



U.S. Fish and Wildlife Service

Environmental Assessment

California Flats Solar, LLC
Eagle Incidental Disturbance Take Permit Request

California

Finding of No Significant Impact

Prepared by

U. S. Fish and Wildlife Service
Pacific Southwest Region
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I. Introduction

This Finding of No Significant Impact (FONSI) addresses the issuance of an incidental eagle take permit pursuant to the Bald and Golden Eagle Protection Act (Eagle Act) (16 *United States Code* [U.S.C.] 668–668d) and its permitting regulations (50 *Code of Federal Regulations* [CFR] 22.26) for the disturbance to one breeding pair of golden eagles for one breeding season associated with the construction of the California Flats Solar Project, California Flats Solar, LLC (Applicant) (California Flats) in Monterey County, California.

In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.) and its implementing regulations (40 CFR 1506.6 and 43 CFR 46.300), we, the U.S. Fish and Wildlife Service (Service) prepared an Environmental Assessment (EA) analyzing the impacts to the human environment associated with permit issuance based on the California Flats Solar Project Eagle Non-Purposeful Take Permit Application (EA, Appendix A) (Application), as well as other alternatives. The EA is incorporated by reference into this FONSI and provided as Attachment 1. Permit issuance will authorize eagle take that is incidental to otherwise lawful operational activities described in Section E of the Application.

The EA and Application detail the impacts of the incidental disturbance take on golden eagles and how these impacts would be avoided, minimized, and mitigated. Eagle take permits may be issued only in compliance with the conservation standards of the Eagle Act. This means that to consider permit issuance, we must determine whether the take is compatible with the preservation of the golden eagle, defined as “consistent with the goal of stable or increasing breeding populations” (74 *Federal Register* [FR] 46836; September 11, 2009). The EA evaluates a range of reasonable alternatives, based on their ability to meet our purpose and need, and the associated impacts to the human environment. Upon review of the EA, the Service concludes that a finding of no significant impact is appropriate. Following review and analysis, the Service has chosen to issue a permit for activities under our Selected Alternative, which is Alternative 3 of the EA (Attachment 1).

II. Background

The EA analyzes the effects on the human environment of our proposed issuance of a short-term eagle take permit to allow incidental disturbance take of one breeding pair of golden eagles for one breeding season. The analysis focuses on golden eagles, but also addresses other elements of the human environment, such as whether this action would substantially burden a Native American tribe’s free exercise of its religion.

The Applicant is constructing a 280-megawatt (MW) alternating current (AC) photovoltaic (PV) solar power facility in unincorporated southeastern Monterey County, approximately seven miles southeast of the community of Parkfield and 25 miles northeast of the City of Paso Robles, near the borders of Monterey, San Luis Obispo, Kern, Kings and Fresno counties. Road access to the project is through San Luis Obispo County.

Phase I of the project is completed and Phase II is currently under construction. The project will be operated on an approximately 3,000-acre portion of an existing 72,000-acre cattle ranch, known as the “Jack Ranch.” The project site is located in an area that is optimal for solar energy development, and has been identified as a Competitive Renewable Energy Zone (CREZ) under the State’s Renewable Energy Transmission Initiative (RETI) (County of Monterey 2014a). With elevations of around 1,700 feet, the site is situated above the coastal marine layer and, unlike many other inland central California areas, is not subjected to “tule fog” during the winter. The project site therefore experiences substantial year-round sunlight. An existing 230 kilovolt (kV) transmission line with available transmission capacity, the Morro Bay-Gates line, transects the site.

III. Alternatives Considered

The EA analyzes the following Alternatives:

- Alternative 1: No Action
- Alternative 2: Issue Permit to Allow Installation of a Nesting Deterrent Device in One Golden Eagle Nest for One Breeding Season
- Alternative 3: Issue Permit to Allow Disturbance Take to One Golden Eagle Pair for One Breeding Season (Selected Alternative)

Evaluation of Alternatives

The EA evaluates potential impacts that could result from the issuance of the incidental eagle take permit based on the Application or alternatives to the permit application. We developed the EA to assist us in evaluating effects on the human environment and assessing the significance of the impacts that could result from the alternatives. “Significance” under NEPA is defined by regulation at 40 CFR 1508.27, and requires short- and long-term consideration of both the context of a proposal and its intensity. As required by NEPA, all alternatives must undergo an equal level of analysis, and the final proposal may include all or some components of a single alternative, or it may include a combination of components from more than one alternative.

Selected Alternative

The Selected Alternative for our issuance of an incidental eagle take permit to the Applicant for the California Flats project is Alternative 3 of the EA.

SELECTED ALTERNATIVE: ISSUE PERMIT TO ALLOW DISTURBANCE TAKE TO ONE GOLDEN EAGLE PAIR FOR ONE BREEDING SEASON

Under the EA’s Alternative 3, our Selected Alternative, we would issue a permit allowing unrestricted disturbance take authorization within one mile of one eagle nest for a single breeding season (2018). In addition, the Applicant would provide compensatory mitigation by retrofitting power poles sufficient to compensate for the loss of a single nesting season’s productivity for one breeding pair at a 2:1 mitigation ratio. If the eagles do not attempt to nest the following breeding season, this mitigation would be doubled.

Effects of Implementation

As described in the EA, implementing any of the identified action alternatives would result in no significant impacts to any of the environmental resources identified in the EA. Therefore, implementing the Selected Alternative would result in no significant impacts to any of the environmental resources identified in the EA. Our Selected Alternative is consistent with the purpose and need stated in the EA. A summary of the impact analysis, mitigation measures, EA conclusions, and cultural practices follows.

Eagles

In determining the significance of effects of each alternative on eagles, we screened each alternative against the Eagle Act’s permit issuance criteria (Chapter 1 of the EA) using the quantitative tools available in our ECP Guidance (Service 2013a). We also conducted a qualitative analysis based on our knowledge of the area, attendance at technical meetings, discussions with other local experts, and studies of local eagle populations.

The Service has interpreted the preservation standard of the Eagle Act to require maintenance of stable or increasing breeding populations of eagles (81 FR 91494; December 16, 2016). The Service independently evaluated the potential impacts from project operations along with the implications for direct, indirect, and cumulative effects. We developed conservative risk estimates for the project and our cumulative effects analysis to be protective of the species.

Take Authorization

Effects of authorizing take by disturbance of a single golden eagle breeding pair by construction activities associated with the California Flats Solar Project in Monterey County, California occurring within one mile of an inactive golden eagle nest located at 35°49’24.24”N, 120°18’48.168”W (nest 13A; see Application,

Appendix 1 of EA) during the 2018 eagle breeding season (1 January 2018 to 31 August 2018) may entail the loss of one year of productivity for the eagle pair.

In the Service's evaluation of the Eagle Act permit regulations it was estimated that breeding golden eagle pairs produce 0.59 young eagles per year (Service 2016b). When considering a take authorization, it is the Service's practice to round take values up to the nearest whole number representing the take of a whole bird. Therefore, we are considering authorization of the take of one eagle (0.59 rounded to one) for the assumed loss of productivity due to authorized disturbance near this nest site.

Monitoring

As described in greater detail in Chapter 2 of the EA, the Applicant will monitor the nesting territory of the eagle pair described above for evidence that the eagle pair continues to occupy the territory. As the disturbed eagle pair may have increased interactions with other eagles in the area and may alter the dynamics of the area eagle population, the Applicant will monitor all eagle use, during the eagle breeding season, within two miles of the project footprint for the duration of the permit and up to five years after its expiration.

Cumulative Effects

Cumulative effect estimates were calculated for the Shiloh IV Wind Project at 12.3 percent of the local area population taken annually (Service 2014) and for the Alta East Wind Project at 8 percent of the local area population taken annually (Service 2016a). California Flats Solar Project is located geographically about halfway between these two wind projects and within the same mountain range, the Diablo Range, as the Altamont Wind Pass Resource Area, which accounted for the majority of eagle take in the Shiloh IV project analysis. We therefore believe the estimate for the cumulative effects for California Flats Solar Project will fall within the range of these two estimates, 8-12.3 percent of the local area population taken annually. To address these estimated cumulative effects we will require a compensatory mitigation ratio of 2:1.

Conclusion

We have determined that, by issuing a permit, the Service would have a means to ensure that take of eagles would be minimized through implementation of required minimization and avoidance measures and offset by the retrofitting of additional utility power poles at levels above that currently undertaken by the utility company, and that these activities will help accomplish our population goal for eagles. Because the Applicant would offset take through compensatory mitigation at a 2:1 ratio, issuance of this permit would be compatible with the preservation of golden eagles. It is our opinion that issuance of this permit will reduce impacts to eagles compared to allowing the project to operate without the conservation benefits required under a permit.

Therefore, the Service has determined that the direct and indirect effects of the take and required mitigation, together with the cumulative effects of other permitted take and additional factors affecting eagle populations, are compatible with the preservation of bald eagles and golden eagles.

IV. Significance Criteria

The Selected Alternative will not have a significant effect on the human environment. This conclusion is based on an examination of the significance criteria defined in 40 CFR Section 1508.27, and on the analysis in the EA.

Context

NEPA requires consideration of the significance of an action in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend on the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant in accordance with 40 CFR 1508.27(a). For purposes of analyzing the Selected Alternative, the appropriate context for potential impacts associated with the Selected Alternative is local and regional, because the Selected Alternative does not affect statewide or national resource values. The context of the

Selected Alternative points to no significant unmitigated environmental impact considering the following (as discussed in Chapter 4 of the EA):

- The Applicant will offset golden eagle take and cumulative impacts through compensatory mitigation. This will ensure that the impacts of issuing an eagle take permit to the Applicant on the local and regional golden eagle populations will be less than significant.
- As discussed in Chapter 4 of the EA, issuance of an eagle take permit to the California Flats project for disturbance take of one eagle breeding pair for one breeding season, including the take of eagles anticipated under the permit, is not expected to interfere with cultural practices and ceremonies related to eagles, or to affect tribal use of eagle feathers. Any eagle remains that are found will be sent to our Repository and distributed to tribes for religious use. Under the Selected Alternative, increased monitoring should ensure that any eagle remains in the project area are found in a timely manner, facilitating efficient distribution to tribes.

Intensity

The term "intensity" refers to the severity of a proposed action's impact on the environment. In determining the intensity of an impact, the NEPA regulations direct federal agencies to consider ten specific factors, each of which is discussed below in relation to the Selected Alternative for the project.

1. *Impacts can be both beneficial and adverse and a significant effect may exist regardless of the perceived balance of effects.*

While consideration of the intensity of project impacts must include analysis of both beneficial and adverse effects, only a significant adverse effect triggers the need to prepare an environmental impact statement (EIS) (40 CFR 1508.27). The potential beneficial effects and adverse impacts of the Selected Alternative are discussed briefly below.

Beneficial Effects. As described in Chapter 4 of the EA, issuance of an eagle permit for disturbance take under the Selected Alternative would not result in adverse effects to golden eagle populations, but may also benefit other raptors at risk of electrocution on electric utility poles. Our analysis is in comparison to the No-Action Alternative, under which the project continues to construct without an eagle take permit's compensatory mitigation, implementing other minimization/avoidance commitments, or applying for eagle take authorization for future construction and project operations. In addition, issuance of this permit will allow the Applicant to operate in compliance with the Eagle Act should eagle take occur and comply with commitments under their project's Power Purchase Agreement.

Adverse Effects. As described in detail in Chapter 4 of the EA, the construction of California Flats will result in adverse impacts primarily to the golden eagle breeding pair that utilizes nest 13A (see Application, Appendix 1 of EA). All known adverse impacts have been mitigated to the extent practicable by designing the Selected Alternative to avoid golden eagle disturbance take as much as possible. The EA describes commitments to avoid, minimize, and otherwise mitigate for impacts to golden eagles near the California Flats project site. Eagle use and activity impacts and will be monitored and reported. Mitigation included in the EA addresses and substantially reduces the potential impacts to less than significant levels under NEPA.

Summary. The analyses in the EA and implementation of the measures identified in the Selected Alternative, including those in the Application (EA, Appendix A), the Bird and Bat Conservation Strategy (EA, Appendix B), and previous commitments, support the conclusion that the Selected Alternative will not have a significant effect on the quality of the human environment.

2. *The degree to which the selected alternative will affect public health or safety.*

As discussed in Chapter 1 of the EA, the proposed action is issuance of an incidental eagle take permit to the California Flats Solar Project. This action will have no effect on public health or safety.

3. *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas.*

Impacts to historic and cultural resources, parks lands, prime farmlands, wetlands, wild and scenic rivers, and ecologically critical areas were all considered in the County of Monterey California Flats Solar Project Environmental Impact Report (EIR) analyses (County of Monterey 2014a, County of Monterey 2014b). The relevant EIR analyses were incorporated by reference in the EA. Issuance of a incidental eagle take permit to the California Flats Solar Project would have no further impacts.

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

No effects of the Selected Alternative were identified as highly controversial. As a factor for determining within the meaning of 40 CFR 1508.27(b)(4) whether to prepare a detailed EIS, controversy is not equated with the existence of opposition to a use. The NEPA implementation regulations (43 CFR 46.30) define controversial as “circumstances where a substantial dispute exists as to the environmental consequences of the proposed action and does not refer to the existence of opposition to a proposed action, the effect of which is relatively undisputed.” Neither public comments on the County of Monterey’s EIR (County of Monterey 2014b) nor internal discussions during preparation of the EA revealed any expert scientific evidence supporting claims that issuance of this permit to authorize disturbance take to one pair of breeding eagles for one breeding season will have significant effects, or that it is highly controversial.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

As summarized in the Application and EA, the impacts of issuance of an eagle permit for disturbance take to one pair of breeding golden eagles for one season are limited and small in scale. As a result, there are no predicted effects of the Selected Alternative on the human environment that are considered to be highly uncertain or involve unique or unknown risks.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

Issuance of an eagle disturbance take permit to the Applicant does not set precedent for, or automatically apply to, other eagle take permit applications the Service is reviewing or could review in the future. Each permit request will be evaluated on a case-by-case basis. Therefore, the Selected Alternative does not establish precedents for future actions or represent a decision in principle about a future action. Moreover, this project will not limit the Service’s discretion when processing future eagle take permit applications under the Eagle Act’s permitting regulations.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts-which include connected actions regardless of land ownership.*

Golden Eagles. We evaluated cumulative effects on golden eagles as required by NEPA (CFR 1508.8) and the Eagle Act’s permitting regulations (EA Chapter 4). Under 50 CFR 22.26 (f)(1), when reviewing a permit application, the Service is required to evaluate and consider effects of take permits on eagle populations at three scales: (1) the eagle management unit/bird conservation region, (2) local area, and (3) project area. Our evaluation also considers cumulative effects. We incorporated data provided by the Applicant, other data on mortality at wind farms and electric utilities, and additional information on population-limiting effects in our eagle cumulative impact assessment. Our approach was mostly quantitative but combined some qualitative analysis based on available data and our knowledge of this area, attendance at local technical meetings, discussions with other local experts, and studies of local eagle populations.

As golden eagles are territorial, the disturbed eagle pair may have increased interactions with other eagles in the area and may alter the dynamics of the area eagle population. Therefore, the Applicant would monitor all eagle use, during the eagle breeding season, within two miles of the project footprint for the duration of the permit and up to five years after its expiration noting whether eagles continue to nest, roost, or forage in this area and identifying any nests within two miles of the project footprint.

At the project level, foreseeable cumulative impacts to eagles may be caused by future construction,

operations, the presence of infrastructure and increased human presence. Between 1-3 golden eagle breeding territories located within one mile of the project footprint could be affected by reduced productivity or displacement in future years.

Our cumulative effects analysis contained within the EA (EA Chapter 4) estimates that between 8 – 12.3 percent of the local area population is taken annually, resulting primarily from wind fatalities operating in the Altamont Pass and Tehachapi WRAs and, to a lesser extent, other wind facilities and from electric utility infrastructure. While the amount of ongoing take exceeds the biological benchmark recommended (5 percent cumulative authorized take or 10 percent cumulative unauthorized mortality of a local area population), we believe the additional offsetting mitigation we will require under our Selected Alternative will more than offset any impacts attributable to the California Flats Solar Project. In addition, we will require the Applicant to implement minimization and avoidance measures within one mile of any other nesting eagles and monitor eagles near the project. Therefore, there are no significant adverse cumulative effects contributed by issuance of this permit under the Selected Alternative.

Climate Change. The effects of climate change on eagles in the region is treated as a cumulative impact because it occurs later in time (see EA Chapter 4). Over the life of the project, the effects of climate change in California will likely result in more pronounced seasonal variation. However, because the golden eagles survive on a wide variety of prey species across a broad gradient of climatic zones, it is reasonable to surmise that golden eagles have the capacity to adapt to minor changes. Moreover, by generating electricity using solar energy rather than fossil fuels, operation of the project could offset production CO₂. This offset would constitute an indirect beneficial effect. Overall, there are no significant adverse cumulative effects contributed by issuance of an incidental eagle take permit to California Flats under the Selected Alternative.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*

The action of issuing an eagle take permit to the California Flats project to allow disturbance to one breeding golden eagle pair due to construction activities already authorized by Monterey County will have no adverse effect on historic properties.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973, or the degree to which the action may adversely affect a species proposed to be listed as endangered or threatened or proposed critical habitat.*

Construction and operations. We issued a Biological Opinion and Incidental Take Statement on November 19, 2015 to the Army Corps of Engineers pursuant to Section 7(a)(2) of the Federal Endangered Species Act (ESA) addressing potential effects of the proposed issuance of a permit, pursuant to section 404 of the Clean Water Act, to the Applicant for the California Flats project on the federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*) and the federally threatened California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), and vernal pool fairy shrimp (*Branchinecta lynchi*).

The Applicant completed a Low-Effect Habitat Conservation Plan (Althouse and Meade, Inc. 2016), and the Service issued an Incidental Take Permit (ITP) under Section 10(a)(1)(B) of the ESA for activities associated with the California Flats operations and maintenance on July 10, 2017. The Service is currently working with the Applicant to amend the Habitat Conservation Plan to cover project impacts to eagles.

Issuance of an eagle disturbance take permit to the Applicant under the Selected Alternative would have no additional impacts to species protected by the ESA.

Required Compensatory Mitigation Effects.

The California Flats mitigation will occur on PG&E lines in one of the following locations:

Mitigation Site Option 1:

Under this option, the compensatory mitigation for the California Flats permit for eagle disturbance take will occur as described in the Shiloh IV eagle take permit EA (Service 2014). The Pacific Gas and Electric Company (PG&E) Oilfields 1103 circuit was identified as a high priority area for retrofits. The mitigation area is located near the U.S. Army Garrison Fort Hunter Liggett property and directly adjacent to Monterey County's San Antonio Reservoir. The Oilfields 1103 circuit has experienced four known golden eagle mortalities since 2002. Three of these incidents occurred in recent years (i.e., one incident each in December 2009, January 2010, and January 2011). All three of these incidents occurred within 5 miles of one another. It should be noted that PG&E discovers eagle electrocutions incidentally after investigating a power outage, by personnel working on utility lines, or—less frequently—from reports from the public. We believe the rate of eagle electrocution events are higher than what is discovered and reported on an annual basis, and this variation is accounted for in our Shiloh IV Resource Equivalency Analysis (Service 2014, Appendix D).

On April 1, 2014, we submitted an Intra-Service Section 7 ESA Biological Evaluation for the *Shiloh IV Wind Project Eagle Permit Mitigation: Utility Pole Retrofits in Southern Monterey County, California* and a concurrence request to the Service's Ventura Field Office. Our evaluation determined that with implementation of the following avoidance and minimization measures, the retrofit work will have no effect to California condor, least Bell's vireo, southwestern willow flycatcher, vernal pool fairy shrimp, and marsh sandwort, and is not likely to adversely affect San Joaquin kit fox, California red-legged frog, or purple amole.

Avoidance and Minimization Measures

The retrofit work will be conducted during the dry season (July 1-October 31 or as long as the dry season ensues) to avoid potential impacts to ESA-listed species and breeding birds that may be in the area, including eagles. If unusual weather patterns occur, PG&E will not conduct work until 10 days after a rain event that resulted in 0.5 inches of rain or more.

- The retrofit work will not be conducted if poles are located in or adjacent to wetland or riparian areas. Other alternate poles which are not located in or near these habitats would be selected for retrofits.
- The retrofit work will not be conducted if poles are located in or adjacent to ponds or vernal pools.
- The retrofit work will not involve ground-disturbing activities and vehicles will remain on existing public and private access roads to complete the work.
- Vehicles will maintain a speed limit of no more than 10 mph on roads within the right-of-way.

On May 5, 2014, we received a memorandum from the Service's Ventura Field Office stating they concur with our determinations (Attachment 2).

We will require the same ESA take minimization and avoidance measures to be implemented by PG&E when conducting the retrofit work as compensatory mitigation for the California Flats eagle take permit. Therefore, any retrofit work conducted by PG&E on behalf of California Flats in the Oilfields 1103 circuit will not differ in any way from work conducted for Shiloh IV.

Mitigation Site Option 2:

Under this option, the compensatory mitigation for the California Flats permit for eagle disturbance take will occur in conjunction with and as described in the Alta East eagle take permit EA (Service 2016a). The Alta East mitigation area is within an area covered by PG&E's San Joaquin Valley Habitat Conservation Plan (HCP). The retrofit work is a covered activity as described in the HCP's Section *E8 Electrical System Pole and Equipment Replacement and Repair* and the Section 10 permit issued to PG&E authorizes incidental take associated with the retrofit work. We have completed an internal Section 7 consultation under the ESA for issuance of the Alta East eagle take permit (Service 2016a) and determined that the mitigation activities required under the Eagle Act will not have an effect on listed species included as covered species in the HCP beyond that analyzed in the Intra-Service Biological

Opinion prepared in association with the Service's issuance of the Section 10 permit to PG&E for their HCP (Service 2007). We also determined that issuance of the Alta East eagle take permit will not affect California condor (*Gymnogyps californianus*) or its critical habitat, southwestern willow flycatcher (*Empidonax traillii estimus*), or delta smelt (*Hypomesus transpacificus*). Any retrofit work conducted by PG&E on behalf of California Flats within this area will not differ from the retrofit work conducted by PG&E under its HCP, and is therefore a covered activity under PG&E's HCP.

10. *Whether the action threatens a violation of Federal, State, or local law requirements imposed for the protection of the environment.*

The Selected Alternative will not violate any federal, state, or local law.

Determination: Under the Selected Alternative, we would issue a permit allowing unrestricted disturbance take authorization within one mile of one eagle nest for a single breeding season (2018). In addition, the Applicant would provide compensatory mitigation by retrofitting power poles sufficient to compensate for the loss of a single nesting season's productivity for one breeding eagle pair and to address cumulative impact concerns at a 2:1 mitigation ratio. If the eagles do not attempt to nest the following breeding season, this mitigation would be doubled.

Our Resource Equivalency Analysis (EA Chapter 2) shows that between 27-62 retrofits (final number depends upon the type of retrofit and expected longevity) will mitigate for the predicted loss of eagles, that is one eagle for the loss of productivity in one breeding season, and also address cumulative effects concerns in this area.

Increased monitoring associated with this alternative will help to ensure that any additional effect to breeding eagles in the area are detected and will support validation of the take estimate. Based on the intensity and context of these effects and consideration of the elements associated with the Selected Alternative, issuance of an eagle disturbance take permit to the Applicant as analyzed in the EA is not expected to result in significant adverse effects on the human environment.

V. Conclusions

The Service developed the EA and FONSI in accordance with the National Environmental Policy Act of 1969, as amended, and the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508). The Service concludes that, with the implementation of the avoidance, minimization, and mitigation measures outlined in the EA for the Selected Alternative, issuance of an eagle disturbance take permit to the California Flats Solar Project will result in no significant impacts to the quality of the human environment, individually or cumulatively with other actions in the general area.

It is our determination that the Selected Alternative is not a major Federal action significantly affecting the quality of the human environment under NEPA Section 102(2)(c). Accordingly, an EIS is not required and our environmental review under NEPA is concluded with this finding of no significant impact (43 CFR 46.325). The EA prepared in support of this FONSI is incorporated by reference and attached (Attachment 1). Our Decision will be announced on the Service's Pacific Southwest Regional website at:

<http://www.fws.gov/cno/conservation/MigratoryBirds/EaglePermits.html>.

Deputy Chief, Migratory Birds
Pacific Southwest Region
U.S. Fish and Wildlife Service

Date

VI. Literature Cited

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**Attachment 1: Environmental Assessment,
California Flats Solar, LLC, Eagle Incidental
Disturbance Take Permit**



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Environmental Assessment

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January 30, 2018

CHAPTER 1: PURPOSE AND NEED

Introduction

We, the U.S. Fish and Wildlife Service (Service), have prepared this Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] 4321 et seq.). This EA evaluates the effects of issuing an incidental eagle take permit (permit) for take that is incidental to otherwise lawful activities under the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668–668d and 50 Code of Federal Regulations [CFR] 22.26) for construction activities described in Section E of the California Flats Solar Project Eagle Incidental Take Permit Application (Application) (Appendix A).

The applicant, California Flats Solar, LLC, (Applicant) (California Flats) is requesting incidental Eagle Act disturbance take coverage for construction activities associated with the California Flats project. California Flats was originally a wholly owned subsidiary of Element Power, but was sold to First Solar, Incorporated in 2013 and later sold again to Capital Dynamics in 2017, but with First Solar's continued involvement in certain project aspects such as permitting.

Our decision as to whether to issue an eagle take permit constitutes a discretionary Federal action that is subject to NEPA. The Applicant requested a permit for the disturbance take of one golden eagle breeding pair for one season. In this EA, we independently analyze the Applicant's request for consistency with the Eagle Act permit regulations.

This EA evaluates potential impacts that could result from the issuance of the golden eagle disturbance take permit based on the Application or alternatives to the proposed request. It is intended to assist us in evaluating effects to the human environment due to permit issuance and in assessing the significance of the impacts that could result from the alternatives. "Significance" under NEPA is defined by regulation at 40 CFR 1508.27, and requires short-term and long-term consideration of both the context of a proposal and its intensity. As required by NEPA, all alternatives must undergo an equal level of analysis, and the final proposal may include all or some components of a single alternative, or it may include a combination of components from more than one alternative.

Our analysis within this EA shows that while the incremental effect of issuing this permit is small the project could contribute to local and possibly regional adverse effects on the species. We anticipate that, by issuing a permit, the Service would ensure that take of eagles would be offset through compensatory mitigation and additional requirements to address potential future project impacts to eagles from construction and operations.

Project Background

The Applicant is constructing a 280-megawatt (MW) alternating current (AC) photovoltaic (PV) solar power facility in unincorporated southeastern Monterey County, approximately seven miles southeast of the community of Parkfield and 25 miles northeast of the City of Paso Robles, near the borders of Monterey, San Luis Obispo, Kern, Kings and Fresno counties. Road access to the project is through San Luis Obispo County.

Phase I of the project is completed and Phase II is currently under construction. The project will be operated on an approximately 3,000-acre portion of an existing 72,000-acre cattle ranch, known as the

“Jack Ranch.” The project site is located in an area that is optimal for solar energy development, and has been identified as a Competitive Renewable Energy Zone (CREZ) under the State’s Renewable Energy Transmission Initiative (RETI) (County of Monterey 2014a). With elevations of around 1,700 feet, the site is situated above the coastal marine layer and, unlike many other inland central California areas, is not subjected to “tule fog” during the winter. The project site therefore experiences substantial year-round sunlight. An existing 230 kilovolt (kV) transmission line with available transmission capacity, the Morro Bay-Gates line, transects the site.

Since 2011, the Service has provided technical assistance and recommendations to the Applicant for how to best comply with the Eagle Act. The Service first met with Element Power, the original project developer, on December 5, 2011. On August 8, 2013, we were notified the project was being sold to First Solar. In September 2017 we were notified that First Solar had sold the project to Capital Dynamics, but with First Solar’s continued involvement in certain project aspects such as permitting.

List of Project Permits and Authorizations

- U.S. Fish and Wildlife Service Low-Effect Habitat Conservation Plan for Issuance of an Incidental Take Permit Under Section 10(a)(1)(B) of the ESA for the California Flats Solar Project Operations and Maintenance Activities, Monterey and San Luis Obispo Counties, California. (Complete, amendment pending)
- U.S. Fish and Wildlife Service, Biological Opinion on the California Solar Flats Project, Monterey and San Luis Obispo Counties, California. 08EVEN00-2015-F-0287 (Complete)
- Department of the Army, Section 404 of the Clean Water Act, Application: SPN-2012-00266S (Complete)
- California Department of Fish and Wildlife, Streambed Alteration Agreement: Notification No.: 1500-2015-0041-R4 (Complete)
- California Department of Fish and Wildlife, California Endangered Species Act Incidental Take Permit, No.: 2081-2015-027-04 (Complete)
- U.S. Fish and Wildlife Service, Bald and Golden Eagle Protection Act Incidental Disturbance Take Permit, Short-term (Single Nest, Single Season), Permit # MB13707C-1 (Complete)

Purpose of and Need for the Federal Action

The purpose of the Federal action is to consider issuing a permit to the California Flats project under the Eagle Act for disturbance take of one pair of breeding golden eagles for one season. This is driven by a need for the Service to make a permitting decision that may enable the Applicant to continue project construction for the purpose of generating renewable energy in a manner that is consistent with our Eagle Act regulations. In responding to the request for a permit, we, the Service, must ensure compliance with the Eagle Act and our goal to maintain stable or increasing breeding populations of bald and golden eagles. We may consider issuance of an eagle disturbance take permit if 1) the incidental take is necessary to protect legitimate interests, 2) the take is compatible with the preservation standard of the Eagle Act, 3) the applicant has avoided and minimized impacts to eagles to the extent practicable and, 4) compensatory mitigation will be provided for any take.

This purpose and need establishes the basis for determining if other viable alternatives to the Applicant’s request as described in their Application may meet the project’s intended purpose and reduce potential effects. Alternatives considered in this analysis are the No-Action Alternative and two action alternatives.

Regulatory Setting, Authorities, and Guidance

Two primary Federal statutes, the Eagle Act and the Migratory Bird Treaty Act, as well as regulations and guidance under those statutes, provide the basis for our review of the Application.

Bald and Golden Eagle Protection Act

The Eagle Act (16 U.S.C. 668–668d) makes it illegal to import, export, take (which includes molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or parts thereof. The Service oversees enforcement of this act. Under the Eagle Act (72 FR 31132, June 5, 2007), “take” is defined as to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb.” “Disturb” is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior” (72 FR 31132).

With the removal in 2007 of the bald eagle from the ESA list of threatened and endangered species, the Service issued new regulations to authorize the limited take of bald and golden eagles under the Eagle Act, where the take that may be authorized is associated with otherwise lawful activities. A final Eagle Permit Rule was published on September 11, 2009 (74 FR 46836–46879; 50 CFR 22.26 and 22.27). On December 16, 2016, the Service published a final rule revising certain permitting processes and monitoring requirements under the Eagle Act permitting regulations (81 FR 91494). This final rule became effective on January 17, 2017.

Under these rules, the Service can issue permits that authorize individual instances of take of bald eagles and golden eagles where the take is compatible with the preservation of the bald eagle and the golden eagle; is necessary to protect an interest in a particular locality; is associated with, but not the purpose of, the activity; and cannot practicably be avoided.

National Environmental Policy Act

Federal agencies must complete environmental documents pursuant to NEPA (42 USC 4321 et seq.) before implementing Federal actions. Such documents help ensure that the underlying objectives of NEPA are achieved: to disclose environmental information, assist in resolving environmental problems, foster intergovernmental cooperation, and enhance public participation. NEPA requires evaluation of the potential effects on the human environment related to the proposed action, alternatives to the proposed action, and a “No-Action Alternative.”

An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). If we determine that this project has “significant” impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a FONSI would be signed for the EA approving the alternative selected, and a Set of Findings may be prepared.

We have prepared this EA pursuant to NEPA (42 U.S.C. 4321 et seq.), its implementing regulations (40 CFR 1500–1508), Department of Interior NEPA regulations (73 FR 61292– 61323), and Department of Interior and Service NEPA policy and NEPA guidance. This EA evaluates the environmental effects of issuing an incidental eagle take permit under the Eagle Act (50 CFR 22.26).

Consultation and Coordination with Tribal Governments

Tribal participation is an integral part of the NEPA process, as well as a key component of determining whether to issue an eagle take permit. In accordance with Executive Order 13175 and our Native

American Policy, we consult with Native American tribal governments whenever our actions taken under authority of the Eagle Act may affect tribal lands, resources, or the ability to self-govern or affect their cultural practices. This consultation process is also intended to ensure compliance with the National Historic Preservation Act and American Indian Religious Freedom Act. The County of Monterey contacted representatives of tribes in southern Monterey and northern San Luis Obispo Counties identified by the Native American Heritage Commission for comment on the construction of the California Flats Solar Project (County of Monterey 2014a). The effects of issuing a permit for disturbance take of one breeding golden eagle pair during the 2018 eagle breeding season at the California Flats project site would be minor and local in scale. No federally-recognized tribes are located in Monterey or San Luis Obispo Counties or in the project area.

Department Of Interior Adaptive Management Implementation Policy

This policy from the Department of the Interior states that Interior agencies should incorporate the operational components identified in Adaptive Management: The U.S. Department of the Interior Technical Guide (Williams et al. 2009). These operational components include the definition of adaptive management, the conditions under which adaptive management should be considered, and the process for implementing and evaluating adaptive management effectiveness. Adaptive management is a decision process promoting flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an iterative learning process. It is not a “trial and error” process, but rather one that emphasizes learning while doing. Adaptive management is considered here because of the challenges associated with avoiding, minimizing, and mitigating the take of eagles. Adaptive management is not an end in itself, but rather a means to more effective decisions and enhanced benefits.

Scope of Analysis

This EA considers alternatives for issuance of a permit for construction disturbance take of one breeding golden eagle pair during the 2018 eagle breeding season at the California Flats project site. It analyzes the effects of our proposed issuance of a short-term eagle take permit on the human environment. The analysis primarily focuses on golden eagles, but also addresses potential cultural effects to tribes.

As referenced in the Council for Environmental Quality (CEQ) NEPA regulations regarding the contents of an EA (40 CFR 1508.9[b]), NEPA Section 102(2)(E) requires Federal agencies to develop, study, and briefly describe alternatives to any proposed action with the potential to result in unresolved resource conflicts. This EA evaluates the effects of three alternatives:

- Alternative 1: No Action
- Alternative 2: Issue Permit to Allow Installation of a Nesting Deterrent Device in One Golden Eagle Nest for One Breeding Season
- Alternative 3: Issue Permit to Allow Disturbance Take to One Golden Eagle Pair for One Breeding Season

Each alternative’s viability is evaluated for its ability to meet the Eagle Act permit issuance criteria as described below.

Permit Issuance Criteria

In the analysis of alternatives, we consider the degree to which each alternative will conform to the permit issuance criteria for incidental take permits under the Eagle Act. We may not issue a take permit under the Eagle Act unless the following issuance criteria are met as required in 50 CFR 22.26(f)(1–7):

1. The direct and indirect effects of the take and required mitigation, together with the cumulative effects of other permitted take and additional factors affecting the eagle populations within the eagle management unit and the local area population, are compatible with the preservation of bald eagles and golden eagles.
2. The taking is necessary to protect an interest in a particular locality.
3. The taking is associated with, but not the purpose of, the activity.
4. The applicant has applied all appropriate and practicable avoidance and minimization measures to reduce impacts to eagles.
5. The applicant has applied all appropriate and practicable compensatory mitigation measures, when required, pursuant to paragraph (c) of 50 CFR 22.26, to compensate for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied.
6. Issuance of the permit will not preclude issuance of another permit necessary to protect an interest of higher priority as set forth in paragraph (e)(7) of 50 CFR 22.26.
7. Issuance of the permit will not interfere with an ongoing civil or criminal action concerning unpermitted past eagle take at the project.

Geographic Extent

The geographic scope of the analysis of all alternatives considers the local project level—the footprint of the California Flats project plus a 1-mile radius and 10-mile radius around it—and the local eagle population level. The local area population for both bald and golden eagles is defined by the dispersal distance of young—86 miles for bald eagles and 109 miles for golden eagles (Service 2016a). The California Flats local area population for bald eagles is within the Service’s Region 8, which includes all of California and Nevada and the Klamath Basin in Oregon. The local area population for golden eagles includes parts of four Federal Bird Conservation Regions (BCRs): BCR 32 (Coastal California), BCR 15 (Sierra Nevada), BCR 9 (Great Basin), and BCR 5 (Northern Pacific Rainforest) (Service 2009: Figures 1-3 and Table 4-1).

Previous Environmental Analysis

Previous and pending authorizations obtained by the Applicant:

- U.S. Fish and Wildlife Service Low-Effect Habitat Conservation Plan for Issuance of an Incidental Take Permit Under Section 10(a)(1)(B) of the ESA for the California Flats Solar Project Operations and Maintenance Activities, Monterey and San Luis Obispo Counties, California. (Complete, amendment pending)
- U.S. Fish and Wildlife Service, Biological Opinion on the California Solar Flats Project, Monterey and San Luis Obispo Counties, California. 08EVEN00-2015-F-0287 (Complete)

- Department of the Army, Section 404 of the Clean Water Act, Application: SPN-2012-00266S (Complete)
- California Department of Fish and Wildlife, Streambed Alteration Agreement: Notification No.: 1500-2015-0041-R4 (Complete)
- California Department of Fish and Wildlife, California Endangered Species Act Incidental Take Permit, No.: 2081-2015-027-04 (Complete)
- U.S. Fish and Wildlife Service, Bald and Golden Eagle Protection Act Incidental Disturbance Take Permit, Short-term (Single Nest, Single Season), Permit # MB13707C-1 (Complete)

Previous environmental analyses conducted for the project:

- County of Monterey, California Flats Solar Project Draft Environmental Impact Report (County of Monterey 2014a)
- County of Monterey, California Flats Solar Project Final Environmental Impact Report (County of Monterey 2014b)
- Department of the Army, Permit Evaluation and Decision Document (Department of the Army 2015)
- U.S. Fish and Wildlife Service, Environmental Assessment: California Flats, LLC, Eagle Non-purposeful Disturbance Take Permit Request, January 31, 2017 (Service 2017)

Previous analyses for the issuance of Eagle Act take permits conducted at the National level and includes the following:

- U.S. Fish and Wildlife Service Final Environmental Assessment: Proposal to Permit Take Provided under the Bald and Golden Eagle Protection Act (Service 2009)
- U.S. Fish and Wildlife Service Programmatic Environmental Impact Statement for the Eagle Rule Revision (Service 2016c)

Previous analyses applicable to our local area population cumulative effects analysis:

- Cumulative Effects Analysis: U.S. Fish and Wildlife Service Final Environmental Assessment: Shiloh IV Wind Project Eagle Conservation Plan (Service 2014)
- Cumulative Effects Analysis: U.S. Fish and Wildlife Service Final Environmental Assessment: Alta East Wind Project Eagle Conservation Plan (Service 2016b)

These documents provide a foundation for the analysis of most other elements of the project or our eagle take permit process related to the human environment, and consequently allow the current analysis to focus primarily on eagles and our action, which is consideration of issuance of an eagle disturbance take permit. The analyses listed above are hereby incorporated by reference into this EA.

Public Participation

The County of Monterey Draft Environmental Impact Report for California Flats (County of Monterey 2014a) was released for public comment in August 2014. Monterey County received substantial

comments regarding impacts to eagles and recommendations that the county require the California Flats project to comply with the Eagle Act regulations. In response, Monterey County required a one mile no disturbance buffer around active golden eagle nests at the project site. The county stipulated that this buffer could be reduced only in consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

CHAPTER 2: ALTERNATIVES

Introduction

As referenced in the CEQ's NEPA regulations regarding the contents of an EA (40 CFR 1508.9[b]), NEPA requires federal agencies to develop, study, and briefly describe alternatives to a proposed action and evaluate how those alternatives can resolve resource conflicts. This chapter describes the alternatives we considered during preparation of this EA and alternatives that were considered but eliminated from further consideration. Alternative 3 is our Preferred Alternative.

Alternatives Analyzed in this EA

Alternative 1: No Action

Under the No-Action Alternative, we would take no action or would deny the permit application and would not issue an eagle take permit. The California Flats project would continue its construction and presumably operate without a take permit being issued. We considered this alternative because NEPA requires evaluation of a No-Action Alternative, and either issuing or not issuing the permit are the potential responses to the permit application. Under the No-Action Alternative, we would deny the permit application because it fails to meet one or more of several issuing criteria under 50 CFR 22.26 as described in section 1.5.2, or because we have determined that the risk to eagles is so low that a take permit is unnecessary.

Alternative 2: Issue Permit to Allow Installation of a Nesting Deterrent Device in One Golden Eagle Nest for One Breeding Season

Under Alternative 2, we would issue a permit to place a nesting deterrent device in one eagle nest (nest 13A, see Application; Appendix 1) for one breeding season. California Flats would install a nesting deterrent device in the nest immediately prior to the 2018 nesting season to temporarily deter nesting in a particular nest. Any new nests constructed by the eagle pair in the immediate vicinity of the nest with the deterrent device or within one mile of construction activities would be removed. Under this alternative, the Applicant would provide compensatory mitigation by retrofitting power poles sufficient to compensate for the loss of a single breeding season's productivity for one breeding pair at a 1.2:1 mitigation ratio. If the eagles do not attempt to nest the following breeding season in 2019, the Applicant would provide compensatory mitigation for the loss of a second season's productivity.

Alternative 3: Issue Permit to Allow Disturbance Take to One Golden Eagle Pair for One Breeding Season

Under Alternative 3, we would issue a permit allowing unrestricted disturbance take authorization within one mile of one eagle nest (nest 13A, see Application; Appendix 1) for a single breeding season (2018). In addition, the Applicant would provide compensatory mitigation by retrofitting power poles sufficient to compensate for the loss of a single breeding season's productivity for one breeding pair at a 2:1 mitigation ratio. The higher rate of 2:1 versus the standard 1.2:1 compensatory mitigation rate will both offset take, as well as address cumulative impacts. If the eagles do not attempt to nest the following breeding season in 2019, the Applicant would provide compensatory mitigation for the loss of a second season's productivity.

Key Elements for the Action Alternatives

Take Authorization

Effects of authorizing take by disturbance of a single golden eagle breeding pair by construction activities associated with the California Flats Solar Project in Monterey County, California occurring within one mile of a golden eagle nest located at 35°49'24.24"N, 120°18'48.168"W (nest 13A, see Application; Appendix 1) during the 2018 eagle breeding season (1 January 2018 to 31 August 2018) may entail the loss of one year of productivity for the eagle pair.

In the Service's evaluation of the Eagle Act permit regulations it was estimated that breeding golden eagle pairs produce 0.59 young eagles per year (Service 2016c). When considering a take authorization, it is the Service's practice to round take values up to the nearest whole number representing the take of a whole bird. Therefore, we are considering authorization of the take of one eagle (0.59 rounded to one) for the assumed loss of productivity due to authorized disturbance near this nest site.

Monitoring

Through permit terms and conditions, the Applicant would be required to monitor the nesting territory of the eagle breeding pair described above for evidence that the eagle pair continues to occupy the territory. California Flats would employ qualified biologists to monitor the breeding territory at least once every two weeks during the eagle breeding season for a minimum of four hours per survey. The Applicant would also monitor the area surrounding the nesting territory for evidence that the eagle pair has expanded their territory or moved into an adjacent area. As golden eagles are territorial and the disturbed eagle pair may have increased interactions with other eagles in the area and may alter the dynamics of the area eagle population, the Applicant would be required to monitor all eagle use, during the eagle breeding season, within two miles of the project footprint for the duration of the permit and up to five years after its expiration noting whether eagles continue to nest, roost, or forage in this area and identifying any nests within two miles of the project footprint. Monitors would use survey methodology as described in *Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations* (Pagel et al. 2010).

Compensatory Mitigation

Service Eagle Policy

To calculate compensatory mitigation, we used a Resource Equivalency Analysis (REA) to quantify the number of power pole retrofits needed to offset the take of golden eagles (see Appendix G of the ECP

Guidance [Service 2013]). We used utility pole retrofits to eliminate electrocutions because:

- High-risk power poles cause quantifiable adverse impacts to eagles;
- The “per eagle” effects of high-risk power pole retrofitting are quantifiable and verifiable through accepted practices;
- Success of and subsequent maintenance of retrofitting can be monitored; and
- Electrocution from high-risk power poles is known to cause eagle mortality and this can be corrected.

Our take prediction is one of several fundamental variables that we use to populate the REA (see Appendix G of the ECP Guidance [Service 2013]). The REA generates a project-area eagle impact calculation (debit), expressed in bird-years, and an estimate of the quantity of compensatory mitigation (credit) (e.g., power pole retrofits) necessary to offset this impact. The REA and take estimate both consider the age of the eagle in their calculations and assume that the age distribution of eagles killed at a facility will be the same as the age distribution of eagles in the wild (i.e., 20% juvenile, 35% sub-adult, 45% adult). These estimates come from information contained in the 2009 Final Environmental Assessment for the Eagle Rule (Service 2009). In the REA, this age distribution is used in both the debit and credit sides of the calculations.

Effectiveness of Power Pole Retrofits

This EA incorporates by reference the *Effectiveness of Power Pole Retrofits* analysis conducted in the *Final Environmental Assessment: Alta East Wind Project Eagle Conservation Plan* (Alta East EA) (Service 2016b).

REA Calculations

This EA incorporates by reference the *REA Calculations* discussion and analysis conducted in the Alta East EA (Service 2016b).

Under each action alternative, the Applicant would deposit compensatory mitigation funds, calculated using the REA as described in our ECP Guidance (Service 2013), in the Service’s Pacific Southwest Region Bald and Golden Eagle Mitigation Account with the National Fish and Wildlife Foundation (NFWF Eagle Mitigation Account).

Under both action alternatives, the Applicant would provide compensatory mitigation for eagles by retrofitting electric utility poles. The intent is to minimize the potential for electrocutions in this area and ensure that the effects of eagle take authorized by issuance of this permit are offset.

Under Alternative 2, in order to mitigate for the predicted loss of eagles, that is one eagle for the loss of productivity in one breeding season, take would be offset at a 1.2:1 ratio. The Applicant would be required to retrofit approximately between 16-37 electric utility poles for a single season’s loss of productivity. If monitoring indicates the pair does not attempt to reoccupy the nest in the 2019 breeding season, the Applicant would provide the same amount of compensatory mitigation to address the loss of productivity in 2019.

Under Alternative 3, in order to mitigate for the predicted loss of eagles, that is one eagle for the loss of productivity in one breeding season, and to address cumulative effects in this area, we would require take be offset at a 2:1 ratio. The Applicant would be required to retrofit approximately between 27-62 electric utility poles for a single season’s loss of productivity. If monitoring indicates the pair does not attempt to reoccupy the nest in the 2019 breeding season, our permit conditions would require the same amount of

compensatory mitigation be provided to address the loss of productivity in 2019.

Mitigation Site

We worked with a utility company to identify high-risk utility poles appropriate for eagle compensatory mitigation. We selected the mitigation site options below based on areas identified as having higher than average electrocution rates and high densities of wintering and breeding eagles. The retrofits are not duplicative of the utility company's other obligations to retrofit poles within its system.

The California Flats mitigation will occur on Pacific Gas and Electric Company (PG&E) lines in one of the following locations:

Mitigation Site Option 1:

Under this option, the compensatory mitigation for the California Flats permit for eagle disturbance take will occur as described in the Shiloh IV eagle take permit EA (Service 2014). The PG&E Oilfields 1103 circuit was identified as a high priority area for retrofits. The mitigation area is located near the U.S. Army Garrison Fort Hunter Liggett property and directly adjacent to Monterey County's San Antonio Reservoir. The Oilfields 1103 circuit has experienced four known golden eagle mortalities since 2002. Three of these incidents occurred in recent years (i.e., one incident each in December 2009, January 2010, and January 2011). All three of these incidents occurred within 5 miles of one another. It should be noted that PG&E discovers eagle electrocutions incidentally after investigating a power outage, by personnel working on utility lines, or—less frequently—from reports from the public. We believe the rate of eagle electrocution events are higher than what is discovered and reported on an annual basis, and this variation is accounted for in our Shiloh IV Resource Equivalency Analysis (Service 2014, Appendix D).

Mitigation Site Option 2:

Under this option, the compensatory mitigation for the California Flats permit for eagle disturbance take will occur in conjunction with and as described in the Alta East eagle take permit EA (Service 2016a). PG&E's Tejon 1102 circuit was identified as a high-priority area for retrofits. The Tejon 1102 circuit is located in Kern County, California south of the city of Bakersfield at the base of the Grapevine Pass. The Tejon 1102 circuit experienced four known golden eagle mortalities in 2013. It should be noted that PG&E discovered these eagle fatalities incidentally by personnel working on utility lines. Although PG&E already retrofitted a section of line in response to these incidents and plans to retrofit more in the future, we believe prioritizing further retrofits within this type of habitat will benefit the local-area eagle population.

NFWF Eagle Mitigation Account

We established an Eagle Mitigation Account with the National Fish and Wildlife Foundation (NFWF Eagle Mitigation Account) to facilitate the eagle permit process in our Pacific Southwest Region. Deposits to this account will be used to accomplish specified conservation practices as identified in permits issued under the Eagle Act. Under both action alternatives, California Flats would deposit compensatory mitigation funds into the NFWF Eagle Mitigation Account to fund electric utility pole retrofits. Within 30 days of permit issuance, the Applicant would make the initial deposit into our NFWF Eagle Mitigation Account. Further deposits would be required if the funds run out before the required retrofits are completed.

Retrofit Effectiveness Monitoring

As required by the California Public Utilities Commission (CPUC), electric utility companies establish inspection cycles and record-keeping protocols for their utility distribution equipment. These requirements are set forth in General Order 165 (CPUC 1997). In general, utilities must patrol (walk,

drive, or fly by) their systems once per year (in urban areas) or once every 2 years (in rural areas). For example, Pacific Gas and Electric Company (PG&E) must conduct detailed inspections every 3–5 years, depending on the type of equipment. For detailed inspections, utilities' records must specify the condition of inspected equipment, any problems found, and a scheduled date for corrective action. We have determined that the monitoring requirements set forth by the CPUC are sufficient to comply with our policy for monitoring the effectiveness of retrofits.

Conclusion

Based on the available data sets, we have determined that retrofitting poles within the California Flats project Eagle Management Unit and/or within the same local-area population would satisfy the compensatory mitigation requirement for an eagle disturbance take permit.

Alternatives Considered but Eliminated from Further Consideration

Alternative 2, use of a nesting deterrent device placed in the eagle nest to prevent eagles from being able to utilize the nest, was suggested as an alternative. However, there is no direct safety risk to the eagles in using the nest and this alternative definitely prevents successful nesting. By leaving the nest available for use by the eagles, there is a chance, even with potential disturbance, that eagles may use the nest and successfully produce young. Therefore, we rejected this proposed Alternative.

CHAPTER 3: ENVIRONMENTAL SETTING

Introduction

This chapter provides background on the environmental resources that are evaluated in the context of the Federal action and alternatives. Specifically, this chapter describes the physical environment, climate change, eagle use and demographics.

Setting Discussions

Physical Environment

The project area is in southeastern Monterey County, with road access through the northeastern corner of San Luis Obispo County north of State Route 41. It lies within the southern terminus of the Diablo mountain range with Cholame Valley to the west. The town of Parkfield and the city of Paso Robles lie approximately 7 miles to the northwest and 25 miles to the southwest, respectively, from the project area. The region is sparsely populated and dominated by agriculture and ranching activities, with land use in the project footprint historically consisting of cattle grazing. The project footprint is approximately 3,000 acres. The landscape in the project vicinity is dominated by gently rolling terrain and grasslands, surrounded by woodlands and shrublands where various trees, primarily oak trees, provide nest substrates.

suited to eagles and other raptors.

Climate Change

This EA incorporates by reference the Climate Change analysis conducted in the Alta East EA (Service 2016b).

Eagle Use and Demographics

This EA incorporates by reference the Eagle demographic analysis conducted in the following documents:

1. U.S. Fish and Wildlife Service. *Programmatic Environmental Impact Statement for the Eagle Rule Revision*. December 2016. (Service 2016c)
2. U.S. Fish and Wildlife Service. *Bald and Golden Eagles: Population demographics and estimation of sustainable take in the United States, 2016 update*. April 2016. (Service 2016a).
3. County of Monterey. *California Flats Solar Project Draft Environmental Impact Report*. August 2014. (County of Monterey 2014a)
4. County of Monterey. *California Flats Solar Project Final Environmental Impact Report*. December 2014. (County of Monterey 2014b)
5. U.S. Fish and Wildlife Service. *Final Environmental Assessment: Shiloh IV Wind Project Eagle Conservation Plan*. June 2014. (Service 2014)
6. U.S. Fish and Wildlife Service. *Final Environmental Assessment: Alta East Wind Project Eagle Conservation Plan*. September 2016. (Service 2016b)
7. H.T. Harvey & Associates. *Baseline Raptor Nest Surveys for the Proposed California Flats Solar Project in Monterey County, California: 2013*. September 2013. (H.T. Harvey & Associates 2013)

Project and Local Area Eagle Use and Demographics

Golden eagle habitat in central California consists mainly of open grasslands and oak savanna interspersed with oak and shrub woodlands. The eagles in this area, therefore, have little opportunity for cliff-nesting, so predominately nest in trees, utilizing nearby open areas for foraging on ground squirrels and jackrabbits. Golden eagles are territorial, aggressively defending territorial boundaries. Breeding eagles in the area are supplemented by floater individuals, which quickly fill any territory vacancies that occur. The populations of golden eagles in these areas remain resident throughout the winter and pairs will occupy, maintain, and defend their territories even in years in which they do not breed (Hunt 2002).

Pre-project eagle nesting surveys conducted in 2013 identified one bald eagle breeding territory and at least 21, but possibly up to 33, golden eagle breeding territories located within 10 miles of the California Flats project site (H.T. Harvey & Associates 2013). The study confirmed the presence of several other adult and sub-adult eagles that appeared to be floaters (i.e., potential breeding birds that have not yet established a breeding territory). Surveys and monitoring in 2016 within the project footprint and a one-mile buffer outside of the project footprint identified six golden eagle and one bald eagle territories, as well as the potential for several floater eagles, within the project footprint and one-mile buffer (West Inc. 2016).

Additional eagle data is available within the local area. Winter bald eagle surveys were conducted at San Antonio Reservoir in Monterey County between 1979 and 2012 as part of U.S. Geological Survey's Midwinter Bald Eagle Survey program. These surveys documented an average of 26 wintering bald eagles per year (USGS 2014). Incidental golden eagle sightings were also recorded during the surveys. The surveys documented an average of 11 wintering golden eagles per year and a total of 192 golden eagle observations between 1988 and 2010, the highest total observations of any midwinter survey location in California (USGS 2014).

U.S. Army Garrison Fort Hunter Liggett is a military installation encompassing 162,000 acres within the Santa Lucia Mountains in southern Monterey County. In 1996, biologists at Fort Hunter Liggett documented the first occupied bald eagle nest in Monterey County since the 1930s (U.S. Army 2012). Since then, the installation has annually surveyed for and monitored bald eagle nests in accordance with its Integrated Natural Resources Management Plan. The bald eagle pairs had fledged at least 26 eaglets, collectively, between 1996 and 2011. Golden eagle nest monitoring began in 2010. During the Fort Hunter Liggett surveys for both wintering bald and resident golden eagles, five golden eagles were observed on January 12, 2011. During bald and golden eagle nesting surveys at Fort Hunter Liggett in 2010 and 2011, seven of eight known nests were monitored (Guilliam 2012). Four of the eight nests were identified as golden eagle nests (U.S. Army 2012).

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

Introduction

This chapter describes the environmental consequences of the three permitting alternatives. The analysis considers two action alternatives that provide a reasonable range of options for responding to the California Flats application for an eagle permit, and evaluates the impacts on the human environment; most specifically, impacts on the local area and project level eagle populations.

- Alternative 1: No Action
- Alternative 2: Issue Permit to Allow Installation of a Nesting Deterrent Device in One Golden Eagle Nest for One Breeding Season
- Alternative 3: Issue Permit to Allow Disturbance Take to One Golden Eagle Pair for One Breeding Season

Impact Analysis

Effects Related To Take Of Golden Eagles

Approach and Methods

In determining the significance of effects of each alternative on eagles, we screened each alternative against the Eagle Act's Permit Issuance Criteria as described in Chapter 1. We used our Resource Equivalency Analysis and Cumulative Effects Analysis methods as described in our ECP Guidance

(Service 2013) to calculate compensatory mitigation and cumulative impacts to eagles. We have also used some qualitative analysis based on our knowledge of the area, attendance at local technical meetings, discussions with other local experts, and studies of local eagle populations.

To address the effects of golden eagle take on cultural practices, we assessed whether the Proposed Action or alternatives would substantially burden a Tribe's free exercise of its religion.

Effects Common to Alternatives

All alternatives have the potential to result in permitted or unpermitted take of eagles. The potential is substantially greater for golden eagles than bald eagles due to their frequency of occurrence in the project area and different foraging requirements. We believe that effects to bald eagles will not occur and therefore no permit for bald eagle take is required. Accordingly, this analysis focuses on golden eagles, primarily the breeding pair associated with the nest location, 13A, for which we are considering issuance of a disturbance take authorization.

Direct and Indirect Effects

Direct effects of authorizing take by disturbance to a single golden eagle breeding pair by construction activities associated with the California Flats project to occur within one mile of a golden eagle nest (13A) during the 2018 eagle breeding season (1 January 2018 to 31 August 2018) may entail the loss of one year of productivity for the pair.

Indirect effects of this authorization may result in temporary or long-term displacement of the breeding pair. To address this potential effect, we would require monitoring of the pair and their territory and include in our permit requirements for additional compensatory mitigation if the pair fails to breed in the 2018 season. Also, if the eagle pair builds an alternate nest site close to a neighboring breeding eagle's territory, it could put the pair in conflict with neighboring eagles. This may negatively affect the neighboring eagle pair by lowering their productivity. Therefore, we would also require monitoring of the rest of the project area eagle breeding population located within two miles of the California Flats project site for five consecutive breeding seasons.

Cumulative Effects

The purpose of this cumulative effects evaluation is to identify situations where take, either at the individual project level or in combination with other present or foreseeable future actions and other limiting factors at the local-area population scale, may be approaching levels that are biologically problematic or which cannot reasonably be offset through compensatory mitigation. The scale of our analyses to assess cumulative effects for eagles is the natal dispersal distance for the given species, which is a 109-miles radius around the project site to examine effects to golden eagles.

At the project level, foreseeable cumulative impacts to eagles may be caused by future construction, operations, the presence of infrastructure and increased human presence. Between 1-3 golden eagle breeding territories located within one mile of the project footprint could be affected by reduced productivity or displacement in future years.

Cumulative effect estimates were calculated for the Shiloh IV Wind Project at 12.3 percent of the local area population taken annually (Service 2014) and for the Alta East Wind Project at 8 percent of the local area population taken annually (Service 2016b). California Flats Solar Project is located geographically about halfway between these two wind projects and within the same mountain range, the Diablo Range, as the Altamont Wind Pass Resource Area, which accounted for the majority of eagle take in the Shiloh IV project analysis. We therefore believe the estimate for the cumulative effects for California Flats Solar Project will fall within the range of these two estimates, 8-12.3 percent of the local area population taken annually. Alternative 3 addresses these estimated cumulative effects by including a compensatory

mitigation ratio of 2:1.

We anticipate that issuing a permit would ensure that take of eagles would be minimized and offset by compensatory mitigation. Because the Applicant would offset take through compensatory mitigation, issuance of an incidental take (through disturbance) permit would cause no significant adverse cumulative effects on golden eagle populations. Further, our permit conditions would require the Applicant to implement minimization and avoidance measures within one mile of any other nesting eagles and monitor eagles near the project. The Applicant has also been in consultation with the Service regarding coverage of take of eagles for long-term operations and maintenance of the project. Therefore, issuance of this short-term take authorization will ensure future impacts to eagles at this project site are minimized to the maximum degree practicable.

Cultural Effects

Eagles and their feathers are revered and considered sacred in many Native American traditions. Construction and operations of the project, including disturbance take of eagles, is not expected to interfere with cultural practices and ceremonies related to eagles, or to affect the ability to utilize eagle feathers. Further, any eagles or eagle parts that are found would be sent to our repository and, if in good condition, would be made available for these practices. In addition, there are no federally-recognized tribes located in Monterey or San Luis Obispo Counties or in the project area. Therefore, we do not anticipate any adverse effect on cultural practices.

Climate Change

The effects of climate change on eagles in the region are treated as cumulative impacts because they occur later in time. Over the life of the project, the effects of climate change in California will likely result in more pronounced seasonal variation. Due to climate change, the project area is anticipated to shift to a warmer and dryer regime. The ultimate effect of these changes on golden eagles in the project area and the region is difficult to predict. However, because the species survives on a wide variety of prey species across a broad gradient of climatic zones, it is reasonable to surmise that golden eagles have the capacity to adapt to minor changes. The project, by generating electricity using solar energy rather than fossil fuels, could offset CO₂ productions (Service 2012b). Over the life of the project, this would constitute an indirect beneficial effect. Over the term of this permit, impacts will be negligible.

Other Priority Uses

Other priority uses described in our regulations include safety emergencies, Native American use for rites and ceremonies, activities necessary to ensure public health and safety, renewal of programmatic nest-take permits, and resource development or recovery operations (for inactive golden eagle nests only). Operation of the project, including disturbance take of eagles, is not expected to interfere with other priority uses or permits because a no-net-loss standard is expected to be achieved under the action alternatives.

Conclusion

We have determined that, by issuing a permit, the Service would have a means to ensure that take of eagles would be minimized through implementation of required minimization and avoidance measures and offset by the retrofitting of additional utility power poles at levels above that currently undertaken by the utility company, and that these activities will help accomplish our population goal for eagles. The Applicant would offset take through compensatory mitigation, and it is our opinion that issuance of a permit would reduce impacts to eagles compared to allowing the project to operate without the conservation benefits required under a permit.

Assessment of Alternatives

In assessing whether there is a “significant” impact, we have considered both the context and intensity of the action and its effects (40 CFR 1508.27). Context refers to the affected environment in which the proposed action takes place and may include the socioeconomic, legal, and political situation surrounding an action. Intensity refers to the severity of the proposed action’s impact on the environment and may consider environmentally beneficial actions, public health, unique characteristics of the geographic area, controversy, uncertainty, precedent- setting elements, cumulative effects, cultural resource effects, effects on endangered species, and consistency with environmental laws (40 CFR 1508.27[b]). In the case of the Proposed Action—issuance of a short-term disturbance eagle take permit—we have assumed that the context is the presence of the California Flats project construction site. Consideration of intensity addresses the relative severity of effects on eagles, the possibility of the Federal action to establish a precedent for future eagle take permits, and the efficacy of the action in mitigating adverse effects.

Under the action alternatives, the “action” of issuing a disturbance take permit to the Applicant will result in no additional impacts to the human environment. The Applicant will continue construction of the project as allowed by other permissions California Flats has already received.

Alternative 1: No Action

Under the No-Action Alternative, we would take no action or would deny the permit application and would not issue a permit. Without a permit, California Flats may not complete their construction within timelines required under the project’s Power Purchase Agreement with Pacific Gas and Electric Company and Apple assuming eagles use this nest to breed in the 2018 season. If eagles do not attempt to breed in the 2018 season, not issuing the permit may not affect the project and may not result in loss of productivity to eagles.

Under the No-Action Alternative, the project might continue to construct without a take permit. Should direct or indirect take of eagles occur under the No-Action Alternative, the Applicant would be in violation of the Eagle Act and would thereby be subject to investigation and possible prosecution by the Office of Law Enforcement.

If we decide not to issue a take permit because we assess the risk to be zero, and take occurs, then we will have been in error and law enforcement action against the Applicant would be unlikely. However, following the initial take, the Applicant would be directed by the Office of Law Enforcement to immediately coordinate with us and may be directed to halt construction activities to avoid additional eagle take until preventative measures are implemented. Failure to implement Service recommendations to avoid additional take and/or failure to obtain a permit would likely result in investigation and could result in prosecution under the Eagle Act if take occurs. In the alternate scenario—in which we do not issue a take permit because the application and conservation commitments made by the Applicant fail to meet our issuing criteria—then, if take occurs, immediate law enforcement action would be more likely.

Alternative 2: Issue Permit to Allow Installation of a Nesting Deterrent Device in One Golden Eagle nest for One Breeding Season

Under this alternative, we would issue a permit as requested by the Applicant to place a nesting deterrent device in one eagle nest for a single breeding season. California Flats would install a nesting deterrent device in the nest immediately prior to the nesting season to temporarily deter nesting in a particular nest (13A). Any new nests constructed by the eagle pair in the immediate vicinity of the nest with the deterrent device or within one mile of construction activities would be removed. Under this alternative, the Applicant would provide compensatory mitigation by retrofitting power poles sufficient to compensate for the loss of a single breeding season’s productivity for one breeding pair at a 1.2:1 mitigation ratio. If the eagles do not attempt to nest the following breeding season, this mitigation would

be doubled. Under this Alternative, the Applicant would be required, through a permit term and condition, to apply for Eagle Act authorization for remaining construction activities and for impacts due to operations and maintenance activities.

Under this alternative, for the eagle pair to breed in the 2018 season, they would be forced to construct an alternate nest site. If constructed in the immediate vicinity of the nest with the deterrent device, the Applicant would remove it. Eagle nests are protected from take under the Eagle Act and if the Applicant removed a nest as the pair attempts to construct it, it would likely result in direct harassment take of this breeding pair.

Under Alternative 2, the eagle pair may also be forced to construct an alternate nest in which to lay their eggs in 2018 that the Applicant would not remove. Because our authorization would allow disturbance which assumes the birds will not successfully produce young and requires compensatory mitigation to offset that loss, this effect would be negligible.

If the eagles build an alternate nest site close to a neighboring breeding eagle's territory, it could put the birds in conflict with neighboring eagles. This may negatively affect the neighboring eagle pair by lowering their productivity. There is a greater likelihood of this occurring if the disturbed eagle pair is prevented from using their existing nest. Therefore, we would require monitoring of the project area eagle breeding population located within two miles of the California Flats project site for five consecutive breeding seasons.

Alternative 3: Issue Permit to Allow Disturbance Take to One Golden Eagle Pair for One Breeding Season

Under this alternative, we would issue a permit allowing unrestricted disturbance take authorization within one mile of one eagle nest for a single breeding season (2018).

Under this Alternative, the Applicant would provide compensatory mitigation by retrofitting power poles sufficient to compensate for the loss of a single breeding season's productivity for one breeding pair at a 2:1 mitigation ratio. This 2:1 mitigation ratio would also address estimated cumulative effects. If the eagles do not attempt to nest the following breeding season, this mitigation would be doubled. To address future impacts to eagles from future construction seasons and project operations, under this alternative, we would require the Applicant to apply for eagle take authorization within six months of permit issuance.

Under this Alternative, the eagle pair may utilize the existing nest site or may, but would not be forced to, build an alternate nest site for use during the 2018 season. This pair may or may not breed successfully. If the eagles tolerate the construction activities and breed successfully, there will be a positive effect to the local area eagle population as the Applicant will have already provided compensatory mitigation for anticipated impacts. If the eagles fail to produce young in 2018, that take will have been fully mitigated and there will be no effect to the local area eagle population.

If the eagles build an alternate nest site close to a neighboring breeding eagle's territory, it could put the birds in conflict with neighboring eagles. This may negatively affect the neighboring eagle pair by lowering their productivity. As the disturbed pair would retain access to their existing nest site, this is less likely to occur. We would require monitoring of the project area eagle breeding population located within two miles of the California Flats project site for five consecutive breeding seasons.

Based on the intensity and context of these effects and consideration of the elements associated with this alternative, Alternative 3 is not expected to result in significant adverse effects.

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CHAPTER 6: PREPARERS & CONTRIBUTORS

U.S. Fish and Wildlife Service, Pacific Southwest Region, Migratory Bird Program

Heather Beeler, Eagle Permit Coordinator, NEPA Lead

Tracy Borneman, Migratory Bird Biologist, Permit Lead

APPENDIX A: California Flats Solar, LLC, Section E of Eagle Incidental Take Permit Application

California Flats Solar Project

Eagle Non-Purposeful Take Permit Application (Federal Fish and Wildlife Permit Application Form)

Section E

1. The name and contact information for any U.S. Fish and Wildlife Service employee(s) who has provided technical assistance or worked with you on this project.

- Amedee Brickey, email: amedee_brickey@fws.gov, telephone: (916) 414-6480
- Tracy Borneman, email: tracy_borneman@fws.gov, telephone: (916) 414-6571
- Thomas Leeman, email: thomas_leeman@fws.gov, telephone: (916) 978-6189
- Heather Beeler, email: heather_beeler@fws.gov, telephone: (916) 414-6651
- Tom Dietsch, email: thomas_dietsch@fws.gov, telephone: (760) 431-9440 Ext. 214
- Chris Diel, email: christopher_diel@fws.gov, telephone: (805) 644-1766 Ext. 305

2. The species and number of eagles that are likely to be taken and the likely form of that take (e.g., disturbance, other take).

California Flats Solar, LLC (California Flats) proposes to potentially temporarily disturb one golden eagle (*Aquila chrysaetos*) nesting pair located within one mile of the California Flats Solar Project's (Project) active construction zone in southern Monterey County, California.

Disturbance caused by construction activities could impact breeding activity by the Nest 13A pair in 2018, which may result in decreased nest productivity. Two young fledged successfully from Nest 13A in 2013 and 2016. In 2014, the nest was unoccupied. In 2015, the nest was occupied, but did not produce young. A new nest was used by the pair in 2017 (we assume that it was the same pair and/or this new nest is part of the same Nest 13A territory), and two young successfully fledged. This nest was located approximately 0.13 mile west of the structure used in 2013 and 2016; California Flats requests that the disturbance permit covers both nest structures (hereafter, Nest 13A) used by the breeding pair.

Additional avoidance and minimization measures are being implemented to reduce the potential for operational impacts of the Project on eagles (see the *Bird and Bat Conservation Strategy* for the California Flats Solar Project previously submitted to the U.S. Fish and Wildlife Service on October 16, 2017).

3. The dates the activity will start and is projected to end. If the project has begun, describe the stage of progress.

Construction activities for this phase of the Project began during the first quarter of 2017 and will continue through 2018. Contractually, construction within one mile of Nest 13A is required to be completed in late 2018. Project activities affected by this permit include pre-construction biological surveys (90% complete), mowing (~25% complete), fence installation (~10% complete), interior/array road grading (15% complete), and general (contour) grading (5%

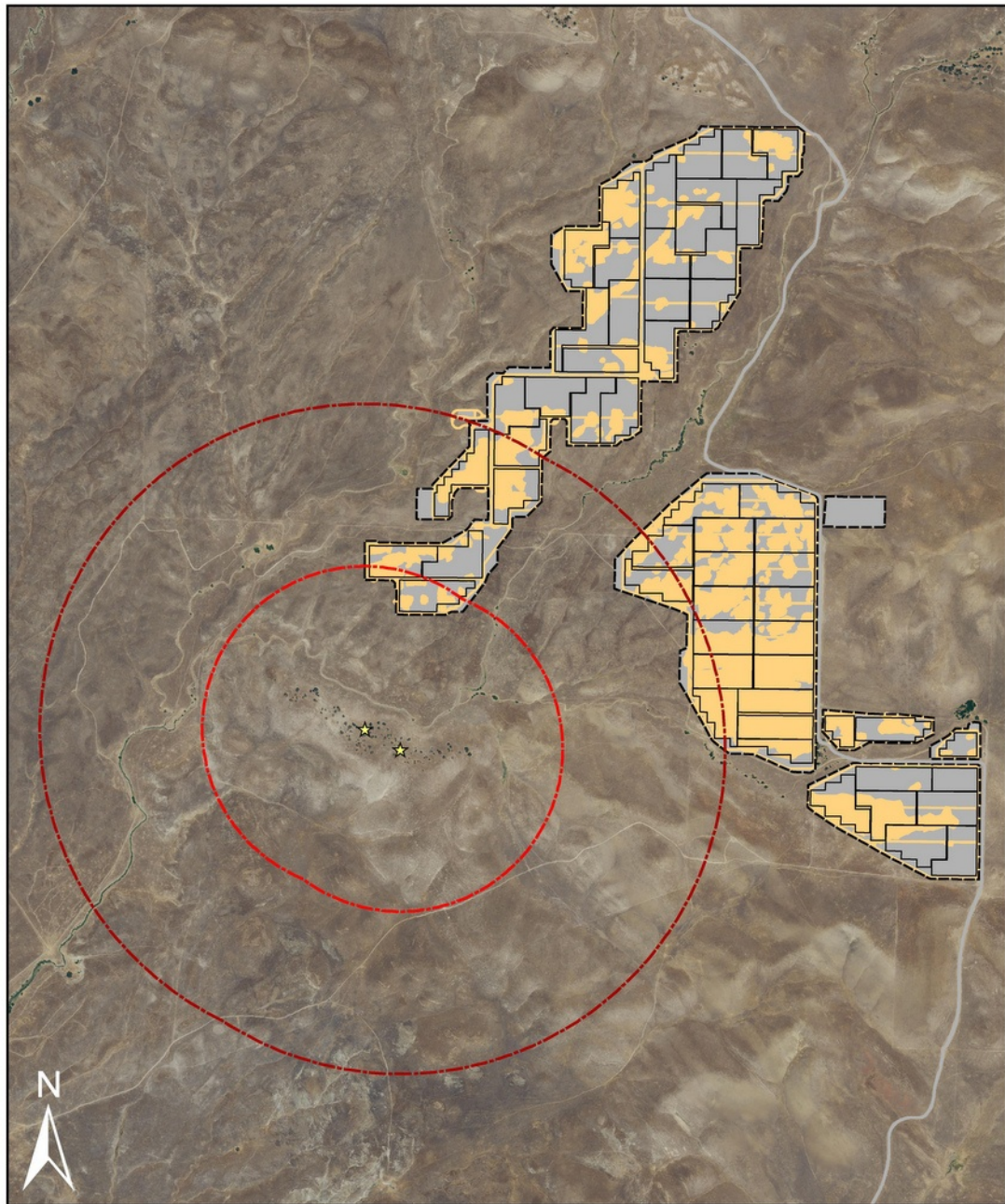
complete). Post pounding activities are scheduled to begin November 20, 2017. To minimize potential disturbance to the Nest 13A pair, First Solar will complete as much construction activity within 1.0 mile of Nest 13A as feasible prior to the start of the 2018 breeding season (January 15, 2018). At the start of the season, First Solar will shift the focus of construction activity to those areas farthest away from Nest 13A, so as to delay construction activities in those areas closest to Nest 13A until as late in the 2018 breeding season as possible. The Project is scheduled to be placed in commercial service in late 2018, and no construction activities are scheduled to extend into the 2019 breeding season.

4. A detailed description of the activity that will likely cause the disturbance or other take of eagles.

Construction of the Project includes site preparation that might involve mowing, grading, and access road improvements. Installation of the photovoltaic solar panels involves installation of the panel racking system and mounting the panels. Additionally, construction will involve installation of electrical inverters and above-ground/below-ground electrical collector lines. Typical equipment used during construction will include:

- Scrapers
- Dozers
- Dump Trucks
- Watering Trucks
- Motor Graders
- Compactors (for array roads)
- Backhoes
- Truck-Mounted Auger
- Pneumatic Post Drivers
- Cranes
- All-Terrain Forklift
- Hand held tools
- Worker vehicles (work trucks) and small ATV “buggies”

Construction activities that could occur within one mile of Nest 13A from now until Project construction is complete include: site preparation (e.g., installation of posts, installation of inverter and transformer pads (called “PCS” pads), improvement of internal access roads, installation of aboveground/underground electrical trench runs); installation of an AC collector and all the necessary electrical equipment; and racking of solar panels – these same activities will be conducted within the ½-mile of the nest. The figure below illustrates the location of the primary construction areas in relation to Nest 13A.



5. An explanation of why the take of eagles is necessary, including what interests will be protected by the project or activity.

The California Flats Solar Project was proposed due to interest by the Jack Ranch in developing a state-of-the-art solar energy facility in an area with high solar resource potential as an alternative to other land use or development options. The objectives of the Project include supporting the State of California and Monterey County's renewable energy and greenhouse gas emission goals. Additionally, the Project was designed to optimize the delivery of solar-produced energy given its location adjoining existing electrical transmission infrastructure with excess transmission capacity. After extensive federal, state, and county environmental reviews, development of the Project was approved by numerous federal, state, and county authorities. These environmental reviews included the development of a Draft and Final Environmental Impact Report pursuant to the California Environmental Quality Act; Environmental Assessment pursuant to the National Environmental Policy Act; negotiations and settlements with all of the major non-government environmental organizations in the region; adoption of extensive mitigation, minimization, and avoidance measures (see the Project's Bird and Bat Conservation Strategy, Low Effect Habitat Conservation Plan); and the development of related management plans. In particular, the Project's habitat mitigation plan involves the preservation, enhancement, and maintenance of 6,204 acres of conservation lands in nearby areas of the Jack Ranch to compensate for anticipated Project impacts on special-status plant and wildlife species and sensitive habitats. The location of these compensatory mitigation lands will provide particularly high value to the long-term protection of eagles in the southern Diablo Range given the relatively high density of eagles that nest and forage in this area along with the growth of both agricultural (vineyard) and rural-residential developments in the surrounding areas.

Following environmental reviews and site permitting, construction of the Project included coordination with the US Fish and Wildlife Service (USFWS) to avoid, minimize, and mitigate for potential disturbances to all eagle nests. This was primarily achieved through the use of no-work buffer zones near occupied eagle nests. Maintaining no-work buffers has come with significant additional financial costs (estimated at \$7,000,000 in 2016) and delays to the construction schedule. However, a nest disturbance permit was issued by USFWS for California Flats to conduct construction activities near golden eagle Nest 19A during the 2017 breeding season (Permit MB13707C-1), which involved, at a minimum, another payment of \$140,000 to the *U.S. Fish and Wildlife Pacific Southwest National Fish and Wildlife Foundation Bald and Golden Eagle Mitigation Account*.

California Flats is now seeking a nest disturbance permit for Nest 13A during the 2018 nesting season. While maintaining a conservative no-work buffer zone around the nest is possible, doing so would result in the need to accelerate work in this buffer zone after the active nesting season to meet the contractually required project completion/power delivery date obligations. Many workers/trades could be required to mobilize to this area at once, rather than the phased

approach normally used for constructing the solar arrays. A schedule acceleration of this type may cause increased equipment and worker vehicle traffic and increased overlap of work activities, both of which, together with general pressure on workers to accelerate work activities, could increase the risk of accidents and/or injuries to workers.

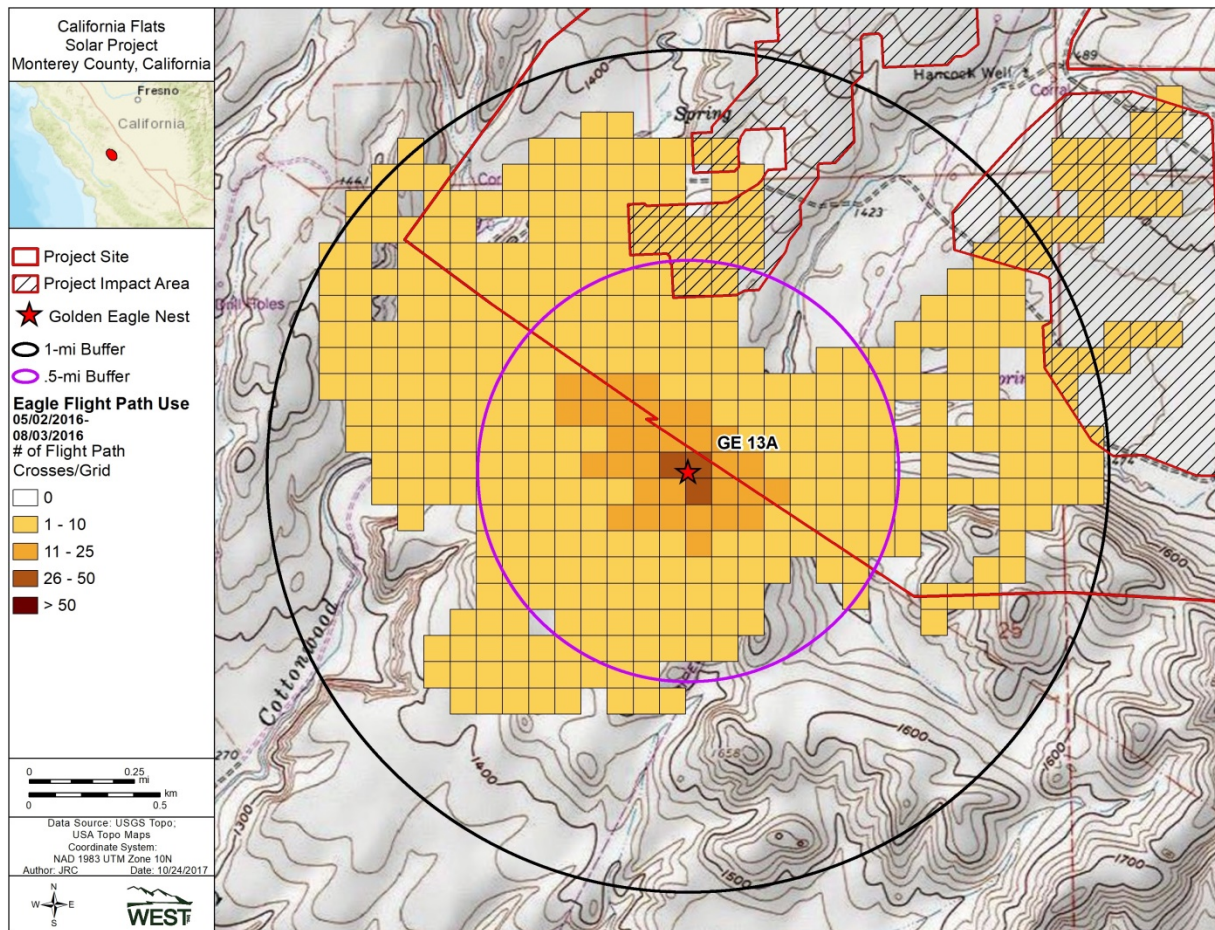
Also, there are other protected species on the Project site, including the San Joaquin kit fox, California tiger salamander, burrowing owl, and others. While it is impossible to know if these species will cause their own no disturbance buffers in areas that would affect the timing of construction within the Nest 13A buffer, it would be prudent to address this potential construction schedule risk by obtaining the nest disturbance permit.

The additional mitigation required for this nest disturbance permit would benefit area golden eagle conservation efforts.

6. Maps, digital photographs, county/city information, and latitude/longitude geographic coordinates of the proposed activity.

The map included below shows the locations of eagle nests in the immediate vicinity of the California Flats Solar Project. Nest 13A is located in southern Monterey County, California at 35°49'24.24"N, 120°18'48.168"W.

occupied in 2016 or 2017. Disturbances to all other eagle nests in the Project area would be avoided either 1) due to the distance to active construction areas, or 2) through the establishment of no-work buffer zones agreed to in coordination with the USFWS. Nest 13A is located approximately 0.36 to 0.41 mile (1,901-2,165 feet) from the Project impact area (see figure below). Eagles that use Nest 13A would have access to areas less than one mile from the nest to the south and west that would not be detrimentally affected by construction of the Project. The map below illustrates eagle use of areas around Nest 13A based on approximately 161 hours of observation completed during biomonitoring from May through August in 2016.



8. If the projected take of eagles is in the form of disturbance, answer the following two questions:

a. Will the activity be visible to eagles in the eagle-use areas, or are there visual buffers such as screening vegetation or topography that blocks the view?

Topography at Nest 13A provides full view of the Project construction areas within one mile of the nest (see photo below) and beyond.

b. What is the extent of existing activities in the vicinity that are similar in nature, size, and use to your activity, and if so, what is the distance between those activities and the important eagle use areas

The California Flats Project is located within a 72,000-acre private cattle ranch. Nest 13A is located in a relatively remote area of the Project site. Disturbance near Nest 13A has likely been limited to occasional traffic from ranch operations and views of: a) the main Project access road regularly in use since early 2016 (located approximately 1.3 miles away from the nest); b) the newly constructed office trailer complex and the equipment lay down areas (~1.4 miles away); and c) limited nearby construction activity associated with the California Flats Project.

The USFWS and California Department of Fish and Wildlife (CDFW) approved limited construction between 0.5 and 1.0 mile of Nest 13A beginning May 5, 2016. A biomonitor was required to be present during construction activities. The nest was monitored prior to construction to establish baseline patterns and then during construction to determine behavioral response to construction activity. If indications of disturbance were observed (e.g., adult eagles abandoning the area for extended periods, quickly transitioning from resting to very alert or agitated, flush response, etc.), work was stopped to minimize the disturbance. From May 5 to July 28, 2016, 161 hours of monitoring was completed over 37 days, during construction activities associated with the south microwave tower. One "Stop Work Order" was issued on May 6, 2016, when surveyors entered the 0.5-mile buffer on foot, shortly before the adults moved away from the nest and out-of-site of the observer for 10 minutes; this behavior was deemed unusual based on baseline observations. The two adult eagles returned to the nest site approximately one hour after construction activities ceased within the 1.0-mile buffer. Two nestlings successfully fledged on June 22 and June 23, 2016, and remained near the nest for several weeks before moving away from the nest hill.

During the 2017 breeding season, construction activities commenced within one mile of Nest 13A more than six weeks after the young had fledged and the family group had shifted their activity center away from the nest site, adhering to USFWS recommendations for disturbance avoidance during the post-fledging period. Given the location of Nest 13A relative to other golden eagle territories and available habitat, we hypothesize that the family group drifted away from the Project to the south once the fledglings became more mobile.

Other golden eagles near the Project have shown tolerance for construction activity. During the 2016 breeding season, Nest 19A became active after construction associated with the north microwave tower and switchyard area had already begun within one mile of the nest. In particular, extensive biological clearance activities (up to 10 biologists on foot conducting clearances), the excavation of the retention pond (including the use of heavy equipment), and extensive "rock picking" activities using manual labor (approximately 25 workers) and heavy equipment was underway while this nest became active. Following discussions with the USFWS and CDFW, construction within one mile of Nest 19A was halted until April 7, 2016, and then approved under the condition that a biomonitor with Stop Work authority was present. Biomonitoring occurred for 332 hours over 42 days from May 9, 2016, to June 3, 2016. No Stop Work Orders were implemented and no apparent disturbance was observed during that period.

Two nestlings fledged from the nest by late June 2016. After the fledglings at Nest 19A died in 2016 (thought to be due to predation), construction activities were restarted within the one-mile buffer to complete as much work as possible prior to the 2017 nesting season. In 2017, Nest 19A was occupied but inactive as construction activities took place under Permit MB13707C-1. No indications of eagle disturbance were observed during 59 hours of observation.



The red circles indicate the locations of the two Nest 13A structures. The picture was taken looking south from the Project Impact Area.

9. A detailed description of all avoidance and minimization measures that you have incorporated into your planning for the activity that you will implement to reduce the likelihood of take of eagles.

California Flats understands that to receive a permit, an applicant for a standard take permit must implement practical measures to minimize impacts to eagles. As described in the *Bird and Bat Conservation Strategy* prepared for the Project, a variety of steps were taken to minimize impacts to golden eagles, including implementing conservative 1.0-mile no-disturbance buffers for four months at great expense and schedule risk to the Project. As described under item #5, use of a conservative no-work buffer zone around Nest 13A is not optimal to achieve the Project objectives and in-service power delivery requirements. The preferred option to minimize ongoing impacts to the Nest 13A pair during the 2018 nesting season is to leave both nests untouched (i.e., no nest removal or coning). This approach will give the pair the opportunity to use the nests regardless of construction activities. However, California Flats requests the removal or decrease of the existing no-disturbance buffer for Nest 13A (both structures) during the 2018 nesting season. If a disturbance permit is issued, California Flats will comply with the same avoidance and minimization measures included under Condition F (a, c, e and f) of Permit MB13707C-1, as well as monitoring and reporting requirements included under Conditions H (1-3, 5-6) and I. No construction activity will take place within a 0.25-mile buffer of Nest 13A. Construction activities will be phased to complete as much as possible within the one mile buffer prior to the nesting season. If the nest is confirmed to be active, the remaining construction activities will be phased to complete work in areas farthest away from Nest 13A.

If a nest disturbance permit is issued, California Flats will provide compensatory mitigation for the potential decrease in productivity at Nest 13A during the 2018 breeding season. A deposit of compensatory mitigation funds into the US Fish and Wildlife Southwest National Fish and Wildlife Foundation Bald and Golden Eagle Mitigation Account (R8 Eagle NFWF account) is anticipated. The details of the compensatory mitigation will be finalized in coordination with the USFWS.

10. You must retain records relating to the activities conducted under your permit for at least 5 years from the date of expiration of the permit. Please provide the address where these records will be kept.

Records will be kept at 135 Main Street (6th Floor), San Francisco, CA 94105

11. Any permit issued as a result of this application is not valid unless you also have any required State or Tribal permits associated with the activity. Have you obtained all required State or Tribal permits or approvals to conduct this activity? Indicate "Yes," "Have applied," or "None Required." If "Yes," attach a copy of the approval(s). If "Have applied," submit a copy when issued.

Yes, appropriate state permits have been obtained for construction of the California Flats Solar Project (see attached). We are aware of no tribal jurisdiction or permits associated with the activity in this location.

12. If you have received technical assistance for your project from your State wildlife agency, please provide the name and contact information for the individual(s).

- Lisa Gymer, Senior Environmental Scientist Specialist, California Department of Fish and Wildlife, email: lisa.gymer@wildlife.ca.gov, telephone: (559) 243-4014 x238

13. Disqualification factor. A conviction, or entry of a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act disqualifies any such person from receiving or exercising the privileges of a permit, unless such disqualification has been expressly waived by the Service Director in response to a written petition. (50 CFR 13.21(c)) Have you or any of the owners of the business, if applying as a business, been convicted, or entered a plea of guilty or nolo contendere, forfeited collateral, or are currently under charges for any violations of the laws mentioned above? Indicate "Yes" or "No." If you answered "Yes" provide: a) the individual's name, b) date of charge, c) charge(s), d) location of incident, e) court, and f) action taken for each violation.

No.

**Attachment 2: Shiloh IV Eagle Take Permit
ESA, Section 7 Concurrence Memo**



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003



IN REPLY REFER TO:
08EVEN00-2014-I-0257

May 5, 2014

Memorandum

To: Chief of Migratory Birds and State Programs, Pacific Southwest Regional Office,
Sacramento, California

From: Deputy Assistant Field Supervisor, Ventura Fish and Wildlife Office, Ventura,
California

Subject: Request for Concurrence on Utility Pole Retrofits for Shiloh IV Eagle Take Permit
Compensatory Mitigation, Monterey County, California

We have reviewed your request, dated April 1, 2014, and received by our office on April 7, 2014, for our concurrence that the subject plan may affect but is not likely to adversely affect the federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*), and the federally threatened California red-legged frog (*Rana draytonii*) and purple amole (*Chlorogalum purpureum* var. *purpureum*). Your request and our response are in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The Regional Migratory Bird Program proposes to issue a programmatic eagle take permit (permit) pursuant to the Bald and Golden Eagle Protection Act (Eagle Act) to the Shiloh IV Wind Project, LLC (applicant). To meet permit issuance standards, the applicant is providing compensatory mitigation for eagles by retrofitting 133 electric utility poles. The proposed retrofitting would involve repairing or replacing aerial equipment on the utility poles to reduce or eliminate the risk of electrocution to bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*). The mitigation will occur within Pacific Gas and Electric's Oilfields 1103 circuit, near Lake San Antonio, Monterey County, California. To avoid impacts to listed species, the following conservation measures will be required under the permit:

1. Public and private roads will be used for access to the utility poles. In areas without road access, the work crew will walk to the utility poles. No new roads will be created.
2. The proposed work will be conducted during the dry season (July 1 through October 31, or until the first significant rainfall). In the event of unseasonal rainfall, work will not occur for 10 days after a rainfall event of 0.5 inch or more precipitation.
3. Retrofit activities will not occur on poles located in or adjacent to wetlands, vernal pools, ponds, or riparian areas.

4. Retrofit activities will not involve ground disturbing activities.
5. Vehicles will maintain a speed limit of 10 miles-per-hour in the work area.

San Joaquin kit fox, California red-legged frog, and purple amole are known to occur in the vicinity of the proposed project (CNDDDB 2014). Suitable potential habitat occurs within vicinity of area with the utility poles designated for retrofitting; however, avoiding ground disturbing activities and restricting vehicles and equipment to existing roadways will avoid affects to listed species and their potential habitat.

We concur with your determination that the proposed action is not likely to adversely affect San Joaquin kit fox, California red-legged frog, or purple amole. This concurrence is based on the expected effects of the activities proposed and the proposed avoidance measures. Therefore, further consultation, pursuant to section 7 of the Act is not necessary. If the proposed action changes in any manner that may affect a listed species, you must contact us immediately to determine whether additional consultation is required.

If you have any questions, please contact Christopher Diel of my staff at (805) 644-1766, extension 305.

LITERATURE CITED

[CNDDDB] California Natural Diversity Data Base. 2014. Rarefind: A database application for the California Department of Fish and Wildlife, Natural Heritage Division, California Natural Diversity Data Base, Sacramento, California.