Finding of No Significant Impact

for the Issuance of a Short-Term Incidental Eagle Take Permit
for Del Puerto Canyon Reservoir Project Geotechnical Evaluation

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California

February 2022

Prepared by:
U.S. Fish and Wildlife Service, California Great Basin Region
U.S. Department of Interior
2800 Cottage Way, Suite W-2606, Sacramento, CA 95825
Contact: Tracy Borneman | tracy_borneman@fws.gov | 916-414-6571

Introduction

The U.S. Fish and Wildlife Service (Service) received an application from Del Puerto Water District (Applicant) requesting eagle take coverage under the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. §§ 668–668d and 50 Code of Federal Regulations [CFR] § 22.80) for incidental disturbance take of eagles in the vicinity of geotechnical evaluation surveys for the Del Puerto Canyon Reservoir Project (Project). The Applicant will be conducting geotechnical surveys to evaluate the site of the proposed Del Puerto Canyon Reservoir for the initial stages of the Project. The Project is located in Del Puerto Canyon in the foothills west of the City of Patterson, California and Interstate-5, in Stanislaus County, California. The geotechnical surveys will occur over 22 months, from approximately March 2022 through December 2023. The Applicant requested a short-term (two year) incidental eagle take permit (permit) for the disturbance and loss of breeding productivity of one golden eagle (*Aquila chrysaetos*) pair during the 2022 and 2023 eagle breeding seasons from geotechnical evaluation activities for the Project. Issuance of a permit by the Service for take that is incidental to otherwise lawful activities under the Eagle Act constitutes a discretionary Federal action that is subject to the National Environmental Policy Act (NEPA; 42 United States Code [U.S.C.] §§ 4321 et seq.).

In accordance with the NEPA, we prepared an Environmental Assessment (EA) analyzing the environmental consequences of issuing a permit for the disturbance take of golden eagles associated with the Project geotechnical evaluations, as well as alternatives to this proposed action. This EA is incorporated by reference and attached (Attachment 1). The EA assists the Service in ensuring compliance with the NEPA and in making a determination as to whether any significant impacts to the environment not previously analyzed under the Service's Programmatic Environmental Impact Statement for the Eagle Rule Revision, December 2016 (PEIS; USFWS 2016) could result from the analyzed actions, which would require preparation of an Environmental Impact Statement (EIS). Determining if effects are significant under NEPA is addressed by regulation 40 CFR § 1501.3(b), and requires analysis of the degree of effects of the action, including short- and long-term considerations and beneficial and adverse effects, as well as considering the affected area and its resources.

The Service's purpose in considering the proposed action of issuing an eagle incidental take permit is to fulfill our authority under the Eagle Act (16 U.S.C. §§ 668–668e) and its regulations (50 CFR § 22). Applicants whose otherwise lawful activities may result in take of eagles can apply for incidental take permits so that their projects may proceed without potential violations of the Eagle Act. The Service may issue permits for eagle take that is associated with, but not the purpose of, an activity. Such permits can be issued by the Service when the take that is authorized is compatible with the Eagle Act preservation standard; it is necessary to protect an interest in a particular locality; and it is associated with, but not the purpose of, the activity; and it cannot be practicably avoided (50 CFR § 22 and 81 Federal Register [FR] 91494).

The need for this federal action is a decision on an eagle incidental take permit application from the Del Puerto Water District that is in compliance with all applicable regulatory requirements set forth under the Eagle Act in 50 CFR § 22.

Proposed Action and Alternatives Considered

In the EA, the Service fully analyzed two potential courses of action, summarized below, to respond to the Applicant's request for an incidental eagle take permit.

Proposed Action

The Service proposed to issue a two-year incidental eagle take permit, with associated conditions, to Del Puerto Water District for disturbance to, and loss of breeding productivity of, one golden eagle breeding pair in the vicinity of the Del Puerto Canyon Reservoir Project geotechnical evaluation surveys during the 2022 and 2023 eagle breeding seasons ("Proposed Action"). This loss of breeding productivity is estimated to equate to 0.59 young fledged each year lost from the eagle population. The permit would require implementation of measures to avoid and minimize eagle take, monitoring of eagles, and compensatory mitigation to fully offset the estimated take.

Alternative 1: No Action

Under the No-Action Alternative, the Service would take no further action on Del Puerto Water District's eagle take permit application.

Public Scoping and Tribal Coordination

Scoping regarding issuance of eagle take permits was performed for the PEIS (USFWS 2016). This Finding of No Significant Impact and attached EA will be made public on the Service's regional webpage.[1]

To notify Tribes regarding potential issuance of the permit, the Service sent letters to 22 federally-recognized tribal governments located within 109 miles (the natal dispersal distance of golden eagles thought to adequately define the local area population of the eagles) of the Project geotechnical evaluation area informing them of the received permit application and preparation of the EA and offering the opportunity for formal consultation regarding potential issuance of the Permit. The Yocha Dehe Wintun Nation responded with a letter dated January 14, 2022, declining comment as they concluded the Project was not within the aboriginal territories of the tribe. The United Auburn Indian Community responded with an email dated January 18, 2022, indicating they would not be commenting as they determined the Project falls outside of the tribe's geographic area of traditional and cultural affiliations. The Tuolumne Me-Wuk Tribal Council responded with a letter dated January 12, 2022, requesting additional information on the

[1] https://www.fws.gov/cno/conservation/MigratoryBirds/EaglePermits.html

Project and eagle nest locations. The Service responded with a letter and map providing the information requested. The Service received no response from any of the other Tribes contacted.

Selected Alternative

Based on review of the analyses detailed in the EA, the Service selected the Proposed Action of issuing a two-year incidental eagle take permit to Del Puerto Water District for disturbance and loss of productivity of one golden eagle pair during the 2022 and 2023 eagle breeding seasons, with the requirement to implement avoidance and minimization measures, conduct eagle monitoring, and provide compensatory mitigation to fully offset the estimated take.

Take of golden eagles is predicted to occur under all alternatives; however the Proposed Action incorporates additional measures to avoid and minimize take of eagles, fully offsets the take with required compensatory mitigation, and includes eagle productivity monitoring, which would not occur under the No-Action Alternative.

The Proposed Action is consistent with the purpose and need for this Federal action and is in compliance with all statutory (16 U.S.C. §§ 668) and regulatory requirements (50 CFR § 22.80 and 50 CFR § 13.21), including the criteria codified for permit issuance (50 CFR § 22.80(f)).

Determining Significance

When considering whether the effects of the Proposed Action are significant, regulations of the NEPA require agencies to "analyze the potentially affected environment and degree of the effects of the action" (40 CFR § 1501.3(b)). This includes considering the extent of the potentially affected area (national, regional, or local) and its resources, as appropriate to the specific action. Further considerations for the degree of the effects include both short- and long-term effects, both beneficial and adverse effects, effects on public health and safety, and effects that would violate Federal, State, Tribal, or local law protecting the environment (40 CFR § 1501.3(b)). Below we examine these considerations for the selected Proposed Action.

Potentially Affected Environment

For purposes of analyzing the selected Proposed Action, the appropriate affected environment associated with the Proposed Action is local and regional, because the Proposed Action does not affect statewide or national resource values. Analyses of effects at the local and regional scale are provided in the EA.

Golden eagles are the resource in the affected area most likely to be affected by the Proposed Action of issuance of the requested eagle take permit. One golden eagle pair nesting in the vicinity of the Project geotechnical evaluation activities may be disturbed by these activities. However, as discussed in the EA and below, the Applicant will implement conservation

measures to minimize the risk to eagles and will offset golden eagle take through compensatory mitigation.

Bald eagles (*Haliaeetus leucocephalus*) are known to occur in the region but are not expected to be affected by Project construction activities as no bald eagle nests have been identified in the vicinity of the Project. Bald eagles may benefit from reduced electrocution risk due to the power pole retrofitting to be done as offsetting compensatory mitigation for the authorized golden eagle take.

Migratory birds are not expected to be negatively affected by the Proposed Action of issuing an eagle take permit to the Applicant, however migratory birds may incidentally benefit from reduced electrocution risk due to the power pole retrofitting to be done for the eagle take permit.

Authorizing incidental eagle take is not expected to have effects to species protected by the Endangered Species Act (ESA) at the Project facility. As described in the EA, the Service will evaluate the proposed mitigation site once the location is selected. The Service anticipates that adverse effects to species listed under the ESA would be avoidable, however if there is potential for impacts to species listed under the ESA, we would conduct an additional NEPA analysis.

Eagles and their feathers are revered and considered sacred in many Native American traditions. Issuing a permit for disturbance take of eagles, is not expected to interfere with cultural practices and ceremonies related to eagles or to affect Native Americans' ability to obtain or use eagle feathers. Moreover, the Service requests any eagle feathers that are found be sent to our repository and, if in good condition, will be made available for these practices. Therefore, we do not anticipate any adverse effect on cultural resources from the Proposed Action.

Degree of the Effects

1) Both short- and long-term effects.

> Issuance of an eagle take permit for the Project 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 Proposed Action 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.
>
> The analyses in the EA considered effects to golden eagles at varying temporal scales and considered effects to both local and regional golden eagle populations.
>
> **Short-Term Effects.** Under the Proposed Action, issuance of an eagle take permit would authorize disturbance take and loss of productivity of one golden eagle pair for two years. However, the Applicant will implement measures to minimize disturbance to the eagles and decrease the chance of take and will fully offset the estimated take with

compensatory mitigation. Analyses provided in the EA indicate the authorized take will have no significant effect on the local eagle population, and as the take will be fully offset with compensatory mitigation, the take will also have no significant effect on regional eagle populations.

Long-Term Effects. Despite short-term disturbance to the eagle pair and minimal temporary effects to eagle habitat from the Project geotechnical evaluations, the geotechnical evaluation activities are not expected to have long-term effects to eagles as the geotechnical evaluation activities will occur over only two years and will not permanently alter the landscape.

The analyses in the Service's PEIS on issuing incidental eagle take permits provides information and greater certainty in understanding the risks and effects to eagles of issuing these incidental eagle take permits now and into the future. Furthermore, surveying and monitoring of the golden eagle pair that would be required under the Proposed Action provides information and increased certainty in our future assessments of the risk to eagles from geotechnical evaluation surveys.

2) Both beneficial and adverse effects.

Beneficial Effects. As described in the EA, the Proposed Action includes power pole retrofitting as mitigation for take of eagles. Such retrofits are anticipated to protect eagles from electrocution. As the number of retrofits to be done for mitigation is calculated at a 1.2 to 1 ratio, these avoided eagle electrocutions will more than offset Project-related take of eagles, thereby benefiting the eagle population as a whole. Pole retrofits are also expected to benefit bald eagles and other raptors that may be susceptible to electrocution. Required monitoring of the eagle nest productivity will also be beneficial as it will support the Service's understanding of impacts from geotechnical evaluation surveys in the vicinity of nesting golden eagles. Furthermore, issuance of an incidental eagle take permit will allow the Applicant to operate in compliance with the Eagle Act.

Adverse Effects. As described in the EA, under the Proposed Action the Applicant would implement conservation measures to minimize the risk to eagles. However, loss of breeding productivity of one golden eagle pair in the vicinity of Project geotechnical evaluation activities may occur due to disturbance from these activities over two years. The Applicant will offset this golden eagle take through compensatory mitigation. This will ensure that the impacts of issuing an eagle take permit on the local and regional golden eagle populations will not be significant.

3) Effects on public health or safety.

The Proposed Action would include mitigating eagle take by retrofitting power poles to prevent eagle electrocutions. As eagle and other raptor electrocutions on power poles can start fires, decreasing eagle and other raptor electrocutions could benefit human safety by reducing fire risk.

4) Effects that would violate Federal, State, Tribal, or local law protecting the environment.

The Proposed Action, issuance of an incidental take permit under the Eagle Act, will not violate any federal, state, tribal, or local law.

Finding of No Significant Impact

The Service's Migratory Bird Program concludes from the analysis conducted in the EA and the information provided above that the Proposed Action would not trigger significant impacts on the environment based on considerations and criteria established by regulations, policy, and analysis. Analyses of impacts were conducted at the Project, local, and regional scales, and the degree of effects were assessed. The selected Proposed Action is unlikely to have significant impacts on eagles because all reasonably foreseeable take of eagles is mitigated and the Proposed Action meets the Eagle Act's preservation standard (16 U.S.C. §§ 668a, 50 CFR § 22.6) and all regulatory requirements (50 CFR § 22.80). Based on the findings discussed herein, we conclude that the Proposed Action will have no significant impact on the environment and is not a major Federal action significantly affecting the quality of the human environment pursuant to Section 102(2)(C) of NEPA (42 U.S.C. 4332(2)(C)). Therefore, we are not required to prepare an EIS to further analyze possible effects, and our environmental review under NEPA is concluded with this finding of no significant impact (40 CFR 1501.3, 43 CFR 46.325).

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Daniel Blake
Chief, Migratory Bird Program
California Great Basin Region
U.S. Fish and Wildlife Service

References

16 United States Code (U.S.C.) § 668. Title 16 - Conservation; Chapter 5a - Protection and Conservation of Wildlife; Subchapter II - Protection of Bald and Golden Eagles; Section (§) 668 - Bald and Golden Eagles. Available online: http://uscode.house.gov

40 Code of Federal Regulations (CFR) § 1501.3. Title 40 - Protection of Environment; Chapter V - Council on Environmental Quality; Subchapter A – National Environmental Policy Act Emplementing Regulations; Part 1501 – NEPA and Agency Planning; Section (§) 1501.3 – Determine the appropriate level of NEPA review. Available online: https://www.ecfr.gov

42 United States Code (U.S.C.) §§ 4321 et seq. Title 42 - the Public Health and Welfare; Chapter 55 - National Environmental Policy; Subchapters I (Policies and Goals) and II (Council on Environmental Quality); Sections (§§) 4321 et seq. Available online: http://uscode.house.gov

42 United States Code (U.S.C.) §§ 4332. Title 42 - the Public Health and Welfare; Chapter 55 - National Environmental Policy; Subchapter I - Policies and Goals; Section (§) 4332 – Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts. Available online: http://uscode.house.gov

43 Code of Federal Regulations (CFR) § 46.325. Title 43 – Public Lands: Interior; Subtitle A – Office of the Secretary of the Interior; Part 46 – Implementation of the National Environmental Policy Act of 1969; Section (§) 46.325 – Conclusion of the environmental assessment process. Available online: http://uscode.house.gov

50 Code of Federal Regulations (CFR) § 13.21. Title 50 - Wildlife and Fisheries; Chapter I - United States Fish and Wildlife Service, Department of the Interior; Subchapter B - Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants; Part 13 - General Permit Procedures; Section (§) 13.21 – Issuance of permits. Available online: https://www.ecfr.gov

50 Code of Federal Regulations (CFR) § 22. Title 50 - Wildlife and Fisheries; Chapter I - United States Fish and Wildlife Service, Department of the Interior; Subchapter B - Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants; Part 22 - Eagle Permits. Available online: https://www.ecfr.gov

81 Federal Register (FR) 91494. 2016. Eagle Permits; Revisions to Regulations for Eagle Incidental Take and Take of Eagle Nests. Vol. 81, No. 242. December 16, 2016. pp 91494-91554. Available online: https://www.federalregister.gov/

US Fish and Wildlife Service (USFWS). 2016. Programmatic Environmental Impact Statement for the Eagle Rule Revision. December 2016. Available online: https://www.fws.gov/migratorybirds/pdf/management/FINAL-PEIS-Permits-to-Incidentally-Take-Eagles.pdf

Attachment 1

Environmental Assessment for the Issuance of a Short-Term Incidental Eagle Take Permit for the Del Puerto Canyon Reservoir Project Geotechnical Evaluation

Environmental Assessment

for the Issuance of a Short-Term Incidental Eagle Take Permit
for Del Puerto Canyon Reservoir Project Geotechnical Evaluation

California

February 2022

Prepared by:
U.S. Fish and Wildlife Service, California Great Basin Region
U.S. Department of Interior
2800 Cottage Way, Suite W-2606, Sacramento, CA 95825
Contact: Tracy Borneman | tracy_borneman@fws.gov | 916-414-6571

Contents

Abbreviations

Applicant	Del Puerto Water District
CFR	Code of Federal Regulations
EA	Environmental Assessment
Eagle Act	Bald and Golden Eagle Protection Act
EMU	Eagle Management Unit
ESA	Endangered Species Act
FR	Federal Register
LAP	Local Area Population
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
PEIS Revision	Programmatic Environmental Impact Statement for the Eagle Rule
Permit	Applicant requested incidental eagle take permit
Project	Del Puerto Canyon Reservoir Project
REA	Resource Equivalency Analysis
Service	United States Fish and Wildlife Service
U.S.C.	United States Code
USFWS	United States Fish and Wildlife Service

Introduction

This Environmental Assessment (EA) analyzes the environmental consequences, pursuant to the National Environmental Policy Act (NEPA; 42 United States Code [U.S.C.] §§ 4321 et seq.), of the U.S. Fish and Wildlife Service (Service) issuing an incidental eagle take permit (Permit) for the take of golden eagles (*Aquila chrysaetos*) associated with conducting geotechnical evaluation of the proposed site of the Del Puerto Canyon Reservoir Project (Project). The applicant for the Permit, the Del Puerto Water District (Applicant), is requesting eagle take coverage under the Bald and Golden Eagle Protection Act (Eagle Act; 16 U.S.C. §§ 668–668d and 50 Code of Federal Regulations [CFR] § 22.80) for incidental take by disturbance of a breeding golden eagle pair during the 2022 and 2023 eagle breeding seasons from geotechnical evaluation activities for the Project. Issuance of an incidental eagle take permit by the Service for take that is incidental to otherwise lawful activities under the Eagle Act constitutes a discretionary Federal action that is subject to the NEPA. This EA assists the Service in ensuring compliance with the NEPA and in making a determination as to whether any "significant" impacts to the environment not previously analyzed under the Service's Programmatic Environmental Impact Statement for the Eagle Rule Revision, December 2016 (PEIS; USFWS 2016a) could result from the analyzed actions, which would require preparation of an Environmental Impact Statement. This EA evaluates the effects of the Service's proposed action to issue an eagle incidental take permit to the Applicant, as well as alternatives to this action.

The Eagle Act authorizes the Service to issue eagle take permits only when the take is compatible with the preservation of each eagle species (known as the Eagle Act's "preservation standard"), which is defined in regulations as "consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units and the persistence of local populations throughout the geographic range of each species" (50 CFR § 22.6).

The Applicant has applied for a short-term (two year) incidental eagle take permit for take by disturbance and loss of breeding productivity of a golden eagle breeding pair nesting in the vicinity of geotechnical survey locations during the 2022 and 2023 eagle breeding seasons.

This EA evaluates whether issuance of the Permit will have significant impacts on the potentially affected environment, beyond those previously analyzed in the PEIS. Determining if effects are significant under NEPA is addressed by regulation 40 CFR § 1501.3(b), and requires analysis of the degree of effects of the action, including short- and long-term considerations and beneficial and adverse effects, as well as considering the affected area and its resources.

This proposal conforms with, and carries out, the management approach analyzed in, and adopted subsequent to, the Service's PEIS. Accordingly, this EA tiers from the PEIS. Project-specific information not considered in the PEIS will be considered in this EA as described below.

Purpose and Need

The Service's purpose in considering the proposed action is to fulfill our authority under the Eagle Act (16 U.S.C. §§ 668–668e) and its regulations (50 CFR § 22). Applicants whose otherwise lawful activities may result in take of eagles can apply for incidental eagle take permits so that their projects may proceed without potential violations of the Eagle Act. The Service may issue eagle take permits for eagle take that is associated with, but not the purpose of, an activity. Such permits can be issued by the Service when the take that is authorized is compatible with the Eagle Act preservation standard; it is necessary to protect an interest in a particular locality; and it is associated with, but not the purpose of, the activity; and it cannot be practicably avoided (50 CFR § 22 and 81 Federal Register [FR] 91494).

The need for this federal action is a decision on an incidental eagle take permit application submitted by Del Puerto Water District that is in compliance with all applicable regulatory requirements set forth under the Eagle Act in 50 CFR § 22.

Authorities

Service authorities are codified under multiple statutes that address management and conservation of natural resources from many perspectives, including, but not limited to the effects of land, water, and energy development on fish, wildlife, plants, and their habitats. This analysis is based on the Eagle Act (16 U.S.C. §§ 668–668e) and its regulations (50 CFR § 22). The PEIS has a full list of authorities that apply to this action (USFWS 2016a: Section 1.6, pages 7-12), which are incorporated by reference here.

Background

The Applicant will be conducting geotechnical surveys to evaluate the site of the proposed Del Puerto Canyon Reservoir for the initial stages of the Project. The Project is located in Del Puerto Canyon in the foothills west of the City of Patterson, California and Interstate-5, in Stanislaus County, California (Figure 1). Project geotechnical evaluations include pedestrian surveys, trench surveys, boring surveys, test pit surveys, surface geophysical surveys, and instrumentation surveys throughout the Project site (Figure 2). These surveys may require development of temporary access roads. Geotechnical surveys will occur over 22 months, from approximately March 2022 through December 2023.

The Diablo Mountain Range, in which the Project is located, supports a robust population of nesting golden eagles. The presence of two active golden eagle nests within one mile of proposed geotechnical evaluation survey areas was confirmed during eagle nesting surveys conducted in 2021 (Figure 2). The breeding activity of the two eagle pairs nesting near geotechnical surveys could be disturbed by the survey activities. Further information on the golden eagle nests and territories, as well as the potential for disturbance, is provided in the "Affected Environment" and "Environmental Consequences" sections below.

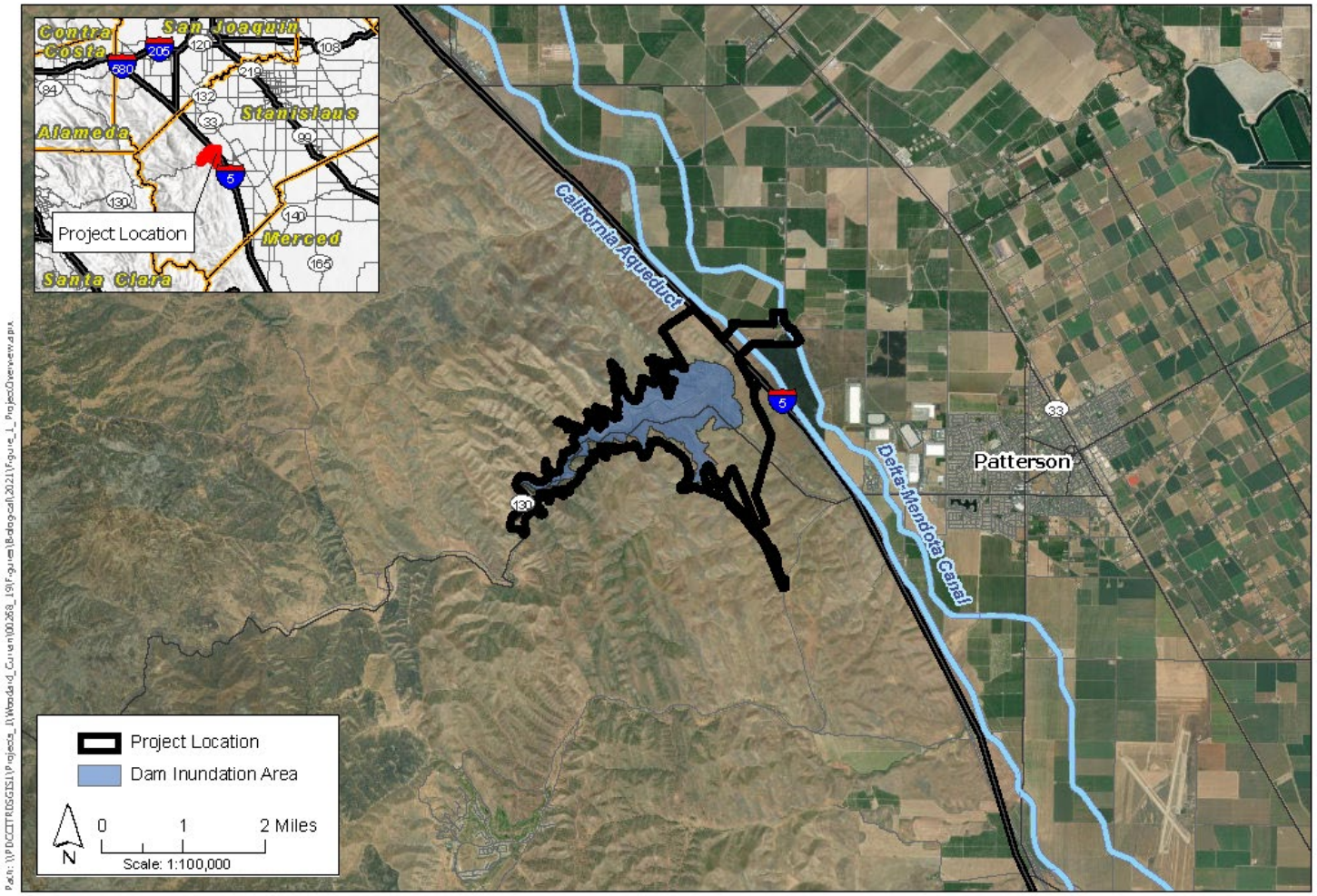

Figure 1
Project Location

Figure 1. Location and vicinity map of the Del Puerto Canyon Reservoir Project (Source: Del Puerto Water District/ ICF)

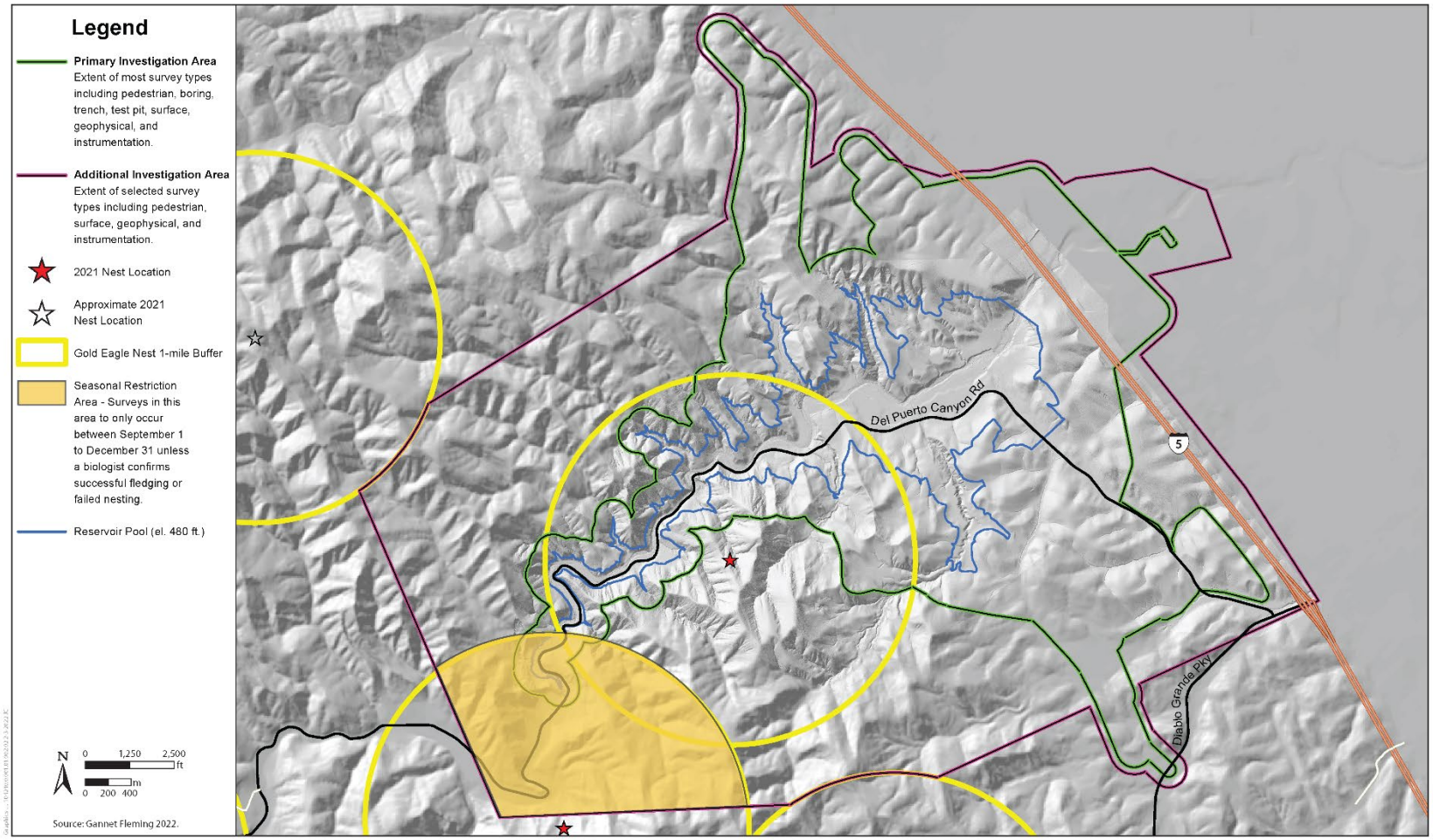

Figure 2. Del Puerto Canyon Reservoir Project geotechnical survey areas and golden eagle nests in the vicinity (Source: Del Puerto Water District/ ICF)

Scoping, Consultation and Coordination

This EA incorporates by reference the scoping performed for the PEIS (USFWS 2016a: Chapter 6, page 175). This EA will be made public on the Service's regional webpage.[1]

Coordination with Tribal Governments

Tribal participation is an integral part of the NEPA and the National Historic Preservation Act (NHPA) processes, as well as a key component of the Service's decision to issue an eagle take permit. Cultural and religious concerns regarding incidental take of eagles were analyzed in the PEIS, and tribal consultation already conducted for the PEIS is incorporated by reference into this EA. The PEIS identified tribal coordination as an important issue for subsequent analysis, given the cultural importance of eagles to the tribes. In accordance with Executive Order 13175, Consultation and Coordination with Tribal Governments (65 FR 67249), the NHPA Section 106 (36 CFR § 800), and the Service's Native American Policy, the Service consults with Native American tribal governments whenever our actions taken under the 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 American Indian Religious Freedom Act.

To notify Tribes regarding potential issuance of the requested Permit, the Service sent letters to 22 federally-recognized tribal governments located within 109 miles (the natal dispersal distance of golden eagles, thought to adequately define the local area population of the eagles) of the Project informing them of the received Permit application and preparation of this EA and offering the opportunity for formal consultation regarding potential issuance of the Permit. The Yocha Dehe Wintun Nation responded with a letter dated January 14, 2022, declining comment as they concluded the Project was not within the aboriginal territories of the tribe. The United Auburn Indian Community responded with an email dated January 18, 2022, indicating they would not be commenting as they determined the Project falls outside of the tribe's geographic area of traditional and cultural affiliations. The Tuolumne Me-Wuk Tribal Council responded with a letter dated January 12, 2022, requesting additional information on the Project and eagle nest locations. The Service responded with a letter and map providing the information requested. The Service received no response from any of the other Tribes contacted.

[1] https://www.fws.gov/cno/conservation/MigratoryBirds/EaglePermits.html

Proposed Action and Alternatives

Proposed Action

We propose to issue a two-year incidental eagle take permit, with associated conditions, to Del Puerto Water District for disturbance to, and loss of breeding productivity of, one golden eagle breeding pair nesting in the vicinity of geotechnical evaluation activities for the Del Puerto Canyon Reservoir Project during the 2022 and 2023 eagle breeding seasons ("Proposed Action").

Disturbance to breeding eagles is assumed to prevent eagles from successfully nesting and raising young. To estimate this loss of breeding productivity, the Service uses an estimate of 0.59 young fledged per each golden eagle breeding pair occupying a nesting territory each year (USFWS 2016b). Therefore, for disturbance over two eagle breeding seasons to one golden eagle breeding pair occupying one nesting territory, 0.59 young fledged each year would be assumed to be lost from the golden eagle population.

The Proposed Action would require measures to avoid and minimize eagle take to the maximum extent practicable, monitoring of the golden eagle breeding pair authorized for take, and compensatory mitigation to offset estimated take of golden eagles.

***Avoidance and Minimization Measures*:** The Applicant would implement the following avoidance and minimization measures: to the maximum extent practicable, conducting all geotechnical survey work or temporary access road development within one mile of eagle nests outside of the eagle breeding season (1 January through 31 August); conducting geotechnical survey work only during daylight hours; avoiding conducting geotechnical survey activities during severe weather such as heavy rain, severe thunderstorms, high winds, and/or extreme temperatures (high or low); accessing work areas from existing roads to the maximum extent practicable; and training work crews about nesting eagles and eagle protection measures.

Compensatory Mitigation: The Applicant would fully offset loss of productivity of one golden eagle pair over two eagle breeding seasons (0.59 young fledged each year) with compensatory mitigation at a 1.2 to 1 ratio, as required in the Eagle Act regulations (81 FR 91494).

Surveying and Monitoring: During the 2022 and 2023 eagle breeding seasons, the Applicant would be required to monitor the golden eagle nest to determine nesting status and nest fate each year.

Criteria for issuance of an eagle take permit are codified in 50 CFR § 22.80(f). Del Puerto Water District's application for an incidental eagle take permit meets all the regulatory issuance criteria and required determinations (50 CFR § 13.21 and 50 CFR § 22.80) for eagle take permits.

Alternative 1: No Action

Under the No-Action Alternative, the Service would take no further action on Del Puerto Water District's eagle take permit application. However, per regulations (50 CFR § 13.21), the Service must take action on the Permit application, determining whether to deny or issue the Permit. We consider this alternative because Service policy requires evaluation of a No-Action Alternative and it provides a clear comparison of any potential effects to the human environment from the Proposed Action.

The No-Action Alternative in this context analyzes predictable outcomes of the Service not issuing the requested Permit. Under the No-Action Alternative, the geotechnical evaluations for the Project would likely be conducted without an eagle take permit being issued. Thus, for purposes of analyzing the No-Action Alternative, we assume that the Applicant will implement all measures required by other agencies and jurisdictions to conduct the activity at this site, but the conservation measures proposed under this requested Permit would not be required. The Project proponent may choose to implement some, none, or all of those conservation measures. Under this alternative, we assume that the Applicant will take some reasonable steps to avoid taking eagles, but the Project proponent will not be protected from enforcement for violating the Eagle Act should take of an eagle occur, and any eagle take that occurs would not be offset by compensatory mitigation.

Other Alternatives Considered but Not Evaluated in this Environmental Assessment

The Service considered a third alternative, but concluded that this alternative did not meet the purpose and need underlying the action because it was not consistent with the Eagle Act and its regulations or did not adequately address the risk of take at the Project. Therefore, the Service did not assess the potential environmental impacts of this alternative. Below is a summary of the third alternative considered but eliminated from further review.

Alternative 2: Deny Permit

Under this alternative, the Service would deny the Permit application because the Applicant falls under one of the disqualifying factors and circumstances denoted in 50 CFR § 13.21, the application fails to meet all regulatory permit issuance criteria and required determinations listed in 50 CFR § 22.80.

Our permit issuance regulations at 50 CFR § 13.21(b) set forth a variety of circumstances that disqualify an applicant from obtaining a permit. None of the disqualifying factors or circumstances denoted in 50 CFR § 13.21 apply to the Applicant. We next considered whether the Applicant meets all issuance criteria for the type of permit being issued. For eagle incidental take permits, those issuance criteria are found in 50 CFR § 22.80(f). The Applicant's application meets all the regulatory issuance criteria and required determinations (50 CFR § 22.80) for eagle take permits.

When an applicant for an eagle incidental take permit is not disqualified under 50 CFR 13.21 and meets all the issuance criteria of 50 CFR § 22.80, denial of the permit is not a reasonable option. Therefore, this alternative—denial of the Permit—was eliminated from further consideration.

Affected Environment

This section describes the current status of the environmental resources and values that may be affected by the Proposed Action and alternatives.

Golden Eagle

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 predominately nest in trees, utilizing nearby open areas for foraging on ground squirrels and jackrabbits. The Diablo Mountain Range, in which the Project is located, supports a robust population of nesting golden eagles.

Eagle surveys conducted in 2021in the vicinity of the Project indicate there are approximately six eagle territories near the Project site. In the 2021 surveys, biologists located an in-use nest in four of the territories and approximated the nesting location of the other two territories. The area in and around the Project site has a long history of eagle monitoring, and eagle territories in this area have been very frequently occupied, often with successful nesting, throughout the years (Wiens et al. 2015, Hunt et al. 2017, Wiens et al. 2018, and Dunk et al. 2019). Of the six eagle territories, two of the 2021 eagle nest locations lie within one mile of the proposed Project geotechnical evaluation areas (Figure 2).

Bald Eagles

Bald eagles (*Haliaeetus leucocephalus*) are known to occur in the region; however, no bald eagle nests were identified within 660 feet of the Project geotechnical evaluation areas. Therefore, bald eagles are not expected to be affected by Project geotechnical survey activities.

Migratory Birds

Effects to migratory birds of issuing eagle take permits have been analyzed in the PEIS, and those analyses are incorporated by reference here.

Species Listed under the Endangered Species Act

Section 7 of the ESA requires Federal agencies to consult to "insure that any action authorized, funded, or carried out" by them "is not likely to jeopardize the continued existence of any

endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat" (16 U.S.C. § 1536(a)(2)). The Service's decision regarding the requested Permit will not alter the physical footprint of the Project and therefore will not alter the Project impacts to federally threatened and endangered species in the Project area.

However, under the Proposed Action, required compensatory mitigation in the form of retrofitting electric power poles to offset authorized take of golden eagles under an eagle take permit has the potential to cause effects to ESA-listed species in the area where retrofitting is completed. The compensatory mitigation sites for retrofitting of power poles to offset any authorized eagle take under an eagle take permit have not yet been identified. Once the compensatory mitigation sites are selected, the Service will conduct an internal Section 7 Consultation and further analyze and address potential effects to ESA-listed species at the location of the power poles that would be retrofitted. The Service anticipates that adverse effects to listed species would be avoidable by timing retrofits to avoid sensitive seasons, and/or through the use of other species-specific avoidance measures. However, if the determination of the Section 7 Consultation was that adverse effects were likely to occur to listed species, the Service would prepare additional NEPA documentation to supplement this EA.

Cultural and Socio-economic Interests

Bald and golden eagles are important symbols of U.S. history and sacred to many Native American cultures. Some Native American cultures utilize eagles, eagle feathers, and other eagle parts for religious practices and cultural ceremonies. Outside of rituals and practices, wild eagles as live beings are deeply important to many tribes (Lawrence 1990, as cited by USFWS 2016a). Numerous tribes confirmed the importance of wild eagles during scoping and tribal consultation for the PEIS. The Proposed Action or considered alternatives would not impact cultural or socioeconomic interests beyond the impacts already discussed in the PEIS. Therefore, cultural and socioeconomic interests will not be further analyzed in the EA.

Climate Change

Climate change was considered in the PEIS and is incorporated by reference here.

Environmental Consequences

This section summarizes the effects on the environment of implementing the Proposed Action or alternatives to the action. The discussion of overall effects to the environment of the eagle incidental take permit program is provided in the PEIS and is incorporated by reference here. This section of this EA analyzes only the effects that were not analyzed in the PEIS that may result from the issuance of an eagle incidental take permit for this specific project.

Proposed Action

Golden Eagles

Effects

In determining the significance of effects of the Project on eagles, we confirmed that the Proposed Action does not deviate from the analysis provided in the PEIS and the Service's 2016 report, *Bald and Golden Eagles: Population demographics and estimation of sustainable take in the United States, 2016 update* (USFWS 2016b). We also assessed Project-specific effects to eagles that were not covered in the PEIS analyses. These effects may occur at the project scale, at the local-area eagle population scale, and at the regional EMU scale.

Two golden eagle nests in the vicinity of the Project site are located within one mile of proposed Project geotechnical evaluation areas, where the likelihood of disturbance from human activities is increased. Human activity and noise near an eagle nest may decrease foraging opportunities and efficiency, decrease the potential for territory occupancy, result in nest abandonment, or affect the likelihood of the eagles to successfully incubate or fledge young (Rosenfield et al. 2007, Scott 1985). The Applicant has determined geotechnical surveys can be conducted fully outside of the eagle breeding season within a mile of one of these two nests. Therefore, Project geotechnical evaluations would cause no effect to this nest. The second nest within one mile of proposed Project geotechnical evaluation surveys may be disturbed by surveys as potential survey locations may be less than 1,000 feet from the nest, will be mostly visible and audible to the nesting eagles, and the necessary surveys cannot be fully conducted outside of the eagle breeding season.

Some Project geotechnical surveys will require ground disturbance. This, along with any necessary development of temporary access roads, may also reduce available foraging habitat for eagles. However, these changes in the landscape will be minimal and temporary. Extensive foraging habitat in the vicinity will remain undisturbed. All survey sites and any temporary access roads developed will be re-contoured and restored and revegetated to pre-disturbance condition.

The larger Project may have impacts to golden eagles in the foreseeable future, as continued Project data collection, construction, and inundation of the reservoir in subsequent years may cause future disturbance to golden eagle pairs and loss of nesting and foraging habitat that could lead to future loss of eagle territories. However, Project geotechnical evaluation activities for which the Permit is requested are not expected to have long-term effects to eagles as the geotechnical evaluation activities will occur over only two years and will not permanently alter the landscape.

To estimate potential loss of breeding productivity during the two years of Project geotechnical evaluation activities, the Service uses an estimate of 0.59 young fledged per each golden eagle breeding pair occupying a nesting territory each year (USFWS 2016b). When a golden eagle breeding pair is disturbed, the Service assumes this 0.59 annual nesting-territory productivity is

lost. Therefore, for disturbance over two eagle breeding seasons to one golden eagle breeding pair occupying one nesting territory, 0.59 young fledged each year would be assumed to be lost from the golden eagle population.

The Proposed Action incorporates measures to minimize and avoid eagle take to the maximum degree practicable, as required by regulation. The Applicant would implement the following avoidance and minimization measures: to the maximum extent practicable, conducting all geotechnical survey work or temporary access road development within one mile of eagle nests outside of the eagle breeding season (1 January through 31 August); conducting geotechnical survey work only during daylight hours; avoiding conducting geotechnical survey activities during severe weather such as heavy rain, severe thunderstorms, high winds, and/or extreme temperatures (high or low); accessing work areas from existing roads to the maximum extent practicable; and training work crews about nesting eagles and eagle protection measures.

Along with implementing these minimization and avoidance measures, the Applicant would provide compensatory mitigation to offset the estimated take at a 1.2 to 1 ratio, as required in the Eagle Act regulations (81 FR 91494), by paying for retrofitting of electric power poles that are an electrocution risk to eagles. The 1.2 to 1 ratio for compensatory mitigation achieves a net benefit to golden eagle populations, ensuring that regional eagle populations are maintained consistent with the preservation standard of the Eagle Act despite indications of declines in golden eagle populations (USFWS 2016a).

Mitigation will be paid on an annual basis, with mitigation for the first year's loss of productivity paid shortly after permit issuance and subsequent years paid before each eagle breeding season. If mitigation is paid but the Service determines that eagles successfully breed that year and productivity is not lost, the unneeded mitigation paid to offset take that did not occur will be applied to future years of estimated take authorized to the Applicant under this or future permits.

The retrofitting of electric utility power poles can be used to offset authorized take of golden eagles, as electrocution from power poles is known to be a major cause of eagle mortality. Power poles can be retrofitted by verified methods (such as insulating or covering electrical components or modifying pole elements to increase the distance between electrical components) to reduce the risk of electrocution to eagles, with the maintenance and efficacy of retrofits confirmed through post-installation inspections and monitoring. The effects of retrofitting power poles has been quantified "per eagle", allowing use of a Resource Equivalency Analysis (REA) to calculate the number of power pole retrofits needed to offset the authorized take of golden eagles (USFWS 2013).

The Service ran the REA to determine the number of power poles that would need to be retrofit to offset the disturbance take and loss of productivity to the golden eagle breeding pair. Incorporating the 1.2 to 1 compensatory mitigation ratio required under the Eagle Act regulations, the Applicant would need to retrofit 10-24 power poles to offset the take of 0.71 golden eagles (a 1.2 to 1 ratio of the estimated take of 0.59 golden eagles) each year at the Project. The final number of poles retrofitted will depend on several factors, including the type and expected longevity of each retrofit once the actual poles have been identified. To complete the required compensatory mitigation, the Applicant would either work directly with a utility

company to complete the required power pole retrofits, with Service approval of the developed plan, or would work with an in-lieu fee program to purchase credits to fulfill the required retrofits to be completed.

Along with the benefit to eagles of reducing mortalities by electrocution, retrofitting of power poles to prevent bird electrocutions also increases public safety by reducing the risk of wildfires. Bird electrocution events may ignite fires in the vegetation surrounding and below the site of electrocution, so decreasing electrocution risk also reduces the risk of fire.

Eagle Act regulations require compensatory mitigation to be sited in the same EMU in which the take occurs (50 CFR § 22.80(c)(1)(iii)(B)). The Project is located in the Pacific Flyway EMU for golden eagles. The Applicant or the in-lieu fee program manager would coordinate with electric utility companies within the Pacific Flyway to determine locations of power poles that are appropriate for retrofitting to prevent eagle electrocutions. The retrofits conducted as compensatory mitigation for this Permit would not be duplicative of the utility company's other obligations to retrofit power poles, including addressing their own responsibilities to rectify eagle take caused by electrocutions and line collisions from their infrastructure.

Under the Proposed Action, the Applicant would provide compensatory mitigation to fully offset the loss of breeding productivity of one golden eagle pair over two eagle breeding seasons at a 1.2 to 1 ratio. In addition, the 1.2 to 1 ratio also provides an additional net benefit to golden eagle populations. As the estimated take of golden eagles by Project geotechnical evaluation activities would be fully offset by compensatory mitigation provided by the Applicant, project scale effects of issuance of the requested incidental eagle take Permit on golden eagle populations would not be significant and are therefore compatible with the preservation of golden eagles.

The Service also assessed situations where the golden eagle take proposed under the Proposed Action combined with take from other present or foreseeable future actions and sources may be approaching levels that are biologically problematic. Along with effects to eagles at the Project scale described in the preceding paragraphs, to ensure that eagle populations at the local scale are not depleted by combined take in the local area, the Service analyzed the amount of annual eagle take that can be authorized while still maintaining local area populations of eagles (USFWS 2016a). The local-area population (LAP) scale is defined for eagles as the median natal dispersal distance for the given species, which for golden eagles is a 109-mile radius (USFWS 2016a). The Service's analysis found that to maintain local area eagle populations, all annual authorized take within a LAP must not exceed five percent of the LAP unless the Service can demonstrate why allowing take to exceed that limit is still compatible with the preservation of eagles. The Service must also assess any available data to determine if there is any indication that unauthorized take (take that has not been permitted by the Service) in the LAP may exceed ten percent, as this is roughly the average background level of unpermitted take in local area populations of golden eagles (USFWS 2016a). The eagle incidental take permit regulations require the Service to conduct an individual LAP analysis for each permit application as part of our application review (50 CFR § 22.80(e)). We, therefore, considered effects to the eagle LAP surrounding the Project to evaluate whether the take to be authorized under this Permit, together with other sources of permitted take and unpermitted eagle mortality, may be incompatible with

the persistence of this LAP. We incorporated data provided by the Applicant, our data on other eagle take authorized and permitted by the Service, and other reliably documented unauthorized eagle mortalities to estimate impacts to the LAP. We conducted our LAP effects analysis as described in the Service's *Eagle Conservation Plan Guidance* (USFWS 2013).

Results from our LAP effects analysis for the Proposed Action are summarized in Appendix A. The LAP is estimated to be 231 golden eagles. The five percent benchmark for sustainable authorized take of the LAP is 12 golden eagles per year. Current authorized take in the LAP, which includes permitted take at three other projects and the take proposed for authorization under this Permit, is 3.4 golden eagles or 1.48 percent of the LAP per year. This is well below the five percent sustainable take benchmark determined by the Service to maintain the local area population of golden eagles. The Service also does not have any indication that unauthorized take may exceed ten percent of the LAP. A summary of available data of unauthorized take is provided in Appendix A and suggests that unauthorized take of eagles in the LAP may be around 9.13 percent of the LAP per year. Therefore, effects of take at the local scale would not be significant and would therefore be compatible with the preservation of golden eagles.

Among other sources of unauthorized take, the Service is aware of several wind facilities in the vicinity of the LAP that are operational and likely to take eagles but are not yet permitted for eagle take. Past take of eagles at these facilities is known to the Service and is included in the information analyzed as unauthorized eagle take. While additional future wind energy development and other activities may further increase eagle take in the LAP during the lifespan of this Permit, the Service cannot reasonably predict the resulting impacts to eagles of such projects when important aspects, such as their size, location, configuration, and lifespan, are currently unknown. There is no reasonable basis to consider such speculative impacts in this EA.

Finally, take of eagles also has the potential to affect the larger eagle population. Therefore, the Service defined regional EMUs and analyzed the effects of permitting take of golden eagles in combination with ongoing unauthorized sources of human-caused eagle mortality and other present or foreseeable future actions affecting golden eagle populations (USFWS 2016a). As part of the analysis, the Service determined sustainable limits to permitted take within each EMU. The take limit for all golden eagle EMUs was set to zero as golden eagle populations throughout the United States may be declining (USFWS 2016a). Therefore, any authorized take of golden eagles must be offset with compensatory mitigation at a mitigation ratio of 1.2 to 1 (81 FR 91494). The take that would be authorized under the Proposed Action would be offset by the compensatory mitigation that will be provided by the Applicant, as described above, so will not significantly impact the EMU eagle population. The avoidance and minimization measures that would be required under the Permit, along with monitoring, are designed to further ensure that the Permit is compatible with the preservation of the golden eagle at the regional EMU population scale.

As the estimated take of golden eagles by this Project, and the potential for the take to compound with other sources of eagle take and affect larger eagle populations, is either below Service-determined sustainable benchmarks or will be addressed by mitigation measures provided by the Applicant such as fully-offsetting compensatory mitigation, the Proposed Action of issuance of

the requested incidental eagle take Permit would cause no significant adverse effects on golden eagle populations and is compatible with the preservation of golden eagles.

Monitoring

Under the Proposed Action, the Applicant would be required to monitor the golden eagle nest during the 2022 and 2023 eagle breeding seasons to determine nesting status and success each year.

Bald Eagles

Although take of bald eagles is not expected to occur from Project geotechnical evaluation activities and take of bald eagles would not be authorized under the Proposed Action, bald eagles in the region may benefit from avoidance and minimization measures established to reduce the risk to golden eagles, as well as from compensatory mitigation actions provided to offset the take of golden eagles. No significant adverse effects are foreseen to bald eagles.

Migratory Birds

Issuance of the Permit to the Project may provide benefits to migratory birds. Power pole retrofits done as compensatory mitigation for the eagle take Permit may minimize electrocution risk for raptors and other migratory birds, just as with eagles.

Impacts to migratory birds from the issuance of incidental eagle take permits were fully analyzed in the PEIS (USFWS 2016a); no further adverse effects to migratory birds are anticipated from issuance of the eagle take Permit to the Project.

Species Listed under the Endangered Species Act

Section 7 of the ESA requires Federal agencies to consult to "insure that any action authorized, funded, or carried out" by them "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat" (16 U.S.C. § 1536(a)(2)). The Service's decision regarding the requested Permit will not alter the physical footprint of the Project and therefore will not alter the Project impacts to federally threatened and endangered species in the Project area.

However, under the Proposed Action, required compensatory mitigation in the form of retrofitting electric power poles to offset authorized take of golden eagles under an eagle take permit has the potential to cause effects to ESA-listed species in the area where retrofitting is completed. The compensatory mitigation sites for retrofitting of power poles to offset any authorized eagle take under an eagle take permit have not yet been identified. Once the compensatory mitigation sites are selected, the Service will conduct an internal Section 7 Consultation and further analyze and address potential effects to ESA-listed species at the location of the power poles that would be retrofitted. The Service anticipates that adverse effects

to listed species would be avoidable by timing retrofits to avoid sensitive seasons, and/or through the use of other species-specific avoidance measures. However, if the determination of the Section 7 Consultation was that adverse effects were likely to occur to listed species, the Service would prepare additional NEPA documentation to supplement this EA.

Alternative 1: No Action

Golden Eagles

If, under the No-Action Alternative, the Service took no action on the Applicant's Permit application, should take of eagles occur, the Applicant would be in violation of the Eagle Act. Under this No-Action Alternative, although all eagle conservation measures required by other agencies and jurisdictions should be implemented the Project geotechnical activities, additional measures required under the Permit would not be implemented to avoid or minimize risk to eagles of the Project geotechnical evaluation activities. Therefore, the risk to eagles is expected to be higher under this alternative as compared to the Proposed Action. Furthermore, none of the impacts to golden eagles described above under the Proposed Action would be offset by compensatory mitigation if no action was taken on the application and an eagle take permit was not issued. Under this No-Action Alternative, impacts of the Project geotechnical evaluation activities on the eagle population are anticipated to be unmitigated loss of productivity from one golden eagle pair (0.59 young fledged) over two eagle breeding seasons equating to 1.18 young fledged assumed to be lost from the golden eagle population.

This alternative does not meet the purpose and need for the action because, by regulation (50 CFR § 13.21), when in receipt of a completed application, the Service must either issue or deny a permit to the applicant. The No-Action Alternative also does not meet the purpose of and need for the action because it would result in the adverse, unmitigated effects to golden eagles described above, effects that are not compatible with the preservation of golden eagles.

Bald Eagles

The Applicant did not apply for take authorization for bald eagles, nor is take of bald eagles expected to occur from Project geotechnical evaluation activities. However, the No-Action Alternative would mean benefits that bald eagles might also incur from avoidance and minimization measures established to reduce the risk to golden eagles and compensatory mitigation actions provided to offset the take of golden eagles, would not occur.

Migratory Birds

Any incidental benefits to migratory birds from avoidance, minimization, and mitigations required under the Permit would not be realized under the No-Action Alternative.

Species Listed under the Endangered Species Act

As the Service would be taking no action under this alternative, and therefore there would be no requirement to provide compensatory mitigation to offset eagle take, there is no potential for effects to ESA-listed species from retrofitting of power poles. Therefore, there would be no effects to ESA-listed species under this No-Action alternative.

Comparison of Alternatives

The following table compares the effects of the Proposed Action and alternatives (Table 1).

Table 1. Comparison of the Proposed Action and other alternatives

	Proposed Action: Issue permit for disturbance take of one golden eagle breeding pair over two breeding seasons	**Alternative 1: No Action**
Eagle Take Levels	Disturbance take and loss of productivity of one golden eagle breeding pair over two breeding seasons	Disturbance take and loss of productivity of one golden eagle breeding pair over two breeding seasons
Avoidance and Minimization	The Applicant will implement measures required under the Permit	There would be no requirement to implement Service suggested measures
Compensatory Mitigation	Retrofit power poles to offset the loss of 0.59 golden eagles each year at a 1.2:1 ratio	None
Unmitigated Eagle Take/Effects	None	Loss of productivity from one golden eagle breeding pair (0.59 young fledged) over two breeding seasons, equating to 1.18 young fledged estimated lost from the eagle population
Data Collection /Monitoring	Monitoring of the golden eagle nest to determine nesting status and success during the 2021 and 2022 eagle breeding seasons	There would be no requirement to implement Service suggested monitoring

	Proposed Action: Issue permit for disturbance take of one golden eagle breeding pair over two breeding seasons	Alternative 1: No Action
Company Liability for Eagle Take	No (if in compliance with Permit)	Yes
Meets Eagle Act Statutory and Regulatory Requirements	Yes	No

List of Preparers

Tracy Borneman, Ecologist, US Fish and Wildlife Service, Migratory Birds Program

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16 United States Code (U.S.C.) § 1536. Title 16 – Conservation; Chapter 35 – Endangered Species; Section (§) 1536 – Interagency Cooperation. Available online: http://uscode.house.gov

36 Code of Federal Regulations (CFR) § 800. Title 36 – Parks, Forests, and Public Property; Chapter VIII – Advisory Council on Historic Preservation; Part 800 – Protection of Historic Properties. Available online: https://www.ecfr.gov

40 Code of Federal Regulations (CFR) § 1501.3. Title 40 - Protection of Environment; Chapter V - Council on Environmental Quality; Subchapter A – National Environmental Policy Act Emplementing Regulations; Part 1501 – NEPA and Agency Planning; Section (§) 1501.3 – Determine the appropriate level of NEPA review. Available online: https://www.ecfr.gov

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50 Code of Federal Regulations (CFR) § 13.21. Title 50 - Wildlife and Fisheries; Chapter I - United States Fish and Wildlife Service, Department of the Interior; Subchapter B - Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants; Part 13 - General Permit Procedures; Section (§) 13.21 – Issuance of permits. Available online: https://www.ecfr.gov

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Appendix A. Results of the golden eagle local area population (LAP) analysis for the Del Puerto Canyon Reservoir Project Geotechnical Evaluation

Focal Project: Del Puerto Canyon Reservoir Project Geotechnical Evaluation

Predicted eagle take (annual)	**0.59**

Local Area Population (LAP) Estimates by Local Area Density Unit (LADU):

Focal Project_Density Unit	Estimated Number of Eagles
DelPuertoResGeotech_COASTAL_CALIFORNIA	218.66
DelPuertoResGeotech_NORTHERN_PACIFIC_RAINFOREST	0.33
DelPuertoResGeotech_SIERRA_NEVADA	11.08
Del Puerto Reservoir Geotech LAP (total)	**230.06**

1% LAP Benchmark	**2.3**
5% LAP Benchmark	**11.5**

Permitted Projects with Overlapping LAPs:

Project ID	Estimated Annual Take	Percent Overlap With Focal Project	Overlapping Area (SqMi)	Overlapping Take
Project 88409D	0.59	95.28%	21911.55	0.56
Project 23857D	1.18	39.46%	11428.62	0.47
Project 02735B	2.4	74.01%	21251.01	1.78
All Projects (total)	**4.17**			**2.81**

Known Unpermitted Take Summary	
Cause of take	**# eagles from 2012-2021**
Electrocution;Starvation	0
Unknown	59
Electrocution;Poisoned (pesticide)	2
Other	4
Trauma	6
Collision with wind turbine;Infection	1
Poisoned (lead);Infection	0
Electrocution	31
Collision with wind turbine	72
Collision with wind turbine;Poisoned (pesticide)	2

Other;Trauma	1
Collision with wire	2
Collision with vehicle;Poisoned (pesticide)	3
Poisoned (lead)	10
Infection;Trauma	1
Electrocution;Trauma	0
Poisoned (pesticide);Starvation	1
Poisoned (pesticide);Infection;Starvation	1
Collision with vehicle	7
Collision	1
Trauma;Starvation	1
Collision/electrocution	4
Poisoned (pesticide)	1
10-year total	**210**
10-year annual average	**21**

LAP Take Results	**Number of Eagles (Annual)**	**Percent of LAP**
Permitted Take		
Total Overlapping Take	2.81	1.22%
Focal Project Predicted Take	0.59	0.26%
Total Permitted Take (Focal Project + Total Overlapping Take)	3.4	1.48%
Unpermitted Take	21	9.13%