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<b>Description:</b>	The revised Plan identifies nest survey protocols and methodologies, management considerations to avoid nesting birds and their nests, eggs, and chicks, and monitoring and reporting requirements to document compliance with federal, state, and local regulations
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# **Attachment 3**

## Nesting Bird Management Plan



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Nesting Bird Management Plan

# **Potentia-Virdi Battery Energy Storage System Facility Project**

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**JANUARY 2025**

*Prepared for:*

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# Acronyms and Abbreviations

Acronym/Abbreviation	Definition
BESS	Battery Energy Storage
CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Code
cy	Cubic yards
kV	Kilovolt
HVAC	Heating, ventilation, and air conditioning
MBTA	Migratory Bird Treaty Act
MM	Mitigation Measure
MV	Medium voltage
MW	Megawatt
NML	Nest Management Log
O&M	Operations and maintenance
POCO	Point of Change of Ownership
PCS	Power Conversion System
PG&E	Pacific Gas and Electric
Project	Potentia-Viridi Battery Energy Storage System
Plan	Nesting Bird Management Plan



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# 1 Introduction

This Nesting Bird Management Plan (Plan) describes the measures to be taken by Levy Alameda, LLC and its contractors to avoid impacts to migratory birds and raptors in accordance with federal, state, and local regulations during construction of the Potentia-Viridi Battery Energy Storage System Project (Project).

The Plan identifies nest survey protocols and methodologies, management considerations to avoid nesting birds and their nests, eggs, and chicks, and monitoring and reporting requirements to document compliance with federal, state, and local regulations.

Migratory birds and raptors are sensitive biological resources pursuant to the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGF). This Plan was developed to assist with compliance pursuant to those standards.

## 1.1 Purpose of the Nesting Bird Management Plan

The purpose of this Plan is to provide by Levy Alameda, LLC and its contractors with the process and protocol that will be implemented to comply with the measures outlined in MM-BIO-2 and MM-BIO-3. This Plan provides specific information for implementing MM-BIO-5 and MM-BIO-9 as well as the means of monitoring the effectiveness of the Plan during Project construction. The management practices and activities in this Plan are intended to accomplish the following objectives:

- Avoid impacts to migratory birds and raptors
- Maintain consistency with the MBTA and the CFGF

## 1.2 Project Description

Levy Alameda, LLC (Applicant), a wholly owned subsidiary of Obra Maestra Renewables, LLC, proposes to construct, operate, and eventually repower or decommission the 400-megawatt (MW) Potentia-Viridi Battery Energy Storage System (Project) on approximately 85 acres in eastern Alameda County. The primary components of the Project include an up to 3,200 megawatt-hour (MWh) battery energy storage system (BESS) facility, an operations and maintenance (O&M) building, a project substation, a 500 kilovolt (kV) overhead intertie transmission (gen-tie) line, and interconnection facilities within the Pacific Gas and Electric (PG&E) owned and operated Tesla Substation.

The Project would draw electricity from the power grid to charge and store electrical energy and discharge back to the power grid when the stored energy is needed. The Project would provide several benefits to the power grid, including reducing the need to operate natural gas power plants to balance intermittent renewable generation and serving as an additional capacity resource that would enhance grid reliability. The Project would be remotely operated and monitored year-round and be available to receive or deliver energy 24 hours a day and 365 days a year.

## 1.3 Project Location

The Project site is located at 17257 Patterson Pass Road, Tracy, CA 95377. The property is southwest of Interstate 580 and Interstate 205 on a portion Alameda County Assessor's Parcel Number 99B-7890-002-04. The Project area consists of approximately 60 acres. The gen-tie line would extend southeast from the Project substation, crossing Patterson Pass Road, and then proceed east to the Tesla Substation. The Project's gen-tie line would be sited on APNs 99B-7890-2-4, 99B-7890-2-6, and 99B-7885-12. The Project site has land use and zoning designation of Agriculture. The area surrounding the Tesla Substation is sparsely developed for residential use, with the nearest residence, which is also owned by the same landowner leasing the area for the Project's gen-tie line, is approximately 1,500 feet southeast of the Project site and 560 feet south of the proposed gen-tie line.

## 1.4 Project Components

Project components include the Battery Energy Storage System (BESS) Enclosures, Power Conversion Systems (PCS), Medium voltage (MV) Collection System, Project Substation, Control Building, and Telecommunications Facilities, Access Roads, Laydown Yards, Stormwater Facilities and Outfall, Site Security and Fencing, including fire detection system, and an Operations and Maintenance Building. This section provides details of each component.

- **Battery Energy Storage System (BESS).** The energy storage facility would utilize a modular and containerized BESS. The initial Project concept has been developed assuming lithium iron phosphate (LFP) cells. It is anticipated ESS enclosure height will not exceed 12 feet. The structures may also have a heating, ventilation, and air conditioning (HVAC) system for optimal performance and safety.
- **Power Conversion Systems (PCS).** The PCS would convert electric energy from AC to DC when the energy is transferred from the grid to the battery, and from DC to AC when the energy is transferred from the battery to the grid.
- **Project Substation.** A Project substation is anticipated to be constructed adjacent to the BESS facilities. The power to and from the BESS would be passed through a final interconnection step-up transformer to convert it from 34.5 kV to 500-kV high-voltage for delivery to the PG&E Tesla Substation.
- **Telecommunications Facilities.** Fiber-optic cables will be used to connect the Project site switchyard with the PG&E point of interconnection and to existing fiber-optic lines for remote monitoring. Fiber optic cable may require trenching for installation or it may be place on poles or a combination of both.
- **Access Roads.** Access to the Project site would be provided via new private driveways to the north of the site, off of Patterson Pass Road and to the southeast of the site, off of Patterson Pass Road.
- **Laydown Yards.** One laydown yard would be maintained just north of the central project substation area. This yard would be used during both construction and operation of the BESS facility.
- **Site Security, Lighting, and Fencing.** The Project would be enclosed at the perimeter by a 6-foot to 8-foot-tall security fence. Lighting would only be in areas where it is required for safety, security, or operations. Security cameras will be placed on site and monitored 7 days a week and 24 hours per day.
- **Fire detection system.** Multiple fire detection systems will be installed on-site and within the individual BESS enclosures including an infrared camera system and an onboard battery management system (BMS). In the event of an anomaly, the system will shut down and mitigate the hazard. The BESS enclosures are designed and constructed in such a way that fire would not propagate from one enclosure to a neighboring enclosure in the event of a thermal runaway.

- **Operations and Maintenance Building.** An O&M building would be constructed within the primary laydown yard for the Project's anticipated three full-time operations staff
- **Generation Tie-Line.** Electrical energy would be transmitted to and from the Project substation to the existing Tesla PG&E Substation through a proposed 500-kV gen-tie line. The gen-tie line would extend southeast from the facility to the Tesla PG&E Substation.

## 1.5 Project Schedule

Initial mobilization and site preparation is anticipated to begin no later than Q1 2026 and testing and commissioning is anticipated to conclude no later than Q2 2028. It is anticipated that construction crews would work 8 to 10 hours per day, with work occurring Monday through Friday. Environmental clearance surveys would be performed at the Project site prior to commencement of construction activities. Construction activities would include the following:

- **Site preparation.** Prior to construction, environmental clearance surveys would be performed. Erosion and sediment control measures will be installed prior to the start of major earthworks activities. Rough grading and grubbing/vegetation removal would be performed. Detention basins and stormwater facilities would be created for hydrologic control. Stabilized construction entrances and exits would be installed.
- **Site Grading and Civil Work.** Grading is anticipated to include up to approximately 588,018 cubic yards (cy) of cut and up to approximately 344,900 cy of fill, resulting in up to approximately 243,118 cy of export material. The BESS facility site access roads and driveways would be graded, compacted, and surfaced with gravel or aggregate. The project perimeter fence and access gates would then be constructed.
- **Foundations and Underground Equipment Installation.** A grounding grid and underground conduit would be installed below grade beneath the project substation area and BESS components. The main power transformers (MPTs) foundations within the substation area are anticipated to be concrete slab foundations poured into excavations up to 10 feet deep. Foundations for the control building, static masts, other aboveground substation equipment, O&M building, BESS enclosures, PCS units, DC/DC converters, and BESS auxiliary transformers and panels are anticipated to be pile foundations embedded up to 40 feet below ground level. Additional underground work would include trenching for the placement of underground electrical and communications lines.
- **BESS and Project Substation Equipment Installation.** Major equipment would be delivered and offloaded directly into place with a crane or heavy equipment when possible or stored at one of the laydown areas near its permanent location and installed at a later date. Electrical wiring would be installed underground, at-grade, and above ground, depending on the application and location.
- **Gen-Tie Structure Erection.** The transmission structure access path may be bladed, compacted, and surfaced with gravel where necessary to facilitate access. Cast-in-place concrete foundations would be installed. Fiber optic utility poles would be direct embedded in holes up to 8 feet deep.
- **Gen-Tie Stringing and Pulling.** Conductors would be strung between transmission structures and cables would be pulled through one segment of the transmission line at a time.
- **PG&E-Owned Gen-Tie Segment and Interconnection Facilities within Tesla Substation Footprint.** PG&E would construct the segment of the gen-tie between the POCO and the POI within the Tesla Substation, and the fiber optic routes between the POCO and the PG&E control building within the Tesla Substation footprint.
- **Testing and Commissioning.** After installation, equipment will be tested and commissioned. Commissioning work will be completed by qualified personnel.

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## 2 Regulatory Framework

Several laws and regulations have been enacted in the United States and in California that provide protections for avian species; these are described in the following sections.

### 2.1 Federal

#### 2.1.1 Migratory Bird Treaty Act

The federal MBTA makes it unlawful, except as formally permitted, to “take” (pursue, hunt, take, capture, or kill) migratory birds except under permits for special situations such as imminent threat to human safety or scientific research. The law currently applies to more than 1,000 species, including most native birds, and covers the destruction or removal of active nests of those species.

#### 2.1.2 Bald and Golden Eagle Protection Act

Bald and golden eagles, their eggs, and their nests receive additional protection under the Bald and Golden Eagle Protection Act (16 United States Code 668 - 668d, 54 Stat. 250 and Amendments). The Bald and Golden Eagle Protection Act states, “no person shall take, possess, sell, purchase, barter, offer for sale, transport, export, or import any bald or golden eagle alive or dead, or any part, nests or eggs, thereof without a valid permit to do so.”

### 2.2 State

The California Environmental Quality Act and CFGC wildlife protection laws require that government agencies develop standards and procedures necessary to maintain, protect, restore, and enhance environmental quality (including fish and wildlife populations and plant and animal communities), and to ensure that projects comply with these laws. CFGC sections that relate to protection of avian and wildlife resources and are relevant to the Project are listed below:

- **Bird Nests or Eggs, Fish and Game Code 3503; Birds of Prey and Their Eggs, Fish and Game Code section 3503.5; Migratory Birds, Fish and Game Code Section 3513:** These CFGC sections protect all birds, birds of prey, and all nongame birds, as well as their eggs and nests, for species that are not already listed as fully protected and that occur naturally within the state. Sections 3503 and 3503.5 of the CFGC stipulate the following regarding eggs and nests: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by CFGC or any regulation made pursuant thereto. Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by CFGC or any regulation adopted pursuant thereto. Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

- **Fully Protected Species, Fish and Game Code Section 3511:** The legislature of the State of California designated certain species as “fully protected” prior to the creation of California Endangered Species Act. Section 3511 states that “fully protected” birds or parts thereof may not be taken or possessed at any time. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, mammals, amphibians and reptiles, and birds.

## 2.3 Mitigation Measures BIO-5, BIO-6, BIO-7, and BIO-8

Primarily, this Plan is intended to comply with the measures outlined in MM-BIO-5, MM-BIO 6, MM-BIO-7, and MM-BIO-8, which state the following:

MM-BIO-5 Pre-Construction Northern Harrier, White-Tailed Kite, and Nesting Bird Surveys and Avoidance.

Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potential significant impact to birds that may be nesting in the Study Area, including northern harrier and white-tailed kite.

If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the Project Boundary and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests.

The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code Sections 3503, 3503.5, and 3513.

If an active bird nest is found, the nest shall be flagged and mapped on the construction plans, along with an appropriate buffer established around the nest.

If any active nests are observed during surveys, the nest area shall be demarcated in the field with flagging and stakes or construction fencing, and mapped on the construction plans along with a species appropriate buffer established by a qualified biologist. The buffer distance will range from 25 to 500 feet dependent upon factors such as topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. Limits of construction to avoid active nests should be established in the field with flagging, fencing, or other appropriate barriers and should be maintained until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist. The qualified biologist should be responsible for monitoring all nests that are found within the Project Study Area once construction work is initiated. Nests should be monitored within the following distances until the final nest outcome is determined (i.e., fledged or failed):

- 150 feet for passerines and other non-raptors
- 500 feet for raptors and owls
- 250 feet for occupied burrowing owl burrows
- 500 feet for federally and/or state-listed species unless otherwise specified by protocol-level surveys described in BIO-MM-6, -7. and -8.

If the qualified biologist determines that the recommended buffer may not avoid disturbance that could cause a nest failure, the biologist should recommend additional measures (e.g.,

increased buffer width, noise or visual barriers, work intervals, stopping work as needed, or allowing only specific work types). These measures should be implemented on a case-by-case basis to minimize impacts to nesting birds and may be based on site-specific conditions and work requirements. The qualified biologist should use behavioral cues that indicate nest disturbance (e.g., time off the nest, hesitation approaching the nest, incessant chattering, bill swiping, or other unusual behavior) to determine the buffer's effectiveness. All potential sources of nest disturbance should be assessed and documented, including non-construction activities (e.g., interspecific, and conspecific interactions and depredation) and non-Project-related activities (e.g., traffic and recreational activities).

If an active nest is identified in or adjacent to the construction zone after construction has started, work in the vicinity of the nest should be halted as needed until the Project biologist can provide appropriate avoidance and minimization measures to ensure that the nest is not disturbed by construction. Appropriate measures may include a no-disturbance buffer until the birds have fledged, limitations on construction activities that generate substantial vibration and/or noise levels, and/or full-time monitoring by a qualified biologist during construction activities conducted near the nest.

Vegetation or trees planned for removal should be removed during the period of September through January, to avoid the nesting season. If the season cannot be avoided, measures should be implemented to avoid take of birds or nests prohibited by the MBTA and the FGC. Any trees that are to be removed during the nesting season, which is February through August, should be surveyed by a qualified biologist and should only be removed if no nesting migratory birds are found. If vegetation removal activities are delayed, additional nest surveys should be conducted such that no more than 7 days elapse between the survey and vegetation removal activities.

#### MM-BIO-6 Pre-Construction Golden Eagle Surveys and Avoidance:

If nesting golden eagles are determined to be present within the Study Area or within 2 miles of the Study Area during construction of the Project, work should be conducted outside of the nesting season (February 1 to September 1).

- a. Pre-construction surveys for nesting golden eagle will be conducted within 2 miles of the Study Area where accessible. The survey will be performed by a qualified biologist familiar with golden eagle biology and will follow recommendations outlined in the *USFWS Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations* (Pagel et al. 2010).
- b) If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season, a no-activity zone should be established by a qualified biologist. The no-activity zone should be large enough to avoid nest abandonment and alleviate any impacts (e.g., noise, dust) and should be a minimum of 500 feet and up to 1 mile from the nest. Ongoing monitoring by a qualified biologist may be required to ensure no impacts to this species and its habitat.
- c) If an effective no-activity zone cannot be established in either case, an experienced raptor biologist should develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of



the eagles, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the eagles.

MM-BIO-7 Pre-Construction Swainson's Hawk Surveys and Avoidance. Implementation of the following pre-construction survey and nest avoidance buffers will avoid potential adverse effects to Swainson's hawk that may breed in the project vicinity:

- a) Pre-construction surveys for nesting Swainson's hawk will be conducted within 0.5 mile of the Study Area where accessible. The survey will be performed by a qualified biologist familiar with Swainson's hawk biology and will follow recommendations outlined in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (SHTAC 2000).
- b) If active Swainson's hawk nests are identified, an avoidance buffer of 0.5 mile shall be established around active nests consistent with the Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California (CDFG 1994). No construction within avoidance buffers shall be allowed until a qualified biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest). If it is not feasible to maintain a 0.5-mile buffer for an active Swainson's hawk nest to reasonably accommodate construction, maintenance, or decommissioning activities, the established buffer distance may be reduced through coordination with CDFW. Project activities within the reduced buffer shall be monitored at the discretion of a qualified biologist and based on coordination with CDFW.

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# 3 Nest Survey Protocol

Nest surveys will be conducted by visually inspecting all ground, shrubs, trees, cliffs, rock outcrops, and artificial structures suitable for nesting. The survey area will be inspected by qualified biologists using visually overlapping pedestrian transects, spaced approximately 30 to 100 feet apart based on existing topography, conditions, and vegetation to identify nesting birds and their nests.

Surveys will be conducted within 72 hours of the start of construction scheduled to occur during the avian nesting season (February 1 to September 1).

Surveys will be conducted within the specified survey areas detailed above in MM-BIO-5 through MM-BIO-8 for passerines and raptors, respectively, from all areas proposed for construction activities. A survey for golden eagles will also be conducted within 2-miles of the Project. All nests discovered during these surveys will be logged on a Nest Monitoring Log (NML) and updated per the nest management details described in Section 3.

The NML will include a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. For all nests discovered, a qualified biologist will determine if construction activities could potentially disturb nesting birds and will implement appropriate impact avoidance measures (for example, on-site monitoring, setbacks, timing restrictions) to adequately protect nesting birds as described in Section 3. Nest status will be designated as follows:

- **Active** -Incubating or chick-rearing behavior are observed and/or eggs or nestling/fledgling chicks are observed.
- **Inactive** - No sign of activity as described for active nests.
- **Undetermined** - Status cannot be determined for any reason (for example, conditions unsafe to assess, view into nest not available, length of time nest observed insufficient to document status). Undetermined nests will be monitored as active until otherwise determined inactive.

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## 4 Nest Management

If active or undetermined status nests are detected during the preconstruction survey, a no-disturbance buffer will be established, and site-specific nest monitoring will be implemented. Standard buffer widths are based on a nesting bird management plan created by the California Public Utilities Commission (CPUC) in collaboration with a Technical Working Group consisting of members of the BLM, USFWS, CDFW, Southern California Edison, and Aspen Environmental Group for a large project in the same region (CPUC 2019). The standard buffer size for specific avian groups is defined in Table 1 below and can be increased or decreased in the field, determined by a qualified avian biologist (avian biologist).

Recommended standard nest buffers will be applied to each active or undetermined-status nest; however, the biologist may expand or reduce this limit based on factors such as nesting chronology of the species, existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise), type and extent of construction activity disturbance (noise levels and quality—punctuated, continual, ground vibrations—blasting-related vibrations), visibility of construction activity disturbance, duration and timing of construction activity disturbance, influence of other environmental factors, and the species' site-specific level of habituation to the construction activity disturbance. For nesting avian species, buffers may be reduced to smaller buffers through the following process:

1. The construction contractor will request a buffer reduction to the on-site biologist, describing the proposed work activity within the default nest buffer, reason the work activity must be completed while the nest remains active, and approximate period of proposed buffer reduction.
2. Once the request for a buffer reduction is received from the construction contractor, the biologist will review the nest status and the need for the reductions with the contractor. Potential avoidance of the buffer reduction will be evaluated (e.g., by staging equipment in a different location). Wherever feasible, proposed work activities and locations will be adjusted to avoid or minimize incursion into the buffer area.
3. The biologist and Project team will evaluate the request and determine whether a reduced buffer can be applied. The decision will be based on the documented nest information and site-specific conditions such as distance to construction, type of construction activity disturbance, anticipated duration of construction activity disturbance, microhabitat at the nest location that may provide visual and acoustic barriers, behavior of the pair, its reproductive stage, the species' natural history, species' known tolerances to human presence and construction activities, proposed buffer reduction distance and start and end dates, and anticipated work activities and durations.

An NML will be completed for each active nest, and a map or aerial photograph identifying the location of the nest and the boundaries of the no-disturbance buffer zone around the nest will be generated.

Active/undetermined-status nests will be monitored at regularly and logged in the NML until such time that the avian biologist determines that the nestlings have fledged and dispersed or that the nest is otherwise no longer active. Nests detected in areas causing significant delays to construction may be monitored at shorter intervals to potentially expedite construction in those areas. Bird nest locations will be mapped using a GPS unit and will be recorded in the NML. All construction activities that might, in the opinion of the biologist, disturb nesting activities will be prohibited within the nest buffer. If the biologist determines that certain construction activities are allowed within the nest buffer (i.e., walking within buffer, equipment/tool drop off, etc.), the biologist will monitor the nest

during these activities to ensure activities are not impacting the nesting birds. Construction activities will cease if the biologist determines that the nesting birds are agitated. At the completion of construction activities within the buffer, the nest buffer will be restored to its original distance.

Any nests found in or adjacent to disturbance areas will be flagged and the area around the nest will be protected by a nest buffer from construction equipment and disturbance, per the appropriate nesting buffer width for the species, with high-visibility flagging tape to demarcate sensitive habitat. No work activities will be conducted within the designated nest buffers as identified by the biologist. Application of the appropriate buffer width should minimize any disturbance to the nesting behavior and avoid the potential for Project-related nest abandonment and failure of fledging. Each nest buffer will be maintained until construction activities have been completed, or until nesting is complete, and would then be removed.

If Project activities cause or contribute to a bird being flushed from the nest, the buffer will be increased and actions taken will be documented in the NML. Likewise, if activities cause nest failures, the standard buffer width for that species may be increased.

**Table 1. Standard Buffers for Avian Groups**

Avian Group	Species Potentially Nesting within Construction Site	Standard Buffer for Ground Construction
Waterfowl and rails	Canada goose, wood duck, mallard, cinnamon teal, ruddy duck, Virginia rail, Sora, American coot, pied-billed grebe	150 feet
Quail	California quail, Gambel’s quail	150 feet
Hérons	Great blue heron, great egret, snowy egret, cattle egret, black-crowned night-heron	250 feet
Birds of prey (Category 1)	American kestrel, barn owl, western screech-owl	300 feet
Birds of prey (Category 2)	Osprey, Cooper’s hawk, red-tailed hawk (some urban/suburban), red-shouldered hawk, great horned owl, burrowing owl	300 feet (burrowing owl buffers will be based upon the CDFW 2012 Staff Report on Burrowing Owl Mitigation)
Birds of prey (Category 3)	Turkey vulture, red-tailed hawk (some rural/remote), white-tailed kite, northern harrier, long-eared owl	500 feet
Birds of prey (Category 3)	Peregrine falcon, prairie falcon	Consult CDFW and USFWS
Eagles	Golden eagle	1 mile line of sight; 0.5 mile no line of sight
Shorebirds	Killdeer	200 feet
Pigeons	Band-tailed pigeon	150 feet
Doves	Mourning dove, white-winged dove, common ground-dove	150 feet
Roadrunners	Greater roadrunner	300 feet
Nightjars	Lesser nighthawk, common poorwill	150 feet
Swifts	White-throated swift	200 feet
Hummingbirds	Black-chinned hummingbird, Anna’s hummingbird, Costa’s hummingbird, Allen’s hummingbird	100 feet

**Table 1. Standard Buffers for Avian Groups**

Avian Group	Species Potentially Nesting within Construction Site	Standard Buffer for Ground Construction
Woodpeckers	Acorn woodpecker, ladder-backed woodpecker, Nuttall’s woodpecker, downy woodpecker, northern flicker	150 feet
Passerines (cavity and crevice nesters)	Say’s phoebe, ash-throated flycatcher, brown-crested flycatcher, tree swallow, rock wren, canyon wren, house wren, Bewick’s wren, mountain chickadee, oak titmouse, western bluebird	100 feet
Passerines (bridge, culvert, and building nesters)	Black phoebe, Say’s phoebe, northern rough-winged swallow, cliff swallow, barn swallow, house finch	100 feet
Passerines (ground nesters, open habitats)	Horned lark, rock wren, western meadowlark, orange-crowned warbler, lark sparrow, grasshopper sparrow	150 feet
Passerines (understory and thicket nesters)	Bushtit, blue-gray gnatcatcher, black-throated gray warbler, yellow-breasted chat, spotted towhee, black-chinned sparrow, sage sparrow, song sparrow, black-headed grosbeak, blue grosbeak, lazuli bunting, American goldfinch	150 feet
Passerines (shrub and tree nesters)	Pacific-slope flycatcher, Cassin’s kingbird, western kingbird, Hutton’s vireo, western scrub-jay, American crow, common raven, verdin, bushtit, black-tailed gnatcatcher, blue-gray gnatcatcher, American robin, northern mockingbird, Le Conte’s thrasher, phainopepla, yellow warbler, black-throated gray warbler, yellow-breasted chat, California towhee, black-throated sparrow, song sparrow, summer tanager, great-tailed grackle, hooded oriole, Bullock’s oriole, house finch, Lawrence’s goldfinch	150 feet
Passerines (shrub and tree nesters)	Loggerhead shrike, cactus wren	300 feet
Passerines (open scrub nesters)	Wren tit, California thrasher, southern rufous-crowned sparrow, black-throated sparrow, lesser goldfinch	150 feet
Passerines (tower nesters)	Western kingbird, common raven	150 feet
Passerines (marsh nesters)	Common yellowthroat, red-winged blackbird, great-tailed grackle	150 feet
Passerines (marsh nesters)	Tricolored blackbird	300 feet
Species not covered under the MBTA	Domestic waterfowl, including domestic mallards, feral (rock) pigeon, ring-necked pheasant, chukar, Eurasian collared-dove, spotted dove, parrots, parakeets, European starling, house sparrow	N/A

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## 5 Nest Monitoring and Reporting

All nests discovered will be documented in the NMLs as needed (preferably weekly but could be more or less often depending on the proximity of the nest to the work area). Nests will be monitored from an appropriate distance with binoculars until the biologist has determined that the nest has failed or fledged, and approaching the nest will be kept to a minimum. Each nest will be located using GPS, given a unique identification number for tracking purposes, and any action taken to protect the nest will be described, including but not limited to creating a buffer zone. NMLs will be updated at each monitoring event to reflect the status of the nest and any comments, observations, or actions taken. The NMLs will serve as documentation of the Project's compliance with CFGC Sections 3503, 3503.5, 3511, and 3513. Nest failures that occur will be reported in the NMLs. Nest failures that appear to be the direct result of the construction activity will be reported within 48 hours of discovery, via phone call and/or email to the appropriate agency contacts.



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## 6 Bird Use Deterrent Measures

Construction activities during the nesting season (February 1 through September 15) could adversely affect breeding birds through direct take or indirectly through disruption or harassment. Key avoidance and minimization measures to deter birds from using the site or Project structures during construction include the following:

- **Worker Environmental Awareness Program:** A Worker Environmental Awareness Program training will be conducted for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading. A full-time biological monitor will be onsite during vegetation clearing, grubbing, and grading, verifying that artificial light fixtures are directed away from open space and are shielded, limiting staging to designated areas to reduce the potential for birds to nest within staged materials and equipment, and flushing avian species from occupied habitat areas immediately prior to brush-clearing and earthmoving activities (Note: if brush-clearing and earth-moving activities take place within the bird breeding season, flushing will not occur).
- **Netting or Tarps:** Nets and/or tarps are a very effective way to prevent birds from entering and nesting in small crevices in construction equipment (i.e., excavators, lights, generators). If avian nesting is frequent, a tarp can be placed over equipment at the end of each work day to prevent birds from entering . If possible, netting should be avoided unless tarps are infeasible or unavailable.
- **Best Management Practices:** Best management practices, such as waste containment and capping the ends of construction material (pipe), are very effective in preventing birds from nesting in tight locations. On-site personnel should always place trash and waste in secured bins with closed lids to prevent attraction from birds. Pipe and other material on site (if applicable) should be capped when not in use to prevent birds from entering and nest building.

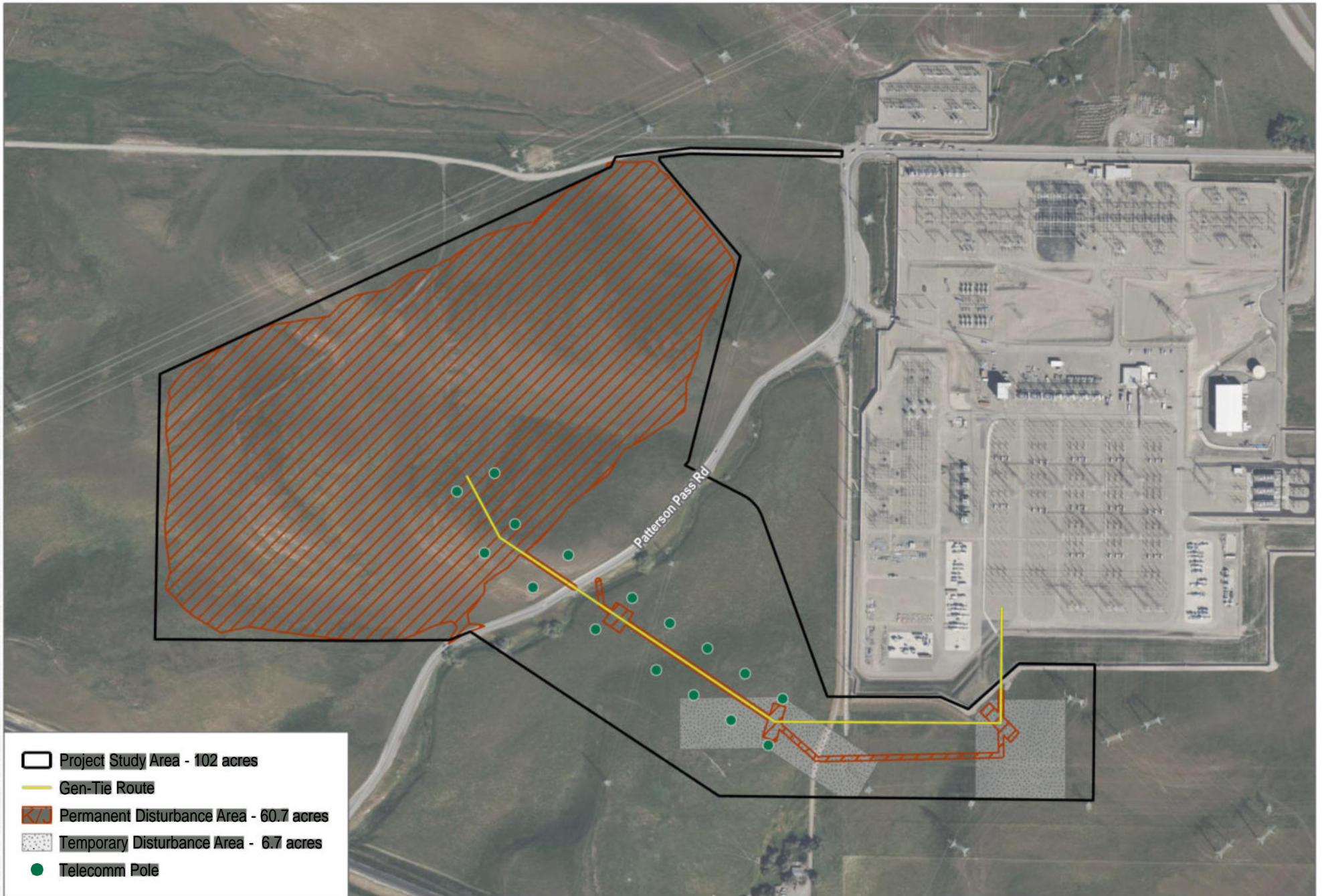
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## 7 References

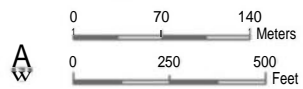
- California Public Utilities Commission (CPUC). 2019. West of Devers Upgrade Project Nesting Bird Management Plan. September 2019.
- Dudek. 2024. Draft Environmental Impact Report Potentia-Virdi Battery Energy Storage System Facility Project. June 2024.
- Pagel, J.E., D.M. Whittington, and G.T. Allen. 2010. *Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations*. Division of Migratory Bird Management, U.S. Fish and Wildlife Service. Sacramento, California. February 2010.

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- Project Study Area - 102 acres
- Gen-Tie Route
- Permanent Disturbance Area - 60.7 acres
- Temporary Disturbance Area - 6.7 acres
- Telecomm Pole

SOURCE: Bing Maps 2023



**FIGURE 1**

Project Site Aerial

Potentia-Viridi BESS Project

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