



U.S. Fish and Wildlife Service

Environmental Assessment Alta East Wind Project Eagle Conservation Plan

California

Finding of No Significant Impact

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- 1 Final Environmental Assessment, Alta East Wind Project Eagle Conservation Plan
- 2 Response to Comments on Draft Environmental Assessment
- 3 Final Eagle Conservation Plan for the Alta East Wind Project

I. Introduction

This Finding of No Significant Impact (FONSI) addresses the issuance of a programmatic 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 operational Alta East Wind Project (Alta East; project), located in Kern 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 (*Environmental Assessment – Alta East Wind Project Eagle Conservation Plan*) based on the project’s Eagle Conservation Plan (ECP) (Alta East, 2013) (EA Appendix A), as well as other alternatives. The Final EA (FEA) (Service 2016a) 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 the Alta East ECP.

The EA and ECP detail the impacts of the incidental take on golden eagles and how these impacts will 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 evaluated 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 contains elements of Alternatives 3, 4 and 5 analyzed in the EA.

II. Background

The EA analyzes the effects of our proposed issuance of a 5-year programmatic eagle take permit on the human environment and evaluates impacts over the 30-year duration of the project. The analysis focuses on golden eagles, but also addresses other elements of the human environment; primarily whether this action would substantially burden a tribe’s free exercise of its religion. The applicant received a Federal Land Policy and Management Act (FLPMA) Title V right-of-way Type 3 grant and plan amendment on May 30, 2013, to construct, operate, maintain, and decommission the portion of the project on Bureau of Land Management (BLM)-administered lands. The BLM analyzed the environmental effects of its permit action to build and operate the project in a Plan Amendment/Final Environmental Impact Statement (FEIS) (BLM 2013) pursuant to FLPMA and NEPA. The analysis for other elements of the human environment in the FEIS was incorporated by reference into the EA. The BLM is a cooperating agency for this FEA.

The Service developed ECP guidance to provide recommendations for the development of ECPs in support of issuance of programmatic eagle take permits for wind facilities. The applicant (Alta Wind X, LLC) requested Eagle Act programmatic take coverage for operational activities of the project. The applicant is a former affiliate of Terra-Gen Power, LLC, and current affiliate of NRG Yield, Inc. In March 2013, the applicant submitted an application for Eagle Act programmatic take coverage. In April 2013, the Service issued Version 2 of the *Eagle Conservation Plan Guidance* (ECP Guidance; Service 2013a), which is intended to assist industry in avoiding and minimizing impacts to eagles that might result from site selection, construction, operation, and maintenance of land-based, wind energy facilities. Because the ECP Guidance Technical Appendices (Appendices; Service 2012) were released in advance of the full

document, Alta East developed the ECP under the (2012) Appendices. The newer (2013) revised ECP Guidance was substantially similar to the 2012 Appendices in its approach to recommending a staged approach to site evaluation, identifying conservation measures and advanced conservation practices (ACPs) for eagle conservation, and developing an ECP with the Service. The attached EA used methods presented in the revised guidance to analyze eagle risk, assess population level cumulative effects, and determine how much compensatory mitigation is needed to offset impacts to eagle populations.

III. Alternatives Considered

Introduction

The EA considered alternatives for issuance of a permit to take golden eagles at Alta East. It analyzed the effects of our proposed issuance of a 5-year programmatic eagle take permit on the human environment and evaluated impacts over the 30-year duration of the project. The analysis primarily focused on impacts to golden eagles and Native American cultural and religious practices, and incorporated by reference the analyses presented in BLM's FEIS (BLM 2013) addressing the other elements of the human environment, including other potential avian, noise, visual, and cultural effects.

As referenced in the 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.

The EA evaluated a No-Action Alternative and four action alternatives. The following is a brief description of the alternatives considered. For a complete description of alternatives considered, see EA Section 2.2. EA Section 2.5 contains a description of alternatives considered, but not evaluated further.

Offsetting Compensatory Mitigation

Under all action alternatives, the applicant would provide compensatory mitigation for eagles by retrofitting electric distribution poles. The intent is to minimize the potential for electrocutions in this area and ensure that the effects of take caused by Alta East are offset. As shown in Table 1 below, 92 poles are proposed to be retrofitted under Alternative 2, 138 poles under Alternative 3, and 92 poles under Alternatives 4 and 5. The number of retrofits was derived using our Resource Equivalency Analysis (Service 2013a, Appendix D), based on the anticipated annual eagle fatalities.

We worked with a utility company to identify high-risk utility poles appropriate for eagle compensatory mitigation. We selected the Alta East mitigation site based on an area 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.

Alternative 1: No Action – Operation of the Project Without an Eagle Take Permit

Under the No-Action Alternative, we would either take no action or deny the permit application and not issue an eagle take permit. The wind project would continue to operate without a take permit, and the applicant would be subject to law enforcement action if unauthorized take of golden eagles occurred during operations. We consider 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 EA 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 for Applicant's ECP

Under this alternative, we would issue a 5-year permit to take up to three eagles under the applicant's implementation of the ECP with associated conditions, as allowed by regulation. The permit would incorporate all conservation commitments described in the ECP (Appendix A). The project would entail the operation of up to 51 turbines for 30 years and the implementation of ACPs outlined in the ECP. The applicant would provide compensatory mitigation by retrofitting 92 power poles. Under this alternative, experimental ACPs would be implemented as outlined in their ECP. Required deposits would be made to the NFWF Eagle Mitigation Account sufficient to cover cost of required mitigation. The first deposit would be made by the applicant within 30 days of permit issuance.

Alternative 3: Issue Permit for Applicant's ECP with Additional Monitoring and Mitigation

Under this alternative, we would issue a 5-year permit to take up to three eagles under the applicant's implementation of the ECP with associated conditions, as allowed by regulation. The project would entail the operation of up to 51 turbines for 30 years. The applicant would provide compensatory mitigation by retrofitting 138 power poles in Year 1 of permit issuance to compensate for the predicted take of eagles. To offset the high level of cumulative impacts to golden eagle populations in the local area, this alternative would require a total of 1.5 compensatory mitigation rates. This equates to an additional 46 power pole retrofits than required under Alternative 2. Required deposits would be made to the NFWF Eagle Mitigation Account sufficient to cover cost of required mitigation. The first deposit would be made by the applicant within 30 days of permit issuance.

Alternative 4: Issue Permit for ECP with Curtailment of Four Ridgeline Turbines when Eagles are Observed

Under this alternative, we would issue a 5-year permit to take up to three golden eagles with associated conditions, as allowed by regulation. The permit would incorporate all conservation commitments described in the ECP (EA Appendix A), including a human onsite observer during daylight hours to monitor for eagles and condors. The permit would stipulate that the project operator execute operational restrictions to curtail the four ridgeline turbines as eagles are detected to further avoid and minimize potential take of eagles. Required deposits would be made to the NFWF Eagle Mitigation Account sufficient to cover cost of required mitigation. The first deposit would be made by the applicant within 30 days of permit issuance.

Alternative 5: Issue Permit for ECP with Radar Deployment, Curtailment when Eagles are Detected

Under this alternative, we would issue a 5-year permit to take up to three golden eagles with associated conditions, as allowed by regulation. The permit would incorporate all conservation commitments described in the ECP (EA Appendix A), including a human onsite observer during daylight hours to monitor for eagles and condors, and would also require a radar detection system to monitor for eagles. The permit would also stipulate that the project operator execute operational restrictions to curtail turbines throughout the facility as eagles are detected by the radar system to further avoid and minimize potential take of eagles. Required deposits would be made to the NFWF Eagle Mitigation Account sufficient to cover cost of required mitigation. The first deposit would be made by the applicant within 30 days of permit issuance.

Table 1. Key Components of Alternatives
 Summary of Key Components of Alternatives

	Alternative 1 – No Action	Alternative 2 – Issue Permit for Applicant’s ECP	Alternative 3 – Issue Permit for Applicant’s ECP with Additional Monitoring and Mitigation	Alternative 4 – Issue Permit for ECP with Curtailment of Four Ridgeline Turbines when Eagles are Observed	Alternative 5 – Issue Permit for ECP with Radar Deployment, Curtailment when Eagles are Detected	Selected Alternative – Issue Permit for ECP with Curtailment when Eagles are Detected, and Additional Monitoring and Mitigation
Predicted Take:						
Annual	0.5	0.5 ^a	0.5	0.46 ^a	0.5	0.5
5 Years (rounded up)	3	3	3	3	3	3
Mortality Monitoring						
Number of Years	3	3+	3+	3+	3+	3+
Frequency of fatality searches (percent of turbines)	Twice/month at 33%	Twice/month at 33%	Twice/month at 33%	Twice/month at 33%	Twice/month at 33%	Twice/month at 33%
	Twice/year remaining 67%	Twice/year remaining 67%	Monthly 100%	Twice/year remaining 67%	Twice/year remaining 67%	Monthly 100%
	Informal monthly inspections 100%	Informal monthly inspections 100%	Informal monthly inspections 100%	Informal monthly inspections 100%	Informal monthly inspections 100%	Informal monthly inspections 100%
Compensatory Mitigation	92 poles	92 poles	138 poles	92 poles	92 poles	138 poles
^a See EA Appendix D for Bayesian analysis simulations of Alternatives 2 and 4.						
Curtailment Implementation	Following third eagle take	Following third eagle take	Following third eagle take	Four ridgeline turbines when eagle within 1 mile; then, same as Alternative 2	All turbines when eagle within 1 mile	Relevant turbines when eagle within 1 mile
^a See EA Appendix D for Bayesian analysis simulations of Alternatives 2 and 4.						

Evaluation of Alternatives

The EA evaluated potential impacts that could result from the issuance of the programmatic eagle take permit based on the proposed ECP or alternatives to the proposed ECP. 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 a programmatic eagle take permit to Alta East contains elements of Alternatives 3, 4 and 5 of the EA as described below and summarized in Table 1.

Selected Alternative: Issue Permit for ECP with Curtailment when Eagles are Detected, and Additional Monitoring and Mitigation

Under this alternative, we would issue a 5-year permit to take up to three golden eagles with associated conditions, as allowed by regulation. The permit would incorporate all conservation commitments described in the ECP (EA Appendix A), including a human onsite observer during daylight hours to monitor for eagles and condors. Under this alternative, informed curtailment of turbines by a biological monitor would occur when eagles are perceived to be risk of collision with a turbine. Curtailment would not be restricted to just the four ridgeline turbines.

The permit would include all of the commitments to conservation and monitoring in the existing permit application, plus the following additional measures:

- The daytime observer (i.e., biological monitor) would identify eagles approaching the project's turbines from an observation tower (or elsewhere in the landscape as appropriate) and would be authorized to implement curtailment of all turbines at the Alta East facility when an eagle is observed within 1 mile of any turbine(s);
- A detailed curtailment protocol would be implemented as described in of the Final ECP (Attachment 3); and
- Fatality monitoring would occur monthly for all turbines for at least the first year after permit issuance. Subsequent annual monitoring would be determined in coordination between the Service and the applicant based on the results of the first year's additional fatality monitoring.

Thresholds or triggers for implementing ACPs (as outlined in EA Table 2-1) would be based upon mortality studies or carcasses discovered, whichever is greater.

To offset the high level of cumulative impacts to golden eagle populations in the local area, this alternative would require a total of 1.5 compensatory mitigation rates. The applicant would provide compensatory mitigation by retrofitting up to 138 power poles. It should be noted that a combination of two types of electric utility pole retrofits may be required to make poles safe. There is a variety of factors considered to determine the appropriate type of retrofit necessary to make each individual pole avian safe (see APLIC 2006). The first type involves placing plastic covers over lines or equipment on a pole. This type of retrofit is generally less expensive and the fix is temporary because plastic covers can degrade in the environment over time. Our REA assumes this type of retrofit will provide protection to eagles for 10 years. The second type of retrofit requires reframing (i.e., partially rebuilding) an electric utility pole to provide adequate spacing between electrified parts to prevent electrocution hazard to

eagles. This second type of retrofit is more expensive although it provides long-term protection from electrocution hazard. The REA assumes this type of retrofit will provide 30 years protection to eagles. The final mitigation package will likely contain a combination of both types of retrofits. The REA gives more eagle protection mitigation credit for long-term retrofits than it does for the short-term retrofits. The output of our REA analysis is presented in the tables below. In reality, the number of required retrofits will range between 60 and 138, depending on how many of each type is required. To simplify our comparative analysis of Alternatives in the EA, we assumed all retrofits would be the first type, as in practice this method is used more frequently within the utility industry. As described in our ECP Guidance (Service 2013a), the REA can be adjusted for the expected effectiveness of mitigation, and more or fewer high-risk power poles would need to be mitigated. Allowing a range of pole retrofits (based on the type of retrofit) to satisfy the mitigation requirement does not result in any change to the analysis of impacts presented in the EA as the applicant will still be required to fully offset the impacts of the incidental take of eagles consistent with the REA analysis.

Credit Owed for a 5-Year Permitted Take of Golden Eagle (assuming 10 years of avoided loss from retrofitted poles)		
Total Debit	56.83	Present Value Bird-Years
÷ Relative Productivity of Lethal Electric Pole Retrofitting	0.411	Avoided loss of PV bird-years/pole
= Credit owed	138.25	Poles to be retrofitted to achieve no net loss of Golden Eagle

Credit Owed for a 5-Year Permitted Take of Golden Eagle (assuming 30 years of avoided loss from retrofitted poles)		
Total Debit	56.83	Present Value Bird-Years
÷ Relative Productivity of Lethal Electric Pole Retrofitting	0.945	Avoided loss of PV bird-years/pole
= Credit owed	60.17	Poles to be retrofitted to achieve no net loss of Golden Eagle

Required deposits would be made to the NFWF Eagle Mitigation Account sufficient to cover cost of required mitigation. The first deposit would be made by the applicant within 30 days of permit issuance. PG&E would contract the work to retrofit poles within one year of permit issuance. In the EA, for all the action alternatives, we stated that the mitigation (i.e., pole retrofits) would be completed within one year of permit issuance. However, experience has shown that the process for completing the required pole retrofits can take up to two years to complete. Thus, the mitigation work should be completed within two years of permit issuance.

An up to one year delay in the completion of the mitigation would not result in additional significant effects to eagle populations. This is due to our analysis and mitigation approach which is conservative in favor of providing protections to eagles. For example, we use the risk model's upper 80% credible interval of the median to estimate the number of annual eagle fatalities for permit decisions. This method is used to avoid underestimating fatality rates at wind projects (ECP Guidance, Service 2013a). In addition, to offset potential cumulative effects, we would require a 1:1.5 compensatory mitigation ratio. This conservative approach ensures that despite the potential for an up to one year delay in

implementation of mitigation, the effects to eagle populations do not differ significantly from those analyzed in the EA.

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. Combining the components of Alternatives 3, 4 and 5 into our Selected Alternative as described above does not result in any additional effects that are significant. 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 effects on climate change 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 (EA Section 1.5.2) using the quantitative tools available in our ECP Guidance (Service 2013a). We also conducted a qualitative analysis based on our knowledge of the Tehachapi Wind Resource Area (WRA), attendance at technical meetings, discussions with other local experts, and studies of local eagle populations.

The Service has interpreted the conservation standard of the Eagle Act to require maintenance of stable or increasing breeding populations of eagles (74 FR 46836; September 11, 2009). 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.

Risk Estimate

In the ECP Guidance (Service 2013a), we provide a mathematical model that estimates fatality risk at wind project sites. The model relies on a logical assumption that there is a positive relationship between the number of minutes eagles are present in the air near turbines, the number of turbines, and the risk of collisions by eagles. The model results estimate the possible number of fatalities per year at the project site (see EA Appendix D for details). Under the Selected Alternative, we estimate that up to three eagles will be taken over the duration of the 5-year permit. The predicted take of golden eagles conservatively estimates impacts to eagles. We have purposefully used these estimates to be protective of eagles and ensure that take authorization is not over-allocated across the population. We acknowledge that with implementation of the curtailment program using a biological monitor, actual risk may be lower than we predicted although available monitoring data is not sufficient to evaluate this hypothesis. The mortality monitoring requirements under the Selected Alternative will allow us to evaluate the project's risk when implementing the curtailment program and provide statistically meaningful results.

Cumulative Effects

To evaluate cumulative impacts for the local-area population, we followed the guidance provided in Appendix F of the ECP Guidance (Service 2013a). Using this process, we estimated annual golden eagle fatality rates within a 140-mile radius around the project area (EA Figure 4-1). This analysis included available data from other wind projects within the Tehachapi WRA, the San Geronio Pass WRA, Altamont Pass WRA, and the Montezuma Hills WRA. Although no data were available for the Pacheco Pass WRA, we estimated annual mortality based on information from other wind energy facilities in

similar habitat types. Our analysis also included utility-caused mortality data from PG&E. Consequently, we estimate that 8 percent of the local-area population is taken annually.

This is a conservative estimate of population-level effects that are protective of the species. Based on our assessment, fatalities at the Tehachapi WRA have the largest overall impact on the eagle population. However, eagle mortality in that and other WRAs may change over time as individual wind projects within the WRAs reach their lifespan and are decommissioned or repowered and resited. This conservative approach was adopted to ensure that undocumented fatalities are addressed.

As discussed in the EA (see Section 4.3.6), the Service's objective is to manage the species by authorizing take at a level that is less than 5 percent of the local-area population. However, in this area, where the annual ongoing fatality of eagles is well above this benchmark, our goals will be implementation of additional mitigation and overall reduction of ongoing eagle mortality. The Service will continue to encourage measures to reduce mortality from the sources identified in the EA, including the Alta East project. The ACPs outlined in the applicant's ECP are intended to minimize ongoing take at the facility.

Conclusion

While the incremental effect of the project is small, the project would contribute to local and possibly regional adverse effects on the species. We anticipate that, by issuing a permit, we will ensure that take of eagles would be minimized and offset by implementation of the curtailment program (an ACP) and compensatory mitigation. The retrofitting of additional utility power poles will contribute to the fulfillment of our population goal for eagles. By implementing the curtailment program ACP, the applicant will generate information on the effectiveness of this experimental ACP and help us evaluate this approach's ability to minimize eagle and avian impacts associated with turbine operations.

Because the applicant would offset take through compensatory mitigation, and may reduce the amount of actual take (compared with our take estimates for the project) through the implementation of the curtailment program, an experimental ACP, issuance of a programmatic eagle take permit would cause no significant adverse cumulative effects on golden eagle populations.

Climate Change

Over the life of the project, the project area is anticipated to shift to a warmer and dryer climatic regime. The ultimate effect of this shift on golden eagles in the project area and the region is difficult to predict. While the population dynamics might change locally, the species may be resilient more broadly because golden eagles survive on a wide variety of prey species and range across a broad gradient of climatic zones (Kochert et al. 2002). Moreover, by generating electricity using wind energy rather than fossil fuels, operation of the project could offset production of greenhouse gases. We do not anticipate any significant adverse effect on climate change. Any offset would constitute an indirect beneficial effect.

Cultural Practices

Tribal participation is an integral part of the NEPA and the National Historic Preservation Act processes, 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. This coordination process is also intended to ensure compliance with the National Historic Preservation Act and American Indian Religious Freedom Act. To coordinate with tribes regarding potential issuance of a programmatic eagle take permit, we sent letters to 62 tribes located within 140 miles (the natal dispersal distance of golden eagles) of the project site. Comments were also encouraged and welcomed during the comment period on the Draft EA.

We received two comment letters on the Draft EA from tribes. The letters and our responses to comments are presented in Attachment 2.

Eagles and their feathers are revered and considered sacred in many Native American traditions. Issuance of an eagle take permit to the operational Alta East project, 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. We make this determination because Alta East is an operational wind facility. Currently, eagle carcasses that are found are sent to our National Eagle Repository and, if in good condition, are made available for these practices. Under our Selected Alternative, requirements under an eagle take permit may increase eagle carcass detection rates and ensure carcasses are sent to the repository in a timely manner, while feathers and parts are in good condition. Therefore, we do not anticipate any significant adverse effect on cultural practices.

IV. Public Comment

The Service published a Notice of Availability of the Draft EA in the FR on October 28, 2015, opening a 45-day comment period.

We received 10 submissions; 2 from tribes, 6 from nongovernmental organizations, and 2 from the public. Our responses to the comments on the Draft EA are presented in Attachment 2.

V. Changes Made to Draft EA

We made the following minor changes to the Draft EA based on comments received:

- Added information on the take evaluation under the curtailment program.
- Added information on the electric utility pole retrofit process for mitigation.
- Added information about our NFWF Eagle Mitigation Account.

We also made some minor changes to the Draft EA to improve clarity.

VI. Eagle Take Permit Issuance Criteria

In considering this 5-year permit, we evaluated the Selected Alternative's ability to meet the issuance criteria and required determinations identified in the Eagle Act's permitting regulations [see 50 CFR 22.26(f)]. Under the regulations, the Service may not issue a permit unless the following issuance criteria are met:

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 eagle populations, are compatible with the preservation of bald eagles and golden eagles.*

Because Alta East will offset take through compensatory mitigation at a 1 to 1.5 ratio, and may reduce the amount of actual take (compared with our take estimates for the project) through the implementation of their curtailment program, an experimental ACP, we have determined that the action of permit issuance under the Selected Alternative is compatible with the preservation of golden eagles (see analysis in EA Chapter 4). No take of bald eagles is anticipated.

2. *The taking is necessary to protect a legitimate interest in a particular locality.*

As discussed in Chapter 1.2 of the EA, Alta East is an operational wind facility that previously received other state and federal environmental compliance authorizations. The applicant is seeking an eagle permit to comply with the Eagle Act because some unintentional take of golden eagles is anticipated during facility operations.

3. *The taking is associated with, but not the purpose of, the activity.*

Alta East currently collects and delivers renewable energy to the California Independent System Operator power grid. Unintentional take of golden eagles is associated with, but not the purpose of the wind energy generating facility.

4. *The taking cannot practicably be avoided; or for programmatic authorizations, the take is unavoidable.*

Our ECP Guidance (Service 2013a) states:

“Because the best information currently available indicates there are no conservation measures that have been scientifically shown to reduce eagle disturbance and blade-strike mortality at wind projects, the Service has not currently approved any ACPs for wind energy projects.

The process of developing ACPs for wind energy facilities has been hampered by the lack of standardized scientific study of potential ACPs. The Service has determined that the best way to obtain the needed scientific information is to work with industry to develop ACPs for wind projects as part of an adaptive-management regime and comprehensive research program tied to the programmatic-take-permit process.”

Accordingly, the ECP and the Selected Alternative include implementation of an informed curtailment program to minimize and avoid eagle take using a biological monitor. Over the permit term, we will require data collection sufficient to evaluate the effectiveness of this experimental ACP. In addition, the ECP includes an adaptive management framework for which additional experimental ACPs can be applied to this project to address long-term effects (see EA Table 2-2). Any eagle take that occurs will be considered unavoidable.

5. *The applicant has avoided and minimized impacts to eagles to the maximum extent practicable, and for programmatic authorizations, the taking will occur despite application of advanced conservation practices.*

See answer to number 4.

6. *Issuance of the permit will not preclude issuance of another permit necessary to protect an interest of higher priority according to the following prioritization order:*

- a. *safety emergencies,*
- b. *Native American religious use for traditional ceremonies that require eagles be taken from the wild,*
- c. *renewal of programmatic take permits,*
- d. *non-emergency activities necessary to ensure public health and safety, and*
- e. *other interests.*

In the Pacific Southwest region, there are no Native American tribes whose religious practices require eagles to be taken from the wild. Because this will be a programmatic authorization, we have determined that issuing this permit is compatible with the preservation of the golden eagle (i.e., consistent with the goal of stable or increasing breeding populations). Therefore, issuance of this permit will not preclude our ability to issue permits needed to address safety emergencies or necessary to protect an interest of higher priority.

VII. 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 EA Sections 4.2 through 4.4):

- The applicant will offset golden eagle take through compensatory mitigation, and may reduce the amount of actual take (compared with our take estimates for the project) through the implementation of experimental ACPs. This will ensure that the impacts of issuing a programmatic eagle take permit to Alta East on the local and regional golden eagle populations will be less than significant.
- As discussed in EA Section 4.3.4, issuance of an eagle take permit to the operational Alta East project, 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. Eagles 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 all carcasses are found in a timely manner compared to the existing conditions. This may facilitate an 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 a programmatic eagle take permit under the Selected Alternative would result in beneficial effects, primarily to golden eagle populations, but may also benefit other raptors impacted by wind energy generation. Our analysis is in comparison to the No-Action Alternative, under which the project continues to operate without an eagle take permit's compensatory mitigation and ACP commitments. In addition, issuance of this permit will allow Alta East to operate in compliance with the Eagle Act should eagle take occur.

Adverse Effects. As described in detail in Chapter 4 of the EA, the operation and maintenance of Alta East results in adverse impacts primarily to raptors and golden eagles. All known adverse

impacts have been mitigated to the extent practicable by designing the Selected Alternative to avoid raptors and golden eagles as much as possible. Even so, birds, including eagles, can be injured and killed by collision with wind turbines. Alta East's ECP (EA Appendix A) and Bird and Bat Conservation Strategy (BBCS) (EA Appendix B) describe commitments to avoid, minimize, and otherwise mitigate impacts to birds and bats. Avian and bat mortality will be monitored and mitigated through an adaptive management plan that has been crafted to address impacts as operational data are gathered. 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 ECP, BBCS, 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 a programmatic eagle take permit to the operational Alta East wind 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 Alta East's Environmental Impact Report and EIS analyses. The relevant EIS analyses were incorporated by reference in the EA. Issuance of a programmatic eagle take permit to the operational Alta East wind facility 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." Comment letters we received on the EA provided no expert scientific evidence supporting claims that the project 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 ECP and EA, impacts of wind power generation to birds and bats, including eagles, have been relatively well studied within the Tehachapi WRA. The ECP and BBCS for Alta East were developed to address any uncertainty regarding impacts. A 3-year post construction mortality study is underway at Alta East, as required by BLM's right-of-way grant, to determine project-level impacts to birds and bats (monitoring 33 percent of the turbines twice monthly basis). The Selected Alternative requires a more rigorous mortality monitoring design to reduce uncertainty regarding impacts to eagles. Under the eagle take permit, mortality monitoring will be conducted at 100 percent of the turbines on a monthly basis for at least 1 year. The Service believes this level of monitoring, at a minimum, will help ensure eagle take events are detected.

The adaptive management process will further reduce and monitor potential impacts to eagles by Alta East. Implementation of the ECP and BBCS and issuance of the permit will prevent significant impacts to avian and bat populations.

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 a programmatic eagle take permit to Alta East 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 (see EA Section 4.3.6). Under 50 CFR 22.26 (f)(1), when reviewing a permit application, the Service is required to evaluate and consider effects of programmatic 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 Alta East, other data on mortality 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 the Tehachapi WRA, attendance at local technical meetings, discussions with other local experts, and studies of local eagle populations.

Our cumulative effects analysis contained within the EA (EA Section 4.3.6) estimates that 8 percent of the local-area population of golden eagles is taken annually, resulting primarily from wind fatalities operating in the Tehachapi WRA and to a lesser extent, the neighboring projects within the San Geronio Pass WRA. While the amount of ongoing take exceeds the biological benchmark that our national guidance recommends (5 percent take of a local-area population), we believe the additional offsetting mitigation within the project's ECP and under the Selected Alternative will more than offset any impacts attributable to the Alta East project. Therefore, there are no significant adverse cumulative effects contributed by Alta East under the Selected Alternative.

Climate Change. The effects of climate change on eagles and other migratory bird species in the region is treated as a cumulative impact because it occurs later in time (see EA Section 4.3.6). 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 wind energy rather than fossil fuels, operation of the project could offset production of up to 262,113 metric tons of CO₂ equivalent per year (BLM 2013). Over the life of the project, this would equate to approximately 7.8 million metric tons of CO₂ equivalent. This offset would constitute an indirect beneficial effect. Overall, there are no significant adverse cumulative effects contributed by issuance of a programmatic eagle take permit to Alta East 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 a programmatic eagle take permit to the operational Alta East wind facility will have no adverse effect on historic properties (see EA Section 1.8.2 and BLM FEIS Section 5.2.3 [BLM 2013]).

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. Before construction and operations began, we issued a Biological Opinion and Incidental Take Statement in May 2013 to BLM pursuant to Section 7(a)(2) of the Federal Endangered Species Act (ESA) addressing potential effects on California condor (*Gymnogyps californianus*), desert tortoise (*Gopherus agassizii*), and Bakersfield cactus (*Opuntia basilaris* var. *treleasei*) (Service 2013b). Issuance of a programmatic eagle take permit to Alta East under the Selected Alternative would have no additional impacts to species protected by the ESA.

Required Compensatory Mitigation Effects. The Alta East mitigation area is within an area covered by Pacific Gas and Electric Company's (PG&E) San Joaquin Valley Habitat Conservation Plan (HCP). The retrofit work is a covered activity as described in the HCP's Section *E8 Electrical System Ple 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 eagle take permit (Service 2016b) and determined that the mitigation activities required under the Eagle Act will have not have an effect to 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 eagle take permit will not effect California condor (*Gymnogyps californianus*) or its critical habitat, southwestern willow flycatcher (*Empidonax traillii estimus*), or delta smelt (*Hypomesus transpacificus*).

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 estimate that 0.50 eagle will be killed annually, and up to three eagles will be killed over a 5-year period. The Selected Alternative includes additional monitoring and ACPs that will result in operational adjustments. ACPs will be implemented based on the number of fatalities. The Selected Alternative requires informed curtailment of turbines by a biological monitor during all daylight hours to minimize risk to eagles. Our Resource Equivalency Analysis (see EA Appendix D) shows that 138 retrofits will mitigate the loss of three eagles and addresses cumulative effects concerns to the local area eagle population. Increased mortality monitoring associated with this alternative (i.e., evaluating all turbines monthly for at least one year), will help to ensure that fatalities are detected and will support validation of the take estimate. Increased monitoring also has the benefit of accelerating the use of the stepwise adaptive management table if fatalities are discovered, thereby helping to reduce future fatalities. Based on the intensity and context of these effects and consideration of the elements associated with the Selected Alternative, issuance of a programmatic eagle take permit to Alta East as analyzed in the attached EA is not expected to result in significant adverse effects on the human

environment.

VIII. Final Eagle Conservation Plan

The EA analyzed the draft ECP submitted in May 2013 (EA Appendix A). At our request, the applicant submitted a final ECP (Alta East, 2016) (Attachment 3), which incorporates the curtailment program and additional mitigation and mortality monitoring requirements as described in our Selected Alternative, and adopts the minor language changes made to Table 2-1 (*Summary of Advanced Conservation Practices Using a Stepwise Approach*). Issuance of a programmatic eagle take permit to Alta East will require implementation of the final ECP (Attachment 3) as submitted in August 2016.

IX. 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, ECP, and BBCS, the Selected Alternative for issuance of a programmatic eagle take permit to the Alta East Wind 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 FEA prepared in support of this FONSI is incorporated by reference and attached (Attachment 1). The FEA is also available from the Service's Pacific Southwest Regional website at:

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



Deputy Regional Director
Pacific Southwest Region
U.S. Fish and Wildlife Service

10/14/16
Date

X. Literature Cited

- Alta Windpower Development, LLC (Alta East). 2013. *Conservation Plan for the Avoidance and Minimization of Potential Impacts to Golden Eagles Alta East Wind Project*. Draft. May.
- Alta Windpower Development, LLC (Alta East). 2016. *Conservation Plan for the Avoidance and Minimization of Potential Impacts to Golden Eagles Alta East Wind Project*. Final. August.
- Bureau of Land Management (BLM). 2013. *Alta East Wind Project - Proposed Plan Amendment and Final Environmental Impact Statement*. Volume 2A. Case File Number: CACA 0052537. United States Department of the Interior Bureau of Land Management, Moreno Valley, CA. February.
- U.S. Fish and Wildlife Service (Service). 2007. *Intra-Service Biological and Conference Opinion on Issuance of a Section 10(a)(1)(B) Incidental Take Permit to Pacific Gas & Electric Company (PG&E) for the San Joaquin Valley Operations and Maintenance Program Habitat Conservation Plan, for portions of Nine Counties in the San Joaquin Valley, California*. December.
- U.S. Fish and Wildlife Service (Service). 2012. *Eagle Conservation Plan Guidance, Module 1 – Land-based Wind Energy Technical Appendices*. Division of Migratory Bird Management. August.
- U.S. Fish and Wildlife Service (Service). 2013a. *Eagle Conservation Plan Guidance, Module 1 – Land-based Wind Energy*. Version 2. April.
- U.S. Fish and Wildlife Service (Service). 2013b. *Biological Opinion for the Alta East Wind Project, Kern County, California (3031(P), CACA-052537, CAD000.06)) (8-8-13-F-19)*. May.
- U.S. Fish and Wildlife Service (Service). 2016a. *Final Environmental Assessment—Alta East Wind Project Eagle Conservation Plan*. September.
- U.S. Fish and Wildlife Service (Service). 2016b. *Intra-Service Endangered Species Act Section 7 Compliance for Alta East Wind Project Programmatic Eagle Take Permit*. September.