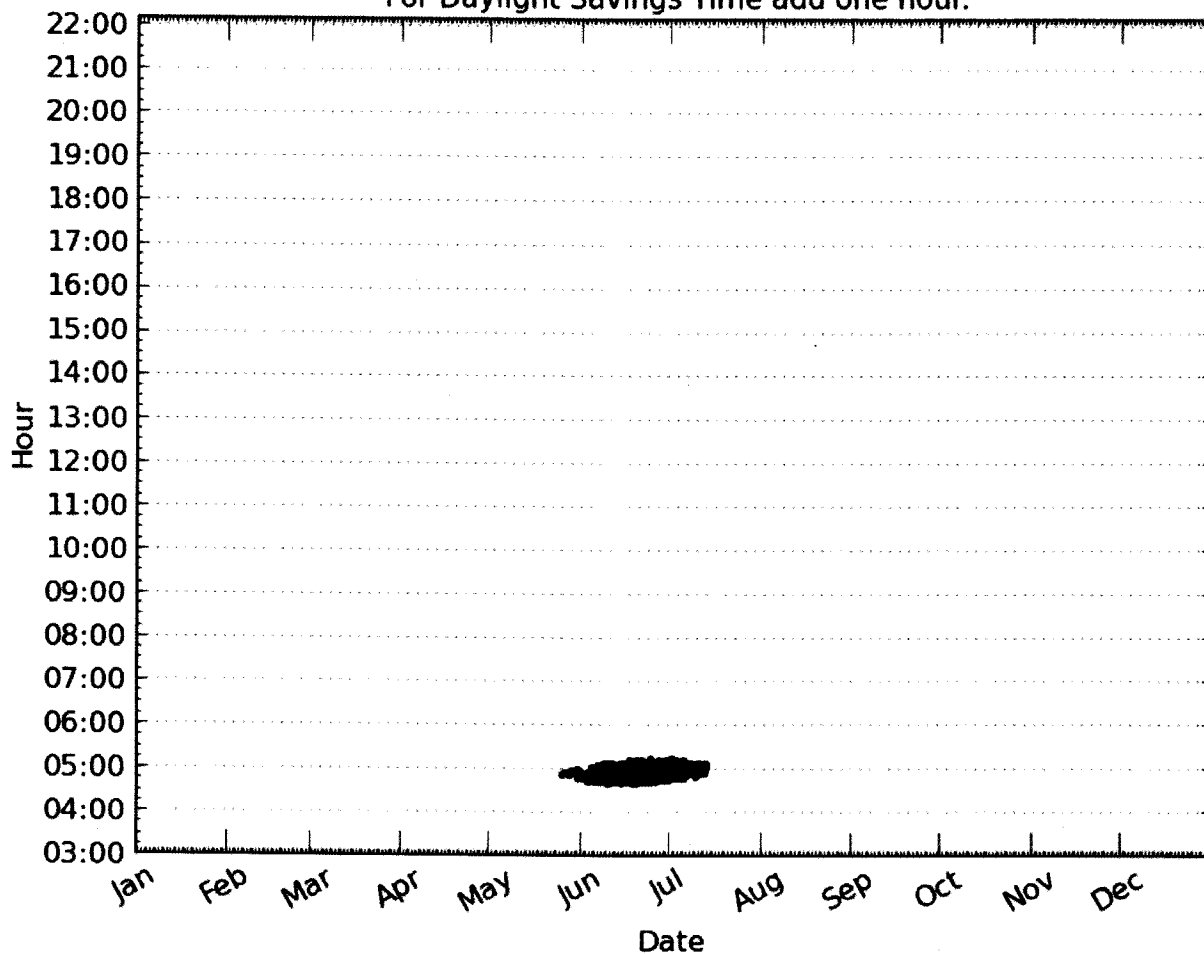
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.







- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

3/4 mi

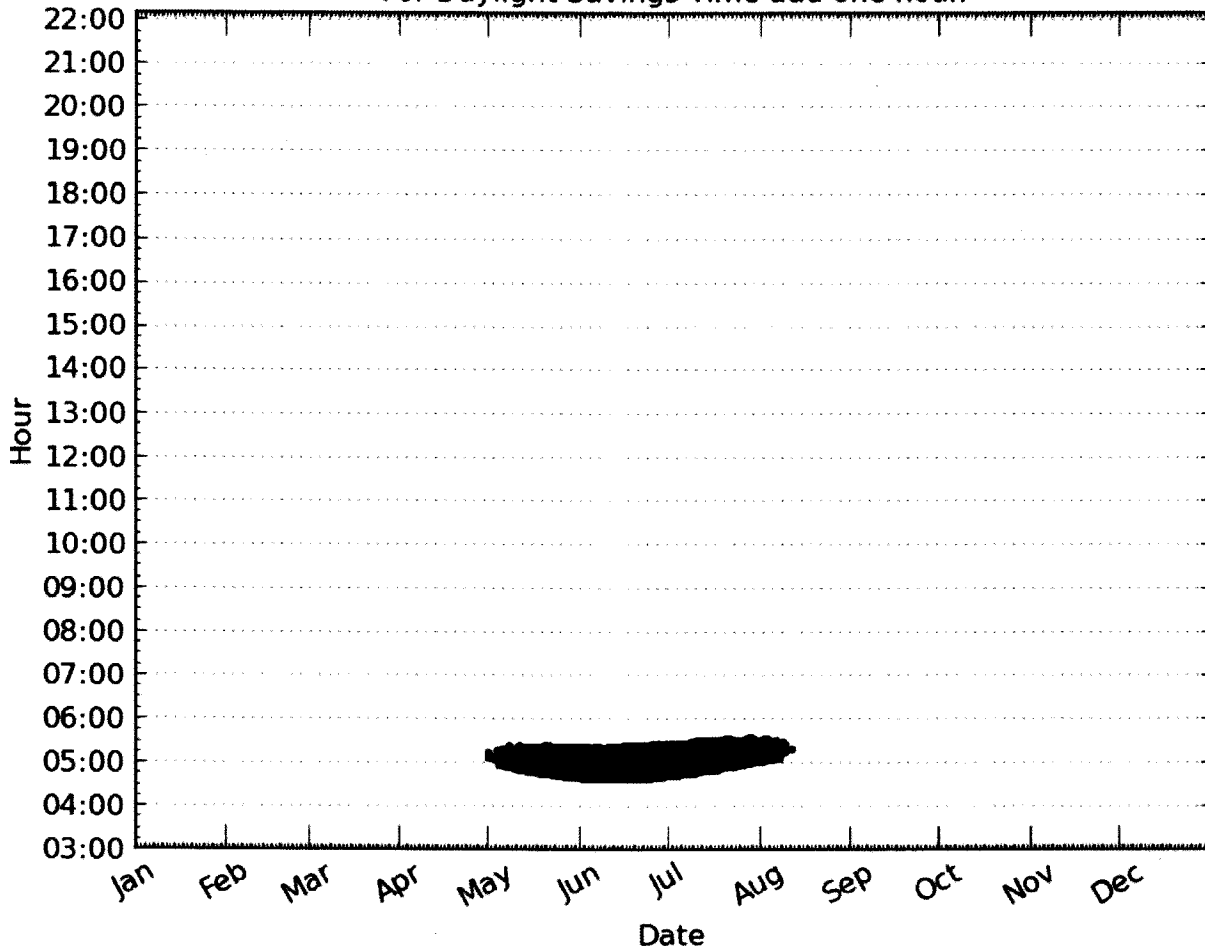
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



-  Glare beyond 50 deg from pilot line-of-sight
-  Low potential for temporary after-image
-  Potential for temporary after-image
-  Potential for permanent eye damage

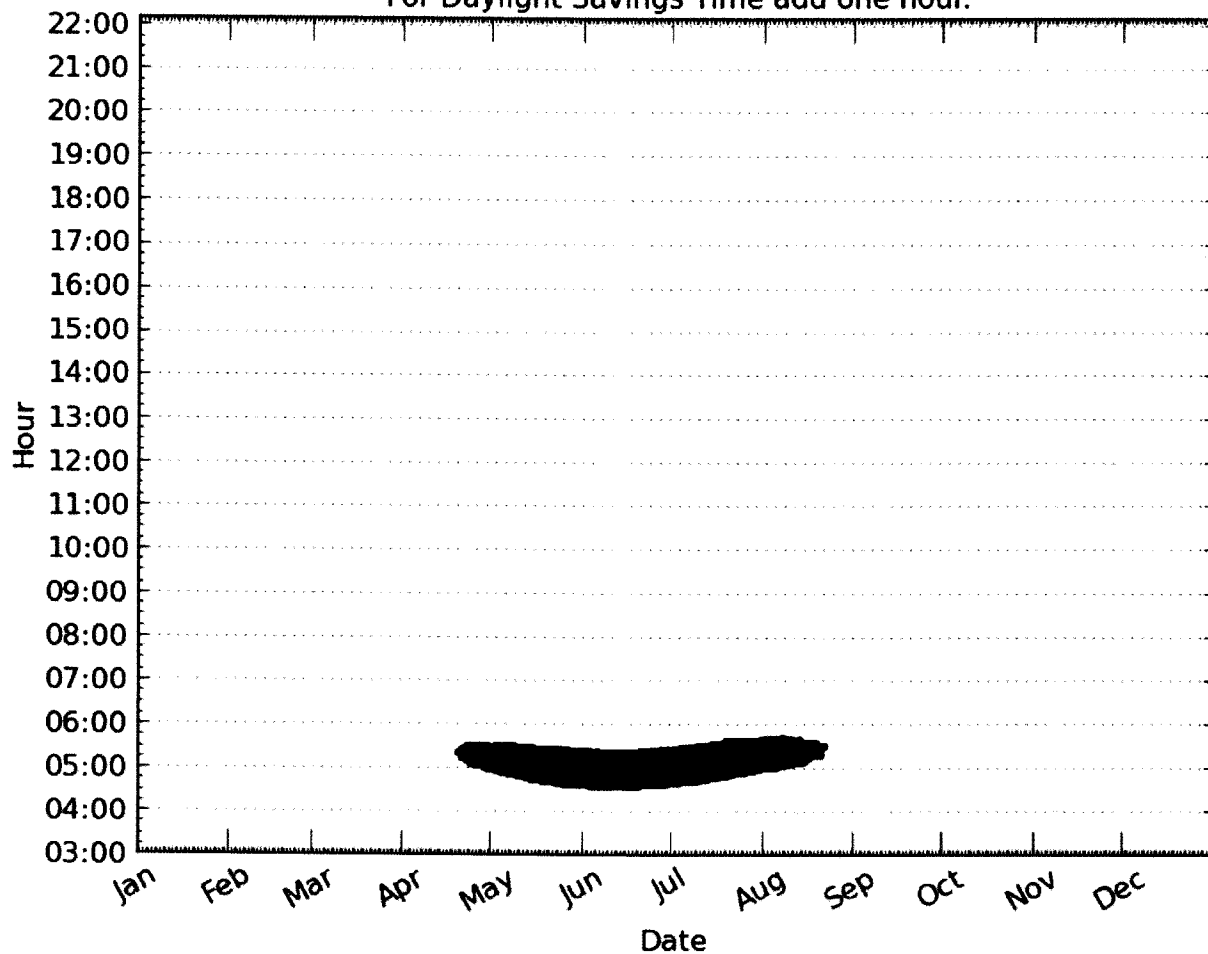
1 mi





1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



1 1/4 mi

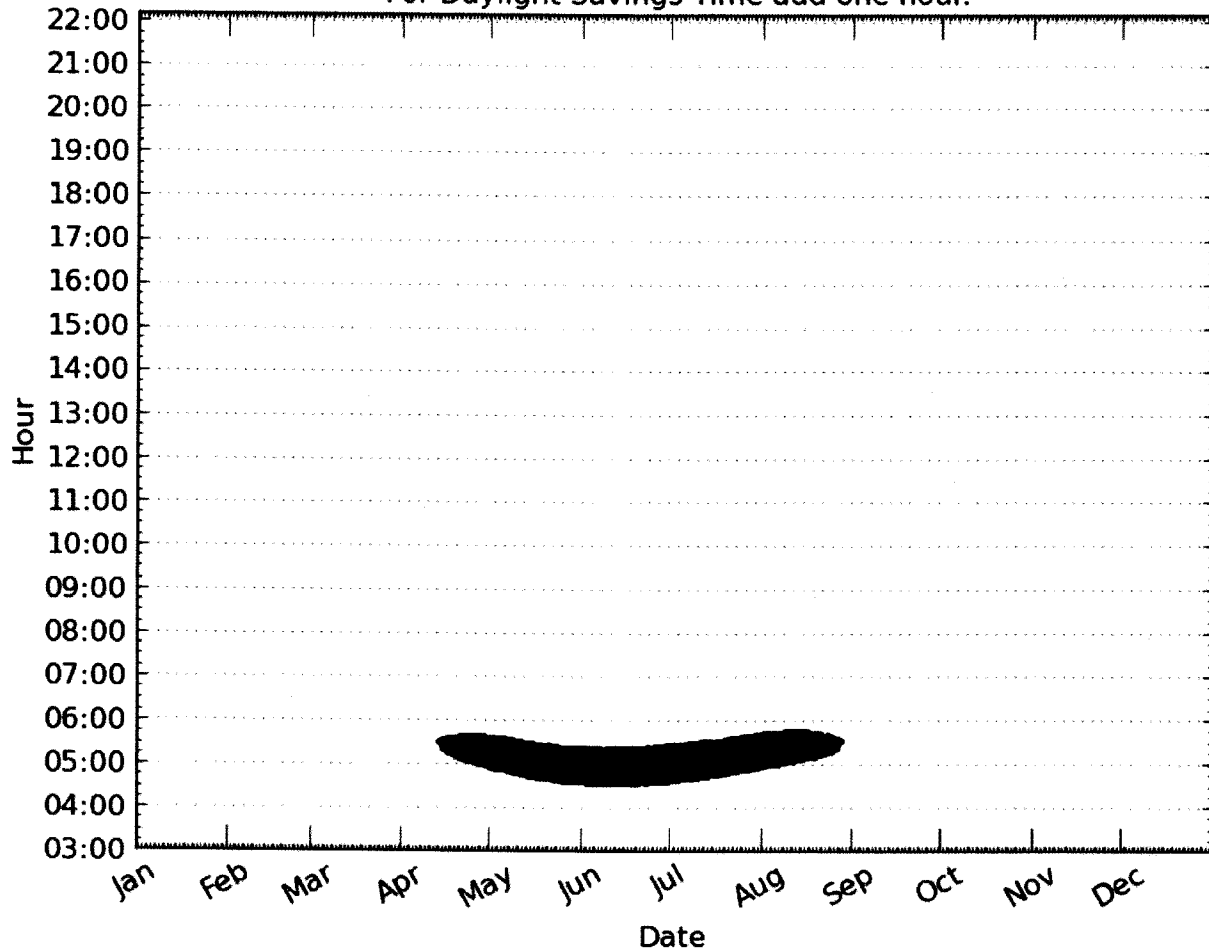
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



-  Glare beyond 50 deg from pilot line-of-sight
-  Low potential for temporary after-image
-  Potential for temporary after-image
-  Potential for permanent eye damage

1 1/2 mi

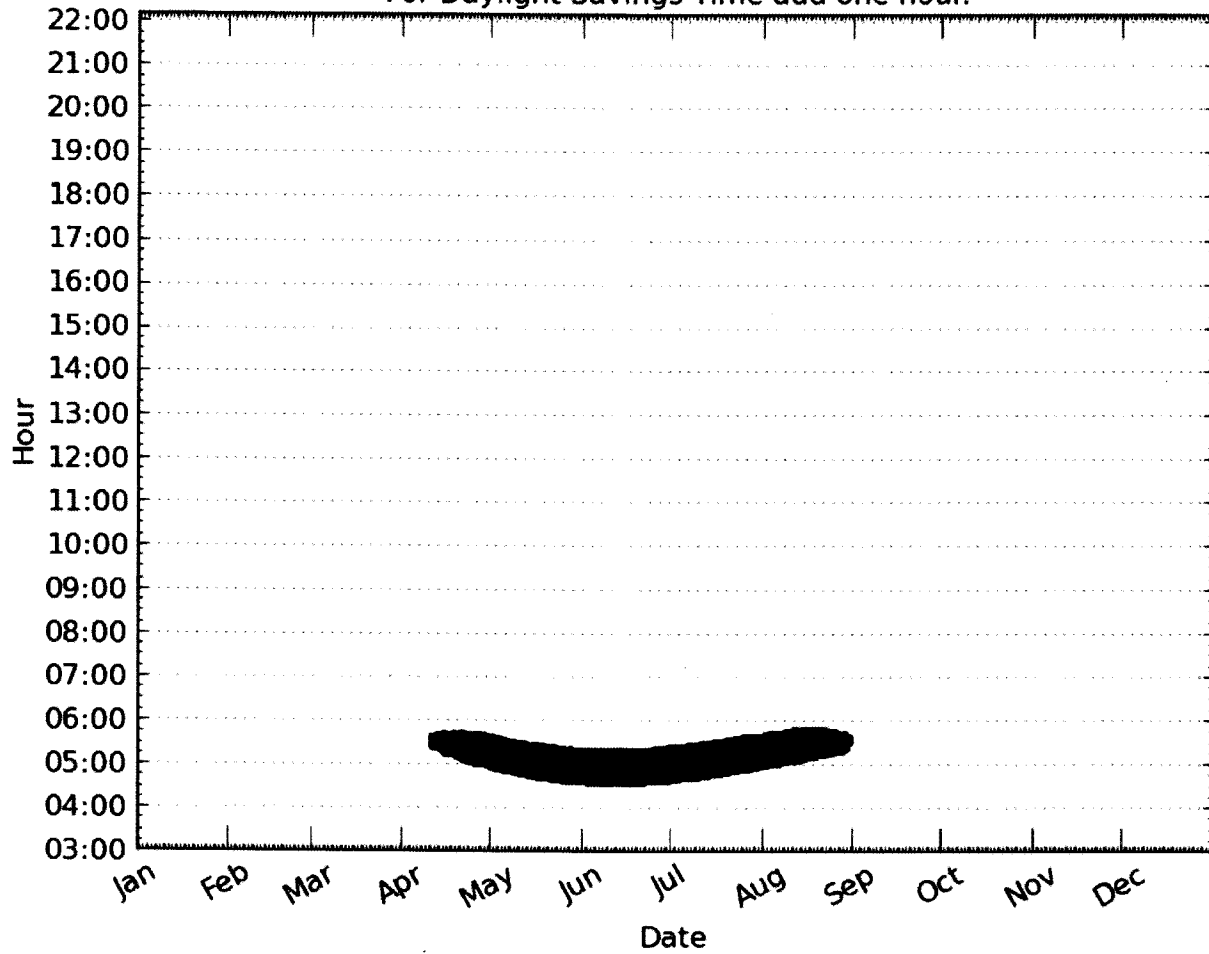
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1 3/4 mi

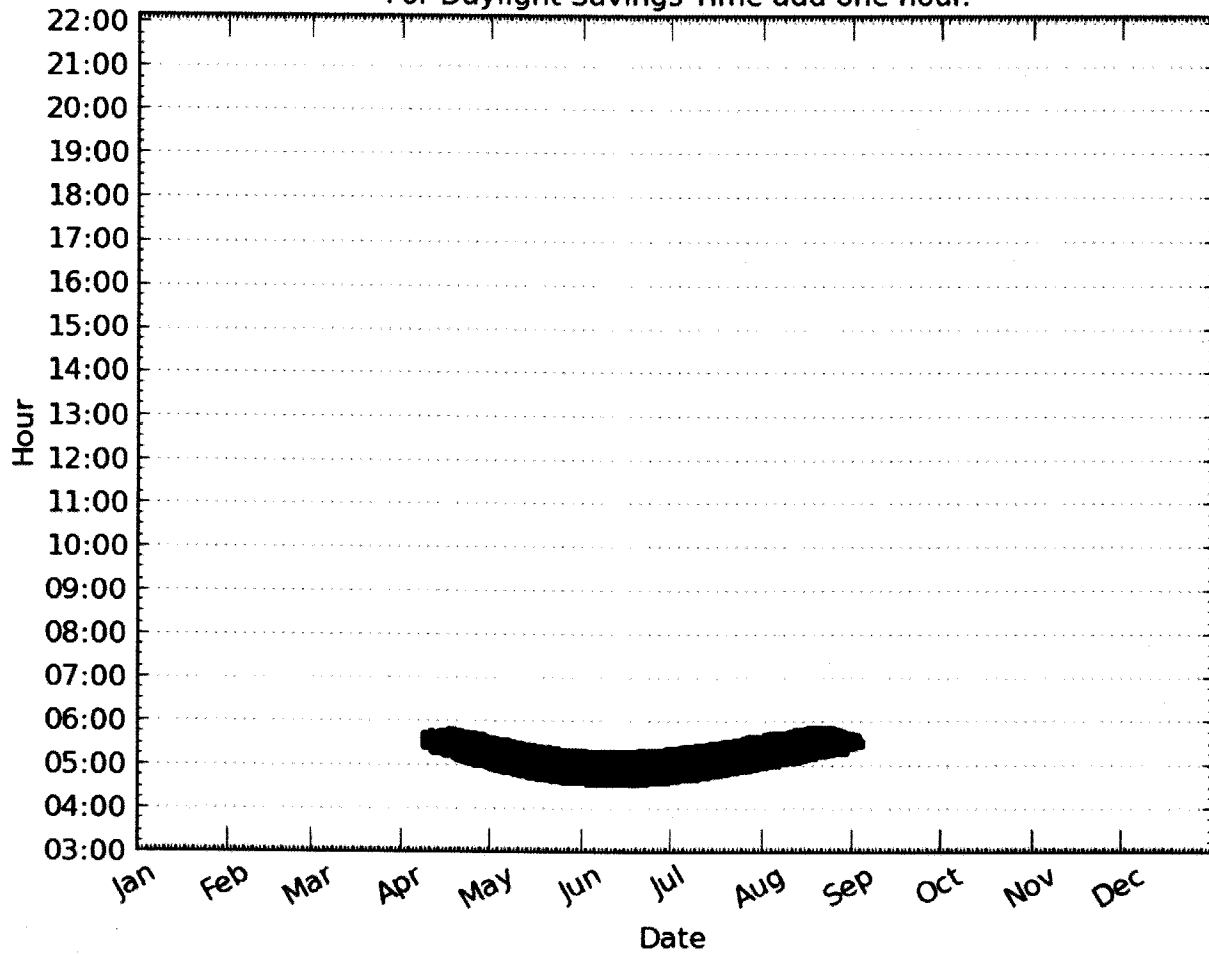
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

2 mi

1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

©1997-2014 Sandia Corporation



# Solar Glare Hazard Analysis Flight Path Report

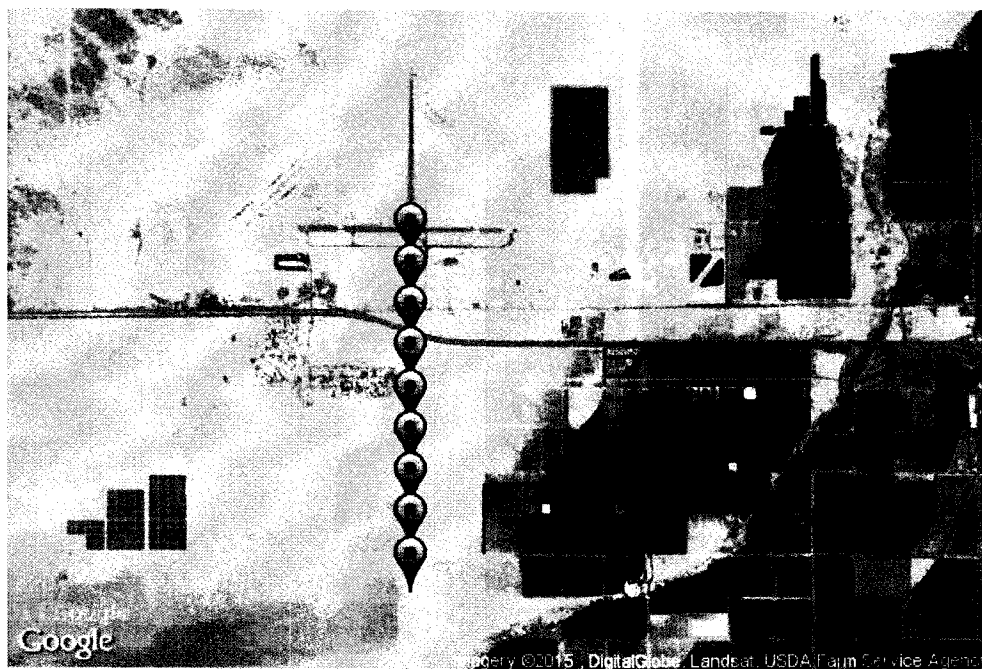
Generated April 9, 2015, 2:36 p.m.

Flight path: BLH Runway 35

Northbound Landing Approach

Glare found

 Print



## Analysis & PV array parameters

Analysis name	BLH Solar Site Part B
PV array axis tracking	single
Tilt of tracking axis (deg)	0.0
Orientation of tracking axis (deg)	179.0
Offset angle of module (deg)	0.0
Limit rotation angle?	True
Maximum tracking angle (deg)	90.0
Rated power (kW)	0.0
Vary reflectivity	True
PV surface material	Light textured glass with ARC
Timezone offset	-8.0
Subtended angle of sun (mrad)	9.3
Peak DNI (W/m <sup>2</sup> )	1000.0
Ocular transmission coefficient	0.5
Pupil diameter (m)	0.002
Eye focal length (m)	0.017
Time interval (min)	1
Correlate slope error with material	False
Slope error (mrad)	10.0

## Flight path parameters

Direction (deg)	0.0
-----------------	-----

Glide slope (deg)	3.0
Consider pilot visibility from cockpit	True
Max downward viewing angle (deg)	30.0
Azimuthal viewing angle (deg)	180.0

## PV array vertices

<b>id</b>	<b>Latitude (deg)</b>	<b>Longitude (deg)</b>	<b>Ground Elevation (ft)</b>	<b>Height of panels above ground (ft)</b>	<b>Total elevation (ft)</b>
1	33.619921217	-114.69771	391.82	6.0	397.82
2	33.62131	-114.69772	392.07	6.0	398.07
3	33.62133	-114.69629	391.61	6.0	397.61
4	33.62897	-114.69639	393.61	6.0	399.61
5	33.62896	-114.70204	395.25	6.0	401.25
6	33.61991	-114.70198	393.62	6.0	399.62

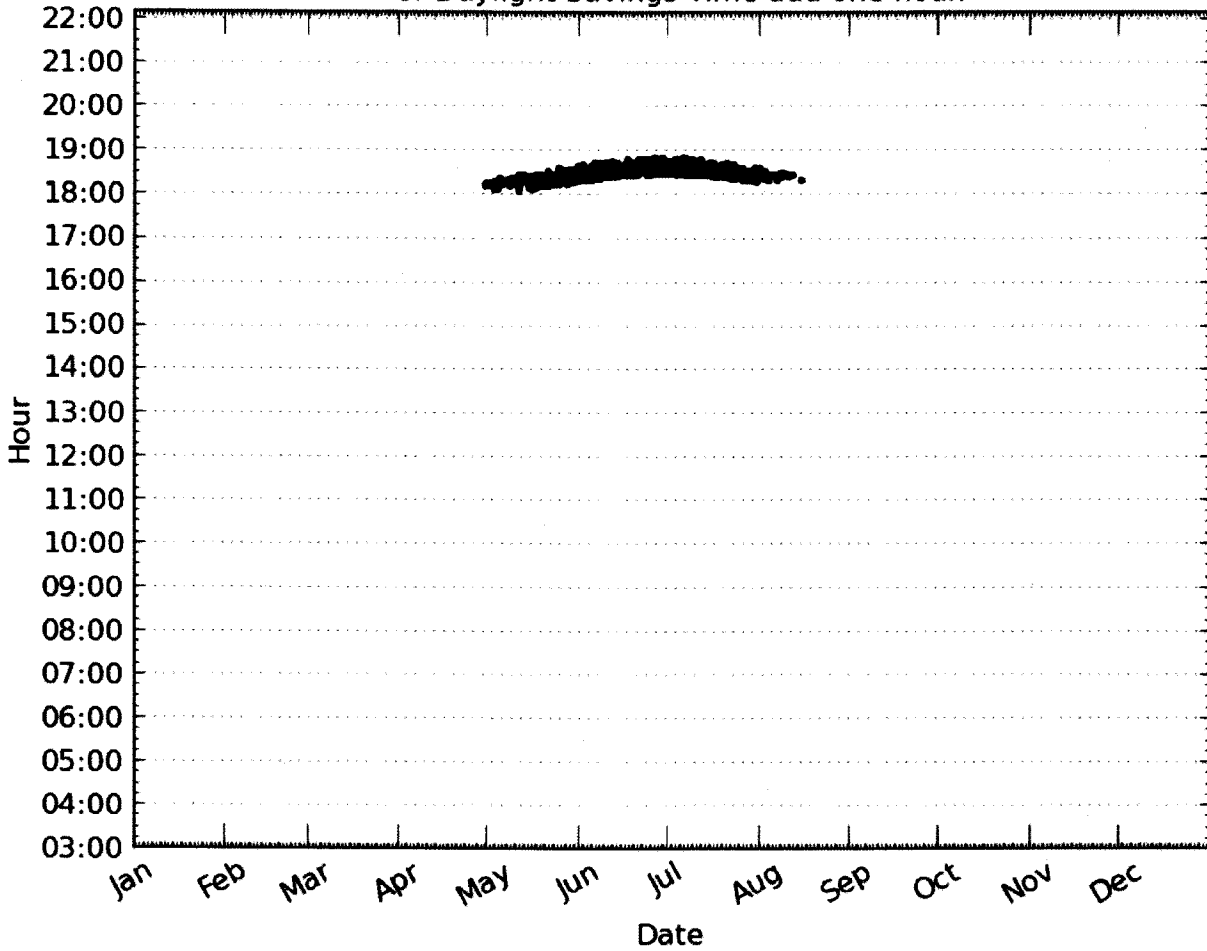
## Flight Path Observation Points

	<b>Latitude (deg)</b>	<b>Longitude (deg)</b>	<b>Ground Elevation (ft)</b>	<b>Eye-level height above ground (ft)</b>	<b>Glare?</b>
Threshold	33.6141163979	-114.716827512	392.71	50.0	Yes
1/4 mi	33.6105026544	-114.716827512	391.45	120.43	Yes
1/2 mi	33.6068889108	-114.716827512	389.51	191.56	No
3/4 mi	33.6032751673	-114.716827512	389.36	260.89	No
1 mi	33.5996614237	-114.716827512	391.02	328.4	No
1 1/4 mi	33.5960476802	-114.716827512	392.27	396.34	No
1 1/2 mi	33.5924339367	-114.716827512	389.07	468.71	No
1 3/4 mi	33.5888201931	-114.716827512	384.96	542.01	No
2 mi	33.5852064496	-114.716827512	370.79	625.35	No

## Glare occurrence plots

# Threshold

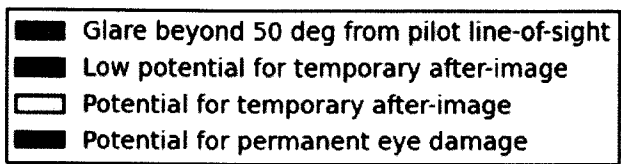
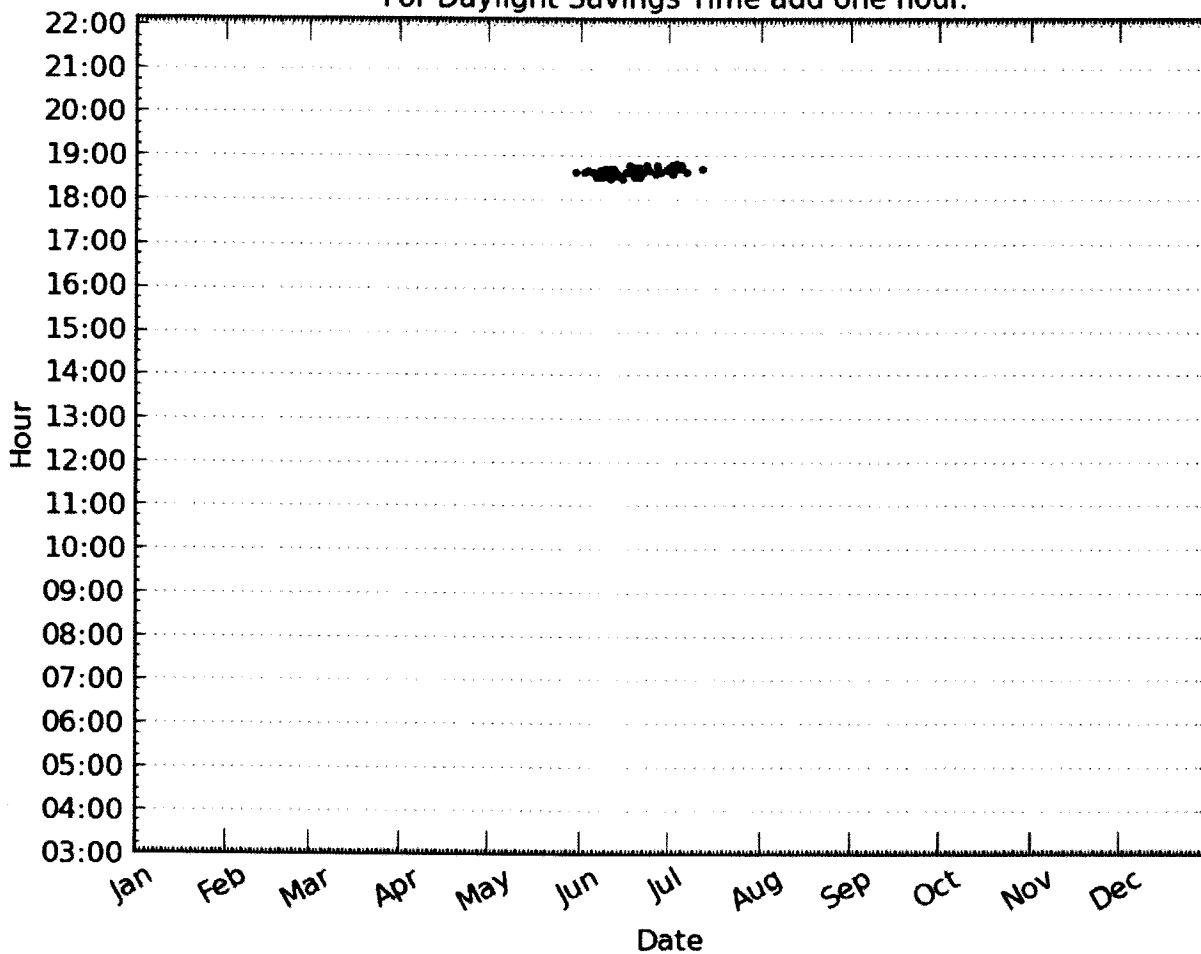
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1/4 mi

1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



# Solar Glare Hazard Analysis Flight Path Report

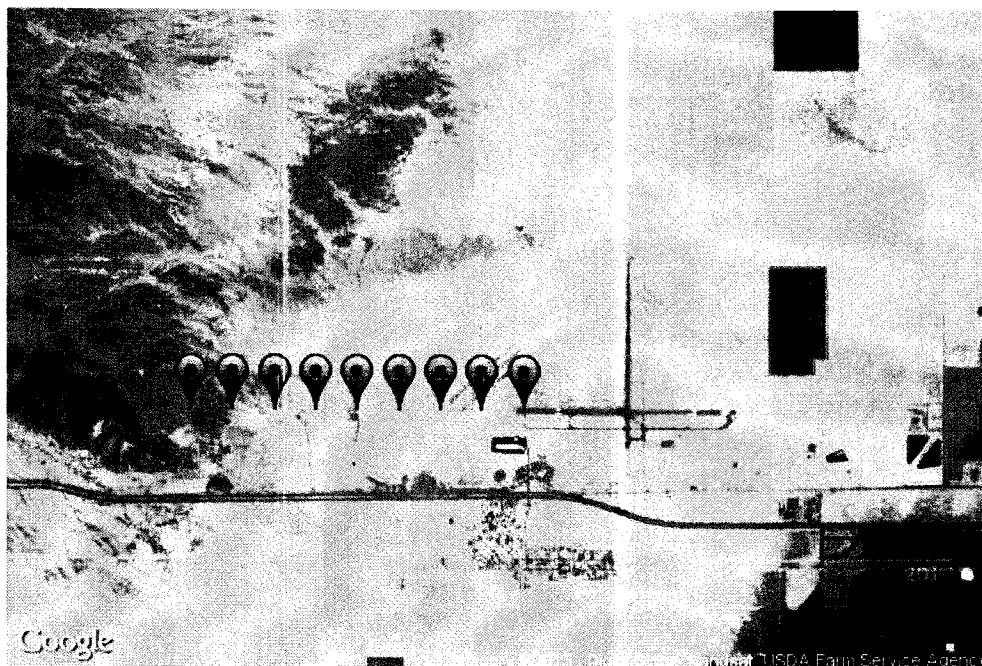
Generated April 9, 2015, 2:37 p.m.

Flight path: BLH Runway 8

Eastbound Landing Approach

Glare found

 Print



## Analysis & PV array parameters

Analysis name	BLH Solar Site Part B
PV array axis tracking	single
Tilt of tracking axis (deg)	0.0
Orientation of tracking axis (deg)	179.0
Offset angle of module (deg)	0.0
Limit rotation angle?	True
Maximum tracking angle (deg)	90.0
Rated power (kW)	0.0
Vary reflectivity	True
PV surface material	Light textured glass with ARC
Timezone offset	-8.0
Subtended angle of sun (mrad)	9.3
Peak DNI (W/m <sup>2</sup> )	1000.0
Ocular transmission coefficient	0.5
Pupil diameter (m)	0.002
Eye focal length (m)	0.017
Time interval (min)	1
Correlate slope error with material	False
Slope error (mrad)	10.0

## Flight path parameters

Direction (deg)	90.0
-----------------	------



Glide slope (deg)	3.0
Consider pilot visibility from cockpit	False

## PV array vertices

<b>id</b>	<b>Latitude (deg)</b>	<b>Longitude (deg)</b>	<b>Ground Elevation (ft)</b>	<b>Height of panels above ground (ft)</b>	<b>Total elevation (ft)</b>
1	33.619921217	-114.69771	391.82	6.0	397.82
2	33.62131	-114.69772	392.07	6.0	398.07
3	33.62133	-114.69629	391.61	6.0	397.61
4	33.62897	-114.69639	393.61	6.0	399.61
5	33.62896	-114.70204	395.25	6.0	401.25
6	33.61991	-114.70198	393.62	6.0	399.62

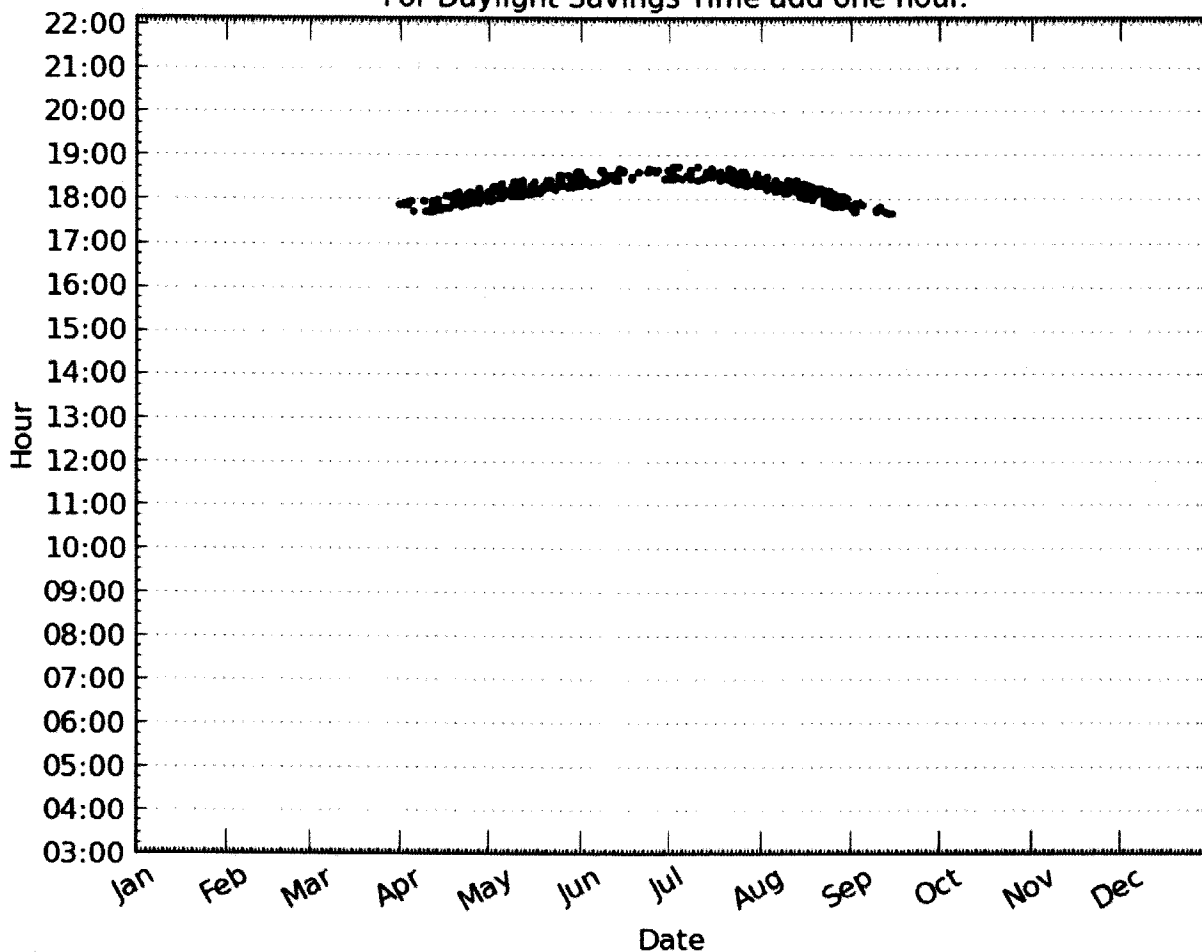
## Flight Path Observation Points

	<b>Latitude (deg)</b>	<b>Longitude (deg)</b>	<b>Ground Elevation (ft)</b>	<b>Eye-level height above ground (ft)</b>	<b>Glare?</b>
Threshold	33.6166038138	-114.72770977	394.31	50.0	Yes
1/4 mi	33.6166038138	-114.73205432	394.72	118.76	Yes
1/2 mi	33.6166038138	-114.73639887	395.59	187.08	Yes
3/4 mi	33.6166038138	-114.740743419	397.04	254.8	Yes
1 mi	33.6166038138	-114.745087969	402.0	319.02	Yes
1 1/4 mi	33.6166038138	-114.749432519	409.77	380.44	Yes
1 1/2 mi	33.6166038138	-114.753777068	415.94	443.44	Yes
1 3/4 mi	33.6166038138	-114.758121618	424.7	503.86	Yes
2 mi	33.6166038138	-114.762466168	462.12	535.62	Yes

## Glare occurrence plots

# Threshold

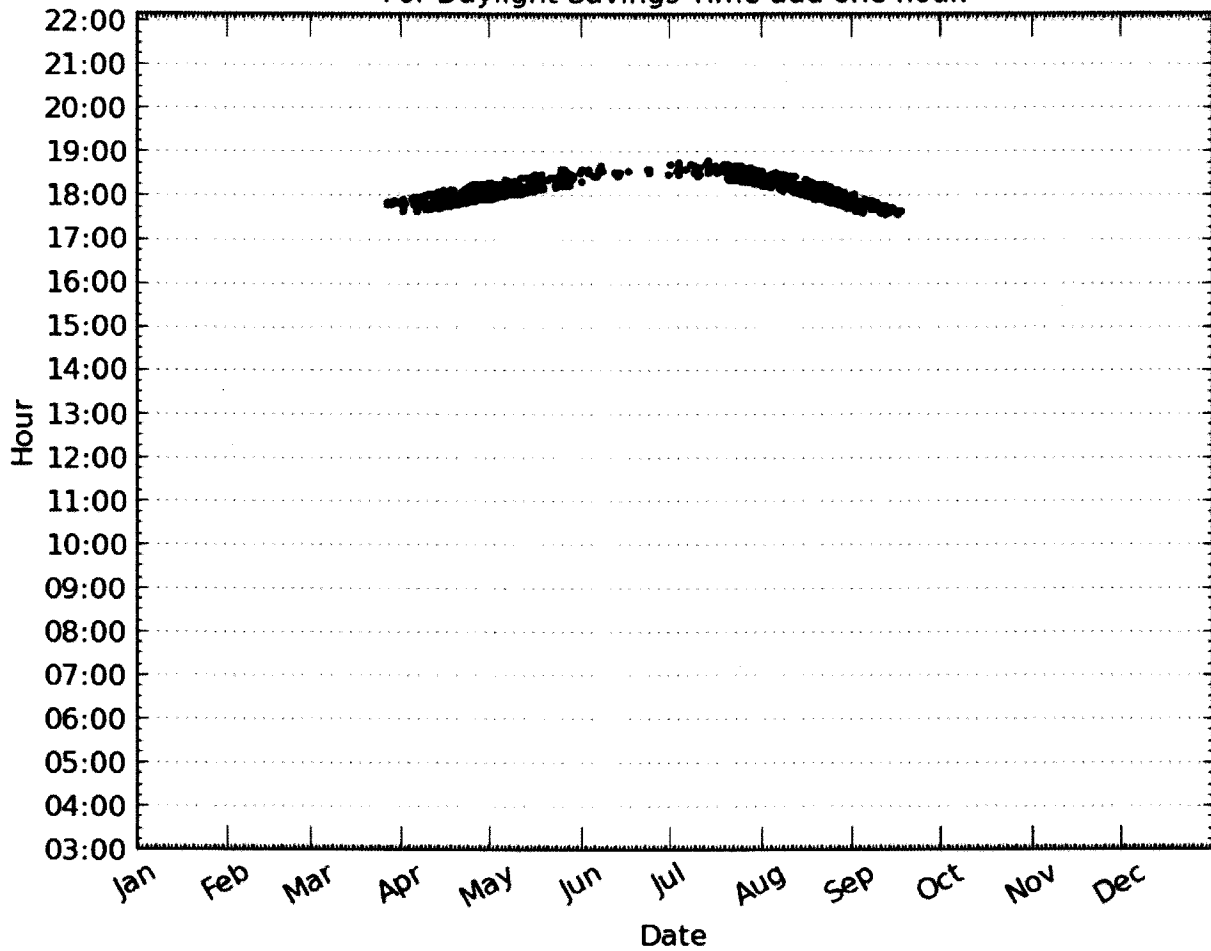
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1/4 mi

1-minute time interval.  
 All times are in standard time.  
 For Daylight Savings Time add one hour.

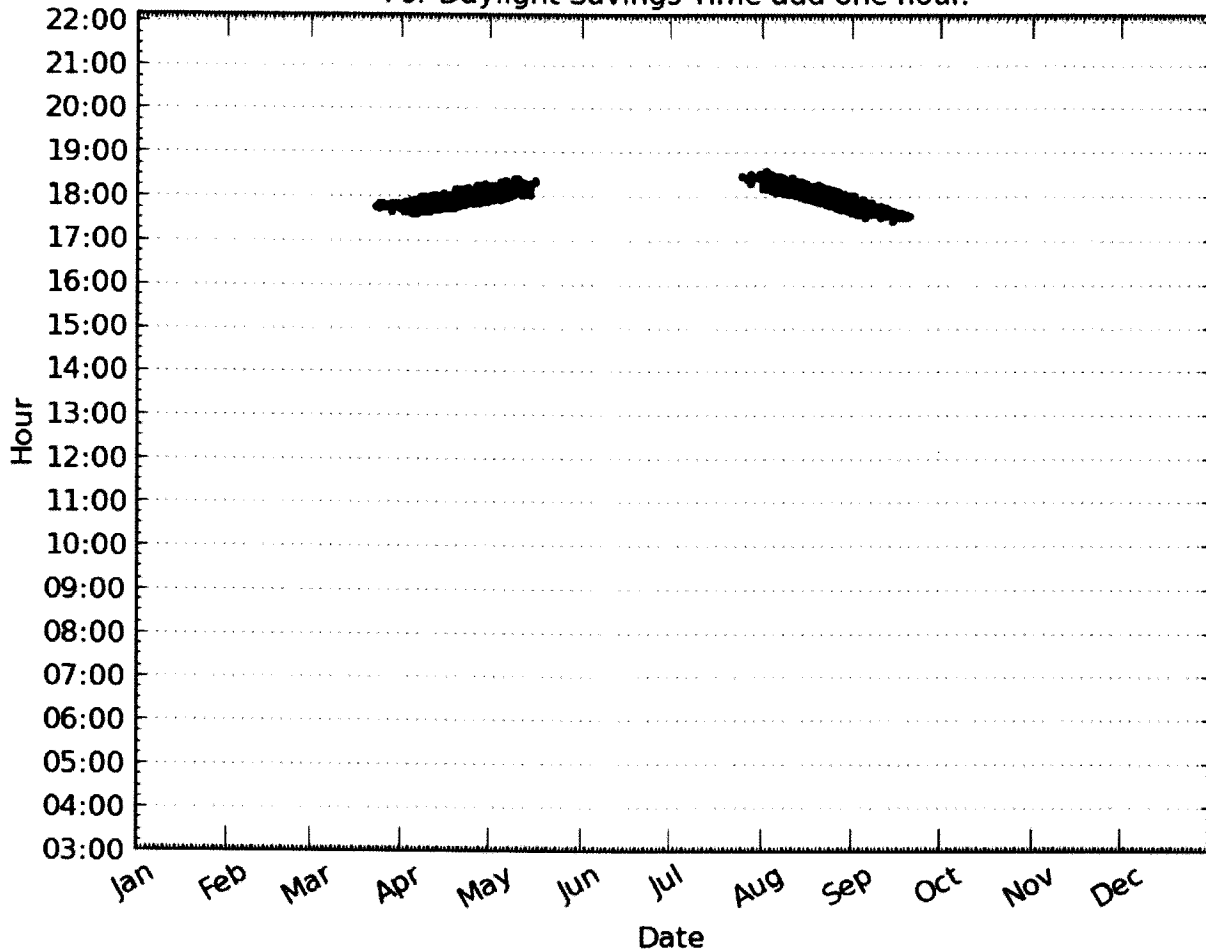


- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage



3/4 mi

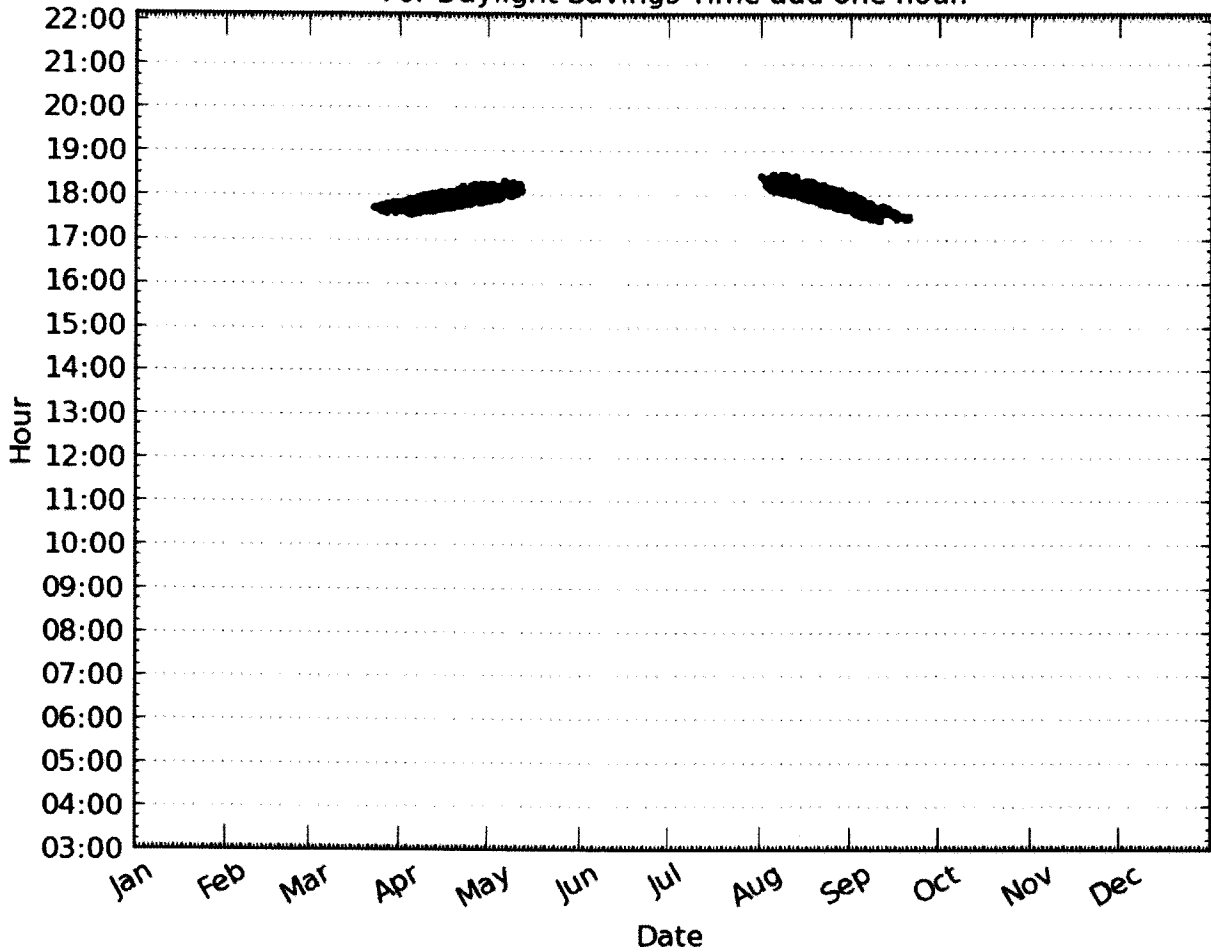
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1 mi

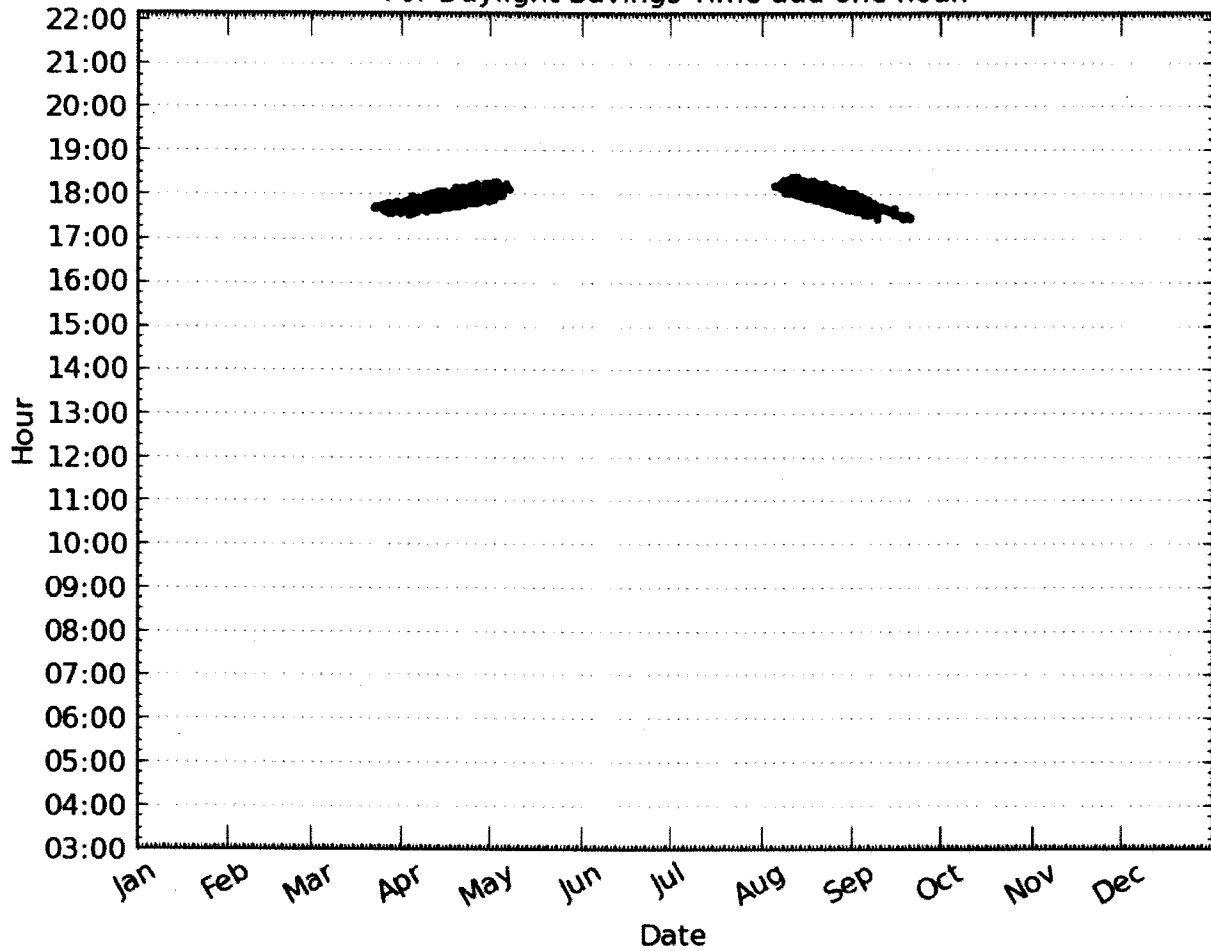
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

1 1/4 mi

1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.

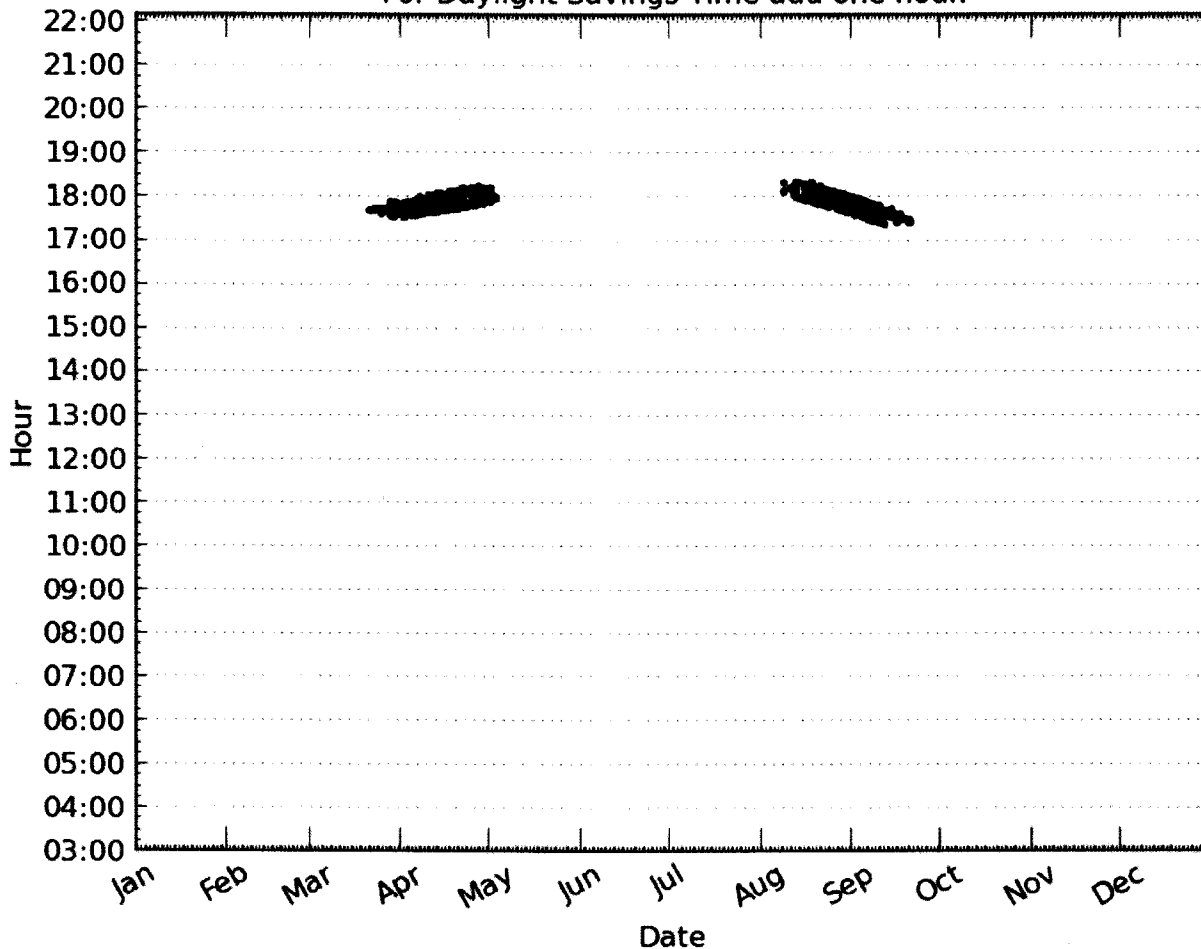


- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage



1 1/2 mi

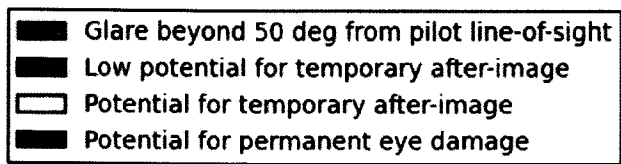
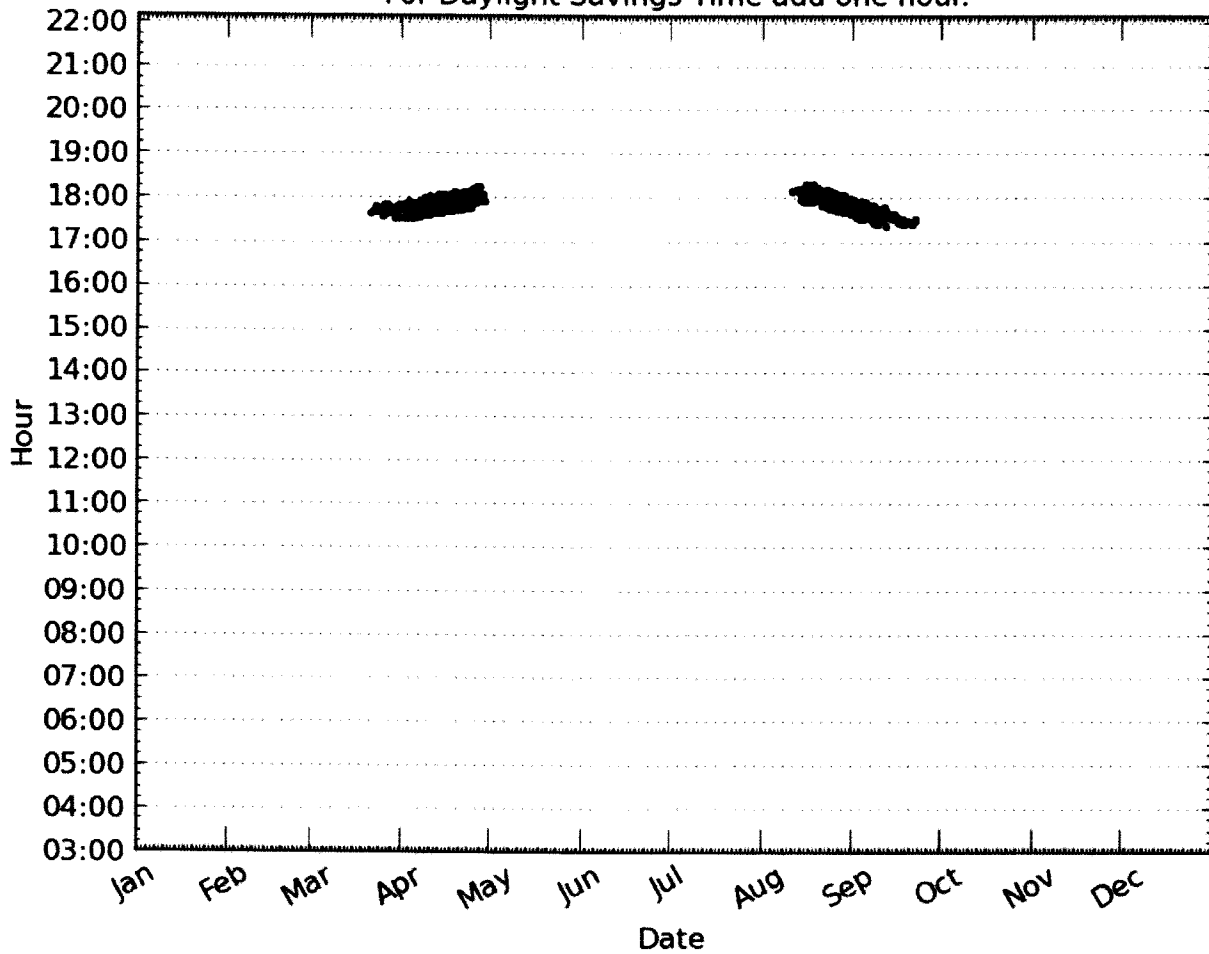
1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



- Glare beyond 50 deg from pilot line-of-sight
- Low potential for temporary after-image
- Potential for temporary after-image
- Potential for permanent eye damage

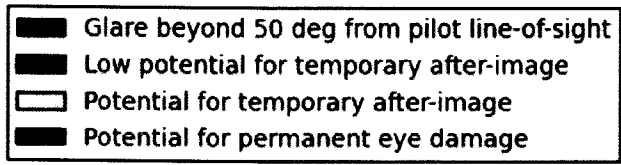
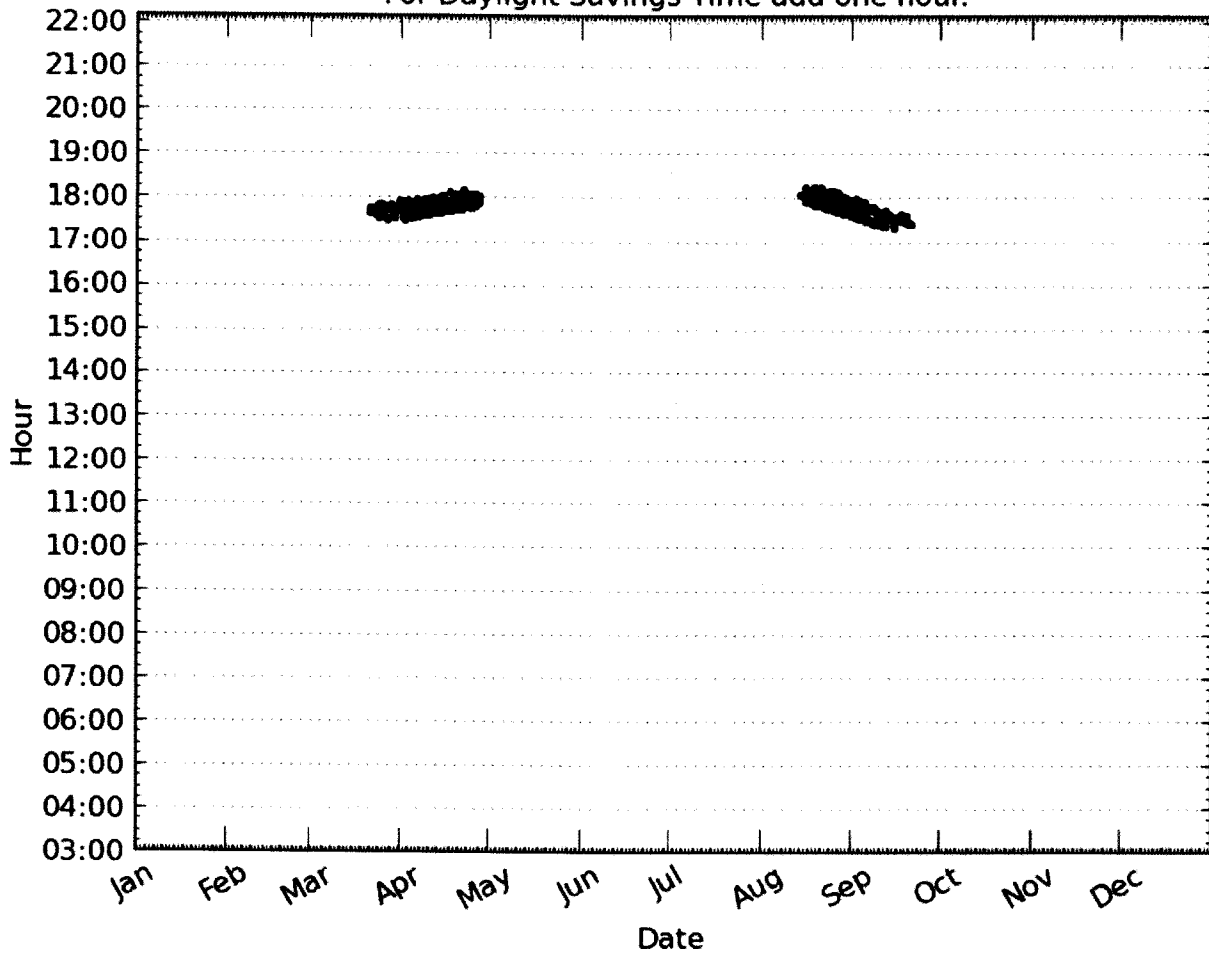
1 3/4 mi

1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



2 mi

1-minute time interval.  
All times are in standard time.  
For Daylight Savings Time add one hour.



©1997-2014 Sandia Corporation

**Attachment C**

---

Updated Biological Resources Report

---

## Blythe II Solar Project Updated Biological Resources Report

---

The proposed Blythe II Solar Project is a 20 MW solar power facility to be constructed on lands on the northeast portion of the Blythe Municipal Airport. The current 20 MW project, referred to as the Blythe II Solar Project, is an independent stand-alone single-phase project which was a part of a larger 100 MW project previously approved by Riverside County, referred to as the Blythe Airport Solar 1 Project that was situated on approximately 829 acres. The majority of the project property has been previously farmed and now is fallow. The proposed Project would use proven PV technology and would deliver electricity directly into the grid adjacent to the Project. The 100 MW project was previously approved by Riverside County (PP24616, EA42340) and included consultation with state and federal wildlife agencies. **Figure 1** shows the location of the Blythe II Solar site.

The Project Proponent leases the approximately 156.5-acre site on Blythe Municipal Airport land from Riverside County. The site is northeast of the existing runways and outside of the area used for aeronautical operations. The solar facility will include PV module arrays along with approximately 20 electrical equipment pads located within the interior of the Site, which will house the inverters and transformers. The project will use crystalline silicon or thin-film PV technology mounted on power driven single-axis tracking technology, in which the PV modules follow the path of the sun throughout the day. The PV panels are non-reflective and convert sunlight into direct current (DC) electricity. The DC output of the panels is collected through one or more combiner boxes and directed to an inverter. The inverter converts the DC electricity to alternating current (AC) electricity, which then flows to a transformer where it is stepped up to distribution-level voltage. The energy generated by the PV system arrays will be collected via underground cables excavated to a depth of 2 to 3 feet along each row of panels. These cables would route the energy to the project switchyard. **Figure 2** shows the proposed layout of the 20 MW Project.

An electrical switchyard and associated electrical equipment will be located at the southeastern corner of the project site. Electricity generated by the proposed Project will be interconnected into the local electrical system via a short 33 kilovolt (kV) overhead generation tie (gen-tie) line that will be extended to the site by the local utility Southern California Edison (SCE). This line would be extended from an existing structure at the corner of Buck Boulevard and Riverside Drive and be extended west to the corner of Riverside Drive and Butch Avenue, and then north from Butch Avenue to the project switchyard. The generation tie line will be constructed on single-pole wooden structures up to approximately 50 feet in height and spanned approximately 175 to 200 feet apart.

An 8-foot chain-link security fence would be installed along the perimeter of the entire approximately 156.5 acre Site. The switchyard will also be separately fenced for security purposes. The main site entrance gate will be located at the southeast corner of the Site.

---

Two water storage tanks owned by Riverside County EDA, with a combined volume of 1,350,000 gallons, are located approximately one mile southwest of the Site. Current plans are to truck water from these tanks to the site during construction mainly for dust control purposes. Water will also be trucked to the Site during operation as needed for panel washing. Following construction, water use during operations is estimated at two acre-feet per year.

Primary Site access would be via existing roads – from Hobsonway to Buck Boulevard to West Riverside Avenue. Secondary access would be provided from Hobsonway via an existing dirt road.

The proposed Project will be unmanned and is expected to be serviced for routine maintenance or as-needed from full time employees located offsite and near the City of Blythe. Workers will bring their own water to the Site and portable toilets will provide the needed sanitary facilities on Site.

## **Regulatory Setting**

Floral (plant) and faunal (animal) species that are listed by the U.S. Fish and Wildlife Service (USFWS) as federally endangered or threatened are protected under the Federal Endangered Species Act (FESA). Section 9 of FESA prohibits the taking of species listed by the USFWS as endangered or threatened. As defined by FESA, "taking" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in such conduct. As indicated in FAA Order 1050.1E, Section 7 of FESA applies to federal agency actions and sets forth requirements for consultation to determine if a proposed action may affect endangered or threatened species and to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

In addition to the FESA, the California Endangered Species Act (CESA) prohibits the taking, importation, or sale of state-listed endangered or threatened species except in compliance with permits or conditions specified in CESA. Further special status species have been given recognition by federal and/or state agencies, as well as private conservation organizations, because of perceived or documented decline in the population size or geographic range of the species.

## **Survey Methods**

Three site surveys were conducted at the site (May 12, 2009, August 23, 2010, and September 15, 2015). The September 2015 survey was conducted at the request of County of Riverside for a supplemental habitat assessment because the size of the original site assessed in the previous surveys was recently significantly reduced. The site surveys of the Blythe II Solar site and surrounding areas were completed by a qualified biologist. Additionally, a site tour was conducted with the U.S. Fish and Wildlife Service (USFWS) [Jody Fraser, Biologist, Carlsbad Fish and Wildlife Office] and the California Department of Fish and Wildlife (CDFW) [Magdalena Rodriquez, Biologist, Inland Deserts Region] on October 28, 2010.

---

Prior to conducting the site visits, a list of target species was developed by contacting the California Natural Diversity Data Base (CNDDB) to gather existing records on special-status species occurring in the project survey area (CNDDB 2015). In addition, special-status species identified through agency contacts with USFWS and CDFW were also included in the target list (USFWS 2015; CDFW 2015a and 2015b). **Tables 2 and 3** below identify the federally and state listed species with the potential to occur in the general area and their likelihood to occur onsite.

Field surveys of the Project Site and surrounding areas were conducted to evaluate habitat and the occurrence of listed species on the Site. Survey techniques included walking transects and driving surveys to ensure full coverage of the Project Site. Aspects such as ecology and habitat requirements of various species were reviewed. Habitat conditions and wildlife observations on and around the Project Site were recorded. Information including habitat requirements, known occurrences, and habitat types, was used to evaluate the potential effects of Project implementation on biological resources within the vicinity of the Project.

During the surveys, species sign (e.g., individuals, dens, burrows, scat, tracks, pellets, skeletal remains) was recorded. The survey area was described relative to topography, drainage type, soils, substrate, aspect-dominant, common and occasional plant species, plant cover, and anthropogenic disturbances. All plant communities were described in detail and mapped; densities were estimated visually (**Figure 3**).

In the absence of definitive species sign, species presence was assumed wherever suitable habitat existed and the relevant habitat was rated as to its quality. Development of the proposed action would result in the removal of the existing sparse vegetation and habitats from the site. In addition, a short transmission line would be built to interconnect the project to the regional electrical system.

## **Existing Environment**

The biological resource areas of the Blythe Region of the Palo Verde Valley are dominated by three plant community types: creosote bush scrub community associated with undeveloped desert areas; riparian plant communities associated with the channel banks of the Colorado River and various canals and drains; and agricultural areas in active cultivation (Blythe General Plan 2007).

The desert region outside of the river basin where the Project is located is commonly called Sonoran Desert or "Colorado Desert", and includes the area between the Colorado River Basin and the Coast Ranges south of the Little San Bernardino Mountains and the Mojave Desert. Rainfall amounts are very minimal, approximately 3.7 inches per year, and typically restricted to the winter months. Due to low elevations, temperatures are extreme. As a consequence of these climatic variables, vegetation is drought-adapted and typically simple and sparse. Few cacti are present within the plant communities found in this region.

The Blythe area is within the Lower Colorado River Valley biotic subdivision (Brown 1994), which is the largest and most arid of the seven Sonoran Desert subdivisions. The limited precipitation and extreme heat characterizing the climate has led to the establishment of

---

communities of drought-, salt-, and heat-tolerant species. These plants are typified by spiny, succulent, evergreen or seasonally rapid growth habits. Vegetation spatial patterns are also influenced by biotic responses to elevation, topography, exposure, soil type, temperature, soil permeability, runoff potential, and land use.

Two types of drainage ways, minor and through-flow runnels, support the majority of vegetation observed in the Lower Colorado River Valley biotic subdivision. The minor runnels of shallow rill drainage patterns are lined by small trees and shrubs generally requiring periodic runoff. Within the minor runnel drainages, vegetation is irregularly scattered, and because the indistinct runnels may be numerous and anastomosing, the illusion is presented of trees and shrubs forming a homogeneous community over the entire desert landscape (Brown 1994). The drier interfluves host fewer perennial plants, and support a sparse seasonal cover. Desert plants growing on the interfluves compete for scarce water resources compared to plants growing along nearby runnels. Creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) generally dominate this perennial plant community. As the sand fraction increases, as represented by the slopes of the Palo Verde Mesa, big galleta grass (*Pleuraphis rigida*) increases in density, while creosote bush and white bursage decrease in abundance.

Through-flow channels carry periodic runoff to some regional drainage and are often incised, several-yards wide, sandy to cobbly drainages. They are densely vegetated along the banks by both trees and shrubs. The associated trees are aphyllous or microphyllous with a high proportion of chlorophyll in or beneath the bark or stems (Turner and Brown 1982) and primarily include ironwood (*Olneya tesota*), blue palo verde (*Cercidium floridum*) and honey mesquite (*Prosopis glandulosa*).

### **Wildlife Habitat and Plant Communities in the Project Area**

The Site is on a nearly flat mesa (slope <1 %); the elevation ranges from 389 to 395 feet. The site is on a portion of the Blythe Airport. The soil is soft sand with an approximately 60% fine-gravelly substrate. Almost the entire site is abandoned agriculture (pivot circles) and old runways associated with the Blythe Airport (**Figure 2**). These areas appear to have been fallow for a significant period of time and sparse creosote bush (*Larrea tridentata*), galleta grass (*Pleuraphis rigida*), and brittle bush (*Encelia farinosa*) have begun to reestablish. Sahara mustard (*Brassica tournefortii*) is the dominant herbaceous species. Shrub cover in the crop circles is estimated at less than 1 percent. Approximately 141.9 acres of the Project Site occur within this vegetation type (**Appendix A – Photo 1**). Average shrub cover on the entire site is estimated at less than 5 percent.

There are two small areas between and adjacent to pivot circles which support relatively disturbed native vegetation but have not been cultivated. These areas account for approximately 14.6 acres of the site. One of these patches occurs on the perimeter (perimeter patch) of the Blythe II Solar site, and one occurs on the western patch. The vegetation community is low diversity Sonoran Creosote Bush Scrub (after Holland 1986). Aspect-dominant shrub species are creosote bush, salt bush (*Atriplex polycarpa*), and white bursage (*Ambrosia dumosa*); Sahara mustard is the dominant herbaceous species, although a small amount of galleta grass is present in areas with the loosest sand. Shrub cover was estimated visually at approximately less than 10 percent. Site drainage is primarily by percolation. Representative photographs of the site are included in **Appendix A**.



---

The two habitat patches provide varying but low quality wildlife habitat due to existing and past disturbances. The eastern patch is approximately 8.3 acres and is highly disturbed. It is dominated by creosote bush and salt bush. The understory is dominated by Sahara mustard (**Appendix A – Photo 2**). This patch is traversed by two roads, has several areas that were dug out by heavy equipment, has several low berms that appear to be associated with past agricultural activities, and is littered with pieces of the old runway. This patch provides little to no habitat value.

The western patch is approximately 6.3 acres and is highly disturbed. It is surrounded by crop circles and abandoned runways. The habitat is dominated by creosote bush and salt bush (**Appendix A – Photo 3, 4**). The understory is dominated by Sahara mustard. The patch is bisected by several access roads and is littered with pieces of old runway. This patch is isolated and provides little to no habitat value.

On a larger scale, the Blythe II Solar site is surrounded by other disturbed areas including the airport, a power plant, transmission lines, and agricultural fields. The south and west boundaries directly adjoin the airport and agricultural fields. The east boundary is adjacent to a 30 to 40 foot-wide road and a 0.7 mile wide strip of disturbed creosote bush/salt bush scrub, which is then bounded by agricultural fields. The north boundary is adjacent to a 0.5 mile-wide strip of disturbed creosote bush/salt bush scrub, which is then bounded by agricultural fields. As stated in the Blythe General Plan (2007), remnant parcels of creosote bush scrub are found near the airport north of Interstate 10, but most of these areas are degraded by surface disturbances. Essentially, the site is isolated from high quality habitat on all sides. Due to limited undisturbed natural habitats in the surrounding area, wildlife abundance is low and habitats are highly fragmented.

#### Gen-tie Line

The primary site access would be along Riverside Drive and Butch Boulevard and the proposed gen-tie line would follow the same route. The gen-tie line would be adjacent to the roads in fallow agricultural fields. The segment along Butch would be approximately 0.1 miles long and the segment along Riverside Drive would be about 0.7 miles long. The vegetation in the fallow agricultural lands is dominated by Sahara mustard and bare ground and provides little to no habitat value.

### **Results**

Given the sensitivity of special-status species and the relationship to edge effects (e.g., the highly disturbed nature of the site) and non-native species invasion (e.g., the dominance of Sahara mustard), the Blythe II Solar site was selected to avoid areas of high impact potential. Due to the location of the site in an area that is highly disturbed, further fragmentation of the creosote bush scrub community will not occur. No special-status plant or wildlife species were observed on the Blythe II Solar site. **Table 1** provides a summary of habitat types at the Blythe II Solar site.

<b>Table 1</b> <b>Habitat Types at the Blythe II Solar Project Site</b>
--

---

<b>Habitat ID</b>	<b>Community Type</b>	<b>Acreage</b>
Abandoned Agriculture	Barren/Scattered Creosotebush and Salt Bush	141.9
	<b>Subtotal</b>	<b>141.9</b>
Eastern Patch	Disturbed Creosotebush Scrub	8.3
Western Patch	Disturbed Creosotebush Scrub	6.3
	<b>Subtotal</b>	<b>14.6</b>
	<b>Total</b>	<b>156.5</b>

**Tables 2 and 3** present the special-status species that have the potential to occur based on range and known observations, and the potential for those species to occur based on habitats present and survey observations.

**Table 2  
Special-Status Plant Species Potentially Occurring in the Vicinity**

SPECIES	FEDERAL <sup>2</sup>	STATE <sup>2</sup>	CNPS <sup>2</sup>	HABITAT	LIKELIHOOD OF OCCURRENCE ON THE PROJECT SITE <sup>3</sup>
<b>Plants</b>					
Cove's Cassia ( <i>Senna covesii</i> )	SC	---	1B	Dry washes and slopes in Sonoran Desert Scrub, below 2000 ft.	Not possible - no habitat.
Crucifixion Thorn ( <i>Castela emoryi</i> )	---	---	2	Mojave and Sonoran Desert scrubs; typically associated with drainages	Not present. No individuals observed. No suitable drainage habitats on site.
Dwarf Germander ( <i>Teucrium cubense</i> ssp. <i>Depressum</i> )	---	---	2	Creosote flat/Desertscrub	Possible in undisturbed areas -- occurs within 1 mile of the Project Site. No individuals observed.
Foxtail Cactus ( <i>Escobaria vivipera</i> var. <i>alversonii</i> )	SC	---	1B	Sandy to gravelly slopes between 250 and 4000 ft. in elevation	Not possible - no habitat.
Glandular Ditaxis ( <i>Ditaxis clariana</i> )	---	---	2	Sandy flats in Mojave and Sonoran Creosote Bush Scrub, below ~800 ft	Not possible -- no habitat.
Harwood's Milkvetch ( <i>Astragalus insularis</i> var. <i>harwoodii</i> )	---	---	2	Dunes and windblown sands below 1200 ft.	Not possible - no habitat.
Wiggins's Cholla ( <i>Opuntia wigginsii</i> )	C3b	---	3	Desert flats <1000 ft in elevation	Possible in undisturbed areas -- not known to occur within 1 mile of the Project Site. N/A -- Taxonomically invalid species.

1/ See text for method of determination of those species potentially in project area.

2/ Applicable Status codes are as follows:

- Federal SC                Species of Special Concern (species whose conservation status may be of concern to the USFWS, but have no official status [formerly C2 species])
  - Federal C3b              Taxonomically invalid
  - CNPS :
    - List 1A -    Plants presumed extinct in California
    - List 1B -    Plants rare and endangered in California and elsewhere
    - List 2 -    Plants rare and endangered in California but more common                elsewhere
    - List 3 -    Plants about which CNPS needs more information
    - List 4 -    Plants of limited distribution
- (Note: CNPS lists 1 and 2 require CEQA consideration.)

3/ Potential for occurrence is based on survey results and habitat assessments.

**Table 3  
Special-Status Animal Species Potentially Occurring in the Vicinity**

SPECIES	FEDERAL <sup>1</sup>	STATE <sup>2</sup>	HABITAT	LIKELIHOOD OF OCCURRENCE ON THE PROJECT SITE <sup>3</sup>
<b>Amphibians</b>				
Couch's Spadefoot ( <i>Scaphiopus couchii</i> )	---	SC	Various arid communities in extreme southeastern California and east, south; requires areas that support temporary ponds for at least 8 days for breeding.	Not possible - no habitat.
<b>Fish</b>				
Razorback sucker ( <i>Xyrauchen texanus</i> )	E	FP	Found only in the upper Green River in Utah, the lower Yampa River in Colorado and occasionally in the Colorado River near Grand Junction	Not possible, outside of known range and no habitat. No impacts affecting downstream habitats.
<b>Reptiles</b>				
Chuckwalla ( <i>Sauromalus obesus</i> )	SC	---	Rock outcrops	Not possible - no habitat.
Desert Rosy Boa ( <i>Charina trivirgata gracia</i> )	SC	---	Rocky uplands and canyons; often near stream courses	Not possible - no habitat.
Desert Tortoise ( <i>Gopherus agassizii</i> )	T	T	Most desert habitats below approximately 5000 feet in elevation	Highly unlikely- poor habitat and highly disturbed. Extremely small, fragmented habitats both on the Project Site and surrounding the site
<b>Invertebrates</b>				
Cheeseweed Owlfly ( <i>Oliarces clara</i> )	SC	---	Creosote bush scrub in rocky areas	Not possible - no habitat due to lack of rocky areas.
Mojave Desert Blister Beetle ( <i>Lytta insperata</i> )	SC	---	Mojave Desert Scrub; appear to rely on flowering plants	Not possible due to the lack of sufficient flowering plants on the Project Site
California McCoy Snail ( <i>Eremarionata rowelli mccoiana</i> )	SC	---	Rocky sites in gullies of the McCoy and Big Maria mountains	Not possible - no habitat
<b>Birds</b>				
Arizona Bell's Vireo ( <i>Vireo bellii arizonae</i> )	E	E	Moist woodlands and mesquite bosques	Not possible - no habitat.
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	---	E	Nests on cliffs, pinnacles, and in tall trees and snags	Possible as transient only
Burrowing Owl ( <i>Athene cunicularia</i> )	SC	SC	Open, arid habitats	Possible - suitable habitat exists on the Project Site.
California Brown Pelican ( <i>Pelecanus occidentalis californicus</i> )	---	FP	Open water, especially salt water	Not possible - no habitat.
California Horned Lark ( <i>Eremophila alpestris actia</i> )	---	WL	Open desert habitats	Possible
Ferruginous Hawk	SC	WL	Arid, open country	Possible winter transient only

**Table 3  
Special-Status Animal Species Potentially Occurring in the Vicinity**

SPECIES	FEDERAL <sup>1</sup>	STATE <sup>2</sup>	HABITAT	LIKELIHOOD OF OCCURRENCE ON THE PROJECT SITE <sup>3</sup>
<i>(Buteo regalis)</i>				
Gila Woodpecker ( <i>Melanerpes uropygialis</i> )	---	E	Desert woodland habitats	Not possible - no habitat.
Gilded Northern Flicker ( <i>Colaptes chrysoides</i> )	---	E	Woodlands, including trees in small desert towns	Not possible - no habitat.
Golden Eagle ( <i>Aquila chrysaetos</i> )	---	FP, WL	Open country; nests in large trees in open areas or cliffs	Possible forager; no local nesting habitat
LeConte's Thrasher ( <i>Toxostoma lecontei</i> )	---	SC	Mojave and Sonoran Desert Scrub	Possible, but habitat is marginal
Loggerhead Shrike ( <i>Lanius ludovicianus</i> )	SC	SC	Arid habitats with perches	Present – observed foraging during field reconnaissance but no nesting habitat on site.
Merlin ( <i>Falco columbarius</i> )	--	WL	Open country; nests in trees, cliffs, and on ground	Possible as winter transient only
Mountain Plover ( <i>Charadrius montanus</i> )	PT	SC	Dry upland habitats, plains, bare fields	Possible as winter transient only
Northern Cardinal ( <i>Cardinalis cardinalis</i> )	---	WL	Woodland edges, stream thickets, suburban gardens; known from Parker Dam	Not possible - no habitat.
Prairie Falcon ( <i>Falco mexicanus</i> )	---	WL	Dry, open country, including arid woodlands; nests in cliffs	Possible forager; no local nesting habitat
Short-eared Owl ( <i>Asio flammeus</i> )	---	SC	Open habitats: marshes, fields; nests on ground and roosts on ground, low poles	Possible as winter resident only
Western Yellow-billed Cuckoo ( <i>Coccyzus americanus occidentalis</i> )	T	E	River thickets and woodlands; well-vegetated	Not possible - no habitat.
White-faced Ibis ( <i>Plegadis chihi</i> )	SC	WL	Freshwater marshes and flooded fields	Not possible - no habitat.
Yellow-breasted Chat ( <i>Icteria virens</i> )	---	SC	Dense streamside thickets, willows; brushy hillsides and canyons	Not possible - no habitat.
<b>Mammals</b>				
Cave Myotis ( <i>Myotis velifer</i> )	SC	SC	Caves and mines in lower desert scrub habitats	Not possible – no roosting habitat and poor foraging habitat on the Project Site.
California Leaf-nosed Bat ( <i>Macrotus californicus</i> )	SC	SC	Caves and mines	Not possible – no roosting habitat and poor foraging habitat on the Project Site.
Cave Myotis ( <i>Myotis velifer brevis</i> )	SC	SC	Desert habitats along the Colorado River	Not possible - no roosting habitat and poor foraging habitat on the Project Site.
Greater Western Mastiff Bat ( <i>Eumops perotis californicus</i> )	SC	SC	Steep, rocky canyons in Sonoran and Mojave Desert Scrub	Not possible - no roosting habitat on the Project Site.
Occult Little Brown	SC	SC	Caves, mines, tunnels,	Not possible - no roosting habitat on the

Table 3 Special-Status Animal Species Potentially Occurring in the Vicinity				
SPECIES	FEDERAL <sup>1</sup>	STATE <sup>2</sup>	HABITAT	LIKELIHOOD OF OCCURRENCE ON THE PROJECT SITE <sup>3</sup>
Bat ( <i>Myotis lucifugus occultus</i> )			bridges, especially in woodland; feeds in trees	Project Site.
Pale Townsend's Big-eared Bat ( <i>Plecotus townsendii pallescens</i> )	SC	SC	Broad habitat associations. Roosts in caves and manmade structures; feeds in trees	Not possible - no roosting or foraging habitat on the Project Site.
Pallid Bat ( <i>Antrozous pallidus</i> )	---	SC	Several desert habitats including coniferous and non-coniferous forests, brushy terrain, rocky canyons, open farmland, and deserts where suitable roosts exist	Not possible – no roosting habitat and poor foraging habitat on the Project Site.
Spotted Bat ( <i>Euderma maculatum</i> )	SC	SC	Unclear, probably roosts in cliffs, forages in riparian sites	Not possible - no roosting or foraging habitat on the Project Site.
<sup>1</sup> T = Threatened, E = Endangered, SC = Species of Special Concern, PT = Federally Proposed Threatened <sup>2</sup> T = Threatened, E = Endangered, SC = State Candidate, FP = Fully Protected, WL = Watch List <sup>3</sup> Potential for occurrence is based on survey results and habitat assessments.				

## Federally-listed Species

### Plants

There are no federally-listed threatened or endangered plants with the potential to occur within the project area. Cove's cassia and foxtail cactus are federal species of concern; however, they have no official status and there is no suitable habitat for either in the project area.

### Wildlife

There is one federally-listed threatened species, desert tortoise, with the potential to occur within the project area. Additionally, mountain plover is federally proposed threatened and is possible as a winter transient.

### Desert Tortoise (USFWS: Threatened; CDFW: Threatened)

While tortoises are known from sites north and northeast of the project site (CNDDDB records), none are expected to occur in the project area because of the disturbed nature of the site. On the project site, no tortoise sign was observed, and no tortoise sign was observed on the BEP or BEP II sites to the southeast of the project area. The Solar Millennium Blythe Energy Project, located to the northwest, documented a fair amount of tortoise sign, and live tortoises were found during surveys for that project (Fraser 2010), although habitats in that area are relatively undisturbed, represent higher quality habitat for the desert tortoise, and is located many miles away. The Project Site was formerly farmland and is now experiencing very sparse regrowth of white bursage, creosote bush, and scattered four-winged saltbush. Previous surveys by the Bureau of Land Management (BLM) are consistent with the estimate of very low tortoise density in the area (BLM 2006). More recently, survey data for projects in the surrounding area have also shown lower desert tortoise densities along the I-10 corridor. The combination of the low

---

elevation, low shrub diversity, low ephemeral species production, presence of weedy species, lack of topographical relief and soil quality (gravelly sand) strongly suggest poor habitat quality for tortoises.

The low quality disturbed creosotebush scrub habitat patches (**Figure 2**) have gravelly sand soils that are generally hard-packed. There are no hummocks, or raised areas, at the base of shrubs, where desert tortoise prefer to excavate burrows. Certain areas support friable soils, while others do not, and very few small mammal burrows were observed, indicating that soils are generally not friable. No suitable desert tortoise burrows or other sign were observed.

These habitat patches are also dominated by Sahara mustard, which is not a good food source for desert tortoise. Desert tortoise prefer to feed on winter annuals, perennial grasses, woody perennials, and cacti, as well as non-native species such as red brome (*Bromus rubens*) and red-stem filaree (*Erodium cicutarium*). The Blythe II Solar site provides a very low density of these food sources.

In addition to the degraded habitat quality, the area immediately surrounding the site is heavily disturbed by agriculture, industry, waste dumping and the airport, further decreasing habitat availability. No designated critical habitat for the desert tortoise exists on the project site. Based on the factors described above, impacts to desert tortoise are not expected, and protocol-level surveys are not recommended. In order to ensure no impacts to desert tortoise, Mitigation Measure BIO-1 will be implemented.

**Mountain Plover (USFWS: Proposed Threatened; CDFW: Species of Concern)**

Mountain Plovers may occasionally forage on the Project Site during the winter. No nesting habitat for this species is present on the Project Site. Foraging habitat for this species is low quality on the Project Site due to the disturbed nature of the site and the extremely low density of vegetation (prey habitat). Foraging habitat quality is higher in undisturbed areas near the Project Site and also within active agricultural fields nearby; these areas are also much larger than the Project Site. The removal of low quality foraging habitat for this species is expected to result in a less than significant impact because this species likely currently forages in higher quality foraging habitats and would be able to forage in these areas during and after project construction.

**State-listed Species**

**Plants**

There are no state-listed threatened or endangered plants with the potential to occur within the project area.

**Wildlife**

There are two state-listed species, desert tortoise (threatened) and bald eagle (endangered), with the potential to occur within the project area. Additionally, golden eagle is fully protected in the State of California and may forage on the project site. Desert tortoise is discussed above in the Federally-listed Species Section.

---

**Bald Eagle (USFWS: Delisted; CDFW: Endangered) and Golden Eagle (USFWS: None; CDFG: Fully Protected)**

Bald Eagles and Golden Eagles may occasionally forage on the Project Site during certain times of the year. No nesting habitat for these species is present on the Project Site. Foraging habitat for these species is low quality on the Project Site due to the disturbed nature of the site and the extremely low density of vegetation (prey habitat). Foraging habitat quality is higher in undisturbed areas near the Project Site and also within active agricultural fields nearby; these areas are also much larger than the Project Site. The removal of low quality foraging habitat for these species is expected to result in a less than significant impact because these species likely currently forage in higher quality foraging habitats and would be able to forage in these areas during and after project construction.

**CNPS Species**

There are two CNPS List 2 plant species with the potential to occur within the project area, including dwarf germander and glandular ditaxis.

**Dwarf Germander (USFWS: None; CDFW: None; CNPS: List 2)**

Marginal habitat for dwarf germander occurs in the eastern patch on the Blythe II Solar site (**Figure 2**). The eastern patch and the western patch are not expected to support this species because of their small size, duration of isolation and current level of disturbance. The CNDDDB occurrence appears to be a remnant because of its location in existing agricultural fields. Removal of these habitat patches would not likely affect long-term population viability, because they are small. It is not likely that these small areas support a significant population, and long-term persistence is not unlikely given their small size. The habitat in the eastern patch will be avoided until pre-construction surveys can be completed so that presence/absence can be confirmed prior to construction. The survey period for this species is March to May.

**Wiggin's Cholla (USFWS: Taxonomically invalid; CDFW: None; CNPS: List 3)**

The only potentially suitable habitat for this species occurs in the eastern habitat patch on the Blythe II Solar site (**Figure 2**). The other habitat patch is too disturbed and too isolated for this species to occur. Wiggin's cholla is not a valid species recognized in the Jepson Desert Manual (Baldwin et al. 2002); therefore, it should not be considered a rare species.

The remaining potential special status plant species may be found near the Project Site, but there is no suitable habitat for these species onsite. To ensure the proposed project would not impact the dwarf germander, glandular ditaxis, or any other special-status plant, Mitigation Measure BIO-4 will be implemented. The potential impacts to these species will be reduced to a less than significant level with the incorporation of the Mitigation Measure BIO-4.

**California Wildlife Species of Special Concern**

There are nine species of special concern with the potential to occur within the project area, including Burrowing Owl, California Horned Lark, Ferruginous Hawk, LeConte's Thrasher, Loggerhead Shrike, Merlin, Mountain Plover, Prairie Falcon, and Short-eared Owl.



---

**Burrowing Owl (USFWS: Species of Special Concern; CDFW: Species of Special Concern)**

Habitat for this species exists more than 500 feet north of the Blythe II Solar site along the berms near some of the pivot circles, although no individuals or sign were observed during either the site reconnaissance survey or the habitat assessment surveys. Burrowing owls do not currently occupy the site and no suitable burrows were observed. No burrowing owl individuals or sign were observed. However, burrowing owls could move onto the site and disturbance to nesting activities could occur. Based on this the following mitigation is recommended:

Due to the potential for burrowing owl to occur onsite, Mitigation Measure BIO-2 will be implemented. The potential impacts to this species will be reduced to a less than significant level with the incorporation of Mitigation Measure BIO-2.

Other Raptors - Ferruginous Hawk, Loggerhead Shrike, Merlin, Prairie Falcon, and Short-eared Owl may occasionally forage on the Project Site during certain times of the year. No nesting habitat for these species is present on the Project Site. Foraging habitat for these species is low quality on the Project Site due to the disturbed nature of the site and the extremely low density of vegetation (prey habitat). Foraging habitat quality is higher in undisturbed areas near the Project Site and also within active agricultural fields nearby; these areas are also much larger than the Project Site. The removal of low quality foraging habitat for these species is expected to result in a less than significant impact because these species likely currently forage in higher quality foraging habitats and would be able to forage in these areas during and after project construction.

Small patches of potentially suitable habitat for the California Horned Lark and LeConte's Thrasher exist on the Project Site. Due to the potential for these species to occur onsite, Mitigation Measure BIO-3 will be implemented. The potential impacts to this species will be reduced to a less than significant level with the incorporation of the Mitigation Measures BIO-3.

The remaining potential special status wildlife species may be found near the Project Site, but there is no habitat onsite and impacts to these species would be less than significant.

There is no riparian habitat or other sensitive natural community on the Site that has been identified in local or regional plans, policies, or regulations. Sonoran Creosote Bush Scrub is not identified as a sensitive natural community by the California Department of Fish and Wildlife or in any local plans. In addition, there are no waters of the U.S. or federally protected wetlands as defined by Section 404 on the Site.

The Project will not interfere with the movement of any native resident or migratory wildlife species or with established corridors. The ability of wildlife to move from one tract of habitat to another increases the value of the habitat. Habitats with wildlife movement opportunities allow for population dispersal and seasonal migration, and increase the area for home range activities. Wildlife movement opportunities are often called wildlife corridors. The Project Site lies on the Blythe Airport and near Interstate 10 and the BES Generation Station. The Site itself is almost entirely disturbed. Based on these factors, the Site is not a wildlife corridor, and development of the Project would not impact wildlife movement or dispersal.

There are no native wildlife nursery sites in the area and the Project will not conflict with any

---

local policies or ordinances protecting biological resources, as none exist that would govern biological resources onsite.

## **Mitigation Measures**

The potential impacts to the species listed above will be reduced to a less than significant level with the incorporation of the following Mitigation Measures.

**Mitigation Measure BIO-1 – Desert Tortoise** - Appropriate mitigation for desert tortoise will include:

1. The site shall be fenced with temporary exclusionary fencing prior to construction.
2. Pre-construction clearance surveys shall be conducted.
3. If tortoises are found, the project shall be halted and the applicant shall consult with CDFW and USFWS.
4. Once the site is determined to be clear of desert tortoise, a permanent exclusionary fence shall be constructed for the entire site, within the boundary of the existing temporary fence.
5. Once the permanent fence is completed, the temporary fence shall be removed.

**Mitigation Measure BIO-2 – Burrowing Owl** – Because owls could move onto the Site prior to construction, a pre-construction survey for burrowing owl shall be conducted on the Project Site by a qualified biologist within 45 (forty-five) days prior to commencing construction. The survey methodology shall follow the California Department of Fish and Game’s “Staff Report on Burrowing Owl Mitigation” dated October 17, 1995 and the Burrowing Owl Consortium’s “Survey Protocol & Mitigation Guidelines”. The methodology and results of the survey shall be documented in a report. If burrowing owls are found onsite, grading and/or construction activities shall not commence until the California Department of Fish and Wildlife has reviewed and approved a burrowing owl mitigation plan. Said burrowing owl mitigation plan shall include provisions for exclusionary trapping and burrow protection. Should burrowing owls be present and nesting on the proposed Project Site, this impact is mitigable by avoidance of nests by a 250-foot buffer (CDFG 1995).

**Mitigation Measure BIO-3 – Migratory Birds** - The proposed project has the potential to impact nesting birds through grading and other construction related activities. Ground and vegetation disturbing activities shall take place outside of the recognized nesting season, if practical. The nesting season typically occurs between early February and August, but can vary slightly from year to year. If ground disturbing and vegetation disturbing activities must occur within the recognized nesting season, then nesting bird surveys shall be performed starting within one week of commencing construction throughout the nesting season to identify any nests that may be impacted by construction activities. If any active nests are located within the proposed disturbance area or within 100 feet of ground disturbing activities, a 100 foot buffer area will be flagged around the nest (500 feet from any active raptor nest) and no activity will be allowed in the buffer area until nesting is completed as verified by the project biologist. Periodic monitoring by a biologist shall be performed to determine when nesting is complete.

---

**Mitigation Measure BIO-4 – Rare Plants** - Due to the presence of potential habitat for dwarf germander, glandular ditaxis, and Wiggin’s cholla, a rare plant survey must be conducted during the appropriate season for these three species. If any of the aforementioned species are encountered, avoidance, transplant, or replacement measures must occur. If any of these plants are eliminated or transplanted, the California Department of Fish and Wildlife shall be notified. If any of these plants are to be transplanted, they shall be planted in a suitable location under the supervision of a qualified biologist. Temporary irrigation shall be provided to transplanted plants until such time that they are able to survive on their own.

## **Conclusion**

The smaller proposed 156.5-acre site is totally contained within the original solar project footprint that was previously analyzed. Likewise, the gen-tie route is also within the corridor previously evaluated. Both the solar site and gen-tie route contain very little habitat and what little exists is of low quality and of limited to no value to sensitive species. The updated habitat assessment conducted on September 15, 2015, identified no changes in habitat condition from the previous analysis.

Therefore, there would be no additional potential impacts associated with the current 156.5-acre Blythe II Solar Project. Impacts would be less than described for the previously approved larger site.

The potential impacts to the special status species described in this report will be reduced to a less than significant level with the incorporation of the identified Mitigation Measures

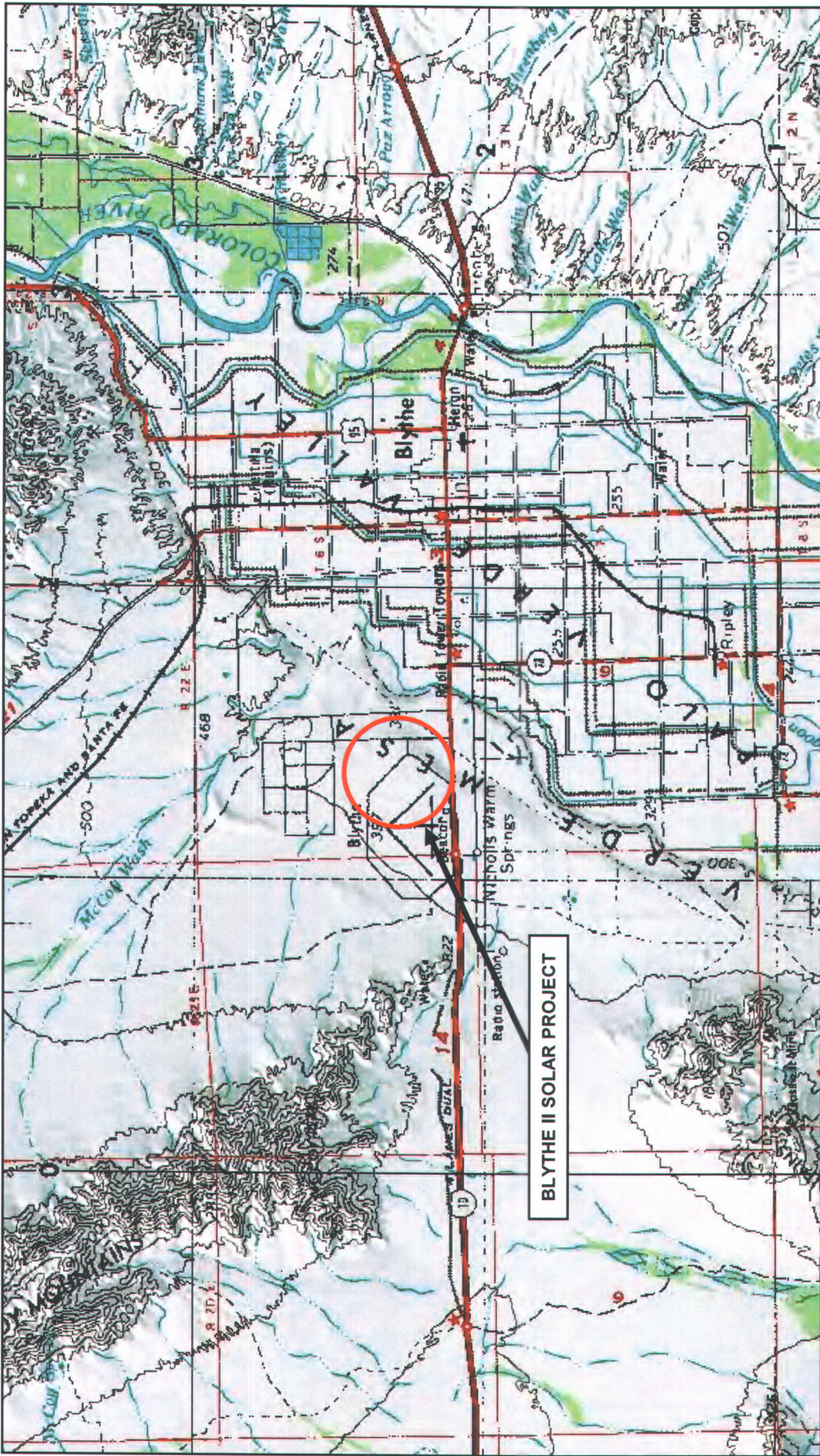
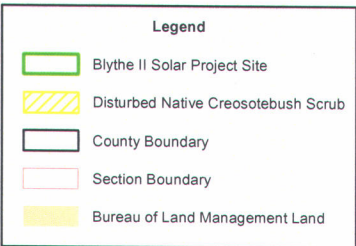
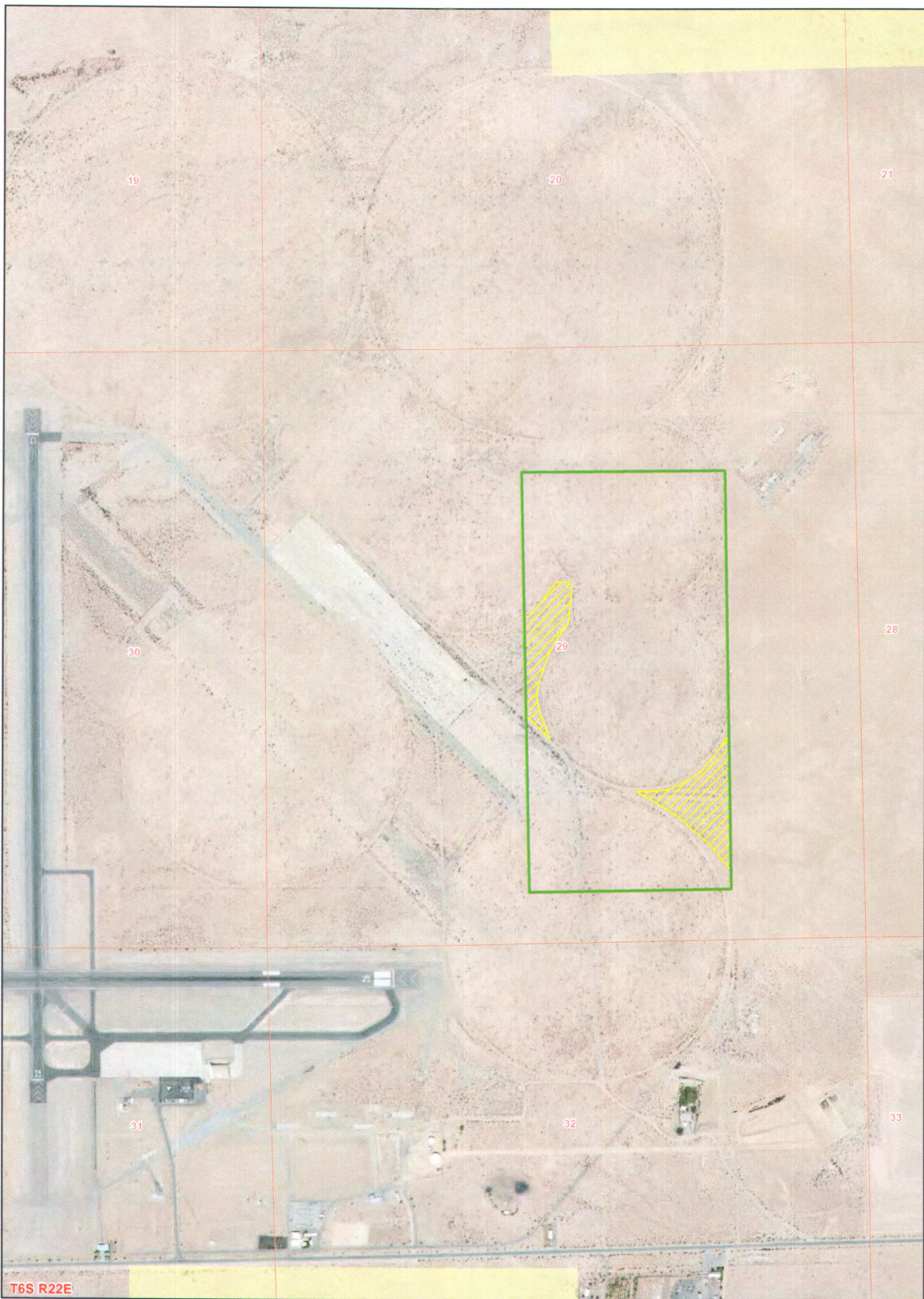


Figure 1  
**BLYTHE II SOLAR PROJECT**  
 Regional Location





**BLYTHE II SOLAR PROJECT**

**Figure 3**  
**Habitat Assessment**

Map Extent: Riverside County, California

Date: 5/27/15	Author: sjw
...Figure 2 Blythe II Solar Project Bio 5/27/15.mxd	

---

## References

- Baldwin et al. 2002. Jepson Desert Manual - Vascular Plants of Southeastern California. B. Baldwin, S. Boyd, B. Ertter, R. Patterson, T. Rosatti and D. Wilken - Editors. University of California Press.
- Blythe General Plan. 2007. City of Blythe General Plan 2025. March 2007.  
<<http://www.cityofblythe.ca.gov/DocumentCenterii.aspx>> Accessed July 2010.
- Brown D.E. 1994. Biotic Communities: Southwestern United States and Northwestern Mexico. University of Utah Press. Provo, Utah.
- Bureau of Land Management (BLM). 2006. Desert Southwest Transmission Project Final EIS. BLM California Desert District, Palm Springs-South Coast Field Office.
- California Department of Fish and Game (CDFG). 1995. Staff Report on Burrowing Owl Mitigation. Unpublished document. 8 pp.
- California Department of Fish and Wildlife (CDFW). 2015a. *State and Federally Listed Endangered, Threatened and Rare Plants of California*. Updated July 2015. 6 pp.
- California Department of Fish and Wildlife (CDFW). 2015b. *State and Federally Listed Endangered and Threatened Animals of California*. Updated July 2015. 14 pp.
- California Natural Diversity Database (CNDDDB). 2015. CNDDDB occurrence data for McCoy, Blythe and Ripley 7.5 minute quad maps and RareFind data [web page]. California Department of Fish and Wildlife.. Accessed: April, 2015.
- California Native Plant Society (CNPS). 1994. Inventory of Rare and Endangered Vascular Plants of California.
- Fraser, J. 2010. Personal Communication [Aug 23 email to C. Young, Ecological Resource Specialist, Riverside County, Riverside, California. RE: Desert tortoise impacts for the BAS I Project]. Biologist, U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, California. 1 page.
- Holland, D. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Nongame Heritage Program, Sacramento, CA. Unpublished document. 155 pp.
- U.S. Fish and Wildlife Service (USFWS) 2015. *USFWS IPaC Trust Resource Report. Blythe 2 Solar Project*. Project Code EX5AI-LIGNN-HSHJN-MDU3B-FD3M74. May 5, 2015.

---

**Appendix A – Site Photographs**



## Appendix A – Site Photographs



Photo 1  
Abandoned agriculture pivot depicting compact soils and sparse vegetation



Photo 2  
Perimeter patch - disturbed creosotebush scrub



Photo 3  
Disturbed creosotebush scrub with old pieces of runway and other refuse



Photo 4  
Interior patch with runway rubble



Photo 5  
Access road and gen-tie line corridor along Butch Boulevard looking north toward solar facility  
(0.1 mile segment)



Photo 6  
Access Road and gen-tie line corridor along Riverside Drive looking east toward existing power plant  
(0.7 mile segment)