| **DOCKETED** |
|------------------|------------------|
| **Docket Number:** | 09-AFC-07C |
| **Project Title:** | Palen Solar Power Project - Compliance |
| **TN #:** | 201901 |
| **Document Title:** | Palen Solar Holdings, LLC's Updated Compilation of Avian Data as of 3-21-14 |
| **Description:** | N/A |
| **Filer:** | Marie Fleming |
| **Organization:** | Galati | Blek LLP |
| **Submitter Role:** | Applicant Representative |
| **Submission Date:** | 3/21/2014 12:40:29 PM |
| **Docketed Date:** | 3/21/2014 |
March 21, 2014

California Energy Commission
Dockets Unit
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: PALEN SOLAR HOLDINGS, LLC’S UPDATED COMPILATION OF AVIAN DATA AS OF 3-21-14
PALEN SOLAR ELECTRIC GENERATING SYSTEM
DOCKET NO. (09-AFC-7C)

Enclosed please find an updated table containing avian mortality information for the Genesis, Desert Sunlight, and Ivanpah projects for 2012, 2013 and 2014. This version replaces the table that was previously docketed on February 28, 2014. The table has been updated to reflect the following:

- The previous version contained an accidental duplication of some of the data shown for the Desert Sunlight Project, resulting in incorrect yearly totals. PSH apologizes for this unintentional error and has reached out to Desert Sunlight representatives for their assistance in correcting the entries. The 2013 mortality total has been corrected downward from 105 to 83. No changes were made to the 2012 or 2014 totals.

- PSH also reached out to Genesis representatives and worked with them to confirm the accuracy of their data – a few refinements to some of the Genesis entries have been made as a result of that effort and the yearly totals for 2012 and 2013 have been reduced from 14 to 12 and 140 to 139, respectively.

- Three of the January 2014 ISEGS entries were modified to change the color coding to indicate that the suspected cause of mortality for the American kestrel, yellow-rumped warbler, and Anna’s hummingbird was singeing or scorching from solar flux.

- In order to be consistent between the three projects, bat mortality information was added to the monthly listings if available.

- Information regarding the source of the data used to compile the table has been added to the front page.

- February 2014 mortality information has been added for each of the three projects.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Marie Fleming
### 2012/2013/2014 AVIAN MORTALITY INFORMATION FOR THE GENESIS, DESERT SUNGLIGHT, AND ISEGS PROJECTS

**Updated as of 3/21/14**

#### Monthly Totals

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>January</strong></td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>February</strong></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>March</strong></td>
<td>3</td>
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<tr>
<td><strong>April</strong></td>
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<td>3</td>
</tr>
<tr>
<td><strong>May</strong></td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>June</strong></td>
<td>0</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td><strong>July</strong></td>
<td>2</td>
<td>15</td>
<td>19</td>
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<tr>
<td><strong>August</strong></td>
<td>6</td>
<td>8</td>
<td>12</td>
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<tr>
<td><strong>September</strong></td>
<td>0</td>
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<td>10</td>
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<tr>
<td><strong>November</strong></td>
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<td>1</td>
</tr>
<tr>
<td><strong>December</strong></td>
<td>4</td>
<td>1</td>
<td>3</td>
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#### Yearly Totals

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<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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</thead>
<tbody>
<tr>
<td><strong>Genesis (Trough)</strong></td>
<td>12</td>
<td>139</td>
<td>7</td>
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<tr>
<td><strong>Desert Sunglight (PV)</strong></td>
<td>20</td>
<td>97</td>
<td>4</td>
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<tr>
<td><strong>ISEGS (Tower)</strong></td>
<td>15</td>
<td>160</td>
<td>40</td>
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</table>

#### Color Code Legend

- Specific location not reported
- Open area
- Fence
- Pond
- Solar array, trough, panel, or heliostat
- Solar Tower
- Solar Flux
- Power block or building
- T/L, power line, substation
- Road or vehicle
- Drainage channel
- Construct or laydown area
- Carcass surveys conducted

**NOTE:** Systematic, statistically rigorous carcass surveys began at ISEGS in November 2013 under the CEC and BLM approved Avian and Bat Monitoring and Management Plan.

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**THIS IS A SUMMARY SHEET—PROJECT SPECIFIC DATA FOR EACH PROJECT IS PROVIDED ON SEPARATE SHEETS WITHIN THIS EXCEL FILE.**

**SOURCE INFORMATION:**

1. Monthly Compliance Reports for Genesis and ISEGS as publically filed with the California Energy Commission.
2. Publically available biological monitoring reports available from the Desert Sunlight Solar Farm website.
3. Information provided by the Project Owners based on communications with PSH representatives.
<table>
<thead>
<tr>
<th>Month</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
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</tbody>
</table>

### LEGEND

- **Specific location not reported**:.
- **Open area**:.
- **Fence**:.
- **Pond**:.
- **Solar array, trough, panel, or heliostat**:.
- **Solar Tower**:.
- **Solar Flux**:.
- **Power block building**:.
- **UT, power line, substation**:.
- **Road or vehicle**:.
- **Drainage channel**:.
- **Construct or landscape area**:.
- **Carcass surveys conducted**:.

Entries for August continue on next page
<table>
<thead>
<tr>
<th>Month</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td></td>
<td>jan</td>
<td>feb</td>
<td>mar</td>
</tr>
<tr>
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</tbody>
</table>

**LEGEND**

- Specific location not reported
- Open area
- Fence
- Road
- Solar array, trough, plant, or helicopter
- Solar Tower
- Solar Flux
- Power block, building
- VL, power, transmission
- Road or vehicle
- Drainage channel
- Construct or loadarea
- Carcass surveys, conducted

**Species**
- Tree swallow
- Blue winged teal
- Mourning dove
- Sora
- Tree swallow
- Unknown Cowbird
- Bullock’s Oriole
- (Lazul?) Bunting
- (Lazul?) Cowbird
- Cowbird
- Passerine species
- Yellow headed blackbird
- Passerine species
- Eared grebe
- Gull
- Zone grey heron
- Red-winged blackbird
- American kestrel
- T/L, power line, substation
- Road or vehicle
- Solar array, trough, plant, or helicopter
- Solar Tower
- Solar Flux
- Power block, building
- VL, power, transmission
- Road or vehicle
- Drainage channel
- Construct or loadarea
- Carcass surveys, conducted

**Locations**
- Open area
- Fence
- Road
- Solar array, trough, plant, or helicopter
- Solar Tower
- Solar Flux
- Power block, building
- VL, power, transmission
- Road or vehicle
- Drainage channel
- Construct or loadarea
- Carcass surveys, conducted

**Tower Solar Flux Power block or building T/L, power line, substation Road or vehicle Solar array, trough, plant, or helicopter Solar Tower Solar Flux Power block, building VL, power, transmission Road or vehicle Drainage channel Construct or loadarea Carcass surveys, conducted**
<table>
<thead>
<tr>
<th>Month</th>
<th>jan</th>
<th>feb</th>
<th>mar</th>
<th>apr</th>
<th>may</th>
<th>june</th>
<th>july</th>
<th>aug</th>
<th>sept</th>
<th>oct</th>
<th>nov</th>
<th>dec</th>
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</thead>
<tbody>
<tr>
<td>Burrowing owl</td>
<td>Back tailed grackle</td>
<td>Western gnatcatcher</td>
<td>Black-throated sparrow</td>
<td>Western gnatcatcher</td>
<td>Black-throated sparrow</td>
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<td>Common nighthawk</td>
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<td>Black-throated sparrow</td>
<td>Burrowing owl</td>
<td>Common nighthawk</td>
<td>Black-throated sparrow</td>
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<tr>
<td>Prairie falcon</td>
<td>White‐crowned sparrow</td>
<td>Western gnatcatcher</td>
<td>Black-throated sparrow</td>
<td>Burrowing owl</td>
<td>Common nighthawk</td>
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<td>Common nighthawk</td>
<td>Black-throated sparrow</td>
<td>Burrowing owl</td>
<td>Common nighthawk</td>
</tr>
</tbody>
</table>

**Legend**

- Open area
- Fence
- Road
- Solar arrays, troughs, planes, or heliostats
- Solar Tracker
- Solar Flux
- Power black building
- T/L, power line, substation
- Road or vehicle
- Drains or channel
- Construct or laydown area
- Construct curvals, boundaries, sidewalks

**Specific location not reported**

**Open area**

**Fence**

**Road**

**Solar arrays, troughs, planes, or heliostats**

**Solar Tracker**

**Solar Flux**

**Power black building**

**T/L, power line, substation**

**Road or vehicle**

**Drains or channel**

**Construct or laydown area**

**Construct curvals, boundaries, sidewalks**

**Specific location not reported**
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<thead>
<tr>
<th>SPECIES</th>
<th>OCT</th>
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<tbody>
<tr>
<td>Yellow-rumped warbler</td>
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<td>American coot</td>
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<tr>
<td>Great-tailed grackle</td>
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<tr>
<td>Spotted sandpiper</td>
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</tr>
</tbody>
</table>

**LEGEND**

- Green: Carcass survey conducted
- Yellow: Rose-Finch
- Unknown: Rose-Finch