Finding of No Significant Impact

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

California

February 2023

U.S. Fish and Wildlife Service
U.S. Department of Interior
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Introduction

The U.S. Fish and Wildlife Service (Service) received an application from Sites Project Authority (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 Sites Reservoir Project (Project). The Applicant will be conducting geotechnical surveys to evaluate the site of the proposed Sites Reservoir for the initial stages of the Project. The Project is located in Antelope Valley west of the town of Maxwell, California, and Interstate-5, in Colusa and Glenn Counties, California. The geotechnical surveys will occur over 48 months, from approximately January 2023 through December 2026. The Applicant requested a short-term (four year) incidental eagle take permit (permit) for disturbance and loss of breeding productivity take of bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) breeding pairs 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 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 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 Sites Project Authority 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 four-year incidental eagle take permit, with associated conditions, to Sites Project Authority for disturbance and loss of breeding productivity of bald and golden eagles nesting in the vicinity of geotechnical evaluation activities for the Sites Reservoir Project during the 2023-2026 eagle breeding seasons ("Proposed Action"). During this four-year duration, the Permit authorization would include up to three incidents of disturbance and loss of breeding productivity take for bald eagle breeding pairs and up to six incidents of disturbance and loss of breeding productivity take for golden eagle breeding pairs. The permit would require measures to avoid and minimize eagle take to the maximum extent practicable, surveying for and monitoring all eagle pairs and nests that may be disturbed by Project geotechnical activities, and compensatory mitigation to offset estimated take of golden eagles.

Alternative 1: No Action

Under the No-Action Alternative, the Service would take no further action on Sites Project Authority'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 41 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. One Tribe responded with a letter dated January 18, 2023, requesting updates on the

[1] https://www.fws.gov/library/collections/pacific-southwest-region-nepa-documents-eagle-permits

project. The Service responded with an email on January 30, 2023, acknowledging that request. 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 four-year incidental eagle take permit to Sites Project Authority for up to three incidents of disturbance and loss of breeding productivity take for bald eagle breeding pairs and up to six incidents of disturbance and loss of breeding productivity take for golden eagle breeding pairs, with the requirement to implement avoidance and minimization measures, conduct eagle monitoring, and provide compensatory mitigation to fully offset the estimated take of golden eagles.

Take of bald and 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 golden eagle 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 the local and EMU scales. Analyses of effects at these scales are provided in the EA.

Eagles are a resource in the affected area most likely to be affected by the Proposed Action of issuance of the requested eagle take permit. Bald eagle and golden eagle pairs 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 both species of eagles and will offset golden eagle take through compensatory mitigation. 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.

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 eagles at varying temporal scales and considered effects to both local and EMU eagle populations.

Short-Term Effects. Under the Proposed Action, issuance of an eagle take permit would authorize up to three incidents of disturbance and loss of breeding productivity take of bald eagle breeding pairs and up to six incidents of disturbance and loss of breeding productivity take of golden eagle breeding pairs. 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 of golden eagles with compensatory mitigation. Analyses provided in the EA indicate the authorized take, coupled with fully offsetting compensatory mitigation for golden eagle take, will have no significant effect on the local or regional eagle population of either species.

Long-Term Effects. Despite short-term disturbance to the bald eagle pairs and golden eagle pairs 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 four 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 bald eagle pairs and golden eagle pairs 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 golden 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 golden eagles, thereby benefiting the golden 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 bald eagle and golden 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 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 bald and golden eagles. However, up to three incidents of disturbance and loss of breeding productivity take for bald eagle breeding pairs and up to six incidents of disturbance and loss of breeding productivity take for golden eagle breeding pairs may occur. The Applicant will offset the golden eagle take through compensatory mitigation. This will ensure that the impacts of issuing an eagle take permit on the local and EMU golden eagle populations will not be significant.

3) Effects on public health or safety.

The Proposed Action would include mitigating golden 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
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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 Sites Reservoir Project Geotechnical Evaluation

Environmental Assessment

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

California

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U.S. Fish and Wildlife Service
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Contents

Abbreviations

Applicant	Sites Project Authority
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	Programmatic Environmental Impact Statement for the Eagle Rule Revision
Permit	Applicant requested incidental eagle take permit
Project	Sites 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 bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) associated with conducting geotechnical evaluation of the proposed site of the Sites Reservoir Project (Project). The applicant for the Permit, the Sites Project Authority (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 up to two breeding bald eagle pairs and up to three breeding golden eagle pairs during four breeding seasons from geotechnical evaluation activities for the Project scheduled between 2023 and 2026. 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 NEPA. This EA assists the Service in ensuring compliance with 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 (four-year) incidental eagle take permit for take by disturbance and loss of breeding productivity of bald and golden eagles nesting in the vicinity of geotechnical survey locations during the 2023-2026 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 Sites Project Authority 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 Sites Reservoir for the initial stages of the Project. The Project is located in Antelope Valley west of the town of Maxwell, California and Interstate-5, in Colusa and Glenn Counties, California (Figure 1). Project geotechnical evaluations include surface geologic (i.e., pedestrian mapping), surface geophysical (i.e., seismic refraction lines), and subsurface geotechnical investigations (i.e., boring, test pit, and trench surveys) throughout the Project site (Figure 1). Temporary access will be via existing roads and accessible overland routes; no creation of new roads or grading will be done for Project geotechnical evaluation activities. Geotechnical surveys will occur over 48 months, from approximately January 2023 through December 2026.

The Project area has historically been actively managed for cattle grazing, with ranch personnel routinely accessing the entire area. Geotechnical work crews accessing the Project area will use the public Maxwell Sites Road as their primary access road. Maxwell Sites Road, as a main thoroughfare in the region, has regular vehicle use. Daily traffic volumes on Maxwell Sites Road average approximately 1,050 vehicles per day, and the capacity is estimated at 15,500 vehicles per day in the section outside of Maxwell (Sites Project Authority and Bureau of Reclamation 2021). Vehicle traffic includes passenger vehicles and large trucks.

Eagle activity and nesting in the Project footprint area and surrounding vicinity have not been closely monitored or documented in the past. However, there is documentation of eagle occurrences in the area and some known historic nesting (CDFW 2021, Auer et al. 2021, Jensen pers. comm., DWR 2017, D'Errico pers. comm.). Consultants for the Applicant conducted surveys for eagles and their nests within four miles of the Project in 2022. This is the first comprehensive aerial eagle survey of the Antelope Valley area. The survey documented multiple pairs of nesting bald and golden eagles. Further information on eagle nests and territories in the Project vicinity is provided in the "Affected Environment" section below. The breeding activity of one bald eagle pair and two golden eagle pairs nesting near geotechnical survey locations and activities could be disturbed by the geotechnical survey activities. Further information on these pairs, as well as their potential for disturbance, is provided in the "Environmental Consequences" section below.

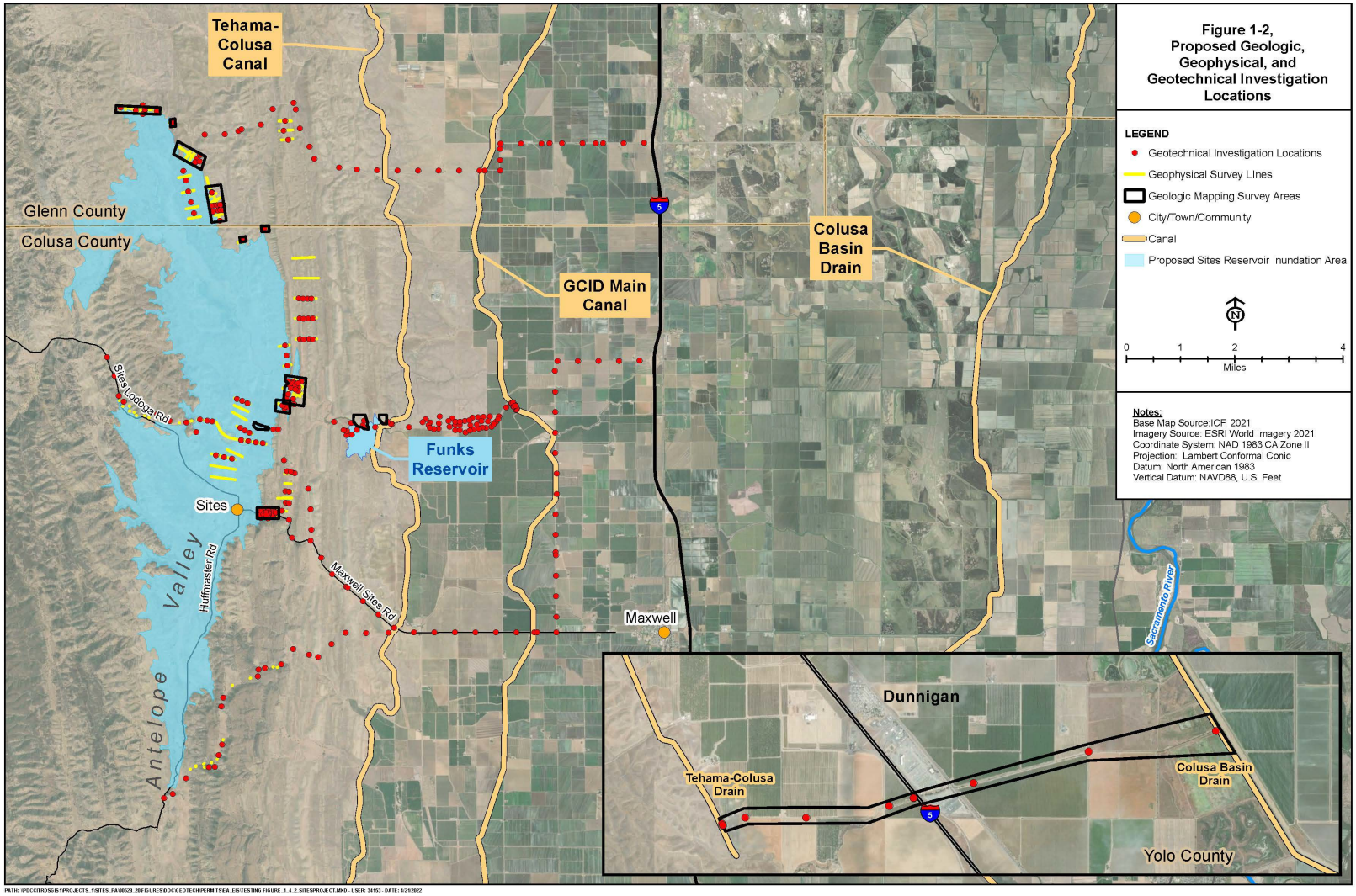


Figure 1. Location and vicinity map of the Sites Reservoir Project (Source: Sites Project Authority/ICF)

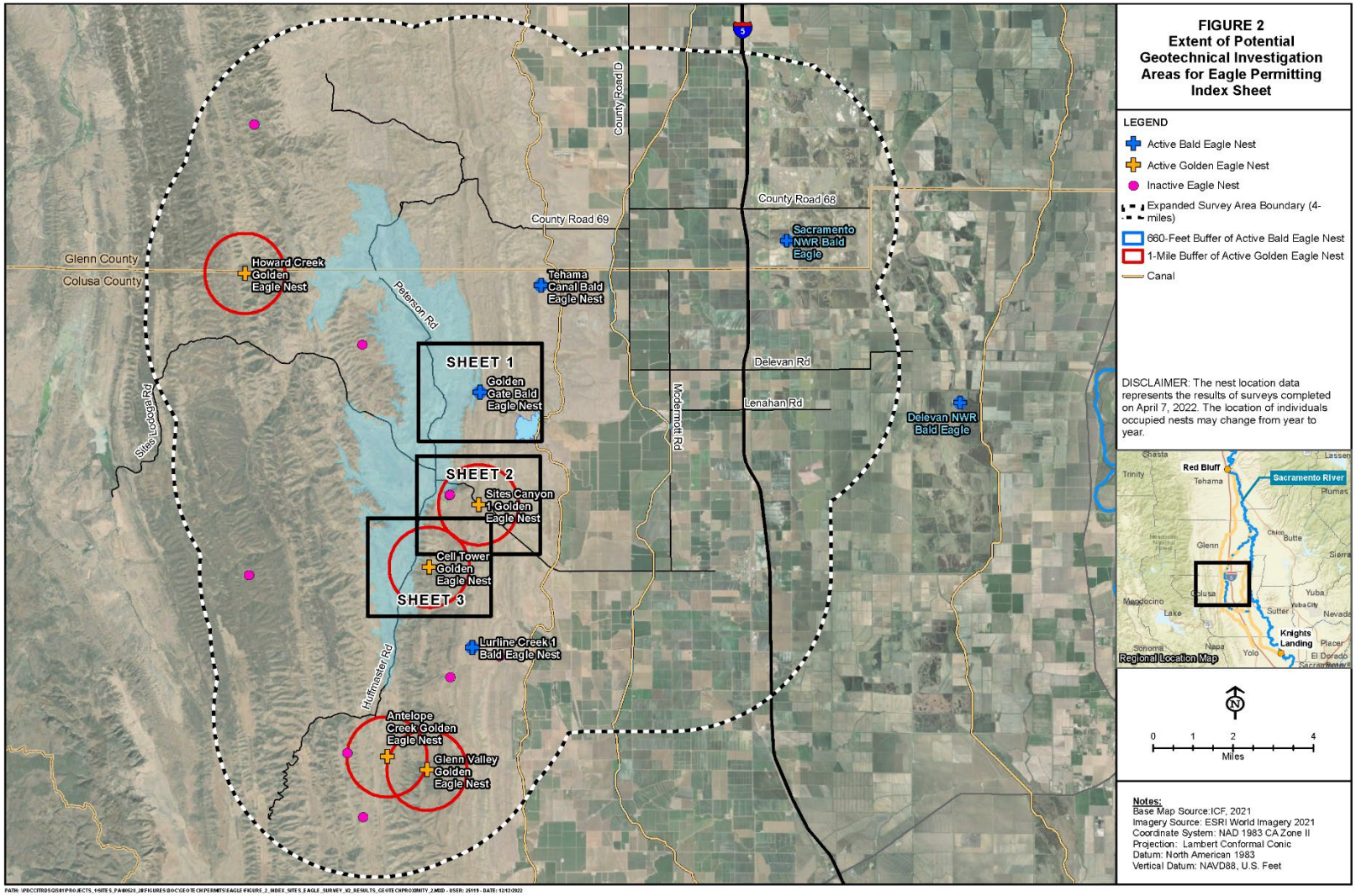
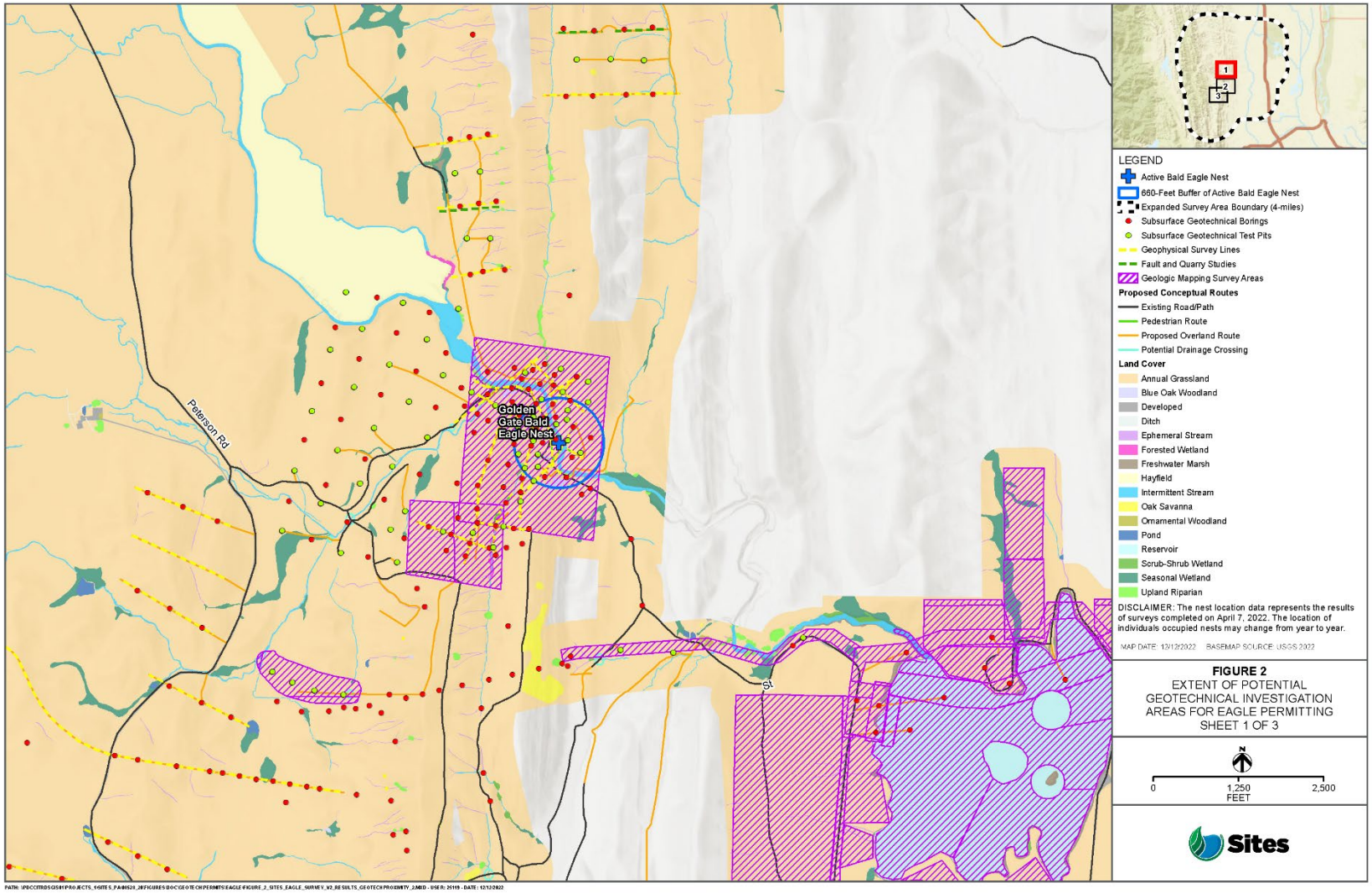


Figure 2. Sites Reservoir Project geotechnical survey areas and bald and golden eagle nests in the vicinity, with inset sheets (Source: Sites Project Authority/ICF)



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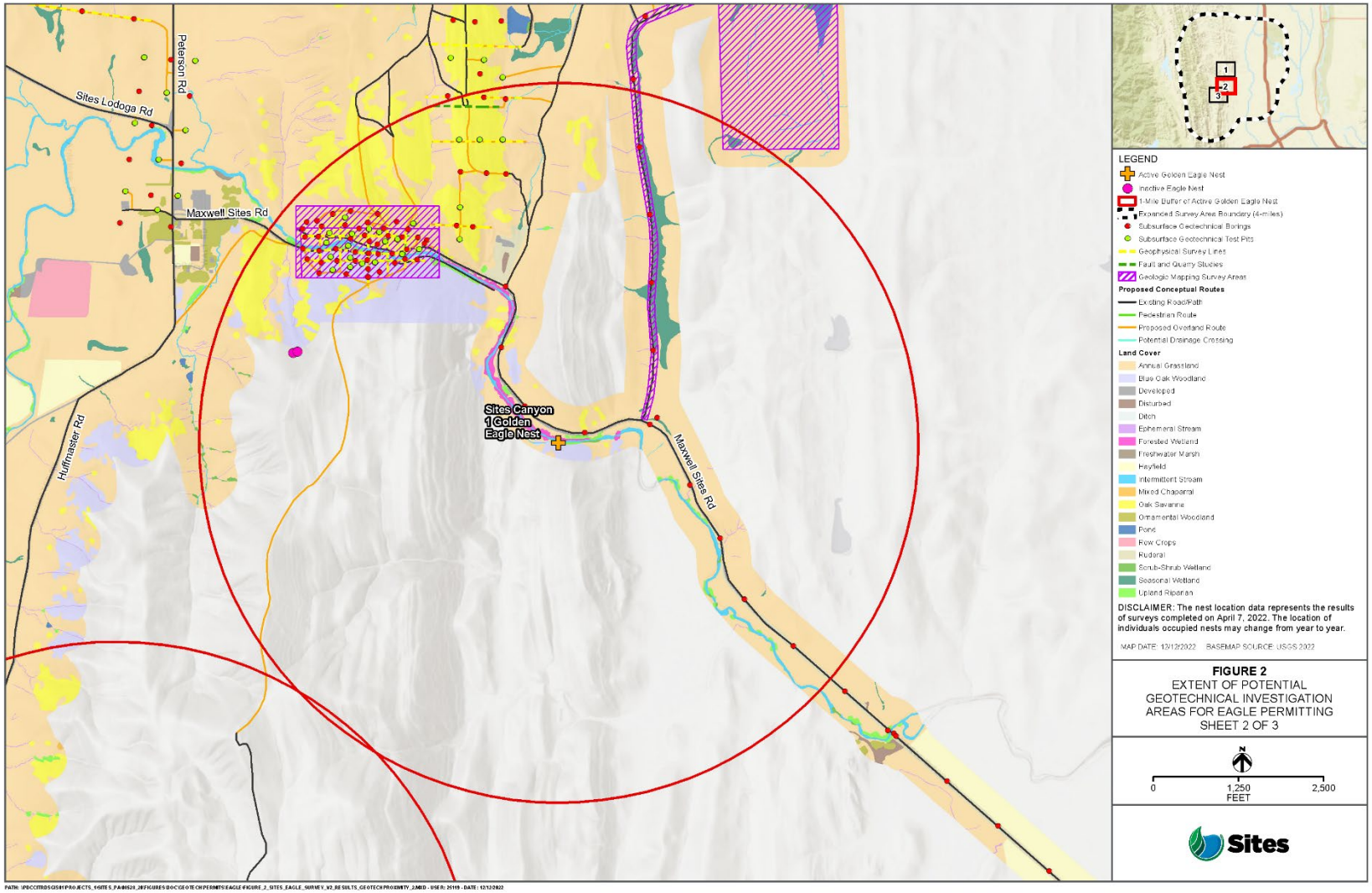

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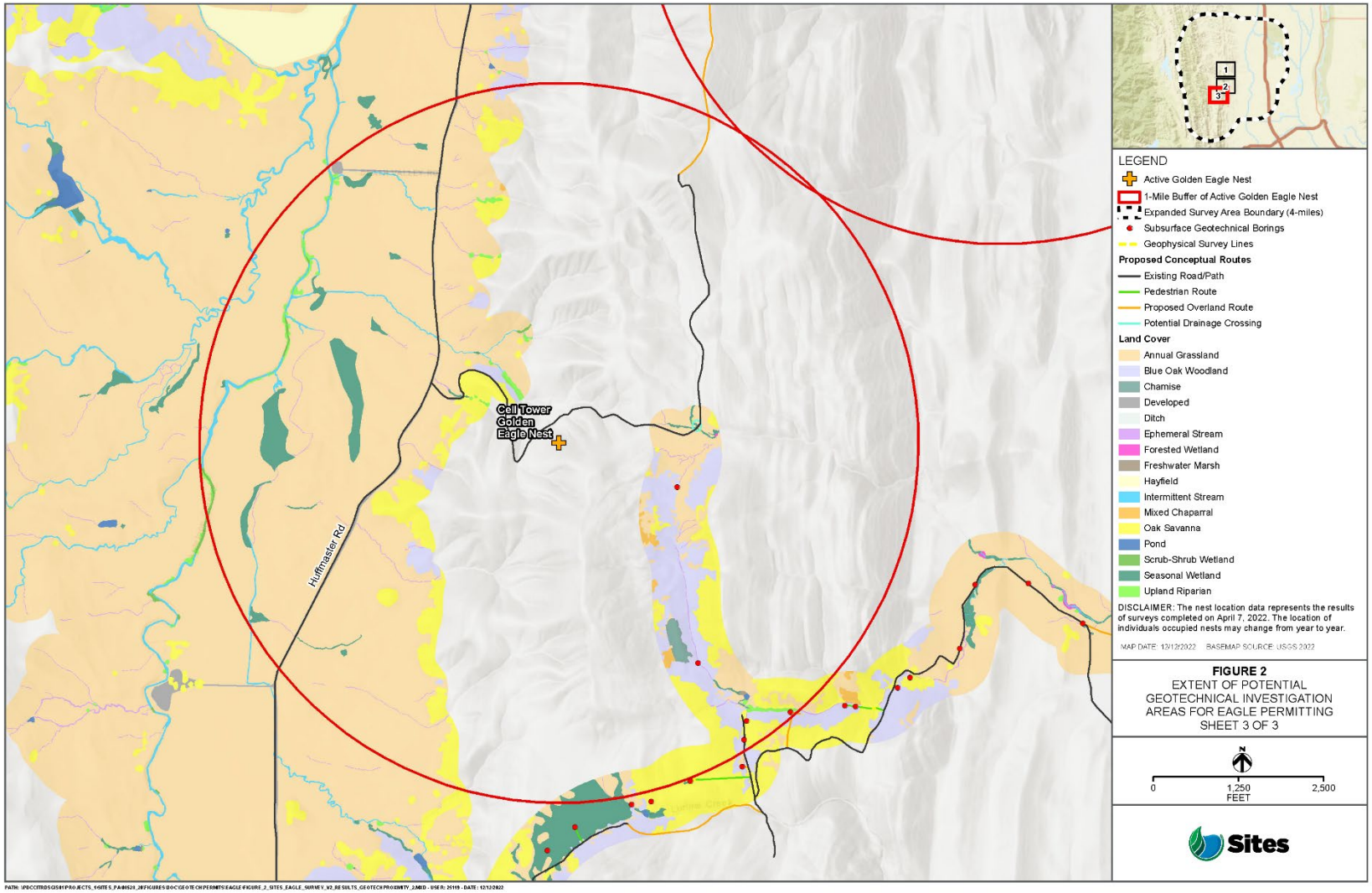

Figure 2 (cont.). Sheet 3

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 41 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. One Tribe responded with a letter dated January 18, 2023, requesting updates on the project. The Service responded with an email on January 30, 2023, acknowledging that request. The Service received no response from any of the other Tribes contacted.

Proposed Action and Alternatives

Proposed Action

We propose to issue a four-year incidental eagle take permit, with associated conditions, to Sites Project Authority for disturbance and loss of breeding productivity of bald and golden eagles nesting in the vicinity of geotechnical evaluation activities for the Sites Reservoir Project during the 2023-2026 eagle breeding seasons ("Proposed Action"). During this four-year duration, the

[1] https://www.fws.gov/library/collections/pacific-southwest-region-nepa-documents-eagle-permits

Permit authorization would include up to three incidents of disturbance and loss of breeding productivity take for bald eagle breeding pairs and up to six incidents of disturbance and loss of breeding productivity take for golden eagle breeding pairs.

Although historical nesting information of both bald and golden eagles in the Project area provided information to estimate the potential future disturbance of breeding eagles from Project activities, the disturbance take authorized under the Permit is not limited to the specific nest locations or eagle pairs used to derive the estimated take quantity. To allow for Project flexibility, the Applicant may utilize the take authorizations at any point during the Permit duration, and for nest locations within the vicinity of the Project that are not yet specifically identified. The effects of the authorized take to eagle populations are expected to be the same, regardless of the exact locations of nesting eagles.

Disturbance to breeding eagles is assumed to prevent eagles from successfully nesting and raising young. To estimate this loss of breeding productivity for eagles, the Service uses an estimate of 0.95 young fledged per each bald eagle breeding pair occupying a nesting territory each year, which equates to one incident of disturbance and loss of breeding productivity take of a bald eagle breeding pair, and 0.59 young fledged per each golden eagle breeding pair occupying a nesting territory each year, which equates to one incident of disturbance and loss of breeding productivity take of a golden eagle breeding pair (USFWS 2016b). Therefore, for potential of up to three incidents of disturbance and loss of breeding productivity take for bald eagle breeding pairs, a maximum total of 2.85 young fledged (0.95 young fledged * 3) may be lost from the bald eagle population. For potential of up to six incidents of disturbance and loss of breeding productivity take for golden eagle breeding pairs, a maximum total of 3.54 young fledged (0.59 young fledged * 6) may be lost from the golden eagle population.

The Proposed Action would require measures to avoid and minimize eagle take to the maximum extent practicable, surveying for and monitoring all eagle pairs and nests that may be disturbed by Project geotechnical activities, and compensatory mitigation to offset estimated take of golden eagles. These measures, mitigation, and monitoring are further described in the "Environmental Consequences" section below.

Criteria for issuance of an eagle take permit are codified in 50 CFR § 22.80(f). Sites Project Authority'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 Sites Project Authority'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 investigations 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 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 second alternative to the Proposed Action 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 second 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 Eagles

Golden eagle habitat in the Project vicinity consists mainly of open grasslands and oak savanna interspersed with oak and shrub woodlands. The golden eagles in this area predominately nest in trees, utilizing nearby open areas for foraging on ground squirrels and jackrabbits. Antelope Valley, in which the Project is located, supports a robust population of nesting golden eagles.

Eagle surveys conducted in 2022 in the vicinity of the Project indicate there are approximately 11 golden eagle territories within four miles of the Project site. In the 2022 surveys, biologists located nests in all of the golden eagle territories with a total of 14 golden eagle nests in the 11 territories. Only two of the nests had no evidence of use. Nest production and overall golden eagle activity in this area have not been closely monitored or documented in the past. However, the area was known to support golden eagle occurrences; recreational birders had recorded occurrences of golden eagles on the nearby wildlife refuges (CDFW 2021, Auer et al. 2021). Of the 14 golden eagle nests found in 2022, two of these, the "Sites Canyon 1" golden eagle nest and the "Cell Tower" golden eagle nest, are located within one mile of the proposed Project geotechnical evaluation areas (Figure 2, Sheets 2 and 3).

Bald Eagles

Bald eagle habitat in the Project vicinity consists of woodlands near open waters such as rivers, lakes, and reservoirs. The bald eagles in this area predominately nest in trees, utilizing nearby open waters for foraging on fish, waterfowl, small mammals, and carrion. The Antelope Valley, in which the Project is located, supports a robust population of nesting bald eagles.

Eagle surveys conducted in 2022 in the vicinity of the Project indicate there are approximately four bald eagle territories within four miles of the Project site. In the 2022 surveys, biologists located nests in all of the bald eagle territories with a total of five bald eagle territories. Only one of the nests had no evidence of use. Nest production and overall bald eagle activity in this area have not been closely monitored or documented in the past. However, the area was known to support bald eagle occurrences; recreational birders had recorded occurrences of bald eagles on the nearby wildlife refuges and landowners knew of nesting bald eagles (CDFW 2021, Auer et al. 2021, Jensen pers. comm.). Not far outside of the four-mile survey area, there is a known bald eagle nest on Delevan National Wildlife Refuge. Of the six bald eagle nests known in 2022, one of these, the "Golden Gate" bald eagle nest, is located within 660 feet of the proposed Project geotechnical evaluation areas (Figure 2, Sheet 1).

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 Endangered Species Act (ESA) requires Federal agencies to consult to "ensure 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.

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

Eagles

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 of both species, and at the regional Eagle Management Unit (EMU) scale of both species.

Golden Eagle Effects

Some Project geotechnical surveys will require ground disturbance. This may reduce available foraging habitat for golden eagles. However, these changes in the landscape will be minimal and temporary. All survey sites will be re-contoured and revegetated to restore the sites to pre-disturbance condition. Extensive foraging habitat in the vicinity will remain undisturbed.

The geotechnical evaluation elements of the Project, for which the Permit is requested, are not expected to have long-term effects to golden eagles as the geotechnical evaluation activities will occur over only four years and will not permanently alter the landscape. Potential future effects to eagles from construction, inundation, and operation of a reservoir (e.g., future disturbance to golden eagle pairs and loss of nesting and foraging habitat that could lead to future loss of golden eagle territories) are beyond the scope of this permit decision.

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 golden eagles to successfully incubate or fledge young (Rosenfield et al. 2007, Scott 1985). Both nest locations within one mile of proposed Project geotechnical evaluation surveys may be disturbed by survey activities, as potential survey locations may be less than 1,000 feet from one nest and 3,900 feet from the other nest and survey activities may be visible and audible to the nesting golden eagles. Surveys cannot be fully conducted outside of the eagle breeding season, however it is not expected that survey activities within one mile of the nests will occur every year. Additionally, one of these two nests is also within 130 feet of Maxwell Road, which will be used for survey equipment and personnel access. Presumably, however, the eagles utilizing this nest would already be habituated to the regular moderate use of Maxwell Road by both passenger vehicles and trucks currently using the road for non-Project related travel.

We anticipate up to six incidents of take, based on one of the above-mentioned breeding pairs being adversely affected during four breeding seasons, the other above-mentioned breeding pair

being adversely affected during one breeding season, and potentially an additional breeding pair being adversely affected during one breeding season. However, when considering the potential for effects to golden eagles from Project components, we took into account the possibility for golden eagle pairs to build nests in new locations that may be both closer or farther away from Project activities. Although historical nesting information of both bald and golden eagles in the Project area provided information to estimate the potential future disturbance of breeding eagles from Project activities, the disturbance take authorized under the Permit is not limited to the specific nest locations or eagle pairs used to derive the estimated take quantity. Disturbance take authorization would only be necessary when breeding golden eagles have an in-use nest (see 50 CFR § 22.6 for "in-use nest" definition) within one mile of Project activities, as nesting golden eagles within this distance have increased likelihood of disturbance. During the four-year Permit duration, the Permit authorization would include up to six incidents of disturbance and loss of breeding productivity take for golden eagle breeding pairs. To allow for Project flexibility, the Applicant may utilize the take authorizations at any point during the Permit duration, and for eagle breeding pairs and/or nest locations within the vicinity of the Project that are not yet specifically identified. The effects of the authorized take to eagle populations are expected to be the same, regardless of the exact locations of nesting eagles.

Disturbance to breeding eagles is assumed to prevent eagles from successfully nesting and raising young. To estimate this loss of breeding productivity for golden eagles, the Service uses an estimate of 0.59 young fledged per each golden eagle breeding pair occupying a nesting territory each year, which equates to one incident of disturbance and loss of breeding productivity take of a golden eagle breeding pair (USFWS 2016b). When a golden eagle breeding pair is disturbed, the Service assumes this 0.59 annual nesting-territory productivity is lost. Therefore, for potential of up to six incidents of disturbance and loss of breeding productivity take for golden eagle breeding pairs, a maximum total of 3.54 young fledged (0.59 young fledged * 6) may be lost from the golden eagle population.

The Applicant would provide compensatory mitigation to fully offset the estimated take. Compensatory mitigation would be provided at a 1.2 to 1 ratio, as required in the Eagle Act regulations (81 FR 91494). The 1.2 to 1 ratio for compensatory mitigation achieves a net benefit to golden eagle populations, ensuring that regional (i.e., EMU) eagle populations are maintained consistent with the preservation standard of the Eagle Act despite indications of declines in golden eagle populations (USFWS 2016a). Compensatory mitigation will be completed by paying for retrofitting of electric power poles that are an electrocution risk to eagles.

Mitigation may be paid in full upon permit issuance, or mitigation may be paid on an annual basis, with mitigation for the potential first year's loss of productivity (estimated loss of productivity of two golden eagle breeding pairs) paid shortly after permit issuance and subsequent years estimated take paid before each eagle breeding season. If it's determined that additional is needed in a given year, the Applicant will provide this mitigation within 60 days of discovering its need. If mitigation is paid but the Service determines that golden eagles successfully breed that year and productivity is not lost, the 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 have 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 retrofitted to offset each incident of golden eagle pair nest disturbance take and loss of productivity. 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) for each incident of take. 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 golden eagle Pacific Flyway EMU. 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.

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 golden 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 golden eagle take authorized and permitted by the Service, and other reliably documented unauthorized golden 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 188 golden eagles. The five percent benchmark for sustainable authorized take of the LAP is nine golden eagles per year. As no more than three golden eagle breeding pairs are expected to be disturbed in a single year by the Project geotechnical evaluation activities, the annual take estimate used for the LAP effects analysis was 1.77 golden eagles (0.59 young fledged * 3). Current authorized take in the LAP, which includes permitted take at three other projects and the take proposed for authorization under this Permit, is 3.71 golden eagles or 1.97 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 golden eagles in the LAP may be around 9.04 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 golden eagles but are not yet permitted for eagle take. Past take of golden eagles at these facilities is known to the Service and is included in the information analyzed as unauthorized golden eagle take. While additional future wind energy development and other activities may further increase golden eagle take in the LAP during the lifespan of this Permit, the Service cannot reasonably predict the resulting impacts to golden 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 golden eagles also has the potential to affect the larger golden 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 golden 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.

As the estimated take of golden eagles by the Project geotechnical evaluation activities, and the potential for the take to compound with other sources of golden eagle take and affect larger eagle populations, is either below Service-determined sustainable benchmarks or will be addressed by fully-offsetting compensatory mitigation provided by the Applicant, 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.

Bald Eagle Effects

Some Project geotechnical surveys will require ground disturbance. This may reduce available foraging habitat for bald eagles. However, these changes in the landscape will be minimal and temporary. All survey sites will be re-contoured and restored and revegetated to pre-disturbance condition. Extensive foraging habitat in the vicinity will remain undisturbed.

The geotechnical evaluation elements of the Project, for which the Permit is requested, are not expected to have long-term effects to bald eagles as the geotechnical evaluation activities will occur over four years and will not permanently alter the landscape. Potential future effects from construction, inundation, and operation of a reservoir (e.g., future disturbance to bald eagle pairs and loss of nesting and foraging habitat that could lead to future loss of bald eagle territories) are beyond the scope of this permit decision.

One bald eagle nest in the vicinity of the Project site is located within 660 feet 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 bald eagles to successfully incubate or fledge young (Rosenfield et al. 2007). The nest may be disturbed by survey activities, as potential survey locations may be less than 300 feet from the nest and would be visible and audible to the nesting bald eagles. Surveys cannot be fully conducted outside of the eagle breeding season, however it is not expected that survey activities within 660 feet of the nest will occur every year.

We anticipate up to three incidents of take, based on one breeding pair at the above-mentioned nest being adversely affected during two breeding seasons, and potentially an additional breeding pair being adversely affected during one breeding season. However, when considering the potential for effects to bald eagles from Project components, we took into account the possibility for bald eagle pairs to build nests in new locations that may be both closer to or farther away from Project activities. Although historical nesting information of both bald and golden eagles in the Project area provided information to estimate the potential future disturbance of breeding

eagles from Project activities, the disturbance take authorized under the Permit is not limited to the specific nest locations or eagle pairs used to derive the estimated take quantity. Disturbance take authorization would only be necessary when breeding bald eagles have an in-use nest (see 50 CFR § 22.6 for "in-use nest" definition) within 660 feet of Project activities, as nesting bald eagles within this distance have increased likelihood of disturbance. During the four-year Permit duration, the Permit authorization would include up to three incidents of disturbance and loss of breeding productivity take for bald eagle breeding pairs. To allow for Project flexibility, the Applicant may utilize the take authorizations at any point during the Permit duration, and for eagle breeding pairs and/or nest locations within the vicinity of the Project that are not yet specifically identified. The effects of the authorized take to eagle populations are expected to be the same, regardless of the exact locations of nesting eagles.

Disturbance to breeding eagles is assumed to prevent eagles from successfully nesting and raising young. To estimate this loss of breeding productivity for bald eagles, the Service uses an estimate of 0.95 young fledged per each bald eagle breeding pair occupying a nesting territory each year, which equates to one incident of disturbance and loss of breeding productivity take of a bald eagle breeding pair (USFWS 2016b). When a bald eagle breeding pair is disturbed, the Service assumes this 0.95 annual nesting-territory productivity is lost. Therefore, for potential of up to three incidents of disturbance and loss of breeding productivity take for bald eagle breeding pairs, a maximum total of 2.85 young fledged (0.95 young fledged * 3) may be lost from the bald eagle population.

The Service also assessed situations where the bald 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 bald eagles is an 86-mile radius (USFWS 2016a). The Service's analysis found that to maintain local area golden 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 bald eagle take authorized and permitted by the Service, and other reliably documented unauthorized bald 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 B. The LAP is estimated to be 606 bald eagles. The five percent benchmark for sustainable authorized take of the LAP is 30 bald eagles per year. As no more than two bald eagle breeding pairs are expected to be disturbed in a single year by the Project geotechnical evaluation activities, the annual take estimate used for the LAP effects analysis was 1.90 bald eagles (0.95 young fledged * 2). Current authorized take in the LAP, which includes permitted take at three other projects and the take proposed for authorization under this Permit, is 2.97 bald eagles or 0.49 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 bald 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 B and suggests that unauthorized take of bald eagles in the LAP may be around 0.84% 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 bald eagles.

Finally, take of bald eagles also has the potential to affect the larger bald eagle population. Therefore, the Service defined regional EMUs and analyzed the effects of permitting take of bald eagles in combination with ongoing unauthorized sources of human-caused bald eagle mortality and other present or foreseeable future actions affecting bald eagle populations (USFWS 2016a). As part of the analysis, the Service determined sustainable limits to permitted take within each EMU. The Pacific Flyway, South EMU within which the reservoir is located has an annual take threshold limit of 15 bald eagles, of which 4.75 eagles have currently been authorized for take. The addition of the bald eagle take authorized under the Proposed Action would not exceed the EMU annual take threshold limit, so would not significantly impact the EMU eagle population.

The retrofitting of electric utility power poles done as compensatory mitigation to offset authorized take of golden eagles may benefit bald eagles as these retrofits would also prevent electrocution of bald eagles.

As the estimated take of bald eagles by the Project geotechnical evaluation activities, and the potential for the take to compound with other sources of bald eagle take and affect larger eagle populations, is below Service-determined sustainable benchmarks, the Proposed Action of issuance of the requested incidental eagle take Permit would cause no significant adverse effects to bald eagle populations and is compatible with the preservation of bald eagles.

Eagle Avoidance and Minimization Measures

The Proposed Action incorporates measures to minimize and avoid eagle take (of both eagle species) 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 Project geotechnical evaluation activities (including but not limited to geotechnical survey work, seismic refraction surveys, boring and/or CPT surveys, test pit activities, trenching activities, test fill construction activities, helicopter use, and use of overland temporary access routes), within recommended eagle nest buffers outside of the eagle breeding season (1 January through 31 August); accessing work areas from existing roads; conducting geotechnical work only during daylight hours; avoiding conducting geotechnical investigation

activities during severe weather such as heavy rain, severe thunderstorms, high winds, and/or extreme temperatures (high or low); implementing temporary erosion controls, spill prevention and management measures, materials containment, and geotech-specific best management practices. Along with other worker environmental awareness training, the Applicant will also train work crews about nesting eagles and eagle protection measures.

These avoidance and minimization measures, that would be required if the Permit is issued, are designed to further ensure that issuance of the Permit is compatible with the preservation of eagle populations.

Eagle Monitoring

Under the Proposed Action, the Applicant would be required to survey for and monitor all bald eagle and golden eagle pairs and nests that may be disturbed by Project geotechnical activities, determining nesting status and nest fate each year, during the 2023, 2024, 2025, and 2026 eagle breeding seasons.

Migratory Birds

Issuance of the Permit to the Project may provide benefits to migratory birds. Power pole retrofits done as compensatory mitigation for golden eagle take authorized under the 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 Permit to the Project.

Species Listed under the Endangered Species Act

Section 7 of the ESA requires Federal agencies to consult to "ensure 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.

Alternative 1: No Action

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 both bald and golden 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 golden eagle population are anticipated to be unmitigated loss of productivity of up to six incidents of disturbance and loss of breeding productivity take for golden eagle breeding pairs.

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 adverse, unauthorized effects to bald eagles and adverse, unmitigated, unauthorized effects to golden eagles, effects that are not compatible with the preservation of golden eagles.

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, 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 the No-Action Alternative (Table 1).

Table 1. Comparison of the Proposed Action and other alternatives

	Proposed Action: Issue permit for disturbance and loss of breeding productivity take of eagles	**Alternative 1: No Action**
Eagle Take Levels	Eagle breeding pair disturbance and loss of breeding productivity take of: • Up to 3 incidents for bald eagles • Up to 6 incidents for golden eagles	Eagle breeding pair disturbance and loss of breeding productivity take of: • Up to 3 incidents for bald eagles • Up to 6 incidents for golden eagles
Avoidance and Minimization	Applicant required to implement measures	There would be no requirement to implement Service-suggested measures
Compensatory Mitigation	Power pole retrofitting to offset golden eagle take at a 1.2:1 ratio	None
Monitoring	Applicant required to survey for and monitor all eagle pairs and nests that may be disturbed by Project geotechnical activities, determining nesting status and nest fate each year, during the 2023 - 2026 eagle breeding seasons	There would be no requirement to implement Service-suggested monitoring
Applicant Liability for Eagle Take	No (if in compliance with Permit)	Yes
Meets Eagle Act Statutory and Regulatory Requirements	Yes	No

List of Preparers

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Amy Walsh, Permits Biologist, 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

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

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 Sites Reservoir Project Geotechnical Evaluation

Focal Project: Sites Reservoir Project Geotechnical Evaluation

Maximum predicted annual golden eagle take	**1.77**

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

Focal Project_Density Unit	Estimated Number of Eagles
SitesResGeotech_COASTAL_CALIFORNIA	149.45
SitesResGeotech_GREAT_BASIN	8.09
SitesResGeotech_NORTHERN_PACIFIC_RAINFOREST	14.11
SitesResGeotech_SIERRA_NEVADA	16.49
Sites Reservoir Geotech LAP (total)	**188.14**

1% LAP Benchmark	**1.88**
5% LAP Benchmark	**9.41**

Permitted Projects with Overlapping LAPs:

Project ID	Estimated Annual Take	Percent Overlap With Focal Project	Overlapping Area (SqMi)	Overlapping Take
PER0055522	4.13	9.38%	3442.28	0.39
PER0038885	0.59	29.00%	8746.93	0.17
Project 02735B	2.4	57.68%	16561.13	1.38
All Projects (total)	**7.12**			**1.94**

Known Unpermitted Take Summary	
Cause of take	**# eagles from 2013-2022**
Unknown	50
Electrocution; Poisoned (pesticide)	2
Other	4
Trauma	7
Poisoned (pesticide);Trauma	1
Collision with wind turbine; Infection	1
Collision with vehicle; Poisoned (lead);Poisoned (pesticide)	1
Collision with wind turbine	59
Collision with wind turbine; Poisoned (pesticide)	2

Other; Trauma	1
Collision with vehicle; Poisoned (pesticide)	1
Poisoned (lead)	9
Electrocution	16
Infection; Trauma	1
Electrocution; Trauma	0
Poisoned (pesticide);Starvation	1
Poisoned (pesticide);Infection; Starvation	2
Shot	0
Collision with vehicle	6
Collision	3
Trauma; Starvation	1
Collision/electrocution	1
Poisoned (pesticide)	0
Disease; Starvation	1
10-year total	**170**
10-year annual average	**17**

LAP Take Results	**Number of Eagles (Annual)**	**Percent of LAP**
Permitted Take		
Total Overlapping Take	1.94	1.03%
Focal Project Predicted Take	1.77	0.94%
Total Permitted Take (Focal Project + Total Overlapping Take)	**3.71**	**1.97%**
Unpermitted Take	**17**	**9.04%**

Appendix B. Results of the bald eagle local area population (LAP) analysis for the Sites Reservoir Project Geotechnical Evaluation

Focal Project: Sites Reservoir Project Geotechnical Evaluation

Maximum predicted annual bald eagle take	**1.9**

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

Focal Project_Density Unit	Estimated Number of Eagles
SitesResGeotech_Pacific	605.89
Sites Reservoir Geotech LAP (total)	**605.89**

1% LAP Benchmark	**6.06**
5% LAP Benchmark	**30.29**

Permitted Projects with Overlapping LAPs:

Project ID	Estimated Annual Take	Percent Overlap With Focal Project	Overlapping Area (SqMi)	Overlapping Take
Project 21202D	0.95	51.19%	11682.88	0.49
PER0024204	0.95	7.17%	1141.85	0.07
PER0071559	1.9	26.66%	4361.63	0.51
All Projects (total)	**2.97**			**0.49%**

Known Unpermitted Take Summary	
Cause of take	**# eagles from 2013-2022**
Electrocution	17
Drowned; Trauma	0
Collision with vehicle	4
Unknown	17
Collision with vehicle; Starvation	1
Poisoned (lead);Starvation	0
Poisoned (lead)	0
Shot	0
Trauma	7
Trauma; Starvation	2
Collision/electrocution	2

Collision with wire	1
Poisoned	0
Drowned (entangled)	0
10-year total	**51**
10-year annual average	**5.1**

LAP Take Results	**Number of Eagles (Annual)**	**Percent of LAP**
Permitted Take		
Total Overlapping Take	2.81	1.22%
Focal Project Predicted Take	0.885	0.26%
Total Permitted Take (Focal Project + Total Overlapping Take)	**2.97**	**0.49%**
Unpermitted Take	**5.1**	**0.84%**