

Environmental Assessment

for the Issuance of a Short-Term Incidental Eagle Take Permit
for the Sunol Valley Water Treatment Plant Expansion

California

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Abbreviations

Applicant	San Francisco Public Utilities Commission (SFPUC)
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	Sunol Valley Water Treatment Plant Expansion
REA	Resource Equivalency Analysis
Service	United States Fish and Wildlife Service
SFPUC	San Francisco Public Utilities Commission
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 disturbance take of golden eagles (*Aquila chrysaetos*) associated with expansion and facility upgrades at the Sunol Valley Water Treatment Plant (Facility; Project). The applicant for the Permit, the San Francisco Public Utilities Commission (SFPUC; 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 one golden eagle breeding pair during each of four breeding seasons from Facility expansion and upgrade activities scheduled to occur from September 2024 through December 2028.

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 (42 U.S.C. §§ 4336e, 40 CFR § 1508.1(q)). 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 Federal action. In considering this, 40 CFR § 1501.3 directs an agency to consider the affected area (local, regional, or national) and its resources. In evaluating the degree of the effects, we must also consider short-term, long-term, beneficial, and adverse effects; impacts to public health and safety; and compliance with other environmental protection laws. Effects or impacts are defined to mean “changes to the human environment from the proposed action or alternatives that are reasonably foreseeable” (40 CFR § 1508.1(g)). This EA evaluates the effects of the Service’s proposed action to issue an eagle incidental take permit to the Applicant (Proposed Action), as well as alternatives to this action. The Proposed Action 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.

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.

The Eagle Act authorizes the Service to issue incidental eagle take permits only when the take cannot be practicably avoided and it 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 Service may issue incidental eagle take permits for eagle take that is associated with, but not the purpose of, an activity and it is necessary to protect an interest in a particular locality (50 CFR § 22.80 and 81 Federal Register [FR] 91494).

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

Background

The Applicant will be expanding and upgrading the existing Sunol Valley Water Treatment Plant for the Project. The Project is located in Sunol, California in Alameda County (Figure 1). The Project will include the expansion of the plant, including construction of a new ozonation facility and a new polymer feed facility, and the relocation of an existing radio tower, as well as upgrades to existing facilities at the plant and off-site electrical system upgrades. Activities are scheduled to occur for 56 months, from approximately September 2024 to December 2028.

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 website.¹

Coordination with Tribal Governments

Tribal participation is a key component of the Service’s decision to issue an eagle take permit, and an integral part of the National Historic Preservation Act (NHPA) and NEPA processes. Cultural and religious concerns regarding incidental take of eagles on a national scale 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 in consideration of individual eagle take permit applications, given the cultural importance of eagles to the tribes. In accordance with Executive Order 13175,

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

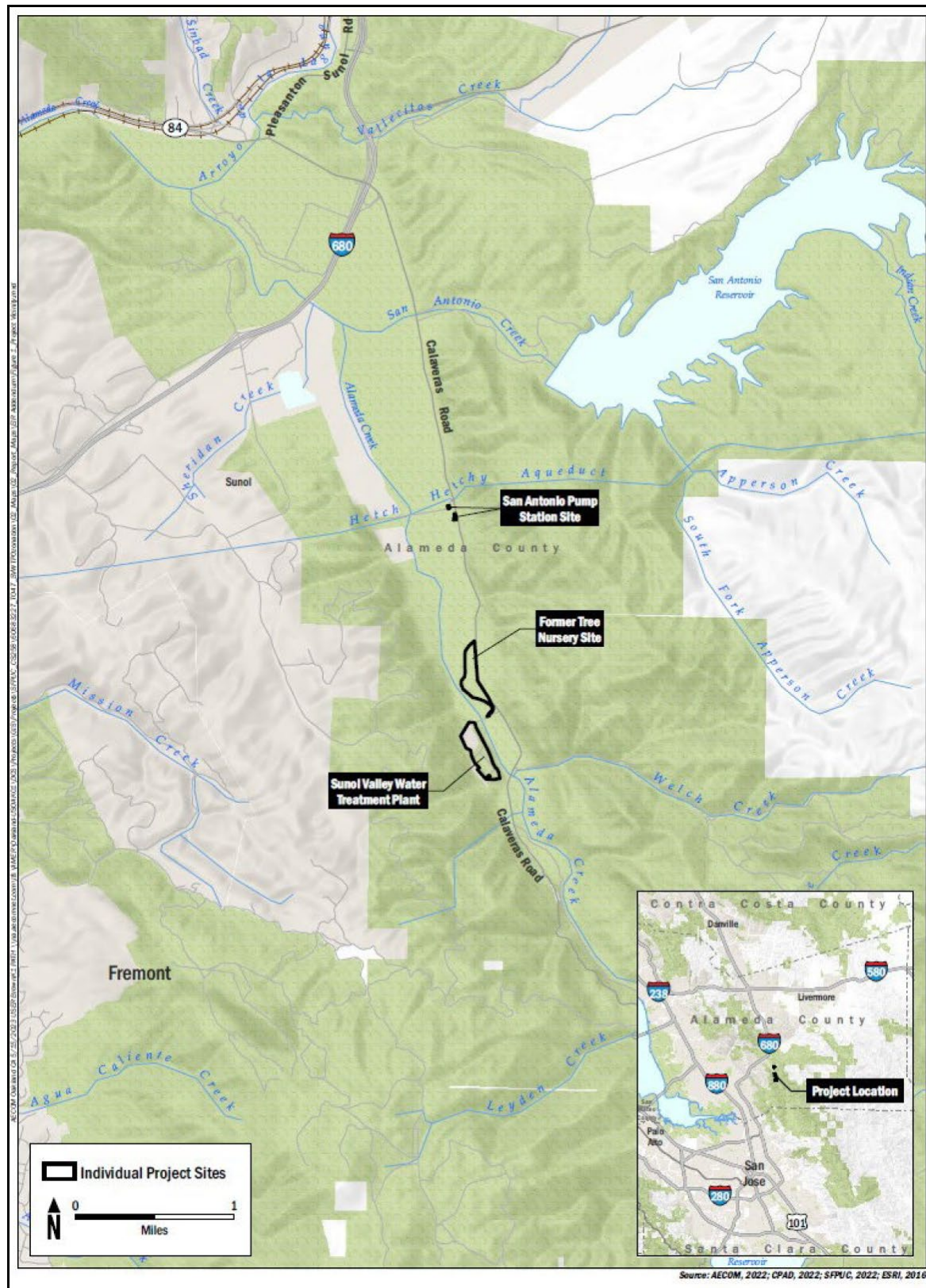


Figure 1. Location and vicinity map of the Sunol Valley Water Treatment Plant Expansion Project (Source: SFPUC)

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 19 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 an email dated December 7, 2023 expressing concern for potential effects to golden eagles from the Project, but did not request a formal consultation. The Service responded with an email on January 10, 2024 providing additional information on minimization and mitigation that would be required if a permit was issued. 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 SFPUC for a short-term (four-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 Project activities during each of the 2025-2028 eagle breeding seasons. ("Proposed Action").

The Proposed Action would require measures to avoid and minimize eagle take to the maximum extent practicable, monitoring to estimate and assess take, and compensatory mitigation to offset estimated take of golden eagles as summarized below and detailed in the *Environmental Consequences* section later in this document.

Avoidance and Minimization Measures: The Applicant would implement the following avoidance and minimization measures. To the maximum extent practicable, during the eagle breeding season, the Applicant would: conduct project activities outside of recommended eagle nest buffers, access work areas from existing roads, conduct all project activities only during daylight hours, and avoid conducting project activities during severe weather such as heavy rain, severe thunderstorms, high winds, and/or extreme temperatures (high or low). The Applicant would also train work crews about nesting eagles and eagle protection measures. Additionally, the Applicant would, to the maximum extent practicable, construct Project electrical elements such as power poles, to standards that decrease the risk to eagles of electrocution.

Compensatory Mitigation: The Applicant would fully offset all authorized take with compensatory mitigation at a 1.2 to 1 ratio. The Applicant will also provide additional mitigation to address concerns about cumulative effects in the local area eagle population.

Surveying and Monitoring: The Applicant would be required to survey for and monitor all golden eagle pairs and nests that may be disturbed by Project construction activities, determining nesting status and nest fate each year, during the 2025, 2026, 2027, and 2028 eagle breeding seasons.

Criteria for issuance of an eagle take permit are codified in 50 CFR § 22.80(f). SFPUC'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 the Applicant'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, Project activities 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 an additional 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 additional 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, or 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 western central California where the Project is located consists mainly of open grasslands and oak savanna interspersed with oak and shrub woodlands. The eagles in this area predominantly nest in trees, utilizing nearby open areas for foraging on ground squirrels and jackrabbits. The Project vicinity is situated within the steep to rolling hills of the Diablo Mountain Range, which supports a robust population of nesting golden eagles.

Historic and recent surveying for eagles in the area encompassing and surrounding the Project location indicate one recent in-use golden eagle nest (used 2021 to 2023) within one mile of the Project activities to be conducted during the eagle breeding season, as well as several historic golden eagle nest locations (Figure 2). All of the nests, both historic and recent, are believed to be alternate nest locations of the same golden eagle pair using the Maguire Peaks territory. The recent nest is approximately 900 feet from Calaveras Road, a well-used public county road, along a drainage in a riparian corridor. The nest is in an oak tree with views of Calaveras Road and the staging area for the Project, however topography and vegetation around the nest provide a visual screen between the nest and the main Project activity area. All project activity will be visible to the eagles when they are in flight.

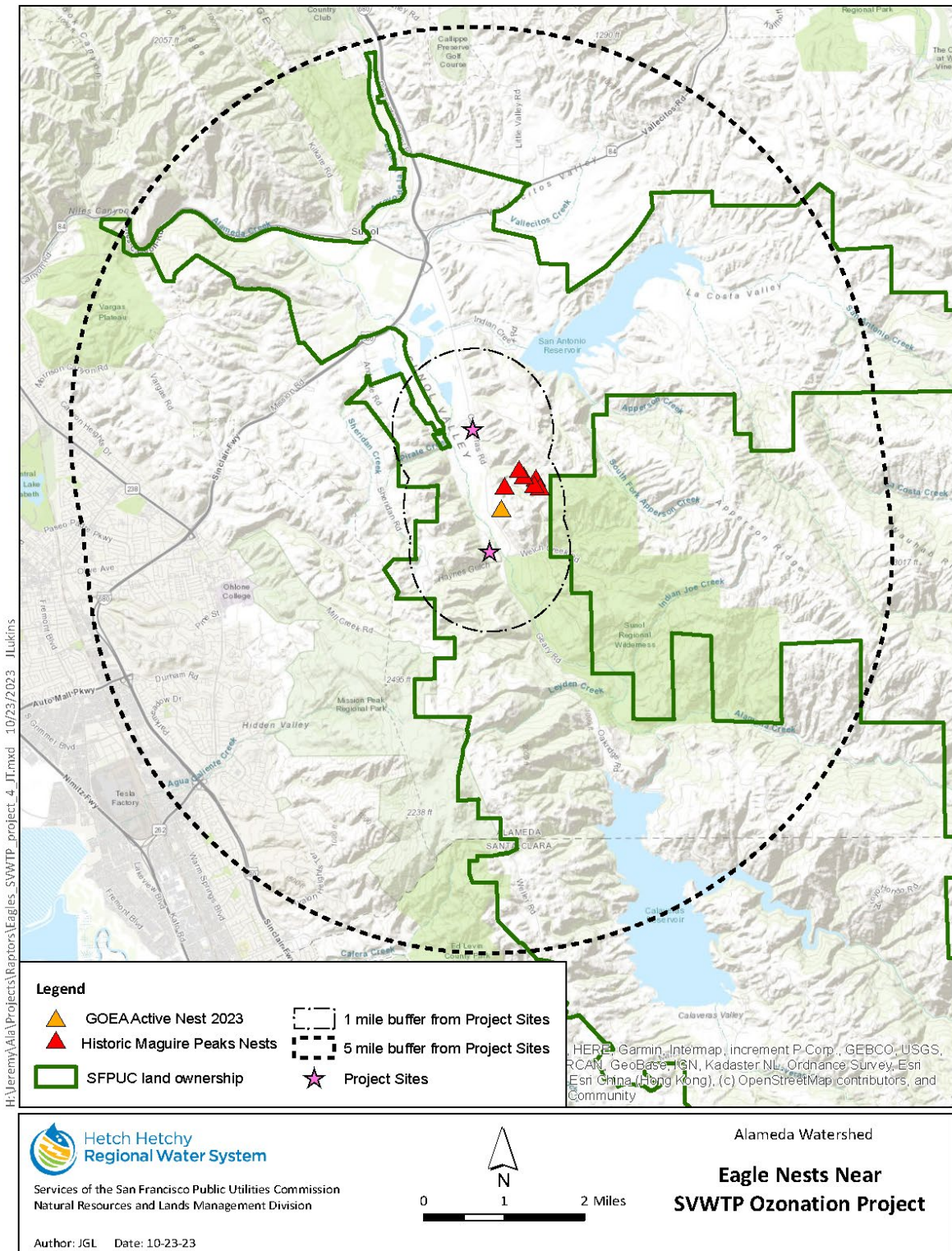


Figure 2. Current and historic golden eagle nests within one mile of the Sunol Valley Water Treatment Plant Expansion Project (Source: SFPUC).

Bald Eagles

Bald eagles (*Haliaeetus leucocephalus*) are known to occur and breed in the region, however there are no known bald eagle nests within the vicinity of the Project, and bald eagles are not expected to be affected by Project activities.

Migratory Birds

Effects to migratory birds from 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.

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

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.

Direct and Indirect Effects

The Project is not expected to have long-term effects to golden eagles as the Project activities will occur only over four years, will affect minimal acreage, and will occur on previously disturbed and developed land.

One recently in-use golden eagle nest, as well as multiple other alternate historic nest locations of the eagle pair, are located within one mile of the Project activities to occur during the eagle breeding season, 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). Project activities may be as close as approximately 900 feet from the nest, may be visible and audible to the golden eagle pair, and may disturb their breeding activities. We anticipate that this golden eagle breeding pair could be disturbed each year of Project activities.

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 for the breeding season in which the eagles were disturbed. Therefore, the Service estimates the take of eagles to be 0.59 young fledged each year for the four-year duration of the Project.

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, during the eagle breeding season, the Applicant would: conduct project activities outside of recommended eagle nest buffers, access work areas from existing roads, conduct all project activities only during daylight hours, and avoid conducting project activities during severe weather such as heavy rain,

severe thunderstorms, high winds, and/or extreme temperatures (high or low). The Applicant would also train work crews about nesting eagles and eagle protection measures. Additionally, the Applicant would, to the maximum extent practicable, construct Project electrical elements such as power poles, to standards that decrease the risk to eagles of electrocution.

Along with implementing these minimization and avoidance measures, the Applicant would provide compensatory mitigation to offset the estimated take by the Project 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 may be paid in full upon permit issuance, or mitigation may be paid on an annual basis, with mitigation for each year's loss of productivity (estimated loss of productivity of one golden eagle breeding pair) paid before the start of each eagle breeding season. 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 high-risk 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 estimated golden eagle take. 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 0.59 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 EMU 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 estimated annual take of golden eagles 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 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.

Cumulative Effects

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. Effects of take may be cumulative at the project scale, at the local-area eagle population scale, and at the EMU scale.

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 (human-caused 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 anthropogenic mortality of 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. In the analysis to estimate impacts to the LAP, we incorporated data provided by the Applicant, data on other eagle take authorized and permitted by the Service, and information regarding other reliably documented unauthorized eagle mortalities. 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 198.62 golden eagles. The five percent benchmark for sustainable authorized take of golden eagles from the LAP is 9.93 golden eagles per year. Current authorized take in the LAP, which includes permitted take at four other projects and the take proposed for authorization under this Permit, is 6.23 golden eagles, which equates to 3.14 percent of the LAP per year. This is below the five percent sustainable take benchmark determined by the Service to maintain the local area population of golden eagles. 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 9.92 percent of the LAP per year.

However, along with the data analyzed in the LAP cumulative effects analysis, the Service is aware of additional sources of potential effects to golden eagle populations within the LAP that the analysis did not capture. A number of wind facilities within the LAP are operational and likely to take eagles, but do not yet have authorization for eagle take under an incidental eagle take permit. Some of the take of eagles at these facilities is known to the Service and is included in the information analyzed as unauthorized eagle take in the LAP cumulative effects analysis described above, however the Service is also aware of additional, unquantified unpermitted take at these facilities. As noted above, our range-wide analysis of golden eagle populations indicates that, on average, 10% of the range-wide population is lost each year from unauthorized human-caused mortality (Service 2016b). However, Hunt et al. (2017) conservatively concluded that in the vicinity of Altamont Pass Wind Resource Area, at least 67% (59 out of 88) of the fatalities of the eagles tracked in the study over six years (257 radio-tagged eagles tracked from 1994-2000) were human-caused, and more specifically, 40.9% (36 out of 88) of the eagle deaths were caused by wind turbine blade strikes. Research has also provided evidence of a high rate of golden eagle breeding pair member turnover and an increase in subadult members of golden eagle breeding pairs in the vicinity of Altamont Pass Wind Resource Area, a concerning trend thought to indicate low survivorship and an unstable population with potential for population decline (Hunt et al. 1998, Hunt and Hunt 2006, Hunt et al. 2017, Kolar and Wiens 2017, Wiens et al. 2018, Wiens and Kolar 2021, USGS unpublished data and personal communication). Along with the Altamont Pass Wind Resource Area, the LAP also contains the Montezuma Hills/Solano Wind Resource Area and the Pacheco Wind Resource Area, which also pose a risk to eagles.

Compilation of all the analyses and peer-reviewed published information for unpermitted take in the LAP indicate unauthorized take of eagles in the LAP is very likely exceeding the 10% threshold thought to be sustainable for golden eagle populations.

To address these potential cumulative effects in the LAP, the Applicant would provide additional mitigation. This additional mitigation would be completed in one or more of the following ways.:

- The Applicant may pay for retrofitting of power poles at an increased mitigation ratio of 2 to 1, making reasonable attempt for a subset of those retrofits to occur in the LAP.
- The Applicant may contribute to one or more scientific research studies that provide information to benefit golden eagle populations in the LAP. Examples of research the Applicant could contribute to include quantifying the value of treating golden eagle nests for Mexican chicken bugs or other nest parasites. The USFWS considers this a viable option as recent scientific studies found that treating young eagles for the protozoan

parasite (*Trichomonas gallinae*) was effective and increased nest site productivity (Kochert et al., 2018). Current and emerging threats of disease and ectoparasites have the potential to negatively affect golden eagle productivity (Dudek and Heath, 2017). The Applicant might also contribute to continuing research on how increasing drought conditions are affecting golden eagle breeding productivity and populations and how to mitigate those effects (Wiens et al 2018). The contribution of funds must, at minimum, provide for a viable and implementable study that will produce rigorous results.

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. As the Applicant would provide mitigation to offset cumulative effects in the LAP, LAP-scale effects of issuance of the requested incidental eagle take Permit on golden eagle populations would not be significant and would therefore be compatible with the preservation of golden eagles.

Take of eagles also has the potential to affect the larger regional 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 at least 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 and offset by mitigation measures 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.

Monitoring

Under the Proposed Action, the Applicant would be required to survey for and monitor all golden eagle pairs and nests that may be disturbed by Project construction activities, determining nesting status and nest fate each year, during the 2025, 2026, 2027, and 2028 eagle breeding seasons.

Bald Eagles

As there are no known bald eagle nests within the vicinity of the Project, take of bald eagles is not expected to occur from Project activities and take of bald eagles would not be authorized under the Proposed Action. However, 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.

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 at the Project, additional measures required under the Permit would not be implemented to avoid or minimize risk to eagles of the Project 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 on the eagle population are anticipated to be up to four

incidents of unmitigated disturbance and loss of breeding productivity for the golden eagle breeding pair.

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 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 eagle take minimization measures and mitigation 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 alternatives (Table 1).

Table 1. Comparison of the Proposed Action and other alternatives

	Proposed Action: Issue Incidental Eagle Take Permit	Alternative 1: No Action
Eagle Take Levels	Eagle breeding pair disturbance and loss of breeding productivity take of up to four incidents for golden eagles	Same as Proposed Action
Avoidance and Minimization	Applicant required to implement avoidance and minimization 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, with additional mitigation required to address cumulative effects concerns	None
Unmitigated Eagle Take/Effects	None	Eagle breeding pair disturbance and loss of breeding productivity take of up to four incidents for golden eagles, as well as potential cumulative effects
Data Collection /Monitoring	Applicant required to survey for and monitor all eagle pairs and nests that may be disturbed by Project activities each year	There would be no requirement to implement Service-suggested monitoring
Applicant Liability for Eagle Take	None, if in compliance with Permit terms and conditions	Yes
Meets Eagle Act Statutory and Regulatory Requirements	Yes	No

List of Preparers

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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 Implementing 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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Appendix A. Results of the golden eagle local area population (LAP) analysis for the Sunol Valley Water Treatment Plant Expansion

Focal Project: Sunol Valley Water Treatment Plant Expansion

Predicted eagle take (annual)	0.59
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Local Area Population (LAP) Estimates by Local Area Density Unit (LADU):

Focal Project_Density Unit	Estimated Number of Eagles
COASTAL_CALIFORNIA	194.85
NORTHERN_PACIFIC_RAINFOREST	0.54
SIERRA_NEVADA	3.22
SFPUC_SunolValleyPlant_GOEAdisturb_2024-2028 LAP (total)	198.62

1% LAP Benchmark	1.99
5% LAP Benchmark	9.93

Permitted Projects with Overlapping LAPs:

Project ID	Estimated Annual Take	Percent Overlap With Focal Project	Overlapping Area (SqMi)	Overlapping Take
PER4885793	0.59	98.66%	22679.12	0.58
Project 23857D	1.18	25.10%	7270.22	0.30
PER1309795	3.54	84.56%	23412.07	2.99
Project 02735B	2.4	73.76%	21177.55	1.77
All Projects (total)	7.71			5.64

Known Unpermitted Take Summary	
Cause of take	# eagles from 2014-2023
Unknown	54
Electrocution;Poisoned (pesticide)	2
Other	3
Trauma	6
Collision with wind turbine;Infection	1
Poisoned (lead);Infection	0
Electrocution	30
Collision with wind turbine	60
Collision with wind turbine;Poisoned (pesticide)	2
Other;Trauma	1

Collision with wire	2
Collision with vehicle;Poisoned (pesticide)	1
Poisoned (lead)	9
Infection;Trauma	1
Electrocution;Trauma	0
Poisoned (pesticide);Starvation	1
Poisoned (pesticide);Infection;Starvation	1
Collision with vehicle	7
Collision	12
Trauma;Starvation	1
Collision/electrocution	2
Poisoned (pesticide)	1
10-year total	197
10-year annual average	19.7

LAP Take Results	Number of Eagles (Annual)	Percent of LAP
Permitted Take		
Total Overlapping Take	5.64	2.84%
Focal Project Predicted Take	0.59	0.30%
Total Permitted Take (Focal Project + Total Overlapping Take)	6.23	3.14%
Unpermitted Take	19.7	9.92%