



County of San Diego

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PLEASE NOTE THAT A FORMAL APPLICATION FOR A HABITAT LOSS PERMIT HAS NOT BEEN FILED AT THIS TIME. THE FOLLOWING IS A DRAFT FORM OF DECISION FOR A HABITAT LOSS PERMIT SHOWING THE FORMAT AND POSSIBLE CONDITIONS FOR A FUTURE HABITAT LOSS PERMIT. BECAUSE A FORMAL APPLICATION HAS NOT BEEN FILED, CERTAIN DATES, FINDINGS AND OTHER INFORMATION IS ABSENT FROM THE DRAFT FORM OF DECISION, THIS INFORMATION WILL BE INCLUDED IN THE FINAL FORM OF DECISION.

DATE (TO BE DETERMINED)

CR Questhaven, LLC
444 West Beech Street, Suite 300
San Diego, CA 92101

DRAFT **Habitat Loss Permit**

APPLICATION NUMBER: HLP XX-XXX, ER 20-08-008

ASSOCIATED PERMIT(S): PDS2020-TM-5643, PDS2022-STP-22-018,
PDS2020-AD-20-001

NAME OF APPLICANT: CR Questhaven, LLC

DESCRIPTION/LOCATION OF LOSS:

The project proposes a Tentative Map, Density Bonus Permit, Site Plan Review, and Administrative Permit to develop the 69.1-acre site with 76 single-family homes. The Project will impact 7.2 acres of Diegan coastal sage scrub (CSS) as shown on the attached Habitat Loss Exhibit. The Project site is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area as indicated on the attached USGS map. The site is currently undeveloped and includes several unimproved dirt roads and trails. Surrounding uses include open space to the west and north, residential uses to the north and east, and an indoor sports complex to the south.

Biological resources on the Project site were evaluated in a Biological Technical Report prepared by Alden Environmental, Inc on May 6, 2024. Onsite habitat includes Diegan coastal sage scrub, scrub oak chaparral, mafic chamise chapparal, mafic southern mixed chaparral, non-native grassland, eucalyptus woodland, disturbed, and developed habitat. Four special-status plant species and five special-status animal species were identified on site: Orcutt's brodiaea (*Brodiaea orcuttii*), Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), Nuttall's scrub oak (*Quercus dumosa*), Ashy spike-moss (*Selaginella cinerascens*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), western spadefoot toad (*Spea hammondi*), Cooper's hawk (*Accipiter cooperii*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). A USFWS protocol survey for the coastal California gnatcatcher (CAGN) was conducted from April 9 through May 1, 2020. One pair of CAGN was observed on site during all three visits made to the site between April 9 and May 1, 2020.

A Habitat Loss Permit is intended to address the loss of coastal sage scrub habitat. The coastal sage scrub onsite is considered "Intermediate Value for Long-Term Conservation" according to the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines Logic Flow Chart. The project area is within the Pre-Approved Mitigation Area (PAMA) of the County's draft North County Multiple Species Conservation Plan (NCMSCP). Implementation of mitigation measures would reduce project impacts to a level below significance for sensitive habitats. Therefore, the Project conforms to the NCCP standards and guidelines.

Table 1. Existing Vegetation Communities, Impacts, and Mitigation

Habitat Type	Existing Vegetation (acres)	Impacts (acres)	Mitigation Ratio	Mitigation Required (acres)
Diegan Coastal Sage Scrub	11.9	7.2	1:1	7.2
Scrub Oak Chaparral	0.6	0.2	1:1	0.2
Mafic Chamise Chaparral	2.4	1.6	3:1	4.8
Mafic Southern Mixed Chaparral	25.7	2.8	3:1	8.4
Non-Native Grassland	20.9	15.4	0.5:1	7.8
Eucalyptus Woodland	2.9	1.4	--	--
Disturbed	3.7	2.6	--	--
Developed	1.0	1.7	--	--
Total	69.1	32.9	--	28.4

*The project includes 7.4 acres of impact neutral area, 29.0 acres preserved onsite, 15.4 acres preserved offsite (adjacent), 1.1 acres restored/preserved onsite, and 4.8 acres restored/preserved offsite (adjacent).

DECISION:

The Director of Planning & Development Services has approved your application for a HABITAT LOSS PERMIT. This Habitat Loss Permit approval does not become final until both the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) concur with the Director's approval, by the either of the following:

1. Concurrence implied by allowing a 30-day period, initiated by their receipt of this decision, to lapse without presenting written notification to the County that the decision is inconsistent with the Southern California Coastal Sage Scrub (CSS) Natural Community Conservation Planning (NCCP) Process Guidelines (CDFW, November 1993) or any approved subregional mitigation guidelines; or
2. Granting concurrence through written notification to the County prior to the conclusion of the 30-day period, initiated by their receipt of this decision, that the project is consistent with the Southern California CSS NCCP Process Guidelines or any approved subregional mitigation guidelines.

Pending the issuance of an associated Grading Permit, Clearing Permit or Improvement Plan from the County of San Diego, this Habitat Loss Permit allows for the loss of the above-described coastal sage scrub habitat (see attached Habitat Loss Exhibit) and incidental take of the California gnatcatcher for a period of one calendar year commencing the day concurrence is given by both the USFWS and CDFW. If the loss of habitat, as authorized by this Habitat Loss Permit, has not occurred within this one-year period, this Habitat Loss Permit, and the authorization for the loss of coastal sage scrub habitat expires.

This Habitat Loss Permit cannot be relied upon for the clearing, grading, or removal of any vegetation until a valid Grading Permit, Clearing Permit or Improvement Plan has been issued from the County of San Diego authorizing such vegetation removal. Furthermore, use and reliance upon this Habitat Loss Permit cannot occur until all of the requirements as specified within the "Conditions of Approval" section of this permit have been satisfied.

CONDITIONS OF APPROVAL:

The following conditions are being placed on PDS2020-TM-5643. For the final Habitat Loss Permit, the list of conditions will be modified to require satisfaction of all conditions prior to use and reliance on the HLP.

APPROVAL OF MAP: The conditions shall be complied with either before a Final Map is approved and filed with the County Recorder or where specifically indicated, may be satisfied on the Final Map and shall also be complied with prior to approval of any plans and issuance of any grading or other permits as specified:

BIO#1–BIOLOGICAL EASEMENT (M-BIO-1) [PDS, FEE X 2]

INTENT: In order to protect sensitive biological resources, pursuant to the County's Guidelines for Determining Significance for Biological Resources, a biological open space easement shall be granted. **DESCRIPTION OF REQUIREMENT:** Grant to the County of San Diego an open space easement, as shown on the approved Tentative Map. This easement is for the protection of biological resources and prohibits all of the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. Granting of this open space authorizes the County and its agents to periodically access the land to perform management and monitoring activities for the purposes of species and habitat conservation. The only exception(s) to this prohibition are:

1. Selective clearing of vegetation by hand to the extent required by written order of the fire authorities for the express purpose of reducing an identified fire hazard. While clearing for fire management is not anticipated with the creation of this easement, such clearing may be deemed necessary in the future for the safety of lives and property. All fire clearing shall be pursuant to the applicable fire code of the Fire Authority Having Jurisdiction and the Memorandum of Understanding dated February 26, 1997, between the wildlife agencies and the fire districts and any subsequent amendments thereto.
2. Activities conducted pursuant to a revegetation or habitat management plan approved by the Director of PDS, DPR and DPW.
3. Vegetation removal or application of chemicals for vector control purposes where expressly required by written order of the County of San Diego DEH.

DOCUMENTATION: The applicant shall show the easement on the Final Map with the appropriate granting language on the title sheet concurrent with Final Map Review – OR – The applicant shall prepare the draft plats and legal descriptions of the easements, then submit them for preparation and recordation with the *[DGS, RP]*, and pay all applicable fees associated with preparation of the documents. **TIMING:** Prior to the approval of the map or on the map, and prior to the approval of any plan and issuance of any permit, the easements shall be executed and recorded. **MONITORING:** For recordation on the map, *[PDS, LDR]* shall route the Final Map to *[PDS, PCC]* for approval prior to map recordation – OR – for recordation by separate document, the *[DGS, RP]* shall prepare and approve the easement documents and send them to *[PDS, PCC]* and *[DPR GPM]* for preapproval. The *[PDS, PCC]* shall preapprove the language and estimated location of the easements prior to recordation. Upon Recordation of the easements *[DGS, RP]* shall forward a copy of the recorded documents to *[PDS, PCC]* for satisfaction of the condition or if recorded on the map, the *[PDS LDR]* shall satisfy the condition after map recordation.

BIO#2–LBZ EASEMENT [PDS, FEEX 2]

INTENT: In order to protect sensitive biological resources, pursuant to the County's Guidelines for Determining Significance for Biological Resources, a Limited Building Zone (LBZ) Easement shall be granted to limit the need to clear or modify vegetation for fire protection purposes within an adjacent biological resource area. **DESCRIPTION OF**

REQUIREMENT: Grant to the County of San Diego a LBZ Easement as shown on the Tentative Map. The purpose of this easement is to limit the need to clear or modify vegetation for fire protection purposes within the adjacent biological open space easement and prohibit the construction or placement of any structure designed or intended for occupancy by humans or animals. The only exceptions to this prohibition are:

1. Decking, fences, and similar facilities.
2. Sheds, gazebos, and detached garages, less than 250 square feet in total floor area, that are designed, constructed, and placed so that they do not require clearing or fuel modification within the biological open space easement, beyond the clearing/fuel modification required for the primary structures on the property.

DOCUMENTATION: The applicant shall show the easement on the Final Map with the appropriate granting language on the title sheet concurrent with Final Map Review – OR – The applicant shall prepare the draft plats and legal descriptions of the easements, then submit them for preparation and recordation with the *[DGS, RP]*, and pay all applicable fees associated with preparation of the documents. **TIMING:** Prior to the approval of the map or on the map and prior to the approval of any plan and issuance of any permit, the easements shall be recorded. **MONITORING:** For recordation on the map, the *[PDS, LDR]* shall route the Final Map to *[PDS, PCC]* for approval prior to map recordation – OR – for recordation by separate document, the *[DGS, RP]* shall prepare and approve the easement documents and send them to *[PDS, PCC]* and *[DPR GPM]* for preapproval. The *[PDS, PCC]* shall preapprove the language and estimated location of the easements prior to recordation. Upon Recordation of the easements *[DGS, RP]* shall forward a copy of the recorded documents to *[PDS, PCC]* for satisfaction of the condition – OR – if recorded on the map, the *[PDS LDR]* shall satisfy the condition after map recordation.

BIO#3–OPEN SPACE SIGNAGE (M-BIO-3) [PDS, FEE]

INTENT: In order to protect the proposed open space easement from entry, informational signs shall be installed. **DESCRIPTION OF REQUIREMENT:** Open space signs shall be placed along the biological open space boundary as indicated on the approved Tentative Map. The signs must be corrosion resistant, a minimum of 6" x 9" in size, on posts not less than three (3) feet in height from the ground surface, and must state the following:

Sensitive Environmental Resources Area Restricted by Easement

Entry without express written permission from the County of San Diego is prohibited. To report a violation or for more information about easement restrictions and exceptions contact the County of San Diego,
Planning & Development Services
Reference: PDS2020-TM-5643

DOCUMENTATION: The applicant shall install the signs as indicated above and provide site photos and a statement from a California Registered Engineer, or licensed surveyor, that the open space signs have been installed at the boundary of the open space easement(s). **TIMING:** Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, the open space signs shall be installed. **MONITORING:** The *[PDS, PCC]* shall review the photos and statement for compliance with this condition.

BIO#4–OPEN SPACE FENCING (M-BIO-3) [PDS, FEE]

INTENT: In order to protect the proposed open space easement from entry, and disturbance, permanent fencing or walls shall be installed. **DESCRIPTION OF REQUIREMENT:** Open space fencing shall be placed along the biological open space boundary as indicated on the Tentative Map. The fencing design shall consist of three strand non-barbed wire or split rail. **DOCUMENTATION:** The applicant shall install the fencing as indicated above and provide site photos and a statement from a California Registered Engineer, or licensed surveyor that the open space fencing has been installed. **TIMING:** Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, the fencing shall be placed. **MONITORING:** The [PDS, PCC] shall review the photos and statement for compliance with this condition.

BIO#5–REVEGETATION PLAN (M-BIO-7)

INTENT: In order to mitigate for the impacts to Nuttall's scrub oak, southern mafic chaparral, coastal sage scrub, and western spadefoot toad, which are sensitive biological resources pursuant to the County's Guidelines for Determining Significance for Biological Resources, revegetation shall occur. **DESCRIPTION OF REQUIREMENT:** A Revegetation Plan shall be prepared, which mitigates impacts to Nuttall's scrub oak, southern mafic chaparral, coastal sage scrub, and western spadefoot toad. The revegetation plan shall conform to the Conceptual Restoration Plan dated May 6, 2024, and the most current version of the County of San Diego Report Format and Content Requirements for Revegetation Plans. The Revegetation Plan shall include the following:

- a. The monitoring plan shall be for a length of 5 years and have an 80 percent success criterion.
- b. A preservation plan over the land to be revegetated shall be included in the Revegetation Plan. The preservation plan shall include evidence of dedication of an open space easement to the County of San Diego or evidence of protection in perpetuity by some other means to the satisfaction of the Director of PDS.
- c. The report shall be prepared by a County approved biologist and the construction plans shall be prepared by a State of California Licensed Landscape Architect.
- d. Revegetation objectives, revegetation site biological resource map, 24"x 36" landscape plan, map showing revegetation areas according to mitigation type and amount, site preparation information, type of planting materials (e.g. species ratios, source, size material, etc.), planting program, 80 percent success criteria, and a detailed cost estimate.
- e. A cost estimate based on a 3% annual inflation rate shall be submitted and approved, which includes the cost of the plant stock and its installation, irrigation system and installation, cost of monitoring and maintenance of the revegetation area for the required monitoring period, and report preparation and staff time to review.

DOCUMENTATION: The applicant shall prepare the Revegetation Plan, submit it to the [PDS, ZONING] and pay all the applicable review fees and deposits. **TIMING:** Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, the Revegetation Plan shall be approved. **MONITORING:** The [PDS, LA] shall review the Revegetation Plan for conformance with this condition and the Report Format and

Content Requirements for Revegetation Plans. Upon approval of the Plan, a Director's Decision of approval shall be issued to the applicant, and a request for compliance with condition BIO#6 shall be made to enter into a Secured Agreement for the implementation of the Plan.

BIO#6–SECURED AGREEMENT (M-BIO-7)

INTENT: In order to assure project completion and success of the Revegetation Plan in condition BIO#5, a surety shall be provided and an agreement shall be executed.

DESCRIPTION OF REQUIREMENT: The applicant shall enter into a Secured Agreement with the County of San Diego as follows:

- a. The security shall consist of a letter of credit, bond, or cash for 100 percent of the estimated costs associated with the implementation of the Revegetation Plan and,
- b. Provide a 10 percent cash deposit of the cost of all improvements, but no less than \$3,000 and no more than \$30,000.
- c. The monitoring time and the length of time the Secured Agreement and cash deposit will be in effect starts at the time the installation is accepted by a County staff representative. The Secured Agreement and cash deposit shall be released upon completion of the Revegetation Plan implementation provided the installed vegetation is in a healthy condition and meets the 80 percent success criteria. Eighty- percent success rate and one hundred percent vegetative cover, excluding herbaceous species, shall be considered satisfactory completion of the Revegetation Plan.

DOCUMENTATION: The applicant shall execute a Secured Agreement provided with the Revegetation Plan Final Decision and provide the approved securities and the cash deposit for County monitoring time. The executed Agreement, cash deposit, and the securities shall be submitted to the *[PDS, LA]* for final review and approval. **TIMING:** Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, and after the approval of the Revegetation Plan, the agreement shall be executed and the securities provided for the revegetation plan implementation. **MONITORING:** The *[PDS, LA]* shall review the Agreement cash deposit and securities provided are in compliance with this condition, and the Revegetation Plan Final Decision. The *[PDS, LA]* shall sign the Agreement for the Director of PDS and ensure the cash deposit is collected. Upon acceptance of the Agreement, securities, and cash deposit, the *[PDS, LA]*, shall provide a confirmation letter-acknowledging acceptance of securities.

BIO#7–ORCUTT'S BRODIAEA TRANSLOCATION PLAN (M-BIO-7)

INTENT: In order to mitigate for the impacts to Orcutt's brodiaea, which are a sensitive biological resource pursuant to the County's Guidelines for Determining Significance for Biological Resources, revegetation shall occur. **DESCRIPTION OF REQUIREMENT:** A Revegetation Plan shall be prepared, which mitigates impacts to Nuttall's scrub oak and western spadefoot toad. The revegetation plan shall conform to the Conceptual Orcutt's Brodiaea Translocation Plan dated May 6, 2024, and the most current version of the County of San Diego Report Format and Content Requirements for Revegetation Plans. The Revegetation Plan shall include the following:

- f. The monitoring plan shall be for a length of 5 years and have an 80 percent success criterion.
- g. A preservation plan over the land to be revegetated shall be included in the Revegetation Plan. The preservation plan shall include evidence of dedication of an open space easement to the County of San Diego or evidence of protection in perpetuity by some other means to the satisfaction of the Director of PDS.
- h. The report shall be prepared by a County approved biologist and the construction plans shall be prepared by a State of California Licensed Landscape Architect.
- i. Revegetation objectives, revegetation site biological resource map, 24"x 36" landscape plan, map showing revegetation areas according to mitigation type and amount, site preparation information, type of planting materials (e.g. species ratios, source, size material, etc.), planting program, 80 percent success criteria, and a detailed cost estimate.
- j. A cost estimate based on a 3% annual inflation rate shall be submitted and approved, which includes the cost of the plant stock and its installation, irrigation system and installation, cost of monitoring and maintenance of the revegetation area for the required monitoring period, and report preparation and staff time to review.

DOCUMENTATION: The applicant shall prepare the Revegetation Plan, submit it to the *[PDS, ZONING]* and pay all the applicable review fees and deposits. **TIMING:** Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, the Revegetation Plan shall be approved. **MONITORING:** The *[PDS, LA]* shall review the Revegetation Plan for conformance with this condition and the Report Format and Content Requirements for Revegetation Plans. Upon approval of the Plan, a Director's Decision of approval shall be issued to the applicant, and a request for compliance with condition BIO#8 shall be made to enter into a Secured Agreement for the implementation of the Plan.

BIO#8—SECURED AGREEMENT (M-BIO-7)

INTENT: In order to assure project completion and success of the Revegetation Plan in condition BIO#7, a surety shall be provided and an agreement shall be executed.

DESCRIPTION OF REQUIREMENT: The applicant shall enter into a Secured Agreement with the County of San Diego as follows:

- d. The security shall consist of a letter of credit, bond, or cash for 100 percent of the estimated costs associated with the implementation of the Revegetation Plan and,
- e. Provide a 10 percent cash deposit of the cost of all improvements, but no less than \$3,000 and no more than \$30,000.
- f. The monitoring time and the length of time the Secured Agreement and cash deposit will be in effect starts at the time the installation is accepted by a County staff representative. The Secured Agreement and cash deposit shall be released upon completion of the Revegetation Plan implementation provided the installed vegetation is in a healthy condition and meets the 80 percent success criteria. Eighty- percent success rate and one hundred percent vegetative cover, excluding

herbaceous species, shall be considered satisfactory completion of the Revegetation Plan.

DOCUMENTATION: The applicant shall execute a Secured Agreement provided with the Revegetation Plan Final Decision and provide the approved securities and the cash deposit for County monitoring time. The executed Agreement, cash deposit, and the securities shall be submitted to the *[PDS, LA]* for final review and approval. **TIMING:** Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, and after the approval of the Revegetation Plan, the agreement shall be executed and the securities provided for the revegetation plan implementation. **MONITORING:** The *[PDS, LA]* shall review the Agreement cash deposit and securities provided are in compliance with this condition, and the Revegetation Plan Final Decision. The *[PDS, LA]* shall sign the Agreement for the Director of PDS and ensure the cash deposit is collected. Upon acceptance of the Agreement, securities, and cash deposit, the *[PDS, LA]*, shall provide a confirmation letter-acknowledging acceptance of securities.

BIO#9–RESOURCE MANAGEMENT PLAN (M-BIO-1)

INTENT: In order to provide for the long-term management of the proposed open space preserve, a Resource Management Plan (RMP) shall be prepared and implemented.

DESCRIPTION OF REQUIREMENT: Submit to and receive approval from the Director of PDS, an RMP. The RMP shall be consistent with the conceptual Upland RMP dated May 6, 2024. The plan shall be prepared and approved pursuant to the most current version of the County of San Diego Report Format and Content Requirements for Biological Resources. The final RMP cannot be approved until the following has been completed to the satisfaction of the Director of PDS and in cases where DPR has agreed to be the owner and/or manager, to the satisfaction of the Director of DPR.

- a. The plan shall be prepared and approved pursuant to the most current version of the County of San Diego Report Format and Content Requirements for Biological Resources.
- b. The habitat land to be managed shall be completely purchased.
- c. The easements shall be dedicated to ensure that the land is protected in perpetuity.
- d. A Resource Manager shall be selected and evidence provided by applicant as to the acceptance of this responsibility by the proposed Resource Manager.
- e. The RMP funding mechanism shall be identified and approved by the County to fund annual costs for basic stewardship.
- f. A contract between applicant and County shall be executed for the implementation of the RMP.

DOCUMENTATION: The applicant shall prepare the RMP and submit it to the *[PDS, ZONING]* and pay all applicable review fees. **TIMING:** Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, the RMP shall be approved. **MONITORING:** The *[PDS, PPD]* shall review the RMP for compliance with the content guidelines, the conceptual RMP, and this condition.

BIO#10–WETLAND PERMITS (M-BIO-6) [PDS, FEE X2]

INTENT: In order to comply with the State and Federal Regulations for the unvegetated ephemeral streambed, the following agency permits, or verification that they are not required shall be obtained. **DESCRIPTION OF REQUIREMENT:** The following permit and agreement shall be obtained, or provide evidence from the respective resource agency satisfactory to the Director of PDS that such an agreement or permit is not required:

- a. A Clean Water Act, Section 401/404 permit issued by the California Regional Water Quality Control Board and the U.S. Army Corps of Engineers for all project related disturbances of waters of the U.S. and/or associated wetlands.
- b. A Section 1602 Streambed Alteration Agreement issued by the California Department of Fish and Wildlife for all project related disturbances of any streambed.

DOCUMENTATION: The applicant shall consult each agency to determine if a permit or agreement is required. Upon completion of the agency review of this project, the applicant shall provide a copy of the permit(s)/agreement(s), or evidence from each agency that such an agreement or permit is not required to the [PDS, PCC] for compliance. **TIMING:** Prior to the approval of the map and prior to the approval of any plan and issuance of any permit, the permits shall be obtained. **MONITORING:** The [PDS, PCC] shall review the permits/agreement for compliance with this condition. Copies of these permits should be transmitted to the [DPW, ESU], for implementation on the grading plans.

BIO#11–PREVENTION OF INVASIVE PLANT SPECIES (M-BIO-4, M-BIO-5)

INTENT: In order to prevent the introduction of invasive, non-native plant species, the following shall be complied with during the operations of the project. **DESCRIPTION OF REQUIREMENT:** A County of San Diego approved plant list shall be used for areas immediately adjacent to open space. A hydroseed mix that incorporates native species, is appropriate to the area, and is free from invasive species shall be used for landscaped areas adjacent to the biological open space. **DOCUMENTATION:** The San Diego County Planning & Development Services landscape architect shall verify that all final landscape plans comply with the following: no invasive plant species, as included on the most recent version of the California Invasive Plant Council's California Invasive Plant Inventory for the project region shall be included, and the plant palette shall be composed of native species that do not require high irrigation rates. **TIMING:** Prior to the approval of any plan, and issuance of any permit, the applicant shall comply with this condition. **MONITORING:** The [PDS, PPD] shall review the statement and, photos, and any additional evidence for compliance with this condition.

PRE-CONSTRUCTION MEETING: *(Prior to Preconstruction Conference, and prior to any clearing, grubbing, trenching, grading, or any land disturbances.)*

(BIOLOGICAL RESOURCES)**BIO#12–TEMPORARY FENCING (M-BIO-2) [PDS, FEE]**

INTENT: In order to prevent inadvertent disturbance to areas outside the limits of grading, temporary construction fencing shall be installed. **DESCRIPTION OF REQUIREMENT:**

Prior to the commencement of any grading and/or clearing in association with this grading plan, temporary orange construction fencing shall be placed to protect from inadvertent disturbance of all open space easements that do not allow grading, brushing, or clearing. Temporary fencing is also required in all locations of the project where proposed grading or clearing is within 100 feet of an open space easement boundary. The placement of such fencing shall be approved by the PDS, Permit Compliance Section. Upon approval, the fencing shall remain in place until the conclusion of grading activities after which the fencing shall be removed. **DOCUMENTATION:** The applicant shall provide evidence that the fencing has been installed and have a California licensed surveyor certify that the fencing is located on the boundary of the open space easement(s). The applicant shall submit photos of the fencing along with the certification letter to the [PDS, PCC] for approval. **TIMING:** Prior to Preconstruction Conference, and prior to any clearing, grubbing, trenching, grading, or any land disturbances the fencing shall be installed, and shall remain for the duration of the grading and clearing. **MONITORING:** The [PDS, PCC] shall either attend the preconstruction conference and approve the installation of the temporary fencing, or review the certification and pictures provided by the applicant.

BIO#13–MIGRATORY BIRD AND RAPTOR RESOURCE AVOIDANCE (M-BIO-8) [PDS, FEE X2]

INTENT: In order to avoid impacts to migratory birds and raptors, which are a sensitive biological resource pursuant to the Migratory Bird Treaty Act (MBTA), a Resource Avoidance Area (RAA), shall be implemented on all plans. **DESCRIPTION OF REQUIREMENT:** There shall be no brushing, clearing and/or grading such that none will be allowed within 300 feet of migratory bird nesting habitat and 500 feet of raptor nesting habitat during the breeding season of the migratory bird and raptor. The breeding season is defined as occurring between January 15 and August 31. If clearing of vegetation or grading activities will occur during the breeding season for migratory birds or raptors, pre-construction survey(s) shall be conducted by a qualified biologist no more than 72 hours prior to the start of work to determine whether these species occur within the construction footprint and/or adjacent areas potentially impacted by construction noise (i.e., 60 dB(A) hourly average or ambient, if greater). If it is determined at the completion of pre-construction surveys that active nests belonging to these sensitive species are absent from the construction limits and adjacent potential noise-impacted area, construction shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to these sensitive species occur within the construction limits or adjacent noise-impacted area, the biologist shall determine the physical area in which construction activities cannot occur to protect the nesting species, and one of two actions shall occur: (1) construction activities in the area delineated by the biologist shall be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) construction activities shall be postponed until a temporary noise barrier or berm is constructed at the edge of the development footprint or other location determined appropriate and effective by the biologist and an acoustical engineer to ensure that noise levels in the occupied habitat are reduced to below 60 dB(A) hourly average or ambient, if greater. Decibel output shall be confirmed by a County-approved acoustical engineer and intermittent monitoring by a qualified biologist shall occur to ensure that the reduced noise levels are being maintained. **DOCUMENTATION:** The applicant shall provide a letter of agreement with this condition; alternatively, the applicant

may submit a written request for waiver of this condition. Although, no grading shall occur within the RAA until concurrence is received from the County and the Wildlife Agencies.

TIMING: Prior to preconstruction conference and prior to any clearing, grubbing, trenching, grading, or any land disturbances and throughout the duration of the grading and construction, compliance with this condition is mandatory unless the requirement is waived by the County upon receipt of concurrence from the Wildlife Agencies.

MONITORING: The [DPW, PDCI] shall not allow any grading in the RAA during the specified dates, unless a concurrence from the [PDS, PCC] is received. The [PDS, PCC] shall review the concurrence letter.

BIO#14–COASTAL CALIFORNIA GNATCATCHER RESOURCE AVOIDANCE (M-BIO-8) [PDS, FEE X2]

INTENT: In order to avoid impacts to the coastal California gnatcatcher, which is a sensitive biological resource pursuant to the Migratory Bird Treaty Act (MBTA), a Resource Avoidance Area (RAA), shall be implemented on all plans. **DESCRIPTION OF**

REQUIREMENT: There shall be no brushing, clearing and/or grading such that none will be allowed within 500 feet of coastal sage scrub nesting habitat during the breeding season of the coastal California gnatcatcher. The breeding season is defined as occurring between February 15 and August 31. If clearing of vegetation or grading activities will occur during the breeding season for the coastal California gnatcatcher, pre-construction survey(s) shall be conducted by a qualified biologist no more than 72 hours prior to the start of work to determine whether these species occur within the construction footprint and/or adjacent areas potentially impacted by construction noise (i.e., 60 dB(A) hourly average or ambient, if greater). If it is determined at the completion of pre-construction surveys that active nests belonging to these sensitive species are absent from the construction limits and adjacent potential noise-impacted area, construction shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to these sensitive species occur within the construction limits or adjacent noise-impacted area, the biologist shall determine the physical area in which construction activities cannot occur to protect the nesting species, and one of two actions shall occur: (1) construction activities in the area delineated by the biologist shall be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) construction activities shall be postponed until a temporary noise barrier or berm is constructed at the edge of the development footprint or other location determined appropriate and effective by the biologist and an acoustical engineer to ensure that noise levels in the occupied habitat are reduced to below 60 dB(A) hourly average or ambient, if greater. Decibel output shall be confirmed by a County-approved acoustical engineer and intermittent monitoring by a qualified biologist shall occur to ensure that the reduced noise levels are being maintained. **DOCUMENTATION:** The

applicant shall provide a letter of agreement with this condition; alternatively, the applicant may submit a written request for waiver of this condition. Although, no grading shall occur within the RAA until concurrence is received from the County and the Wildlife Agencies.

TIMING: Prior to preconstruction conference and prior to any clearing, grubbing, trenching, grading, or any land disturbances and throughout the duration of the grading and construction, compliance with this condition is mandatory unless the requirement is waived by the County upon receipt of concurrence from the Wildlife Agencies.

MONITORING: The [DPW, PDCI] shall not allow any grading in the RAA during the

specified dates, unless a concurrence from the [PDS, PCC] is received. The [PDS, PCC] shall review the concurrence letter.

FINAL GRADING RELEASE: *(Prior to any occupancy, final grading release, or use of the premises in reliance of this permit).*

(BIOLOGICAL RESOURCES)

BIO#15—OPEN SPACE SIGNAGE & FENCING (M-BIO-3) [PDS, FEE]

INTENT: In order to protect the proposed open space easement from entry, the fencing and signage shall be installed. **DESCRIPTION OF REQUIREMENT:** The permanent fences and open space signs shall be placed along the open space boundary as shown on these plans and the approved Conceptual Grading and Development Plan for PDS2020-TM-5643.

- a. Evidence shall be site photos and a statement from a California Registered Engineer, or licensed surveyor that the permanent fences and open space signs have been installed.
- b. The signs must be corrosion resistant, a minimum of 6" x 9" in size, on posts not less than three (3) feet in height from the ground surface, and must state the following:

Sensitive Environmental Resources Area Restricted by Easement

Entry without express written permission from the County of San Diego is prohibited. To report a violation or for more information about easement restrictions and exceptions contact the County of San Diego,
Planning & Development Services
Reference: PDS2020-TM-5643

DOCUMENTATION: The applicant shall install the fencing and signage and provide the documentation photos and certification statement to the [PDS, PCC]. **TIMING:** Prior to the occupancy of any structure or use of the premises in reliance and prior to Final Grading Release ([Grading Ordinance Sec. 87.421.a.3](#)) the fencing and signage shall be installed. **MONITORING:** The [PDS, PCC] shall review the photos and statement for compliance with this condition.

BIO#16—EASEMENT AVOIDANCE (M-BIO-1) [PDS, FEE]

INTENT: In order to protect sensitive resources, pursuant to [County Grading Ordinance Section 87.112](#) the open space easements shall be avoided. **DESCRIPTION OF REQUIREMENT:** The easement indicated on this plan is for the protection of sensitive environmental resources and prohibits all of the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. It is unlawful to grade or clear within an open space easement, any disturbance shall constitute a violation of the [County Grading Ordinance Section 87.112](#) and will result in enforcement action and restoration. The only exception(s) to this prohibition are:

1. Selective clearing of vegetation by hand to the extent required by written order of the fire authorities for the express purpose of reducing an identified fire hazard. While clearing for fire management is not anticipated with the creation of this easement, such clearing may be deemed necessary in the future for the safety of lives and property. All fire clearing shall be pursuant to the applicable fire code of the Fire Authority Having Jurisdiction and the Memorandum of Understanding dated February 26, 1997, between the wildlife agencies and the fire districts and any subsequent amendments thereto.
2. Activities conducted pursuant to a revegetation or habitat management plan approved by the Director of PDS, DPR and DPW.
3. Vegetation removal or application of chemicals for vector control purposes where expressly required by written order of the County of San Diego DEH.

DOCUMENTATION: The applicant shall provide a letter statement to the [PDS, PCC] stating that all Sensitive Resource Easements were avoided during the grading construction, and that no impacts or encroachment into the open space occurred.

TIMING: Prior to Final Grading Release the letter verifying the easements were not disturbed shall be submitted. **MONITORING:** The [DPW, PDCI] shall not allow any grading, clearing or encroachment into the open space easement.

ENVIRONMENTAL FINDINGS:

A. CEQA Findings

1. TO BE PROVIDED

B. FINDINGS MADE IN SUPPORT OF THE ISSUANCE OF THE HABITAT LOSS PERMIT:

The following findings are made based upon all of the documents contained in the record for this project, and pursuant to Section 86.104 of County of San Diego Ordinance No. 8365 (N.S.) and Section 4.2.g of the CSS NCCP Process Guidelines (CDFW, November 1993):

Finding 1.a: The habitat loss does not exceed the five percent guideline.

The proposed project will impact 7.2 acres of coastal sage scrub and 1 pair of coastal California gnatcatcher (*Polioptia californica*). Approved coastal sage scrub losses as of the date of May 13, 2024, and including this approval, for the entire unincorporated County, outside the boundaries of the Multiple Species Conservation Program (MSCP), are presented in the following table:

Unincorporated Area Coastal Sage Scrub Cumulative Losses	
Total loss allowed under five percent guideline:	2953.30 acres
Cumulative loss of Coastal sage scrub to date:	2392.23 acres
Net loss due to this project:	7.2 acres

Total cumulative loss:	2399.43 acres
Remaining loss under five percent guideline:	553.87 acres

Finding 1.b: The habitat loss will not preclude connectivity between areas of high habitat values.

The existing habitat onsite is considered to be of Intermediate Quality as defined by the NCCP Conservation Guidelines. The Habitat Evaluation Map identifies the project site as having very high, high, and developed value habitat. The project will concentrate development within developed value habitat and adjacent to existing development to the north and east. The project proposes to preserve biological open space onsite, as well as adjacent offsite areas, that are within high and very high value habitat. These areas are also adjacent to high and very high value habitat offsite to the south and west. Therefore, the habitat loss will not preclude connectivity between areas of high habitat values.

Finding 1.c: The habitat loss will not preclude or prevent the preparation of the subregional NCCP.

The Project site is located within designated Pre-Approved Mitigation Area (PAMA) of the County's draft North County MSCP. The project will concentrate development in an area that is characterized as lower in biological quality and adjacent to existing development to the north and east. The remainder of the project site, as well as adjacent offsite areas, will be preserved within a biological open space easement. These areas are located adjacent to undeveloped lands that are characterized as higher in biological quality. The project also includes revegetation, enhancement, and management of the open space areas. Further, the project is not within or adjacent to any local or regional wildlife corridors. Therefore, the habitat loss will not preclude or prevent the preparation of the subregional NCCP.

Finding 1.d: The habitat loss has been minimized and mitigated to the maximum extent practicable in accordance with Section 4.3 of the NCCP Process Guidelines.

The habitat onsite is considered of Intermediate Value pursuant to the NCCP Logic Flow Chart. The proposed project will impact 7.2 acres of the total 11.9 acres of coastal sage scrub present on the site. The proposed development footprint would be situated adjacent to existing development to the north and east. The remainder of the property, as well as adjacent areas offsite, would be preserved within a biological open space easement and managed in perpetuity as mitigation for project impacts. This 50.3-acre preserve is located adjacent to undeveloped lands which would allow for connectivity to remain.

Besides the minimized project design, the project proposes the following measures to ensure that indirect impacts are minimized:

- Placement of temporary flagging/fencing during grading/clearing under the supervision of a biological monitor.
- Implementation of grading and clearing restrictions during breeding season months for migratory birds and raptors.
- Implementation of grading and clearing restrictions during breeding season months for the coastal California gnatcatcher.
- Implementation of Best Management Practices (BMPs) to ensure no impacts occur to sensitive wildlife species during project related activities.
- Placement of permanent fencing and signage at the interface of the project and preserve.

With all of the design elements and mitigation measures incorporated into the project, it has been found that the area proposed for habitat loss has been minimized and mitigated to the maximum extent practicable.

Finding 2 The habitat loss will not appreciably reduce the likelihood of survival and recovery of listed species in the wild.

Four special-status plant species and five special-status animal species were identified on site: Orcutt's brodiaea (*Brodiaea orcuttii*), Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), Nuttall's scrub oak (*Quercus dumosa*), Ashy spike-moss (*Selaginella cinerascens*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), western spadefoot toad (*Spea hammondii*), Cooper's hawk (*Accipiter cooperii*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*). A USFWS protocol survey for the coastal California gnatcatcher (CAGN) was conducted from April 9 through May 1, 2020. One pair of CAGN was observed on site during all three visits made to the site between April 9 and May 1, 2020.

Impacts to listed species would be fully mitigated by the project. Mitigation includes breeding season avoidance for the coastal California gnatcatcher, migratory birds, and raptors; revegetation and enhancement; preservation of habitat; and management of preserved areas through a Resource Management Plan (RMP). Through these mitigation measures the proposed project will not appreciably reduce the likelihood of the survival and recovery of listed species.

Finding 3: The habitat loss is incidental to otherwise lawful activities.

The issuance of a Habitat Loss Permit by the County of San Diego, with the concurrence of the Department of Fish and Wildlife and U.S. Fish and Wildlife Service and approval by the County of San Diego of a Grading Permit, Clearing Permit, or Improvement Plan is required prior to the clearing of any coastal sage scrub supported on the project site. No state or federal permits other than those mentioned above are identified as being required at this time. Construction and/or land use modification will not commence until all appropriate permits have been issued. The project has been found to be in conformance with Section 86.104 of

the San Diego County Code. As such, the anticipated loss will be incidental to “otherwise lawful activities”.

NCCP FLOWCHART

1. Is natural vegetation present? **Yes.**
2. Is Coastal sage scrub present? **Yes.**
3. Is Coastal sage scrub the densest in the subregion? **No.**
4. Is the land close to high value district. **Yes.**
5. Is the land located in a corridor between higher value districts? **No.**
6. Does the land support high density of target species? **Yes.**

Based on the NCCP Logic Flow Chart, the quality of habitat supported on the Questhaven project is defined as being “Intermediate Value.”

MITIGATION MONITORING AND REPORTING PROGRAM:

The following shall be the Mitigation Monitoring or Reporting Program for this Habitat Loss Permit:

Public Resources Code Section 21081.6 requires the County to adopt a mitigation reporting or monitoring program for any project that is approved on the basis of a mitigated Negative Declaration or an Environmental Impact Report for which findings are required under Section 21081(a)(1). The program must be adopted for the changes to a project which the County has adopted, or made a condition of project approval, in order to mitigate or avoid significant effects on the environment. The program must be designed to ensure compliance during project implementation.

The mitigation monitoring program is comprised of all the environmental mitigation measures adopted for the project. The full requirements of the program (such as what is being monitored, method and frequency, who is responsible, and required time frames) are found within the individual project conditions. These conditions are referenced below by category under the mechanism which will be used to ensure compliance during project implementation.

- Subsequent Project Permits

Compliance with the following conditions is assured because specified subsequent permits or approvals required for this project will not be approved until the conditions have been satisfied:

BIO#1-16

- Enforcement

Compliance with the following conditions is assured because complaints of non-compliance may be provided by the public to the County which may then investigate the status of compliance and pursue enforcement:

N/A

- Ongoing Mitigation

Compliance with the following conditions is assured because County staff will monitor the on-going requirements and, if necessary, pursue the remedies specified in the project permit, the security agreement, or the mitigation monitoring agreement:

N/A

NOTICE: The issuance of this permit by the County of San Diego does not authorize the applicant for said permit to violate any federal, state, or county laws, ordinances, regulations, or policies, including but not limited to, the federal Endangered Species Act and any amendments thereto.

NOTIFICATION TO APPLICANT: Because your project has an effect on native biological resources, State law requires the payment (or proof of prior payment) of a \$4,051.25 (2024 fees) fee to the California Department of Fish and Wildlife for their review of the Environmental Impact Report (Fish and Wildlife Code §711.4) and a \$50 administrative fee to the County (\$4,101.25 total). To comply with State law, the applicant must file the EIR and remit applicable fees within five (5) working days of the date of the project approval. Payment or sufficient proof of prior payment to the County Clerk is required at the time of filing. Payment may be made with cash or by check/money order made payable to the "San Diego Recorder/Clerk". American Express, Discover, MasterCard, and Visa Debit card payments are also accepted at County Administration Center with a \$2.50 surcharge per transaction, and must be submitted to the Clerk at the time of filing the EIR.

JUDICIAL REVIEW TIME LIMITATIONS: The time within which judicial review of this decision must be sought is governed by Code of Civil Procedure Section 1094.6, which has been made applicable in the County of San Diego by San Diego County Code Section 11.120. Any petition or other paper seeking judicial review must be filed in the appropriate court not later than the 90th day following the date on which this decision becomes final; however, if within 10 days after the decision becomes final a request for the record of the proceedings is filed and the required deposit in an amount sufficient to cover the estimated cost of preparation of such record is timely deposited, the time within which such petition may be filed in court is extended to not later than the 30th day following the date on which the record is either personally delivered or mailed to the party, or the party's attorney of record. A written request for the preparation of the record of the proceedings shall be filed with the Director, Planning & Development Services, 5510 Overland Avenue, Suite 110, San Diego, California 92123.

The foregoing decision was approved by the Director of Planning & Development Services on date of decision. A copy of this decision, and the documentation supporting

the decision, is on file in the Planning & Development Services office at 5510 Overland Avenue, Suite 110, San Diego, California.

PLANNING & DEVELOPMENT SERVICES
DAHVIA LYNCH, DIRECTOR

BY:

ASHLEY SMITH, Chief
Project Planning Division

DL:AS:kw

Attachments

Habitat Loss Exhibit

USGS Map

Biological Resource Report (Alden Environmental, Inc; May 6, 2024)

Conceptual Revegetation Plan (Alden Environmental, Inc; May 6, 2024)

Conceptual Upland Resource Management Plan (Alden Environmental, Inc; May 6, 2024)

Conceptual Orcutt's Brodiaea Translocation Plan (Alden Environmental, Inc; May 6, 2024)

cc: To be provided at issuance of Habitat Loss Permit

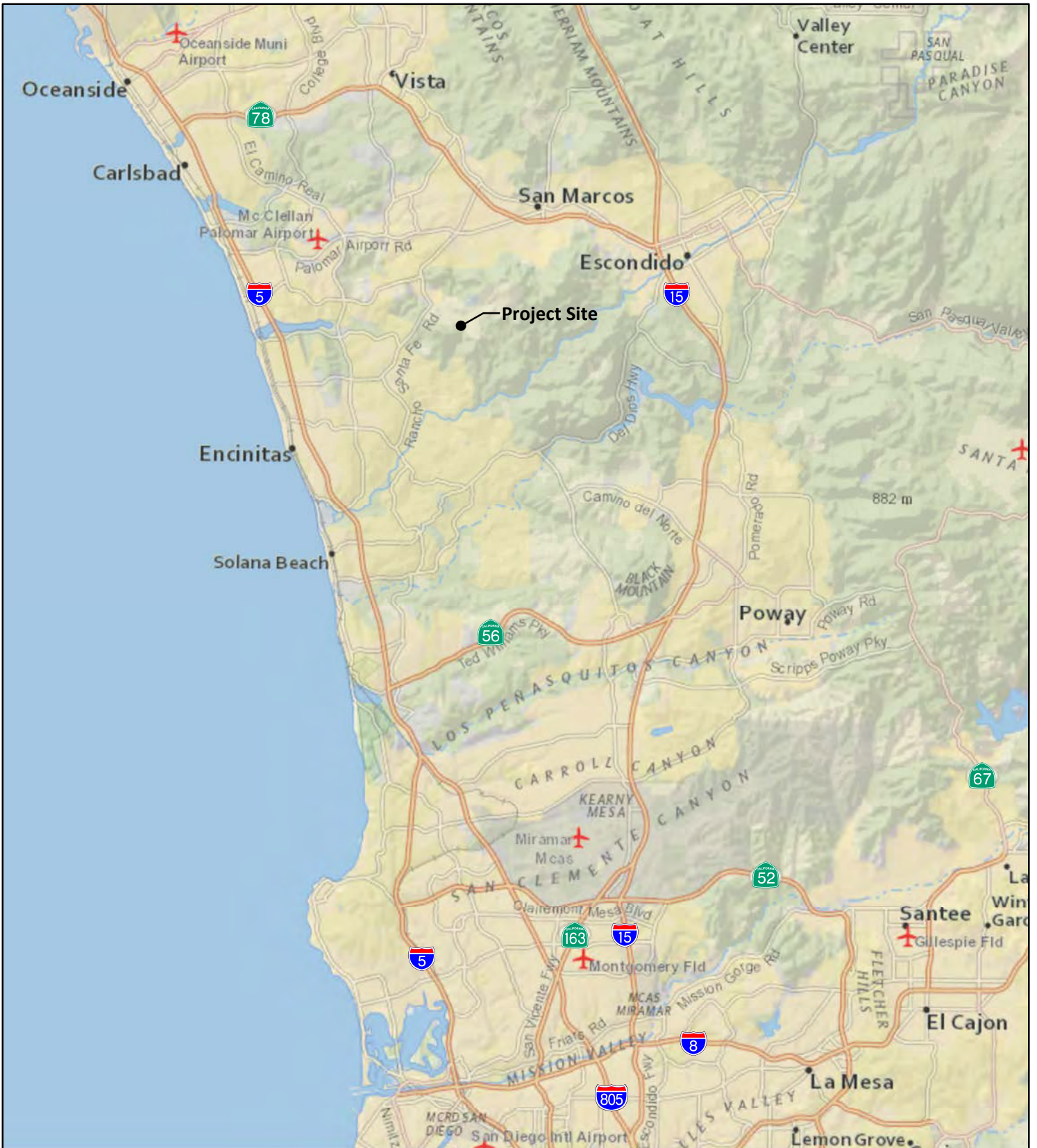
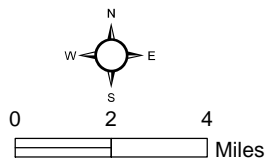


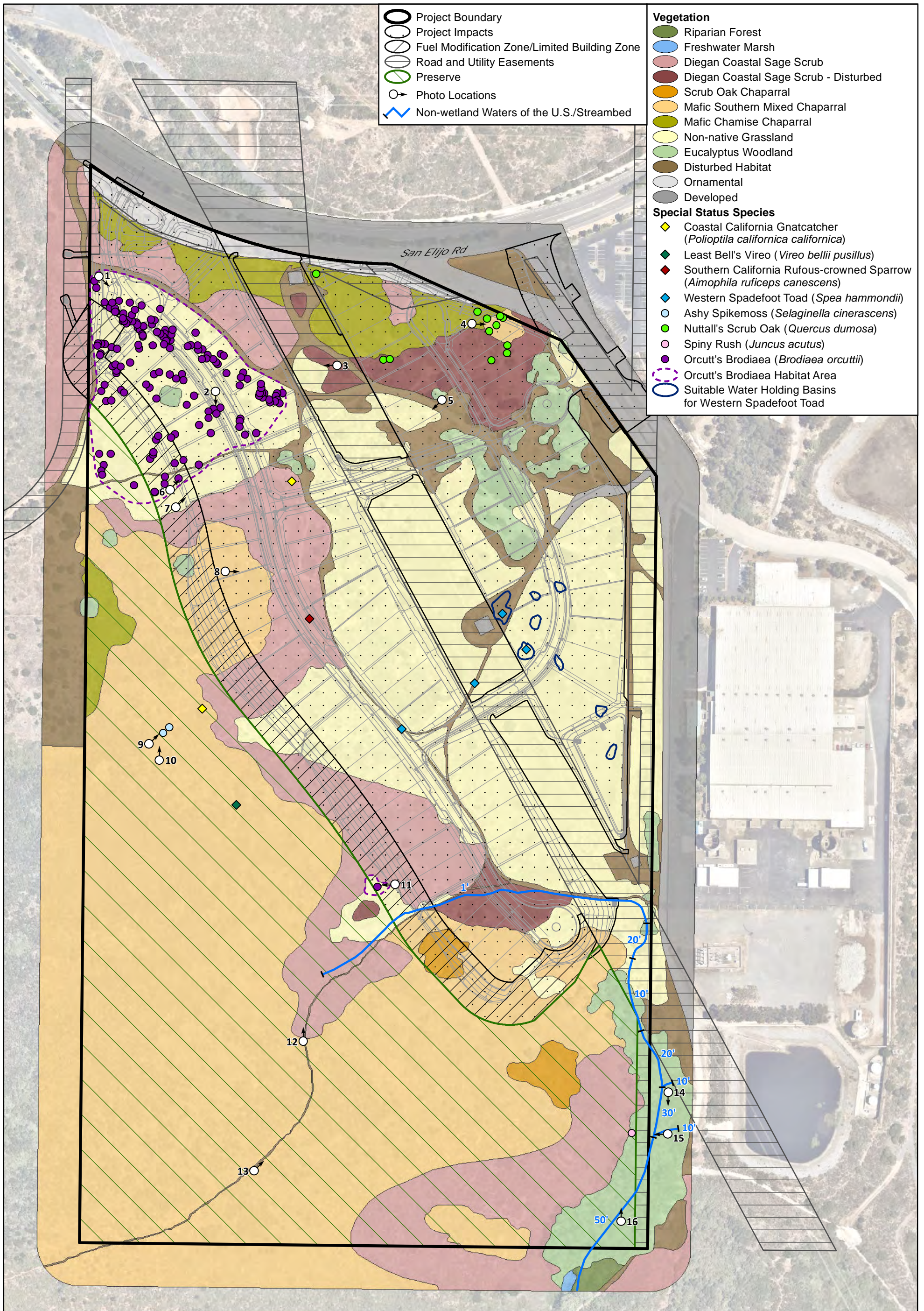
Figure 1

Regional Location

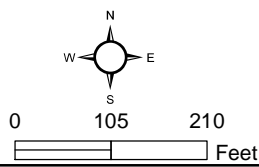
QUESTHAVEN



ALDEN
ENVIRONMENTAL, INC



Aerial Photo: Nearmap 2020



ALDEN
 ENVIRONMENTAL, INC.

Figure 4

Vegetation and Sensitive Resources/Impacts

QUESTHAVEN

**Biological Technical Report for the
Questhaven Tentative Map Project
PDS2020-TM-5643**

May 6, 2024

Project Proponent:
ColRich Communities
444 West Beech Street, Suite 300
San Diego, CA 92101

Lead Agency:
County of San Diego Planning and Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123



Greg Mason
County Approved Biological Consultant

Prepared by:
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San Diego, CA 92104



Biological Technical Report for the Questhaven Tentative Map Project

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SUMMARY

The Questhaven Tentative Map project site is approximately 69.1 acres in size and is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. The site is within the boundaries of the draft North County Multiple Species Conservation Program (NCMSCP) area; however, this plan has not been adopted and is not applicable to the project. While not required to comply with the draft plan requirements, this report does reference Draft NCMSCP background and biological information, as applicable.

The project consists of a Tentative Map, Density Bonus Permit, Site Plan Review, and an Administrative Permit for the site. The total number of lots proposed is 93, with 76 residential and 17 non-residential. The project would provide for development of 69 market-rate units and 7 reserved units for affordable housing (18.27 acres), 4 water quality detention basins (2.40 acres), 1 private park parcel (0.31 acres), 4 private road lots (4.34 acres), and 7 open space HOA lots for fire buffer area (10.77 acres). The project also includes a 50.3 acre biological open space area that would provide habitat mitigation for the project and be contiguous with open space lands to the south and west.

Project construction would result in direct and permanent impacts to approximately 98 percent of the Orcutt's brodiaea plants on site and 3.4 acres out of 3.8 acres mapped as suitable habitat for the species on site.

Project construction would result in direct and permanent impacts to approximately one-third of the Nuttall's scrub oaks on site.

Project construction would result in the direct and permanent removal of three locations where western spadefoot toads were observed and eight water holding basins (totaling 0.14 acre in area) suitable for spadefoot toad breeding. It would also result in the direct and permanent removal of 27.2 acres of habitat that could be used for non-breeding purposes. Construction could also cause direct injury/mortality to individual toads.

Project construction would result in the direct and permanent removal of 7.2 acres of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed habitat on and off site occupied by the coastal California gnatcatcher. Project construction could also have temporary noise impacts on coastal California gnatcatcher nesting.

Project construction would result in the direct and permanent removal of 27.2 acres of habitat used, or potentially used, by the southern California rufous-crowned sparrow. Project construction could also have temporary noise impacts on this species.

Project construction would result in the removal of potential foraging and nesting habitat for the Cooper's hawk. Project construction could also have temporary noise impacts on Cooper's hawk nesting.

Impacts on and off site from the project to sensitive upland habitats that would require compensatory mitigation include 7.2 acres of Diegan coastal sage scrub (including -disturbed), 0.2 acre of scrub oak chaparral, 1.6 acres of mafic chamise chaparral, 2.8 acres of mafic southern mixed chaparral, and 15.4 acres of non-native grassland.

The project will impact sensitive habitat lands as outlined in the Resource Protection Ordinance. The impacted sensitive habitat lands include Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed, scrub oak chaparral, mafic chamise chaparral, mafic southern mixed chaparral, and non-native grassland.

Mitigation for the project's impacts was developed in coordination with the County, U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and focuses on a functioning preserve mitigation strategy rather than relying on prescribed mitigation ratios. The project's proposed mitigation, therefore, includes on- and off-site (adjacent) habitat preservation and on- and off-site (adjacent) habitat restoration/preservation. Mitigation would be provided for significant impacts to a total of 27.2 acres of sensitive natural communities in a 50.3 acre biological preserve area including 44.4 acres of preserved habitat and 5.9 acres of restored habitat. The project's mitigation preserve would connect to other identified preserve areas to create a larger, overall habitat preserve that would not only compensate for the project's impacts but would be a beneficial biological resource in the western portion of unincorporated San Diego County. Implementation of mitigation would reduce the impacts to less-than-significant levels.

The project would not result in impacts to County RPO wetlands. The project would not result in significant impacts to wildlife movement and nursery sites.

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

Alden Environmental, Inc. (Alden) has completed a biological technical report for the proposed Questhaven Tentative Map (project) located on an approximately 69.1-acre site (project site or site) in the western portion of unincorporated San Diego County (County) within the San Dieguito Community Plan Area. The purpose of this report is to document the existing biological conditions on and in the immediate vicinity of the project site and provide an analysis of potential impacts to sensitive biological resources with respect to local, State of California (State), and federal policy. This report provides the biological resources technical documentation necessary for project review under the California Environmental Quality Act (CEQA) by the County Planning & Development Services (PDS).

1.2 PROJECT LOCATION AND DESCRIPTION

1.2.1 Project Location

The approximately 69.1-acre project site is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. The project site is located immediately south and west of the City of San Marcos and east of the City of Carlsbad. Interstate 5 is located approximately 5.3 miles west of the project site. Specifically, the project site is located south of San Elijo Road and east of Denning Drive (Figures 1 and 2). The project site encompasses Assessor's Parcel Number 223-080-46-00 and is located in the west half of the northwest quarter of Section 33, Township 12 South, Range 3 West, San Bernardino Meridian on the U.S. Geological Survey (USGS) 7.5-minute Rancho Santa Fe quadrangle map (Figure 2).

1.2.2 Project Description

The project consists of a Tentative Map, Density Bonus Permit, Site Plan Review, and an Administrative Permit for the site. The total number of lots proposed is 93, with 76 residential and 17 non-residential. The project would provide for development of 69 market-rate units and 7 reserved units for affordable housing (18.27 acres), 4 water quality detention basins (2.40 acres), 1 private park parcel (0.31 acres), 4 private road lots (4.34 acres), and 7 open space HOA lots for fire buffer area (10.77 acres). The project also includes a 50.3 acre biological open space area that would provide habitat mitigation for the project and be contiguous with open space lands to the south and west.

In accordance with the Consolidated Fire Code (County 2020), fire protection for the project would be provided that includes a fire fuel modification zone that is 100-foot wide and includes 20 feet of the level, single-family residential home pads. The Limited Building Zone overlaps with the fire fuel modification zone.

The project is designed to cluster development in the northeastern portion of the project site in order to allow for the development of residential uses while providing biological open space in the remainder of the site. The project would connect to existing utilities within San Elijo Road and utilities along the project's easterly boundary. Access to the project would be provided via two access connections to San Elijo Road at different points along the project frontage. Primary access to the site would be provided via Street D, Street E, and San Elijo Road. A secondary right-in, right-out access to San Elijo Road from Street B would be located at the northwest corner of the site.

1.3 METHODS

1.3.1 Literature Review

Prior to conducting biological field surveys, a search of the California Natural Diversity Database (CNDDDB) for information regarding special status (sensitive) species known to occur within five miles of the project site was performed, as well as a review of U.S. Fish & Wildlife Service (USFWS) and SanBIOS databases.

1.3.2 General Biological Survey

Alden Environmental, Inc. (Alden) initially conducted a field investigation of the project site to map existing biological resources and identify potential constraints to development on July 31, 2014. The entire site was surveyed on foot with the aid of binoculars, and plant and animal species observed were recorded in field notes. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. Representative photographs of the site were taken, with select photographs included in this report as Appendix A. Vegetation was mapped on 1"=200' scale aerial imagery of the site.

Then, on June 10 and 11, 2020, Alden updated the 2014 vegetation mapping on site and mapped vegetation in a 100-foot-wide zone around the site per County mapping requirements. Again, plant and animal species observed or otherwise detected were recorded in field notes. The site was examined for evidence of potential jurisdictional waters and wetlands, including vernal pools. Potential jurisdictional features were mapped. In addition to the general biological survey and vegetation mapping, Alden conducted a special status plant species survey, surveys for the coastal California gnatcatcher (CAGN; *Polioptila californica californica*), burrowing owl (BUOW; *Athene cunicularia*), and Crotch's bumble bee (CBB; *Bombus crotchii*). A habitat assessment for the Hermes copper butterfly (*Lycaena hermes*) also was conducted. Lastly, Alden visited the site following rainfall events to look for evidence of potential water holding basins with the potential to serve as habitat for the western spadefoot toad. Table 1 provides a summary of the biological surveys conducted for the project. CNDDDB field forms for sensitive species observations are included as Appendix B.

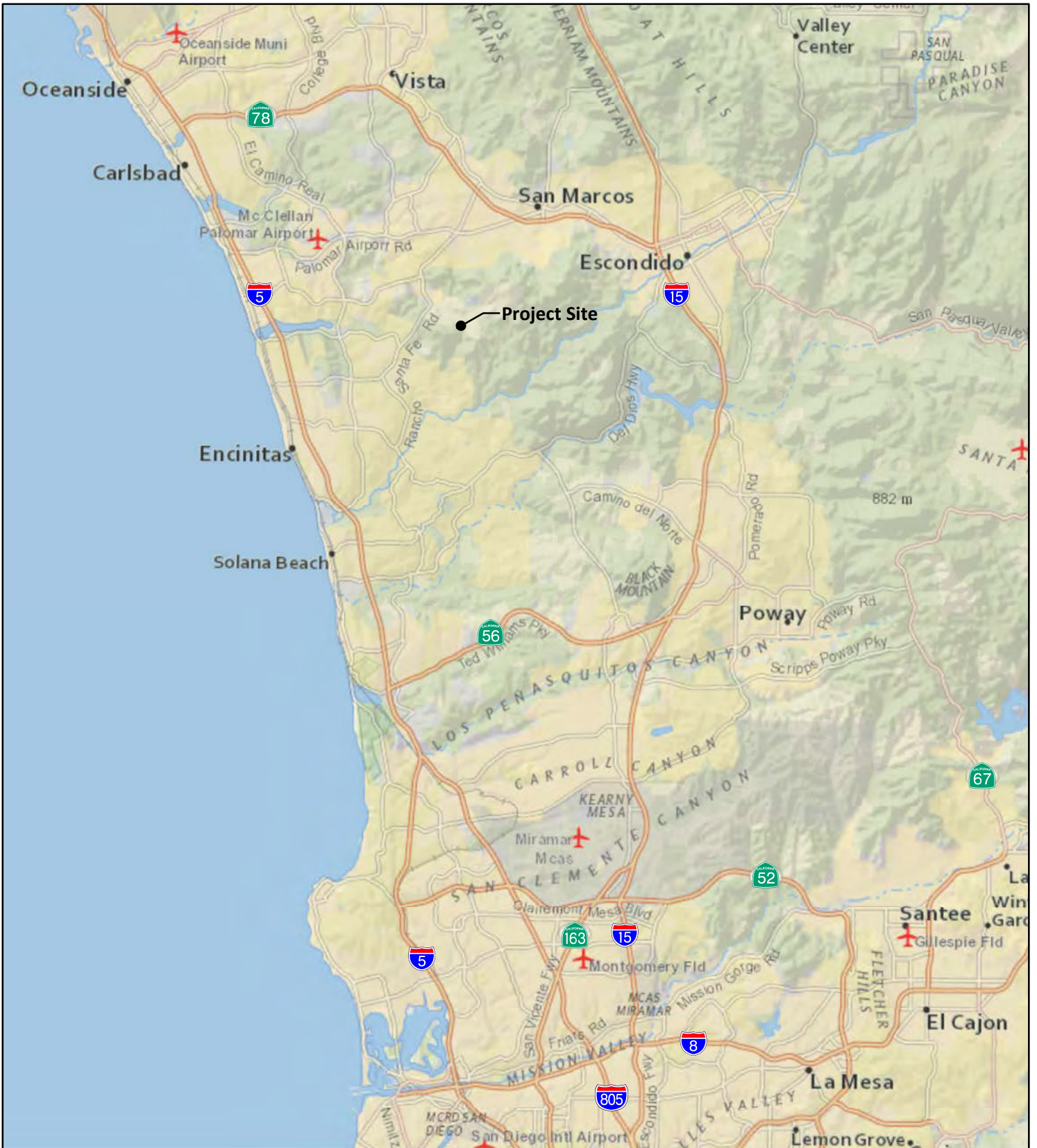
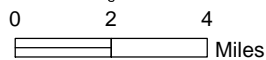


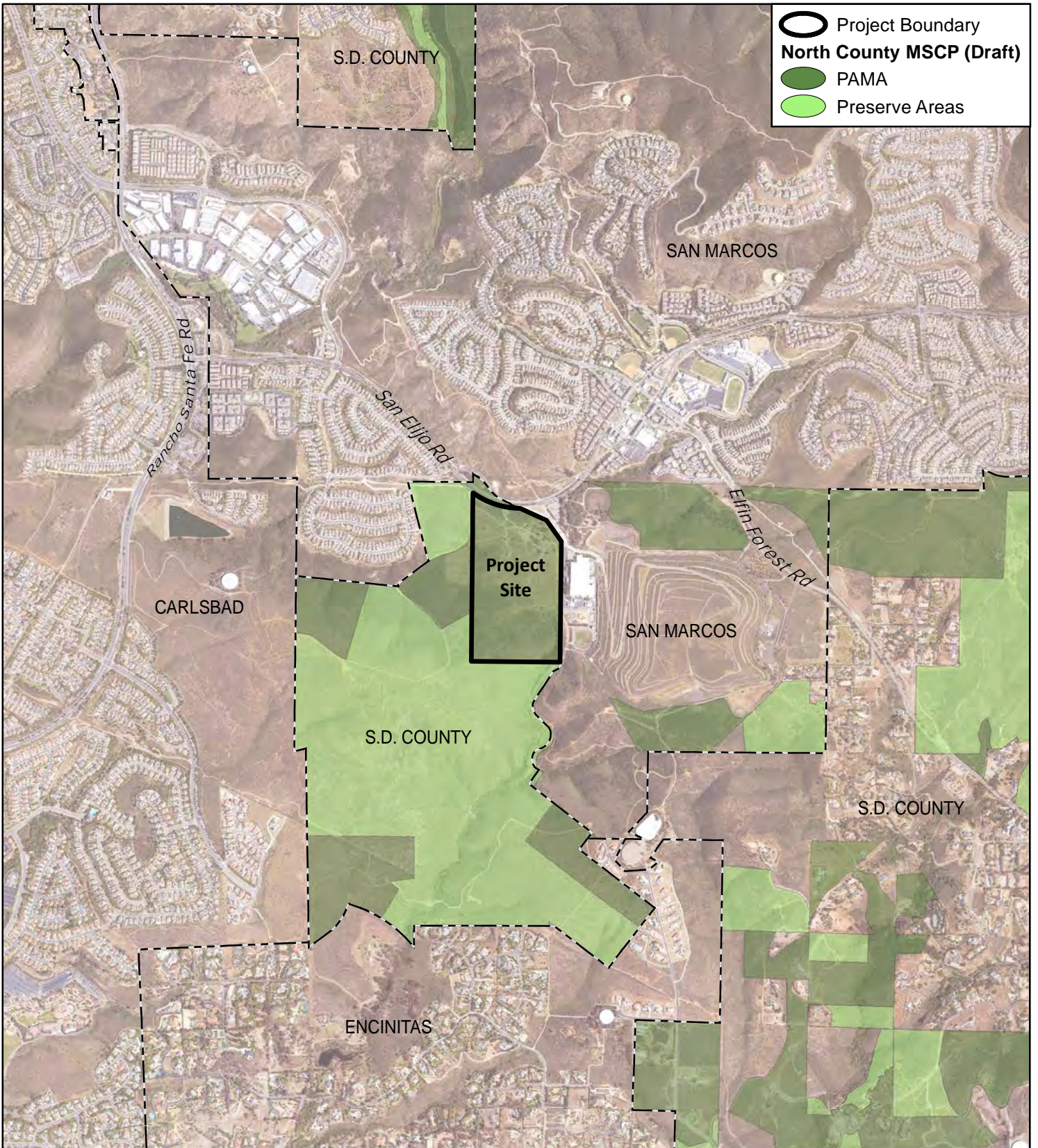
Figure 1

Regional Location

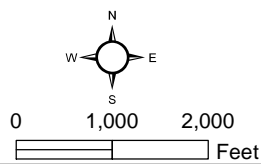
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Source: SanGIS



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Figure 2

Project Location

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**Table 1
BIOLOGICAL SURVEY INFORMATION**

DATE/TIME	PERSONNEL	SURVEY CONDITIONS (START/STOP)	SURVEY TYPE
July 31, 2014/ NA	Greg Mason	NA	General biological survey
February 19, 2020/ 0600-0815	Erik LaCoste	100% cloud cover, 52° F, wind 0-1 mph/100% cloud cover, 62° F, wind 0-1 mph	BUOW 1 of 4
March 17, 2020	Erik LaCoste	NA	Hermes copper butterfly assessment
April 9, 2020/ 0700-1100	Erik LaCoste ¹	80% cloud cover, 58° Fahrenheit (F), wind 2-4 miles per hour (mph)/ 100% cloud cover (sprinkles from 1000- 1100), 59° F, wind 2-4 mph	CAGN 1 of 3
April 23, 2020/ 0600-0800	Erik LaCoste	0% cloud cover, 60° F, wind 0 mph/0% cloud cover, 68° F, wind 1-2 mph	BUOW 2 of 4
April 23, 2020/ 0800-1200	Erik LaCoste ¹	0% cloud cover, 68° F, wind 1-2 mph/0% cloud cover, 78° F, wind 2-4 mph	CAGN 2 of 3
May 1, 2020/ 0615-1015	Erik LaCoste ¹	100% cloud cover, 63° F, wind 0 mph/100% cloud cover, 66° F, wind 1-2 mph	CAGN 3 of 3
June 2, 2020	Erik LaCoste	50% cloud cover, 58° F, wind 0-1 mph/ 30% cloud cover, 73° F, wind 1-2 mph	BUOW 3 of 4
June 3, 2020	Erik LaCoste	NA	Special status plant species (specifically Orcutt's brodiaea)
June 10-11, 2020	Greg Mason Jasmine Watts	NA	Vegetation mapping/update; rare plant species (Orcutt's brodiaea), and map potential jurisdictional features
June 16, 2020	Erik LaCoste	100% cloud cover, 59° F, wind 0-1 mph/50% cloud cover, 66° F, wind 1-3 mph	BUOW 4 of 4
March 13, 2021	Greg Mason	NA	Map water holding basins following rainfall, survey for western spadefoot toads, and confirm vegetation mapping
March 20, 2021	Greg Mason	NA	Map water holding basins, survey for western spadefoot toads, and map areas in which to create new water holding basins.
February 24, 2023	Brian Parker, Darin Busby	90% cloud cover, 62°F, wind 0-2 mph/ 100% cloud cover, 58°F, wind 3-5 mph	Confirm and update vegetation mapping.
May 13, 2023	Greg Mason	Clear, 70°F, wind 0-2 mph/ Clear, 66°F, wind 0-2 mph	Brodiaea survey update and general sensitive plants
May 23, 2023	Korey Klutz	Cloudy, 60°F, wind 0 mph/ Cloudy, 64°F, wind 2 mph	CBB Survey 1, Area 1
May 24, 2023	Brian Lohstroh	100% cover, 70°F, wind 2-6 mph/ 100%, 69°F, wind 3-5 mph	CBB Survey 1, Area 2

**Table 1 (cont.)
BIOLOGICAL SURVEY INFORMATION**

DATE/TIME	PERSONNEL	SURVEY CONDITIONS (START/STOP)	SURVEY TYPE
May 25, 2023	Aldo Mason	Partly cloudy, 64°F, wind 0-2 mph/ Partly cloudy, 66°F, wind 0-1 mph	GPS Brodiaea locations
May 30, 2023	Darin Busby	100% cover, 69°F, wind 4-7 mph/ 90%, 70°F, wind 3-5 mph	CBB Survey 1, Area 3
May 30, 2023	Melissa Busby	100% cover, 69°F, wind 4-7 mph/ 90%, 70°F, wind 3-5 mph	CBB Survey 1, Area 3
June 7, 2023	Korey Klutz	Cloudy, 63°F, wind 0 mph/ Cloudy, 67°F, wind 4 mph	CBB Survey 2, Area 1
June 8, 2023	Brian Lohstroh	100% cover, 73°F, wind 3-6 mph/ 10%, 76°F, wind 2-7 mph	CBB Survey 2, Area 2
June 17, 2023	Darin Busby	0% cover, 73°F, wind 1-5 mph/ 0%, 78°F, wind 3-6 mph	CBB Survey 2, Area 3
June 20, 2023	Aldo Mason	Cloudy, 62°F, wind 0-1 mph/ Cloudy, 64°F, wind 0-1 mph	GPS Brodiaea locations
June 22, 2023	Korey Klutz	Partly cloudy, 64°F, wind 0 mph/ Partly cloudy, 70°F, wind 8 mph	CBB Survey 3, Area 1
June 22, 2023	Brian Lohstroh	20% cover, 74°F, wind 2-5 mph/ 0%, 76°F, wind 4-7 mph	CBB Survey 3, Area 2
June 30, 2023	Darin Busby	0% cover, 70°F, wind 0-3 mph/ 0%, 79°F, wind 2-5 mph	CBB Survey 3, Area 3
July 9, 2023	Korey Klutz	Partly cloudy, 65°F, wind 0 mph/ Clear, 71°F, wind 6 mph	CBB Survey 4, Area 1
July 7, 2023	Brian Lohstroh	0% cover, 70°F, wind 0-4 mph/ 0%, 71°F, wind 2-9 mph	CBB Survey 4, Area 2
July 13, 2023	Darin Busby	0% cover, 78°F, wind 1-3 mph/ 0%, 85°F, wind 1-5 mph	CBB Survey 4, Area 3
July 23, 2023	Korey Klutz	Clear, 65°F, wind 0 mph/ Clear, 73°F, wind 10 mph	CBB Survey 5, Area 1
July 21, 2023	Brian Lohstroh	100% cover, 68°F, wind 2-4 mph/ 0%, 79°F, wind 0-7 mph	CBB Survey 5, Area 2
July 27, 2023	Darin Busby	0% cover, 77°F, wind 2-3 mph/ 0%, 85°F, wind 3-5 mph	CBB Survey 5, Area 3

¹USFWS Threatened/Endangered Species Permit TE-027736-6

1.3.3 Focused Species Surveys/Assessment

Special Status Plant Species Survey

Alden conducted a special status plant species survey of the site on June 3, 2020 with a focus on Orcutt's brodiaea (*Brodiaea orcuttii*; Table 1). Another special status plant species survey of the site was conducted on June 11, 2020. Follow up site visits for sensitive plants and mapping of *Brodiaea* were conducted on May 13, 25, and June 20, 2023. Special status species also were searched for during the vegetation mapping, burrowing owl, CAGN, and CBB (2023) surveys conducted throughout the site. The entire site was traversed by foot and was inspected for the presence of special status plant species. The species were mapped and counted when found (with the exception of Nuttall's scrub oak [*Quercus dumosa*], which is the dominant species in scrub oak chaparral on site). The staminodia of *Brodiaea* found on site was closely inspected to determine which species is present. All *Brodiaea* found were mapped using global positioning system (GPS) technology with sub-meter accuracy (no *Brodiaea* species other than *orcuttii* was found). Special status plant species searched for include those that are listed as threatened or endangered by the USFWS and/or the California Department of Fish and Wildlife (CDFW), those afforded Rare Plant Rank 1-4 designation by the California Native Plant Society (CNPS), and/or those that are on the County Sensitive Plant List.

Western Spadefoot Toad

Alden made site visits on March 13 and 20, 2021 following rain events to search the site for water holding basins potentially suitable for western spadefoot toad (*Spea hammondi*) breeding. Alden identified and mapped, via GPS technology, 35 potential water holding basins consisting of trenches, tire ruts, BMX tracks, holes, and depressions in previously disturbed/cleared portions of the site and those areas of the site once used for stockpiling. After further inspection and consideration of the 35 basins, eight were determined to be suitable for western spadefoot breeding as they are expected to hold water for at least 30 days, which is a requirement for successful spadefoot breeding. Therefore, very shallow ruts and basins that would not hold water long enough were excluded from the final mapping of suitable breeding habitat.

Coastal California Gnatcatcher Survey

A USFWS protocol survey for the CAGN (*Poliophtila californica californica*) was conducted by USFWS-permitted biologist Erik LaCoste (TE-027736-6). Three site visits were made per USFWS (1997) protocol from April 9 through May 1, 2020 (Table 1). The survey was conducted by walking through, and adjacent to, suitable CAGN habitat on site. Birds were viewed with the aid of binoculars, where necessary. Recorded CAGN vocalizations ("mew calls") were broadcast for approximate five-second durations at approximately 50-yard increments along the survey route, or as needed to adequately cover each potentially suitable habitat patch. Recorded vocalizations were only broadcast to initially detect the possible presence of CAGNs. The CAGN survey report is included as Appendix C to this report.

Burrowing Owl Survey

The survey consisted of four site visits made by Erik LaCoste according to the survey methods in the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012), which supersedes the survey, avoidance, minimization and mitigation recommendations in the 1995 Staff Report (CDFG 1995), and takes into account the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).

Suitable habitat (non-native grassland and disturbed) was surveyed for BUOWs and potential burrows or perches that could be used by the owl. BUOWs are known to occupy California ground squirrel (*Otospermophilus beecheyi*) burrows; therefore, particular attention was paid to areas along fence lines, or other locations where squirrel activity was observed in the past, was observed presently, or is likely to occur. Dirt piles, drainages, and culverts are also carefully examined as these sites can often provide cavities that can support the species. The determination of BUOW presence is made by direct BUOW observation or by owl signs such as, but not necessarily limited to, excavated soil, whitewash (excrement), castings (pellets), and/or feathers. The BUOW survey report is included as Appendix D to this report.

Crotch's Bumble Bee

A focused foraging survey for the CBB was conducted during the during the period May 23 through July 27, 2023 (Table 1). The first part of the survey followed the CDFW-issued Unofficial Crotch's Bumble Bee Survey Methods, which was available when the survey began. The latter portion of the survey followed the Survey Considerations for CESA Candidate Bumble Bee Species issued by the CDFW on June 6, 2023 (CDFW 2023). Prior to beginning the survey, a habitat assessment was conducted that included reviewing the California Natural Diversity Database and available bee data (iNaturalist) to identify any reported CBB observations in the project site vicinity and to help determine areas on site with suitable foraging resources (flowering plants) for the CBB. The CBB report is included as Appendix E to this report.

Hermes Copper Butterfly Assessment

Alden conducted an assessment of the site for its potential to support the Hermes copper butterfly based on the butterfly's life history, range and habitat information, as well as the County's Guidelines for Hermes Copper (Attachment B [County of San Diego Guidelines for Hermes Copper] in County 2010a). The assessment was conducted on March 17, 2020 (Table 1), and typically involves mapping spiny redberry (*Rhamnus crocea*), the species larval host plant, and noting where California buckwheat (*Eriogonum fasciculatum*), the adult butterfly's preferred nectar resource, is present within 15 to 20 feet of spiny redberry plants (a species requirement). On the Questhaven site, spiny redberry is such a common species that mapping all the plants was done at the beginning of the assessment but was later limited to focus just on those spiny redberry plants in proximity to California buckwheat (of which there were none).

Mapping of Potential Jurisdictional Features

An initial inspection of the project site for potential jurisdictional features was made by Alden on July 31, 2014. A follow-up inspection and mapping of jurisdictional features on the project site was performed by Alden on June 10 and 11, 2020. Subsequent to the Sackett Supreme Court decision, the Environmental Protection Agency (EPA) issued a new definition for what is to be considered a Waters of the U.S. In conjunction with Corps staff in the Los Angeles District, the previously prepared Jurisdictional Delineation Report was revised to reflect the new Waters definition for the project (Alden, 2023).

A review of relevant literature and materials aided in preliminary identification of areas that may be jurisdictional including aerial photographs, USGS topographic maps, National Wetland Inventory data, and Natural Resource Conservation Service soil survey maps.

During the field visits, the site was inspected for potential wetland resources potentially subject to U.S. Army Corps of Engineers (Corps) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344), streambed habitats potentially subject to CDFW jurisdiction pursuant to Sections 1600 *et seq.* of California Fish and Game Code, and surface waters potentially subject to permitting from the Regional Water Quality Control Board (RWQCB). The effort also included determining the presence or absence of potential County Resource Protection Ordinance (RPO) wetlands.

Waters of the U.S.

Potential Corps-jurisdictional Waters of the U.S. (WUS) are determined in accordance with the *Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement* (Corps 2008a). The potential Ordinary High Water Mark (OHWM) also is determined in accordance with *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008b). Areas are determined to be non-wetland WUS if there is evidence of intermittent or perennial surface flow (e.g., bed and bank) but the vegetation and/or soils criterion are not met. Per the current Corps CWA Rule, unvegetated ephemeral drainages/streambeds are not considered to be jurisdictional WUS.

Waters of the State

Potential CDFW-jurisdictional Waters of the State (WS) are determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction are determined based on the definition of streambed as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation” (Title 14, Section 1.72). Potential CDFW jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream. The RWQCB reviews issues related to WS pursuant to the Federal CWA as well as the Porter-Cologne Act.

County Resource Protection Ordinance Wetlands

Areas are considered County wetlands if they meet 1 of the 3 following attributes pursuant to the County RPO (County 2011): (1) at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places); (2) the substratum is predominantly undrained hydric soil; or (3) an ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

1.3.4 Survey Limitations

Noted animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. However, the lists of species identified are not necessarily comprehensive accounts of all those that utilize the site as species that are nocturnal, secretive, or seasonally restricted may not have been observed or detected.

1.3.5 Nomenclature

Nomenclature used in this report comes from Holland (1986); Oberbauer et al. (2008); Hickman, ed. (1993); CNPS (2021); Crother (2008); American Ornithological Society (2020); Jones, et al. (1992); and CDFW (2021).

1.4 ENVIRONMENTAL SETTING

The project site is undeveloped and includes several unimproved dirt roads and trails. Historically, the northern portion of the site has been subject to disturbance and was used as a laydown yard for construction equipment associated with the adjacent former recycling facilities. Additionally, a portion of the western area of the site was used for agricultural uses. The southern portion of the project site contains a large area of steep hills that transition into a relatively flat area in the northern and central portion of the site. Elevations range between approximately 830 feet above mean sea level (amsl) in the southwest corner to 500 feet amsl along the eastern boundary.

To the west of the project site is open space associated with the Rancho La Costa Habitat Conservation Area, beyond which is existing residential development. North of the project site is land designated for open space, beyond which are existing residential uses. East of the project site is a former recycling facility that is currently used as an indoor sports complex known as “Edenpark” and that is proposed for additional sports complex and commercial uses. To the south of the project site is open space associated with the Rancho La Costa Habitat Conservation Area. The project site is adjacent to the San Elijo Hills development in the City of San Marcos and is within their Sphere of Influence.

Given that the project site is adjacent open space preserves to the west and south, the project proposes a design to cluster in the north in order to preserve a viable wildlife corridor in the more constrained land on the southern edge of the project site and establish a level of compatibility with these adjacent preserves.

1.4.1 Regional Context

The site is within the boundaries of the draft North County Multiple Species Conservation Program (NCMSCP) area and is completely within the PAMA (Pre-approved Mitigation Area; Figure 2); however, the NCMSCP Plan has not yet been approved or adopted. As such, the proposed NCMSCP requirements do not apply and are not addressed in this report. NCMSCP information is referenced as supporting background and biological database information.

1.4.2 General Land Uses

The project site is undeveloped and includes several unimproved dirt roads and trails that have been observed to be used by the public for recreational purposes including hiking, dog walking, bicycling (BMX tracks), and remote control car operation. There also are a total of 9 separate easements for powerlines, roadway, utilities, and site access purposes. Specific information for each easement is provided in Appendix F.

1.4.3 Disturbance

The site has a long history of historical disturbance with clearing and construction related activities visible in historic aerial imagery as far back as 1947 and continuing into the early 2000s. Appendix G includes historic aerial photographs of that shows the disturbance on the site over the years. Much of the northern portion of the site has been cleared, graded, used as a laydown area, and covered with stockpile soil materials. The southern portion of the project site contains a large area of relatively undisturbed steep hills.

1.4.4 Topography and Soils

The project site encompasses a large area of steep hills that transition into a relatively flat area in the northern and central portion of the site. Elevations range between approximately 830 feet amsl in the southwest corner to 500 feet amsl along the eastern boundary. Soil on site is mapped as Cieneba very rocky coarse sandy loam (30 – 75 percent slopes), San Miguel rocky silt loam (9 – 30 percent slopes), Huerhuero loam (2 – 9 percent slopes), San Miguel-Exchequer rocky silt loams (9 – 70 percent slopes), and Exchequer rocky silt loam (30 – 70 percent slopes; Figure 3).

1.4.5 Vegetation Communities/Habitat Types

Nine vegetation communities/habitat types occur on site and are described below (Table 2; Figure 4). The numbers in parentheses are the Holland Codes (Oberbauer et al. 2008).

Table 2		
EXISTING VEGETATION COMMUNITIES/HABITAT TYPES		
VEGETATION COMMUNITY/HABITAT¹	ON SITE	OFF SITE²
Diegan coastal sage scrub (32500)	9.8	0.2
Diegan coastal sage scrub-disturbed (32500)	2.1	-
Scrub oak chaparral (37900)	0.6	-
Mafic chamise chaparral (37220)	2.4	-
Mafic southern mixed chaparral (37122)	25.7	-
Non-native grassland (42200)	20.9	-
Eucalyptus woodland (79100)	2.9	-
Disturbed habitat (11300)	3.7	0.2
Developed and ornamental (12000)	1.0	0.9
TOTAL	69.1	1.3

¹Categories and numeric codes are from Oberbauer et al. 2008.

²Off-site numbers reflect off-site impacts

Diegan Coastal Sage Scrub (including -disturbed; 32500)

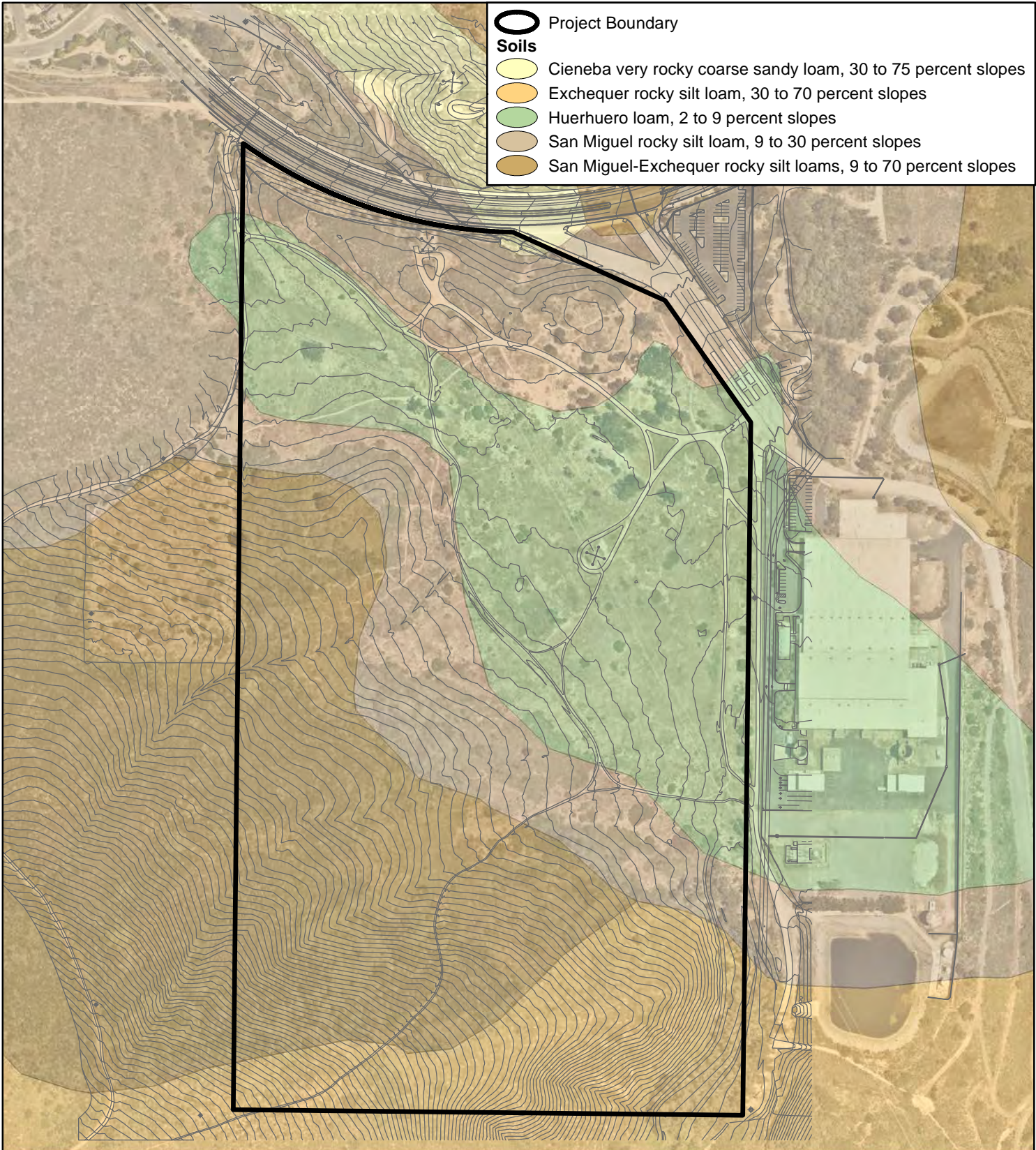
Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Four distinct coastal sage scrub geographical associations (northern, central, Venturan, and Diegan) are recognized along the California coast. Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub, including on the project site, are California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). Where Diegan coastal sage scrub on site is mapped as disturbed, it is characterized by less native shrub cover and more non-native, herbaceous plant species cover (e.g., non-native grasses).

Scrub Oak Chaparral (37900)

Scrub oak chaparral is a dense, evergreen community that may reach heights of 20 feet that is typically dominated by Nuttall's scrub oak with considerable mountain mahogany (*Cercocarpus betuloides*). On site, scrub oak chaparral is dominated by Nuttall's scrub oak.

Mafic Chamise Chaparral (37220)

Mafic chamise chaparral on site occurs on San Miguel series soils (Figure 3) that are formed from metavolcanic rock that overlays metavolcanic bedrock. This chaparral on site is dominated by chamise (*Adenostoma fasciculatum*). Associated species contribute little to the vegetative cover.



Source: USDA NRCS

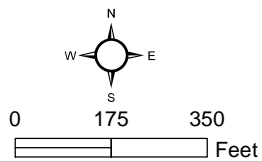
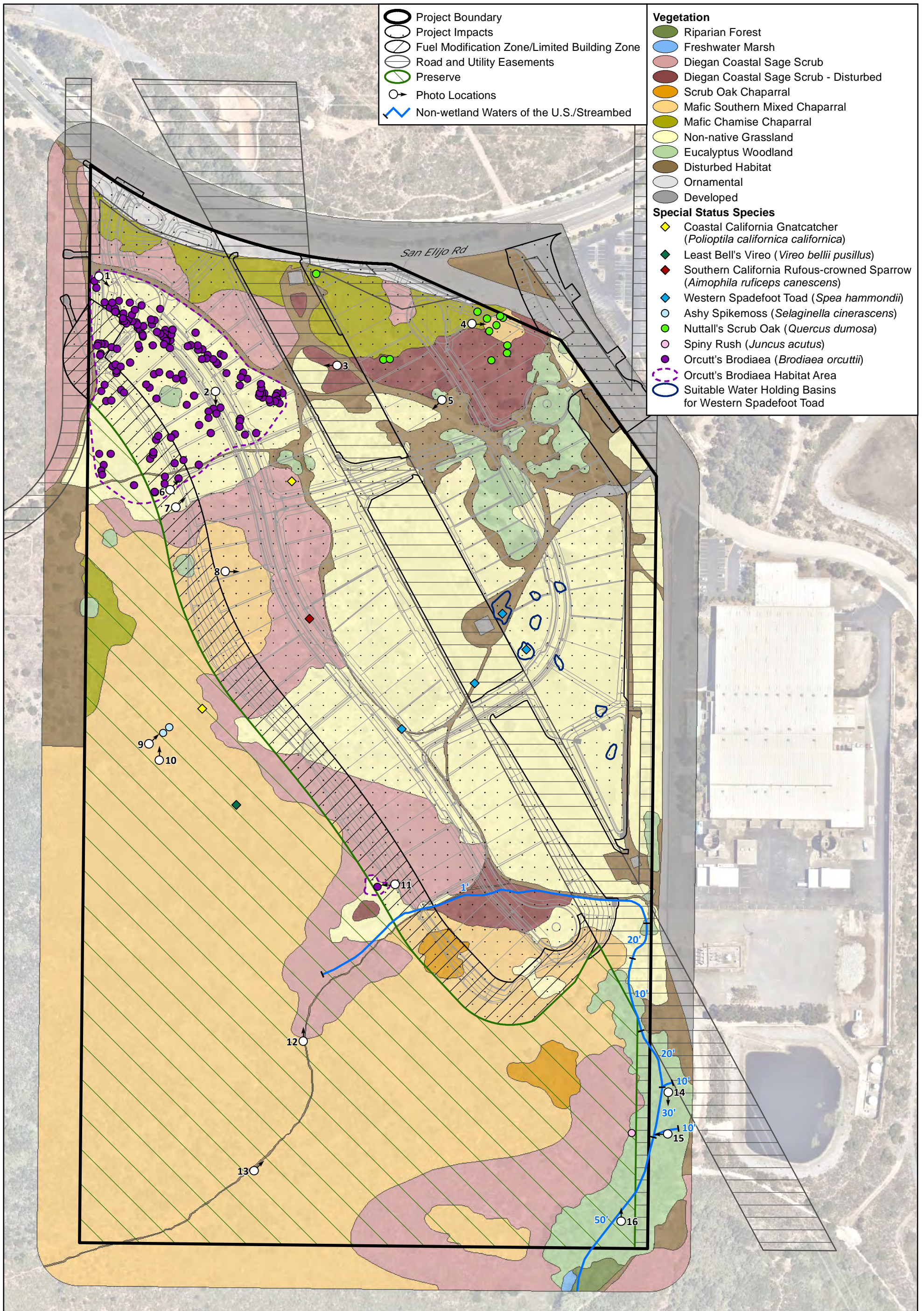


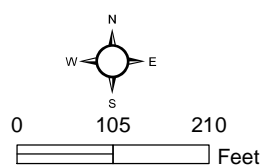
Figure 3

Topography/Soils

QUESTHAVEN



Aerial Photo: Nearmap 2020



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Figure 4

Vegetation and Sensitive Resources/Impacts

QUESTHAVEN

Mafic Southern Mixed Chaparral (37122)

Mafic southern mixed chaparral on site occurs on San Miguel series soils (Figure 3) that are formed from metavolcanic rock that overlays metavolcanic bedrock. This chaparral on site is composed of broad-leaved sclerophyllous shrubs that can reach six to 10 feet in height and form dense often nearly impenetrable stands with poorly developed understories. Characteristic plants in this community include black sage, fuschia-flowered gooseberry (*Ribes speciosum*), spiny redberry (*Rhamnus ilicifolia*), holly-leaf redberry (*Rhamnus ilicifolia*), chamise, toyon (*Heteromeles arbutifolia*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*).

Non-native Grassland (42200)

Non-native grassland is a dense to sparse cover of annual grasses, often associated with native, annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Most of the introduced annual species that comprise non-native grassland originated from the Mediterranean region of Europe, an area with a climate similar to that in California and a long history of agriculture. These two factors have contributed to the successful invasion and establishment of these species and the replacement of native grasslands by annual-dominated non-native grasslands (Jackson 1985). Non-native grassland on site is comprised of the following characteristic non-native species including oats (*Avena barbata* and *A. fatua*), species of bromes (*Bromus diandrus*, *B. madritensis*, and *B. hordeaceus*), Italian ryegrass (*Festuca perennis*), and annual beardgrass (*Polypogon monspeliensis*), along with some native and non-native and forbs.

Eucalyptus Woodland (79100)

Eucalyptus woodland is a non-native vegetation community type dominated by gum tree (*Eucalyptus* spp.). Eucalyptus produces a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. Eucalyptus woodland occurs on site as scattered individual trees, and larger groupings of trees in the northern central portion of the site as well as along a drainage in the site's southeastern corner.

Disturbed Habitat (11300)

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat. Disturbed habitat on site is comprised of dirt roads and pads for transmission line towers.

Developed and Ornamental (12000)

Developed land exists where permanent structures and/or pavement has been placed (preventing the growth of vegetation) or where landscaping is clearly tended and maintained. Developed land on site is comprised of the two transmission line towers and concrete brow ditches. It also includes ornamental plantings along San Elijo Road.

1.4.6 Flora

Alden identified 121 species of plants on site, of which 43 (36 percent) are non-native species (Appendix H) and primarily found in non-native grassland, eucalyptus woodland, and disturbed habitat.

1.4.7 Fauna

A total of 89 animal species were observed or detected on site including 26 invertebrates, two amphibians, two reptiles, 56 birds, and three mammals (Appendix I).

1.4.8 Sensitive Vegetation Communities/Habitat Types

Sensitive habitat is defined as land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the CEQA Guidelines. The County maintains a list of sensitive vegetation communities that require compensatory mitigation for unavoidable impacts (Table 5, Habitat Mitigation Ratios, for lands outside of approved MSCP subarea plans; County 2010a).

Sensitive vegetation communities/habitat types on site include Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, scrub oak chaparral, mafic chamise chaparral, mafic southern mixed chaparral, and non-native grassland.

1.4.9 Special Status Plant Species

Special Status Plant Species Observed

Four special status plant species were found on site (Figure 4) and are addressed below.

Orcutt's brodiaea (*Brodiaea orcuttii*)

Status: CNPS Rare Plant Rank 1B.1; County List A

Distribution: Riverside and San Bernardino counties south to Baja California, Mexico.

Habitat(s): Mesic closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools—often associated with clay soil.

Presence on site: Orcutt's brodiaea was found on site in two locations. The larger population occurs in non-native grassland in the northwestern portion of the site; another small population occurs in non-native grassland in the central portion of the site. A total of 1,740 individual plants were counted in 2023.

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)

Status: CNPS Rare Plant Rank 4.2; County List D

Distribution: Los Angeles, San Bernardino, San Luis Obispo, Ventura, and San Diego counties; Baja California, Mexico.

Habitat(s): Mesic coastal dunes; alkaline meadows and seeps; coastal salt marshes and swamps.

Presence on site: One southwestern spiny rush plant was found in the southeastern corner of the site, within the proposed preserve area.

Nuttall's scrub oak (*Quercus dumosa*)

Status: CNPS Rare Plant Rank 1B.1; County List A

Distribution: Los Angeles, Orange, Santa Barbara, San Diego, and Ventura counties; Baja California, Mexico.

Habitat(s): Sandy and clay loam soils in closed-cone coniferous forest, chaparral, and coastal scrub.

Presence on site: Nuttall's scrub oak is the dominant species in scrub oak chaparral on site.

Ashy spike-moss (*Selaginella cinerascens*)

Status: CNPS Rare Plant Rank 4.1; County List D

Distribution: Orange and San Diego counties; Baja California, Mexico.

Habitat(s): Chaparral and coastal scrub.

Presence on site: Two patches of ashy spike-moss were observed on site in mafic southern mixed chaparral, within the proposed preserve area.

Special Status Plant Species with Potential to Occur

Forty-one special status plant species were evaluated for their potential to occur based on reports of the species to the SanBios, USFWS, and/or the CNDDDB within five miles of the site, the habitat types/vegetation communities present on site, the site's elevation and soils, and the site's geographic location. Appendix J provides a list of these special status species and their potential to occur (or status as present if found on site). Four species were found to be present on site, the remaining species were determined to have low potential to occur or are not expected to occur.

1.4.10 Special Status Animal Species**Special Status Animal Species Observed or Otherwise Detected**

Five special status animal species were found (Figure 4) and are addressed below.

Western spadefoot toad (*Spea hammondi*)

Status: State Species of Special Concern; County Group 2

Distribution: Throughout the Central Valley and San Francisco Bay area south along the coast to northwestern Baja California, Mexico.

Habitat(s): Open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas. Breeding sites include vernal pools and other temporary rain pools, cattle tanks, and occasionally in pools of intermittent streams with little or no cover. To be suitable for the successful transformation of larvae, temporary breeding pools must hold water for at least 30 days. Requires friable soils for burrowing. Generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.).

Presence on site: Observed opportunistically during 2020 gnatcatcher survey. Heard by project biologist on March 13, 2021, but no eggs, tadpoles, or adults were directly observed. Project biologist observed eggs and tadpoles in two water holding basins on March 20, 2021. Two basins on site were observed holding water during the March 2021 site visits; however, a total of eight basins (with a total area of 0.14 acre) were determined to be suitable for toad breeding because they are all deep enough, and evidence of current and/or previous ponding was observed.

Cooper's hawk (*Accipiter cooperii*)

Status: State Watch List; County Group 1

Distribution: Occurs year-round throughout San Diego County's coastal slope where stands of trees are present.

Habitat(s): In San Diego County, tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrubland or fields.

Presence on site: A Cooper's hawk was seen flying overhead potentially foraging on site and has potential to nest in the trees on site (Figure 4).

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)

Status: State Watch List; County Group 1

Distribution: Observed throughout coastal lowlands and foothills of San Diego County.

Habitat(s): Coastal sage scrub and open chaparral as well as shrubby grasslands.

Presence on site: This species was observed in the central portion of the site (Figure 4).

Coastal California gnatcatcher (*Polioptila californica californica*)

Status: Federal Threatened; State Species of Special Concern; County Group 1

Distribution: In San Diego County, occurs throughout coastal lowlands.

Habitat(s): Coastal sage scrub

Presence on site: One pair of CAGN was observed on site during all three site visits of the USFWS protocol survey conducted in April/May 2020. The pair's nest was incidentally noted with the female sitting on it on May 1, 2020 in the north-central portion of the site. All Diegan coastal sage scrub and Diegan coastal sage scrub on site is considered occupied by the CAGN (Figure 4).

Least Bell's vireo (*Vireo bellii pusillus*)

Status: Federal Endangered; State Endangered; County Group 1

Distribution: Observed throughout coastal southern California in the breeding season, south of Santa Barbara, but in smaller numbers in foothills and mountains.

Habitat(s): Riparian woodland, riparian forest, mule fat scrub, and southern willow scrub.

Presence on site: One least Bell's vireo was observed (heard occasionally calling) in mafic southern mixed chaparral in the project's mitigation preserve during the Crotch's bumble bee survey on July 21, 2023. Since there is no breeding habitat for the species on site, it is thought that this bird was a post-breeding, migratory individual (some post-breeding migration may begin as early as late July per the USFWS [2023]).

Special Status Animal Species with Potential to Occur

Sixty-one special status animal species were evaluated for their potential to occur based on reports of the species to the SanBios and/or USFWS databases and/or the CNDDDB within five miles of the site, the habitat types/vegetation communities present on site, the site's elevation and soils, and the site's geographic location. Appendix J provides a list of these special status species and their potential to occur (or status as present if found on site). The BUOW and CBB were not found during the focused surveys.

Seventeen special status animal species have moderate potential to occur because potential habitat occurs on site. Twenty-four have low potential to occur because they are uncommon, their potential habitat on site is limited, or focused species surveys were negative. And, 16 special status animal species are not expected to occur because their habitat is not present on site.

Large Mammals

The coyote was detected on site and other large mammals (mule deer and mountain lion) may also occur on the site but are less likely to use site as they are expected to more frequently use lands farther to the east through the Elfin Forest and Harmony Grove that are core areas identified in the draft Biological Mitigation Ordinance (BMO) for the NCMSCP.

Avian Foraging and Nesting

Migratory Birds

Fifty-six species of birds were observed or detected on site, and the site supports a variety of shrubland, grassland, and eucalyptus woodland habitats that are expected to support year-round foraging and breeding season nesting of migratory birds, particularly passerine species (raptors are addressed separately below).

Raptors

The County (2010b) defines raptor foraging habitat as, “Land that is a minimum of 5 acres (not limited to project boundaries) of fallow or open areas with any evidence of foraging potential (i.e., burrows, raptor nests, etc.)” The more level portions of the site that support vegetation communities/habitat types such as non-native grassland, Diegan coastal sage scrub-disturbed, and disturbed habitat on site could be considered raptor foraging habitat based on this definition since it occupies greater than 5 acres, is open in nature, and it supports burrows of common small mammals, namely California ground squirrel, which was observed.

The Cooper’s hawk was observed flyover over the site potentially foraging. The red-tailed hawk (*Buteo jamaicensis*), which was also observed during site surveys and utilizes open areas for foraging, has high potential to use this habitat on site for foraging. The trees on site may also have potential to support raptor nesting.

1.4.11 Wetlands/Jurisdictional Waters

Waters of the U.S.

A single unvegetated streambed occurs in the southern portion of the site (Figure 4). This streambed is ephemeral in nature; therefore, is not a Corps jurisdictional WUS.

Waters of the State

The ephemeral unvegetated streambed in the southern portion of the site is a potential WS (Figure 4) and potentially subject to regulation by both the CDFW and RWQCB.

RPO Wetlands

There are no RPO wetlands on site. There is an unvegetated, ephemeral streambed located in the southern portion of the site that traverses through upland habitats and under the canopy of eucalyptus woodland. The streambed within the project footprint (impact area) does not meet the County criteria for wetlands (Section 1.5.3) as it lacks wetland vegetation, does not support hydric soils, and does not have a predominately non-soil a substratum.

1.4.12 Habitat Connectivity, Wildlife Corridors, and Nursery Sites

A corridor is a specific route that is used for the movement of species. Local corridors allow wildlife access to resources such as food, water, and shelter within the framework of its daily routines. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations. A linkage is an area of land that supports or contributes to the long-term movement of wildlife and genetic exchange by providing live-in habitat that connects to other habitat areas. Many linkages occur as stepping-stones that are comprised of a fragmented archipelago arrangement of habitat over a linear distance.

Important corridors and linkages have been identified on a local and regional scale throughout the Multiple Habitat Conservation Program (MHCP) and MSCP planning areas in the County. The planning objectives of most corridors and linkages in coastal San Diego County include establishing a connection between the northern and southern regional populations of the CAGN in addition to facilitating movement and connectivity of habitat for large mammals and riparian bird species. The proposed North County preserve system incorporates existing preserves and ensures connections between these preserves through soft-line conservation areas. Soft-line areas are referred to as the PAMA. It is not expected that all land within these soft-line areas (PAMA) will be incorporated into the preserve system. The project site is inside the PAMA (Figure 2).

The PAMA for the draft NCMSCP is based on the core and linkage concept of landscape-level conservation planning. While the project site is within the PAMA and would be subject to criteria to avoid/minimize impacts to habitat lands and plant and animal populations, Appendix C of the draft BMO for the draft NCMSCP shows that the project site is not within a core or linkage.

Large mammals such as coyote detected on site may use the project site and the local area, which includes the adjacent Rancho La Costa Reserve and additional PAMA to the south and west, but movement in this local area is likely limited to the immediate north and east by existing development. San Elijo Road is a significant barrier to non-avian wildlife movement north of the site. Rather, regional movement of large mammals (e.g., coyote, mule deer, and mountain lion) likely occurs farther to the east through the Elfin Forest and Harmony Grove core areas identified in the draft BMO for the NCMSCP. Therefore, the project site likely does not contribute substantially to regional wildlife movement and habitat connectivity. Given that the project site is adjacent to open space preserves to the south and west, the project proposes a design to cluster in the north in order to preserve a corridor for local wildlife movement in the more constrained land on the southern edge of the project site and establish a level of compatibility with these adjacent preserves.

Specific sites for reproduction (i.e., nursery sites) are potentially present on site and include, for example, active bird nests and bat nursery colonies. It is certain that avian nesting occurs on site during the avian nesting season. There are two bat species that have moderate potential to occur on site (Appendix J), and they are Mexican long-tongued bat (*Choeronycteris mexicana*) and western mastiff bat (*Eumops perotis californicus*). However, there is no record of the Mexican long-tongued bat breeding in San Diego County (Tremor et al. 2017), so there are no potential nursery sites for this species on site. And, according to Tremor et al. (2017), western mastiff bat roosts include vertical cliffs, rock quarries, outcrops of fractured boulders, and sometimes tall buildings; none of which is present on site. Therefore, there are no potential nursery sites for either species on site.

1.5 APPLICABLE REGULATIONS

Biological resources on the project site are subject to regulatory review by federal, State, and local agencies. Under CEQA, impacts associated with a proposed project or program are assessed with regard to significance criteria determined by the CEQA Lead Agency (in this case, the County) pursuant to CEQA Guidelines.

1.5.1 Federal Government

Federal Endangered Species Act

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a ‘take’ under the ESA. Section 9(a) of the ESA defines take as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” ‘Harm’ and ‘harass’ are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species’ behavioral patterns.

The USFWS identifies critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. There is no critical habitat designated on site.

Sections 7 and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species’ use of the site and impacts to Corps jurisdictional areas. Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan (HCP). The term “incidental” applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species’ survival must be submitted for issuance of Section 10(a) permits.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to September 1). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests. As a standard condition, the project must comply with the MBTA.

Rivers and Harbors Act and Clean Water Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all WUS. Permitting for projects filling WUS (including wetlands) is overseen by the Corps under Section 404 of the CWA. Projects could be permitted on an individual basis or be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. and typically require substantial time (often longer than 6 months) to review and approve, while Nationwide Permits are pre-approved if a project meets appropriate conditions.

1.5.2 State of California

California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

California Endangered Species Act

The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. California ESA Section 2081 authorizes the CDFW to enter into a memorandum of agreement for the take of listed species for scientific, educational, or management purposes.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in listed plants. The California ESA follows the NPPA and covers both plants and animals designated as endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

California Fish and Game Code

California Fish and Game Code (Sections 1600 through 1603) requires a CDFW agreement for projects affecting riparian and wetland habitats through issuance of a Streambed Alteration Agreement (SAA).

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1970 grants the State Water Resource Control Board (SWRCB) and its regional offices (RWQCBs) power to protect water quality and is the primary vehicle for implementation of the State's responsibilities under Section 401 of the CWA. The Porter-Cologne Act grants the SWRCB authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. Typically, the SWRCB and RWQCB act in concert with the Corps under Section 401 of the Federal CWA in relation to permitting fill of federal jurisdictional waters.

California Natural Communities Conservation Planning Act

The California Natural Communities Conservation Planning (NCCP) Act of 1991 (Section 2835) allows the CDFW to authorize interim take of species covered by plans in agreement with NCCP guidelines. A Natural Communities Conservation Program initiated by the State of California focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and state listing of coastal sage scrub-dependent species. The County of San Diego became a participant in the NCCP in 1993 for projects located within the planning area for the Coastal Sage Scrub NCCP with the intent to "...provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth." The NCCP process guidelines were established as interim guidelines until formal subregional plans were approved. The draft NCMSCP will be the subregional plan for this portion of the County when adopted. Until then, an NCCP 4(d) take permit (Habitat Loss Permit; HLP) is required for the project to demonstrate compliance with the NCCP Act.

1.5.3 County of San Diego

Habitat Loss Permit Ordinance

The HLP Ordinance was adopted in March of 1994 in response to both the listing of the CAGN as a federal threatened species and the adoption of the NCCP Act by the State. Pursuant to the Special 4(d) Rule under the federal ESA, the County is authorized to issue "take permits" for the CAGN (in the form of HLPs) in lieu of Section 7 or 10(a) permits typically required from the USFWS. Although issued by the County, the USFWS and CDFW must concur with the issuance of an HLP for it to become valid as take authorization under the federal ESA. The HLP Ordinance states that projects must obtain an HLP prior to the issuance of a grading permit, clearing permit, or improvement plan if the project would directly or indirectly impact any of several coastal sage scrub habitat types. The HLP Ordinance requires an HLP if coastal sage scrub or related habitat will be impacted, regardless of whether it is currently occupied by the CAGN. An HLP is not required for projects within the boundaries of the MSCP that have an adopted subarea plan; this project lies within the boundaries of the draft NCMSCP, which is still

in draft form. HLPs are also not required for projects that have separately obtained Section 7 or 10(a) permits for take of the CAGN; this project has not.

Approval of an HLP is based on findings made pursuant to the HLP Ordinance. Findings need to demonstrate that a project's loss of coastal sage scrub would not exceed the County's 5 percent interim allowable loss limit. It would also have to demonstrate that the habitat loss would not preclude connectivity between areas of high habitat values or preclude or prevent the preparation of a subregional NCCP plan. Additionally, the findings must show that the habitat loss has been minimized and mitigated to the maximum extent practicable in accordance with Section 4.3 of the Southern California Coastal Sage Scrub NCCP Process Guidelines, and that the habitat loss would not appreciably reduce the likelihood of survival and recovery of listed species in the wild. Finally, the habitat loss must be incidental to otherwise lawful activities. An HLP application must be filed with the County if the draft NCMSCP has not been adopted at the time of its environmental review because impacts to coastal sage scrub occupied by the CAGN would occur.

Resource Protection Ordinance

The County regulates natural resources (among other resources) as sensitive biological resources via the RPO (County 2011), the regulations of which cover wetlands, wetland buffers, sensitive plant and animal species, sensitive vegetation communities/habitat types, and habitats containing sensitive animals or plants.

RPO wetlands are defined as lands having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);
- The substratum is predominantly undrained, hydric soil; or
- An ephemeral or perennial stream is present, whose substratum is predominately non-soil, and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

According to the RPO, the following are not considered RPO wetlands:

- Lands which have attribute(s) specified above, solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of Planning and Land Use determines that they:
 - Have negligible biological function or value as wetlands;
 - Are small and geographically isolated from other wetland systems;
 - Are not vernal pools; and
 - Do not have substantial or locally important populations of wetland dependent sensitive species.

- Lands that have been degraded by past legal land disturbance activities to the point that they meet the following criteria as determined by the Director of Planning and Land Use:
 - Have negligible biological function or value as wetlands even if restored to the extent feasible; and,
 - Do not have substantial or locally important populations of wetland dependent sensitive species.

As noted above in Section 1.4.11, the project would not affect County RPO wetlands.

Sensitive Habitat Lands are defined by the RPO as:

- Land which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State CEQA Guidelines (14 Cal. Admin. Code Section 15000 *et seq.*), including the area which is necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.
 - “Unique vegetation community” refers to associations of plant species which are rare or substantially depleted. These may contain rare or endangered species, but other species may be included because they are unusual or limited due to a number of factors, for example: (a) they are only found in the San Diego region; (b) they are a local representative of a species or association of species not generally found in San Diego County; or (c) they are outstanding examples of the community type as identified by the CDFW listing of community associations.

There are no unique vegetation communities on site; however, Sensitive Habitat Lands on site include: 1) Diegan coastal sage scrub, 2) scrub oak chaparral, mafic chamise chaparral, mafic southern mixed chaparral, and 3) non-native grassland because it supports Orcutt’s brodiaea a County List A species.

The remaining portions of the project site are not Sensitive Habitat Lands as they do not meet the Sensitive Habitat Lands definition. The remaining portions do not represent areas which are necessary to support a viable population of rare and endangered species in perpetuity, or which are critical to the proper functioning of a balanced natural ecosystem or which serve as a functioning wildlife corridor.

2.0 PROJECT EFFECTS

Direct impacts are immediate impacts resulting from permanent removal of biological resources. Direct impacts were quantified by overlaying the limits of project-related impacts on the biological resources map of the site. A total of 32.9 acres would be directly affected by grading and fire fuel modification on site. This includes 31.6 acres of impact on site and 1.3 acre of impact off site (fuel modification). Indirect impacts are all actions that are not direct removal of biological resources but affect the surrounding biological resources either as a secondary effect of the direct impacts or as the cause of degradation of a biological resource over time.

2.1 SPECIAL STATUS SPECIES

2.1.1 Special Status Plant Species

Project construction would result in direct and permanent impacts to an estimated 1,710 individual Orcutt's brodiaea plants (County List A) out of an estimated population of 1,740 individuals on site. The suitable habitat area mapped for the species on site is 3.8 acres (Figure 4), of which 3.4 acres would be impacted and 0.4 acre would be preserved.

Project construction would result in direct and permanent impacts to 12 individual Nuttall's scrub oaks (County List A), which is the dominant species in scrub oak chaparral on site.

Project construction would preserve ashy spike-moss (County List D) and would avoid southwestern spiny rush (County List D) as both occur within the preserve area.

2.1.2 Special Status Animal Species

The western spadefoot toad (County Group 2) was observed opportunistically during a gnatcatcher survey visit in 2020. The species also was heard calling by a project biologist on March 13, 2021, but no eggs, tadpoles, or adults were directly observed. The project biologist did observe eggs and tadpoles in two water holding basins on March 20, 2021; however, a total of eight basins (with a total area of 0.14 acre) were determined to be suitable for toad breeding because they are all deep enough, and evidence of current and/or previous ponding was observed (Figure 4). The spadefoot likely uses the surrounding coastal sage scrub, chaparral, and grassland on site for non-breeding purposes.

The CAGN (federal threatened; County Group 1) was found on the site using it for breeding, and based on the species' behavior patterns and habitat needs, it would also use the site for non-breeding purposes (e.g., feeding and sheltering). Based on the habitat needs and behavioral patterns of the southern California rufous-crowned sparrow (County Group 1), it likely breeds, feeds, and shelters on site, as well. The Cooper's hawk (County Group 1) was observed flying overhead and potentially foraging on site; it was not observed breeding on site (no raptor nests were observed). However, the eucalyptus trees on site have potential to be used as nesting sites for the species.

For the western spadefoot toad, project construction would result in the direct and permanent removal of three locations where toads were observed and eight water holding basins (totaling 0.14 acre in area) suitable for toad breeding (Figure 4). It would also result in the direct and permanent removal of 7.2 acres of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed habitat on and off site, 4.6 acres of chaparral on site, and 15.4 acres of non-native grassland on site that could be used for non-breeding purposes. Construction could also cause direct injury/mortality to individual toads.

Project construction would result in the direct and permanent removal of 7.2 acres of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed habitat on and off site occupied by the CAGN. Project construction could also have temporary noise impacts on CAGN nesting as addressed below in Section 2.5 of this report.

Project construction would result in the direct and permanent removal of 27.2 acres of the scrub, chaparral, and grassland habitats on and off site used, or potentially used, by the southern California rufous-crowned sparrow. Project construction could also have temporary noise impacts on this species' nesting as addressed below in Section 2.5 of this report.

Project construction would result in the removal of potential foraging habitat for the Cooper's hawk, and eucalyptus woodland that has potential to support Cooper's hawk breeding, feeding, and sheltering. Project construction could also have temporary noise impacts on Cooper's hawk nesting as addressed below in Section 2.5 of this report.

2.2 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY

Impacts on and off site from the project to sensitive upland habitats that would require compensatory mitigation include 7.2 acres of Diegan coastal sage scrub (including -disturbed), 0.2 acre of scrub oak chaparral, 1.6 acres of mafic chamise chaparral, 2.8 acres of mafic southern mixed chaparral, and 15.4 acres of non-native grassland. Table 3 provides a summary of project impacts to vegetation communities.

VEGETATION COMMUNITY/ HABITAT	ON SITE	OFF SITE	TOTAL
Diegan coastal sage scrub (32500)	5.1	0.2	5.3
Diegan coastal sage scrub-disturbed (32500)	1.9	0.0	1.9
Scrub oak chaparral (37900)	0.2	0.0	0.2
Mafic chamise chaparral (37220)	1.6	0.0	1.6
Mafic southern mixed chaparral (37122)	2.8	0.0	2.8
Non-native grassland (42200)	15.4	0.0	15.4
Eucalyptus woodland (79100)	1.4	0.0	1.4
Disturbed habitat (11300)	2.4	0.2	2.6
Developed and ornamental (12000)	0.8	0.9	1.7
TOTAL	31.6	1.3	32.9

¹In acres

2.3 JURISDICTIONAL WETLANDS AND WATERWAYS

2.3.1 Waters of the U.S.

The unvegetated streambed is ephemeral and not subject to Corps jurisdiction; therefore, there would be no impacts to WUS.

2.3.2 Waters of the State

Potential non-wetland WS on site include the single unvegetated ephemeral streambed in the southern portion of the site. Impacts to potential non-wetland WS from the project total 0.01 acre (546 linear feet). This impact may require permits from the CDFW and RWQCB, should one or both elect to take jurisdiction over the feature.

2.3.3 County RPO Wetland

The unvegetated ephemeral streambed does not meet the criteria for County RPO wetlands. As such, here are no affected County RPO wetlands.

2.4 WILDLIFE MOVEMENT AND NURSERY SITES

As mentioned previously, the project site is not within a core or linkage and does not serve as a nursery site. Large mammals may, however, use the project site and the local area, but movement is likely limited to the immediate north and east by existing development. Rather, local movement of large mammals probably occurs farther to the east through the Elfin Forest and Harmony Grove core areas identified in the draft BMO for the NCMSCP. Therefore, the project site likely does not contribute substantially to wildlife movement and habitat connectivity and, therefore, would not affect those features substantially. As a benefit, however, the project proposes a design to cluster in the north in order to preserve a corridor for local wildlife movement in the more constrained land in the southern portion of the project site and establish a level of compatibility with the adjacent preserves to the west and south.

2.5 INDIRECT IMPACTS

Potential indirect impacts may occur to sensitive biological as a result of project construction (fugitive dust and noise). Other potential indirect impacts may occur to sensitive biological resources from night lighting; invasive, non-native plant species; and public access due to occupation of the built project. These potential impacts are addressed where applicable in the following sections of this report.

Fugitive Dust

Fugitive dust produced by construction could disperse onto native vegetation beyond the project impact footprint. A continual cover of dust can reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This, in turn, can affect animals dependent on these plants. Fugitive dust also may make plants unsuitable as structural habitat for insects and birds. Fugitive dust would be a short-term, temporary impact of project construction.

Noise

Excessive noise could impact the nesting success of the CAGN, southern California rufous-crowned sparrow, and/or Cooper's hawk through grading, clearing, fire fuel modification, and/or other noise-generating activities such as construction. This potential impact could occur during the general avian breeding season of January 15 through August 15 and affect each of these three species (the specific CAGN breeding season is February 15 to August 15, the specific breeding season for the southern California rufous-crowned sparrow is mid-March to mid-June [San Diego Management and Monitoring Program 2010], and the Cooper's hawk specific breeding season is January 15 to July 15).

Night Lighting

Night lighting that shines on or spills into native habitats adjacent to the project impact footprint can prevent nocturnal wildlife from using the habitat. It can also cause loss of native wildlife by providing nocturnal predators with an unnatural advantage over their prey. Night lighting could cause these impacts over the short term during construction and over the long term during operation of the project.

Invasive, Non-native Plant Species

Invasive, non-native plant species are threats to native biological resources in that they can, for example, displace native plants, increase the threat of wildfire by increasing fuel load, and supplant plants used as forage by herbivorous species. Vehicles are the primary conduits for the spread of many invasive species, and activities and soil disturbance associated with construction of the project could spread invasive, non-native plant species to adjacent areas supporting native vegetation. However, the adjacent undeveloped areas are like the project site in plant species composition, so project construction would not result in the spread of invasive, non-native plant species to those adjacent areas because they are already present. New invasive, non-native plant species could be introduced to the project site, however, in erosion control materials.

Landscaping associated with the project could include species that are not native to the project area. Therefore, project landscaping could result in the introduction of invasive, non-native plant species to the project footprint and their spread outside the project footprint.

Public Access

Increases in human activity in the area could result in degradation of preserved habitat and associated indirect impacts on special status species through the removal of vegetation and creation of unauthorized trails. In addition, illegal dumping of lawn and garden clippings, trash, and other refuse could occur.

Domestic Animals

The project is residential in nature, so domestic predators (e.g., dogs and cats) may be introduced to the proposed preserve adjacent to the project footprint. Such introductions have potential to harm native wildlife species through behavioral pattern disturbance and predation.

3.0 SPECIAL STATUS SPECIES

3.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the USFWS or CDFW?

Any of the following conditions would be considered significant if:

- A. The project would impact one or more individuals of a species listed as federal or State endangered or threatened.
- B. The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a State Species of Special Concern.
- C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.
- D. The project may impact arroyo toad aestivation, foraging or breeding habitat.
- E. The project would impact golden eagle habitat.
- F. The project would result in a significant loss of functional foraging habitat for raptors.
- G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.
- H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.
- I. The project would impact occupied burrowing owl habitat.
- J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.
- K. The project would impact occupied Hermes copper butterfly habitat.

L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction:

- Coastal cactus wren
- Coastal California gnatcatcher
- Least Bell's vireo
- Southwestern willow flycatcher
- Tree-nesting raptors
- Ground-nesting raptors
- Golden eagle
- Light-footed clapper rail

3.2 ANALYSIS OF PROJECT EFFECTS

The proposed project would result in significant impacts under the above guidelines for the following reasons:

3.1.A The project would impact 1 pair of CAGN through the removal of Diegan coastal sage scrub (including -disturbed) during construction. These impacts would be considered significant under County Guideline 3.1.A. Potential noise impacts to the CAGN are addressed under 3.1.L.

3.1.B The project would impact 1,710 individual Orcutt's brodiaea (List A) plants and 12 individual Nuttall's scrub oak (List A) plants. The project would remove 3.4 acres of land supporting Orcutt's brodiaea and 0.2 acre of scrub oak chaparral dominated by Nuttall's scrub oak. The project would impact the western spadefoot toad (SSC) through loss of breeding habitat (eight suitable water holding basins totaling 0.14 acre in area), non-breeding habitat (Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, chaparral, and non-native grassland) and through potential direct injury/mortality to individuals during construction.

The project would impact Cooper's hawk (Group 1) through loss of potential foraging and nesting habitat. The project would impact southern California rufous-crowned sparrow (Group 1) through habitat loss and potential direct impacts to those when nesting. Impacts to these SSC or County Group 1 species would be significant under County Guideline 3.1.B. Potential noise impacts to the Cooper's hawk and southern California rufous-crowned sparrow are addressed under County Guideline 3.1.L.

The project also has potential to impact SSC or County Group 1 species with moderate potential to occur on site (Appendix J). These species include:

Reptiles

- Coast horned lizard (SSC)
- Coast patch-nosed snake (SSC)
- Coastal whiptail (SSC)
- Two-striped garter snake (SSC, Group 1)

Birds

- Bell's sage sparrow (Group 1)
- California horned lark (Group 1)
- Red-shouldered hawk (Group 1)
- Turkey vulture (Group 1)

Mammals

- Dulzura pocket mouse (SSC)
- Mexican long-tongued bat (SSC)
- San Diego black-tailed jackrabbit (SSC)
- San Diego desert woodrat (SSC)
- Western mastiff bat (SSC)

Potential impacts to the reptiles and small mammals could include habitat loss and/or direct injury/mortality to individuals during construction. Potential impacts to the birds could include habitat loss and direct impacts to those that are nesting. Impacts to these County Group 1/SSC species, should they occur, would be significant under County Guideline 3.1.B.

3.1.F The project site supports raptors such as the Cooper's hawk and red-tailed hawk. The project would impact open habitats including, for example, non-native grassland and Diegan coastal sage scrub-disturbed that occur in the more level portion of the site and contain rodent burrows. The impacts would be significant under County Guideline 3.1.F.

3.1.H The project could cause indirect impacts to the Rancho La Costa Preserve or proposed project preserve to levels that would likely harm sensitive species over the long term as follows.

Potentially significant indirect impacts to special status species resulting from human activity; domestic animals (e.g., cats); and invasive, non-native plant species could occur. These impacts would be significant under County Guideline 3.1.H. See 3.1.H, below, for a discussion of potential indirect impacts to Orcutt's brodiaea. Potential indirect impacts from construction noise are discussed under County Guideline 3.1.L.

3.1.L Noise from such sources as clearing and grading could result in an impact to wildlife. Noise-related impacts would be considered significant if special status species like the CAGN were displaced from their nests and failed to breed. The CAGN and other special status bird species nesting within any area impacted by noise exceeding 60 decibels (dB) or ambient could be significantly impacted. If tree-nesting raptors (e.g., Cooper's hawk) are nesting within 500 feet of the impact area, or special status passerines such as the CAGN and southern California rufous-crowned sparrow are nesting within 300 feet of the impact area, effects resulting from construction noise would be significant according to County Guideline 3.1.L.

The project would not result in significant impacts under the above guidelines for the following reasons:

3.1.C The project would not impact the local long-term survival of List C plant species because none was observed on site, and none has potential to occur. The project would not impact the local long-term survival of the List D plant species present on site (southwestern spiny rush and ashy spike-moss) because these species would be preserved or avoided. Other List D plant species have low potential to occur and are, therefore, not likely to be present or impacted. The project is not expected to impact the local long-term survival of any County Group 2 animal species (that are not SSC; those are addressed under County Guidelines 3.1.B) because none has moderate or high potential to occur on site.

List D plant species evaluated for their potential to occur on site have low potential to occur (Appendix J) and, therefore, are not expected to have their long-term survival affected by the project. Therefore, impacts to List C and D plant species and Group 2 animal species are considered less than significant.

3.1.D The project would not impact arroyo toad aestivation, foraging, or breeding habitat because the site contains no habitat suitable for the arroyo toad, and the arroyo toad has not been reported to the CNDDDB or SanBios and USFWS databases within five miles of the site.

3.1.E The project would not impact golden eagle habitat because the site is not currently an area of solitude at a distance to human habitation that the golden eagle requires. Rather, the site is adjacent to existing development. While a record in the SanBios database exists for an eight-kilometer (approximately five-mile) area that overlaps somewhere with the five-mile radius of the site, the record is from 1998. There are no historic or current records of the golden eagle in the CNDDDB or USFWS database within five miles of the site.

3.1.G Appendix C of the draft BMO (Appendix A of County 2009) for the 2009 draft NCMSCP (County 2009) shows that the project site is not within a core despite being adjacent to the 1,400-acre Rancho La Costa Preserve established in 2002. A core is a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species. While the project site is adjacent to the Preserve and supports a viable population of County List A Orcutt's brodiaea and multiple wildlife species (including the County Group 1 CAGN), the project would not impact the viability of a core.

3.1.H. Potential indirect impacts to Orcutt's brodiaea preserved on site would be less than significant because the preserved suitable habitat area would be surrounded by a 100-foot buffer from development. Likewise, potential indirect impacts to Nuttall's scrub oak preserved on site would be less than significant because the preserved individuals would be surrounded by a greater than 100-foot buffer from development. Night lighting would not result in significant impacts because the project would be required to adhere to Division 9 of the San Diego County Light Pollution Code. Lighting within the project footprint adjacent to the proposed open space would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from the open space.

3.1.I The project would not impact occupied BUOW habitat because the BUOW was determined to be absent from the site during the focused survey for the species conducted in 2020.

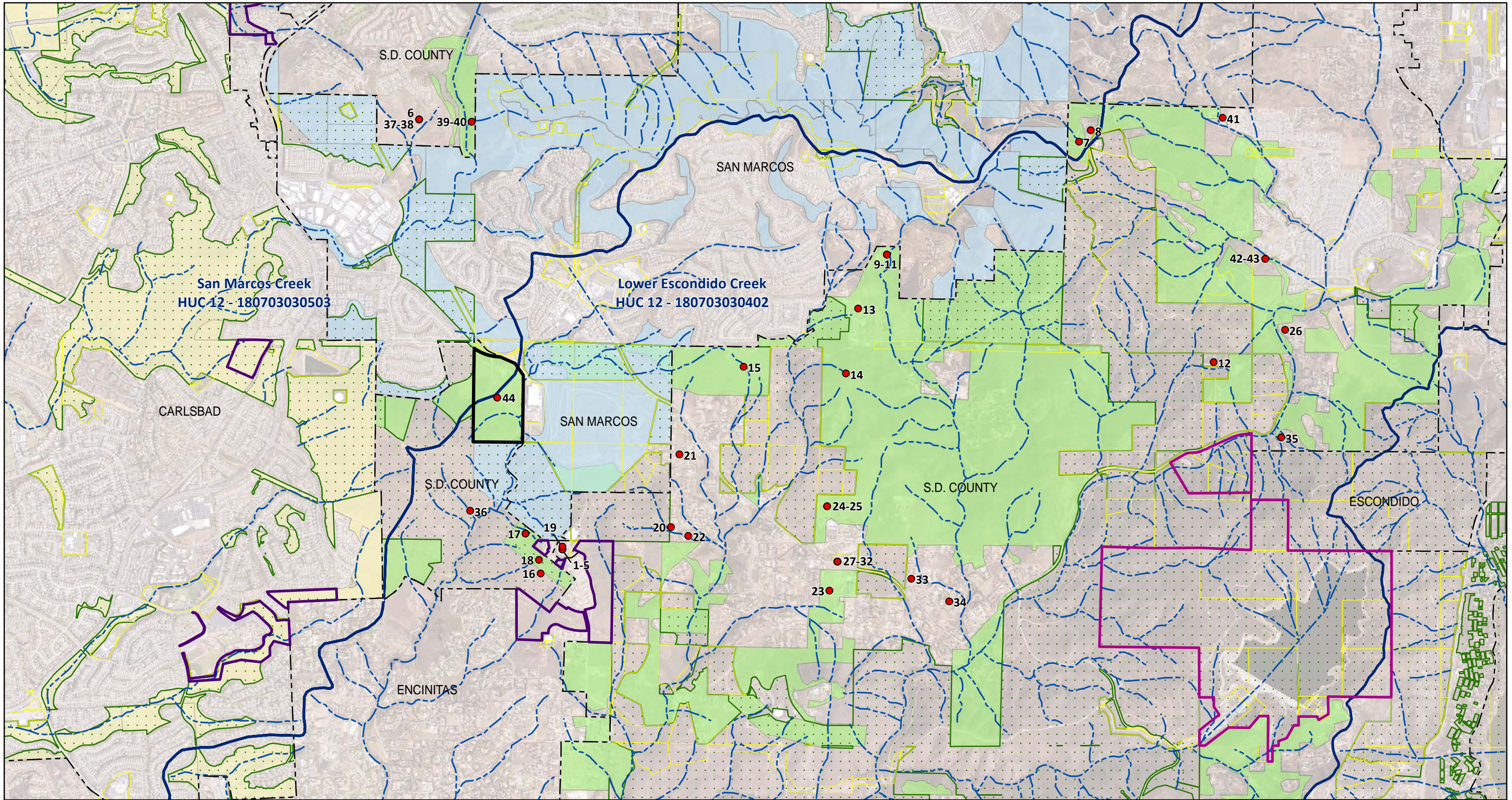
3.1.J The cactus wren was not observed or detected on site, and the cactus thickets that the species require are not present. The species has not been reported to the CNDDDB or SanBios database within five miles of the project site.

3.1.K The project would not impact occupied Hermes copper butterfly habitat because the Hermes copper habitat assessment of the site concluded that the potential for the species to occur is low. There was no spiny redberry was found in proximity to California buckwheat, which is a general habitat requirement for the species (Attachment B [County of San Diego Guidelines for Hermes Copper] in County 2010a).

3.1.L The project would not impact nesting success of the coastal cactus wren because the cactus wren was not observed or detected, and the cactus thickets that the species require are not present. The species has not been reported to the CNDDDB or SanBios database within five miles of the project site. The project would not impact the nesting success of the least Bell's vireo or southwestern willow flycatcher because their native riparian forest, woodland, and scrub habitats are not present on site or adjacent to the site. The project would not affect the Ridgway's rail because its marsh habitats are not present on site or adjacent to the site. Lastly, the project would not impact the nesting success of the golden eagle because no golden eagle nesting habitat (generally remote cliffs) occurs on site, and no nests are known within 4,000 feet of the site. There are no historic or current records of the golden eagle in the CNDDDB or USFWS and database within five miles of the site.

3.3 CUMULATIVE IMPACT ANALYSIS

The area of consideration for cumulative impacts on biological resources (i.e., the cumulative study area) includes an area of unincorporated County including and surrounding the project site and bordered by the cities of Carlsbad to the west, San Marcos to the north and west, Escondido to the east, and Encinitas to the southwest. The cumulative study area encompasses part of the Escondido Creek watershed and numerous preserves and reserves (Figure 5).



- Project Boundary
- Cumulative Projects
- Public Ownership
- North County MSCP PAMA
- City of San Marcos MSCP FPA
- City of Carlsbad HMP Preserve
- Conserved Lands
- CDFW Conservation Easement
- Elfin Forest Recreational Reserve

- NHD Stream
- NHD Watershed (12-digit HUC)

0 1,250 2,500 Feet

Figure 5

Cumulative Study Area

QUESTHAVEN

The cumulative study area was chosen because it includes areas with similar biological resources to the project site. This area includes lands within a reasonable distance from the project site that may have a biologically based connection to the site in terms of habitat connectivity and development in the region. The cumulative study area includes surrounding proposed PAMA and open space preserve connections to the project site as well as Elfin Forest, which is a biological core area identified in the draft BMO for the NCMSCP.

A total of 44 projects (including the proposed project) were reviewed for this cumulative analysis (Table 4; Figure 5). Of these 44 cumulative projects, four would result in significant or potentially significant cumulative impacts to sensitive biological resources. The remaining 40 projects either would not result in impacts to sensitive biological resources, or information on impacts is not available. The project has the potential to contribute to the cumulative impact on the CAGN, raptors (i.e., loss of foraging habitat), southern California rufous-crowned sparrow, and SSC or County Group 1 species with moderate potential to occur on site, as discussed below.

The cumulative projects (i.e., projects 1 through 43) with available data would impact 42.18 acres of coastal sage scrub, 9.7 acres of southern mixed chaparral (not all impacts required mitigation) and 43.7 acres of non-native grassland. The project would contribute additional impacts to 7.2 acres of coastal sage scrub, 0.2 acre of scrub oak chaparral, 1.6 acres of mafic chamise chaparral, 2.8 acres of mafic southern mixed chaparral, and 15.4 acres of non-native grassland. Therefore, the total cumulative impacts for which mitigation is required/was provided is:

- 49.38 acres of coastal sage scrub,
- 0.20 acre of scrub oak chaparral,
- 1.60 acres of mafic chamise chaparral,
- 12.50 acres of southern mixed chaparral, and
- 59.10 acres of non-native grassland.

The loss of coastal sage scrub habitat would represent a potential cumulative impact on the western spadefoot toad, CAGN, southern California rufous-crowned sparrow, and other special status species with moderate potential to occur in this habitat. The project would result in impacts to 7.2 acres of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed and 1 pair of CAGN through the removal of this habitat during construction. Therefore, the proposed project would contribute to the significant cumulative impact on the CAGN and other special status species.

Projects are required to implement avoidance measures so that direct, inadvertent take of CAGN individuals is prevented. In addition, projects are typically required to compensate impacts on coastal sage scrub at a minimum 1:1 ratio to ensure that the loss of occupied and suitable habitat for the CAGN is fully compensated. The project would implement required CAGN avoidance measures and compensate for the loss of 7.2 acres of coastal sage scrub habitat through the mitigation program explained in Mitigation Measure 4.1.A. Therefore, the project's contribution to the cumulative impact on the CAGN and other special status species would be less than considerable and reduced to a less-than-significant level.

**Table 4
CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES¹**

# on Figure 5	Project Number	Project Name	Resource ²									
			CSS		SOC		MCC		MSMC		NNG	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M	I	M
1	PDS2020-ZAP-98-015W1M6	Cell site modification	0	0	0	0	0	0	0	0	0	0
2	PDS2016-ZAP-98-015W2M2	T-Mobile West wireless facility modification	0	0	0	0	0	0	0	0	0	0
3	PDS2017-MUP-95-012W1M2	Verizon Wireless equipment replacement/installation	0	0	0	0	0	0	0	0	0	0
4	PDS2012-3910-1208006	No information available	--	--	--	--	--	--	--	--	--	--
5	PDS2012-3401-98-015-03	T-Mobile wireless facility modification	0	0	0	0	0	0	0	0	0	0
6	PDS2003-3950-03-005	Lake San Marcos Greens	0	0	0	0	0	0	0	0	0	0
7	PDS2014-AD-14-022	Agricultural clearing	0	0	0	0	0	0	0	0	0	0
8	PDS2014-MUP-82-050W3M1	Mount Whitney cell equipment relocation	0	0	0	0	0	0	0	0	0	0
9	PDS2019-MUP-06-008M1	Sprint telecom facility modification	0	0	0	0	0	0	0	0	0	0
10	PDS2006-3300-06-008	Construct/operate telecom facility	0	0	0	0	0	0	0	0	0	0
11	PDS2006-3910-0608005 9	No information available	--	--	--	--	--	--	--	--	--	--
12	PDS2003-3000-03-083	Felker ag clearing	0	0	0	0	0	0	4.5 ³	0	0	0
13	PDS2010-3710-10-0013	Questhaven boundary adjustment	0	0	0	0	0	0	0	0	0	0
14	PDS2005-3710-05-0027	Altmann boundary adjustment	0	0	0	0	0	0	0	0	0	0
15	PDS2018-IC-18-035	Application to subdivide	0	0	0	0	0	0	0	0	0	0
16	PDS2006-3710-06-0047	Perkins boundary adjustment	0	0	0	0	0	0	0	0	0	0
17	PDS2016-LDGRMJ-30097	No information available	--	--	--	--	--	--	--	--	--	--
18	PDS2018-LDGRMJ-30192	No information available	--	--	--	--	--	--	--	--	--	--
19	PDS2012-3300-12-018	Sprint Gaty Reservoir wireless telecom facility	0	0	0	0	0	0	0	0	0	0

**Table 4 (cont.)
CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES¹**

# on Figure 5	Project Number	Project Name	Resource ²									
			CSS		SOC		MCC		MSMC		NNG	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M	I	M
20	PDS2004-3000-04-036	Sinatra and Bordagaray agricultural brushing and clearing	0	0	0	0	0	0	1.5 ³	0	0	0
21	PDS2014-AD-14-014	Barking Elf Ranch Stables zoning verification	--	--	--	--	--	--	--	--	--	--
22	PDS2018-VAC-18-003	Vacate open space easement	0	0	0	0	0	0	0	0	0	0
23	PDS2004-3200-20764	Baumgartner parcel map	0	0	0	0	0	0	0	0	6.0	3.0
24	PDS2004-3100-5278	Anderson major subdivision	0.48	0.48	0	0	0	0	0	0	0	0
25	PDS2017-LDMJIP-50031	No information available	--	--	--	--	--	--	--	--	--	--
26	PDS2017-MUP-70-135M2	Minor deviation—fire rebuild	0	0	0	0	0	0	0	0	0	0
27	PDS2018-MUP-05-008M5	AT&T Mobility plot plan deviation	0	0	0	0	0	0	0	0	0	0
28	PDS2017-MUP-05-008M4	AT&T Mobility plot plan deviation	0	0	0	0	0	0	0	0	0	0
29	PDS2012-3301-05-008-02	AT&T plot plan deviation	0	0	0	0	0	0	0	0	0	0
30	PDS2015-MUP-05-008M3	Sprint plot plan deviation	0	0	0	0	0	0	0	0	0	0
31	PDS2005-3300-05-008	Sprint Nextel telecom facility	0	0	0	0	0	0	0	0	0	0
32	PDS2011-3301-05-008-01	AT&T plot plan deviation	0	0	0	0	0	0	0	0	0	0
33	PDS2011-3710-11-0025	Holland boundary adjustment	0	0	0	0	0	0	0	0	0	0
34	PDS2018-BC-18-0112	Ertorth residence lot line adjustment	0	0	0	0	0	0	0	0	0	0
35	PDS2019-BC-19-0036	Dietel boundary adjustment	0	0	0	0	0	0	0	0	0	0
36	PDS2006-3710-06-0047	Perkins boundary adjustment	0	0	0	0	0	0	0	0	0	0
37	PDS2004-3000-04-067	Agricultural open space easement encroachment	0	0	0	0	0	0	0	0	0	0
38	PDS2004-3500-04-028	Varadero Model Homes	0	0	0	0	0	0	0	0	0	0

Table 4 (cont.) CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES ¹												
# on Figure 5	Project Number	Project Name	Resource ²									
			CSS		SOC		MCC		MSMC		NNG	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M	I	M
39	PDS2007-3710-07-0082	Citizen Development Corp. boundary adjustment	0	0	0	0	0	0	0	0	0	0
40	PDS2006-3710-06-0167	McMorris/CDC boundary adjustment	0	0	0	0	0	0	0	0	0	0
41	PDS2019-MUP-04-012M9	Winchester plot plan deviation	0	0	0	0	0	0	0	0	0	0
42	PDS2002-3500-02-055	Walz "B" site plan	0	0	0	0	0	0	0	0	0	0
43	PDS2004-3100-5365	Harmony Grove Village	41.7	76.5	0	0	0	0	3.7 ^{3,4}	1.9 ⁴	37.7	18.9
Subtotal			42.18	76.98	0.00	0.00	0.00	0.00	9.70^{3,4}	1.90⁴	43.70	21.90
44	PDS2020-TM-5643	Questhaven Tentative Map	7.20	50.6 ²	0.20	50.6 ²	1.60	50.6 ²	2.80	50.6 ²	15.40	50.3 ²
TOTAL			49.38	127.58	0.20	50.60	1.60	50.60	12.50⁴	52.50	59.10	72.20

¹Impacts and mitigation are listed in acres.

²CSS = Diegan coastal sage scrub and variations/ecotones (e.g., coastal sage-chaparral scrub, etc.); SOC = scrub oak chaparral; MCC = mafic chamise chaparral; MSMC = mafic southern mixed chaparral; NNG = non-native grassland. The mitigation shown in Table 4 for Questhaven is not based on impacts to mitigation ratios. Rather, the mitigation is an overall program of preservation and/or habitat restoration/preservation of a total of 50.3 acres on and off site (adjacent). Refer to Section 4.4 and Table 7 of this report.

³Impacts were to southern mixed chaparral, not mafic southern mixed chaparral

⁴Six acres of the impact is to southern mixed chaparral for which no mitigation was required. Mitigation was required for impacts to 3.7 acres of southern mixed chaparral from Harmony Grove Village.

The cumulative projects would impact 0.2 acre of scrub oak chaparral, 1.6 acres of mafic chamise chaparral, and 12.5 acres of southern mixed chaparral, which have the potential to support the western spadefoot toad, southern California rufous-crowned sparrow and other special status species with moderate potential to occur on site. Projects are typically required to compensate for scrub oak chaparral at a minimum 1:1 ratio; impacts to non-mafic chamise chaparral and southern mixed chaparral are typically not required; however, mitigation was required/provided for Harmony Grove Village (project number 43). Impacts to mafic chamise chaparral and mafic southern mixed chaparral are typically required to be mitigated at a minimum 3:1 ratio. The project would mitigate impacts to scrub oak chaparral, mafic chamise chaparral, and mafic southern mixed chaparral through the mitigation program explained in Mitigation Measure 4.1.A. Therefore, the project's contribution to the cumulative impacts would be less than considerable and reduced to a less-than-significant level.

The cumulative projects would impact 59.1 acres of non-native grassland that potentially serve to provide raptor foraging habitat. Cumulative impacts to raptors would be significant since the cumulative projects would further reduce the amount of foraging habitat available for these species. The project's contribution to this habitat loss would be 15.4 acres. Therefore, the project would contribute to significant cumulative impacts to raptors. The project proposes to mitigate for impacts to non-native grassland through the mitigation program explained in Mitigation Measure 4.1.A. With the implementation of this measure, the project's contribution on the cumulative impact to raptor foraging habitat would be less than considerable and reduced to a less-than-significant level.

3.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impact 3.1.A The project would directly impact one pair of the CAGN through habitat removal (see *Impact 3.1.L* for indirect noise impacts to these species).

Mitigation Measure 3.1.A

No grading or clearing of occupied Diegan coastal sage scrub or Diegan coastal sage scrub-disturbed shall occur during the breeding season of the CAGN (February 15 – August 31). All grading permits, improvement plans, and the final map shall state the same. If clearing or grading is scheduled to occur during the breeding season, a pre-construction survey shall be conducted to determine whether CAGN occur within the impact area. If there is no CAGN nesting (includes nest building or other breeding/nesting behavior) within the impact area, clearing and grading shall be allowed to proceed. If, however, CAGN are observed nesting or displaying breeding/nesting behavior in the impact area, construction shall be postponed until all nesting (or breeding/nesting behavior) has ceased or until after August 31.

The loss of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed shall be mitigated through the overall mitigation program explained in Mitigation Measure 4.1.A.

Impact 3.1.B The project impact Orcutt's brodiaea, Nuttall's scrub oak, western spadefoot toad, Cooper's hawk, and southern California rufous-crowned sparrow through loss of habitat and/or potential direct injury/mortality. Furthermore, the project could impact SSC or County Group 1 species with moderate potential to occur on site.

Mitigation Measure 3.1.B

Mitigation for Orcutt's brodiaea shall occur through the translocation of Orcutt's brodiaea corms from within the project impact footprint to suitable habitat within the preserve on site in accordance with a County-, CDFW-, and USFWS-approved translocation plan (Alden 2022; Appendix L).

Nuttall's scrub oak, western spadefoot toad, Cooper's hawk and southern California rufous-crowned sparrow shall be mitigated through implementation of Mitigation Measure 4.1.A

Impacts to Nuttall's scrub oak would also be mitigated through preservation of 0.4 acre of scrub oak chaparral on site. In addition, this species is included in the container stock list for the southern mafic chaparral/coastal sage scrub ecotonal habitat restoration area. The goal would be for a 3:1 replacement (36 total) of impacted individual oaks through planting of container stock in the preserve.

Additionally, 21 new water holding basins suitable for western spadefoot toad breeding shall be created with a combined area of 0.2 acre (Figures 6 and 7a-7c). The basins are only to create western spadefoot toad breeding opportunities and are not intended to be vernal pools or wetland habitat. The basins shall be created in flatter areas on site and off site (i.e., in the adjacent off-site mitigation area; see Mitigation Measure 4.1.A) where surface runoff from rainfall on hillsides to the west and south is expected to collect. The basins shall be created in a variety of sizes for a diversity of breeding conditions, with smaller basins potentially holding water in drier years when there is insufficient rainfall to fill larger basins. The basins shall be created at depths of approximately one foot, maximum, with gradual slopes to facilitate toad access. For created basins within the fuel modification zone, mowing shall be restricted to the dry season and shall be prohibited in the basin areas whenever there is ponded water. Otherwise, periodic mowing shall be considered compatible with western spadefoot toad reproduction. The created basins shall be monitored for ponding and toad activity in conjunction with the five-year maintenance and monitoring period of the on- and off-site restoration plan prescribed in Mitigation Measure 4.1.A (Appendix K). The only basin maintenance that shall occur during that five-year period would be to repair damage to the basins and/or remove weeds if they appear to be hindering the ponding of water.

The potential loss of injury/mortality to individuals of Cooper's hawk and southern California rufous-crowned sparrow shall also be mitigated through complying with the MBTA to avoid impacts to nesting birds.

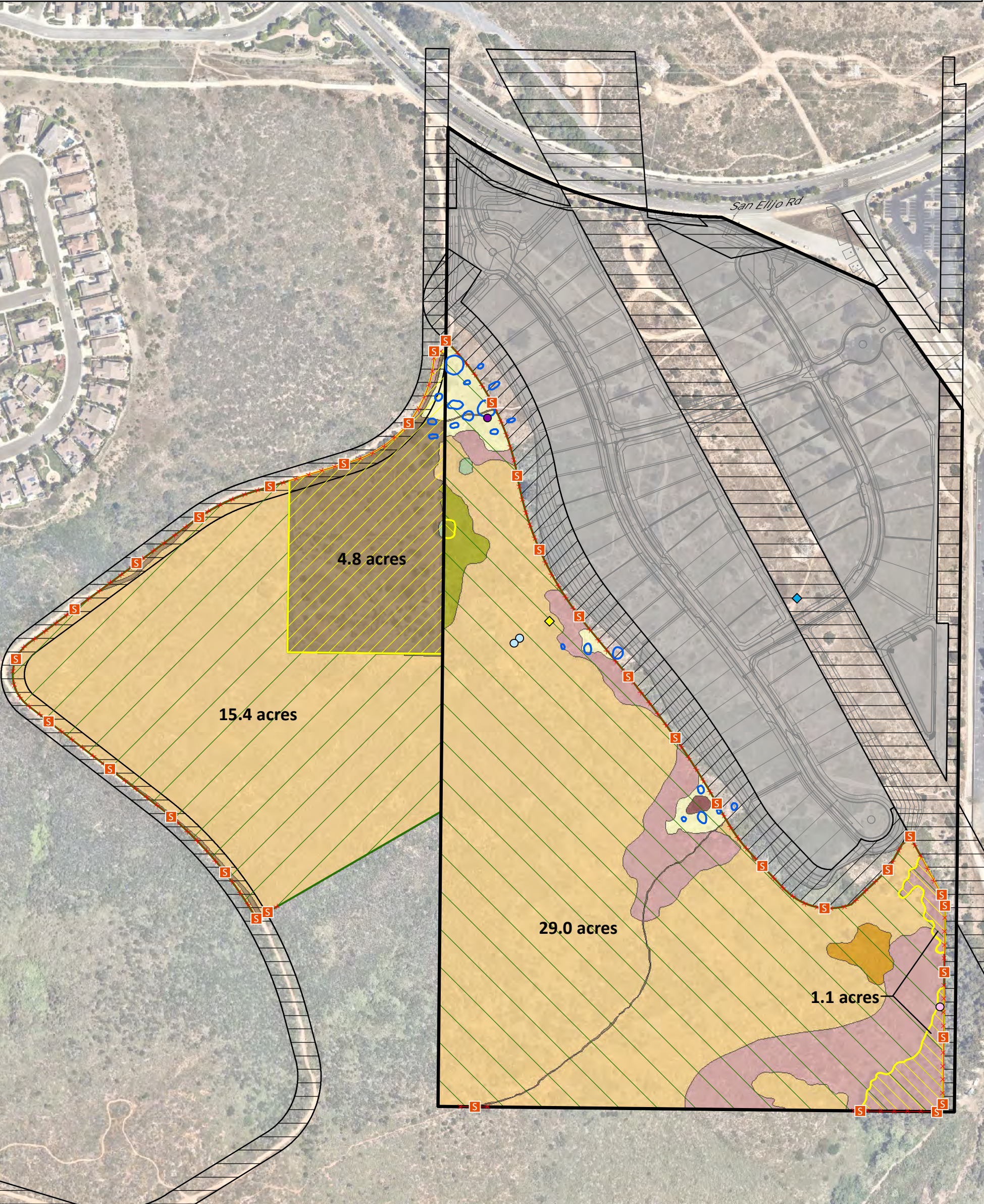
Potential impacts to SSC or County Group 1 species with moderate potential to occur on site shall be mitigated through implementation of Mitigation Measure 4.1.A.

Impact 3.1.F The project would impact raptor foraging habitat (non-native grassland, Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, and disturbed habitat).

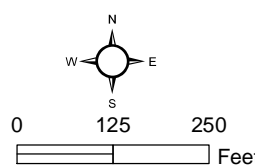
Mitigation Measure 3.1.F

The project shall mitigate the loss of raptor foraging habitat through implementation of Mitigation Measure 4.1.A.

<ul style="list-style-type: none"> Project Boundary Fuel Modification Zone/Limited Building Zone Road and Utility Easements Onsite Upland Habitat Preserve Area Offsite Upland Habitat Preserve Area Onsite CSS Restoration Area Offsite SMC/CSS Ecotonal Restoration Area Constructed Spadefoot Toad Basin Preserve Area Fencing¹ Preserve Area Signs¹ <p>¹ Fencing and signs not included along southern boundary due to very steep slopes and impenetrable vegetation</p>	<p>Vegetation</p> <ul style="list-style-type: none"> Diegan Coastal Sage Scrub Diegan Coastal Sage Scrub - Disturbed Scrub Oak Chaparral Mafic Southern Mixed Chaparral Mafic Chamise Chaparral Non-native Grassland Eucalyptus Woodland Disturbed Habitat Developed 	<p>Special Status Species</p> <ul style="list-style-type: none"> Coastal California Gnatcatcher (<i>Poliottila californica californica</i>) Western Spadefoot Toad (<i>Spea hammondi</i>) Ashy Spikemoss (<i>Selaginella cinerascens</i>) Spiny Rush (<i>Juncus acutus</i>) Orcutt's Brodiaea (<i>Brodiaea orcuttii</i>)
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Aerial Photo: Nearmap 2020

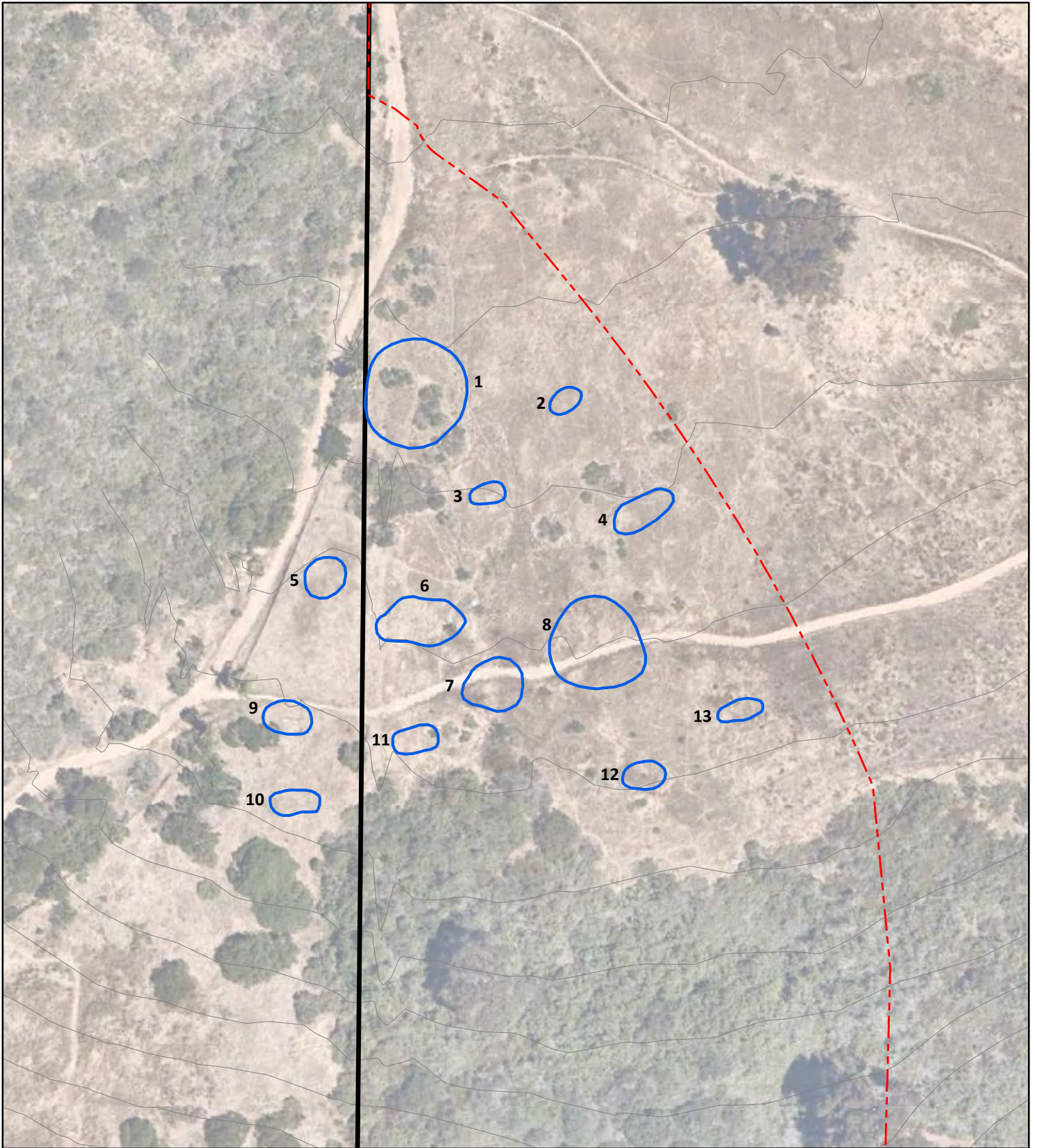


ALDEN
ENVIRONMENTAL, INC.




Figure 6

Biological Mitigation Areas

QUESTHAVEN



Aerial Photo: Nearmap 2020

-  Project Boundary
-  Grading Limits
-  Constructed Spadefoot Toad Basin

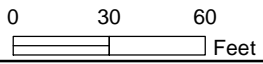
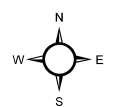





Figure 7a

Spadefoot Toad Basins

QUESTHAVEN



Aerial Photo: Nearmap 2020

-  Project Boundary
-  Grading Limits
-  Constructed Spadefoot Toad Basin

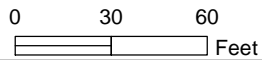
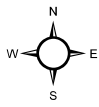





Figure 7b

Spadefoot Toad Basins

QUESTHAVEN



Aerial Photo: Nearmap 2020

-  Project Boundary
-  Grading Limits
-  Constructed Spadefoot Toad Basin

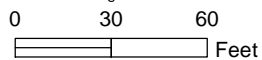
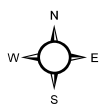


Figure 7c

Spadefoot Toad Basins

QUESTHAVEN

Impact 3.1.H The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.

Mitigation Measure 3.1.H

To mitigate from potential impacts from increased human activity, open space fencing and signage shall be installed: 1) at the interface of the project and the preserve; 2) at the southeast corner of the site where it abuts non-preserve area; 3) at the trailhead entering the preserve from the southwest; and 4) around the off-site preserve area adjacent to an existing trail (Figure 6). The remaining preserve area boundaries shall not be fenced as they are adjacent to Preserve Areas in the Draft NCMSCP (Figure 2) and also have extremely steep slopes with impenetrable vegetation, making fence installation infeasible.

Only non-invasive plant species shall be included in the landscape plan for the site (i.e., species not listed on the California Invasive Plant Council Inventory rated as Moderate or High).

The project proponent shall notify all residents that their domestic cats will be required to remain indoors and will be responsible for dissemination of additional information to residents to protect the preserve if the need arises.

Impact 3.1.L Noise from such sources as clearing and grading could result in impacts to nesting CAGN, Cooper's hawk, and southern California rufous-crowned sparrow.

Mitigation Measure 3.1.L

No clearing or grading shall occur of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed during the breeding season of the CAGN (February 15 – August 31) as described in *Mitigation Measure 3.1.A*.

If construction is to occur during the breeding season for the CAGN (February 15 to August 31) or nesting raptors such as the Cooper's hawk (January 15 to July 15), pre-construction survey(s) shall be conducted by a qualified biologist to determine whether these species occur within the areas potentially impacted by noise (i.e., 60 dB(A) hourly average or ambient, if greater). If it is determined at the completion of pre-construction surveys that active nests belonging to these sensitive species are absent from the potential noise-impacted area, construction shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to these sensitive species occur within the noise-impacted area, then construction shall not occur and shall: (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) shall not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint to ensure that noise levels in the occupied habitat are reduced to below 60 dB(A) hourly average or ambient, if greater. Decibel output will be confirmed by a County-approved noise specialist and intermittent monitoring by a qualified biologist to ensure that the reduced noise levels are being maintained. Implementation of this measure shall also mitigate for potential noise impacts to nesting southern California rufous-crowned sparrows.

3.5 CONCLUSION

Project implementation could result in significant impacts to Orcutt's brodiaea, Nuttall's scrub oak, western spadefoot toad, CAGN, Cooper's hawk, southern California rufous-crowned sparrow, and special status species with moderate potential to occur on site. Implementation of Mitigation Measures 3.1.A, 3.1.B, 3.1.F, 3.1.H, and 3.1.L would reduce the impacts to less-than-significant levels.

4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY

4.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the USFWS or CDFW?

Any of the following conditions would be considered significant if:

- A. Project-related grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 in the County Guidelines for Determining Significance [County 2010a], excluding those without a mitigation ratio) on or off the project site.
- B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by the Corps, CDFW, and County: vegetation removal; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; road crossing construction; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.
- C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.
- D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term.
- E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

4.2 ANALYSIS OF PROJECT EFFECTS

The project would result in significant impacts under the above guideline for the following reasons:

4.1.A Project-related grading, clearing, construction or other activities would permanently remove sensitive native or naturalized habitat as listed in Table 5 in the County Guidelines for Determining Significance [County 2010a]. As noted in Table 3, the project would result in permanent impacts to 7.2 acres of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed, 0.2 acre of scrub oak chaparral, 1.6 acres of mafic chamise chaparral, 2.8 acres of mafic southern mixed chaparral, and 15.4 acres of non-native grassland that would require mitigation. The impacts would be significant under County Guideline 4.1.A.

4.1.D Increases in human activity on site could result in significant indirect impacts to adjacent preserved habitat through unauthorized access and disturbance. Landscaping associated with the project also could result in the introduction of invasive, non-native plant species to the project footprint and their spread outside the project footprint into the proposed open space. This impact would be significant under County Guideline 4.1.D.

The project would not result in significant impacts under the above guidelines for the following reasons:

4.1.B The identified ephemeral streambed is unvegetated and does not meet County or agency criteria for wetland/riparian habitat (wetland WUS, WS, and County RPO Wetlands). As such, the project would not result in significant impacts to Corps, CDFW, RWQCB, or County RPO wetlands or riparian habitats per County significance guidelines.

4.1.C No groundwater withdrawal or other activities that could lower the groundwater table are proposed.

4.1.E The project would not impact County RPO wetlands.

4.3 CUMULATIVE IMPACT ANALYSIS

The project would contribute to the cumulative impact on sensitive natural communities; however, it would not contribute to cumulative impacts on riparian habitats. Tables 5 and 6 show the sensitive natural community acreages within the draft NCMSCP Plan area (Table 5) and how the project's communities compare with the much larger cumulative area of the draft NCMSCP Plan (Table 6).

**Table 5
NATURAL HABITAT REPORTED WITHIN THE DRAFT NCMSCP**

Vegetation Community On Site	Vegetation Community in the Plan Area as Listed in the Plan	Total Acres in Plan Area	Total Acres in PAMA	Total Percentage in PAMA	Total Expected Conservation Percentage in Plan Area	Expected Conservation Acreage in PAMA	Expected Conservation Percentage in PAMA
Diegan coastal sage scrub ¹ (32500)	Coastal sage scrub	29,888	23,463	79	62	18,439	79
Scrub oak chaparral (37900)	Chaparral	75,865	66,931	88	68	51,898	78
Mafic chamise chaparral (37220)							
Mafic southern mixed chaparral (37122)							
Non-native grassland (42200)	Grassland	22,355	14,841	66	48	10,817	73

¹Includes Diegan coastal sage scrub-disturbed

**Table 6
PROJECT NATURAL HABITAT COMPARISON TO DRAFT NCMSCP**

Vegetation Community ¹	Existing Project Acres	Existing as Percentage of Total Acres in Plan Area	Existing as Percentage of Total Acres in PAMA	Existing as Percentage of Expected Conservation Acres in Plan Area	Project Impact Acres	Impacts as Percentage of Total Acres in Plan Area	Impacts as Percentage of Total Acres in PAMA	Impacts as Percentage of Expected Conservation in Plan Area
Coastal sage scrub ²	11.9	0.04	0.05	0.06	7.2 ³	0.02	0.03	0.04
Chaparral	28.7	0.04	0.04	0.06	4.6	0.01	0.01	0.01
Grassland	20.9	0.09	0.14	0.19	15.4	0.07	0.10	0.14

¹See Table 5 for specific vegetation community types

²Includes coastal sage scrub-disturbed

³Includes off-site impacts

The project's impacts to sensitive communities are considered significant but mitigable at the project and cumulative level because the project would provide mitigation consistent with County and regulatory agency guidelines. Mitigation for habitat loss is required to compensate for direct impacts on a project site, but it also compensates for cumulative loss of habitat. Cumulatively significant impacts to the sensitive communities would be fully mitigated through on- and off-site habitat preservation and restoration. Therefore, long-term conservation value is provided. As the project's mitigation would be per agreement with the County and regulatory agencies, the project's contribution to cumulative impacts to sensitive communities is not considerable and would be less than significant.

4.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impact 4.1.A The project would result in permanent impacts to 7.2 acres of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed, 0.2 acre of scrub oak chaparral, 1.6 acres of mafic chamise chaparral, 2.8 acres of mafic southern mixed chaparral, and 15.4 acres of non-native grassland.

Mitigation Measure 4.1.A

Mitigation for the project's significant impacts to sensitive natural communities shall include on- and off-site preservation of 44.4 acres, on- and off-site restoration of 5.9 acres as shown in Table 7 and on Figure 6. On- and off-site restoration shall be implemented in accordance with a County-, CDFW-, and USFWS-approved restoration plan with five years of maintenance and monitoring (Appendix K).

This measure was developed in coordination with the County, USFWS, and CDFW, and focuses on a functioning preserve mitigation strategy rather than relying on prescribed mitigation ratios, as presented in Table 5 of the County's Guidelines for Determining Significance and Report Format and Content Requirements, Biological Resources (County 2010a). The project's proposed mitigation, therefore, includes on- and off-site (adjacent) habitat preservation and on- and off-site (adjacent) habitat restoration/preservation. Mitigation would be provided for significant impacts to a total of 27.2 acres of sensitive natural communities in a 50.3 acre biological preserve area (Figure 6) including 44.4 acres of preserved habitat and 5.9 acres of restored habitat. The project's mitigation preserve area would connect to other identified preserve areas to create a larger, overall habitat preserve (Figure 5) that would not only compensate for the project's impacts but would be a beneficial biological resource in the western portion of unincorporated San Diego County.

A mitigation comparison table (Table 8) has been prepared to determine if the proposed mitigation is equivalent to that which would have been required through use of the County's standard ratio approach. As shown in Table 8, the actual acreage in the proposed mitigation is 50.1 acres, as opposed to the 28.3 acres that would have been provided through the ratio approach (an additional 0.2 acre of disturbed habitat [an existing dirt road] would be preserved off site that is not included in Table 8 but is shown in Table 7). This is an excess of 21.8 acres. The proposed mitigation for coastal sage scrub and non-native grassland is lower than the ratios would have provided, but the amount of mafic chaparral far exceeds all requirements. In addition, the existing mafic chaparral is relatively undisturbed, of high quality, and provides similar functions as those of the impacted habitats (wildlife movement, foraging habitat, etc.). The habitat restoration efforts also incorporate coastal sage scrub

species in their seed mixes and container stock lists. The proposed mitigation approach also allowed for a consolidated development footprint with a lesser interface area between the development and the adjacent preserve. In this way potential impacts from fragmentation and human intrusion are reduced while also providing for a more contiguous and defensible preserve area.

Impact 4.1.D Increases in human activity on site could result in significant indirect impacts to adjacent preserved habitat through unauthorized access and disturbance. Landscaping associated with the project also could result in the introduction of invasive, non-native plant species. Domestic predators (e.g., dogs and cats) may be introduced and harm native wildlife species through disturbance and predation.

Mitigation Measure 4.1.D

Implement Mitigation Measure 3.1.H, which includes installing open space fencing and signage shall mitigate for increases in human activity.

Implement Mitigation Measure 3.1.H, which states that only non-invasive plant species shall be included in the landscape plan for the site (i.e., species not listed on the California Invasive Plant Council Inventory rated as Moderate or High).

**Table 7
SENSITIVE COMMUNITY MITIGATION PROGRAM**

Vegetation Community	Existing ¹	Avoided Impact Neutral ²	Impacts ³			Mitigation				
			On Site	Off Site	Total	On-site Preserved	Off-site Preserved	On-site Restored ⁴	Off-site Restored ⁵	Total
Diegan coastal sage scrub	9.8	0.2	5.1	0.2	5.3	4.5	-	-	-	4.5
Diegan coastal sage scrub-disturbed	2.1	0.1	1.9	-	1.9	-	-	-	-	-
Scrub oak chaparral	0.6	-	0.2	-	0.2	0.4	-	-	-	0.4
Mafic chamise chaparral	2.4	0.3	1.6	-	1.6	0.4	-	-	-	0.4
Mafic southern mixed chaparral	25.7	0.1	2.8	-	2.8	22.8	15.1	-	-	37.9
Non-native grassland	20.9	4.6	15.4	-	15.4	0.9	0.1	-	-	1.0
Subtotal Sensitive Communities	61.5	5.5	27.0	0.2	27.2	29.0	15.2	-	-	44.2
Eucalyptus woodland	2.9	0.5	1.4	-	1.4	-	-	1.0	-	1.0
Disturbed habitat	3.7	1.2	2.4	0.2	2.6	-	0.2 ⁶	0.1	4.8	5.1
Developed/Ornamental	1.0	0.2	0.8	0.9	1.7	-	-	-	-	-
Subtotal Non-sensitive Communities	7.6	1.9	4.6	1.1	5.7	-	0.2	1.1	4.8	6.1
TOTAL	69.1	7.4	31.6	1.3	32.9	29.0	15.4	1.1	4.8	50.3

¹Existing acreage on site includes road and utility easements.

²Avoided “Impact Neutral” area within the existing easements on site, does not count toward impacts or mitigation. Provided for informational purposes.

³On-site impacts are from grading and fire fuel modification. Off-site impacts are only from fire fuel modification.

⁴Restored to Diegan coastal sage scrub and added to Diegan coastal sage scrub mitigation total.

⁵Restored to southern mafic chaparral/coastal sage scrub ecotone and added to mafic southern mixed chaparral mitigation total.

⁶An existing dirt road.

Table 8					
SENSITIVE COMMUNITY MITIGATION COMPARISON					
Vegetation Community	Impact	County Standard		Actual	Difference
		Ratio¹	Result		
Diegan coastal sage scrub (including disturbed)	7.2	1:1	7.2	5.6	-1.6
Scrub oak chaparral	0.2	1:1	0.2	0.4	+0.2
Mafic chamise chaparral	1.6	3:1	4.8	0.4	-4.4
Mafic southern mixed chaparral	2.8	3:1	8.4	42.7	+34.3
Non-native grassland	15.4	0.5:1	7.7	1.0	-6.7
TOTAL	27.2	-	28.3	50.1²	+21.8

¹Ratios from Table 5, for lands outside of approved MSCP subarea plans (County 2010a).

²Does not include the off-site preservation of 0.2 acre of disturbed habitat that is an existing dirt road (Table 7).

4.5 CONCLUSION

Project implementation would result in direct and indirect impacts to sensitive natural communities. Implementation of Mitigation Measures 4.1.A and 4.1.D would reduce the impacts to less-than-significant levels.

5.0 JURISDICTIONAL WETLANDS AND WATERWAYS

5.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

5.2 ANALYSIS OF PROJECT EFFECTS

The unvegetated ephemeral streambed on site is not a federally protected wetland and is not a Corps jurisdictional WUS. However, the unvegetated streambed could be a jurisdictional non-wetland WS, subject to the jurisdiction of the CDFW and the RWQCB.

5.3 CUMULATIVE IMPACT ANALYSIS

No federal wetlands as defined by Section 404 of the CWA would be impacted; therefore, under County Guideline 5.1.A the project would not contribute to cumulative wetland impacts.

5.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impact 5.3 There are no federal, state, or County protected wetlands on site, so none would be impacted. The unvegetated ephemeral streambed may be considered a non-wetland WS by the CDFW and the RWQCB. The project will be submitting permit applications to the CDFW and RWQCB for impacts to the streambed.

Mitigation Measure 5.3

The CDFW and RWQCB may require mitigation for impacts to the unvegetated ephemeral streambed, if it is considered jurisdictional non-wetland WUS and permitting is required.

This will be determined through consultation with the CDFW and RWQCB. Given that the streambed is not a County RPO, no specific County mitigation is required.

5.5 CONCLUSION

The project would result in impacts (0.01 acre) to non-wetland WS (unvegetated streambed) that may be considered jurisdictional by the CDFW and RWQCB.

6.0 WILDLIFE MOVEMENT AND NURSERY SITES

6.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Any of the following conditions would be considered significant if:

- A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
- B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.
- C. The project would create artificial wildlife corridors that do not follow natural movement patterns.
- D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
- E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.
- F. The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage.

6.2 ANALYSIS OF PROJECT EFFECTS

The project would not result in significant impacts under the above guideline for the following reasons:

6.1.A The project would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction because it proposes open space that provides habitat for these purposes and provides for improved local wildlife.

6.1.B The project would not substantially interfere with connectivity between blocks of habitat, nor would it potentially block or substantially interfere with a local or regional wildlife corridor or linkage.

6.1.C The project would not create artificial wildlife corridors that do not follow natural movement patterns; rather, it preserves existing habitat connections.

6.1.D The project would not increase noise or nighttime lighting in a wildlife corridor or linkage. Project operation noise is not anticipated to adversely impact wildlife as project development would be set back and buffered from the proposed on-site biological open space. All project-related lighting would be required to adhere to Division 9 of the San Diego County Light Pollution Code. Project lighting adjacent to habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from habitat.

6.1.E The project does maintain an adequate width for an existing local wildlife corridor. The width of the proposed preserve on site (from north to south) ranges from zero feet to approximately 1,300 feet, which spans the entire southern border of the site. This on-site preserve connects to off-site preserve to the south and west (Figures 2 and 5). Furthermore, the project's proposed addition of off-site preserve, also to the west, would widen the project's portion of the corridor to a maximum of 1,560 feet (Figure 6). Therefore, existing local movement across the site from the south to the west and west to the south is maintained.

6.1.F The project does maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage. The developed portion of the project would be clustered to the north of the proposed preserve that maintains an existing local movement corridor. That is, no portion of the project would physically or visually block the corridor.

6.3 CUMULATIVE IMPACT ANALYSIS

The cumulative projects are in a semi-rural area characterized by low-density residential development, agricultural uses, and preserved lands. The majority of the projects involved no impacts to sensitive biological resources (Table 4). While the project would develop a residential use in this semi-rural environment, the residential use would occur along an existing roadway (San Elijo Road) and be adjacent to an existing sports complex to the east that is proposed for additional sports and commercial uses. These existing facilities are potential barriers to wildlife movement to the north and east. The project would preserve biological open space on the southwestern portion of the site as well as off site to the west that connect to preserved (Figures 2, 5, and 6). This would preserve on-site connections between the eastern, western, and southern conserved lands. As explained in Section 1.4.12 of this report, there are no potential nursery sites on site, so the project would not contribute to cumulative impacts to nursery sites.

With the project's proposed biological open space and implementation of mitigation, the contribution of the project to the cumulative impact on wildlife movement would not be considerable and would be less than significant.

6.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

None required.

6.5 CONCLUSION

The project would not result in significant impacts under County Guideline 6.1, and no mitigation is required.

7.0 LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS

7.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Would the project conflict with the provisions of an adopted HCP, NCCP plan, or other approved local, regional or state HCP?

Any of the following conditions would be considered significant if:

- A. For lands outside of the MSCP, the project would impact Diegan coastal sage scrub vegetation in excess of the County's 5 percent habitat loss threshold, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.
- B. The project would preclude or prevent the preparation of the subregional NCCP. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.
- C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the RPO.
- D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Community Conservation Planning Guidelines.
- E. The project does not conform to goals and requirements outlined in any applicable HCP, Resource Management Plan (RMP), Special Area Management Plan, Watershed Plan, or similar regional planning effort.
- F. For lands within the MSCP, the project would not minimize impacts to Biological Resource Core Area, as defined in the Biological Mitigation Ordinance (County 2010b).
- G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.
- H. The project does not maintain existing movement corridors and/or habitat linkages, as defined by the BMO.
- I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
- J. The project would reduce the likelihood of survival and recovery of listed species in the wild.
- K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).
- L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act; BGEPA).

7.2 ANALYSIS OF PROJECT EFFECTS

The project would result in significant impacts under the above guidelines for the following reasons:

7.1.C The project will impact sensitive habitat lands as follows.

Impacted sensitive habitat lands include:

- Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed;
- Scrub oak chaparral;
- Mafic chamise chaparral;
- Mafic southern mixed chaparral; and
- Non-native grassland

These impacts would be significant under County Guideline 7.1.C.

7.1.K The project could result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).

The project would not result in significant impacts under the above guidelines for the following reasons:

7.1.A The project would not impact Diegan coastal sage scrub vegetation in excess of the County's five-percent habitat loss threshold, as defined by the Southern California Coastal Sage Scrub NCCP Guideline. The project would impact 7.2 acres of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed that would require mitigation.

7.1.B The entire site is located within the PAMA (soft-line preserve), and according to the draft NCMSCP, it is not expected that all land within the PAMA will be incorporated into the preserve system. Therefore, development of the project, which includes preservation of biological open space on the site (and off site) would be consistent with the draft NCMSCP.

7.1.C The unvegetated, ephemeral streambed on site does not meet the criteria for wetland habitat, therefore, the project would not impact federal, state, or County (RPO) regulated wetlands.

7.1.D The project would minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Community Conservation Planning Guidelines. The habitat on site was evaluated for its conservation potential, and the mitigation listed in Mitigation Measure 4.1.A has been developed in coordination with the County and resource agencies.

7.1.E The project does conform to goals and requirements outlined in any applicable HCP, Resource Management Plan (RMP), Special Area Management Plan, Watershed Plan, or similar regional planning effort. The draft NCMSCP, while not yet final, was followed by the project, and the project and its mitigation has been coordinated with the County and resource agencies.

7.1.F For lands within the MSCP, the project would not minimize impacts to Biological Resource Core Area, as defined in the Biological Mitigation Ordinance (County 2010b). The project site is not located in an area covered by an approved MSCP Subarea Plan. The draft NCMSCP (County 2009) shows the project site as not within a core.

7.1.G The project would not preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines. While the value of the habitat south and west of the site is not known, the project would preserve biological open space on site (and adjacent off site) that would maintain an existing connection to the habitat off site to the south and west. Therefore, connectivity between these lands would not be precluded by the project.

7.1.H The project does maintain existing movement corridors and/or habitat linkages. The project would preserve biological open space on site (and adjacent off site) that would maintain an existing local movement corridor between the habitat off site to the south and west.

7.1.I The project site is not located in an area covered by an approved MSCP Subarea Plan; therefore, no impacts to MSCP narrow endemic species would occur.

7.1.J The project would not reduce the likelihood of survival and recovery of listed species in the wild. The project was planned to be consistent with the draft NCMSCP for listed species, which is designed to protect listed species while still allowing for development.

7.1.L The project would not result in the take of eagles, eagle eggs, or any part of an eagle because there is no suitable nesting habitat on site for the golden eagle, and the site and its environs are likely too close to human habitation for the golden eagle to use the site for foraging. The bald eagle is not expected to occur on site because it typically nests in forested areas adjacent to large bodies of water, staying away from heavily developed areas, and in winter it still needs access to open water for foraging.

7.3 CUMULATIVE IMPACT ANALYSIS

The cumulative projects would be required to conform to County Guidelines 7.1.A through 7.1.L and provide mitigation as appropriate. Mitigation is proposed to reduce the project-level impacts on sensitive habitat lands. Conformance or mitigation, as appropriate, would be required for the project and for the other cumulative projects in order to obtain a recommendation for approval; therefore, no significant cumulative impacts would occur. Additional discussion regarding the project's contribution to the cumulative impacts on PAMA and the viability of the draft NCMSCP is provided below. The project would contribute to the cumulative impacts to lands designated as future PAMA under the draft NCMSCP as impacts would occur to 32.9 acres of PAMA (Table 9).

Table 9 PAMA IMPACTS SUMMARY			
Category of Impacts	Acreage		Percent PAMA Impacted
	Existing in PAMA	Proposed Impacts in PAMA	
Sensitive vegetation community ¹	61.5	27.2	44
Non-sensitive vegetation community/land use type ²	7.6	5.7	75
TOTAL	69.1	32.9	48

¹Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, scrub oak chaparral, mafic chamise chaparral, mafic southern mixed chaparral, non-native grassland

²Eucalyptus woodland, disturbed habitat, developed and ornamental

Project impacts to sensitive vegetation communities in PAMA total 27.2 acres representing 44 percent of the PAMA impacts. As shown in Table 9, 44 percent of the total sensitive vegetation communities contained within PAMA would be impacted compared to 75 percent of the non-sensitive vegetation communities within PAMA.

Impacts to sensitive vegetation communities have been minimized to the extent practicable, and the on-site preserve has been designed to maximize connectivity (Figures 2 and 6). Furthermore, project mitigation includes preserving and restoring 20.2 acres of land off site to the west (Figure 6). Therefore, land in the preserve on site is connected to preserved land off-site to the west and to other off-site preserve lands farther to the south and west (Figure 2). Although the NCMSCP Plan is still in draft form, the project and its mitigation has been designed to assist in implementing the proposed PAMA and to contribute to long-term habitat value for plants and wildlife in the region.

With the project's proposed preserve size and configuration and implementation of mitigation, the contribution of the project to the cumulative impact on PAMA would not be considerable and would be less than significant.

7.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impact 7.1.C The project would impact sensitive habitat lands: Diegan coastal sage scrub (including-disturbed) with CAGN, mafic chamise chaparral, mafic southern mixed chaparral, and non-native grassland. The project would not impact County RPO wetlands.

Mitigation Measure 7.1.C

Implement Mitigation Measure 4.1.A.

Impact 7.1.K The project could result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).

Mitigation Measure 7.1.K

Implement Mitigation Measure 3.1.L.

7.5 CONCLUSION

The project would have significant impacts on sensitive habitat lands and migratory birds. Implementation of Mitigation Measures 4.1.A and 3.1.L would reduce the impacts to less-than-significant levels.

8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

Implementation of the project would result in significant impacts to special status species, sensitive natural communities, and local policies. Table 10 provides a summary of the proposed mitigation measures.

Table 10
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES

PROPOSED MITIGATION MEASURE (MM)	SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER
<p>MM 3.1.A</p> <p>No grading or clearing of occupied Diegan coastal sage scrub or Diegan coastal sage scrub-disturbed shall occur during the breeding season of the CAGN (February 15 – August 31). All grading permits, improvement plans, and the final map shall state the same. If clearing or grading is scheduled to occur during the breeding season, a pre-construction survey shall be conducted to determine whether CAGN occur within the impact area. If there is no CAGN nesting (includes nest building or other breeding/nesting behavior) within the impact area, clearing and grading shall be allowed to proceed. If, however, CAGN are observed nesting or displaying breeding/nesting behavior in the impact area, construction shall be postponed until all nesting (or breeding/nesting behavior) has ceased or until after August 31.</p> <p>The loss of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed shall be mitigated through the overall mitigation program listed in Mitigation Measure 4.1.A.</p>	<p align="center">Less than Significant</p>	<p align="center">3.1.A, 3.1.L</p>

**Table 10 (cont.)
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES**

PROPOSED MITIGATION MEASURE (MM)	SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER
<p>M 3.1.B Mitigation for Orcutt’s brodiaea shall occur through the translocation of Orcutt’s brodiaea corms from within the project impact footprint to suitable habitat within the preserve on site in accordance with a County-, CDFW-, and USFWS-approved translocation plan (Alden 2022; Appendix L).</p> <p>Nuttall’s scrub oak, western spadefoot toad, Cooper’s hawk and southern California rufous-crowned sparrow shall be mitigated through implementation of the Mitigation Measure 4.1.A.</p> <p>Impacts to Nuttall’s scrub oak would also be mitigated through preservation of 0.4 acre of scrub oak chaparral on site. In addition, this species is included in the container stock list for the southern mafic chaparral/coastal sage scrub ecotonal habitat restoration area. The goal would be for a 3:1 replacement (36 total) of impacted individual oaks through planting of container stock in the preserve.</p> <p>Additionally, 21 new water holding basins suitable for western spadefoot toad breeding shall be created with a combined area of 0.2 acre (Figures 6 and 7a-7c). The basins are only to create western spadefoot toad breeding opportunities and are not intended to be vernal pools or wetland habitat. The basins shall be created in flatter areas on site and off site (i.e., in the adjacent off-site mitigation area; see Mitigation Measure 4.1.A) where surface runoff from rainfall on hillsides to the west and south is expected to collect. The basins shall be created in a variety of sizes for a diversity of breeding conditions, with smaller basins potentially holding water in drier years when there is insufficient rainfall to fill larger basins. The basins shall be created at depths of approximately one foot, maximum, with gradual slopes to facilitate toad access. For created basins within the fuel modification zone, mowing shall be restricted to the dry season and shall be prohibited in the basin areas whenever there is ponded water. Otherwise, periodic mowing shall be considered compatible with western spadefoot toad reproduction. The created basins shall be monitored for ponding and toad activity in conjunction with the five-year maintenance and monitoring period of the on- and off-site restoration plan prescribed in Mitigation Measure 4.1.A. The only basin maintenance that shall occur during that five-year period would be to repair damage to the basins and/or remove weeds if they appear to be hindering the ponding of water.</p> <p>The potential loss of injury/mortality to individuals of Cooper’s hawk and southern California rufous-crowned sparrow shall also be mitigated through complying with the MBTA to avoid impacts to nesting birds.</p> <p>Potential impacts to SSC or County Group 1 species with moderate potential to occur on site shall be mitigated through implementation of Mitigation Measure 4.1.A.</p>	Less than Significant	3.1.B
<p>MM 3.1.F The project shall mitigate the loss of raptor foraging habitat through implementation of Mitigation Measure 4.1.A.</p>	Less than Significant	3.1.F

**Table 10 (cont.)
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES**

PROPOSED MITIGATION MEASURE (MM)	SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER
<p>MM 3.1.H To mitigate from potential impacts from increased human activity, open space fencing and signage shall be installed: 1) at the interface of the project and the preserve; 2) at the southeast corner of the site where is abuts non-preserve area; 3) at the trailhead entering the preserve from the southwest; and 4) around the off-site preserve area adjacent to an existing trail (Figure 6). The remaining preserve area boundaries shall not be fenced as they are adjacent to Preserve Areas in the Draft NCMSCP (Figure 2) and also have extremely steep slopes with impenetrable vegetation, making fence installation infeasible.</p> <p>Only non-invasive plant species shall be included in the landscape plan for the site (i.e., species not listed on the California Invasive Plant Council Inventory rated as Moderate or High). The project proponent shall notify all residents that their domestic cats will be required to remain indoors and will be responsible for dissemination of additional information to residents to protect the preserve if the need arises.</p>	Less than Significant	3.1.H, 4.1.D
<p>MM 3.1.L No clearing or grading shall occur of Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed during the breeding season of the CAGN (February 15 – August 31) as described under Mitigation Measure 3.1.A.</p> <p>If construction is to occur during the breeding season for the CAGN (February 15 to August 31) or nesting raptors such as the Cooper’s hawk (January 15 to July 15), pre-construction survey(s) shall be conducted by a qualified biologist to determine whether these species occur within the areas potentially impacted by noise (i.e., 60 dB(A) hourly average or ambient, if greater). If it is determined at the completion of pre-construction surveys that active nests belonging to these sensitive species are absent from the potential noise-impacted area, construction shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to these sensitive species occur within the noise-impacted area, then construction shall not occur and shall: (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) shall not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint to ensure that noise levels in the occupied habitat are reduced to below 60 dB(A) hourly average or ambient, if greater. Decibel output will be confirmed by a County-approved noise specialist and intermittent monitoring by a qualified biologist to ensure that the reduced noise levels are being maintained. Implementation of this measure shall also mitigate for potential noise impacts to nesting southern California rufous-crowned sparrows.</p>	Less than Significant	3.1.L

**Table 10 (cont.)
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES**

PROPOSED MITIGATION MEASURE (MM)	SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER
MM 4.1.A Mitigation for the project’s significant impacts to sensitive natural communities shall include on- and off-site preservation of 44.4 acres, on- and off-site restoration of 5.9 acres as shown in Table 7 and on Figure 6.	Less than Significant	4.1.A, 3.1.F, 7.1.C
MM 4.1.D Implement Mitigation Measure 3.1.H above.	Less than Significant	4.1.D, 3.1.H
MM 5.3 The Corps (CDFW and RWQCB) may require mitigation for impacts to the unvegetated ephemeral streambed if it is considered jurisdictional non-wetland WUS and permitting is required. This will be determined through consultation with CDFW and RWQCB).	Less than Significant	5.1
MM 7.1.C Implement Mitigation Measure 4.1.A above.	Less than Significant	7.1.C, 4.1.A
MM 7.1.K Implement Mitigation Measure 3.1 L	Less than Significant	7.1.K, 3.1.L

9.0 LIST OF PREPARERS AND PERSONS/ ORGANIZATIONS CONTACTED

The following individuals contributed to the fieldwork and/or preparation of this report.

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Appendix A

Representative Photographs

Representative Photographs



Photo Point 1. 07/11/20



Photo Point 2. 07/11/20



Photo Point 3. 07/11/20



Photo Point 4. 07/11/20



Photo Point 5. 07/11/20



Photo Point 6. 07/11/20



Photo Point 7. 07/11/20



Photo Point 8. 07/11/20



Photo Point 9. 07/11/20



Photo Point 10. 07/11/20



Photo Point 11. 07/11/20



Photo Point 12. 07/11/20



Photo Point 13. 07/11/20



Photo Point 14. 07/11/20



Photo Point 15. 07/11/20



Photo Point 16. 07/11/20

Appendix B

CNDDDB Field Forms

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 04/09/2020

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: *Polioptila californicacalifornica*

Common Name: Coastal CALifornia gnatcatcher

Species Found? Yes No _____
If not found, why?

Total No. Individuals: 2 Subsequent Visit? Yes No

Is this an existing NDDDB occurrence? _____
Yes, Occ. # No Unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Erik LaCoste

Address: Alden Environmental, Inc.
3245 University Ave #1188, San Diego, CA 92104

E-mail Address: gmason@aldenenv.com

Phone: 619-284-3815

Plant Information

Phenology:
% vegetative _____ % flowering _____ % fruiting _____

Animal Information

2
adults # juveniles # larvae # egg masses # unknown
 wintering breeding nesting rookery burrow site lek other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Questhaven project site off of San Elijo road, approximately .25 mile east of Fallsview Road

County: San Diego Landowner / Mgr: Colrich

Quad Name: Rancho Santa Fe Elevation: 510

T 12s R 3w Sec 33, nw 1/4 of nw 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GE

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model: _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: 1m _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: 33° 5'33.11"N, 117°12'23.65"W

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Loated within coastal sage scrub habitat

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: _____

Visible disturbances: Roadway and SDG&E powerlines

Threats: Proposed for development

Comments: _____

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): Erik LaCoste
- Other: Visual and song identification

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 04/09/2020

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: Spea hammondi

Common Name: Western spadefoot

Species Found? Yes No _____
If not found, why?

Total No. Individuals: 2 Subsequent Visit? Yes No

Is this an existing NDDDB occurrence? _____
Yes, Occ. # No Unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Erik LaCoste

Address: Alden Environmental, Inc.
3245 University Ave #1188, San Diego, CA 92104

E-mail Address: gmason@aldenenv.com

Phone: 619-284-3815

Plant Information

Phenology:
_____ % vegetative _____ % flowering _____ % fruiting

Animal Information

2
adults # juveniles # larvae # egg masses # unknown
 wintering breeding nesting rookery burrow site lek other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Quethaven project site off of San Elijo Road approximately 0.25 mile east of Fallsview Road.

County: San Diego Landowner / Mgr: Colrich

Quad Name: Rancho Santa Fe Elevation: 520

T 12S R 3W Sec 33, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GE

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model: _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: 33°05'28.74"N, 117°12'18.50"W 33°05'28.02"N, 117°12'20.71"W

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Non-native grassland

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: _____

Visible disturbances: Roadway and SDG&E powerlines

Threats: Proposed for development

Comments: _____

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): _____
- Other: Vocalizations heard

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 04/09/2020

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: *Aimophila ruficeps canescens*

Common Name: Southern California rufous-crowned sparrow

Species Found? Yes No _____
If not found, why?

Total No. Individuals: 1 Subsequent Visit? Yes No

Is this an existing NDDDB occurrence? _____
Yes, Occ. # No Unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Erik LaCoste

Address: Alden Environmental, Inc.
3245 University Ave #1188, San Diego, CA 92104

E-mail Address: gmason@aldenenv.com

Phone: 619-284-3815

Plant Information

Phenology:
% vegetative _____ % flowering _____ % fruiting _____

Animal Information

1
adults # juveniles # larvae # egg masses # unknown
 wintering breeding nesting rookery burrow site lek other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Questhaven project site off of San Elijo Road approximately 0.25 mile east of Fallsview Road.

County: San Diego Landowner / Mgr: Colrich

Quad Name: Rancho Santa Fe Elevation: 524

T 12S R 3W Sec 33, 1/4 of 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GE

T _____ R _____ Sec _____, 1/4 of 1/4, Meridian: H M S GPS Make & Model: _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: 33°05'30.8"N, 117°12'23.04"W

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Diegan coastal sage scrub

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: _____

Visible disturbances: Roadway and SDG&E powerlines

Threats: Proposed for development

Comments: _____

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): _____
- Other: Visual and vocals

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 06/03/2020

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: *Selaginella cinerascens*

Common Name: Ashy spike-moss

Species Found? Yes No _____
If not found, why?

Total No. Individuals: _____ Subsequent Visit? Yes No

Is this an existing NDDDB occurrence? _____
Yes, Occ. # No Unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Erik LaCoste

Address: Alden Environmental, Inc.

3245 University Ave #1188, San Diego, CA 92104

E-mail Address: gmason@aldenenv.com

Phone: 619-284-3815

Plant Information

Phenology:
% vegetative _____ % flowering _____ % fruiting _____

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
 wintering breeding nesting rookery burrow site lek other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Questhaven project site off of San Elijo Road approximately 0.25 mile east of Fallsview Road.

County: San Diego Landowner / Mgr: Colrich

Quad Name: Rancho Santa Fe Elevation: 574

T 12S R 3W Sec 33, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GE

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model: _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: 33°05'27.45"N, 117°12'26.94"W

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Two patches of ashy spike-moss found in southern mixed chaparral

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: _____

Visible disturbances: Roadway and SDG&E powerlines

Threats: Proposed for development

Comments: _____

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): _____
- Other: _____

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 06/03/2020

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: Quercus dumosa

Common Name: Nuttall's scrub oak

Species Found? Yes No _____
If not found, why?

Total No. Individuals: 1 Subsequent Visit? Yes No

Is this an existing NDDDB occurrence? _____
Yes, Occ. # No Unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Erik LaCoste

Address: Alden Environmental, Inc.
3245 University Ave #1188, San Diego, CA 92104

E-mail Address: gmason@aldenenv.com

Phone: 619-284-3815

Plant Information

Phenology:
% vegetative _____ % flowering _____ % fruiting _____

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
 wintering breeding nesting rookery burrow site lek other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Questhaven project site off of San Elijo Road approximately 0.25 mile east of Fallsview Road.

County: San Diego Landowner / Mgr: Colrich

Quad Name: Rancho Santa Fe Elevation: 524

T 12S R 3W Sec 33, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GE

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model: _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: _____

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Is the dominant species in scrub oak chaparral on site. Also found in chamise chaparral, southern mixed chaparral, and Diegan coastal sage scrub-disturbed on site.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: _____

Visible disturbances: Roadway and SDG&E powerlines

Threats: Proposed for development

Comments: _____

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): _____
- Other: _____

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 06/20/2020

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: *Brodiaea orcuttii*

Common Name: Orcutt's brodiaea

Species Found? Yes No _____
If not found, why?

Total No. Individuals: 326 Subsequent Visit? Yes No

Is this an existing NDDDB occurrence? _____
Yes, Occ. # No Unk.

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Greg Mason, Erik LaCoste, Jasmine Watts

Address: Alden Environmental, Inc.
3245 University Ave #1188, San Diego, CA 92104

E-mail Address: gmason@aldenenv.com

Phone: 619-284-3815

Plant Information

Phenology:

% vegetative % flowering % fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
 wintering breeding nesting rookery burrow site lek other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Questhaven project site off of San Elijo Road approximately 0.25 mile east of Fallsview Road.

County: San Diego Landowner / Mgr: Colrich

Quad Name: Rancho Santa Fe Elevation: 526

T 12S R 3W Sec 33, 1/4 of 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GE

T _____ R _____ Sec _____, 1/4 of 1/4, Meridian: H M S GPS Make & Model: _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: 33°05'35.58"N, 117°12'26.99"W 33°05'24.44"N, 117°12'21.57"W

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Orcutt's brodiaea was found on site in two locations. The larger population occurs in non-native grassland in the northwestern portion of the site; another small population occurs in non-native grassland in the central portion of the site.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: _____

Visible disturbances: Roadway and SDG&E powerlines

Threats: Proposed for development

Comments:

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): _____
- Other: _____

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 03/20/2021

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: Spea hammondi

Common Name: Western spadefoot

Species Found? Yes No _____
If not found, why?

Reporter: Greg Mason

Total No. Individuals: _____ Subsequent Visit? Yes No

Address: Alden Environmental, Inc.

Is this an existing NDDDB occurrence? _____
Yes, Occ. # _____ No Unk.

3245 University Ave #1188, San Diego, CA 92104

Collection? If yes: _____
Number _____ Museum / Herbarium _____

E-mail Address: gmason@aldenenv.com

Phone: 619-284-3815

Plant Information

Phenology:
_____ % vegetative _____ % flowering _____ % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
 wintering breeding nesting rookery burrow site lek other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Questhaven project site off of San Elijo Road approximately 0.25 mile east of Fallsview Road.

County: San Diego Landowner / Mgr: Colrich

Quad Name: Rancho Santa Fe Elevation: 510

T 12S R 3W Sec 33, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GE

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model: _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: 33°05'30.4"N, 117°12'17.81"W 33°05'29.74"N, 117°12'16.61"W

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Eggs and tadpoles observed in two water-holding basins--one in disturbed habitat near the base of an SDG&E tower; the other slightly southwest in non-native grassland.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: _____

Visible disturbances: Roadway and SDG&E powerlines

Threats: Proposed for development

Comments: _____

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): _____
- Other: Directly observed

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

Appendix C

Coastal California Gnatcatcher

Survey Report

Questhaven Project
U.S. Fish and Wildlife Service Protocol Level
Presence/Absence Surveys for the
Coastal California Gnatcatcher
(Polioptila californica californica)

Prepared for:

ColRich Communities
444 West Beech Street, Suite 300
San Diego, CA 92101

Prepared by:

Alden Environmental, Inc.
3245 University Ave., #1188
San Diego, CA 92104

May 19, 2020

I certify that the information in this survey report and attached exhibits
fully and accurately represent my work.



Erik LaCoste (TE- 027736-6)

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VEGETATION COMMUNITIES	1
SURVEY RESULTS	2
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<u>Letter</u>	<u>Title</u>
A	Summary of Field Survey Conditions
B	Copies of Field Notes

LIST OF FIGURES

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1	Regional Location	2
2	USGS Topographic Map.....	2
3	Survey Results	2

INTRODUCTION

This report documents the results of a survey conducted for the federally listed as threatened coastal California gnatcatcher (*Polioptila californica californica*; CAGN) on the Questhaven project site. The approximately 70 acre site is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. (Figures 1 and 2).

METHODS

The surveys were performed in accordance with the Year 1997 Survey Protocol Information (USFWS 1997) by US Fish & Wildlife Service (USFWS) permitted biologist Erik LaCoste (TE-027736-6). The survey visits were conducted between April 9 and May 1, 2020. CAGN were mapped when encountered.

Dates, times, and weather conditions at the start and end of each survey are presented in Appendix A. The survey was conducted by walking through, and adjacent to, suitable CAGN habitat on site. Birds were viewed with the aid of binoculars, where necessary. Recorded CAGN vocalizations (“mew calls”) were broadcast for approximate 5-second durations at approximately 50-yard increments along the survey route, or as needed to adequately cover each suitable habitat patch. Recorded vocalizations were only broadcast to initially detect the possible presence of CAGNs. Copies of field notes from each survey are presented in Appendix B.

VEGETATION COMMUNITIES

The site supports approximately 11 acres of suitable coastal sage scrub habitat for the CAGN (Figure 3). Dominant species in this area include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). The coastal sage scrub habitat occurs along the northern site boundary and along edge of the mafic southern mixed chaparral habitat to the south. Other habitats mapped on site that were not considered suitable for the species are eucalyptus woodland, non-native grassland, mafic southern mixed chaparral, mafic chamise chaparral, and developed/disturbed area.

SURVEY RESULTS

A pair of CAGN were observed on site during all three site visits. Specific observations are provided in Table 1 and are shown on Figure 3. Additional information is included in the attached field notes (Appendix B).

Number Observed	Date	NOTES
2	4/9/2020	Pair observed foraging on site
2	4/23/2020	Same pair observed, no evidence of active nest but pair is sticking close together
2	5/1/2020	Nest found by accident, female incubating, male nearby

REFERENCES

USFWS. 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines. February 28.

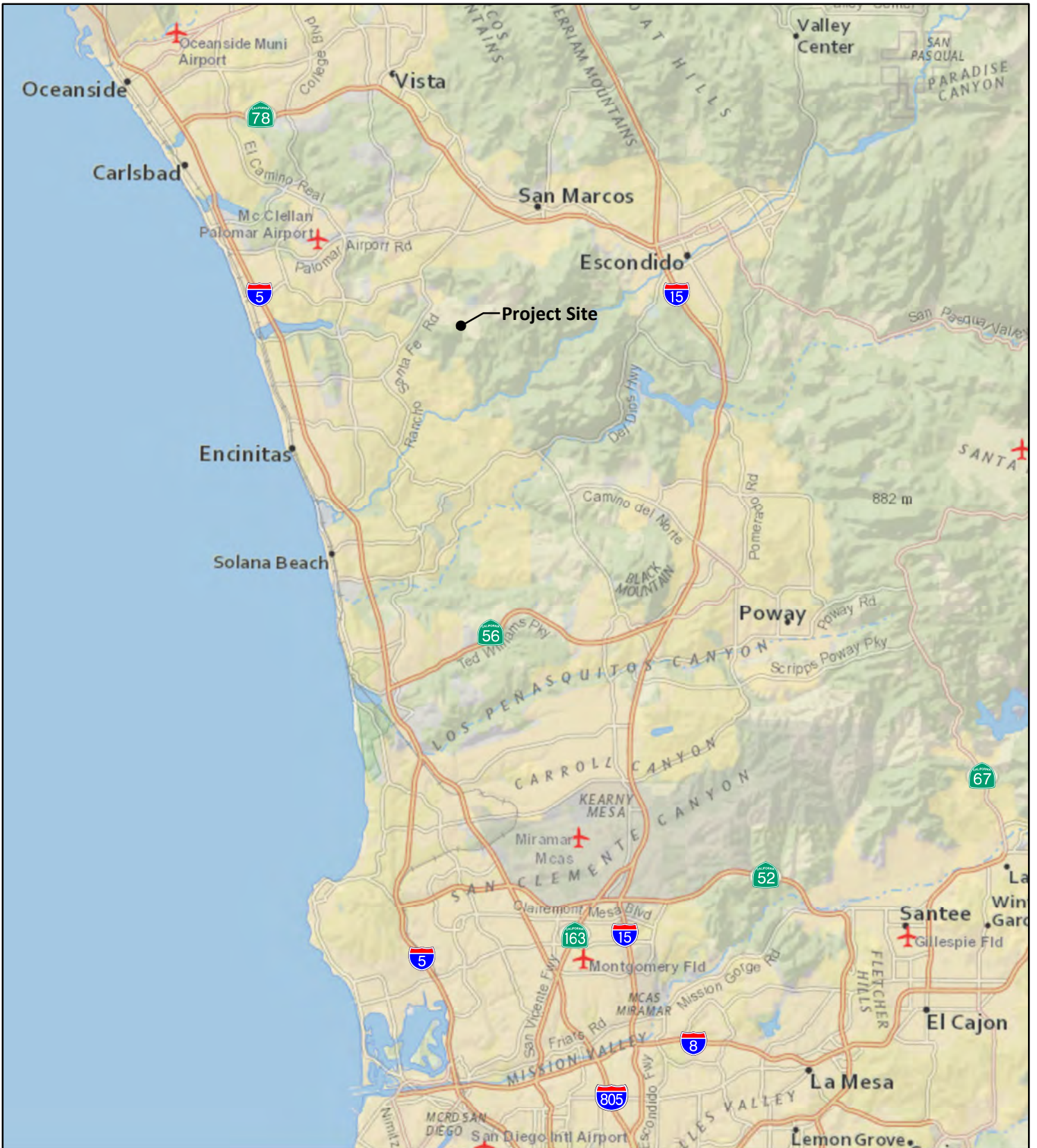
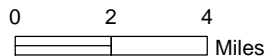
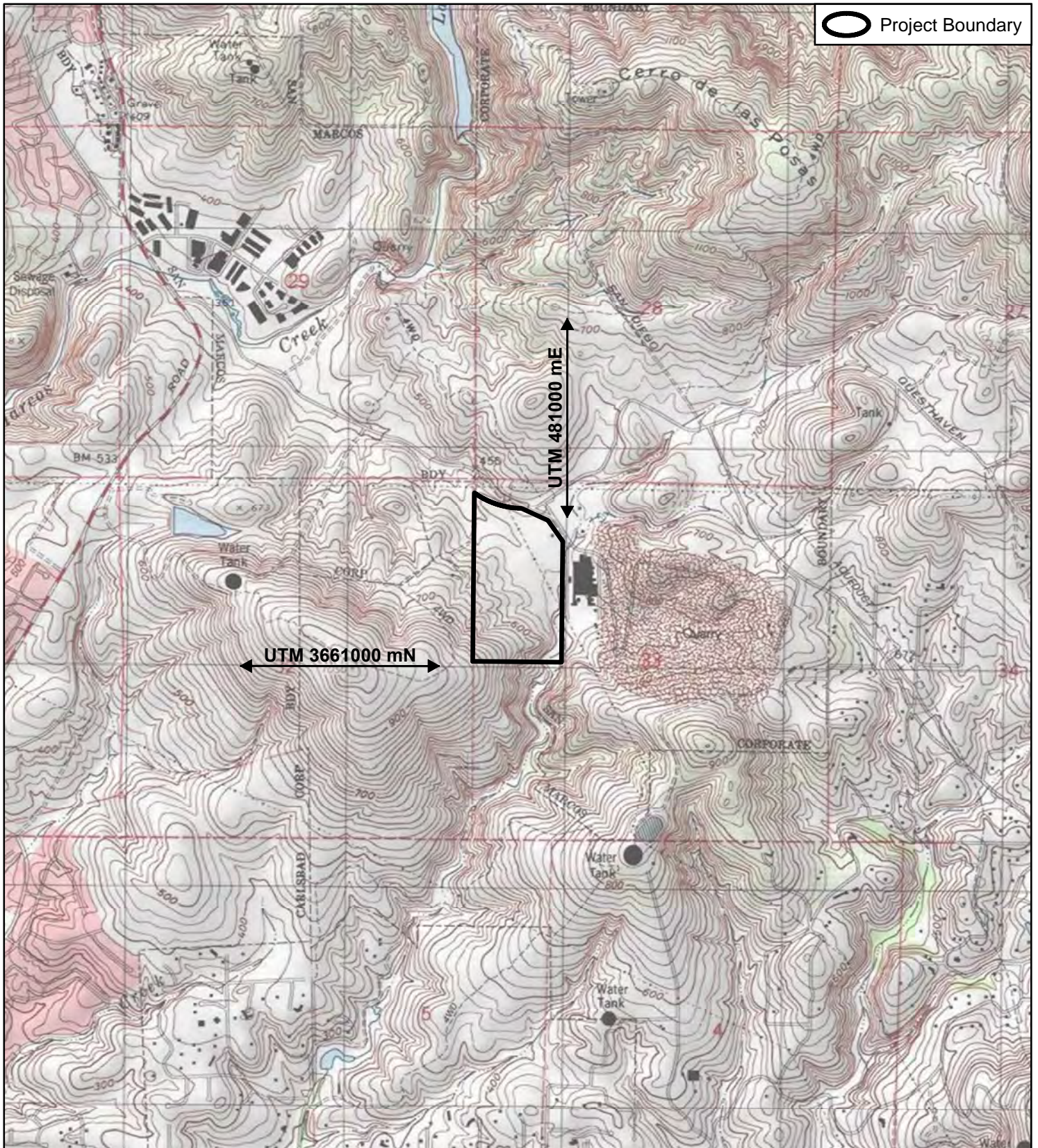


Figure 1

Regional Location

QUESTHAVEN PROJECT
 COASTAL CALIFORNIA GNATCATCHER
 SURVEY REPORT



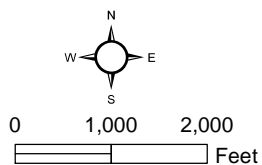


Source: USGS Quads (Rancho Santa Fe) Copyright:© 2013
National Geographic Society, i-cubed

Figure 2

Project Location

QUESTHAVEN PROJECT
COASTAL CALIFORNIA GNATCATCHER
SURVEY REPORT



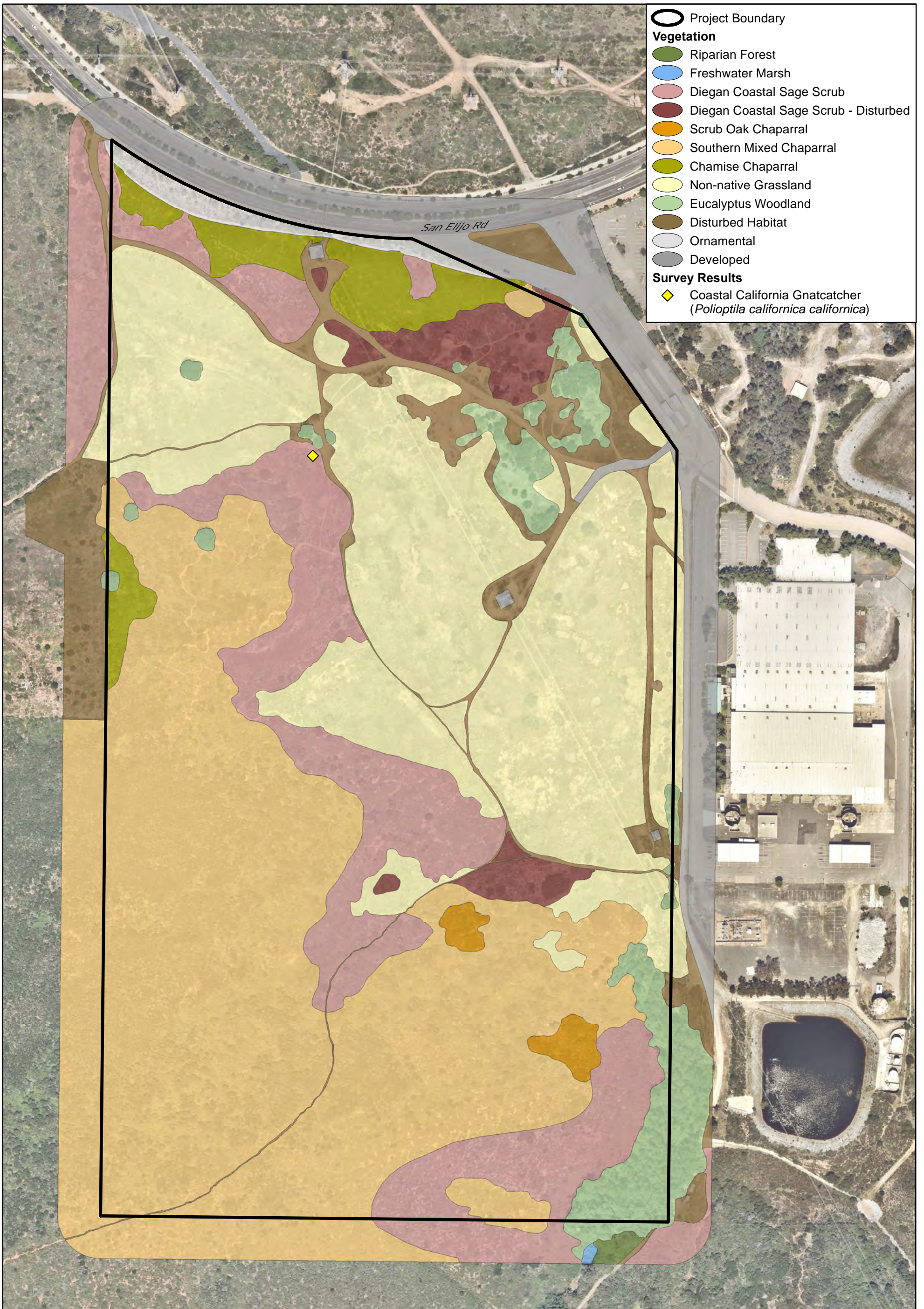


Figure 3

Survey Results

QUESTHAVEN PROJECT
 COASTAL CALIFORNIA GNATCATCHER
 SURVEY REPORT

Appendix A
SUMMARY OF FIELD SURVEY CONDITIONS

Survey	Date	Biologist	Survey Times (start/stop)	Weather Conditions (start/stop)
1	4/9/2020	Erik LaCoste	0700-1100	80% cover, 58°F, wind 2-4 mph/ 100% cover (sprinkles from 1000-1100), 59°F, wind 2-4 mph
2	4/23/2020	Erik LaCoste	0800-1200	0% cover, 68°F, wind 1-2 mph/ 0% cover, 78°F, wind 2-4 mph
3	5/1/2020	Erik LaCoste	0615-1015	100% cover, 63°F, wind 0 mph/ 100% cover, 66°F, wind 1-2 mph

Appendix B
COPIES OF FIELD NOTES

4/9/20 QUART HAVEN CABN # 1

TIME

0700 0700	58	07-4	20% OC.
1100	59	2-4	100% sprinkles 10-11

SPECIESobs

CARI	BEWR	CABR SD
BILGE	OCWA	
HOFI	COYE	
WCSP	VASW	
MOBO	CABN- PAIR -	
ANHU	33,03975, -117.20544	
EUST	Foraging -	
BUSH		
YRWA		
SAPH		
CATO (CALT)		
WREN.		
CATN		
RTHA		
CABN(P)		
BGLN		
SOSP		
SPTO		

♂ 0935 + ♀

≈ 1000 - some sprinkles - not hard -
 not affecting Bird Activity -
 1020 - stopped - still 100% OC.
 - LIGHT RAIN / sprinkles - 10-11 Am -

4/23/20 QUEST Haven BUOW Z

Buow Survey 2

TIME	Temp.	wind	sky
0600	60	0	0
0800	68	0-2	0

SPECIES (For Both Surveys)

CATH	CAKI	BLER	DOWD
SPTD	WTJSW	ATFL	CLSW
CALT	HOFI	COBA	CAEN
ANHU	SAPH	MODO	COHA
B66X	LEGO	NUWO	RTHA
WREN	SOSP	WIWD	NOMO
BEWR	RUHU	BLRH	BUDR
WAVI	WCASS	PSPL	RCSP
BUSH	CADU	HUVI	GRRO
COFE	NRWS	BHCO	EUST

4/23/20 Questhaven CAGN Z

CAGN Survey 2

Time	Temp	wind	sky
0800	68	1-2	0
1200	78	2-4	0

0845 - ♂ + ♀ - Pair CAGN - detect.
 Quiet -

33.09108, -117.20703

No evidence of active nest - though
 pair is sticking close together.

others

Cottontail
 CAKK SQ
 S.P. RattMonaker

QUESTHANCA CABN # 3

5/1/20

TIME	TEMP	WIND	SKY
0615	63	0	100% 0.6
1015	66	12	100% 0.6

SPECIES

MODO	WREN
BHCO	CARV
BUSH	BBLN.
CAKI	RUHU
HOFI	CORA
LEGO	WIWA
BEWR	COYE
EVST	WCSP.
BHGR	GPPO
NUWD	BCHU
CATH	PLA PSEL
SOSP	BLPH
BLGR	ATFL
SPTO	CABN (PINE + NEST)
CALT	COHA
MALL	
CASJ	
HOWR	
ANHV	

NOTES

SPARROW TOAD LOCATED -
33.09132, -117.20510

SPARROW - 33.09102, -117.20565

♂ 857 - NEST FOUND BY
ACCIDENT - 33.09160, -117.20688
♀ incubating, ♂ nearby

Appendix D

Burrowing Owl Survey Report

June 18, 2020

Ms. Rita Mahoney
Colrich
444 West Beech Street, Suite 300
San Diego, CA 92101

Subject: Burrowing Owl Survey Report for the Questhaven Project

Dear Ms. Mahoney:

This letter presents the results of the 2020 nesting season survey for the burrowing owl (*Athene cunicularia*) conducted on the approximately 69.1-acre Questhaven Property (APNs 223-080-46-00, 223-070-07-00, and 223-070-08-00).

LOCATION AND SITE DESCRIPTION

The approximately 69.1-acre project site is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. The project site is located immediately south and west of the City of San Marcos and east of the City of Carlsbad. Interstate 5 is located approximately 5.3 miles west of the project site. Specifically, the project site is located south of San Elijo Road and east of Denning Drive (Figures 1 and 2). The project site encompasses Assessor's Parcel Number 223-080-46-00 and is located in the west half of the northwest quarter of Section 33, Township 12 South, Range 3 West, San Bernardino Meridian on the U.S. Geological Survey (USGS) 7.5-minute Rancho Santa Fe quadrangle map (Figure 2).

The project site encompasses a large area of steep hills that transition into a relatively flat area in the northern and central portion of the site. Elevations range between approximately 830 feet amsl in the southwest corner to 500 feet amsl along the eastern boundary. Soil on site is mapped as Cieneba very rocky coarse sandy loam (30 – 75 percent slopes), San Miguel rocky silt loam (9 – 30 percent slopes), Huerhuero loam (2 – 9 percent slopes), San Miguel-Exchequer rocky silt loams (9 – 70 percent slopes), and Exchequer rocky silt loam (30 – 70 percent slopes; Figure 3).

METHODS

The 2020 survey consisted of 4 site visits conducted by biologist Erik LaCoste on separate days (Table 1, Attachment A) according to the survey methods in the Staff Report on Burrowing Owl Mitigation (CDFG 2012), which supersedes the survey, avoidance, minimization and mitigation recommendations in the 1995 Staff Report (CDFG 1995), and takes into account the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993). Representative photographs were taken and are enclosed as Appendix B.

Surveys were limited to an approximately 30-acre flatter area in the central and northeastern portion of the site. This area supports non-native grassland, sparse eucalyptus woodland, and disturbed/developed areas. The remainder of the site with steep slopes and supporting dense chaparral and eucalyptus woodland communities was excluded from the survey area.

The entire survey area was searched for burrowing owls and potential burrows or perches that could be used by the owl. Burrowing owls are known to occupy California ground squirrel (*Spermophilus beecheyi*) burrows; therefore, particular attention was paid to any areas along fence lines, or other locations where squirrel activity has been observed in the past, was observed presently, or was likely to occur. Dirt piles, drainages, and culverts were also carefully examined as these sites can often provide cavities that can support the species. The determination of owl presence was made by direct owl observation or by owl signs such as, but not necessarily limited to, excavated soil, whitewash (excrement), castings (pellets), and/or feathers.

Table 1 Burrowing Owl Survey Information				
Survey Number	Date	Biologist	Time	Weather Conditions (start/stop)
1	2/19/20	Erik LaCoste	0600-0815	Overcast (high fog/low clouds), 52°F, wind 0-1 mph/ 100%, 62°F, wind 0-1 mph
2	4/23/20	Erik LaCoste	0600-0800	0%, 60°F, wind 0 mph/ 0%, 68°F, wind 1-2 mph
3	6/2/20	Erik LaCoste	0600-0845	50%, 58°F, wind 0-1 mph/ 30%, 73°F, wind 1-2 mph
4	6/16/20	Erik LaCoste	0600-0915	100%, 59°F, wind 0-1 mph/ 50%, 66°F, wind 1-3 mph

SURVEY RESULTS

On the first survey, a single an old corrugated drainage pipe was investigated for the potential to support the BUOW, but there was no sign of presence/occupation. No BUOW or potential BUOW sign/evidence was observed on the site during any of the visits. Based on the negative results of the 2020 field surveys, the site is not anticipated to be occupied by the BUOW.

Please contact me if you have any questions.

Sincerely,



Greg Mason
Senior Biologist

Enclosures:

- Figure 1 Regional Location Map
- Figure 2 Project Location Map
- Figure 3 BUOW Survey Map
- Attachment A Field Notes

References:

Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with USDI, UC Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. March 17.

1995. Environmental Services Division. Staff Report on Burrowing Owl Mitigation. October 17. 8pp. plus attachments.

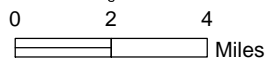
California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. April.

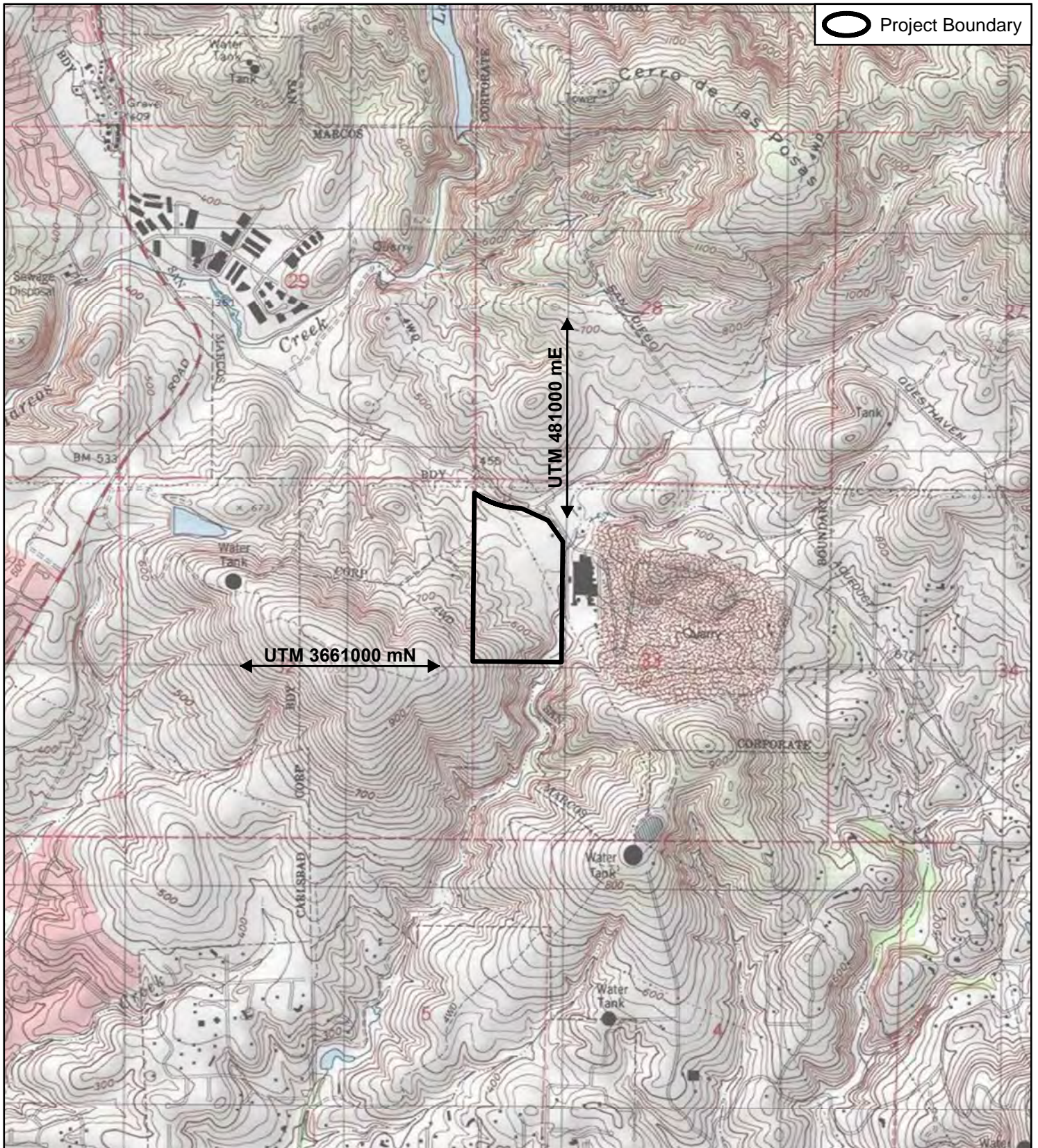


Figure 1

Regional Location

QUESTHAVEN PROJECT
BURROWING OWL SURVEY REPORT



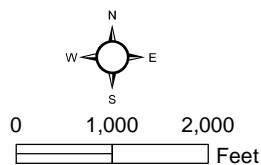


Source: USGS Quads (Rancho Santa Fe) Copyright:© 2013
National Geographic Society, i-cubed

Figure 2

Project Location

QUESTHAVEN PROJECT
BURROWING OWL SURVEY REPORT





Aerial Photo: Nearmap 2020

Figure 3

Burrowing Owl Survey Area

QUESTHAVEN PROJECT
BURROWING OWL SURVEY REPORT



Attachment A

Field Notes

2.19.20 BUOW 1

Erik LaCoste. Arrive 0600, overcast (high fog/low clouds), 52F, 0-1, 100% OC.

Walking transects roughly 10-15 meters apart. Area is relatively flat and open given good observation potential. Periodic scanning with binoculars.

A single burrow with the potential to provide BUOW with a burrow was located. The burrow is an old corrugated drainage pipe. Location is at 33.09022 , -117.20380.



No fossorial mammals were detected the entire survey. No ground squirrels or burrow were detected anywhere in the survey area. Property was 100% covered on foot achieving 100% visual coverage. No BUOW was detected.

End of survey 0815, 62F, 0-1 mph, 100% OC.

4/23/20 QUEST Haven BUOW Z

Buow Survey 2

TIME	Temp.	wind	sky
0600	60	0	0
0800	68	0-2	0

SPECIES (For Both Surveys)

CATH	CAKI	BLER	POWD
SPTO	WTJSW	ATFL	CLSW
CALT	HOFI	COBA	CAEN
ANHU	SAPH	MOBO	COHA
B66X	LEGO	NUWO	RTHA
WREN	SOSP	WIWD	NOMO
BEWR	RUHU	BLRH	BUDR
WAVI	WCASS	PSPL	RCSP
BUSH	CADU	HUVI	GRRO
COFE	NRWS	BHCO	EUST

4/23/20 Questhaven CAGN Z

CAGN Survey 2

Time	Temp	wind	sky
0800	68	1-2	0
1200	78	2-4	0

0845 - ♂ + ♀ - Pair CAGN - detect.
 Quiet -

33.09108, -117.20703

No evidence of active nest - though
 pair is sticking close together.

others

Cottontail
 CAKK SQ
 S.P. RattMonaker

BUOW - # 3 QUEST HAVEN

6/2/20

START	Temp	wind	Sky
0600	58	0-1	50%
0845	73	1-2	30%

SPECIES

BUSH

CASH.

ducks

Cottontail

BUOR

CABR SQ

WEKI

NOMO

LEBO

EUST.

MODO

CALT.

CAQU

SBMU

PSPTO

HOWR

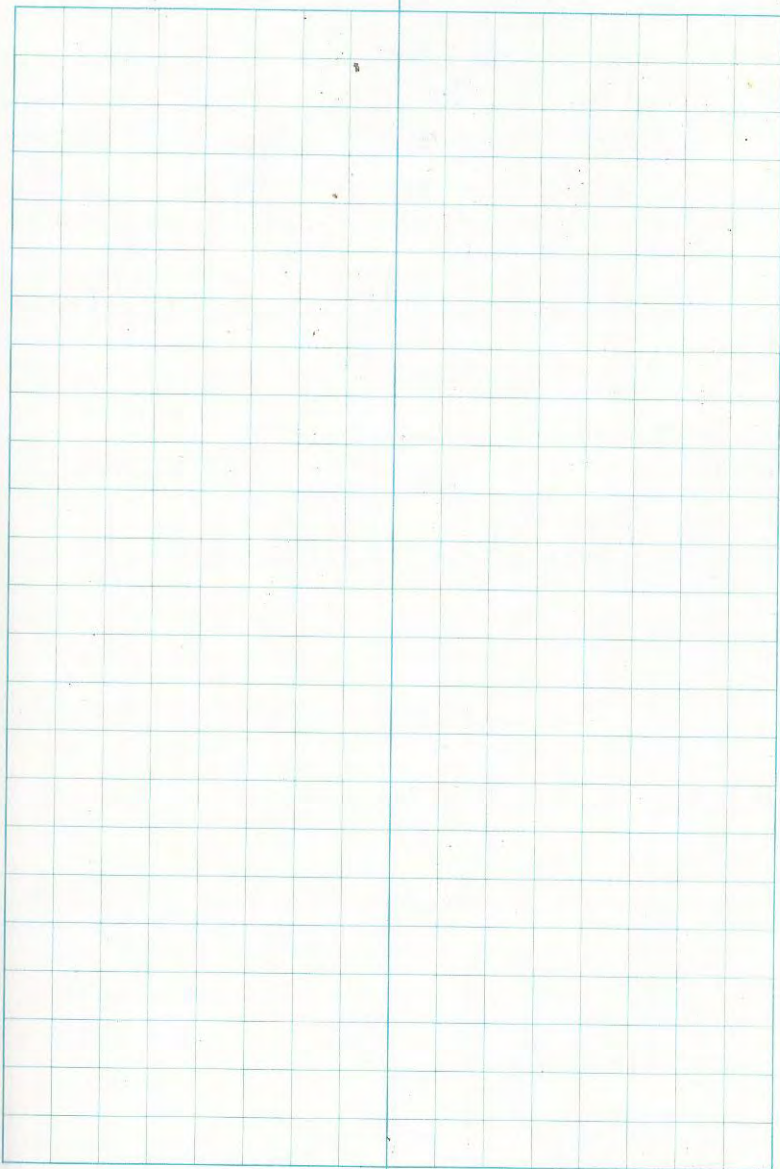
RCSP.

BENK

HOFI

CAST

HOOR



6/16/20

Questhaven Buow #4

Time	Temp	Wind	Sky
0600	59	0-1	100% 0.0
0915	66	1-3	50% 0.0

SPECIES

SAPH	HOPI	NO BUOW
LASP	BLER	
BGGN	CALT	
SBMU	ROSP	
WEKI	COYE	
SPTO	BEWR	
EUST	WREN	
SOSP	ACWO	
MODO	PSFL	
LEGO	CORA	
BLPH	CASJ	
CAQU	ALHU	
ATEL	ANHU	
NOMO	NOFL	
CASN	BHCO - 1 ♂	
NUWO		
H2OR		
BHGR		

Appendix E

Crotch's Bumble Bee Survey Report

**2023 Survey Report
for
Foraging Crotch's Bumble Bee
(*Bombus crotchii*)
on the
Questhaven Project Site**

Prepared for:

Colrich Communities
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Prepared by:

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August 21, 2023



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INTRODUCTION

This report documents the methods and results of a survey conducted on the Questhaven Project (project) site for foraging Crotch's bumble bee (CBB; *Bombus crotchii*), a candidate for listing as endangered under the California Endangered Species Act (CESA). The approximately 70-acre site is in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. It is within the boundaries of the Draft North County Multiple Species Conservation Program in Pre-approved Mitigation Area (Figures 1 and 2).

METHODS

A foraging bumble bee survey for the CBB was conducted during the period May 23 through July 27, 2023 (Table 1). The first part of the survey followed the California Department of Fish and Wildlife (CDFW)-issued Unofficial Crotch's Bumble Bee Survey Methods, which was available when the survey began. The latter portion of the survey followed the Survey Considerations for CESA Candidate Bumble Bee Species issued by the CDFW on June 6, 2023 (CDFW 2023). Prior to beginning the survey, a habitat assessment was conducted that included reviewing the California Natural Diversity Database and available bee data (iNaturalist) to identify any reported CBB observations in the project site vicinity and to help determine areas on site with suitable foraging resources (flowering plants) for the CBB.

**Table 1
Crotch's Bumble Bee Survey Information**

Site Visit	Area	Date	Biologist	Survey Times (start-stop)	Weather Conditions (start/stop)
1	1	5/23	Korey Klutz	0930-1630	Cloudy, 60°F, wind 0 mph/ Cloudy, 64°F, wind 2 mph
1	2	5/24	Brian Lohstroh	1200-1600	100% cover, 70°F, wind 2-6 mph/ 100%, 69°F, wind 3-5 mph
1	3	5/30	Darin Busby	1230-1530	100% cover, 69°F, wind 4-7 mph/ 90%, 70°F, wind 3-5 mph
1	3	5/30	Melissa Busby	1330-1530	100% cover, 69°F, wind 4-7 mph/ 90%, 70°F, wind 3-5 mph
2	1	6/7	Korey Klutz	0900-1430	Cloudy, 63°F, wind 0 mph/ Cloudy, 67°F, wind 4 mph
2	2	6/8	Brian Lohstroh	1100-1530	100% cover, 73°F, wind 3-6 mph/ 10%, 76°F, wind 2-7 mph
2	3	6/17	Darin Busby	1040-1500	0% cover, 73°F, wind 1-5 mph/ 0%, 78°F, wind 3-6 mph
3	1	6/22	Korey Klutz	0900-1430	Partly cloudy, 64°F, wind 0 mph/ Partly cloudy, 70°F, wind 8 mph
3	2	6/22	Brian Lohstroh	1015-1430	20% cover, 74°F, wind 2-5 mph/ 0%, 76°F, wind 4-7 mph
3	3	6/30	Darin Busby	1000-1330	0% cover, 70°F, wind 0-3 mph/ 0%, 79°F, wind 2-5 mph
4	1	7/9	Korey Klutz	1000-1500	Partly cloudy, 65°F, wind 0 mph/ Clear, 71°F, wind 6 mph
4	2	7/7	Brian Lohstroh	1015-1425	0% cover, 70°F, wind 0-4 mph/ 0%, 71°F, wind 2-9 mph
4	3	7/13	Darin Busby	0930-1300	0% cover, 78°F, wind 1-3 mph/ 0%, 85°F, wind 1-5 mph
5	1	7/23	Korey Klutz	0800-1300	Clear, 65°F, wind 0 mph/ Clear, 73°F, wind 10 mph
5	2	7/21	Brian Lohstroh	0815-1215	100% cover, 68°F, wind 2-4 mph/ 0%, 79°F, wind 0-7 mph
5	3	7/27	Darin Busby	1030-1400	0% cover, 77°F, wind 2-3 mph/ 0%, 85°F, wind 3-5 mph

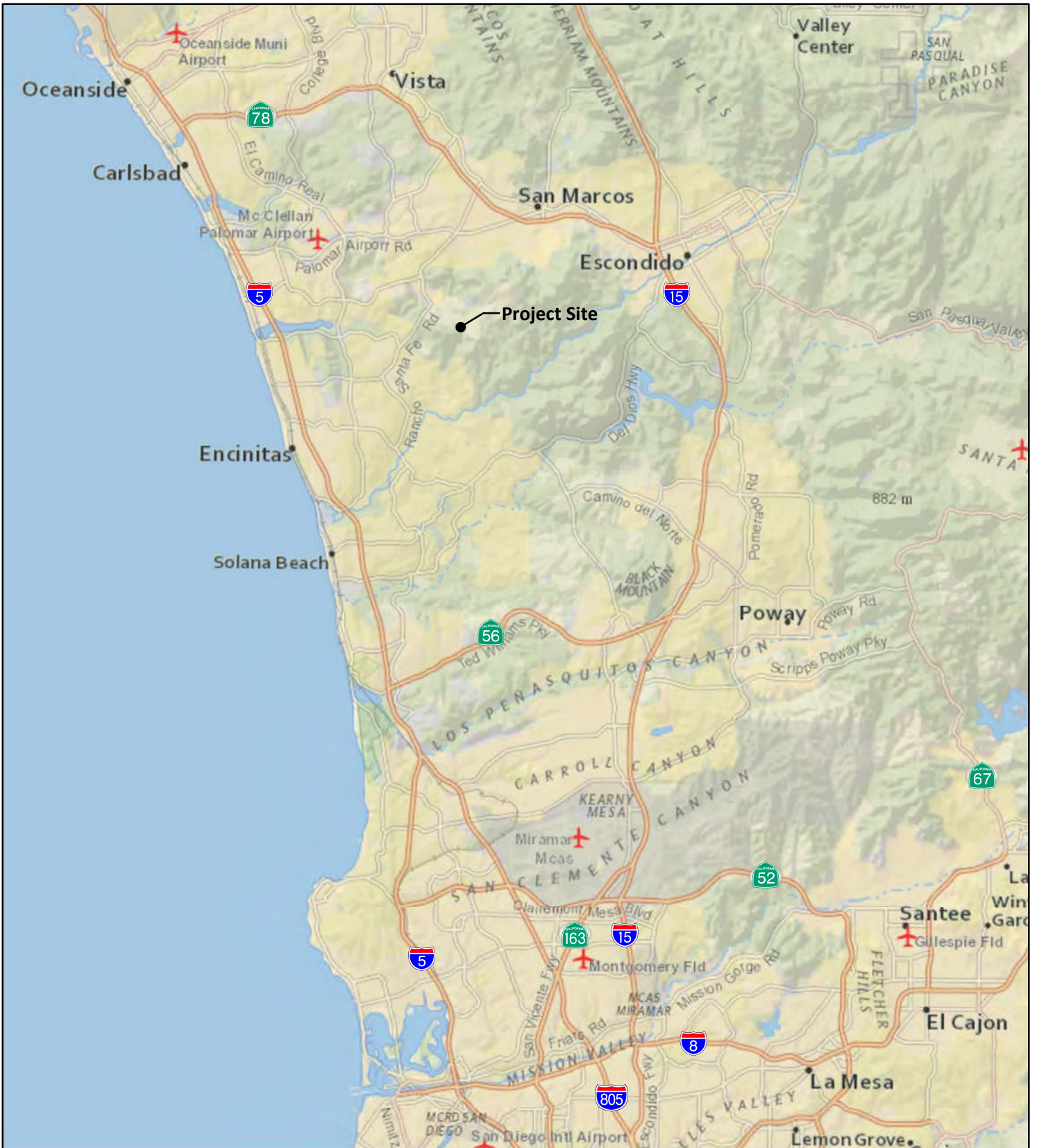
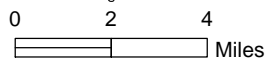
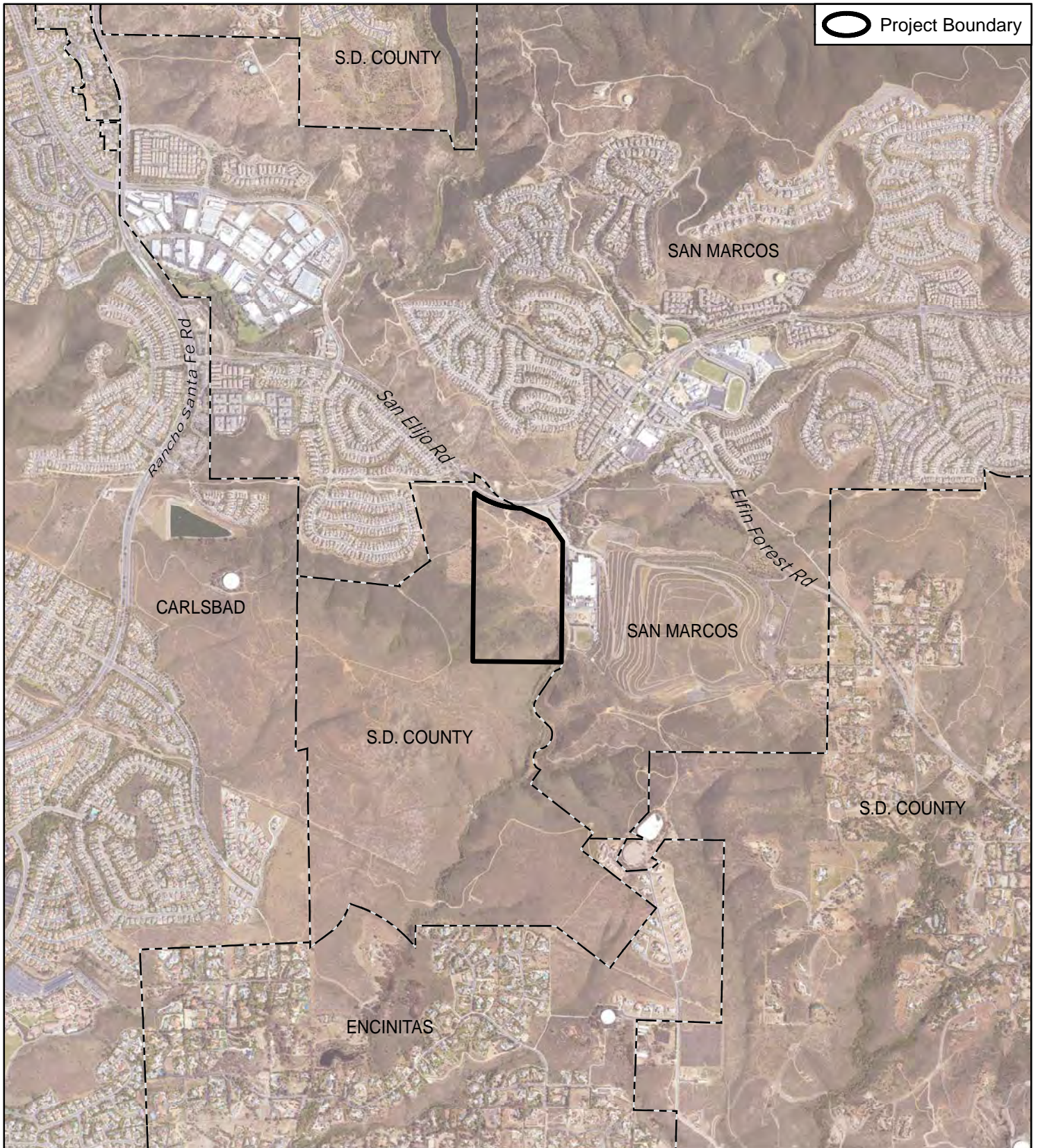


Figure 1

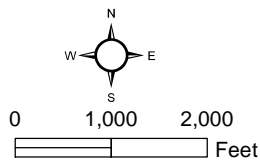
Regional Location

QUESTHAVEN PROJECT
2023 CROTCH'S BUMBLE BEE SURVEY





Aerial Photo: USDA NAIP 2022



ALDEN
ENVIRONMENTAL, INC

Figure 2

Project Location

QUESTHAVEN PROJECT
2023 CROTCH'S BUMBLE BEE SURVEY



Aerial Photo: Nearmap 2023

Figure 3

**Crotch's Bumble Bee
Survey Area**

QUESTHAVEN PROJECT
2023 CROTCH'S BUMBLE BEE SURVEY



The survey area was divided into 3 sections: Area 1 is comprised of 9.67 acres; Area 2 is comprised of 9.95 acres; and Area 3 is comprised of 9.69 acres (Figure 3). The survey areas were determined based on the presence of flowering plants that could serve as nectar and pollen resources for foraging bumble bees. Dense non-native grassland, eucalyptus woodland, and developed/disturbed areas were excluded as they did not support flowering species. More open and less dense non-native grassland areas with numerous flowering species (Orcutt's brodiaea, deer weed, blue dicks, etc.) were included in the survey areas. Less dense coastal sage scrub habitat areas within and adjacent to the project footprint also were surveyed where possible. Areas outside of the project footprint to the south and west also were excluded as they are not proposed for impacts (within the preservation areas) and support primarily dense, impenetrable chaparral habitat on steep slopes.

According to the Survey Considerations (CDFW 2023), it is recommended that at least 3 site visits take place spaced 2 to 4 weeks apart during the period of highest detection probability for foraging Crotch's bumble bees (i.e., the April – August Colony Active Period for the species) and when floral resources are present. As shown in Table 1, 5 site visits were made to each of the 3 survey areas approximately 2 weeks apart during the Colony Active Period when floral resources were present.

The Survey Considerations (CDFW 2023) also state that site visits should be made at least 1 hour after sunrise and at least 2 hours before sunset, although ideally between 9 am and 1 pm on warm, but not hot, sunny days (65-90 degrees Fahrenheit) with low wind (less than 8 miles per hour). The recommended rate of survey is 1 person-hour per 3 acres of suitable habitat. The survey was generally conducted under these conditions (Table 1).

The survey included walking slow, meandering transects through the survey areas and looking for foraging *Bombus* species. Flowering plants in bloom, as well as bumble bees and other bee/wasp species observed, were recorded in field notes (Appendix A). No netting or handling of any insects was conducted.

RESULTS

While there were numerous plant species in flower during the survey, only one genus that is favored by the CBB, which is *Salvia*, was present on site (Appendix A). Three bumble bee species were identified, but none was the CBB. The 3 bumble bee species included black tail bumble bee (*Bombus melanopygus*; observed only in May); yellow bumble bee (*B. californicus*; observed May through July); and most abundantly, the yellow-faced bumble bee (*B. vosnesenskii*; observed May through July).

REFERENCE

California Department of Fish and Wildlife. 2023. Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species. June 6.
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inlin>

APPENDIX A

Copies of Field Notes

Biologist: Korey Klutz

Questhaven Survey Dates and Weather Conditions					
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
	23-May	7-Jun	22-Jun	9-Jul	23-Jul
Survey Hours	0930-1630	0900-1430	0900-1430	1000-1500	0800-1300
Temps	60-64	63-67	64-70	65-71	65-73
Wind	0-2	0-4	0-8	0-6	0-10
Conditions	Cloudy	Cloudy	Partly Cloudy	Partly Cloudy to Clear	Clear

Biologist:
Brian Lohstroh

Questhaven San Marcos Site (Area 2)					
Date	Time on site	Temp (°F)	Sky Cover (%)	Wind Speed (MPH)	Personnel
5/24/23	1200-1600	70-69	100-100%	2-6; 3-5	B. Lohstroh
6/8/23	1100-1530	73-76	100-10%	3-6; 2-7	B. Lohstroh
6/22/23	1015-1430	74-76	20-0%	2-5; 4-7	B. Lohstroh
7/7/23	1015-1425	70-71	0-0%	0-4; 2-9	B. Lohstroh
7/21/23	0815-1215	68-79	100-0%	2-4; 0-7	B. Lohstroh

Biologist:
Brian Lohstroh

Common Name	Scientific Name	Questhaven Area 2				
		5/24/23	6/8/23	6/22/23	7/7/23	7/21/23
Honey bee	<i>Apis mellifera</i>	x	x	x	x	x
Unknown black bee	bee sp. (TBD)				x	
Bee fly	<i>Bombilius sp.</i>	x				
California bumblebee	<i>Bombus californicus</i>	1*		2	6	3
Black-tailed bumblebee	<i>Bombus melanopygus</i>			1	1	
Vonsnesenski's bumblebee	<i>Bombus vosnesenskii</i>	7*	7*	13*	10	35+male
Common blue mud dauber	<i>Chalybion californicum</i>		x			
Mexican Cactus Fly	<i>Copestylum mexicanum</i>		x			x
Digger/sunflower bee species	<i>Diadasia sp.</i>		x	x		x
Scoliid wasp	<i>Scoliidae</i> (Family)	x	x	x	x	x
Syrphid fly	<i>Syrphidae</i> (Family)	x	x			
bumblebee robberfly	<i>Laphria flava</i>			x		
Common cicada	<i>Okanagana sp.</i>			x		x
Tarantula hawk	<i>Pepsis chrysothemis</i>				x	x
Calyptrate (house) fly	Subsection <i>Calyptratae</i>	x				
Western Yellowjacket	<i>Vespula pensylvanica</i>	x				x
		*One queen observed				
Other species of interest:						
Tarantula	Genus <i>Aphonopelma</i>					
California toad (dead)	<i>Anaxyrus boreas halophilus</i>					
green lynx spider	<i>Peucetia viridans</i>					
California Gnatcatcher	<i>Polioptila californica</i>					
Least Bell's Vireo	<i>Vireo bellii pusillus</i>					x
So. California rufous-crowned Sparrow	<i>Aimophila ruficeps canescens</i>					

Crotch's Bumble Bee Survey Form

Surveyor: Darin Busby **Date:** 5/30/2023
Site Name: Questhaven – Area 3 **Site Visit No.:** 1
Acres
Surveyed: 5.81 **Survey Time:** 3.0 hours **Acres per Hour:** 1.9
Other Surveyors
Present: N/A **Project No.:** _____

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1230	69	4-7	100%
End	1530	70	3-5	90%
Start	--	--	--	--
End	--	--	--	--

Vegetation Communities Surveyed (inc. dominant spp.):
Diegan coastal sage scrub (<i>Eriogonum fasciculatum</i>)
Non-native grassland (<i>Avena</i> spp.)

Bumble Bee Species	No.	Other Hymenoptera (Bee/Wasp) Species	Obs.
yellow bumble bee (<i>Bombus californicus</i>)		western honey bee (<i>Apis mellifera</i>)	x
Crotch's bumble bee (<i>B. crotchii</i>)		Ichneumonid wasp (Family: Ichneumonidae)	
Fernald cuckoo bumble bee (<i>B. flavidus</i>)		cuckoo bee (<i>Nomada</i>)	
black tail bumble bee (<i>B. melanopygus</i>)	2	tarantula hawk (<i>Pepsis thisbe</i>)	
Sonoran (American) bumble bee (<i>B. sonorus</i>)		sawfly (Family: Tenthredinidae)	
Vancouver bumble bee (<i>B. vancouverensis nearcticus</i>)		yellowjacket (<i>Vespula / Dilichovespula</i>)	
Van Dyke bumble bee (<i>B. vandykei</i>)		carpenter bee (Subfamily: Xylocopinae)	
Vosnesensky bumble bee (<i>B. vosnesenskii</i>)	14		
Column Total	16	<i>*See field notes for other flying insects observed</i>	

Nectar/Pollen Sources (*CBB favorites)			
deerweed (<i>Acmispon glaber</i>)	x	phacelia / scorpionweed (<i>Phacelia</i> *)	
onion (<i>Allium</i> spp.)		popcorn flower (<i>Cryptantha/Plagiobothrys</i>)	
fiddleneck (<i>Amsinckia</i> spp.)		sage (<i>Salvia</i> *)	x
snapdragon (<i>Antirrhinum</i> *)		ragwort (<i>Senecio</i>)	
manzanita (<i>Arctostaphylos</i>)		clover (<i>Trifolium</i>)	
milkweed (<i>Asclepias</i> *)		vetch (<i>Vicia</i> *)	
milk-vetch (<i>Astragalus</i>)		Other:	
goldenstar (<i>Bloomeria</i> spp.)		canchalagua (<i>Zeltnera venusta</i>)	x
lilac/buckthorn (<i>Ceanothus</i>)		fiesta flower (<i>Pholistoma auritum</i>)	x
pincushion (<i>Chaenactis</i> *)		Italian thistle (<i>Carduus pycnocephalus</i>)	x
thistle (<i>Cirsium</i> *)		bristly ox-tongue (<i>Helminthotheca echioides</i>)	x
clarkia (<i>Clarkia</i>)		morning-glory (<i>Calystegia macrostegia</i>)	x
bird's beak (<i>Cordylanthus</i>)		orange-bush monkeyflower (<i>Diplacus aurantiacus</i>)	x
fascicled tarweed (<i>Deinandra fasciculata</i>)		golden yarrow (<i>Eriophyllum confertiflorum</i>)	x
larkspur (<i>Delphinium</i> *)		scarlet pimpernel (<i>Lysimachia arvensis</i>)	x
buckwheat (<i>Eriogonum fasciculatum</i>)	x	black elderberry (<i>Sambucus nigra</i>)	x
sunflower (<i>Helianthus</i>)		blue-eyed grass (<i>Sisyrinchium bellum</i>)	x
telegraph weed (<i>Heterotheca</i>)		California rose (<i>Rosa californica</i>)	x
goldfields (<i>Lasthenia</i> spp.)		Parish's nightshade (<i>Solanum parishii</i>)	x
honeysuckle (<i>Lonicera</i>)		wild radish (<i>Raphanus sativus</i>)	x
lupine (<i>Lupinus</i> *)		redstem filaree (<i>Erodium cicutarium</i>)	x
bur-clover (<i>Medicago</i> *)		Crete hedypnois (<i>Hedypnois cretica</i>)	x
penstemon (<i>Penstemon</i>)			

Crotch's Bumble Bee Observation(s) Log			
Time	Photo(s)	No.	Notes (Habitat, Nectar/Pollen Source, Behavior)

Crotch's Bumble Bee Survey Form

Surveyor: Melissa Busby **Date:** 5/30/2023
Site Name: Questhaven – Area 3 **Site Visit No.:** 1
Acres
Surveyed: 3.88 **Survey Time:** 2.0 hours **Acres per Hour:** 1.9
Other Surveyors
Present: N/A **Project No.:** _____

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1330	69	4-7	100%
End	1530	70	3-5	90%
Start	--	--	--	--
End	--	--	--	--

Vegetation Communities Surveyed (inc. dominant spp.):
Diegan coastal sage scrub (<i>Eriogonum fasciculatum</i>)
Non-native grassland (<i>Avena</i> spp.)

Bumble Bee Species	No.	Other Hymenoptera (Bee/Wasp) Species	Obs.
yellow bumble bee (<i>Bombus californicus</i>)		western honey bee (<i>Apis mellifera</i>)	x
Crotch's bumble bee (<i>B. crotchii</i>)		Ichneumonid wasp (Family: Ichneumonidae)	
Fernald cuckoo bumble bee (<i>B. flavidus</i>)		cuckoo bee (<i>Nomada</i>)	
black tail bumble bee (<i>B. melanopygus</i>)		tarantula hawk (<i>Pepsis thisbe</i>)	
Sonoran (American) bumble bee (<i>B. sonorus</i>)		sawfly (Family: Tenthredinidae)	
Vancouver bumble bee (<i>B. vancouverensis nearcticus</i>)		yellowjacket (<i>Vespula / Dilichovespula</i>)	
Van Dyke bumble bee (<i>B. vandykei</i>)		carpenter bee (Subfamily: Xylocopinae)	
Vosnesensky bumble bee (<i>B. vosnesenskii</i>)	13		
Column Total	13	<i>*See field notes for other flying insects observed</i>	

Nectar/Pollen Sources (*CBB favorites)			
deerweed (<i>Acmispon glaber</i>)	x	phacelia / scorpionweed (<i>Phacelia</i> *)	
onion (<i>Allium</i> spp.)		popcorn flower (<i>Cryptantha/Plagiobothrys</i>)	
fiddleneck (<i>Amsinckia</i> spp.)		sage (<i>Salvia</i> *)	x
snapdragon (<i>Antirrhinum</i> *)		ragwort (<i>Senecio</i>)	
manzanita (<i>Arctostaphylos</i>)		clover (<i>Trifolium</i>)	
milkweed (<i>Asclepias</i> *)		vetch (<i>Vicia</i> *)	
milk-vetch (<i>Astragalus</i>)		Other:	
goldenstar (<i>Bloomeria</i> spp.)		canchalagua (<i>Zeltnera venusta</i>)	x
lilac/buckthorn (<i>Ceanothus</i>)		grass poly (<i>Lythrum hyssopifolia</i>)	x
pincushion (<i>Chaenactis</i> *)		Italian thistle (<i>Carduus pycnocephalus</i>)	x
thistle (<i>Cirsium</i> *)		bristly ox-tongue (<i>Helminthotheca echioides</i>)	x
clarkia (<i>Clarkia</i>)		morning-glory (<i>Calystegia macrostegia</i>)	x
bird's beak (<i>Cordylanthus</i>)		orange-bush monkeyflower (<i>Diplacus aurantiacus</i>)	x
fascicled tarweed (<i>Deinandra fasciculata</i>)		golden yarrow (<i>Eriophyllum confertiflorum</i>)	x
larkspur (<i>Delphinium</i> *)		scarlet pimpernel (<i>Lysimachia arvensis</i>)	x
buckwheat (<i>Eriogonum fasciculatum</i>)	x	black elderberry (<i>Sambucus nigra</i>)	x
sunflower (<i>Helianthus</i>)		blue-eyed grass (<i>Sisyrinchium bellum</i>)	x
telegraph weed (<i>Heterotheca</i>)		California goldenrod (<i>Solidago velutina</i> ssp. <i>californica</i>)	x
goldfields (<i>Lasthenia</i> spp.)		Orcutt's brodiaea (<i>Brodiaea orcuttii</i>)	x
honeysuckle (<i>Lonicera</i>)		rattlesnake weed (<i>Daucus pusillus</i>)	x
lupine (<i>Lupinus</i> *)		fiesta flower (<i>Pholistoma auritum</i>)	x
bur-clover (<i>Medicago</i> *)		everlasting (<i>Pseudognaphalium</i> spp.)	x
penstemon (<i>Penstemon</i>)		wild radish (<i>Raphanus sativus</i>)	x

Crotch's Bumble Bee Observation(s) Log			
Time	Photo(s)	No.	Notes (Habitat, Nectar/Pollen Source, Behavior)

Crotch's Bumble Bee Survey Form

Surveyor: Darin Busby **Date:** 6/17/2023
Site Name: Questhaven – Area 3 **Site Visit No.:** 2
Acres Surveyed: 9.69 **Survey Time:** 4.3 hours **Acres per Hour:** 2.3
Other Surveyors Present: N/A **Project No.:** _____

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1040	73	1-5	0%
End	1500	78	3-6	0%
Start	--	--	--	--
End	--	--	--	--

Vegetation Communities Surveyed (inc. dominant spp.):
flowers 5-40%, 10% average

Bumble Bee Species	No.	Other Hymenoptera (Bee/Wasp) Species	Obs.
yellow bumble bee (<i>Bombus californicus</i>)	4	western honey bee (<i>Apis mellifera</i>)	x
Crotch's bumble bee (<i>B. crotchii</i>)		Ichneumonid wasp (Family: Ichneumonidae)	
Fernald cuckoo bumble bee (<i>B. flavidus</i>)		cuckoo bee (<i>Nomada</i>)	
black tail bumble bee (<i>B. melanopygus</i>)		tarantula hawk (<i>Pepsis thisbe</i>)	
Sonoran (American) bumble bee (<i>B. sonorus</i>)		sawfly (Family: Tenthredinidae)	
Vancouver bumble bee (<i>B. vancouverensis nearcticus</i>)		yellowjacket (<i>Vespula / Dilichovespula</i>)	
Van Dyke bumble bee (<i>B. vandykei</i>)		carpenter bee (Subfamily: Xylocopinae)	
Vosnesensky bumble bee (<i>B. vosnesenskii</i>)	15		
Column Total	19	<i>*See field notes for other flying insects observed</i>	

Nectar/Pollen Sources (*CBB favorites)			
deerweed (<i>Acmispon glaber</i>)	x	popcorn flower (<i>Cryptantha/Plagiobothrys</i>)	
onion (<i>Allium</i> spp.)		sage (<i>Salvia</i>)*	x
fiddleneck (<i>Amsinckia</i> spp.)		ragwort (<i>Senecio</i>)	
snapdragon (<i>Antirrhinum</i>)*		clover (<i>Trifolium</i>)	
manzanita (<i>Arctostaphylos</i>)		vetch (<i>Vicia</i>)*	
milkweed (<i>Asclepias</i>)*		Other:	
milk-vetch (<i>Astragalus</i>)		canchalagua (<i>Zeltnera venusta</i>)	x
goldenstar (<i>Bloomeria</i> spp.)		Italian thistle (<i>Carduus pycnocephalus</i>)	x
lilac/buckthorn (<i>Ceanothus</i>)		orange-bush monkeyflower (<i>Diplacus aurantiacus</i>)	x
pincushion (<i>Chaenactis</i>)*		golden yarrow (<i>Eriophyllum confertiflorum</i>)	x
thistle (<i>Cirsium</i>)*		scarlet pimpernel (<i>Lysimachia arvensis</i>)	x
clarkia (<i>Clarkia</i>)		black elderberry (<i>Sambucus nigra</i>)	x
bird's beak (<i>Cordylanthus</i>)		blue-eyed grass (<i>Sisyrinchium bellum</i>)	x
fascicled tarweed (<i>Deinandra fasciculata</i>)	x	fennel (<i>Foeniculum vulgare</i>)	x
larkspur (<i>Delphinium</i>)*		wild radish (<i>Raphanus sativus</i>)	x
buckwheat (<i>Eriogonum fasciculatum</i>)	x	California rose (<i>Rosa californica</i>)	x
sunflower (<i>Helianthus</i>)		wild cucumber (<i>Marah macrocarpa</i>)	x
telegraph weed (<i>Heterotheca</i>)		short-pod mustard (<i>Hirschfeldia incana</i>)	x
goldfields (<i>Lasthenia</i> spp.)		garland daisy (<i>Glebionis coronaria</i>)	x
honeysuckle (<i>Lonicera</i>)		redstem filaree (<i>Erodium cicutarium</i>)	x
lupine (<i>Lupinus</i>)*		chaparral mallow (<i>Malacothamnus fasciculatus</i>)	x
bur-clover (<i>Medicago</i>)*		California everlasting (<i>Pseudognaphalium californicum</i>)	x
penstemon (<i>Penstemon</i>)		Parish's nightshade (<i>Solanum parishii</i>)	x
phacelia / scorpionweed (<i>Phacelia</i>)*			

Crotch's Bumble Bee Observation(s) Log			
Time	Photo(s)	No.	Notes (Habitat, Nectar/Pollen Source, Behavior)

Crotch's Bumble Bee Survey Form

Surveyor: Darin Busby **Date:** 6/30/2023
Site Name: Questhaven – Area 3 **Site Visit No.:** 3
Acres Surveyed: 9.69 **Survey Time:** 3.5 hours **Acres per Hour:** 2.8
Other Surveyors Present: N/A **Project No.:** _____

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1000	70	0-3	0%
End	1330	79	2-5	0%
Start	--	--	--	--
End	--	--	--	--

Vegetation Communities Surveyed (inc. dominant spp.):
Diegan coastal sage scrub (<i>Eriogonum fasciculatum</i>); flowers 5-30%, 10% average

Bumble Bee Species	No.	Other Hymenoptera (Bee/Wasp) Species	Obs.
yellow bumble bee (<i>Bombus californicus</i>)	6	western honey bee (<i>Apis mellifera</i>)	x
Crotch's bumble bee (<i>B. crotchii</i>)		Ichneumonid wasp (Family: Ichneumonidae)	
Fernald cuckoo bumble bee (<i>B. flavidus</i>)		cuckoo bee (<i>Nomada</i>)	
black tail bumble bee (<i>B. melanopygus</i>)		tarantula hawk (<i>Pepsis thisbe</i>)	x
Sonoran (American) bumble bee (<i>B. sonorus</i>)		sawfly (Family: Tenthredinidae)	
Vancouver bumble bee (<i>B. vancouverensis nearcticus</i>)		yellowjacket (<i>Vespa</i> / <i>Dilichovespula</i>)	
Van Dyke bumble bee (<i>B. vandykei</i>)		carpenter bee (Subfamily: Xylocopinae)	
Vosnesensky bumble bee (<i>B. vosnesenskii</i>)	15		
Column Total	21	<i>*See field notes for other flying insects observed</i>	

Nectar/Pollen Sources (*CBB favorites)			
deerweed (<i>Acmispon glaber</i>)	x	popcorn flower (<i>Cryptantha/Plagiobothrys</i>)	
onion (<i>Allium</i> spp.)		sage (<i>Salvia</i>)*	x
fiddleneck (<i>Amsinckia</i> spp.)		ragwort (<i>Senecio</i>)	
snapdragon (<i>Antirrhinum</i>)*		clover (<i>Trifolium</i>)	
manzanita (<i>Arctostaphylos</i>)		vetch (<i>Vicia</i>)*	
milkweed (<i>Asclepias</i>)*		Other:	
milk-vetch (<i>Astragalus</i>)		canchalagua (<i>Zeltnera venusta</i>)	x
goldenstar (<i>Bloomeria</i> spp.)		orange-bush monkeyflower (<i>Diplacus aurantiacus</i>)	x
lilac/buckthorn (<i>Ceanothus</i>)		scarlet pimpernel (<i>Lysimachia arvensis</i>)	x
pincushion (<i>Chaenactis</i>)*		black elderberry (<i>Sambucus nigra</i>)	x
thistle (<i>Cirsium</i>)*		blue-eyed grass (<i>Sisyrinchium bellum</i>)	x
clarkia (<i>Clarkia</i>)		fennel (<i>Foeniculum vulgare</i>)	x
bird's beak (<i>Cordylanthus</i>)		wild radish (<i>Raphanus sativus</i>)	x
fascicled tarweed (<i>Deinandra fasciculata</i>)	x	morning-glory (<i>Calystegia macrostegia</i>)	x
larkspur (<i>Delphinium</i>)*		short-pod mustard (<i>Hirschfeldia incana</i>)	x
buckwheat (<i>Eriogonum fasciculatum</i>)	x	laurel sumac (<i>Malosma laurina</i>)	x
sunflower (<i>Helianthus</i>)		golden yarrow (<i>Eriophyllum confertiflorum</i>)	x
telegraph weed (<i>Heterotheca</i>)		chaparral mallow (<i>Malacothamnus fasciculatus</i>)	x
goldfields (<i>Lasthenia</i> spp.)		California everlasting (<i>Pseudognaphalium californicum</i>)	x
honeysuckle (<i>Lonicera</i>)		Parish's nightshade (<i>Solanum parishii</i>)	x
lupine (<i>Lupinus</i>)*		grass poly (<i>Lythrum hyssopifolia</i>)	x
bur-clover (<i>Medicago</i>)*			
penstemon (<i>Penstemon</i>)			
phacelia / scorpionweed (<i>Phacelia</i>)*			

Crotch's Bumble Bee Observation(s) Log			
Time	Photo(s)	No.	Notes (Habitat, Nectar/Pollen Source, Behavior)

Crotch's Bumble Bee Survey Form

Surveyor: Darin Busby **Date:** 7/13/2023
Site Name: Questhaven – Area 3 **Site Visit No.:** 4
Acres Surveyed: 9.69 **Survey Time:** 3.5 hours **Acres per Hour:** 2.8
Other Surveyors Present: N/A **Project No.:** _____

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0930	78	1-3	0%
End	1300	85	1-5	0%
Start	--	--	--	--
End	--	--	--	--

Vegetation Communities Surveyed (inc. dominant spp.):
flowers 0-30%, 5% average

Bumble Bee Species	No.	Other Hymenoptera (Bee/Wasp) Species	Obs.
yellow bumble bee (<i>Bombus californicus</i>)	2	western honey bee (<i>Apis mellifera</i>)	x
Crotch's bumble bee (<i>B. crotchii</i>)		Ichneumonid wasp (Family: Ichneumonidae)	
Fernald cuckoo bumble bee (<i>B. flavidus</i>)		cuckoo bee (<i>Nomada</i>)	
black tail bumble bee (<i>B. melanopygus</i>)		tarantula hawk (<i>Pepsis thisbe</i>)	x
Sonoran (American) bumble bee (<i>B. sonorus</i>)		sawfly (Family: Tenthredinidae)	
Vancouver bumble bee (<i>B. vancouverensis nearcticus</i>)		yellowjacket (<i>Vespula / Dilichovespula</i>)	
Van Dyke bumble bee (<i>B. vandykei</i>)		carpenter bee (Subfamily: Xylocopinae)	
Vosnesensky bumble bee (<i>B. vosnesenskii</i>)	8		
Column Total	10	<i>*See field notes for other flying insects observed</i>	

Nectar/Pollen Sources (*CBB favorites)			
deerweed (<i>Acmispon glaber</i>)		popcorn flower (<i>Cryptantha/Plagiobothrys</i>)	
onion (<i>Allium</i> spp.)		sage (<i>Salvia</i>)*	x
fiddleneck (<i>Amsinckia</i> spp.)		ragwort (<i>Senecio</i>)	
snapdragon (<i>Antirrhinum</i>)*		clover (<i>Trifolium</i>)	
manzanita (<i>Arctostaphylos</i>)		vetch (<i>Vicia</i>)*	
milkweed (<i>Asclepias</i>)*		Other:	
milk-vetch (<i>Astragalus</i>)		canchalagua (<i>Zeltnera venusta</i>)	x
goldenstar (<i>Bloomeria</i> spp.)		orange-bush monkeyflower (<i>Diplacus aurantiacus</i>)	x
lilac/buckthorn (<i>Ceanothus</i>)		Ramona ceanothus (<i>Ceanothus tomentosus</i>)	x
pincushion (<i>Chaenactis</i>)*		scarlet pimpernel (<i>Lysimachia arvensis</i>)	x
thistle (<i>Cirsium</i>)*		black elderberry (<i>Sambucus nigra</i>)	x
clarkia (<i>Clarkia</i>)		blue-eyed grass (<i>Sisyrinchium bellum</i>)	x
bird's beak (<i>Cordylanthus</i>)		fennel (<i>Foeniculum vulgare</i>)	x
fascicled tarweed (<i>Deinandra fasciculata</i>)	x	wild cucumber (<i>Marah macrocarpa</i>)	x
larkspur (<i>Delphinium</i>)*		California rose (<i>Rosa californica</i>)	x
buckwheat (<i>Eriogonum fasciculatum</i>)	x	chaparral mallow (<i>Malacothamnus fasciculatus</i>)	x
sunflower (<i>Helianthus</i>)		short-pod mustard (<i>Hirschfeldia incana</i>)	x
telegraph weed (<i>Heterotheca</i>)		golden yarrow (<i>Eriophyllum confertiflorum</i>)	x
goldfields (<i>Lasthenia</i> spp.)		laurel sumac (<i>Malosma laurina</i>)	x
honeysuckle (<i>Lonicera</i>)		tree tobacco (<i>Nicotiana glauca</i>)	x
lupine (<i>Lupinus</i>)*		common sow thistle (<i>Sonchus oleraceus</i>)	x
bur-clover (<i>Medicago</i>)*		Parish's nightshade (<i>Solanum parishii</i>)	x
penstemon (<i>Penstemon</i>)		wild radish (<i>Raphanus sativus</i>)	x
phacelia / scorpionweed (<i>Phacelia</i>)*			

Crotch's Bumble Bee Observation(s) Log			
Time	Photo(s)	No.	Notes (Habitat, Nectar/Pollen Source, Behavior)

Crotch's Bumble Bee Survey Form

Surveyor: Darin Busby **Date:** 7/27/2023
Site Name: Questhaven – Area 3 **Site Visit No.:** 5
Acres Surveyed: 9.69 **Survey Time:** 3.5 hours **Acres per Hour:** 2.8
Other Surveyors Present: N/A **Project No.:** _____

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1030	77	2-3	0%
End	1400	85	3-5	0%
Start	--	--	--	--
End	--	--	--	--

Vegetation Communities Surveyed (inc. dominant spp.):

Non-native grassland (*Avena fatua*, *Bromus* spp.); flowers 0-10%, 2% average

Coastal sage scrub (*Salvia mellifera*, *Malosma Laurina*)

Bumble Bee Species	No.	Other Hymenoptera (Bee/Wasp) Species	Obs.
yellow bumble bee (<i>Bombus californicus</i>)	3	western honey bee (<i>Apis mellifera</i>)	x
Crotch's bumble bee (<i>B. crotchii</i>)		Ichneumonid wasp (Family: Ichneumonidae)	
Fernald cuckoo bumble bee (<i>B. flavidus</i>)		cuckoo bee (<i>Nomada</i>)	
black tail bumble bee (<i>B. melanopygus</i>)		tarantula hawk (<i>Pepsis thisbe</i>)	x
Sonoran (American) bumble bee (<i>B. sonorus</i>)		sawfly (Family: Tenthredinidae)	
Vancouver bumble bee (<i>B. vancouverensis nearcticus</i>)		yellowjacket (<i>Vespula / Dilichovespula</i>)	
Van Dyke bumble bee (<i>B. vandykei</i>)		carpenter bee (Subfamily: Xylocopinae)	
Vosnesensky bumble bee (<i>B. vosnesenskii</i>)	7		
Column Total	10	<i>*See field notes for other flying insects observed</i>	

Nectar/Pollen Sources (*CBB favorites)

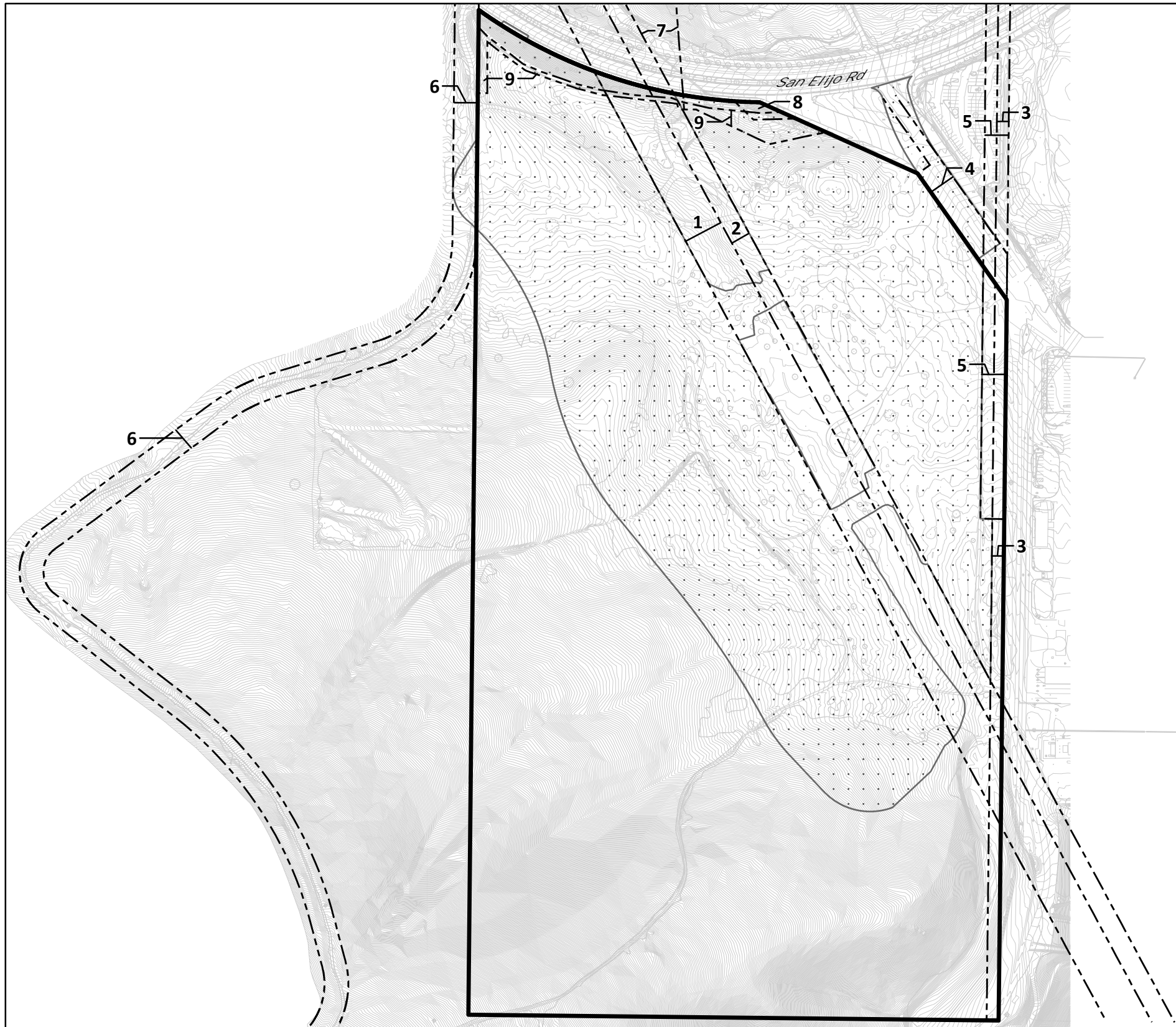
deerweed (<i>Acmispon glaber</i>)		popcorn flower (<i>Cryptantha/Plagiobothrys</i>)	
onion (<i>Allium</i> spp.)		sage (<i>Salvia</i>)*	x
fiddleneck (<i>Amsinckia</i> spp.)		ragwort (<i>Senecio</i>)	
snapdragon (<i>Antirrhinum</i>)*		clover (<i>Trifolium</i>)	
manzanita (<i>Arctostaphylos</i>)		vetch (<i>Vicia</i>)*	
milkweed (<i>Asclepias</i>)*		Other:	
milk-vetch (<i>Astragalus</i>)		canchalagua (<i>Zeltnera venusta</i>)	x
goldenstar (<i>Bloomeria</i> spp.)		orange-bush monkeyflower (<i>Diplacus aurantiacus</i>)	x
lilac/buckthorn (<i>Ceanothus</i>)		Ramona ceanothus (<i>Ceanothus tomentosus</i>)	
pincushion (<i>Chaenactis</i>)*		scarlet pimpernel (<i>Lysimachia arvensis</i>)	x
thistle (<i>Cirsium</i>)*		black elderberry (<i>Sambucus nigra</i>)	
clarkia (<i>Clarkia</i>)		blue-eyed grass (<i>Sisyrinchium bellum</i>)	x
bird's beak (<i>Cordylanthus</i>)		fennel (<i>Foeniculum vulgare</i>)	x
fascicled tarweed (<i>Deinandra fasciculata</i>)	x	wild cucumber (<i>Marah macrocarpa</i>)	x
larkspur (<i>Delphinium</i>)*		California rose (<i>Rosa californica</i>)	x
buckwheat (<i>Eriogonum fasciculatum</i>)		chaparral mallow (<i>Malacothamnus fasciculatus</i>)	x
sunflower (<i>Helianthus</i>)		short-pod mustard (<i>Hirschfeldia incana</i>)	x
telegraph weed (<i>Heterotheca</i>)		golden yarrow (<i>Eriophyllum confertiflorum</i>)	x
goldfields (<i>Lasthenia</i> spp.)		laurel sumac (<i>Malosma laurina</i>)	x
honeysuckle (<i>Lonicera</i>)		tree tobacco (<i>Nicotiana glauca</i>)	x
lupine (<i>Lupinus</i>)*		common sow thistle (<i>Sonchus oleraceus</i>)	x
bur-clover (<i>Medicago</i>)*		Parish's nightshade (<i>Solanum parishii</i>)	
penstemon (<i>Penstemon</i>)		wild radish (<i>Raphanus sativus</i>)	x
phacelia / scorpionweed (<i>Phacelia</i>)*			

Crotch's Bumble Bee Observation(s) Log

Time	Photo(s)	No.	Notes (Habitat, Nectar/Pollen Source, Behavior)

Appendix F

Existing Easement Information



1. An existing 100' wide easement for public utilities and incidental purposes, granted to San Diego Gas and Electric company per document recorded October 11, 1940 in book 1082, page 293 of official records.
2. An existing 50' wide easement for public utilities and incidental purposes, granted to San Diego Gas and Electric per document recorded November 3, 1965 as instrument No. 199601 of official records.
3. An easement for road and utility and incidental purposes in favor of John A. Thomas, Jr and Avis C. Thomas, recorded February 28, 1964 as instrument No. 37644 of official records.
4. The right to extend and maintain drainage structures and excavation and embankment slopes beyond the limits of the right of way granted therein where required for construction and maintenance granted to county of San Diego, recorded July 14, 1978 as instrument No. 78-294151 of official records.
5. An easement for ingress and egress and incidental purposes in favor of Norad Development company, recorded march 5, 1971 as instrument No. 41512 of official records.
6. A 60 foot wide easement and right-of-way for ingress and egress for road and utility purposes, recorded March 15, 1972 in grant deed file No. 61527 of official records.
7. An easement for public utilities and incidental purposes in favor of San Diego Gas and Electric, recorded November 30, 1992 as instrument No. 92-0764106 of official records.
8. An easement for drainage and incidental purposes in favor of the city of San Marcos, recorded June 6, 2003 as instrument No. 03-0670400 of official records.
9. An easement for temporary slope and construction and incidental purposes in favor of the city of San Marcos, recorded June 6, 2003 as instrument No. 03-0670401 of official records.

- Project Parcel Boundary
- Project Limits
- Existing Easement

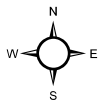
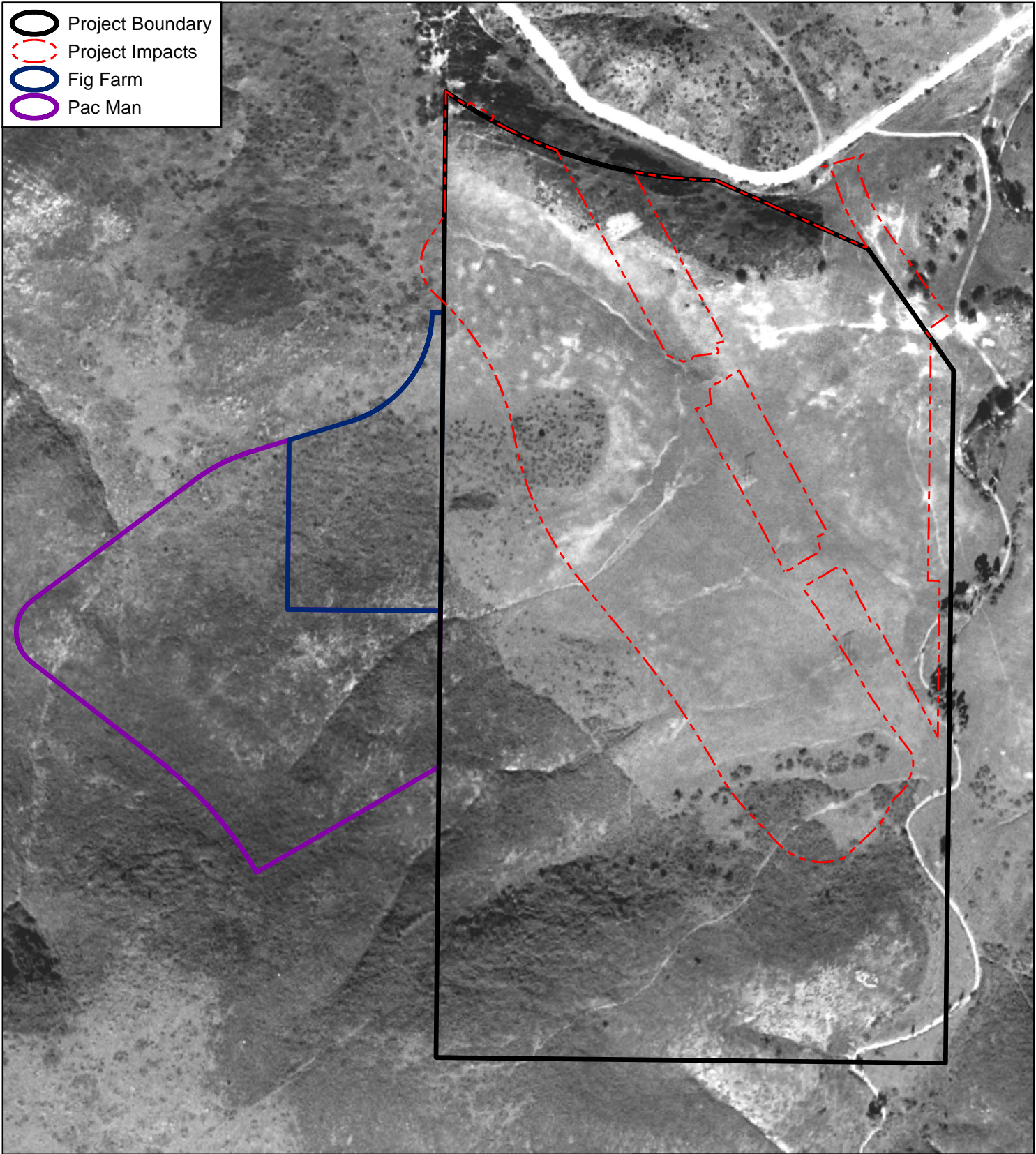
Existing Easement Information

QUESTHAVEN

Appendix G

Historic Aerial Images

- Project Boundary
- Project Impacts
- Fig Farm
- Pac Man







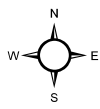
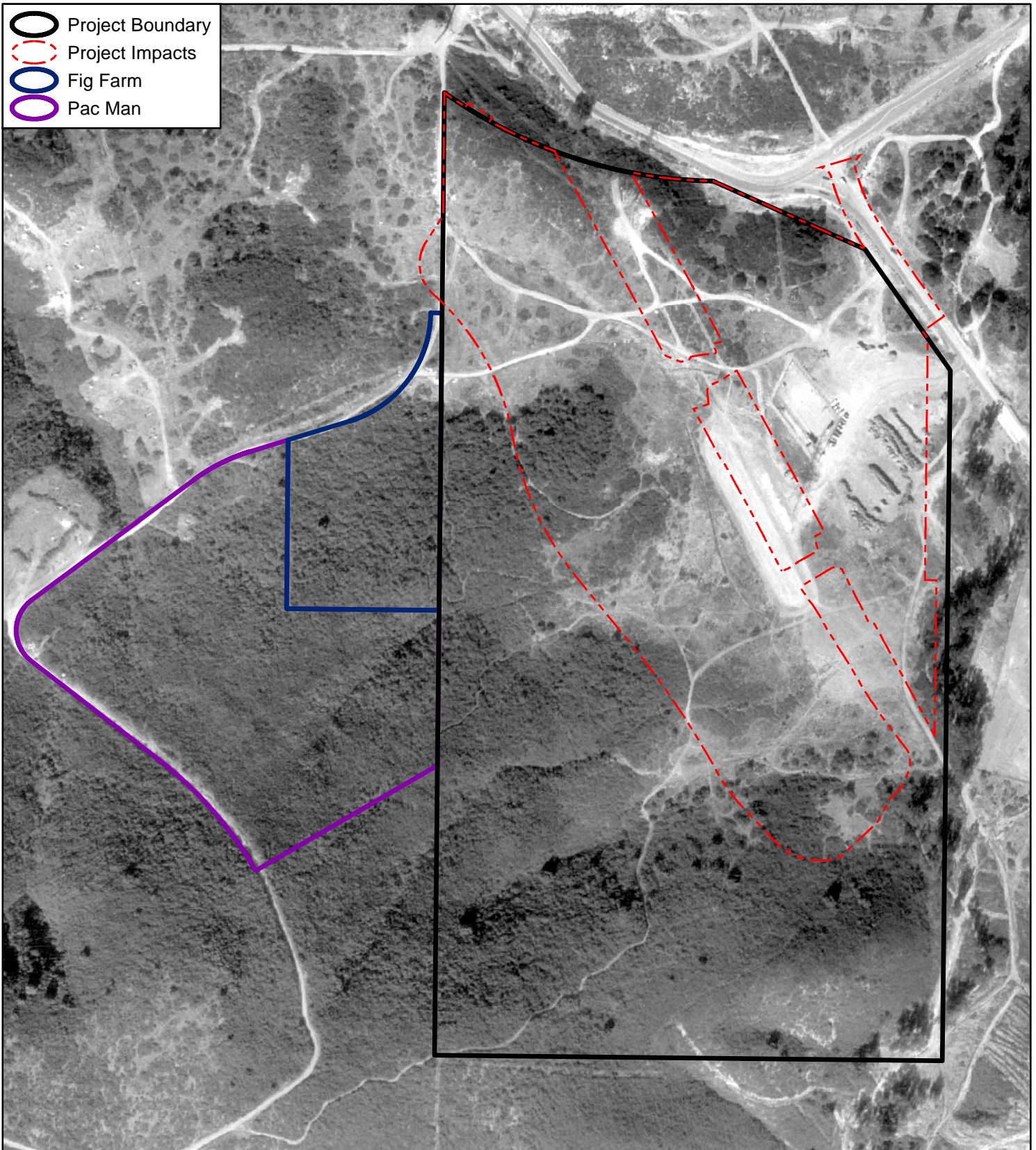
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1947 Aerial Photo

QUESTHAVEN

-  Project Boundary
-  Project Impacts
-  Fig Farm
-  Pac Man



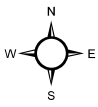
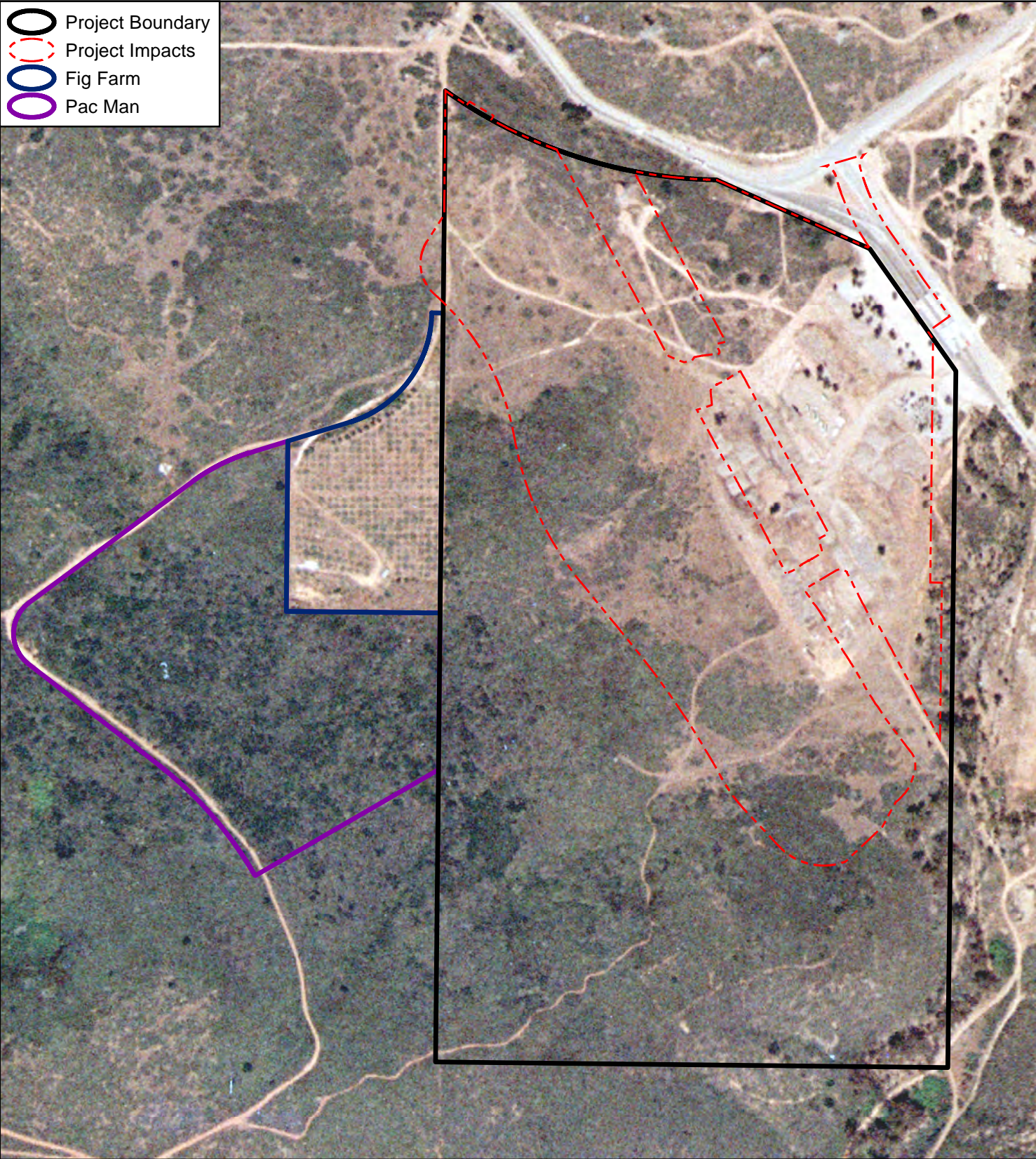
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 Feet



1980 Aerial Photo

QUESTHAVEN

- Project Boundary
- Project Impacts
- Fig Farm
- Pac Man



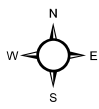
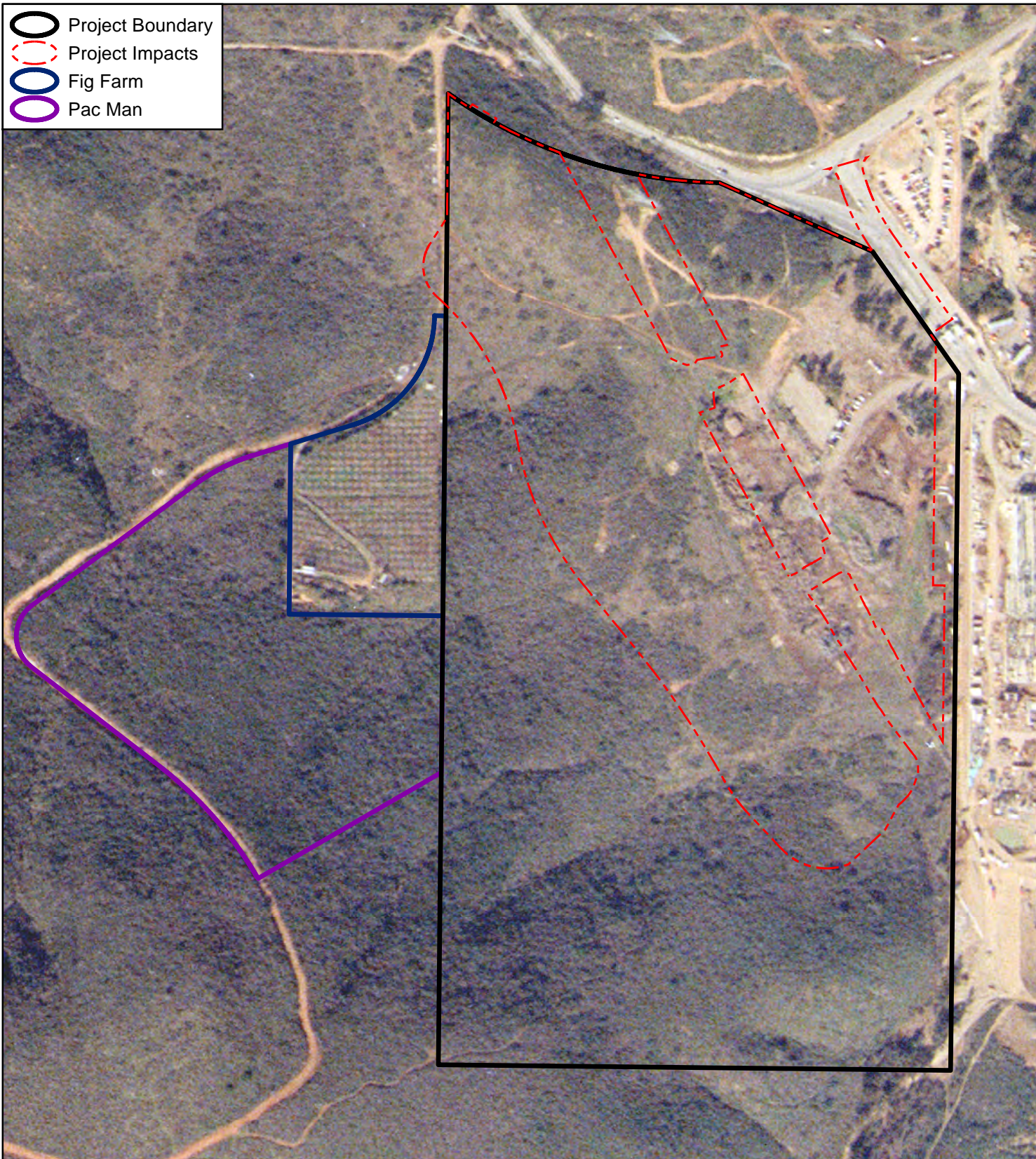
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Feet



1990 Aerial Photo

QUESTHAVEN

- Project Boundary
- Project Impacts
- Fig Farm
- Pac Man



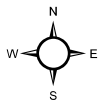
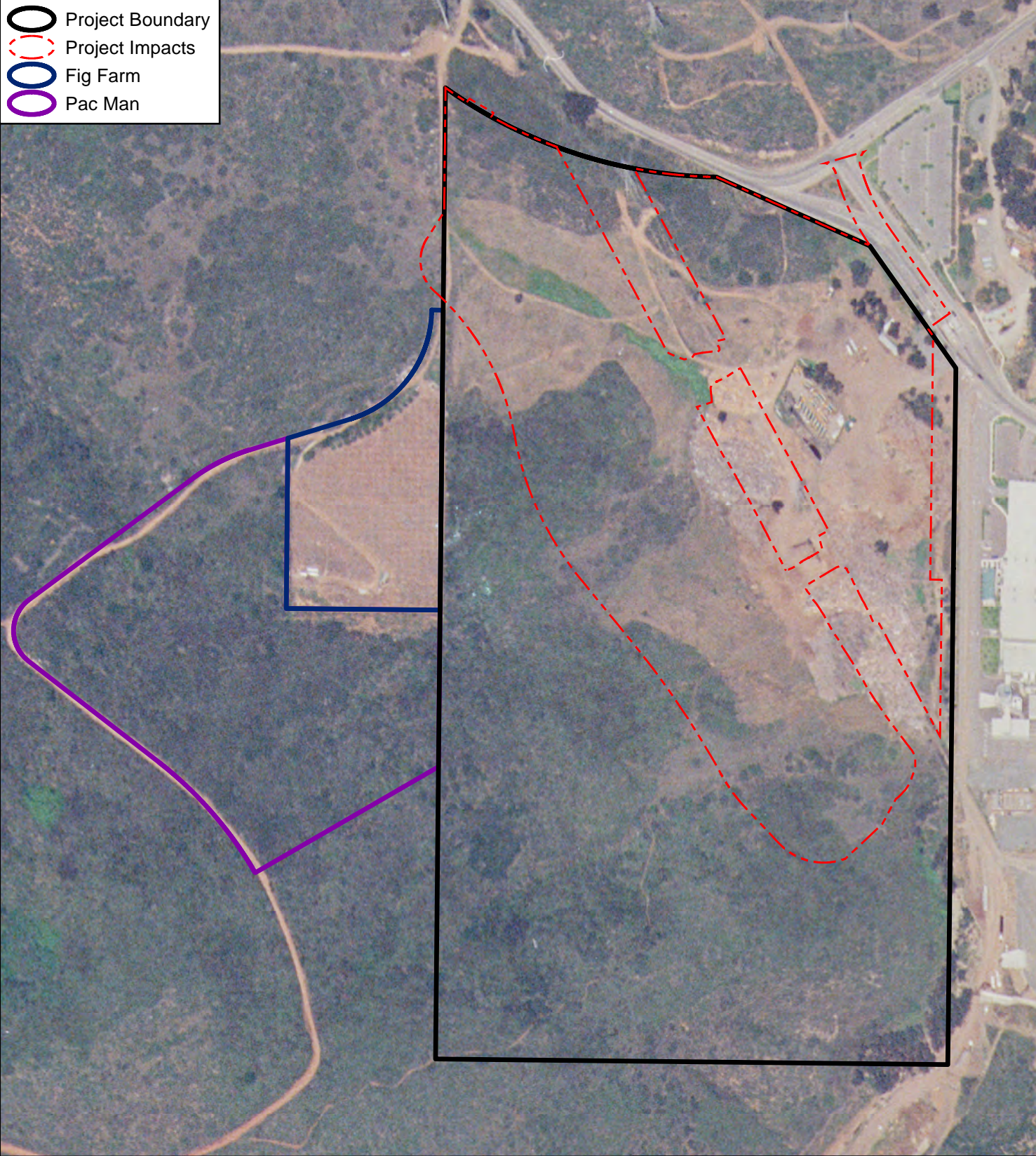
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Feet



1993 Aerial Photo

QUESTHAVEN

- Project Boundary
- Project Impacts
- Fig Farm
- Pac Man







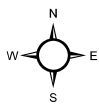
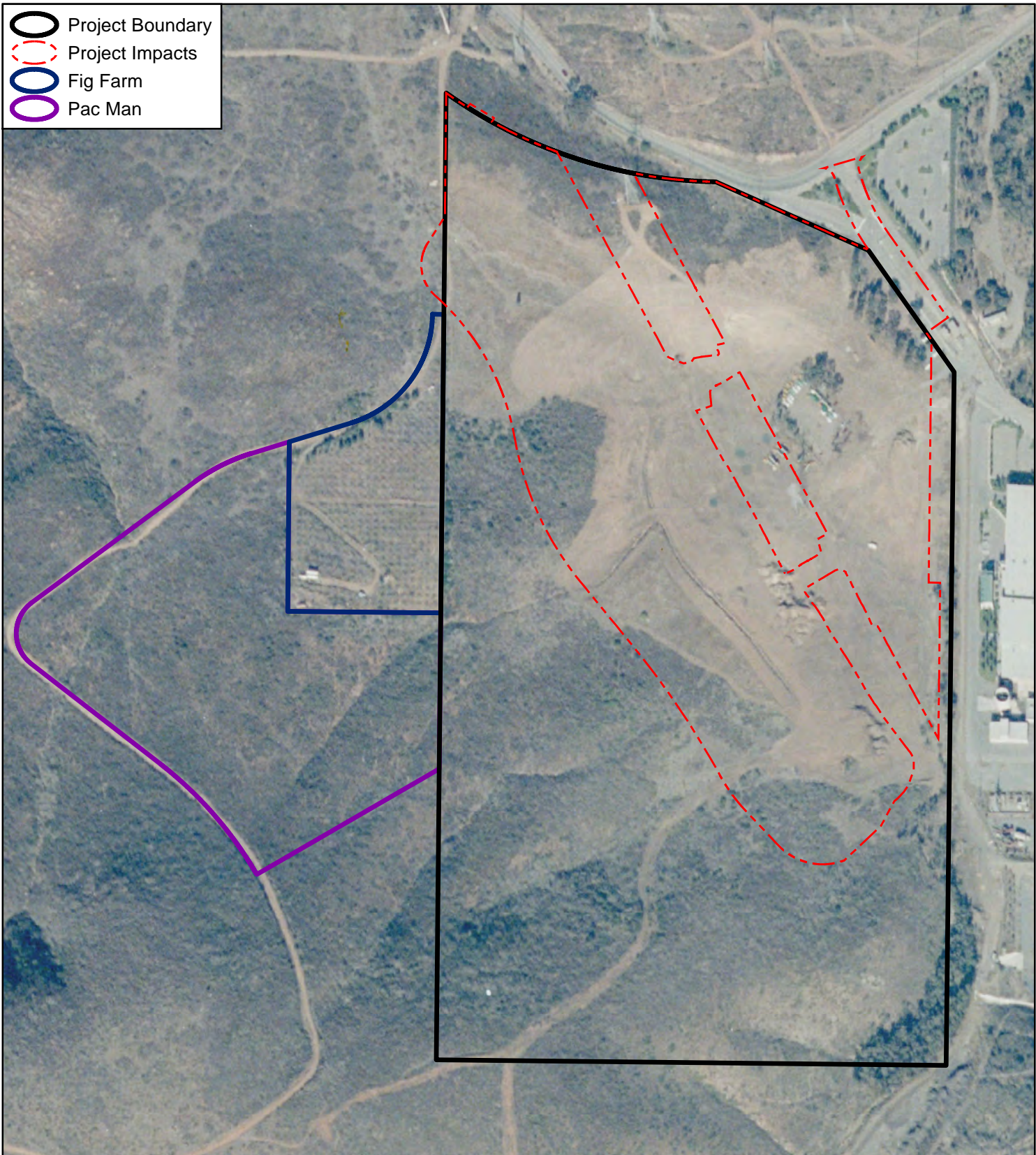
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Feet



1996 Aerial Photo

QUESTHAVEN

-  Project Boundary
-  Project Impacts
-  Fig Farm
-  Pac Man







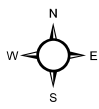
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 Feet



2000 Aerial Photo

QUESTHAVEN

-  Project Boundary
-  Project Impacts
-  Fig Farm
-  Pac Man







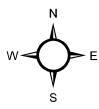
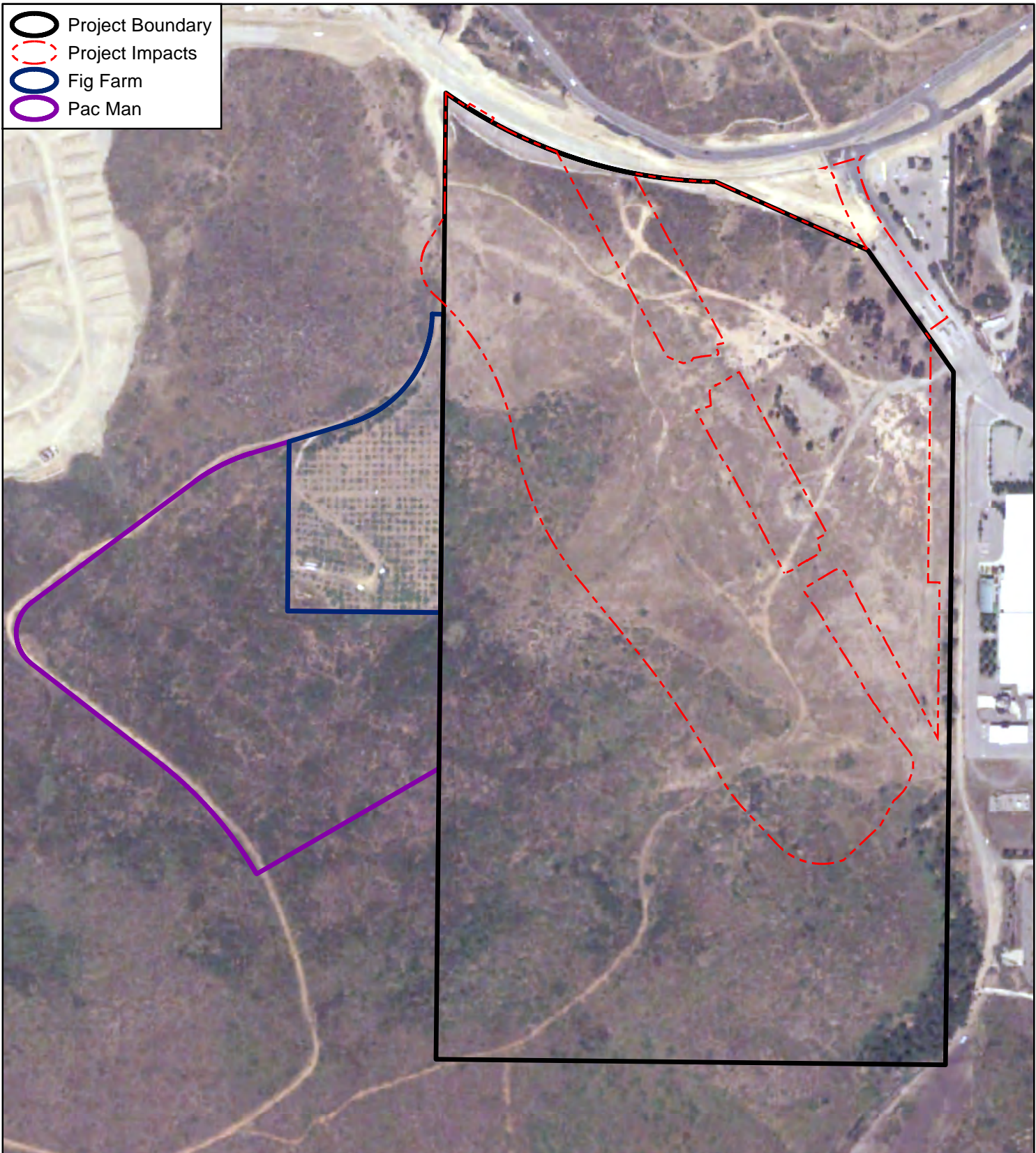
0 175 350
 Feet



2002 Aerial Photo

QUESTHAVEN

-  Project Boundary
-  Project Impacts
-  Fig Farm
-  Pac Man



0 175 350
 Feet



2005 Aerial Photo

QUESTHAVEN

Appendix H

Plant Species Observed

Appendix H
PLANT SPECIES OBSERVED - QUESTHAVEN

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT¹	
ANGIOSPERMS – MONOCOTS				
Cyperaceae	<i>Carex spissa</i>	San Diego sedge	EW	
	<i>Cyperus involucratus</i> ²	umbrella plant	EW	
Juncaceae	<i>Juncus acutus</i> ssp. <i>leopoldii</i> ³	southwestern spiny rush	EW	
	<i>Juncus xiphioides</i>	iris-leaved rush	DCSS, NNG	
Iridaceae	<i>Sisyrinchium bellum</i>	blue-eyed grass	NNG	
Liliaceae	<i>Calochortus splendens</i>	Mariposa lily	SMC	
	<i>Avena barbata</i> ²	slender oat	NNG	
	<i>Avena fatua</i> ²	wild oat	DCSS, DH, NNG	
	<i>Brachypodium distachyon</i> ²	purple false brome	DH, NNG, SMC	
	<i>Bromus diandrus</i> ²	common ripgut grass	DCSS, EW, NNG	
	<i>Bromus hordeaceus</i> ²	soft brome	NNG	
	<i>Bromus madritensis</i> ²	foxtail chess	DCSS, NNG, SMC	
	<i>Cynodon dactylon</i> ²	Bermuda grass	NNG	
	Poaceae	<i>Distichlis spicata</i>	saltgrass	NNG
		<i>Ehrharta erecta</i> ²	panic veldtgrass	EW
		<i>Festuca perennis</i> ²	Italian ryegrass	NNG
		<i>Gastridium phleoides</i> ²	nit grass	NNG
		<i>Lamarckia aurea</i> ²	goldentop	DH, NNG
		<i>Polypogon monspeliensis</i> ²	annual beardgrass	NNG
<i>Stipa lepida</i>		foothill needlegrass	NNG	
<i>Stipa miliacea</i> ²		smilo grass	DCSS, EW, NNG	
Themidaceae	<i>Brodiaea orcuttii</i> ³	Orcutt's brodiaea	NNG	
	<i>Dichelostemma capitatum</i>	blue-dicks	NNG	
ANGIOSPERMS – DICOTS				
Adoxaceae	<i>Sambucus nigra</i>	black elderberry	DCSS, SMC	
Agavaceae	<i>Chlorogalum pomeridianum</i>	soap plant	SMC	
Aizoaceae	<i>Carpobrotus edulis</i> ²	hottentot-fig	DH, NNG	

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT ¹
Anacardiaceae	<i>Malosma laurina</i>	laurel sumac	DCSS, SMC, NNG
	<i>Rhus integrifolia</i>	lemonadeberry	DCSS
	<i>Schinus molle</i> ²	Peruvian pepper tree	NNG
	<i>Toxicodendron diversilobum</i>	poison oak	EW
Apiaceae	<i>Daucus pusillus</i>	rattlesnake weed	SMC
	<i>Foeniculum vulgare</i> ²	fennel	EW, NNG
Asteraceae	<i>Artemisia californica</i>	California sagebrush	DCSS
	<i>Artemisia dracunculus</i>	tarragon	EW
	<i>Baccharis pilularis</i>	coyote brush	DCSS, NNG
	<i>Baccharis salicifolia</i>	mule fat	EW
	<i>Carduus pycnocephalus</i> ²	Italian thistle	EW, NNG, SMC
	<i>Centaurea melitensis</i> ²	totalote	DCSS, NNG
	<i>Corethrogyne filaginifolia</i>	sand aster	DCSS, DH, NNG
	<i>Cynara cardunculus</i> ²	Artichoke thistle	NNG
	<i>Deinandra fasciculata</i>	fascicled tarplant	DCSS, DH, NNG, SMC
	<i>Encelia californica</i>	San Diego Sunflower	EW
	<i>Erigeron foliosus</i>	fleabane	DCSS
	<i>Eriophyllum confertiflorum</i>	golden-yarrow	DCSS, NNG
	<i>Glebionis coronaria</i> ²	garland daisy	DH, NNG
	<i>Grindelia camporum</i>	gum plant	NNG
	<i>Hazardia squarrosa</i>	saw-toothed goldenbush	SMC
	<i>Hedypnois cretica</i> ²	Crete weed	NNG
	<i>Helminthotheca echioides</i> ²	bristly ox-tongue	NNG
	<i>Isocoma menziesii</i>	goldenbush	DCSS, NNG
	<i>Lactuca serriola</i> ²	wild lettuce	DCSS, EW, NNG, SMC
	<i>Logfia gallica</i> ²	narrow-leaf filago	DCSS, DH
	<i>Osmadenia tenela</i>	osmadenia	DCSS
	<i>Pseudognaphalium californicum</i>	California everlasting	DCSS, NNG
	<i>Pseudognaphalium luteoalbum</i> ²	everlasting cudweed	NNG
<i>Pseudognaphalium</i> sp.	everlasting	DCSS, NNG	
<i>Solidago velutina</i> ssp. <i>californica</i>	California goldenrod	NNG	
<i>Sonchus asper</i> ²	prickly sow thistle	NNG	
<i>Sonchus oleraceus</i> ²	common sow thistle	DH, NNG, EW	
<i>Stephanomeria virgata</i>	virgate wreath-plant	DCSS, NNG	
Boraginaceae	<i>Cryptantha intermedia</i>	popcorn flower	DCSS, NNG
	<i>Pholistoma auritum</i>	fiesta flower	DCSS, NNG

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT ¹
Brassicaceae	<i>Brassica nigra</i> ²	black mustard	DCSS, NNG, DH
	<i>Hirschfeldia incana</i> ²	shortpod mustard	NNG, DH
	<i>Raphanus sativus</i> ²	wild radish	NNG, DH
Cactaceae	<i>Opuntia</i> sp.	prickly pear	DCSS, NNG
Caprifoliaceae	<i>Lonicera subspicata</i>	honeysuckle	DCSS, SMC
Chenopodiaceae	<i>Atriplex semibaccata</i> ²	Australian saltbush	DH, NNG
	<i>Salsola tragus</i> ²	Russian-thistle, tumbleweed	NNG
Cistaceae	<i>Cistus</i> sp.	rock rose	NNG
	<i>Helianthemum scoparium</i>	peak rush-rose	DCSS, SMC
Convolvulaceae	<i>Calystegia macrostegia</i>	morning-glory	DCSS, NNG
	<i>Convolvulus arvensis</i> ²	bindweed	DCSS, NNG
Cucurbitaceae	<i>Marah macrocarpa</i>	wild cucumber	SMC
Euphorbiaceae	<i>Chamaesyce</i> sp. ²	spurge	NNG
	<i>Croton setigerus</i>	dove weed	DCSS, DH, NNG
	<i>Ricinus communis</i> ²	castor bean	EW
Fabaceae	<i>Acacia</i> sp. ²	acacia	EW, NNG
	<i>Acmispon americanus</i>	Spanish-clover	NNG
	<i>Acmispon glaber</i>	deerweed	DCSS, DH, NNG, SMC
	<i>Lathyrus vestitus</i>	sweet pea	SMC
Fagaceae	<i>Quercus dumosa</i> ³	Nuttall's scrub oak	SMC, SOC
Gentianaceae	<i>Zeltnera venusta</i>	canchalagua	DCSS, NNG, SMC
Geraniaceae	<i>Erodium botrys</i> ²	long-beak filaree	DH, NNG
	<i>Erodium cicutarium</i> ²	red-stem filaree	DH, NNG
Grossulariaceae	<i>Ribes indecorum</i>	white flowering currant	EW
	<i>Ribes speciosum</i>	fuschia-flowered gooseberry	SMC
Iridaceae	<i>Sisyrinchium bellum</i>	blue-eyed grass	DCSS, NNG
Lamiaceae	<i>Salvia mellifera</i>	black sage	DCSS, SMC
	<i>Stachys</i> sp.	hedge-nettle	EW
Lythraceae	<i>Lythrum hyssopifolia</i>	grass poly	NNG

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT ¹
Malvaceae	<i>Malacothamnus fasciculatus</i>	chaparral mallow	DCSS
	<i>Malvella leprosa</i>	alkali-mallow	EW
Myrsinaceae	<i>Anagallis arvensis</i> ²	scarlet pimpernel	DH, NNG
Myrtaceae	<i>Eucalyptus</i> spp. ²	eucalyptus	EW
Oleaceae	<i>Fraxinus uhdei</i> ²	shamel ash	EW
Onagraceae	<i>Clarkia purpurea</i>	wine-cups	DCSS, NNG
	<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	four-spot clarkia	NNG
Orobanchaceae	<i>Castilleja affinis</i> ssp. <i>affinis</i>	coast paint-brush	SMC
	<i>Castilleja exserta</i>	purple paint brush	DCSS, SMC, NNG
Phrymaceae	<i>Diplacus aurantiacus</i>	orange-bush monkeyflower	CC, DCSS, SMC
	<i>Mimulus guttatus</i>	monkey-flower	
Polemoniaceae	<i>Navarretia hamata</i>	skunkweed	DCSS, SMC
Polygonaceae	<i>Eriogonum fasciculatum</i>	California buckwheat	DCSS, EW
	<i>Rumex conglomeratus</i> ²	dock	EW
	<i>Rumex crispus</i> ²	curly dock	EW, NNG
Primulaceae	<i>Samolus parviflorus</i>	water pimpernel	EW
Ranunculaceae	<i>Thalictrum fendleri</i>	meadow rue	EW, SMC
Rhamnaceae	<i>Rhamnus crocea</i>	spiny redberry	SMC
	<i>Rhamnus ilicifolia</i>	holly-leaf redberry	SMC
	<i>Ceanothus tomentosus</i>	Ramona ceanothus	SMC
Rosaceae	<i>Adenostoma fasciculatum</i>	chamise	CC, SMC
	<i>Heteromeles arbutifolia</i>	toyon	SMC
	<i>Rosa californica</i>	California rose	DCSS, SMC
Rubiaceae	<i>Galium porrigens</i> var. <i>porrigens</i>	San Diego bedstraw	SMC
Salicaceae	<i>Salix lasiolepis</i>	arroyo willow	EW

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT¹
Selaginellaceae	<i>Selaginella cinerascens</i> ³	ashy spike-moss	SMC
Solanaceae	<i>Nicotiana glauca</i> ²	tree tobacco	EW
	<i>Solanum parishii</i>	Parish's nightshade	DCSS, NNG, EW
	<i>Solanum</i> sp.	nightshade	DCSS, SMC
Verbenaceae	<i>Verbena lasiostachys</i>	verbena	NNG

¹Habitat acronyms:

CC = chamise chaparral

DCSS= Diegan coastal sage scrub (including disturbed)

DH=disturbed habitat

EW = eucalyptus woodland

NNG = non-native grassland

SMC = southern mixed chaparral

SOC = scrub oak chaparral

²Non-native species

³Sensitive species

Appendix I
Animal Species Observed
or Detected

Appendix I
ANIMAL SPECIES OBSERVED – QUESTHAVEN

SCIENTIFIC NAME

COMMON NAME

INVERTEBRATES

<i>Apis mellifera</i>	honey bee
<i>Apodemia virgulti</i>	Behr's metalmark
<i>Bombilius</i> sp.	bee fly
<i>Bombus californicus</i>	California bumble bee
<i>Bombus melanopygus</i>	black-tailed bumble bee
<i>Bombus vosnesenskii</i>	yellow-faced bumble bee
<i>Chalybion californicum</i>	common blue mud dauber
<i>Copestylum mexicanum</i>	Mexican cactus fly
<i>Diadasia</i> sp.	digger/sunflower bee species
<i>Erynnis funeralis</i>	funereal duskywing
Genus <i>Aphonopelma</i>	tarantula
Genus <i>Melissodes</i>	unidentified bee
<i>Junonia coenia</i>	common buckeye
<i>Laphria flava</i>	bumblebee robberfly
<i>Leptotes marina</i>	marine blue
<i>Okanagana</i> sp.	common cicada
<i>Pepsis chrysothemis</i>	tarantula hawk
<i>Peucetia viridans</i>	green lynx spider
<i>Plebejus acmon</i>	Acmon blue
<i>Scoliidae</i>	scoliid wasp
<i>Strymon melinus</i>	grey hairstreak
<i>Syrphidae</i> (family)	syrphid fly
<i>Toxomerus marginatus</i>	marginated calligrapher
unidentified	sulphur butterfly
unidentified	white butterfly
<i>Vespula pensylvanica</i>	western yellowjacket

VERTEBRATES

Amphibians

<i>Anaxyrus boreas halophilus</i>	California toad (dead)
<i>Spea hammondi</i> ¹	western spadefoot toad

Reptiles

<i>Crotalus oreganus helleri</i>	southern Pacific rattlesnake
<i>Sceloporus</i> sp.	lizard

Birds

<i>Accipiter cooperii</i> ¹	Cooper's hawk
<i>Aeronautes saxatalis</i>	white-throated swift
<i>Aimophila ruficeps canescens</i> ¹	southern California rufous-crowned sparrow
<i>Anas platyrhynchos</i>	mallard
<i>Aphelocoma californica</i>	California scrub jay
<i>Archilochus alexandri</i>	black-chinned hummingbird
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Callipepla californica</i>	California quail
<i>Calypte anna</i>	Anna's hummingbird
<i>Cardellina pusilla</i>	Wilson's warbler
<i>Chaetura vauxi</i>	Vaux's swift
<i>Chamaea fasciata</i>	wrentit
<i>Chondestes grammacus</i>	lark sparrow
<i>Colaptes auratus</i>	northern flicker
<i>Corvus corax</i>	common raven
<i>Dryobates nuttallii</i>	Nuttall's woodpecker
<i>Empidonax difficilis</i>	Pacific slope flycatcher
<i>Geococcyx californianus</i>	greater roadrunner
<i>Geothlypis trichas</i>	common yellowthroat
<i>Haemorhous mexicanus</i>	house finch
<i>Icterus bullockii</i>	Bullock's oriole
<i>Icterus cucullatus</i>	hooded oriole
<i>Lonchura punctulata</i>	scaly-breasted munia
<i>Melanerpes formicivorus</i>	acorn woodpecker
<i>Melospiza crissalis</i>	California towhee
<i>Melospiza melodia</i>	song sparrow
<i>Mimus polyglottos</i>	northern mockingbird
<i>Molothrus ater</i>	brown-headed cowbird
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Passerina caerulea</i>	blue grosbeak
<i>Petrochelidon pyrrhonota</i>	cliff swallow
<i>Pheucticus melanocephalus</i>	black-headed grosbeak
<i>Picoides pubescens</i>	downy woodpecker
<i>Pipilo maculatus</i>	spotted towhee
<i>Polioptila caerulea</i>	blue-gray gnatcatcher
<i>Polioptila californica californica</i> ¹	coastal California gnatcatcher
<i>Psaltriparus minimus</i>	bushtit
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Selasphorus rufus</i>	rufous hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
<i>Setophaga coronata</i>	yellow-rumped warbler
<i>Spinus psaltria</i>	lesser goldfinch
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
<i>Sturnus vulgaris</i>	European starling

Birds (continued)

Thryomanes bewickii
Toxostoma redivivum
Troglodytes aedon
Tyrannus verticalis
Tyrannus vociferans
Vermivora celata
*Vireo bellii pusillus*¹
Vireo gilvus
Vireo huttoni
Zenaida macroura
Zonotrichia leucophrys

Bewick's wren
California thrasher
house wren
western kingbird
Cassin's kingbird
orange-crowned warbler
least Bell's vireo
warbling vireo
Hutton's vireo
mourning dove
white-crowned sparrow

Mammals

Canis latrans
Otospermophilus beecheyi
Sylvilagus audubonii

coyote
California ground squirrel
desert cottontail

¹Special status species

Appendix J

Special Status Species Evaluated

for Potential to Occur on Site

Appendix J
SPECIAL STATUS SPECIES¹ EVALUATED FOR POTENTIAL TO OCCUR ON SITE

PLANTS				
SPECIES	SENSITIVITY² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Acanthomintha ilicifolia</i> San Diego thornmint	FT SE Rare Plant Rank 1B.1 List A	Clay lenses in grassy openings in chaparral or sage scrub. Prefers friable or broken, clay soils.	April to June	Low. This annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Adolphia californica</i> San Diego adolphia	-- -- Rare Plant Rank 2B.1 List B	Sage scrub but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks. Usually associated with xeric locales where shrub canopy reaches 4 or 5 feet.	December to May	Low. A perennial shrub that was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Ambrosia pumila</i> San Diego ambrosia	FE -- Rare Plant Rank 1B.1 List A	Grasslands, valley bottoms and dry drainages, also can occur on slopes, disturbed places, and in coastal sage scrub.	April to October	Low. This perennial, annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> Del Mar manzanita	FE -- Rare Plant Rank 1B.1 List A	Maritime chaparral with sandy soil.	December to June	Not expected. Maritime chaparral is not present on site; the species was not found on site; and this perennial, evergreen shrub has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Artemisia palmeri</i> San Diego sagewort	-- -- Rare Plant Rank 4.2 List D	Sandy soils in mesic chaparral; coastal scrub; and riparian forest, scrub, and woodland.	(February) May to September	Low. This perennial, deciduous shrub was not found on site, and it has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Atriplex pacifica</i> South coast saltscale	-- -- Rare Plant Rank 1B.2 List A	Coastal bluff scrub, coastal dunes, coastal scrub, and playas.	March to October	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Baccharis vanessae</i> Encinitas baccharis	FT SE Rare Plant Rank 1B.1 List A	Sandstone soils in chaparral. Known mainly from the Encinitas area from which it has been nearly extirpated.	August to November	Low. This perennial, deciduous shrub was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Bloomeria clevelandii</i> San Diego goldenstar	-- -- Rare Plant Rank 1B.1 List A	Clay soils on dry mesas and hillsides in coastal sage scrub, chaparral, grassland, and around vernal pools.	April to May	Low. While this species has been reported to the SanBios database or the CNDDDB within 1,000 feet of the site, this perennial, bulbiferous herb was not found on site.
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	FT SE Rare Plant Rank 1B.1 List A	Clay soils in vernal moist grasslands and vernal pool periphery.	March to June	Low. This perennial, bulbiferous herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Brodiaea orcuttii</i> Orcutt's brodiaea	-- -- Rare Plant Rank 1B.1 List A	Mesic closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools—often associated with clay soil.	May to July	Present
<i>Calandrinia breweri</i> Brewer's calandrinia	-- -- Rare Plant Rank 4.2 List D	Chaparral and coastal scrub with sandy or loamy soils; on disturbed sites and burns.	(Jan) March to June	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Ceanothus verrucosus</i> Wart-stemmed ceanothus	-- -- Rare Plant Rank 2B.2 List B	Chaparral	December to May	Low. While this species has been reported to the SanBios database and/or the CNDDDB within 1,000 feet of the site, this perennial, evergreen shrub was not found on site.
<i>Centromadia parryi</i> ssp. <i>australis</i> Southern tarplant	-- -- Rare Plant Rank 1B.1 List A	Margins of marsh and swamps, vernal mesic grasslands, and vernal pools.	May to November	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Chorizanthe orcuttiana</i> Orcutt's spineflower	FE SE Rare Plant Rank 1B.1 List A	Sandy openings in closed-cone coniferous forest, maritime chaparral, and coastal scrub.	March to May	Low. This annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> Long-spined spineflower	-- -- Rare Plant Rank 1B.2 List A	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools, often with clay soil.	April to July	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> Summer holly	-- -- Rare Plant Rank 1B.2 List A --	Chaparral and cismontane woodland.	April to June	Low. While this species has been reported to the SanBios database and/or the CNDDDB within 1,000 feet of the site, this perennial, evergreen shrub was not found on site.
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> Del Mar Mesa sand aster	-- -- Rare Plant Rank 1B.1 List A	Sandy soils in maritime chaparral, coastal scrub, or coastal bluff scrub.	May, July to September	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Cryptantha wigginsii</i> Wiggins' cryptantha	-- -- Rare Plant Rank 1B.2 --	Coastal scrub habitat, often with clay soil.	February to June	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya	-- -- Rare Plant Rank 1B.1 List A	Coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland habitats with rocky, often clay or serpentinite soils.	April to June	Low. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Dudleya variegata</i> Variegated dudleya	-- -- Rare Plant Rank 1B.2 List A	Clay soils near vernal pools, and on metavolcanic rocky soils in open coastal sage scrub, chaparral, and grasslands.	April to June	Not expected. Potential habitat not present. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Dudleya viscida</i> Sticky dudleya	-- -- Rare Plant Rank 1B.2 List A	Grows predominantly on very steep, north-facing slopes in rocky areas of coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub.	May to June	Not expected. Steep slopes not present. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Eryngium aristulatum</i> <i>parishii</i> San Diego button-celery	FE SE Rare Plant Rank 1B.1 List A	Vernal pools or mima mound areas with vernal moist conditions.	April to June	Not expected. Potential habitat not present; the species was not found on site; and this annual/perennial herb has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Ferocactus viridescens</i> San Diego barrel cactus	-- -- Rare Plant Rank 2B.1 List B	Coastal scrub hillsides, often at the crest of slopes and growing among cobbles.	May to June	Low. This perennial stem succulent was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Harpagonella palmeri</i> Palmer's grapplinghook	-- -- Rare Plant Rank 4.2 List D	Open grassy areas with shrubland (chaparral, coastal scrub) and clay soil.	March to May	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Hazardia orcuttii</i> Orcutt's hazardia	-- ST Rare Plant Rank 1B.1 List A	Maritime chaparral and coastal scrub, often with clay soil.	August to October	Not expected. This perennial, evergreen shrub was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Horkelia truncata</i> Ramona horkelia	-- -- Rare Plant Rank 1B.3 List A	Clay or gabbroic soils in chaparral and cismontane woodland.	May to June	Low. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Iva hayesiana</i> San Diego marsh-elder	-- -- Rare Plant Rank 2B.2 List B	Marshes, swamps, and playas.	April to October	Low. Potential habitat absent or very limited. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Juncus acutus</i> ssp. <i>leopoldii</i> Southwestern spiny rush	-- -- Rare Plant Rank 4.2 List D	Mesic coastal dunes; alkaline meadows and seeps; coastal salt marshes and swamps.	(March) May to June	Present
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	-- -- Rare Plant Rank 1B.1 List A	Coastal salt marshes and swamps; playas; vernal pools.	February to June	Low. Potential habitat absent or very limited. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson pepper grass	-- -- Rare Plant Rank 4.3 List A	Openings in chaparral and sage scrub.	January to July	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Leptosyne maritima</i> Sea dahlia	-- -- Rare Plant Rank 2B.2 List B	Coastal bluff scrub and coastal scrub.	March to May	Low. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Monardella hypoleuca</i> ssp. <i>lanata</i> Felt-leaved monardella	-- -- Rare Plant Rank 1B.2 List A	Chaparral and cismontane woodland.	June to August	Low. This perennial, rhizomatous herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Navarretia fossalis</i> Spreading navarretia	FT -- Rare Plant Rank 1B.1 List A	Chenopod scrub, marshes and swamps (assorted freshwater habitats), playas, and vernal pools.	April to June	Low. This annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Orobanche parishii</i> ssp. <i>brachyloba</i> Short-lobed broomrape	-- -- Rare Plant Rank 4.2 List D	Sandy soils in coastal bluff scrub, coastal dunes, and coastal scrub.	April to October	Low. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Pogogyne abramsii</i> San Diego mesa mint	FE SE Rare Plant Rank 1B.1 List A	Vernal pools	March to July	Not expected. No potential habitat on site. This annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Selaginella cinerascens</i> Ashy spike-moss	-- -- Rare Plant Rank 4.1 List D	Chaparral and coastal scrub	--	Present
<i>Stemodia durantifolia</i> Purple stemodia	-- -- Rare Plant Rank 2B.1 List B	Sonoran desert scrub	(January) April, June, August to October, December	Not expected. Potential habitat not present. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Suaeda esteroa</i> Estuary seablite	-- -- Rare Plant Rank 1B.2 List A	Marshes and swamps	(May) July to October (January)	Not expected. Potential habitat not present. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Tetracoccus dioicus</i> Parry's tetracoccus	-- -- Rare Plant Rank 1B.2 List A	Chaparral and coastal scrub	April to May	Low. This perennial, deciduous shrub was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Viguiera laciniata</i> San Diego County viguiera	-- -- Rare Plant Rank 4.3 List D	Chaparral and coastal scrub	February to June (Aug)	Low. This perennial shrub was not found on site, and it has not been reported to the database or the CNDDDB within 1,000 feet of the site.

¹ List of species is from a search of the SanBios and USFWS databases and the CNDDDB for the project site plus a 5-mile radius.

² Explanation of Sensitivity Codes

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Accipiter cooperii</i> Cooper's hawk	-- WL Group 1	In San Diego County, tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrubland or fields.	Present. Seen flying overhead potentially foraging on site and has potential to nest in the trees on site.
<i>Accipiter striatus</i> Sharp-shinned hawk	-- WL Group 1	Usually observed in areas with tall trees or other vegetative cover but can be observed in a variety of habitats. In San Diego County occurs in small numbers and only in winter.	Low. It only occurs in small numbers and only in winter. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Agelaius tricolor</i> Tricolored blackbird	BCC ST, SSC Group 1	Highly colonial species occurring mostly in coastal lowland grasslands near open water sources for foraging.	Low. Potentially suitable habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Aimophila ruficeps canescens</i> Southern California rufous-crowned sparrow	-- WL Group 1	Coastal sage scrub and open chaparral as well as shrubby grasslands.	Present
<i>Ammodramus savannarum</i> Grasshopper sparrow	-- SSC Group 1	Typical habitat is dense grasslands that have little or no shrub cover.	Low. This species was not observed/detected on site during the site surveys conducted over the period January through June 2020, including the BUOW survey, which occurred in the grasslands on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Anniella stebbinsi (pulchra pulchra)</i> Southern California (silvery) legless lizard	-- SSC Group 2	Areas with loose soil, particularly in sand dunes and or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, and desert scrub.	Low. The soils on site consist primarily of rocky silt loams. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Antrozous pallidus</i> Pallid bat	-- SSC Group 2	Most commonly associated with arid open scrub or grassland and gentle terrain with scattered rocky outcrops.	Low, as rocky outcrops are not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Aquila chrysaetos</i> Golden eagle	BCC, BGEPA WL, FP Group 1	Typical foraging habitat includes grassy and open, shrubby habitats. Generally nests on remote cliffs; requires areas of solitude at a distance from human habitation.	Low. Site and immediate environs are not at distance to human habitation. No reports to the CNDDDB within 5 miles of the site. A record in the SanBios database is from 1998 for the San Diego Natural History Museum in an 8-kilometer area that overlaps with the 5-mile radius of the site.
<i>Ardea herodias</i> Great blue heron	-- -- Group 2	Wetland habitats, but can be observed foraging away from water.	Low. Commonly associated with marshes, mudflats, and agricultural areas not present on site. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Arizona elegans occidentalis</i> California glossy snake	-- SSC --	Arid scrub, rocky washes, grasslands, chaparral. Appears to prefer open areas and areas with soil loose enough for burrowing.	Low. Rocky habitat is not present, and soils may not be suitable for burrowing. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Artemisospiza belli belli</i> Bell's sage sparrow	BCC WL Group 1	Chaparral and sage scrub. The habitat must not be too dense or have too much leaf litter as this species spends most of its time running on the ground.	Moderate. Potential habitat is present on site and has been reported to the SanBios database within 1,000 feet of the site.
<i>Asio otus</i> Long-eared owl	-- SSC Group 1	Shady oak woodlands and broad riparian forests.	Not expected. No potential habitat is present on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Aspidoscelis hyperythra</i> Orange-throated whiptail	-- WL Group 2	Coastal sage scrub, chaparral, edges of riparian woodlands and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas; shaded areas; and abundant invertebrate prey base, particularly termites (<i>Reticulitermes</i> sp.).	Moderate. Potential habitat is present on site, although it has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Aspidoscelis tigris stejnegeri</i> Coastal whiptail	-- SSC Group 2	Open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of insects, spiders, or scorpions.	Moderate. Potential habitat is present on site, although it has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Athene cunicularia hypugea</i> Burrowing owl	BCC SSC Group 1	Open areas such as grasslands, pastures, coastal dunes, desert scrub, and edges of agriculture fields, with underground burrows often excavated by California ground squirrels (<i>Otospermophilus beecheyi</i>), for breeding and foraging.	Low. A focused survey for the BUOW was conducted on site in 2020, and no BUOW was observed nor was any sign of BUOW observed. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Bombus crotchii</i> Crotch's bumble bee	-- SCE --	Found between San Diego and Redding, California in a variety of habitats including open grasslands, shrublands, chaparral, desert margins including Joshua tree and creosote scrub, and semi-urban settings (CDFW 2022). Food plants include <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Phacelia</i> , and <i>Salvia</i> (Williams et al. 2014). The species is near endemic to California, with only a few records from Nevada and Mexico (CDFW 2022).	Low. Much of the project footprint is densely vegetated with non-native grasses. Portions of the site do support nectar and pollen resources. A focused survey for the species was conducted in spring 2023, and the species was not found (Appendix E).
<i>Branchinecta sandiegonensis</i> San Diego fairy shrimp	FE -- Group 1	Seasonally astatic pools which occur in tectonic swales or earth slump basins and other areas of shallow, standing water. Often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral.	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Buteo lineatus</i> Red-shouldered hawk	-- -- Group 1	Riparian woodland, oak woodland, orchards, eucalyptus groves, or other areas with tall trees.	Moderate, as potential habitat is present on site. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Buteo regalis</i> Ferruginous hawk	BCC WL Group 1	In San Diego County, occurs only in winter. Found in open country, primarily prairies, plains, and badlands.	Low, as the site is not in open country, and the species only occurs in winter. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Campylorhynchus brunneicapillus couesi</i> (sandiegensis) San Diego cactus wren	BCC SSC Group 1	Habitat consists of cactus thickets in coastal lowlands of San Diego County.	Low, as cactus thickets are not present on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Cathartes aura</i> Turkey vulture	-- -- Group 1	Foraging habitat includes most open habitats with breeding occurring in crevices among boulders.	Moderate potential to forage on site. No breeding habitat is present. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Chaetodipus californicus femoralis</i> Dulzura pocket mouse	-- SSC Group 2	Primarily associated with mature chaparral. It is known to occur in coastal sage scrub.	Moderate, as potential habitat is present on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Chaetodipus fallax fallax</i> Northwestern San Diego pocket mouse	-- SSC Group 2	Occurs in open areas of coastal sage scrub and weedy growth, often on sandy substrates.	Low, as the site's substrates are primarily rocky silt loams. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT, BCC SSC Group 1	Beaches, dunes, and salt flats.	Not expected due to a lack of potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Charina trivirgata roseofusca</i> Rosy boa	-- -- Group 2	Occurs among rocky outcrops in coastal sage scrub, chaparral, and desert scrub.	Low, as rocky outcrops are not present. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Choeronycteris mexicana</i> Mexican long-tongued bat	-- SSC --	Arid habitats along the coast and in inland valleys in urban and suburban situations. Roosts in natural and man-made crevices and structures.	Moderate, as potential habitat is present on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Circus (cyaneus) hudsonius</i> Northern harrier	-- SSC Group 1	Coastal, salt, and freshwater marshlands; grasslands; and prairies.	Low. Not observed during the site surveys conducted over the period January through June 2020. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Clemmys marmorata pallida</i> Southwestern pond turtle (<i>Emys marmorata</i> , western pond turtle)	-- SSC Group 1	Almost entirely aquatic; occurs in ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Requires basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Low. The drainage on site has an overstory of eucalyptus trees with no suitable basking sites. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Coleonyx variegatus abbottii</i> San Diego banded gecko	-- SSC Group 1 --	Chaparral and coastal sage scrub in areas with rock outcrops.	Low. The site does not contain rock outcrops. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-- SSC Group 2	Most abundant in mesic habitats. Considered uncommon in California (California Department of Fish and Game 1990). Drinks water and requires caves, mines, tunnels, buildings, or other man-made structures for roosting.	Low, due to its uncommon occurrence in California. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Crotalus ruber</i> Red-diamond rattlesnake	-- SSC Group 2	Chaparral, coastal sage scrub, along creek banks, particularly among rock outcrops or piles of debris with a supply of burrowing rodents for prey.	Low, as rock outcrops and piles of debris are not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Diadophis punctatus similis</i> San Diego ringneck snake	-- -- Group 2	Generally occurs in moist habitats such as oak woodlands and canyon bottoms but is also sometimes encountered in grassland, chaparral, and coastal sage scrub; generally restricted to leaf litter and rarely crosses open areas.	Moderate due to the presence of potential habitat on site. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Elanus leucurus</i> White-tailed kite	-- FP Group 1	Riparian woodlands and oak or sycamore groves adjacent to grassland on coastal slopes in San Diego County. Nests in the crowns of trees, especially coast live oak (<i>Quercus agrifolia</i>).	Low, as potential habitat is not present. Not observed during the site surveys conducted over the period January through June 2020. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Eremophila alpestris actia</i> California horned lark	-- WL Group 1	Sandy beaches and in agricultural fields, grassland, and open areas.	Moderate due to the presence of potential habitat on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Eumops perotis californicus</i> Western mastiff bat	-- SSC Group 2	Suitable habitat consists of extensive open areas with abundant roost locations (crevices in cliff faces, high buildings, trees, tunnels).	Moderate due to the presence of potential habitat on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Euphydryas editha quino</i> Quino checkerspot butterfly	FE -- Group 1	Potential habitat includes areas of low-growing and sparse vegetation with primary larval host plants, dwarf plantain (<i>Plantago erecta</i>) and owl's clover (<i>Castilleja exserta</i>).	Not expected. The project site is outside the USFWS' recommended Quino survey area (USFWS 2014). It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Ictera virens</i> Yellow-breasted chat	-- SSC Group 1	Dense riparian habitats.	Not expected. Potential habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Ixobrychus exilis</i> Least bittern	BCC SSC Group 2	Freshwater or brackish marshes with tall grasses, cattails, and reeds.	Not expected. Potential habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Lasiurus blossevillii</i> Western red bat	-- SSC Group 2	Riparian areas dominated by cottonwoods, oaks, sycamores, and walnuts.	Not expected. Potential habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Lasiurus xanthinus</i> Western yellow bat	-- SSC --	Primarily roosts in the skirts of dead palm tree fronds. Strongly associated with native palm groves with open water.	Not expected. Potential habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Lepus californicus bennetii</i> San Diego black-tailed jackrabbit	-- SSC Group 2	Primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.	Moderate. Potential habitat is present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Lycaena hermes</i> Hermes copper	FC -- Group 1	Southern mixed chaparral and coastal sage scrub with mature specimens of its larval host plant, spiny redberry (<i>Rhamnus crocea</i>) with California buckwheat (<i>Eriogonum fasciculatum</i>) generally within 10 feet of the spiny redberry (Attachment B [County of San Diego Guidelines for Hermes Copper] to County 2010).	Low. The entire site was assessed in the field for the species' potential to occur, and no spiny redberry was found in proximity to California buckwheat. It has not been reported to the SanBios or USFWS databases or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Myotis ciliolabrum</i> Small-footed myotis	-- -- Group 2	Occurs in arid, upland habitats. Prefers open stands in forests and woodlands as well as brushy habitats. Feeds over and drinks from streams, ponds, springs, and stock tanks.	Low. Potentially suitable habitat on site is limited or absent. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Myotis yumanensis</i> Yuma myotis	-- -- Group 2	Open forests and woodland are optimal habitat. Closely tied to bodies of water for foraging and drinking. Roosts in buildings, mines, crevices, caves, and under bridges.	Low. Potentially suitable habitat on site is limited or absent. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	-- SSC Group 2	Occurs in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.	Moderate. Potential habitat is present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Nyctinomops femorosaccus</i> Pocketed free-tailed bat	-- -- Group 2	Prefers desert habitats with high cliffs or rock outcrops.	Not expected. Potentially suitable habitat is not present. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Odocoileus hemionus</i> Mule deer	-- -- Group 2	Occurs within a wide range of open habitats associated with expansive open space.	Moderate. Potentially suitable habitat is present, and while not reported to the SanBios database within 1,000 feet of the site, this wide-ranging species has been reported to the SanBios database within 5 miles of the site.
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow	-- SE Group 1	Coastal marshes dominated by pickleweed (<i>Salicornia</i> spp.).	Not expected. Suitable habitat is not present. It has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Perognathus longimembris pacifica</i> Pacific pocket mouse	FE SSC Group 1	Open coastal sage scrub; fine, alluvial sands near ocean.	Not expected. Currently known from Dana Point Headlands in Orange County, CA and three locations on Marine Corps Base Camp Pendleton in San Diego County (Spencer 2005). It has not been reported to the SanBios or USFWS databases or CNDDDB within 1,000 feet of the site.
<i>Phalacrocorax auratus</i> Double-crested cormorant	-- WL Group 2	Fresh and salt water habitats.	Not expected. Suitable habitat is not present. It has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Phrynosoma blainvillii</i> Coast horned lizard	-- SSC Group 2	Coastal sage scrub and open areas in chaparral, oak woodlands, and coniferous forests with sufficient basking sites, adequate scrub cover, and areas of loose soil; require native ants, especially harvester ants (<i>Pogonomyrmex</i> sp.), and are generally excluded from areas invaded by Argentine ants (<i>Linepithema humile</i>).	Moderate. Potentially suitable habitat present, although it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Plestiodon skiltonianus interparietalis</i> Coronado skink	-- WL Group 2	Grasslands, coastal sage scrub, and open chaparral where there is abundant leaf litter or low herbaceous growth.	Moderate. Potentially suitable habitat present, although it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Polioptila californica californica</i> Coastal California gnatcatcher	FT SSC Group 1	Coastal sage scrub	Present
<i>Pyrocephalus rubinus</i> Vermilion flycatcher	-- SSC Group 1	Riparian habitat	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Rallus obsoletus levipes</i> Light-footed Ridgway's rail	FE SE, FP Group 1	Coastal salt marshes, especially those dominated by cordgrass (<i>Spartina</i> sp.), but has been known to use brackish and freshwater sites.	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Salvadora hexalepis virgultea</i> Coast patch-nosed snake	-- SSC Group 2	Semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	Moderate. Potentially suitable habitat present, although it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Spea hammondi</i> Western spadefoot	-- SSC Group 2	Open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (<i>Rana catesbiana</i>) or crayfish (<i>Procambarus</i> sp.).	Not expected to occur. Although it has been reported to the CNDDDB within 1,000 feet of the site, there is no potential habitat on site.
<i>Sternula antillarum browni</i> California least tern	FE SE, FP Group 1	Coastal areas adjacent to the ocean. Nests in colonies at sites typically located on barrier dunes at river mouths, at lagoon entrances, and along sandy strips of sparse coastal strand vegetation.	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Taxidea taxus</i> American badger	-- SSC Group 2	Grasslands, alluvial fans, meadows, and desert. In San Diego County, persists mainly in large blocks of undeveloped land and avoids urbanization.	Low. Potentially suitable habitat limited or absent. It has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Thamnophis hammondi</i> Two-striped garter snake	-- SSC Group 1	Primarily along permanent creeks and streams but also around vernal pools and along intermittent streams. Occasionally found in chaparral or other habitats relatively far from permanent water.	Moderate. Potentially suitable habitat present, although it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Vireo bellii pusillus</i> Least Bell's vireo	FE SE Group 1	Riparian woodland and is most frequent in areas that combine an understory of dense, young willows or mule fat (<i>Baccharis salicifolia</i>) with a canopy of tall willows (<i>Salix</i> spp.).	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.

¹ List of species is from a search of the SanBios and USFWS databases and the CNDDDB for the project site plus a 5-mile radius.

² Explanation of Sensitivity Codes

Federal - U.S. Fish and Wildlife Service

FE	Federal listed endangered
FT	Federal listed threatened
FC	Candidate for federal listing
BCC	Non-listed subspecies or populations of federal threatened or endangered species
BGEPA	Prohibits the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald (and golden) eagle “at any time or in any manner

State – California Department of Fish and Wildlife

SE	State listed endangered
ST	State listed threatened
FP	State fully protected (may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW)
SSC	State species of special concern (declining population levels, limited ranges, and/or continuing threats)
WL	Previously SSC but no longer merits SSC status, or which does not meet SSC criteria but for which there is concern and a need for additional information to clarify status.

County of San Diego

Plant Sensitivity

- List A Plants rare, threatened or endangered in California or elsewhere.
- List B Plants rare, threatened or endangered in California but more common elsewhere.
- List C Plants that may be quite rare, but more information is needed to determine rarity status.
- List D Plants of limited distribution and are uncommon, but not presently rare or endangered.

Animal Sensitivity

- Group 1 Animals that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements.
- Group 2 Animal species that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

CNPS - California Native Plant Society

California Rare Plant Rank

Threat Rank

- | | |
|--|---|
| 1A = Presumed extirpated in California and either rare or extinct elsewhere. | .1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) |
| 1B = Rare, threatened, or endangered in California and elsewhere. | |
| 2A= Presumed extirpated in California but more common elsewhere. | .2 = Moderately endangered in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat) |
| 2B= Rare, threatened, or endangered in California but more common elsewhere. | |
| 3 = More information is needed. | .3 = Not very threatened in California (less than 20 percent of occurrences threatened/ low degree and immediacy of threat or no current threats known) |
| 4 = A watch list for species of limited distribution. | |

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Appendix K

Habitat Restoration Plan

**Questhaven Tentative Map Project
Habitat Restoration Plan
PDS2020-TM-5643**

May 6, 2024

Prepared by:

A handwritten signature in black ink, appearing to read 'Greg Mason', is centered within a white rectangular box.

Greg Mason
County Approved CEQA Consultant-Revegetation

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Prepared for the County of San Diego

Questhaven Tentative Map Project Habitat Restoration Plan

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1.0 INTRODUCTION

This plan addresses the habitat restoration to be conducted as required mitigation for the Questhaven Tentative Map Project. Project impacts and required mitigation are presented in the Biological Technical Report for the project (Alden 2024). Specifically, this plan includes restoration of southern mafic chaparral/coastal sage scrub ecotone and coastal sage scrub communities, as well as the creation of water holding basins for spadefoot toad breeding. This plan does not address any other project components.

2.0 DESCRIPTION OF THE DEVELOPMENT PROJECT/IMPACT SITE

2.1 RESPONSIBLE PARTIES

The project site is currently owned by Colrich Communities. Contact information is provided below.

Colrich Communities
c/o Ms. Rita Mahoney
444 West Beech Street, Suite 300
San Diego, CA 92101

2.2 LOCATION OF THE DEVELOPMENT PROJECT

The approximately 69.1-acre Questhaven development project site is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. The project site is located immediately south and west of the City of San Marcos and east of the City of Carlsbad. Interstate 5 is located approximately 5.3 miles west of the project site. Specifically, the project site is located south of San Elijo Road and east of Denning Drive (Figures 1 and 2). The project site encompasses Assessor's Parcel Number 223-080-46-00 and is located in the west half of the northwest quarter of Section 33, Township 12 South, Range 3 West, San Bernardino Meridian on the U.S. Geological Survey (USGS) 7.5-minute Rancho Santa Fe quadrangle map (Figure 2).

2.3 SUMMARY OF THE OVERALL DEVELOPMENT PROJECT WITH PROPOSED RESTORATION

2.3.1 Current Environmental Setting and Site Conditions

The development project site is undeveloped and includes several unimproved dirt roads and trails. Historically, the northern portion of the site has been subject to disturbance and was used as a laydown yard for construction equipment associated with the adjacent former recycling facilities. Additionally, a portion of the western area of the site was used for agricultural uses. The southern portion of the project site contains a large area of steep hills that transition into a relatively flat area in the northern and central portion of the site. Elevations range between approximately 830 feet above mean sea level (amsl) in the southwest corner to 500 feet amsl along the eastern boundary. Soil on the development site is mapped as Cieneba very rocky coarse sandy loam (30 – 75 percent slopes), San Miguel rocky silt loam (9 – 30 percent slopes),

Huerhuero loam (2 – 9 percent slopes), San Miguel-Exchequer rocky silt loams (9 – 70 percent slopes), and Exchequer rocky silt loam (30 – 70 percent slopes).

To the west of the development project site is open space associated with the Rancho La Costa Habitat Conservation Area, beyond which is existing residential development. North of the project site is land designated for open space, beyond which are existing residential uses. East of the project site is a former recycling facility that is currently used as an indoor sports complex known as “Edenpark” and that is proposed for additional sports complex and commercial uses. To the south of the project site is open space associated with the Rancho La Costa Habitat Conservation Area. The project site is adjacent to the San Elijo Hills development in the City of San Marcos and is within their Sphere of Influence.

Nine vegetation communities/habitat types occur on the development project site and are described below (Table 1). The numbers in parentheses are the Holland Codes (Oberbauer et al. 2008).

Table 1 Development Project Site Vegetation Communities/Habitat Types	
Vegetation Community/Habitat¹	On Site
Diegan coastal sage scrub (32500)	9.8
Diegan coastal sage scrub-disturbed (32500)	2.1
Scrub oak chaparral (37900)	0.6
Mafic chamise chaparral (37220)	2.4
Mafic southern mixed chaparral (37122)	25.7
Non-native grassland (42200)	20.9
Eucalyptus woodland (79100)	2.9
Disturbed habitat (11300)	3.7
Developed and ornamental (12000)	1.0
TOTAL	69.1

¹Categories and numeric codes are from Oberbauer et al. 2008.

A total of 121 species of plants (including 43 non-native species) and 89 animal species were observed during surveys for the development project.

Four sensitive animal species, spadefoot toad (*Spea hammondi*), Cooper’s hawk (*Accipiter cooperii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and Coastal California gnatcatcher (*Polioptila californica californica*) were observed on the development project site (Alden 2024). The least Bell’s vireo (*Vireo bellii pusillus*) also was observed within the project mitigation area.

Four special status plant species Orcutt’s brodiaea (*Brodiaea orcuttii*), Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), Nuttall’s scrub oak (*Quercus dumosa*), and Ashy spike-moss (*Selaginella cinerascens*) were observed on the development project site (Alden 2024).

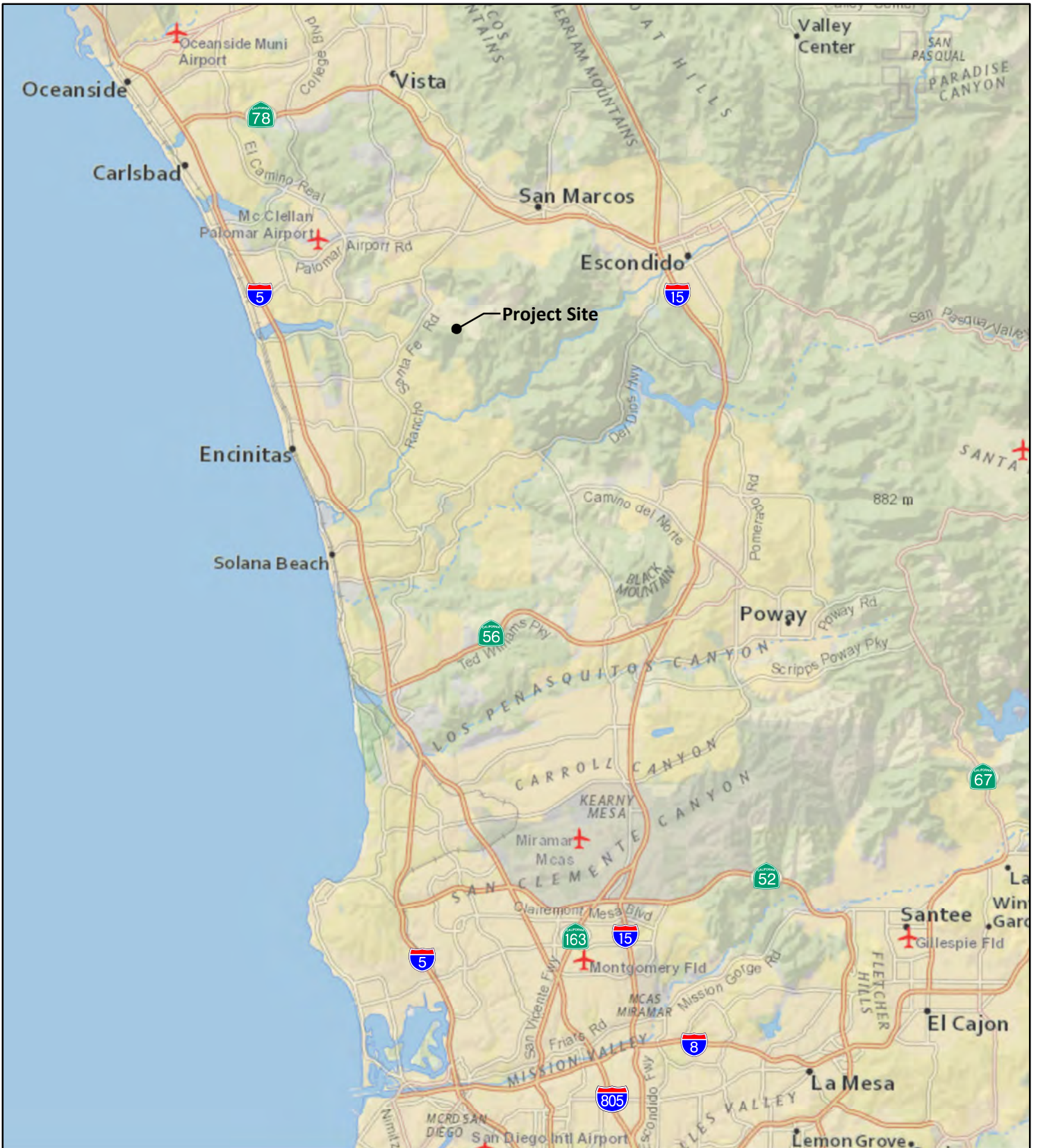
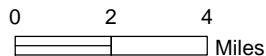
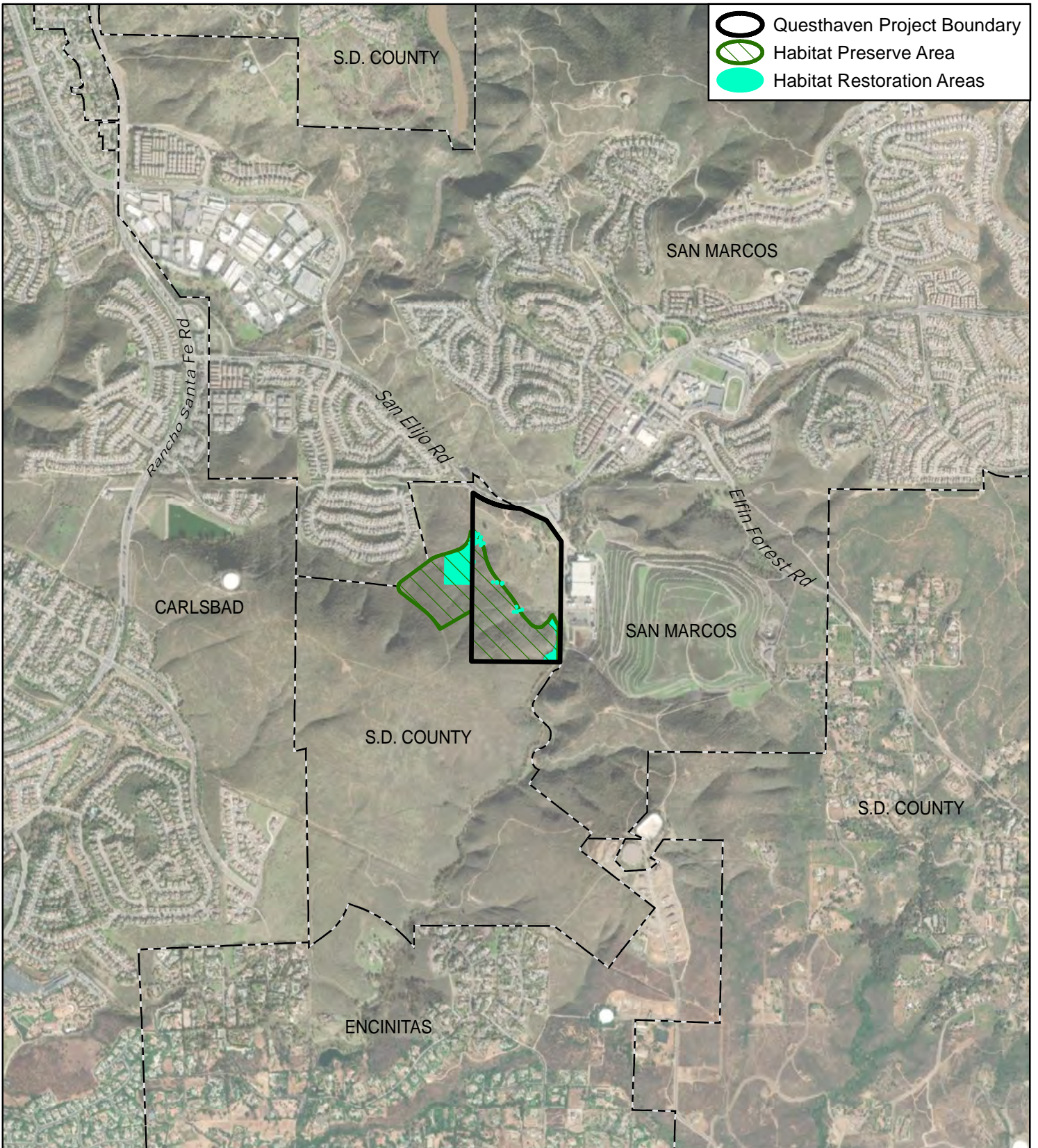





Figure 1

Regional Location

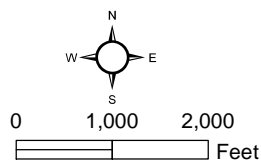
QUESTHAVEN
HABITAT RESTORATION PLAN





-  Questhaven Project Boundary
-  Habitat Preserve Area
-  Habitat Restoration Areas

Source: SanGIS



 **ALDEN**
ENVIRONMENTAL, INC

Figure 2

Project Location

QUESTHAVEN
HABITAT RESTORATION PLAN

2.3.2 Sensitive Resources Affected and Addressed in this Plan

The project would impact a total of 32.9 acres, including Diegan coastal sage scrub, scrub oak chaparral, mafic chamise chaparral, mafic southern mixed chaparral, and non-native grassland communities. The mitigation effort includes habitat preservation (44.4 acres) and habitat restoration (5.9 acres) within an adjacent 50.3 acre area (Figure 3). This document addresses the habitat restoration effort.

2.3.3 Type, Functions, and Value of the Habitat to be Restored

This plan includes restoration of mafic southern mixed/coastal sage scrub ecotone and coastal sage scrub communities. In addition, this plan incorporates creation of shallow ephemeral water holding basins (puddles) to be used by the spadefoot toad for breeding purposes.

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Typical species found within Diegan coastal sage scrub, including on the project site, are California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). The coastal sage scrub restoration in the southeastern area will replace the existing, non-native, eucalyptus woodlands with high quality native coastal sage scrub habitat.

Mafic southern mixed chaparral on site occurs on San Miguel series soils that are formed from metavolcanic rock that overlays metavolcanic bedrock. This chaparral on site is composed of broad-leaved sclerophyllous shrubs that can reach six to 10 feet in height and form dense often nearly impenetrable stands with poorly developed understories. Characteristic plants in this community include black sage, fuchsia-flowered gooseberry (*Ribes speciosum*), spiny redberry (*Rhamnus ilicifolia*), holly-leaf redberry (*Rhamnus ilicifolia*), chamise, toyon (*Heteromeles arbutifolia*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*). The mafic southern mixed chaparral/coastal sage scrub ecotone restoration is intended to, over time, provide for a mature native community of shrub species. The coastal sage scrub component is included to help provide for interim native species cover and allow for the slower growing chaparral species to become established.

These communities are important components of the San Diego County ecosystem; they provide habitat for sensitive plant and animal species. Additionally, the constructed basins will specifically support extant populations of spadefoot toad, as well as other species that may utilize the basins when they are holding water.

3.0 GOALS OF THE RESTORATION

3.1 RESPONSIBILITIES

3.1.1 Project Proponent

Colrich Communities (or the owner at the time of implementation) will be responsible for financing the installation, maintenance, and monitoring of the restoration.

3.1.2 County of San Diego

As part of the monitoring program, annual reports prepared by the restoration specialist will be submitted to the Wildlife Agencies and County. The County will review these reports for completeness and will determine the success of the restoration effort together with the Wildlife Agencies.







3.1.3 Restoration Specialist

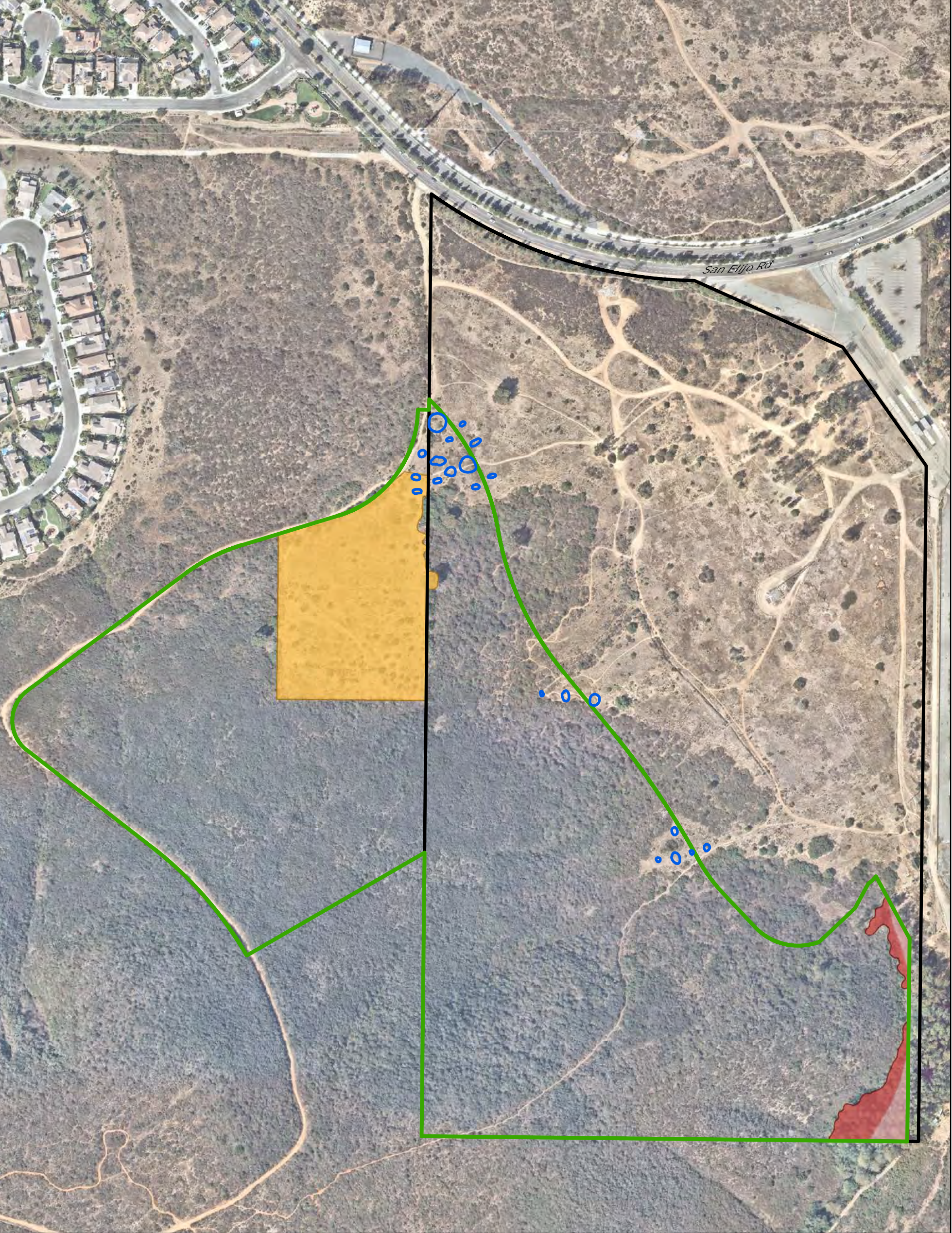
Overall supervision of the installation, maintenance, and monitoring of this restoration program will be the responsibility of a restoration specialist with a minimum of 5 years of habitat restoration experience. The restoration specialist will educate all participants with regard to program goals and directly oversee all aspects of the restoration. In addition, the specialist will conduct all monitoring data collection, annual assessments, and prepare all required reports. If necessary, the restoration specialist will provide the project proponent and contractor with a brief report, including a written list of items in need of attention following each monitoring visit. The contractor will be responsible for carrying out all required measures in a timely manner. The restoration specialist will notify the contractor and responsible party if any requested remediation is not addressed. The restoration specialist will make all contractors, subcontractors, and supervisors aware of the agency permits and authorizations associated with the restoration. Copies of the permits will be kept on site at all times during periods of active work and must be presented to any agency personnel upon demand.

3.1.4 Installation/Maintenance Contractor

The installation and maintenance contractor(s) will have habitat restoration experience and will, under the direction of the restoration specialist, be responsible for tasks such as site preparation, planting, seeding, and maintenance. The restoration specialist will educate the contractor(s) on the installation and maintenance of native plant species.

After the installation is complete, maintenance personnel will initiate the 5-year maintenance program under the direction of the restoration specialist. Maintenance crews will service the entire restoration area regularly following installation. Service will include, but not be limited to, weed control, trash removal, watering, fence repair, dead plant replacement, and re-seeding. All activities conducted will be seasonally appropriate and approved by the restoration specialist. The maintenance crew will meet the restoration specialist at the site when requested and will perform all checklist items in a timely manner as directed by the restoration specialist. The restoration specialist will ensure that maintenance personnel are capable of discerning between native plant species and non-native species.

-  Habitat Preserve Area
-  Questhaven Project Boundary
-  Coastal Sage Scrub Seeding and Planting Area
-  Transitional Coastal Sage Scrub/Riparian Seeding Area
-  Southern Mixed Chaparral/Coastal Sage Scrub Restoration Area
-  Seasonal Basin Restoration Area



Aerial Photo: Nearmap 2020

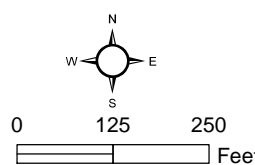


Figure 3

Habitat Restoration Areas

QUESTHAVEN
HABITAT RESTORATION PLAN

Prior to the commencement of restoration activities, the contractor(s) will review all aspects of this plan including permit requirements, site protection, maintenance inspections, landscape procedures, and monitoring.

3.2 TYPE AND AREAS OF HABITAT TO BE RESTORED

As noted above, this plan includes restoration of mafic southern mixed chaparral/coastal sage scrub ecotone and coastal sage scrub habitats (Table 2, Figure 3), along with the creation of shallow, ephemeral water holding basins.

Type	Acreage
Mafic Southern Mixed Chaparral/ Coastal Sage Scrub Ecotone	4.8
Coastal Sage Scrub	1.1
Total	5.9

In addition to these restored habitats, the project includes creation of 21 shallow, ephemeral water holding basins with a combined area of 0.2 acre. The basin creation will occur within and adjacent to the habitat restoration and therefore is not included in the acreage totals above. These basins are intended to be a topographic feature in a larger habitat restoration/preserve area and not a standalone vegetation community/habitat type.

3.3 FUNCTIONS AND VALUES GOALS

The goals of this restoration effort are to restore native habitats that would, at a minimum, replace the functions and values lost through impacts from the development project. The restored areas will provide continuous habitat with the adjacent preserved native habitats, both on- and off-site. The restoration will help maintain a continuous wildlife movement corridor for the site and the larger vicinity.

3.4 TIME LAPSE

Implementation of the habitat restoration effort would commence prior to, or concurrent with the Questhaven project construction/grading.

3.5 COST

The project applicant shall be responsible for all costs associated with the project. The final restoration plan will provide a detailed cost estimate that includes site preparation, fencing, signage, container stock, hydroseeding, irrigation, report preparation, monitoring, maintenance, and weeding along with a 20% contingency factor and a 3% inflation factor.

4.0 DESCRIPTION OF THE PROPOSED RESTORATION SITE

4.1 LOCATION AND SIZE OF THE RESTORATION AREAS

The combined restoration areas are 5.9 acres in size (Table 2) and located in two distinct locations on site (Figure 3).

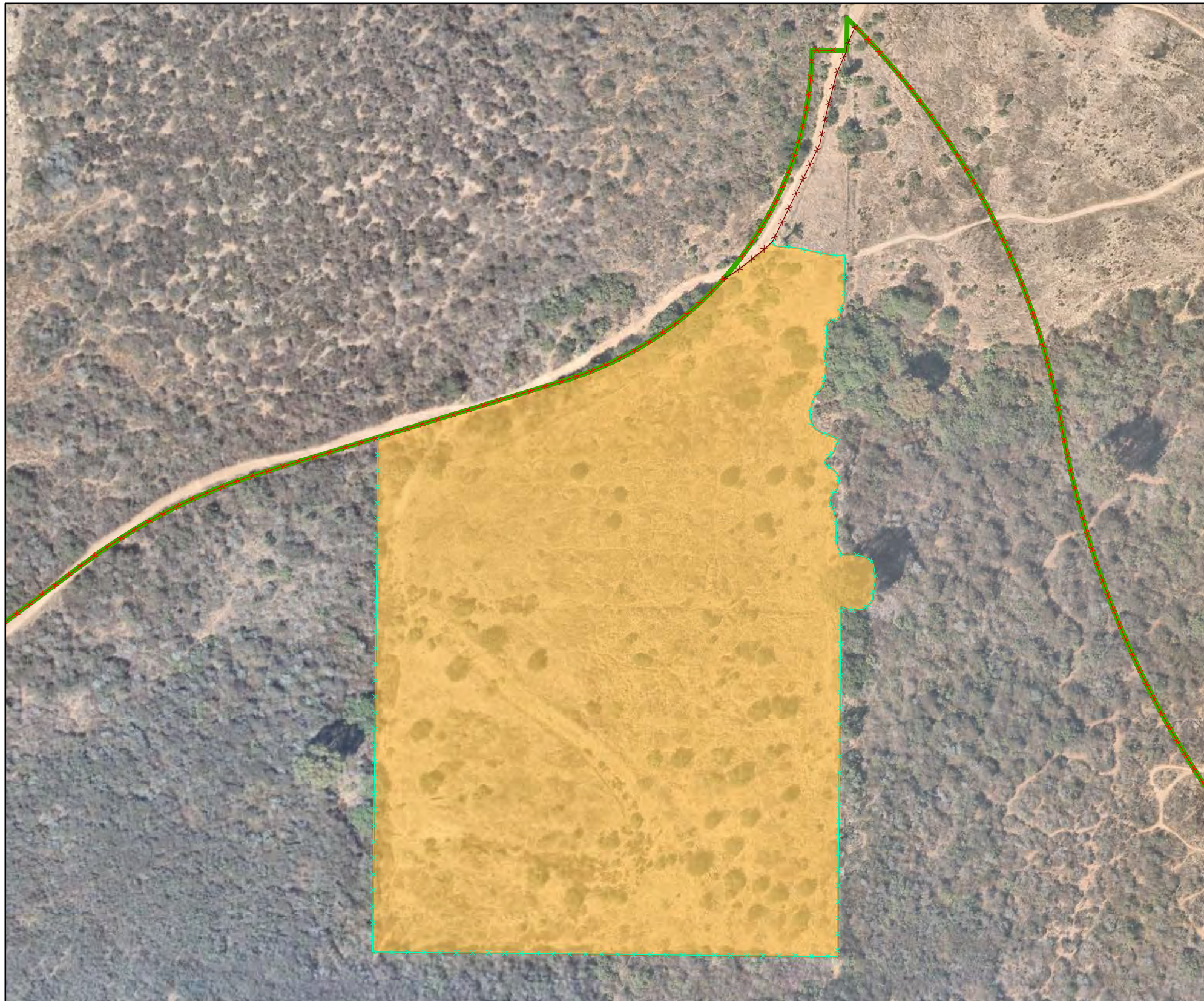
4.2 PRESENT AND PROPOSED USES






The mafic southern mixed chaparral/coastal sage scrub ecotone area (Figure 4) is located on the site of a former fig farm dating back to the 1980s. Agricultural activities have long since been discontinued on the site and it is now in a disturbed state, supporting primarily non-native weed species. There are some scattered remnant trees and debris on the site. The non-native vegetation, debris, and vestiges of the previously agricultural activity will be removed and the entire area restored to native habitat.

The coastal sage scrub area (Figure 5) currently supports a mature grove of eucalyptus trees. In addition, there is an existing drainage within this area that conveys water from stormwater outfalls located off site. The eucalyptus trees are a non-native, invasive species and will be removed from the entire area. Once the trees are removed the area will be restored to coastal sage scrub habitat. A portion of this area where the existing drainage occurs also will be restored, but may not fully become sage scrub as it is wetter than the surrounding area. A transitional coastal sage scrub/riparian area seed mix will be applied near the drainage so that native wetland/riparian species may become established where it is too wet for coastal sage scrub.

The proposed basin creation would occur in 3 distinct locations, within and adjacent to the onsite preserve/restoration areas (Figures 6a-6c). These basins are intended to be shallow features that will hold water during, and shortly after rainfall events. They are not intended to serve as vernal pool or wetland habitat; rather, their purpose is to provide breeding locations for extant spadefoot toads.

A draft easement for the combined preserve and restoration areas will be prepared and submitted to the County for approval. This easement will state that no other easements or activities that would result in soil disturbance and/or vegetation removal will be allowed within the easement area. Upon approval, the easement shall be executed and a final copy furnished to the County.



-  Habitat Preserve Area
-  Southern Mixed Chaparral/Coastal Sage Scrub Restoration Area
-  Preserve Area Fencing
-  Permanent Fencing
-  Temporary Fencing

SOUTHERN MIXED CHAPARRAL/COASTAL SAGE SCRUB SEED MIX	
Species	Pounds Per Acre
Black sage (<i>Salvia mellifera</i>)	3
Blue Dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	3
California melic (<i>Melica imperfecta</i>)	3
California sage brush (<i>Artemisia californica</i>)	3
Chamise (<i>Adenostoma fasciculatum</i>)	4
Chia (<i>Salvia columbariae</i>)	1
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	3
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	4
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Laurel sumac (<i>Malosma laurina</i>)	3
Lemonadeberry (<i>Rhus integrifolia</i>)	3
San Diego needlegrass (<i>Stipa lepida</i>)	5
TOTAL	54

SOUTHERN MIXED CHAPARRAL/COASTAL SAGE SCRUB CONTAINER STOCK SPECIES	
Species	Number Per Acre
Broom baccharis (<i>Baccharis sarothroides</i>)	15
California buckwheat (<i>Eriogonum fasciculatum</i>)	100
California sage brush (<i>Artemisia californica</i>)	100
Chamise (<i>Adenostoma fasciculatum</i>)	100
Coastal prickly pear (<i>Opuntia littoralis</i>)	10
Laurel sumac (<i>Malosma laurina</i>)	10
Lemonadeberry (<i>Rhus integrifolia</i>)	20
Nuttall's scrub oak (<i>Quercus dumosa</i>)	25
Toyon (<i>Heteromeles arbutifolia</i>)	30
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	30
TOTAL	440

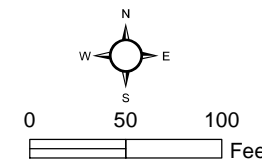
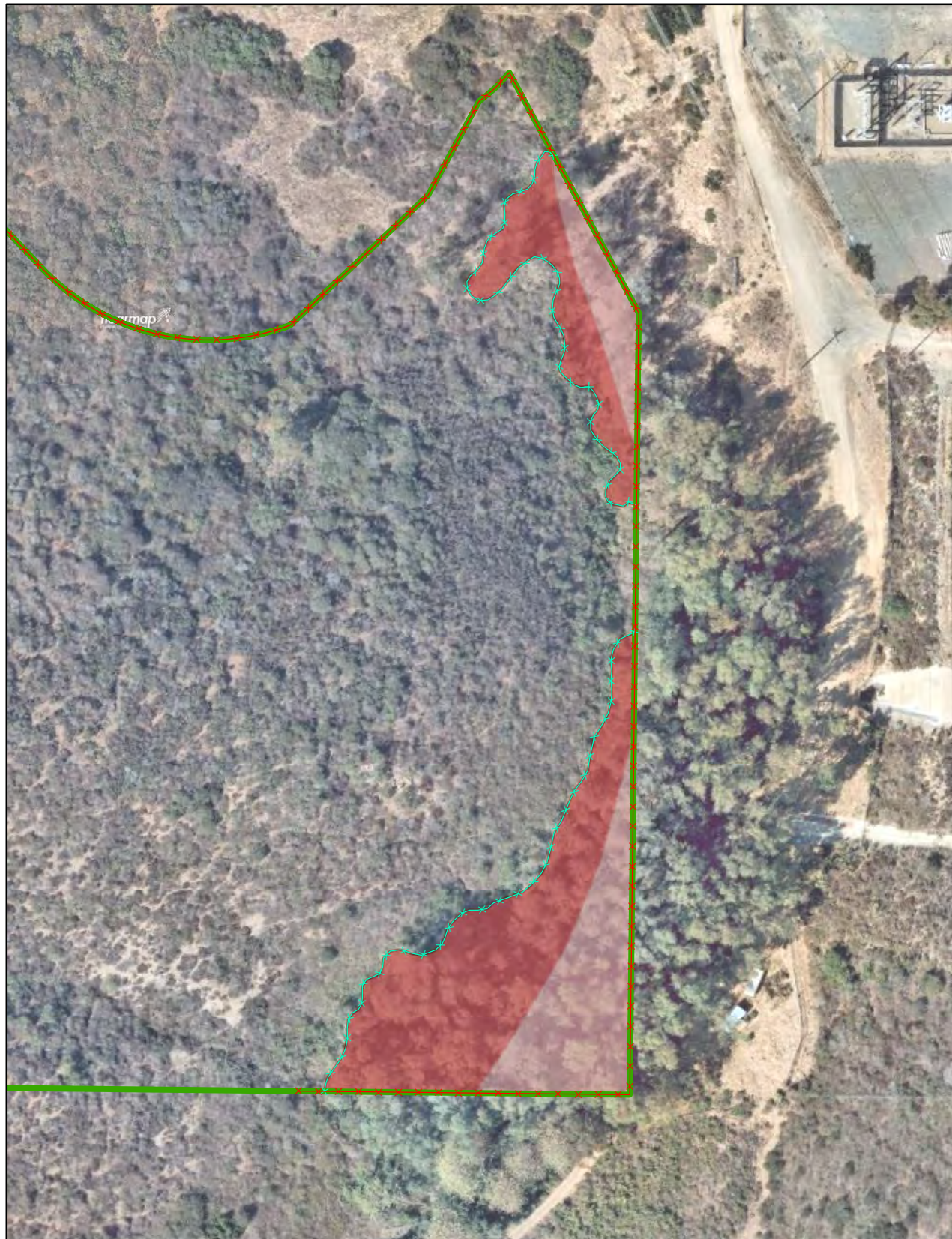


Figure 4

Southern Mixed Chaparral/
Coastal Sage Scrub Restoration

QUESTHAVEN
HABITAT RESTORATION PLAN



- Habitat Preserve Area
- Coastal Sage Scrub Seeding and Planting Area
- Transitional Coastal Sage Scrub/Riparian Seeding Area
- Preserve Area Fencing
- Temporary Fencing

Coastal Sage Scrub Area

COASTAL SAGE SCRUB SEED MIX	
Species	Pounds Per Acre
Blue Dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	3
California melic (<i>Melica imperfecta</i>)	5
California sage brush (<i>Artemisia californica</i>)	3
Chia (<i>Salvia columbariae</i>)	1
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	3
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	6
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Lemonadeberry (<i>Rhus integrifolia</i>)	1
San Diego needlegrass (<i>Stipa lepida</i>)	10
TOTAL	51

COASTAL SAGE SCRUB CONTAINER STOCK SPECIES¹

Species	Number Per Acre
Laurel sumac (<i>Malosma laurina</i>)	10
Coastal prickly pear (<i>Opuntia littoralis</i>)	10
Broom baccharis (<i>Baccharis sarothroides</i>)	15
Lemonadeberry (<i>Rhus integrifolia</i>)	5
San Diego needlegrass (<i>Stipa lepida</i>)	300
California sage brush (<i>Artemisia californica</i>)	100
California buckwheat (<i>Eriogonum fasciculatum</i>)	100
TOTAL	440

¹All container stock is 1 gallon except for *Stipa lepida* which are plugs

Transitional Coastal Sage Scrub/Riparian Area

COASTAL SAGE SCRUB/RIPARIAN SEED MIX	
Species	Pounds Per Acre
Arroyo willow (<i>Salix lasiolepis</i>)	3
Blue Dicks (<i>Dichelostemma capitatum</i>)	2
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	2
California deergrass (<i>Muhlenbergia rigens</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	2
California melic (<i>Melica imperfecta</i>)	3
California sage brush (<i>Artemisia californica</i>)	3
Creeping wild rye (<i>Leymus triticoides</i>)	2
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	2
Elderberry (<i>Sambucus nigra</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	2
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Mulefat (<i>Baccharis salicifolia</i>)	3
San Diego needlegrass (<i>Stipa lepida</i>)	3
San Diego sagewort (<i>Artemisia palmeri</i>)	3
Tarragon (<i>Artemisia dracunculus</i>)	3
Western ragweed (<i>Ambrosia psilostachya</i>)	3
Yerba mansa (<i>Anemopsis californica</i>)	3
TOTAL	58

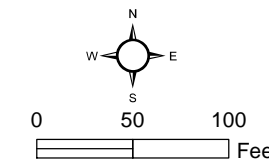
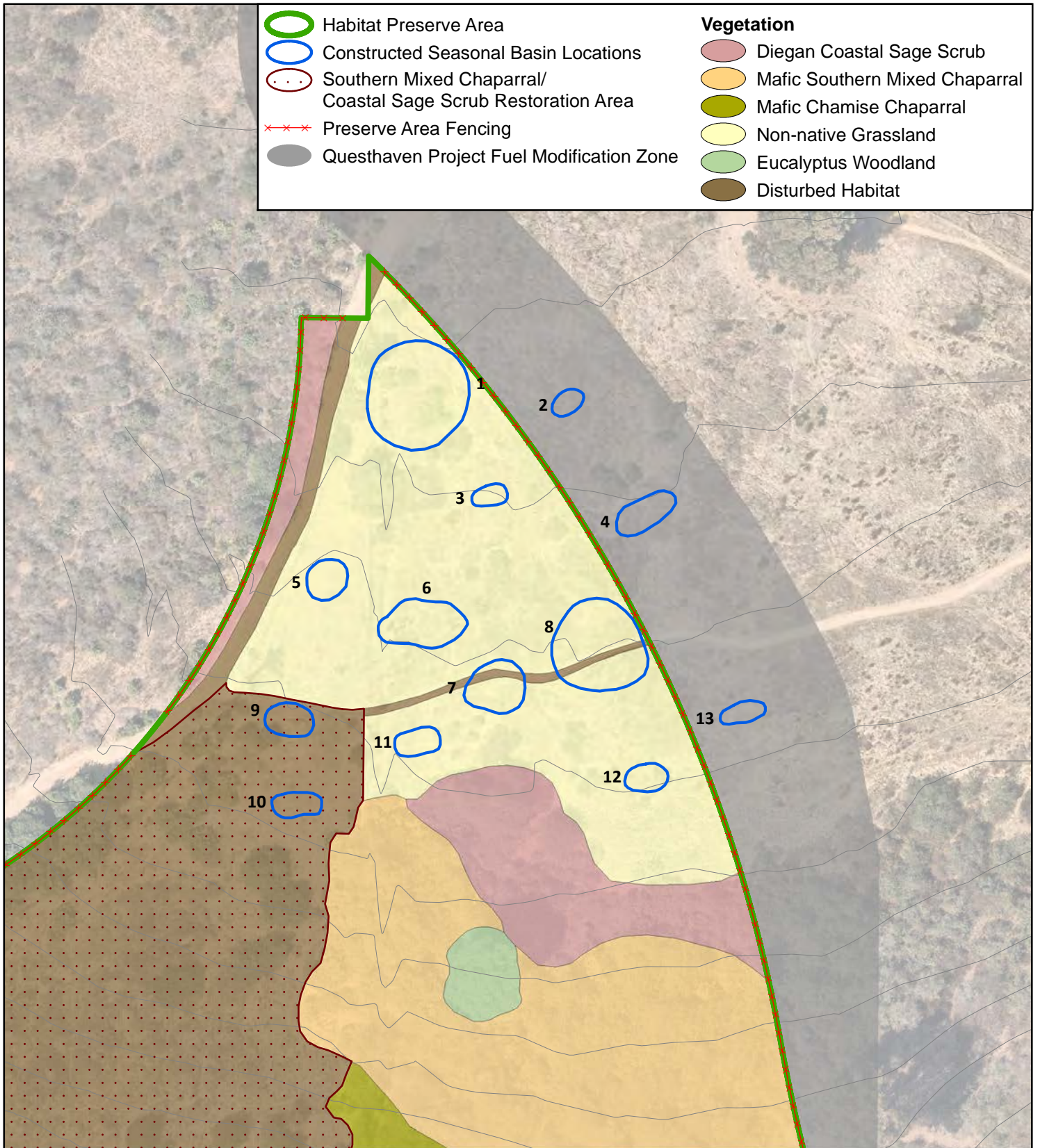


Figure 5

Diegan Coastal Sage Scrub Restoration

QUESTHAVEN
HABITAT RESTORATION PLAN

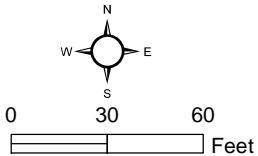


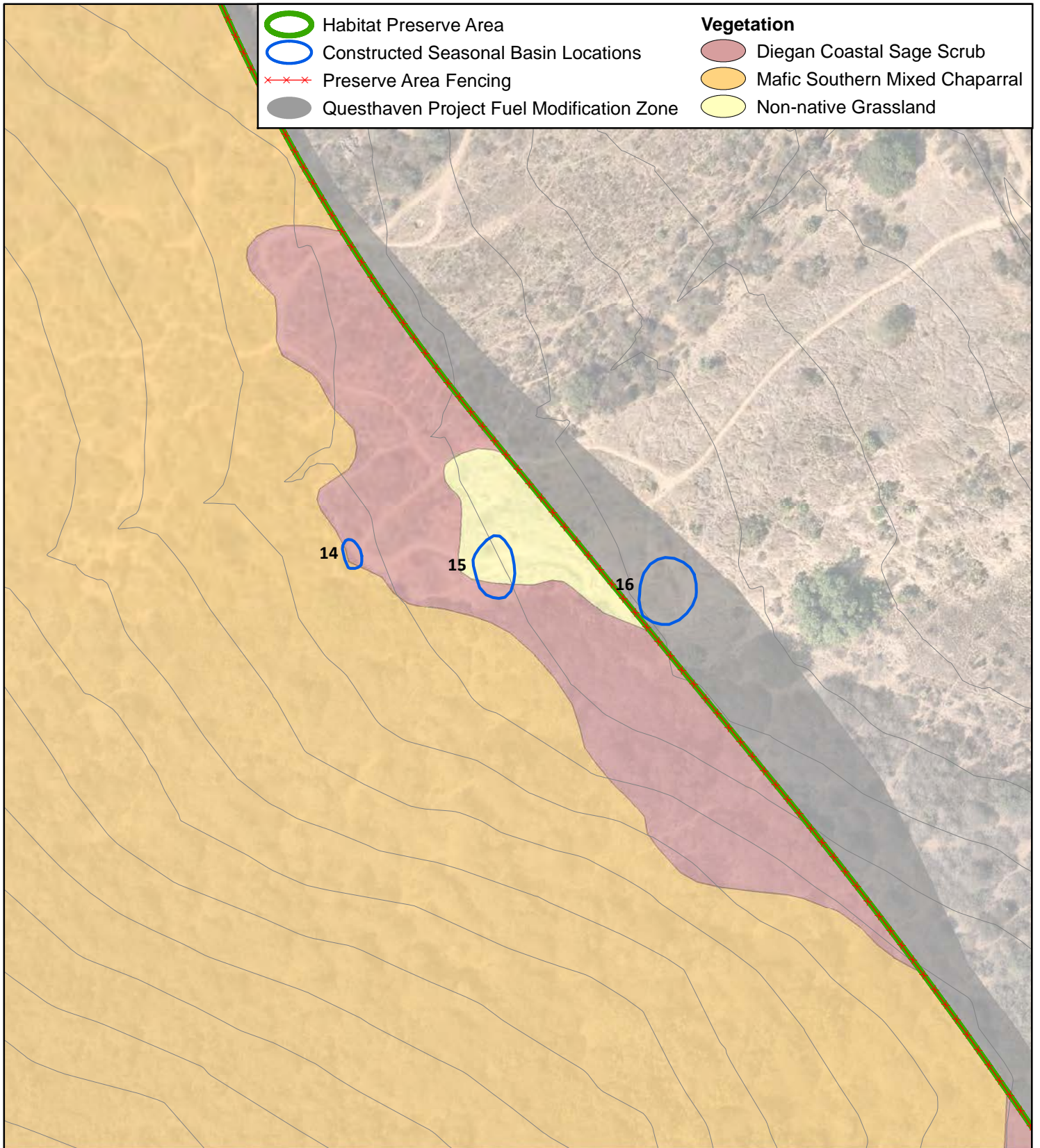
Aerial Photo: Nearmap 2020

Figure 6a

Basin Creation Area 1

QUESTHAVEN
HABITAT RESTORATION PLAN



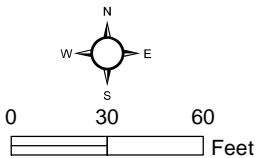


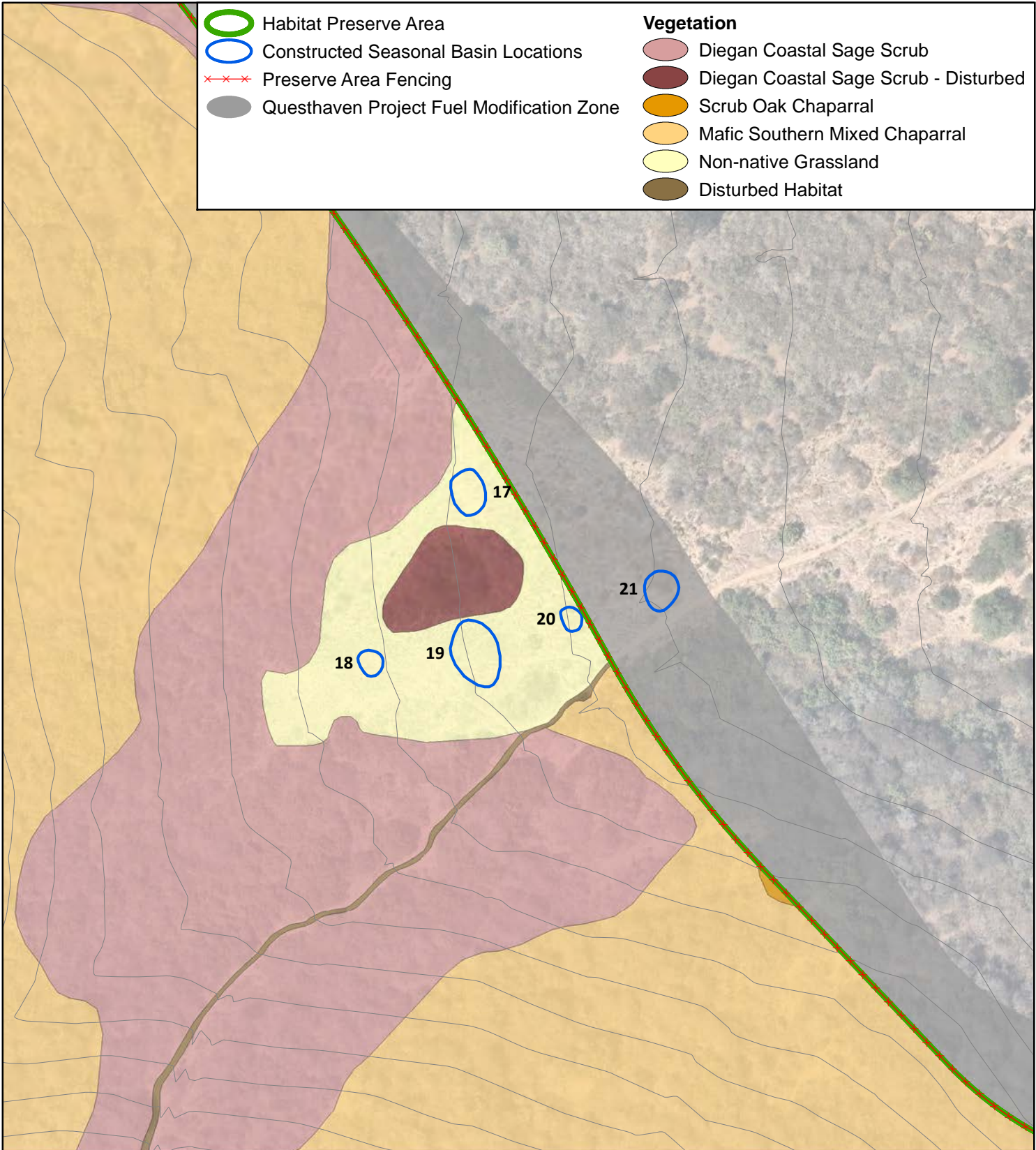
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Figure 6b

Basin Creation Area 2

QUESTHAVEN
HABITAT RESTORATION PLAN



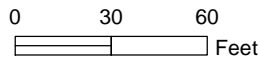
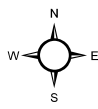


Aerial Photo: Nearmap 2020

Figure 6c

Basin Creation Area 3

QUESTHAVEN
HABITAT RESTORATION PLAN



5.0 IMPLEMENTATION PLAN

5.1 RATIONALE FOR EXPECTING IMPLEMENTATION SUCCESS

The sites selected for the restoration currently support non-native and disturbed habitats (Figure 3) adjacent to native vegetation communities. These areas previously supported native habitat and the soils are appropriate for the proposed restoration. Implementation of this plan would result in restoration of habitats that are present and previously occurred on the site. Therefore, it is expected that the restoration will be successful.

5.2 FINANCIAL ASSURANCES

Colrich Communities (or the owner at the time of implementation) will be responsible for financing the installation, maintenance, and monitoring of the restoration.

A restoration agreement shall be signed and notarized by the property owner following approval of this restoration plan and accompanied by the required security as agreed upon by the County of San Diego.

5.3 SCHEDULE

Implementation of the restoration program would commence prior to, or in conjunction with ground disturbance for the Questhaven development project. These activities are anticipated to take between 6 and 8 weeks to complete. A restoration plan checklist, by project phase, is provided as Table 3.

5.4 SITE PREPARATION

5.4.1 Pre-Construction Meeting

All activities will be carried out under the supervision of the restoration specialist. The restoration specialist will mark all work areas. Existing sensitive habitats and native plants to be avoided will be marked by the restoration specialist. Access routes also will be identified and marked. An on-site meeting will be held with the restoration specialist and all installation personnel to identify sensitive areas and devise a strategy for avoidance prior to initiation of restoration activities. Staging areas will be established and all vehicles and construction equipment will be restricted to the staging areas when not required for restoration activities.

5.4.2 Fencing

Prior the restoration effort, temporary orange construction fences will be installed along the perimeter of all work areas to restrict access. The larger open space easement area (preserved and restored lands) will include permanent fencing following restoration activities. Steel signs will be attached to the fencing that will provide notice, in both English and Spanish, that the area is an ecological preserve and that trespassing is prohibited.

The final restoration plan will include construction details and locations of permanent fencing and signage on the landscape plans.

**Table 3
Restoration Plan Checklist**

Construction Phase	Task	Applicable Parties			
		Project Proponent	Installation Contractor	Maintenance Contractor	Restoration Specialist
Pre-construction	Order seed and container stock		X		
	Attend pre-construction meeting	X	X		X
	Document pre-impact conditions,				X
	Identify site limits and staging area				X
Installation	Delineate mitigation boundaries		X		X
	Remove eucalyptus trees				X
	Debris removal		X		X
	Basin creation		X		X
	Pre-planting weed control		X		
	Install container stock and seed		X		X
	Install irrigation system		X		X
	Prepare/submit as-built report				X
Five-year Maintenance and Monitoring Period	Conduct maintenance monitoring and annual monitoring				X
	Prepare as needed maintenance monitoring memos				X
	Maintain and monitor site for 5 years - until signed off by County			X	X

5.4.3 Eucalyptus Removal

The initial site preparation will involve removal of the eucalyptus trees in the coastal sage scrub restoration area. All eucalyptus trees will be removed from the site and disposed of properly. Remaining stumps will be treated with herbicide (drill & inject method) to ensure that they do not resprout.

5.4.4 Site Cleanup/Dethatching

Refuse, debris, and deleterious soil that may be within the restoration areas will be removed and disposed of in a licensed landfill. Non-native habitat within the restoration areas will be mowed and dethatched prior to initiation of other activities. The dethatching will remove dead weed material that may have accumulated on the ground over time and that can inhibit the establishment and growth of native species. Dethatching consists of mowing or weed-whipping standing grass stalks, and raking, collecting, and removing the grass straw and other cut weeds from the site. All material will be removed from the site and be disposed of in a legal manner. Prior to dethatching, areas supporting native plants (if any) would be flagged for avoidance.

5.4.5 Basin Creation

The created basins are designed to have maximum depths of 8 to 10 inches, with the goal of having appropriate ponding for spadefoot toad breeding (i.e., retain water for approximately 30 days) and that the basins will have slopes of 12:1 to 15:1 to provide smooth, micro-topographic variance for spadefoot toad access. These basins would be unvegetated and intended to serve as vernal pool or wetland habitat. As such, there is no planting or introduction of inoculum.

5.5 PLANTING PLAN

5.5.1 Seed Mixes

Seeding will take place within the mafic southern mixed chaparral/coastal sage scrub ecotone area (Table 4; Figure 4) and the coastal sage scrub (including riparian transition) area (Tables 5 and 6; Figure 5). Seed will be sourced from as close to the site as possible. The source and proof (tags) for all seed will be provided.

Species	Pounds Per Acre
Black sage (<i>Salvia mellifera</i>)	3
Blue Dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	3
California melic (<i>Melica imperfecta</i>)	3
California sage brush (<i>Artemisia californica</i>)	3
Chamise (<i>Adenostoma fasciculatum</i>)	4
Chia (<i>Salvia columbariae</i>)	1
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	3
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	4
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Laurel sumac (<i>Malosma laurina</i>)	3
Lemonadeberry (<i>Rhus integrifolia</i>)	3
San Diego needlegrass (<i>Stipa lepida</i>)	5
TOTAL	54

Species	Pounds Per Acre
Blue Dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	3
California melic (<i>Melica imperfecta</i>)	5
California sage brush (<i>Artemisia californica</i>)	3
Chia (<i>Salvia columbariae</i>)	1
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	3
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	6
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Lemonadeberry (<i>Rhus integrifolia</i>)	1
San Diego needlegrass (<i>Stipa lepida</i>)	10
TOTAL	51

Table 6 Coastal Sage Scrub/Riparian Seed Mix	
Species	Pounds Per Acre
Arroyo willow (<i>Salix lasiolepis</i>)	3
Blue Dicks (<i>Dichelostemma capitatum</i>)	2
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	2
California deergrass (<i>Muhlenbergia rigens</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	2
California melic (<i>Melica imperfecta</i>)	3
California sage brush (<i>Artemisia californica</i>)	3
Creeping wild rye (<i>Leymus triticoides</i>)	2
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	2
Elderberry (<i>Sambucus nigra</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	2
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Mulefat (<i>Baccharis salicifolia</i>)	3
San Diego needlegrass (<i>Stipa lepida</i>)	3
San Diego sagewort (<i>Artemisia palmeri</i>)	3
Tarragon (<i>Artemisia dracunculus</i>)	3
Western ragweed (<i>Ambrosia psilostachya</i>)	3
Yerba mansa (<i>Anemopsis californica</i>)	3
TOTAL	55

A hydroseed slurry will be evenly applied in two stages such that an even, homogeneous distribution is made. The first stage will include the seed, a small amount of fiber mulch, and dye. This application will help ensure that maximum seed/soil contact is made. A second layer will be applied immediately following the first. The second layer will include additional fiber mulch, dye, and a tackifier. The tackifier will serve to help bind seed and soil until germination. Hydroseed specifications are presented in Table 7.

Table 7 Hydroseed Application Specifications		
Material	First Application	Second Application
Seed	As called for per site	N/A
Long fiber wood mulch	500 lbs/acre	1,000 lbs/acre
Dye	As necessary	As necessary
Tackifier	N/A	90 lbs/acre
Water	Sufficient to maintain slurry	Sufficient to maintain slurry

Hand seeding may be conducted in focused areas to help ensure targeted application of seed. Areas not treated with the hydroseed slurry will be hand seeded following hydroseeding to make sure all areas are seeded. These areas will be determined at the time of seeding and will include areas where hydroseeding may not be possible, where existing native plants may be negatively affected by the hydroseed slurry, or where it is thought that certain species may be appropriate in small areas. Seed of different species will only be mixed when they are to be applied to the same location. Individual species may be seeded separately as directed by the restoration specialist. Hand broadcasters will be used to help ensure a consistent application of seed. An inert carrier (sand, saw dust) may also be mixed with the seed to help maintain consistency. Seeding will not be conducted during windy conditions. Seed will be raked into soil after application to help increase seed/soil contact.

5.5.2 Container Stock

In addition to seed, native container stock will be planted within the restoration areas (Tables 8 and 9). The container stock will be sourced from as close to the site as possible. If container stock is unavailable from the site vicinity, the restoration specialist may substitute species as necessary. The source and proof for all plant material will be provided. All container stock will be inspected and approved by the restoration specialist prior to being installed. Specifically, the restoration specialist will ensure that:

- The correct number, size, and species ordered are delivered;
- Plants are healthy and showing no sign of disease;
- Roots fill the containers but are not root bound;
- There is no breakage of plants;
- Plants show no evidence of pests;
- Plants are in a state suitable for out-planting.

The restoration specialist will reject any plants not meeting these requirements.

Species²	Number Per Acre
Broom baccharis (<i>Baccharis sarothroides</i>)	15
California buckwheat (<i>Eriogonum fasciculatum</i>)	100
California sage brush (<i>Artemisia californica</i>)	100
Chamise (<i>Adenostoma fasciculatum</i>)	100
Coastal prickly pear (<i>Opuntia littoralis</i>)	10
Laurel sumac (<i>Malosma laurina</i>)	10
Lemonadeberry (<i>Rhus integrifolia</i>)	20
Nuttall's scrub oak (<i>Quercus dumosa</i>)	25
Toyon (<i>Heteromeles arbutifolia</i>)	30
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	30
TOTAL	440

¹All container stock is 1 gallon size

²If unavailable, restoration specialist shall substitute with other suitable species

Table 9 Coastal Sage Scrub Container Stock Species¹	
Species²	Number Per Acre
Laurel sumac (<i>Malosma laurina</i>)	10
Coastal prickly pear (<i>Opuntia littoralis</i>)	10
Broom baccharis (<i>Baccharis sarothroides</i>)	15
Lemonadeberry (<i>Rhus integrifolia</i>)	5
San Diego needlegrass (<i>Stipa lepida</i>)	300
California sage brush (<i>Artemisia californica</i>)	100
California buckwheat (<i>Eriogonum fasciculatum</i>)	100
TOTAL	540

¹All container stock is 1 gallon size

²If unavailable, restoration specialist shall substitute with other suitable species

5.6 IRRIGATION PLAN

A temporary, above ground irrigation systems will be installed in the restoration areas. The systems will provide head to head coverage to ensure adequate irrigation of the installed seed. The final restoration plan will include a detailed irrigation plan, compliant with the County’s Water Conservation in Landscaping Ordinance.

5.7 AS-BUILT CONDITIONS

The restoration specialist shall prepare and submit a map showing the as-built conditions of the restoration area within 6 weeks of completion of site preparation, planting, and basin creation.

6.0 MAINTENANCE DURING MONITORING

6.1 MAINTENANCE ACTIVITIES

A 5-year maintenance program is proposed to help ensure the successful establishment and persistence of the preserved and revegetated habitat. The maintenance program will involve removal of trash, weed control, fence and signage repair/replacement, and any remedial measures deemed necessary for restoration success (e.g., re-seeding).

6.1.1 Trash Removal

The maintenance contractor will remove any trash encountered within the restoration area during every maintenance event and dispose of it in a legally acceptable fashion.

6.1.2 Weed Control

Particular maintenance emphasis will be placed on pro-active weed control within the restoration area. The project would revegetate non-native grassland habitat, which is dominated by grass species that would otherwise be considered to be weeds. For this project, non-native grasses are the target species, and they will not be controlled as weeds. Other, non-grass weed species observed will be considered invasive and targeted for removal. All workers conducting weed removal activities will be educated to distinguish between native and non-native species, with special attention paid to special status plant species that may occur.

Weeds will be removed by hand or with small machinery (e.g., line trimmers) whenever possible, but focused herbicide application may be used if needed and requested by the restoration specialist. Herbicides will only be applied by workers licensed to use those chemicals. Additionally, herbicide will not be used during wet or windy conditions.

Weeds will be removed from the restoration areas and disposed of in a legal manner. All weeds will be removed prior to reaching 12 inches in height or before setting seed. Leaf and branch drop of native species will be left in place and not removed from the site.

6.2 SCHEDULE

Regular maintenance, trash removal, and weed control of the restoration area will be conducted during the first 5 years following implementation of the restoration program or until the restoration program is deemed successful. Maintenance personnel will visit the site at least bi-monthly for the 5-year maintenance and monitoring period. Additional visits will be conducted as directed by the restoration specialist during the rainy season (generally December through May) each year to keep weeds under control.

7.0 MONITORING PLAN FOR THE RESTORATION SITE

7.1 PERFORMANCE STANDARDS FOR TARGET DATES AND SUCCESS CRITERIA

The following sections provide performance standards to determine the successful completion of the 5-year restoration and monitoring program. Attainment of these standards indicates that restored habitat is progressing and performing the functions and services specified in this plan and by the end of the 5-year restoration and monitoring program. Methods used to measure these performance standards are described in the following text. If the restoration fails to meet the Year 5 standards after the full monitoring term, a specific set of remedial measures will be developed and implemented, and the monitoring and maintenance period will be extended until all Year 5 standards are met, or as otherwise provided in this document. Only when the entire restoration site has attained the Year 5 standards will the entire restoration be signed off.

7.1.1 Container Stock

During each annual monitoring event, there will be no less than 80 percent survival of the container stock plants for all 5 years unless they have been replaced by natural recruitment.

7.1.2 Native Species Richness

Species richness criteria have been established to determine the success. Species richness will be measured by visual assessment in Years 1 and 2, and by quantitative transect data in Years 3, 4, and 5. No specific richness criteria are established for Years 1 or 2, but annual success criteria for species richness in Years 3, 4, and 5 are provided in Table 10. Corrective measures will be implemented in areas not meeting the species richness goals in any given year.

Table 10		
SPECIES RICHNESS SUCCESS CRITERIA¹		
Year 3	Year 4	Year 5
8	10	10

¹Pre-determined, non-relative values

7.1.3 Native Species Cover

Native species cover success criteria have also been established to determine success of the restoration effort. Species cover will be measured by visual assessment in Years 1 and 2, and by quantitative transect data in Years 3, 4, and 5. No specific cover criteria are established for Years 1 or 2, but annual success criterion Years 3, 4, and 5 are provided in Table 11. Corrective measures will be implemented in areas not meeting the species richness goals in any given year.

Table 11		
CSS Native Species Cover Success Criteria¹		
Year 3	Year 4	Year 5
40	60	70

¹Pre-determined, non-relative values

7.1.4 Weed Cover

General and target weed cover success criteria have been established for the restoration effort. Given the size of the area and the extent of the weed seed bank, 100% weed eradication for all weed species is not a realistic goal (Some species are highly invasive and others are easier to eradicate). Therefore, species in Table 12 are zero tolerance species and will be controlled at 100% on a yearly basis. Other non-native species are more ubiquitous and can never be completely eliminated and will therefore be managed to a level of 10% or less. If the weed cover success criteria are not met in any given year, then remedial measures will be conducted.

Latin name	Common name	Cal-IPC Rating ¹
<i>Atriplex semibaccata</i>	Australian saltbush	M
<i>Carpobrotus</i> spp.	Hottentot's fig	H/M
<i>Cynara cardunculus</i>	Artichoke thistle	M
<i>Cynodon dactylon</i>	Bermuda grass	M
<i>Euphorbia lathyris</i>	Gopher plant	N/A
<i>Foeniculum vulgare</i>	Fennel	H
<i>Hordeum</i> spp	barley	M
<i>Nicotiana glauca</i>	Tree tobacco	M
<i>Ricinus communis</i>	Castor bean	L
<i>Salsola tragus</i>	Russian thistle	L
<i>Silybum marianum</i>	Milk thistle	L
<i>Sorghum halepense</i>	Johnson grass	N/A
<i>Xanthium strumarium</i>	Cocklebur	N/A

¹H= High invasiveness, M= Moderate invasiveness, L= Low invasiveness N/A= Not listed.

7.2 MONITORING METHODS AND SCHEDULES

7.2.1 Installation Monitoring

The restoration specialist will be on-site daily during the installation period to direct all restoration activities including site preparation, weed control, seeding, planting, and watering. Upon completion, the restoration specialist will prepare an as-built map and letter and confirm that the 5-year maintenance and monitoring period may begin.

7.2.2 Maintenance Monitoring

The restoration specialist will conduct regular maintenance monitoring visits during the 5-year maintenance period. Visits will be conducted monthly in Year 1, every other month in Years 2 through 3, and quarterly in Years 4 through 5. Additional visits may be required as conditions warrant. During each visit the restoration specialist will assess the condition of the restoration site and identify remedial measures as necessary. A brief monitoring memo will be prepared and submitted to the maintenance contractor following each maintenance monitoring visit.

7.2.3 Annual Monitoring

Annual monitoring visits will be conducted by the restoration specialist in the late spring each year during the 5-year maintenance period. During each annual monitoring the success of the restoration effort will be evaluated and species richness and cover data will be collected. In Years 1 and 2 species richness and cover will be determined by visual assessment. In Years 3-5 quantitative transect data will be collected.

Quantitative transect data will be collected using the point intercept line transect sampling methods described in the California Native Plant Society's Field Sampling Protocol (Sawyer and Keeler-Wolf 1995). Four 50-m long sampling transects will be established in Year 3 within the CSS creation area. The ends of each transect will be marked with a re-bar stake and recorded with a Global Positioning System (GPS) unit.

Species cover will be determined by dividing each transect into 50 half meter intervals. A point will be projected into the vegetation each interval and any species intercepted by the point will be recorded. Species also will be divided into herb (0- 60 cm), shrub (60cm-3m), and tree (greater than 3 m) layers. Percent cover will be measured by dividing the number of hits by the number of possible hits. Total, native, and non-native cover values will be determined separately.

Native species richness (the number of species) will be calculated by counting all of the species encountered within a 5m wide belt transect along each transect (2.5m on each side). All plants observed will be categorized by origin (native/non-native) and height layer.

Photographs will be taken each year from the same photograph points used prior to initiation of site preparation. The photographs will help track project progress over time and will be included in the annual report each year.

7.3 MONITORING REPORTS

As part of the monitoring program, annual reports prepared by the restoration specialist will be prepared and submitted evaluating the success of the restoration effort to date, along with any recommendations for future work that may be deemed necessary. Each annual monitoring report will include data collected throughout the year in addition to the annual monitoring visit. To detect the overall trend of the restoration, beginning with the second annual monitoring report, the reports will contain comparisons of the monitoring data for the current year with the previous years' data.

In accordance with the Report Format and Content Requirements for Restoration plans (County 2007): "Any significant issue or contingency that arises on the job site (e.g., plant survival issues, fire, or flooding) shall be reported in writing to the County of San Diego within two weeks from the date of the incident. Accompanying the report shall be a plan for remediation, with an implementation schedule and a monitoring schedule."

8.0 COMPLETION OF RESTORATION

8.1 NOTIFICATION OF COMPLETION

The permittee shall notify the County upon the restoration obtaining the Year-5 performance standards through the submittal of the final (Year 5) monitoring report.

8.2 CONFIRMATION

After receipt of the final monitoring report, the County may inspect the restoration site to determine if the effort has been conducted in accordance with this plan.

9.0 CONTINGENCY MEASURES

9.1 INITIATING CONTINGENCY PROCEDURES

An integral part of a successful program is the ability to detect problems with the restoration early in the process, determine the cause of the problem, and attempt to modify the program to accommodate emerging issues or situations. Minor problems, such as trash, vandalism, or small-scale weed or pest infestations will be rectified as they are discovered during routine site monitoring and would not warrant the implementation of contingency measures.

If a performance standard is not met for all or any portion of the restoration site in any year, or if the final performance standards are not met, the restoration specialist will prepare an analysis of the cause(s) of failure, and if determined necessary by the County, propose remedial action for approval. These measures may include changes to the plant palette, adjustment of the management of the site, re-evaluation of species composition, or other design changes.

Should the restoration fail as a result of a natural disaster such as a flood, the permittee will still be held responsible for any additional measures that are required to re-establish the restoration site. The permittee is responsible to have the site meet performance standards in order to receive sign-off.

9.2 FUNDING

The Responsible Party shall be responsible for all costs associated with any contingency measures.

10.0 REFERENCES CITED

Alden Environmental, Inc. 2024. Biological Technical Report for the Questhaven Tentative Map Project. May 6.

County of San Diego. 2007. Report Format and Content Requirements-Restoration Plans. July 30. https://www.sandiegocounty.gov/content/dam/sdc/dplu/docs/Restoration_Report_Format_s.pdf

Sawyer, J.O. and T. Keeler-Wolf. 1995. A Manual of California Vegetation. 472 pp.

Appendix L

Orcutt's Brodiaea Translocation Plan

**Orcutt's Brodiaea
Translocation Plan for the
Questhaven Tentative Map Project**

May 6, 2024

Prepared for:

Colrich Communities
444 West Beech Street, Suite 300
San Diego, CA 92101

Prepared by:

Alden Environmental, Inc.
3245 University Avenue, #1188
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**Orcutt’s Brodiaea
Translocation Plan for the
Questhaven Tentative Map Project**

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1.0 INTRODUCTION

This translocation plan provides the mitigation approach for direct impacts to the Orcutt's brodiaea (*Brodiaea orcuttii*), resulting from development of the Questhaven Tentative Map Project (Questhaven project). Orcutt's brodiaea has a California Native Plant Society (CNPS) Rare Plant Rank of 1B.1 and is a San Diego County List A sensitive plant species. It is a perennial herb with underground bulb-like storage stems, known as corms, in the Themidaceae family. Individual plants are up to 25 centimeters tall, which bears flowers on pedicels each a few centimeters long. The flower has six purple petals each between 1 and 2 centimeters long (CNPS 2022). The measures identified herein are based on those contained in the Questhaven project's Biological Technical Report (Alden Environmental, Inc. [Alden] 2024a).

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The approximately 69.1-acre Questhaven project site is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. The Questhaven project site is located immediately south and west of the City of San Marcos and east of the City of Carlsbad. Interstate 5 is located approximately 5.3 miles west of the Questhaven project site. Specifically, the Questhaven project site is located south of San Elijo Road and east of Denning Drive (Figures 1 and 2). The Questhaven project site encompasses Assessor's Parcel Number 223-080-46-00 and is located in the west half of the northwest quarter of Section 33, Township 12 South, Range 3 West, San Bernardino Meridian on the U.S. Geological Survey (USGS) 7.5-minute Rancho Santa Fe quadrangle map (Figure 2).

2.2 PROJECT IMPACTS

The project consists of a Tentative Map, Density Bonus Permit, Site Plan Review, and an Administrative Permit for the site. The total number of lots proposed is 93, with 76 residential and 17 non-residential. The project would provide for development of 69 market-rate units and 7 reserved units for affordable housing (18.27 acres), 4 water quality detention basins (2.40 acres), 1 private park parcel (0.31 acres), 4 private road lots (4.34 acres), and 7 open space HOA lots for fire buffer area (10.77 acres). The project also includes a 50.3 acre biological open space area that would provide habitat mitigation for the project and be contiguous with open space lands to the south and west.

Alden prepared a Biological Technical Report that details all of the impacts and required mitigation for the Questhaven project (Alden 2024a). Specifically, this translocation plan addresses only the compensatory mitigation for impacts to Orcutt's brodiaea resulting from the proposed development.

Alden conducted surveyed for Orcutt's brodiaea on site on June 3 and 11, 2020 and again on May 13 and 25, 2023. The staminodia of *Brodiaea* found on site was closely inspected to determine which species is present. All brodiaea found were mapped using global positioning system (GPS) technology with sub-meter accuracy. No *Brodiaea* species other than *orcuttii* was found.

2.3 OWNERSHIP STATUS

The on-site biological open space where the Orcutt's brodiaea would be translocated is owned by Colrich Communities:

Colrich Communities
444 West Beech Street, Suite 300
San Diego, CA 92101

The brodiaea translocation areas are within on-site biological open space to be preserved that is adjacent to off-site Questhaven project mitigation land, all of which is connected to conserved lands to the east, farther west, and south (Figure 2).

3.0 TRANSLOCATION SUMMARY AND GOALS

This effort includes translocation of brodiaea corms from within the Questhaven project impact footprint (donor site) to receptor sites located within the on-site biological open space and associated planting of native grassland habitat.

3.1 DONOR SITE

The donor site (Figure 3) is comprised of non-native grassland totaling approximately 3.4 acres, out of 3.7 acres of suitable habitat for the species mapped there. The majority of the Orcutt's brodiaea plants on site were found in this area. This location is underlain with a majority of Huerhuero loam soil (2 to 9 percent slopes) and a minority of San Miguel rocky silt loam soil (9 to 30 percent slopes).

3.2 RECEPTOR SITE

The receptor site(s) includes 3 areas of non-native grassland on site (Figure 3). The first site is located immediately adjacent to the donor site within the mapped suitable habitat for the species (with the same Huerhuero loam and San Miguel rocky silt loam soils), and Orcutt's brodiaea was observed there, as well. This location also will support several ponds for the spadefoot toad (*Spea hammondi*). The corm translocation will avoid these ponds.

The other 2 areas of non-native grassland to be receptor sites are located to the southeast of the donor site by approximately 525 feet and 1,050 feet (Figure 3). The former is on a southwest-facing slope underlain with San Miguel rocky silt loam soil (9 to 30 percent slopes). The latter is on a southwest-facing slope underlain with San Miguel rocky silt loam soil (9 to 30 percent slopes) and San Miguel-Exchequer rocky silt loam (9 to 70 percent slopes). A small population of Orcutt's brodiaea was found immediately adjacent to this latter receptor site in the Questhaven project impact footprint.

Salvaged Orcutt's brodiaea corms from the donor site will be relocated to the receptor sites. These sites were selected because they have similar soils, slope steepness, slope aspect, and elevation to

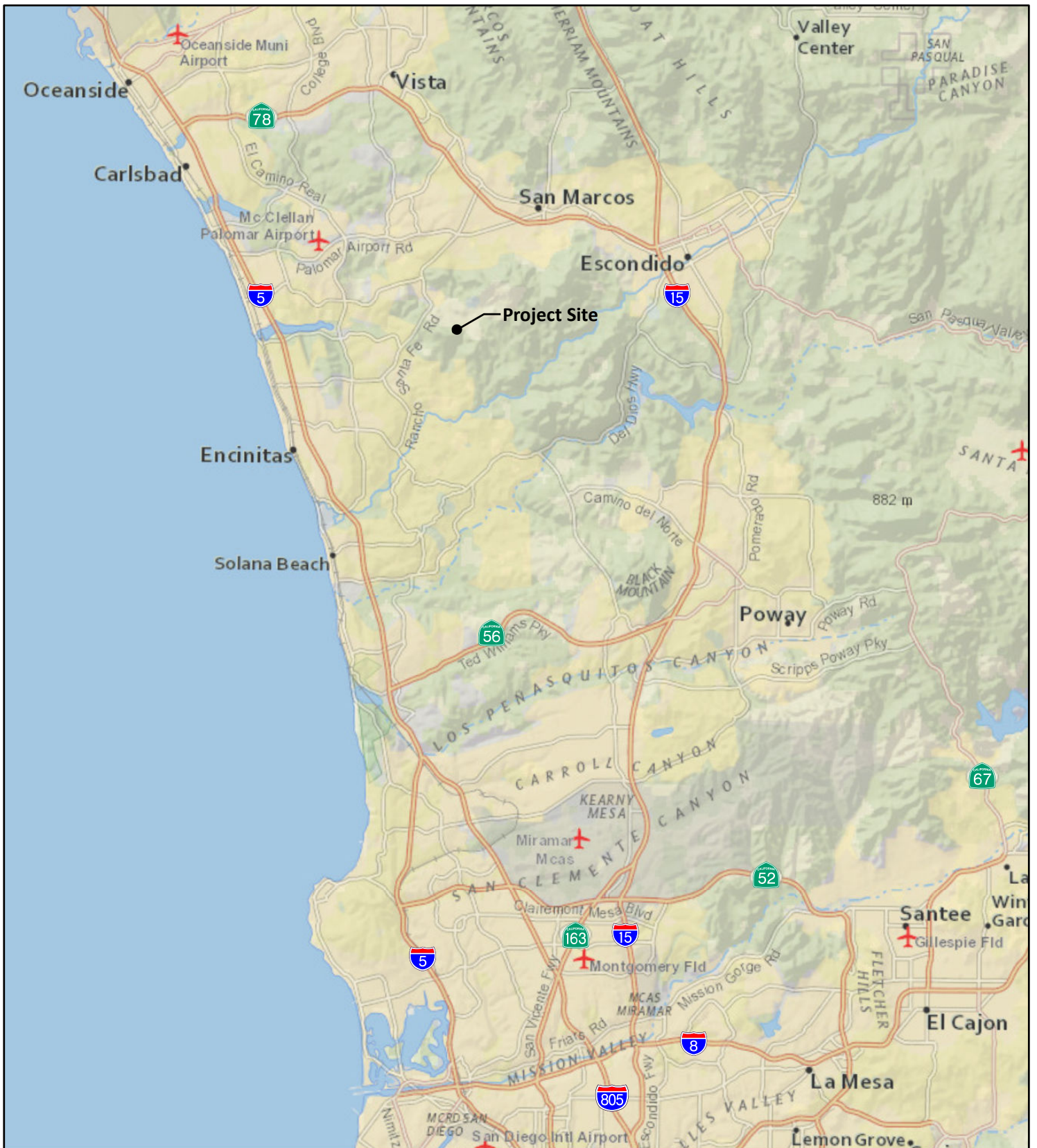
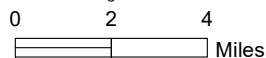
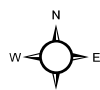
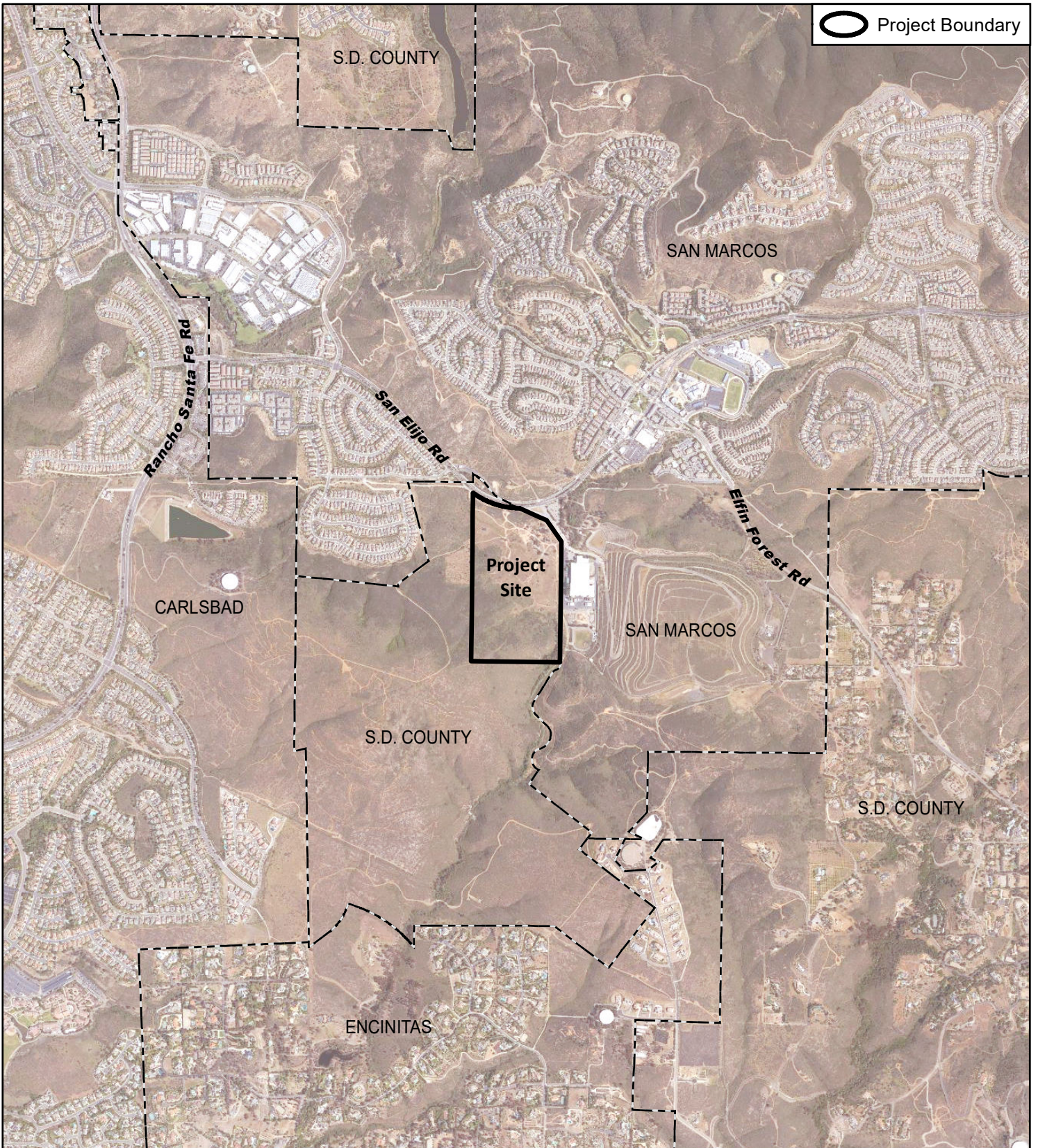


Figure 1

Regional Location

ORCUTT'S BRODIAEA
 TRANSLOCATION PLAN FOR THE
 QUESTHAVEN TENTATIVE MAP PROJECT



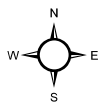


○ Project Boundary

Figure 2






Project Location

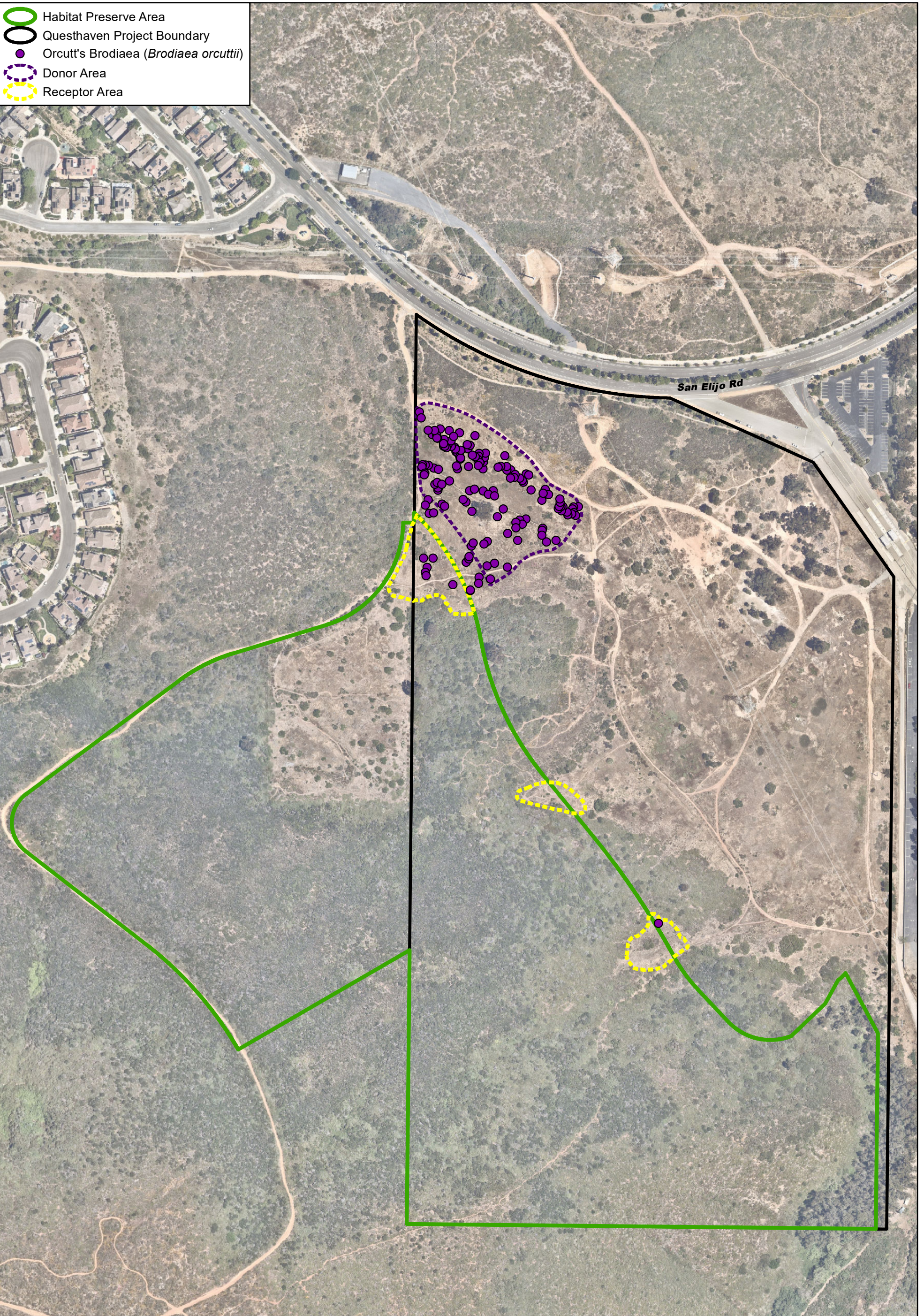
ORCUTT'S BRODIAEA
 TRANSLOCATION PLAN FOR THE
 QUESTHAVEN TENTATIVE MAP PROJECT



0 1,000 2,000
 Feet



-  Habitat Preserve Area
-  Questhaven Project Boundary
-  Orcutt's Brodiaea (*Brodiaea orcuttii*)
-  Donor Area
-  Receptor Area



Aerial Photo: Nearmap 2023

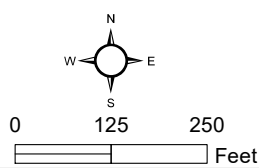


Figure 3

**Orcutt's Brodiaea
Translocation Area**

ORCUTT'S BRODIAEA
TRANSLOCATION PLAN FOR THE
QUESTHAVEN TENTATIVE MAP PROJECT

the donor site. The receptor sites are within the on-site biological open space to be managed in perpetuity, and there are no easements or other potential uses that would conflict with the translocation effort.

The Restoration Specialist will determine how the translocation from donor to receptor sites will occur based on the number of corms to be translocated and site-specific conditions within the receptor sites.

4.0 IMPLEMENTATION PLAN

The brodiaea translocation effort will consist of several components, including:

- Donor site corm salvage
- Receptor site preparation and fencing
- Corm translocation
- Native grassland seeding/planting
- Maintenance and monitoring for a 5-year period

4.1 RATIONALE FOR EXPECTING IMPLEMENTATION SUCCESS

As noted above, the receptor sites selected for the translocation effort currently supports suitable habitat characteristics to support the Orcutt's brodiaea. Additionally, the species occurs in the vicinity in areas exhibiting the same physical characteristics as the receptor sites.

4.2 RESPONSIBLE PARTIES

4.2.1 Project Proponent

Colrich Communities (or the owner at the time of implementation) will be responsible for financing the installation, maintenance, and monitoring of the restoration/enhancement measures of the translocation project.

4.2.2 Restoration Specialist

Overall supervision of the installation, maintenance, and monitoring of this translocation program will be the responsibility of a Restoration Specialist with a minimum of 5 years of habitat restoration experience. Additionally, the Restoration Specialist must have experience identifying, salvaging, and translocating brodiaea species as well as the ability to distinguish brodiaea corms from those of other geophytes. The Restoration Specialist will educate all participants with regard to program goals and directly oversee all aspects of the translocation project. In addition, the specialist will conduct all monitoring data collection, annual assessments, and prepare all required reports. If necessary, the Restoration Specialist will provide the translocation project proponent and contractor with a brief report, including a written list of items in need of attention following each monitoring visit. The contractor will be responsible for carrying out all required measures in a timely manner. The Restoration Specialist will notify the contractor and responsible party if any requested remediation is not addressed. A checklist with the main tasks and responsibilities is included in Table 1.

4.2.3 Installation/Maintenance Contractor

The installation and maintenance contractor(s) will have habitat restoration experience and will, under the direction of the Restoration Specialist, be responsible for pre-planting weed control, planting, seeding, and maintenance. The Restoration Specialist will educate the contractor(s) on the installation and maintenance of native plant species.

After the installation is complete, maintenance personnel will initiate the 5-year maintenance program under the direction of the Restoration Specialist. Maintenance crews will service the entire enhancement area regularly following installation. Service will include but not be limited to weed control, trash removal, watering, dead plant replacement, and re-seeding. All activities conducted will be seasonally appropriate and approved by the Restoration Specialist. The maintenance crew will meet the Restoration Specialist at the site when requested and will perform all checklist items in a timely manner as directed by the Restoration Specialist. The Restoration Specialist will ensure that maintenance personnel are capable of discerning between native plant species and non-native weed species.

4.3 IMPLEMENTATION SCHEDULE

Implementation of the mitigation program would commence prior to, or in conjunction with the grading of the Questhaven project. The brodiaea corm identification and salvage effort must occur prior to grading within the brodiaea donor site.

4.4 SITE PREPARATION

As described above, the initial site preparation of the receptor sites will involve removal of weeds, refuse, debris, and other deleterious material will be removed and disposed of in a licensed landfill. No grading is proposed as part of this translocation effort.

4.5 FENCING

Prior to and during implementation of the translocation effort, a temporary 3-strand barbless wire fence will restrict access to the receptor sites. As this effort is a part of a larger on-site preserve area for the Questhaven project, no permanent fencing or signs will be installed.

**Table 1
MITIGATION PLAN CHECKLIST**

PHASE	TASK	APPLICABLE PARTIES			
		LAND OWNER	INSTALLATION CONTRACTOR	MAINTENANCE CONTRACTOR	RESTORATION SPECIALIST
Preparation	Order seed and container stock		X		
	Attend pre-construction meeting	X	X		X
	Document pre-start conditions				X
	Identify site limits and staging area				X
Corm Salvage	Flag limits of donor site				X
	Excavate soil to search for corms		X		X
	Identify and record corm results				X
	Prepare corms/soil blocks for translocation		X		X
Installation	Delineate boundary of receptor sites		X		X
	Dethatch and mow receptor sites		X		X
	Install temporary fence		X		X
	Install collected corms/soil blocks		X		X
	Install grassland seed mix		X		X
	Prepare/submit as-built report				X
Five-year Maintenance & Monitoring Period	Conduct maintenance monitoring and annual monitoring				X
	Maintenance for remainder of 5 years			X	X

4.6 CORM SALVAGE

The donor site within Questhaven project site must be thoroughly searched for brodiaea corms prior to initiation of grading activity. In order to find and salvage brodiaea corms, the Restoration Specialist will lead an exploratory effort within the donor site. Shovels, hand tools or other equipment will be used to locate corms within the area mapped that would be impacted. The first step will be to lay a search grid pattern over the donor site. Next, a rubber-tired loader (or similar) will use a ripping tyne to turn the soil along a path (determined by the search grid). The Restoration Specialist will follow behind as the machine slowly transits the area. The machine will be halted when corms or corm-like structures are exposed so that they can be identified by the Restoration Specialist. If Orcutt's brodiaea corms are identified, the hand crew will be directed to dig exploratory holes in an effort to identify additional corms and determine if there is a patch or just scattered individuals. Scattered individual brodiaea corms will be collected by hand and placed in a cardboard box for temporary storage.

In the event that larger groupings of corms are encountered, the Restoration Specialist will direct a hand crew to remove soil blocks that contain the corms. The size and depth of the blocks to be removed will depend upon the number of corms present, the depth of the corms, and the condition of the soil (i.e. loose and fragile vs intact clay). It is anticipated that soil blocks will typically be have a depth of 8-12 inches and a surface area of approximately 2-4 square feet. The intent of the soil block method is to ensure that the corms remain undamaged and in their original orientation in the soil. To this end, the soil blocks will be carefully handled and placed in boxes with sufficient soil or other filler material to help maintain their integrity prior to being installed at the receptor sites. If necessary, machinery may be used to help remove the soil blocks from the ground to help keep them intact. Wood also may be used to create box frames for soil blocks that appear to be in danger of collapsing.

The Restoration Specialist will take pre- and post- salvage photographs of the donor site and record all activities undertaken. The numbers of individual corms and soil blocks collected will be recorded, along with specific information regarding the condition of the corms, where they were located within the donor site, and their relative spacing from each other in the soil.

4.7 CORM TRANSLOCATION

Depending on the number of brodiaea corms found and the time of year, individual corms and/or soil blocks containing the corms will be removed from the donor site and translocated immediately to the receptor sites. For individual corms, a pipe- or similar device will be used to create a hole just wide enough to plant a single corm 3-5 inches deep. If soil blocks are used, soil at the receptor site will be excavated to a depth slightly greater than the height of the soil blocks that contain the corms to be transplanted (i.e., 10-14 inches deep). The corms and soil blocks will be spaced in such a way as to mimic the relative spacing observed at the donor site. Displaced soil will be replaced in a manner that will maintain drainage and prevent ponding over the brodiaea. Gaps on the edges of soil blocks will be filled in with native soil and compacted maintain soil structure and stability as much as possible. The receptor sites also may be watered once the corms and soil blocks have been installed. This will help soil to settle in any cracks and fill in air pockets. The location

of each translocated corm and soil block will be recorded with a sub-meter GPS unit to help in relocation and success monitoring.

The Restoration Specialist will notify the County, California Department of Fish and Wildlife (CDFW), and U.S. Fish and Wildlife Service (USFWS) immediately if brodiaea corms are identified at a receptor site. Notification will include the date, time, locations of the corms, and information as to the extent of the occurrence within the receptor site(s). The Restoration Specialist will rebury and flag the previously unmapped corms within the receptor site and will move into areas of the receptor site(s) not occupied by the species to continue the translocation process.

4.8 NURSERY STOCK

Up to 50 percent of any corms found at the donor site will be transferred to a native plant nursery as approved by County, CDFW, and USFWS where they will be propagated. Nursery plants will initially be reserved for planting at the receptor sites if, at any point during the monitoring period, it is determined that the number of the brodiaea individuals originally translocated to the receptor site is not enough to meet the success criteria. The Restoration Specialist will confer with the County, CDFW, and USFWS prior to planting any nursery plants within the receptor sites to determine the reasons for the need for the plantings and to consider whether a receptor site(s) is not functioning adequately and a new receptor site(s) is needed to meet the project requirements. The nursery plants will be used only if their condition is considered satisfactory by the Restoration Specialist and the nursery staff. Any nursery corms or plants left at the end of the monitoring period will be planted at the receptor sites.

4.9 NATIVE GRASSLAND

4.9.1 Seed Mix

Seeding with a native grassland mix (Table 2) will take place within the receptor sites (Figure 3). The species included in the mix were selected because they are native and occur either on the project site or in the project vicinity. The seed will be sourced from as close to the site as possible. The source and proof (tags) for all seed will be provided.

Because of the small size of the receptor sites, the seed will be applied by hand. Seed of different species will only be mixed when they are to be applied to the same location. Individual species may be seeded separately as directed by the Restoration Specialist. Hand broadcasters will be used to help ensure a consistent application of seed. An inert carrier (sand, saw dust) may also be mixed with the seed to help maintain consistency. Seeding will not be conducted during windy conditions. Seed will be raked into soil after application to help increase seed/soil contact.

Table 2 NATIVE GRASSLAND SEED MIX	
SPECIES	POUNDS/ ACRE
Blue dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California everlasting (<i>Pseudognaphalium californicum</i>)	3
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	2
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
San Diego needlegrass (<i>Stipa lepida</i>)	8
TOTAL	29

4.9.2 Container Stock

In addition to seed, San Diego needle grass plugs will be planted in the receptor sites at a rate of 300 per acre. The grass plugs will be evenly spaced throughout the receptor sites, as well as in a 15-foot buffer area. No grass plugs will be planted within translocated soil blocks. The plant material will be sourced from as close to the site as possible. If container stock is unavailable from the project vicinity, the Restoration Specialist may substitute species as necessary. The source and proof for all plant material will be provided. All container stock will be inspected and approved by the Restoration Specialist prior to being installed.

Specifically, the Restoration Specialist will ensure that:

- The correct number, size, and species ordered are delivered;
- Plants are healthy and showing no sign of disease;
- Roots fill the containers, but are not root bound;
- There is no breakage of plants;
- Plants show no evidence of pests;
- Plants are in a state suitable for outplanting.

The Restoration Specialist will reject any plants not meeting these requirements.

The Installation Contractor will be responsible for planting all container stock within four days following delivery. Container stock will be planted in such a way as to mimic a natural species distribution within the receptor sites, while avoiding the installed soil blocks. The project Restoration Specialist will specify the locations for all planting.

4.9.3 Material Salvage

The seed and container stock identified above is intended to be implemented without using any native plant/soil material salvaged from adjacent development projects. If salvaged upland soil/plant material is made available to the translocation project during the installation phase, it will be incorporated into the receptor sites, to the extent practicable.

4.10 HERBIVORE EXCLUSION

Upon completion of the translocation and native grassland planting efforts, herbivore exclusion fencing will be installed around the limits of the translocated corms within the receptor sites. The exclusion fencing will be trenched at least 12 inches to discourage herbivory. The herbivore exclusion fencing will be removed 2 years after its installation.

4.11 IRRIGATION

The brodiaea translocation effort is designed to be a non-irrigated project. While there will be no irrigation system, maintenance crews may hand water the receptor sites during dry years, as directed by the Restoration Specialist.

4.12 AS-BUILT CONDITIONS

The Restoration Specialist shall prepare and submit a map using showing the as-built conditions of the receptor sites within 8 weeks of completion of site preparation and translocation. Areas of corm/soil block translocation and all seeding and planting shall be shown on the map. The map shall be submitted to the County, CDFW, and USFWS.

5.0 MAINTENANCE PLAN

5.1 HABITAT MAINTENANCE ACTIVITIES

A 5-year maintenance program is proposed to help ensure the successful establishment and persistence of the translocated brodiaea. The maintenance program will involve removal of trash, weed control, fence repair/replacement, and any remedial measures deemed necessary for translocation program success (e.g., re-seeding). Maintenance personnel will visit the site at least monthly as part of the 5-year maintenance program.

5.1.1 Trash Removal

The Maintenance Contractor will remove any trash encountered within the receptor sites during every maintenance event and dispose of it in a legally acceptable fashion.

5.1.2 Weed Control

Particular maintenance emphasis will be placed on pro-active weed control within the receptor sites. All weed species observed will be considered invasive and targeted for removal. All workers conducting weed removal activities will be educated to distinguish between native and non-native species, with special attention paid sensitive plant species.

Weeds will be removed by hand or with small machinery (e.g., line trimmers) whenever possible, but focused herbicide application may be used if needed and requested by the Restoration Specialist. Herbicides will only be applied by workers licensed to use those chemicals. Additionally, herbicide will not be used during wet or windy conditions. Weed control tasks that involve machinery or herbicide use will be timed to avoid the vegetative and flowering period for the brodiaea and would not occur between January through July.

Weeds will be removed from the receptor sites and disposed of in a legal manner. All weeds will be removed prior to reaching 12 inches in height or before reaching seed stage. Leaf and branch drop of native species should be left in place and not removed. Vegetation clearing would be limited to above-ground methods, with vegetation being cut to a height of no more than two inches from the soil surface, with roots left in place. There would be no soil disturbance (e.g., from disking, tilling, etc.).

5.2 HABITAT MAINTENANCE SCHEDULE

Regular maintenance, trash removal, and weed control of the receptor sites will be conducted during the first 5 years following implementation of the translocation program or until the program is deemed successful. Maintenance personnel will visit the site at least monthly for the 5-year maintenance and monitoring period.

6.0 PERFORMANCE STANDARDS

The following sections provide performance standards to determine the successful completion of the 5-year maintenance and monitoring program. Attainment of these standards indicates the brodiaea translocation effort is progressing toward the habitat functions and services specified for this plan. Methods used to measure these performance standards are described in the following text. If the receptor sites fail to meet the Year 5 standards after the full monitoring term, a specific set of remedial measures will be developed, implemented, and the monitoring and maintenance period would be extended until all Year 5 standards are met, or as otherwise provided in this document. If a site does not meet Year 5 standards, the monitoring and maintenance period would be extended at least a full year and until all are standards are met. Only when all receptor sites have attained the Year 5 standards for at least 2 years without irrigation will the entire translocation program be signed off.

6.1 ORCUTT'S BRODIAEA

The brodiaea translocation effort will be considered successful when the following success criteria are met during any 2 of the last 4 years of the monitoring period.

- At least 60% of the translocated corms produce vegetative growth
- 100% of the translocated corms produce flowers
- The receptor sites must be free of human intervention (i.e., supplemental watering and/or planting, excluding measures required by the plan) such that the translocated corms are determined to be self-sustaining.

6.2 CONTAINER STOCK

During each of the 5 annual monitoring events there will be no less than 80% of the initially planted container plants surviving (unless their function has been replaced by natural recruitment).

6.3 NATIVE SPECIES RICHNESS/COVER

At the end of the 5-year monitoring period, the native grassland planting (receptor sites plus a 15-foot buffer) will achieve 80% cover overall of native grassland species and support a minimum of 2 native perennial grassland species that are reproducing. Corrective measures will be implemented in areas not meeting the species richness goals in any given year.

6.4 WEED COVER

General and target weed cover success criteria have been established for the translocation effort. Given the small sizes of the receptor sites and the extent of the existing weed seed bank, 100% eradication for all weed species is not a realistic goal (some species are highly invasive and others are easier to eradicate). Therefore, species in Table 3 are zero tolerance species and will be controlled at 100% on a yearly basis. Other non-native species are more ubiquitous and can never be completely eliminated and will, therefore, be managed to a level of 25% cover or less. If the weed cover success criteria are not met in any given year, then remedial measures will be implemented.

Table 3 ZERO TOLERANCE WEED SPECIES		
Latin name	Common name	Cal-IPC Rating¹
<i>Acacia</i> sp.	Acacia	L/M
<i>Atriplex semibaccata</i>	Australian saltbush	M
<i>Carpobrotus</i> spp.	Ice plant, Hottentot's fig	H/M
<i>Cynara cardunculus</i>	Artichoke thistle	M
<i>Cynodon dactylon</i>	Bermuda grass	M
<i>Erodium botrys</i>	Long-beak filaree	NR
<i>Erodium cicutarium</i>	Redstem filaree	L
<i>Foeniculum vulgare</i>	Fennel	H
<i>Lythrum hyssopifolium</i>	Grass poly	M
<i>Nicotiana glauca</i>	Tree tobacco	M
<i>Ricinus communis</i>	Castor bean	L
<i>Rumex conglomeratus</i>	dock	NR
<i>Rumex crispus</i>	Curly dock	L
<i>Salsola tragus</i>	Russian thistle	L
<i>Carduus pycnocephalus</i>	Italian thistle	L

¹H= High invasiveness, M= Moderate invasiveness, L= Low invasiveness NR= Not rated

7.0 MONITORING PLAN

7.1 INSTALLATION MONITORING

The Restoration Specialist will be on site daily during the corm collection and translocation to direct all translocation activities including site preparation, weed control, seeding, planting, and watering. Upon completion, the Restoration Specialist will prepare an as-built map and letter and confirm that the 5-year maintenance and monitoring period may begin.

7.2 MAINTENANCE MONITORING

The Restoration Specialist will conduct regular monitoring of the maintenance conducted by the Installation and Maintenance Contractor(s) during the 5-year maintenance period. Maintenance monitoring visits will be conducted by the Restoration Specialist monthly in Years 1 and 2, and every other month in Years 3-5. Additional visits may be required as conditions warrant. During each visit the Restoration Specialist will assess the condition of the receptor sites and identify any necessary remedial measures. Fencing (including the herbivory exclusion fencing) will be inspected, and any trash, debris, or other disturbances will be recorded. The Restoration Specialist also will monitor soil moisture to determine whether seasonal rains are adequate to keep the soil moist throughout the first 3 growing seasons. Supplemental irrigation of the receptor sites may be needed depending on natural rainfall, temperatures, and day length. A brief monitoring memo will be prepared and submitted to the Maintenance Contractor following each maintenance monitoring visit.

7.3 ANNUAL MONITORING

Two quantitative monitoring visits will be conducted by the Restoration Specialist each year. The first will be conducted in January/February to search for and count the number of brodiaea corms that have produced vegetative growth. The second visit will be conducted in May/June/July to identify and record the extent of brodiaea that are flowering. During the annual monitoring events, the number, average size, and overall health of the transplanted corms will be recorded. A qualitative assessment of health and the number of Orcutt's brodiaea observed (vegetative and flowering) also will be conducted. Brodiaea plants also will be inspected to determine if they are producing viable seeds. If viable seeds are present, then up to 2% may be collected for conservation seed storage at the Rancho Santa Ana Botanic Garden. Photographs will be taken from established photo documentation locations. During each annual monitoring event, the success of the translocation effort will be evaluated, and species richness and cover data will be collected. In Years 1 and 2, species richness and cover will be determined by visual assessment. In Years 3-5, quantitative transect data will be collected.

Quantitative transect data will be collected using the point intercept line transect sampling methods described in the California Native Plant Society's Field Sampling Protocol (Sawyer and Keeler-Wolf 1995). A single sampling transect will be established in Year 3 within each receptor site. The ends of each transect will be marked with a re-bar stake and recorded with a GPS unit. The location and length of each transect will depend upon the number of transplanted corms and the size of each receptor site.

Species cover will be determined by dividing each transect into half-meter intervals. A point will be projected into the vegetation at each interval, and any species intercepted by the point will be recorded. Species also will be divided into herb (0-60 cm), shrub (60 cm-3 m), and tree (greater than 3 m) layers. Percent cover will be measured by dividing the number of hits by the number of possible hits. Total native and non-native cover values will be determined separately.

Native species richness (the number of species) will be calculated by counting all of the species encountered within a 5 m-wide belt transect along each transect (2.5 m on each side). All plants observed will be categorized by origin (native/non-native) and height layer.

7.4 ANNUAL REPORTS

As part of the monitoring program, annual reports prepared by the Restoration Specialist will be prepared and submitted evaluating the success of the translocation effort to date, along with any recommendations for future work that may be deemed necessary. Each annual monitoring report will include data collected throughout the year in addition to the annual monitoring visit. To detect the overall trend of the program, the annual monitoring report will contain comparisons of the monitoring data for the years that data are collected. Annual reports will be submitted to the County, CDFW, and USFWS.

7.5 REMEDIAL MEASURES/ADAPTIVE MANAGEMENT

If the program is not progressing as desired, corrective measures may be implemented. Corrective measures may include, but are not limited to: additional planting or seeding, altered maintenance effort, and increased watering regime.

7.6 MONITORING SCHEDULE

As described above, monthly inspections of the translocation and maintenance effort would be performed during Years 1 and 2, and every other month for the remainder of the 5-year maintenance and monitoring period. The first annual botanical monitoring event will occur in the first spring following installation. Reports will be prepared and submitted within 3 months of the annual monitoring visit.

8.0 COMPLETION OF PROGRAM

8.1 NOTIFICATION OF COMPLETION

The land owner shall notify the County, CDFW, and USFWS upon the mitigation site obtaining the Year 5 performance standards through the submittal of the final (Year 5) monitoring report.

8.2 CONFIRMATION

After receipt of the final monitoring report, the County, CDFW, and USFWS may inspect the sites to determine if the brodiaea translocation has been conducted in accordance with this plan.

8.3 LONG-TERM MANAGEMENT

The brodiaea receptor sites are located within the on-site biological open space of the Questhaven project. The Questhaven project will be responsible for establishing a conservation easement over the entire open space area (which also includes adjacent, off-site mitigation land) and will provide for long-term maintenance and monitoring until the sign-off of all on- and off-site mitigation efforts—including the translocation program. At that point, a designated long-term management entity will be responsible for managing the open space in accordance with an approved management plan. A Conceptual Upland Habitat Biological Resources Management Plan (Alden 2024b) has been prepared to guide the long-term management of the entire open space area.

9.0 CONTINGENCY MEASURES

9.1 INITIATING PROCEDURES

An integral part of a successful translocation effort is the ability to detect problems early in the process, determine the cause of the problem, and attempt to modify the program to accommodate emerging issues or situations. Minor problems such as trash, vandalism, isolated instances of plant mortality, or small-scale weed or pest infestations will be rectified as they are discovered during routine monitoring and would not warrant the implementation of contingency measures.

If a performance standard is not met for all or any portion of a receptor site in any year, or if the final performance standards are not met, the Restoration Specialist will prepare an analysis of the cause(s) of failure, and propose remedial action for approval by the County, CDFW, and USFWS. These measures may include additional planting/seeding, adjustment of the management activities, or other design changes.

9.2 FUNDING MECHANISM

The land owner shall be responsible for all costs associated with any remedial measures.

9.3 RESPONSIBLE PARTIES

The land owner shall be the responsible party for any remedial measures.

10.0 REFERENCES CITED

Alden Environmental, Inc. 2024a. Biological Technical Report for the Questhaven Tentative Map Project. May 6.

2024b. Conceptual Upland Habitat Biological Resources Management Plan for the Questhaven Tentative Map Project PDS2020-TM-5643. May 6.

California Native Plant Society. 2022. Calscape, Orcutt's Brodiaea. [https://calscape.org/Brodiaea-orcuttii-\(\)](https://calscape.org/Brodiaea-orcuttii-())

**Questhaven Tentative Map Project
Habitat Restoration Plan
PDS2020-TM-5643**

May 6, 2024

Prepared by:

A handwritten signature in black ink, appearing to read 'Greg Mason', is centered within a white rectangular box.

Greg Mason
County Approved CEQA Consultant-Revegetation

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San Diego, CA 92104

Project Applicant:

ColRich Communities
444 West Beech Street, Suite 300
San Diego, CA 92101

Prepared for the County of San Diego

Questhaven Tentative Map Project Habitat Restoration Plan

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1.0 INTRODUCTION

This plan addresses the habitat restoration to be conducted as required mitigation for the Questhaven Tentative Map Project. Project impacts and required mitigation are presented in the Biological Technical Report for the project (Alden 2024). Specifically, this plan includes restoration of southern mafic chaparral/coastal sage scrub ecotone and coastal sage scrub communities, as well as the creation of water holding basins for spadefoot toad breeding. This plan does not address any other project components.

2.0 DESCRIPTION OF THE DEVELOPMENT PROJECT/IMPACT SITE

2.1 RESPONSIBLE PARTIES

The project site is currently owned by Colrich Communities. Contact information is provided below.

Colrich Communities
c/o Ms. Rita Mahoney
444 West Beech Street, Suite 300
San Diego, CA 92101

2.2 LOCATION OF THE DEVELOPMENT PROJECT

The approximately 69.1-acre Questhaven development project site is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. The project site is located immediately south and west of the City of San Marcos and east of the City of Carlsbad. Interstate 5 is located approximately 5.3 miles west of the project site. Specifically, the project site is located south of San Elijo Road and east of Denning Drive (Figures 1 and 2). The project site encompasses Assessor's Parcel Number 223-080-46-00 and is located in the west half of the northwest quarter of Section 33, Township 12 South, Range 3 West, San Bernardino Meridian on the U.S. Geological Survey (USGS) 7.5-minute Rancho Santa Fe quadrangle map (Figure 2).

2.3 SUMMARY OF THE OVERALL DEVELOPMENT PROJECT WITH PROPOSED RESTORATION

2.3.1 Current Environmental Setting and Site Conditions

The development project site is undeveloped and includes several unimproved dirt roads and trails. Historically, the northern portion of the site has been subject to disturbance and was used as a laydown yard for construction equipment associated with the adjacent former recycling facilities. Additionally, a portion of the western area of the site was used for agricultural uses. The southern portion of the project site contains a large area of steep hills that transition into a relatively flat area in the northern and central portion of the site. Elevations range between approximately 830 feet above mean sea level (amsl) in the southwest corner to 500 feet amsl along the eastern boundary. Soil on the development site is mapped as Cieneba very rocky coarse sandy loam (30 – 75 percent slopes), San Miguel rocky silt loam (9 – 30 percent slopes),

Huerhuero loam (2 – 9 percent slopes), San Miguel-Exchequer rocky silt loams (9 – 70 percent slopes), and Exchequer rocky silt loam (30 – 70 percent slopes).

To the west of the development project site is open space associated with the Rancho La Costa Habitat Conservation Area, beyond which is existing residential development. North of the project site is land designated for open space, beyond which are existing residential uses. East of the project site is a former recycling facility that is currently used as an indoor sports complex known as “Edenpark” and that is proposed for additional sports complex and commercial uses. To the south of the project site is open space associated with the Rancho La Costa Habitat Conservation Area. The project site is adjacent to the San Elijo Hills development in the City of San Marcos and is within their Sphere of Influence.

Nine vegetation communities/habitat types occur on the development project site and are described below (Table 1). The numbers in parentheses are the Holland Codes (Oberbauer et al. 2008).

Table 1 Development Project Site Vegetation Communities/Habitat Types	
Vegetation Community/Habitat¹	On Site
Diegan coastal sage scrub (32500)	9.8
Diegan coastal sage scrub-disturbed (32500)	2.1
Scrub oak chaparral (37900)	0.6
Mafic chamise chaparral (37220)	2.4
Mafic southern mixed chaparral (37122)	25.7
Non-native grassland (42200)	20.9
Eucalyptus woodland (79100)	2.9
Disturbed habitat (11300)	3.7
Developed and ornamental (12000)	1.0
TOTAL	69.1

¹Categories and numeric codes are from Oberbauer et al. 2008.

A total of 121 species of plants (including 43 non-native species) and 89 animal species were observed during surveys for the development project.

Four sensitive animal species, spadefoot toad (*Spea hammondi*), Cooper’s hawk (*Accipiter cooperii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and Coastal California gnatcatcher (*Polioptila californica californica*) were observed on the development project site (Alden 2024). The least Bell’s vireo (*Vireo bellii pusillus*) also was observed within the project mitigation area.

Four special status plant species Orcutt’s brodiaea (*Brodiaea orcuttii*), Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), Nuttall’s scrub oak (*Quercus dumosa*), and Ashy spike-moss (*Selaginella cinerascens*) were observed on the development project site (Alden 2024).

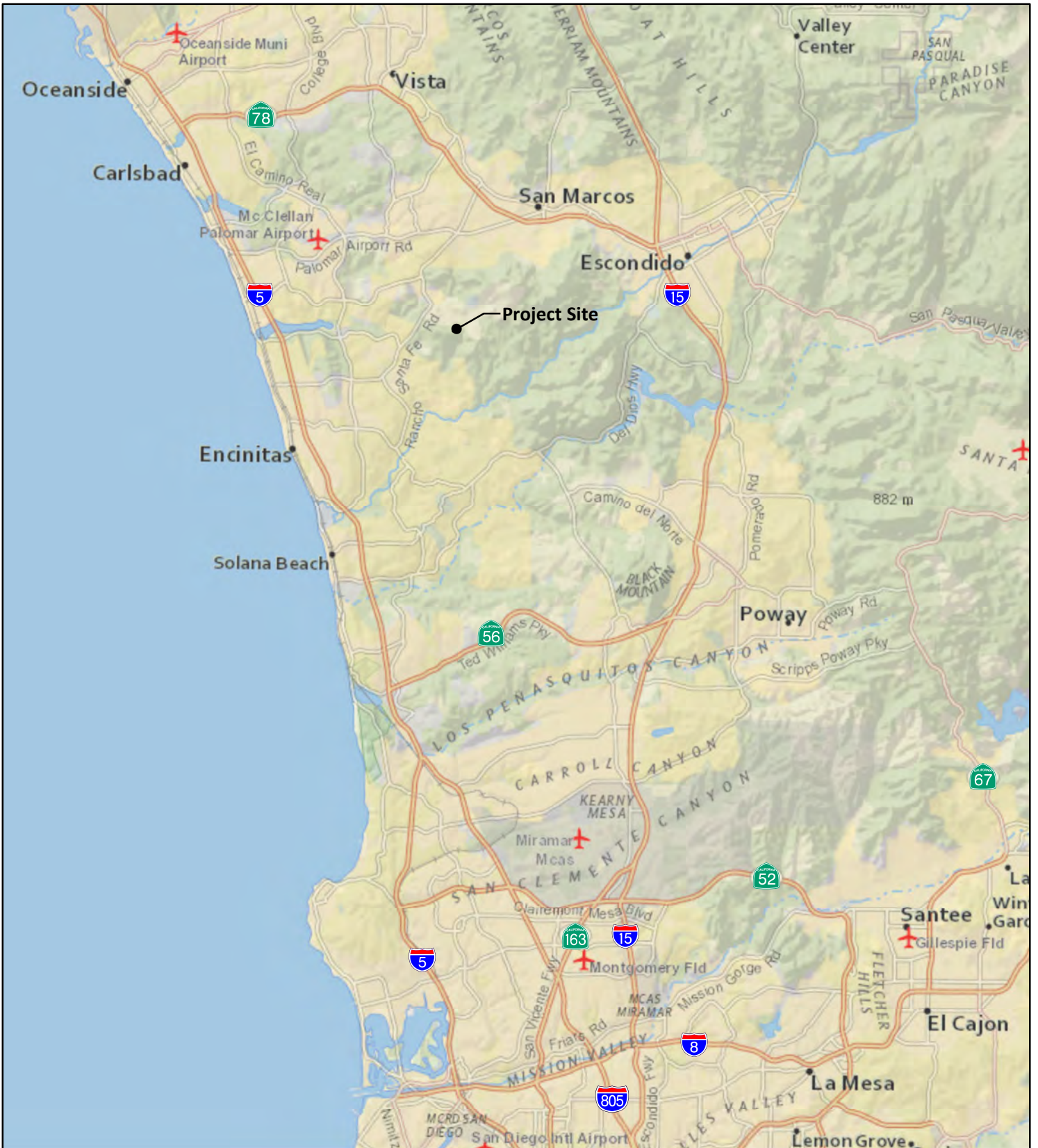
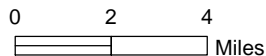
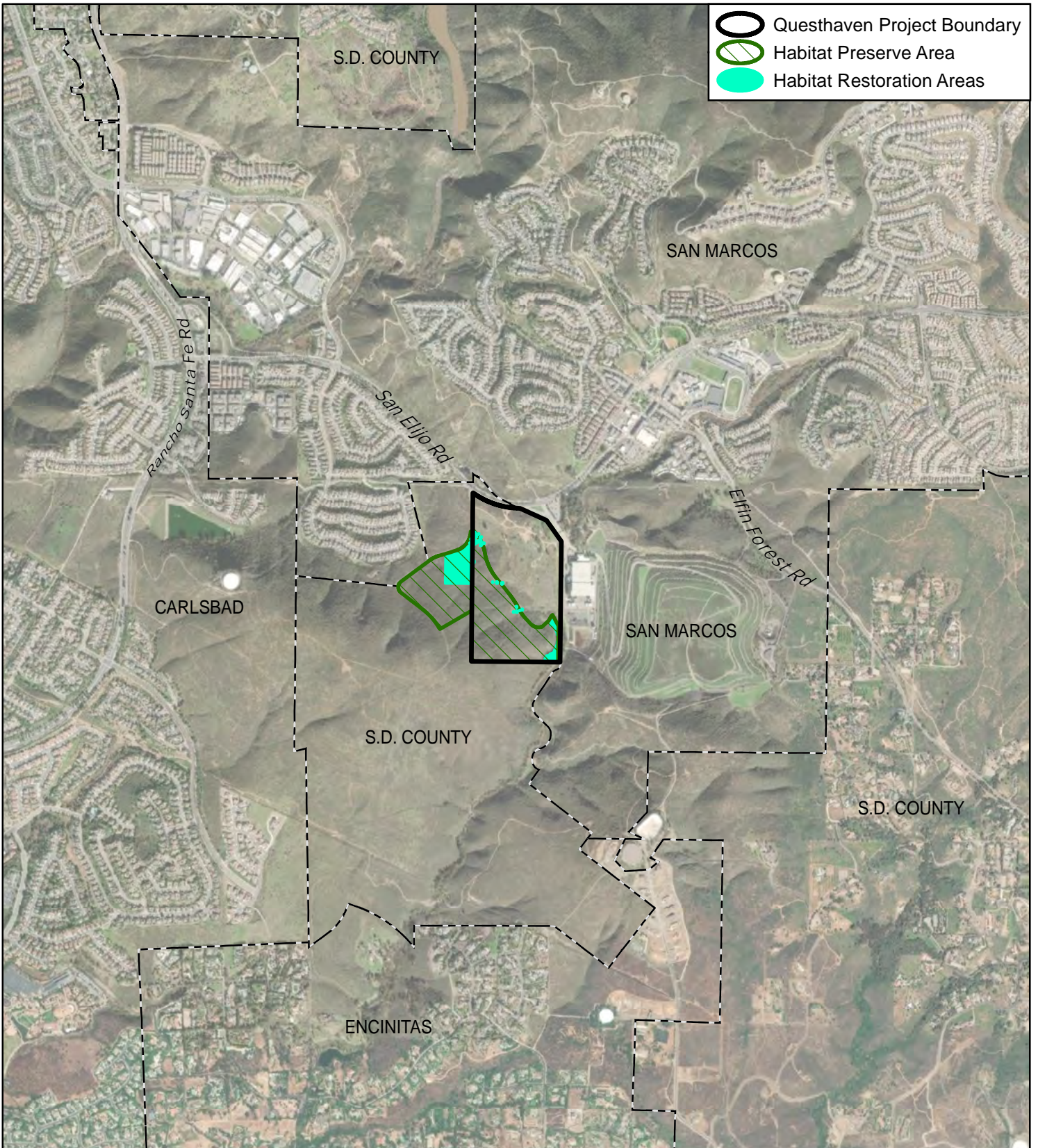





Figure 1

Regional Location

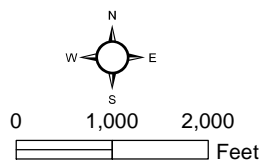
QUESTHAVEN
HABITAT RESTORATION PLAN





-  Questhaven Project Boundary
-  Habitat Preserve Area
-  Habitat Restoration Areas

Source: SanGIS



 **ALDEN**
ENVIRONMENTAL, INC

Figure 2

Project Location

QUESTHAVEN
HABITAT RESTORATION PLAN

2.3.2 Sensitive Resources Affected and Addressed in this Plan

The project would impact a total of 32.9 acres, including Diegan coastal sage scrub, scrub oak chaparral, mafic chamise chaparral, mafic southern mixed chaparral, and non-native grassland communities. The mitigation effort includes habitat preservation (44.4 acres) and habitat restoration (5.9 acres) within an adjacent 50.3 acre area (Figure 3). This document addresses the habitat restoration effort.

2.3.3 Type, Functions, and Value of the Habitat to be Restored

This plan includes restoration of mafic southern mixed/coastal sage scrub ecotone and coastal sage scrub communities. In addition, this plan incorporates creation of shallow ephemeral water holding basins (puddles) to be used by the spadefoot toad for breeding purposes.

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Typical species found within Diegan coastal sage scrub, including on the project site, are California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). The coastal sage scrub restoration in the southeastern area will replace the existing, non-native, eucalyptus woodlands with high quality native coastal sage scrub habitat.

Mafic southern mixed chaparral on site occurs on San Miguel series soils that are formed from metavolcanic rock that overlays metavolcanic bedrock. This chaparral on site is composed of broad-leaved sclerophyllous shrubs that can reach six to 10 feet in height and form dense often nearly impenetrable stands with poorly developed understories. Characteristic plants in this community include black sage, fuchsia-flowered gooseberry (*Ribes speciosum*), spiny redberry (*Rhamnus ilicifolia*), holly-leaf redberry (*Rhamnus ilicifolia*), chamise, toyon (*Heteromeles arbutifolia*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*). The mafic southern mixed chaparral/coastal sage scrub ecotone restoration is intended to, over time, provide for a mature native community of shrub species. The coastal sage scrub component is included to help provide for interim native species cover and allow for the slower growing chaparral species to become established.

These communities are important components of the San Diego County ecosystem; they provide habitat for sensitive plant and animal species. Additionally, the constructed basins will specifically support extant populations of spadefoot toad, as well as other species that may utilize the basins when they are holding water.

3.0 GOALS OF THE RESTORATION

3.1 RESPONSIBILITIES

3.1.1 Project Proponent

Colrich Communities (or the owner at the time of implementation) will be responsible for financing the installation, maintenance, and monitoring of the restoration.

3.1.2 County of San Diego

As part of the monitoring program, annual reports prepared by the restoration specialist will be submitted to the Wildlife Agencies and County. The County will review these reports for completeness and will determine the success of the restoration effort together with the Wildlife Agencies.







3.1.3 Restoration Specialist

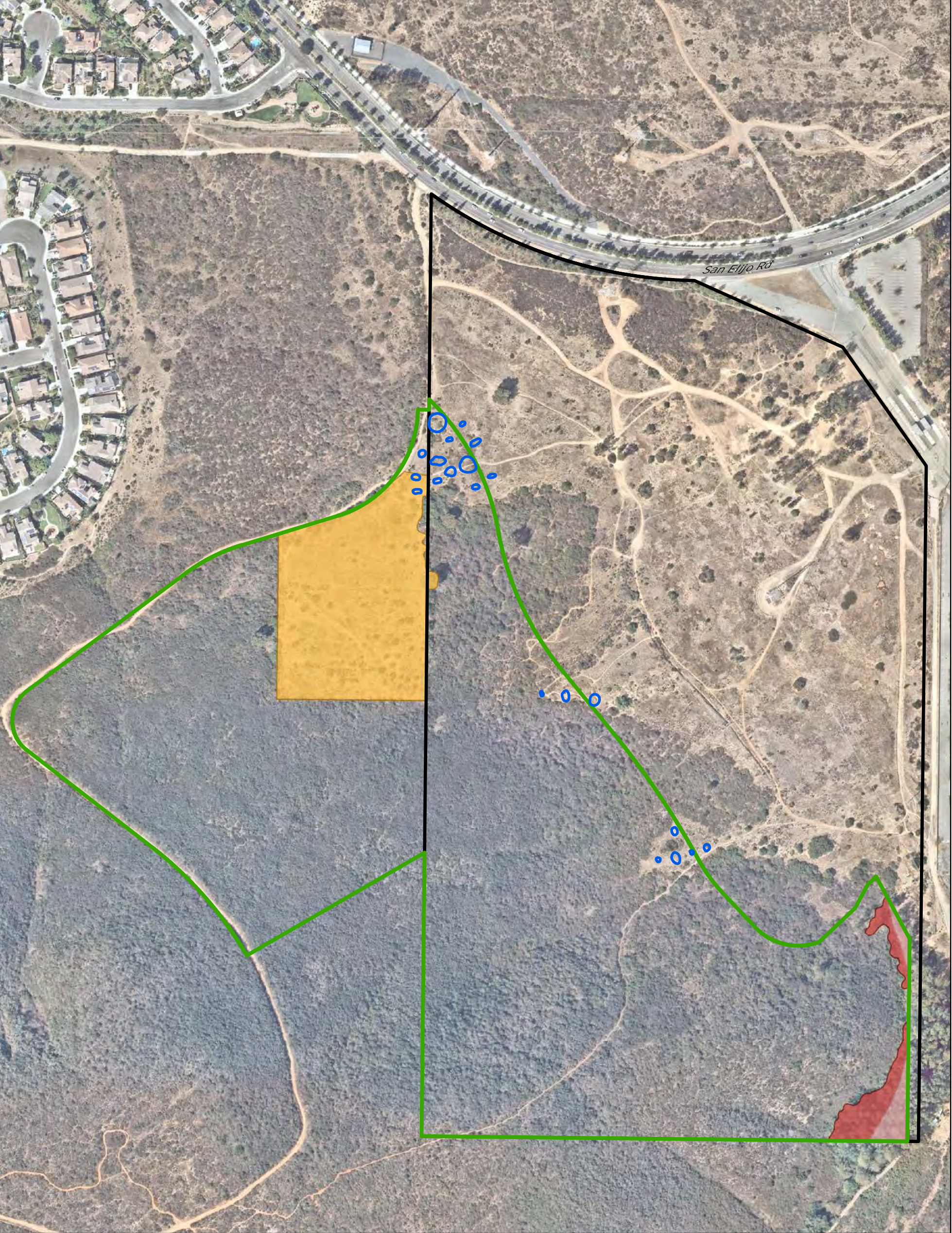
Overall supervision of the installation, maintenance, and monitoring of this restoration program will be the responsibility of a restoration specialist with a minimum of 5 years of habitat restoration experience. The restoration specialist will educate all participants with regard to program goals and directly oversee all aspects of the restoration. In addition, the specialist will conduct all monitoring data collection, annual assessments, and prepare all required reports. If necessary, the restoration specialist will provide the project proponent and contractor with a brief report, including a written list of items in need of attention following each monitoring visit. The contractor will be responsible for carrying out all required measures in a timely manner. The restoration specialist will notify the contractor and responsible party if any requested remediation is not addressed. The restoration specialist will make all contractors, subcontractors, and supervisors aware of the agency permits and authorizations associated with the restoration. Copies of the permits will be kept on site at all times during periods of active work and must be presented to any agency personnel upon demand.

3.1.4 Installation/Maintenance Contractor

The installation and maintenance contractor(s) will have habitat restoration experience and will, under the direction of the restoration specialist, be responsible for tasks such as site preparation, planting, seeding, and maintenance. The restoration specialist will educate the contractor(s) on the installation and maintenance of native plant species.

After the installation is complete, maintenance personnel will initiate the 5-year maintenance program under the direction of the restoration specialist. Maintenance crews will service the entire restoration area regularly following installation. Service will include, but not be limited to, weed control, trash removal, watering, fence repair, dead plant replacement, and re-seeding. All activities conducted will be seasonally appropriate and approved by the restoration specialist. The maintenance crew will meet the restoration specialist at the site when requested and will perform all checklist items in a timely manner as directed by the restoration specialist. The restoration specialist will ensure that maintenance personnel are capable of discerning between native plant species and non-native species.

-  Habitat Preserve Area
-  Questhaven Project Boundary
-  Coastal Sage Scrub Seeding and Planting Area
-  Transitional Coastal Sage Scrub/Riparian Seeding Area
-  Southern Mixed Chaparral/Coastal Sage Scrub Restoration Area
-  Seasonal Basin Restoration Area



Aerial Photo: Nearmap 2020

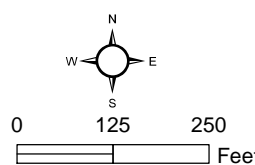


Figure 3

Habitat Restoration Areas

QUESTHAVEN
HABITAT RESTORATION PLAN

Prior to the commencement of restoration activities, the contractor(s) will review all aspects of this plan including permit requirements, site protection, maintenance inspections, landscape procedures, and monitoring.

3.2 TYPE AND AREAS OF HABITAT TO BE RESTORED

As noted above, this plan includes restoration of mafic southern mixed chaparral/coastal sage scrub ecotone and coastal sage scrub habitats (Table 2, Figure 3), along with the creation of shallow, ephemeral water holding basins.

Type	Acreage
Mafic Southern Mixed Chaparral/ Coastal Sage Scrub Ecotone	4.8
Coastal Sage Scrub	1.1
Total	5.9

In addition to these restored habitats, the project includes creation of 21 shallow, ephemeral water holding basins with a combined area of 0.2 acre. The basin creation will occur within and adjacent to the habitat restoration and therefore is not included in the acreage totals above. These basins are intended to be a topographic feature in a larger habitat restoration/preserve area and not a standalone vegetation community/habitat type.

3.3 FUNCTIONS AND VALUES GOALS

The goals of this restoration effort are to restore native habitats that would, at a minimum, replace the functions and values lost through impacts from the development project. The restored areas will provide continuous habitat with the adjacent preserved native habitats, both on- and off-site. The restoration will help maintain a continuous wildlife movement corridor for the site and the larger vicinity.

3.4 TIME LAPSE

Implementation of the habitat restoration effort would commence prior to, or concurrent with the Questhaven project construction/grading.

3.5 COST

The project applicant shall be responsible for all costs associated with the project. The final restoration plan will provide a detailed cost estimate that includes site preparation, fencing, signage, container stock, hydroseeding, irrigation, report preparation, monitoring, maintenance, and weeding along with a 20% contingency factor and a 3% inflation factor.

4.0 DESCRIPTION OF THE PROPOSED RESTORATION SITE

4.1 LOCATION AND SIZE OF THE RESTORATION AREAS

The combined restoration areas are 5.9 acres in size (Table 2) and located in two distinct locations on site (Figure 3).

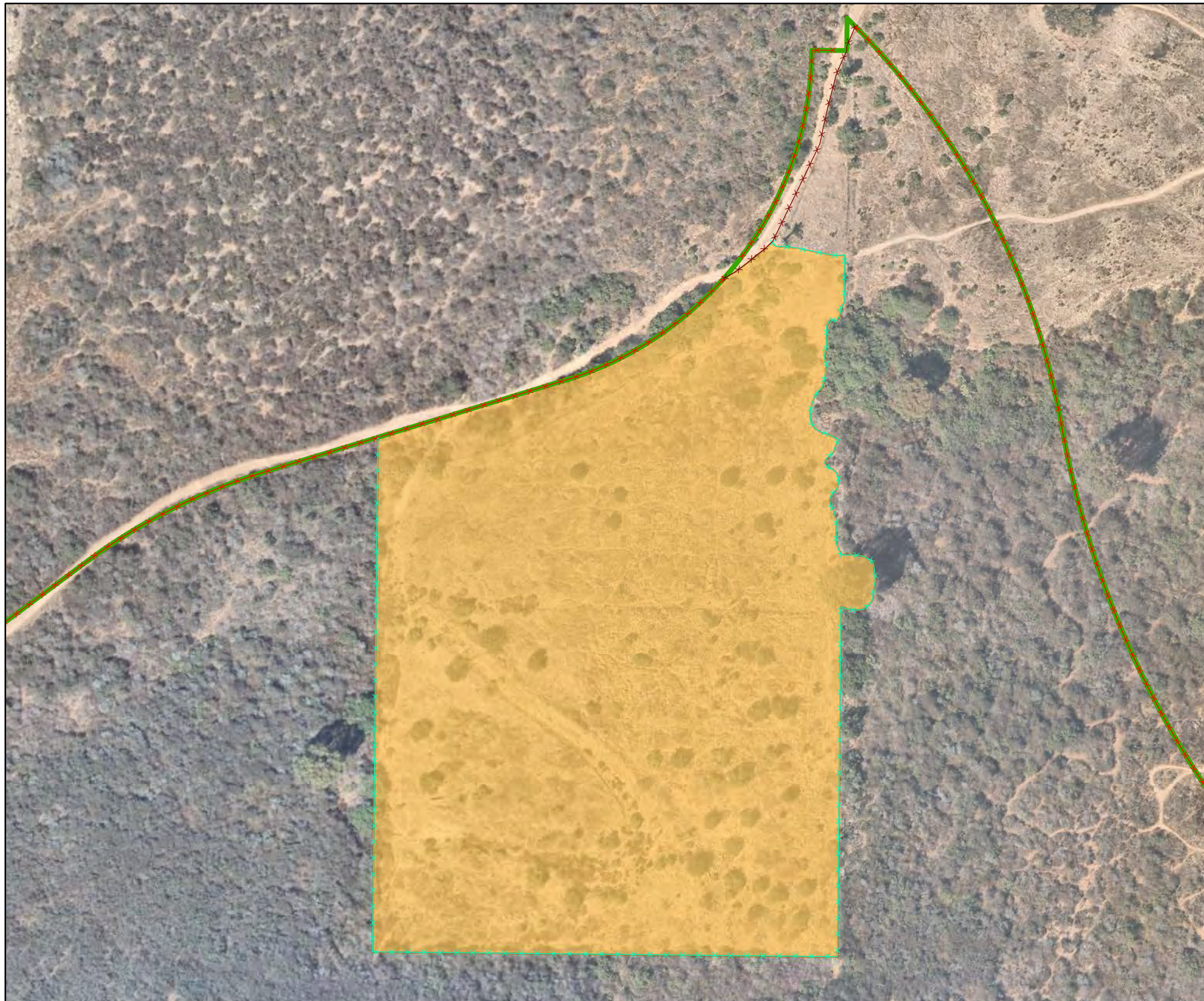
4.2 PRESENT AND PROPOSED USES






The mafic southern mixed chaparral/coastal sage scrub ecotone area (Figure 4) is located on the site of a former fig farm dating back to the 1980s. Agricultural activities have long since been discontinued on the site and it is now in a disturbed state, supporting primarily non-native weed species. There are some scattered remnant trees and debris on the site. The non-native vegetation, debris, and vestiges of the previously agricultural activity will be removed and the entire area restored to native habitat.

The coastal sage scrub area (Figure 5) currently supports a mature grove of eucalyptus trees. In addition, there is an existing drainage within this area that conveys water from stormwater outfalls located off site. The eucalyptus trees are a non-native, invasive species and will be removed from the entire area. Once the trees are removed the area will be restored to coastal sage scrub habitat. A portion of this area where the existing drainage occurs also will be restored, but may not fully become sage scrub as it is wetter than the surrounding area. A transitional coastal sage scrub/riparian area seed mix will be applied near the drainage so that native wetland/riparian species may become established where it is too wet for coastal sage scrub.

The proposed basin creation would occur in 3 distinct locations, within and adjacent to the onsite preserve/restoration areas (Figures 6a-6c). These basins are intended to be shallow features that will hold water during, and shortly after rainfall events. They are not intended to serve as vernal pool or wetland habitat; rather, their purpose is to provide breeding locations for extant spadefoot toads.

A draft easement for the combined preserve and restoration areas will be prepared and submitted to the County for approval. This easement will state that no other easements or activities that would result in soil disturbance and/or vegetation removal will be allowed within the easement area. Upon approval, the easement shall be executed and a final copy furnished to the County.



-  Habitat Preserve Area
-  Southern Mixed Chaparral/Coastal Sage Scrub Restoration Area
-  Preserve Area Fencing
-  Permanent Fencing
-  Temporary Fencing

SOUTHERN MIXED CHAPARRAL/COASTAL SAGE SCRUB SEED MIX	
Species	Pounds Per Acre
Black sage (<i>Salvia mellifera</i>)	3
Blue Dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	3
California melic (<i>Melica imperfecta</i>)	3
California sage brush (<i>Artemisia californica</i>)	3
Chamise (<i>Adenostoma fasciculatum</i>)	4
Chia (<i>Salvia columbariae</i>)	1
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	3
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	4
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Laurel sumac (<i>Malosma laurina</i>)	3
Lemonadeberry (<i>Rhus integrifolia</i>)	3
San Diego needlegrass (<i>Stipa lepida</i>)	5
TOTAL	54

SOUTHERN MIXED CHAPARRAL/COASTAL SAGE SCRUB CONTAINER STOCK SPECIES	
Species	Number Per Acre
Broom baccharis (<i>Baccharis sarothroides</i>)	15
California buckwheat (<i>Eriogonum fasciculatum</i>)	100
California sage brush (<i>Artemisia californica</i>)	100
Chamise (<i>Adenostoma fasciculatum</i>)	100
Coastal prickly pear (<i>Opuntia littoralis</i>)	10
Laurel sumac (<i>Malosma laurina</i>)	10
Lemonadeberry (<i>Rhus integrifolia</i>)	20
Nuttall's scrub oak (<i>Quercus dumosa</i>)	25
Toyon (<i>Heteromeles arbutifolia</i>)	30
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	30
TOTAL	440

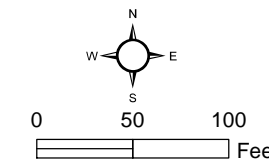
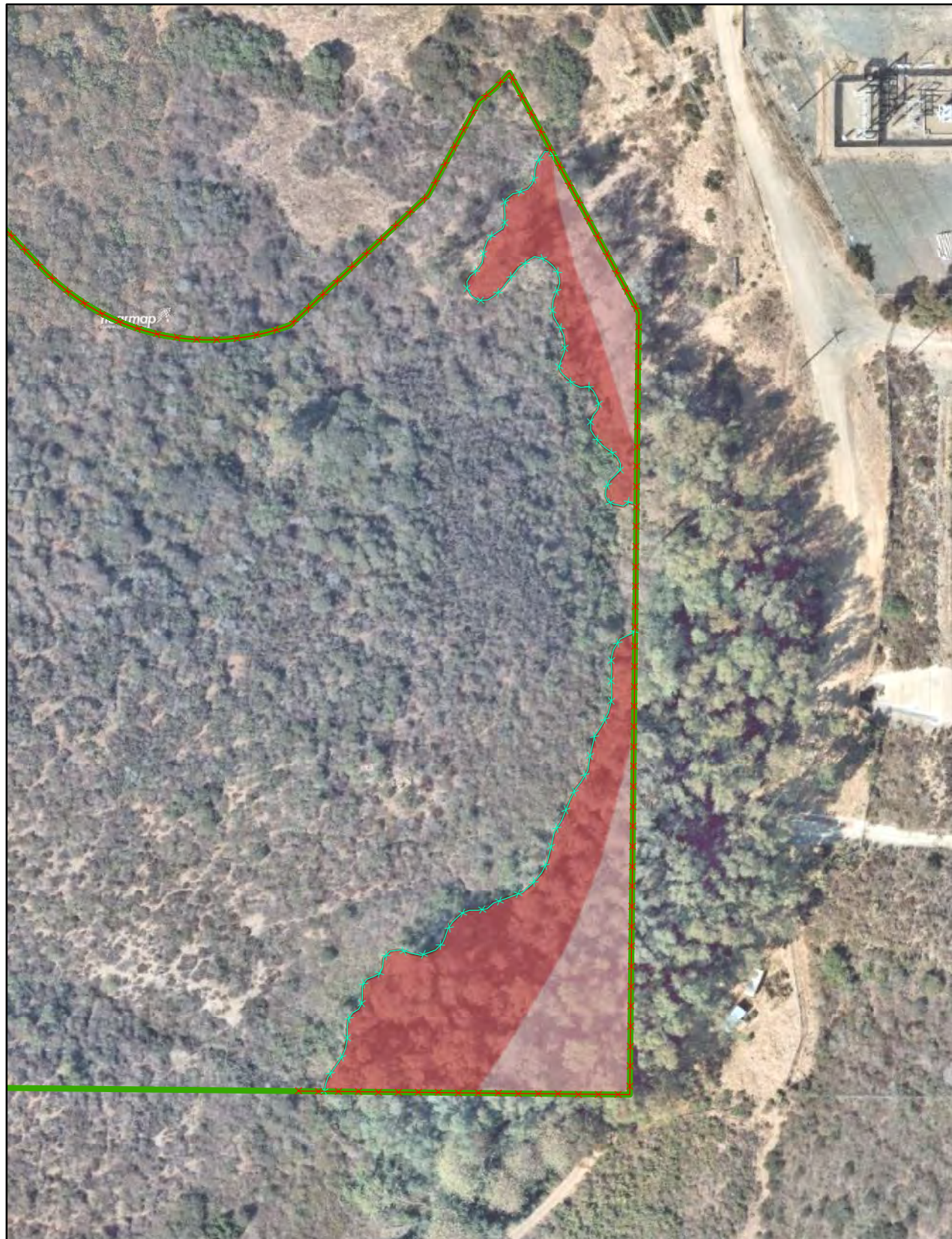


Figure 4

Southern Mixed Chaparral/
Coastal Sage Scrub Restoration

QUESTHAVEN
HABITAT RESTORATION PLAN



- Habitat Preserve Area
- Coastal Sage Scrub Seeding and Planting Area
- Transitional Coastal Sage Scrub/Riparian Seeding Area
- Preserve Area Fencing
- Temporary Fencing

Coastal Sage Scrub Area

COASTAL SAGE SCRUB SEED MIX	
Species	Pounds Per Acre
Blue Dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	3
California melic (<i>Melica imperfecta</i>)	5
California sage brush (<i>Artemisia californica</i>)	3
Chia (<i>Salvia columbariae</i>)	1
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	3
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	6
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Lemonadeberry (<i>Rhus integrifolia</i>)	1
San Diego needlegrass (<i>Stipa lepida</i>)	10
TOTAL	51

COASTAL SAGE SCRUB CONTAINER STOCK SPECIES¹

Species	Number Per Acre
Laurel sumac (<i>Malosma laurina</i>)	10
Coastal prickly pear (<i>Opuntia littoralis</i>)	10
Broom baccharis (<i>Baccharis sarothroides</i>)	15
Lemonadeberry (<i>Rhus integrifolia</i>)	5
San Diego needlegrass (<i>Stipa lepida</i>)	300
California sage brush (<i>Artemisia californica</i>)	100
California buckwheat (<i>Eriogonum fasciculatum</i>)	100
TOTAL	440

¹All container stock is 1 gallon except for *Stipa lepida* which are plugs

Transitional Coastal Sage Scrub/Riparian Area

COASTAL SAGE SCRUB/RIPARIAN SEED MIX	
Species	Pounds Per Acre
Arroyo willow (<i>Salix lasiolepis</i>)	3
Blue Dicks (<i>Dichelostemma capitatum</i>)	2
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	2
California deergrass (<i>Muhlenbergia rigens</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	2
California melic (<i>Melica imperfecta</i>)	3
California sage brush (<i>Artemisia californica</i>)	3
Creeping wild rye (<i>Leymus triticoides</i>)	2
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	2
Elderberry (<i>Sambucus nigra</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	2
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Mulefat (<i>Baccharis salicifolia</i>)	3
San Diego needlegrass (<i>Stipa lepida</i>)	3
San Diego sagewort (<i>Artemisia palmeri</i>)	3
Tarragon (<i>Artemisia dracunculus</i>)	3
Western ragweed (<i>Ambrosia psilostachya</i>)	3
Yerba mansa (<i>Anemopsis californica</i>)	3
TOTAL	58

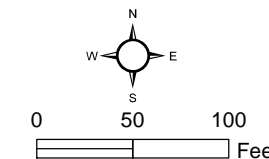
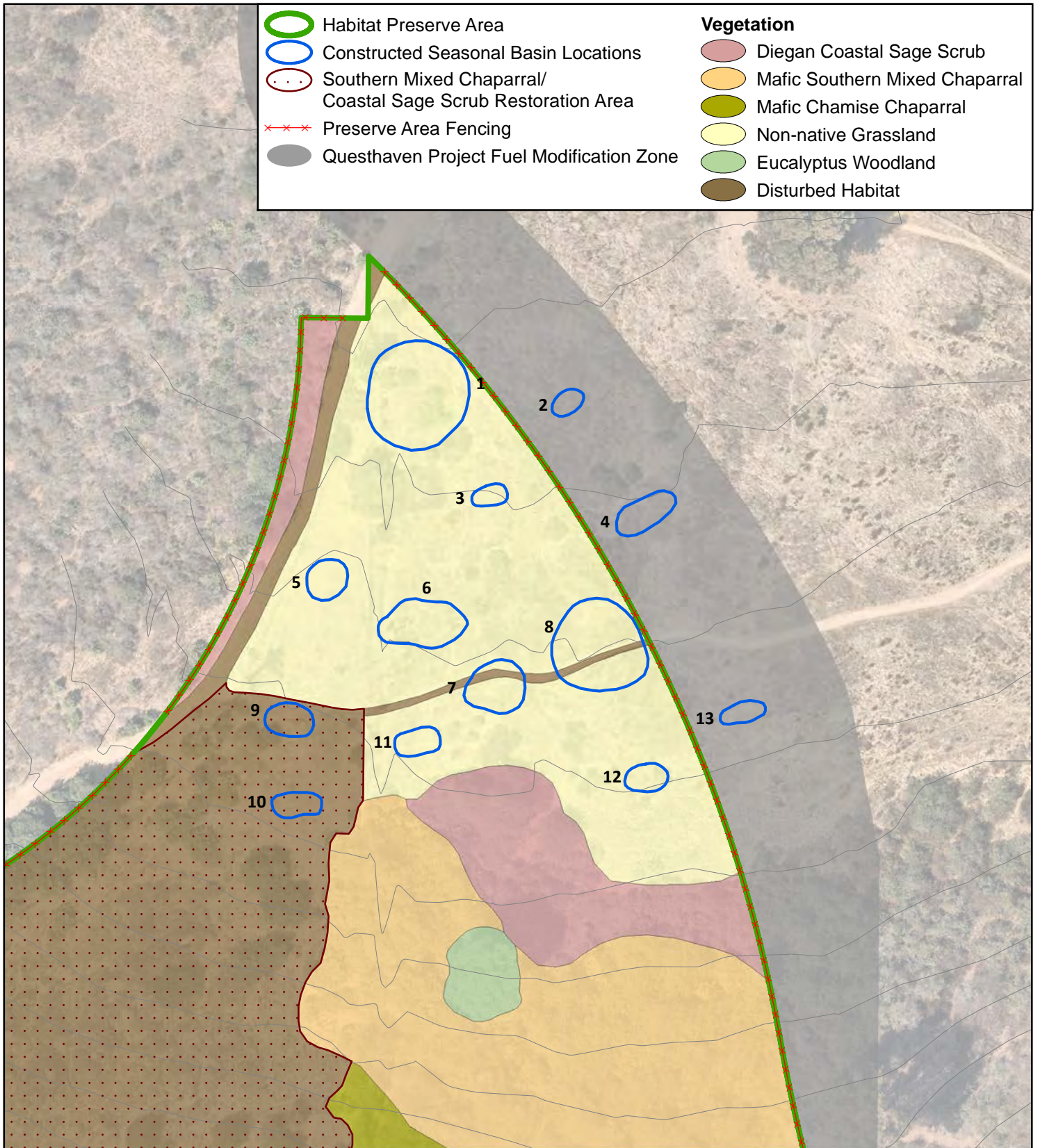


Figure 5

Diegan Coastal Sage Scrub Restoration

QUESTHAVEN
HABITAT RESTORATION PLAN

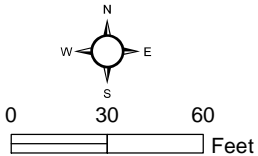


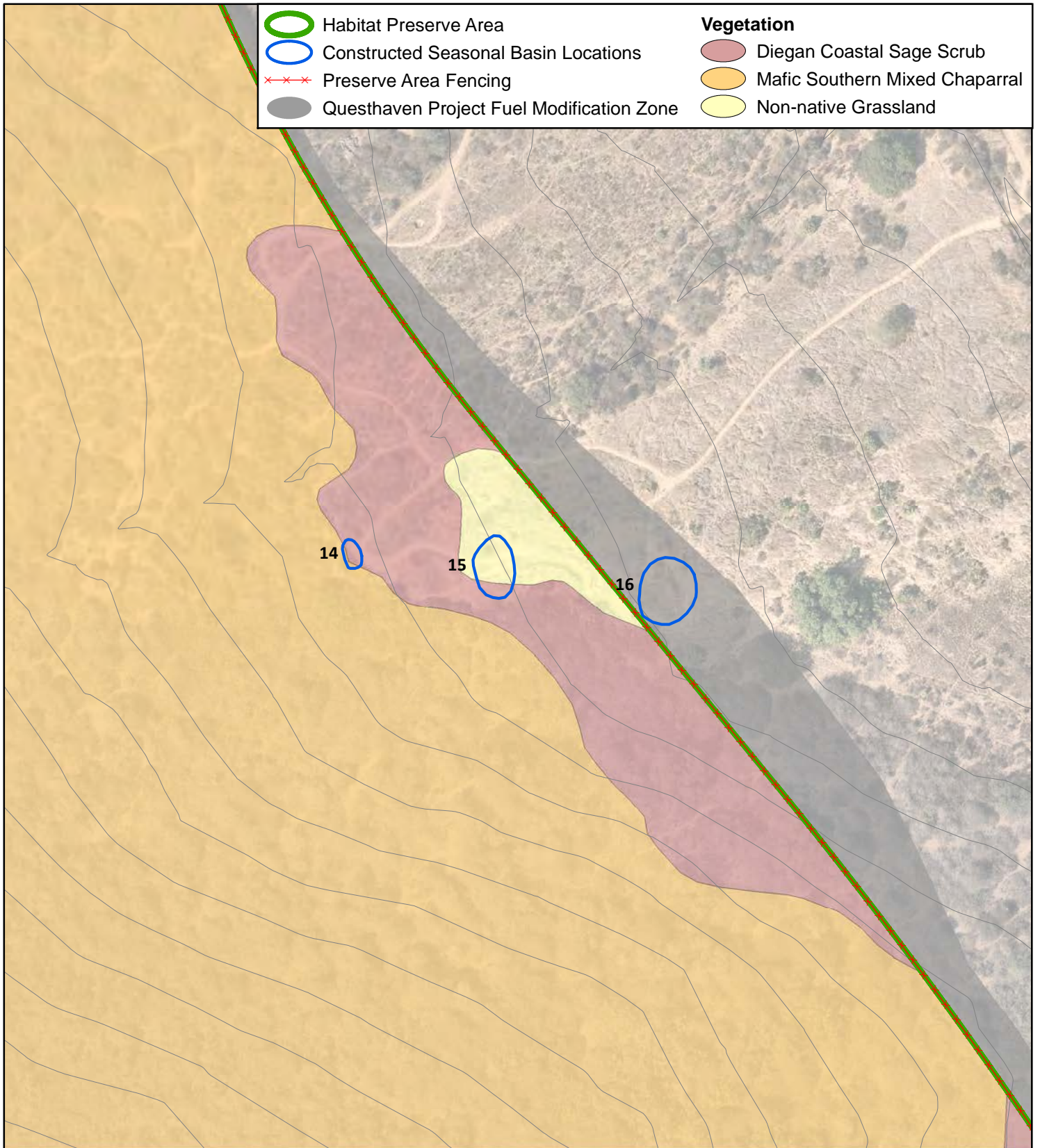
Aerial Photo: Nearmap 2020

Figure 6a

Basin Creation Area 1

QUESTHAVEN
HABITAT RESTORATION PLAN



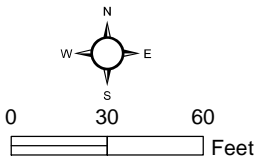


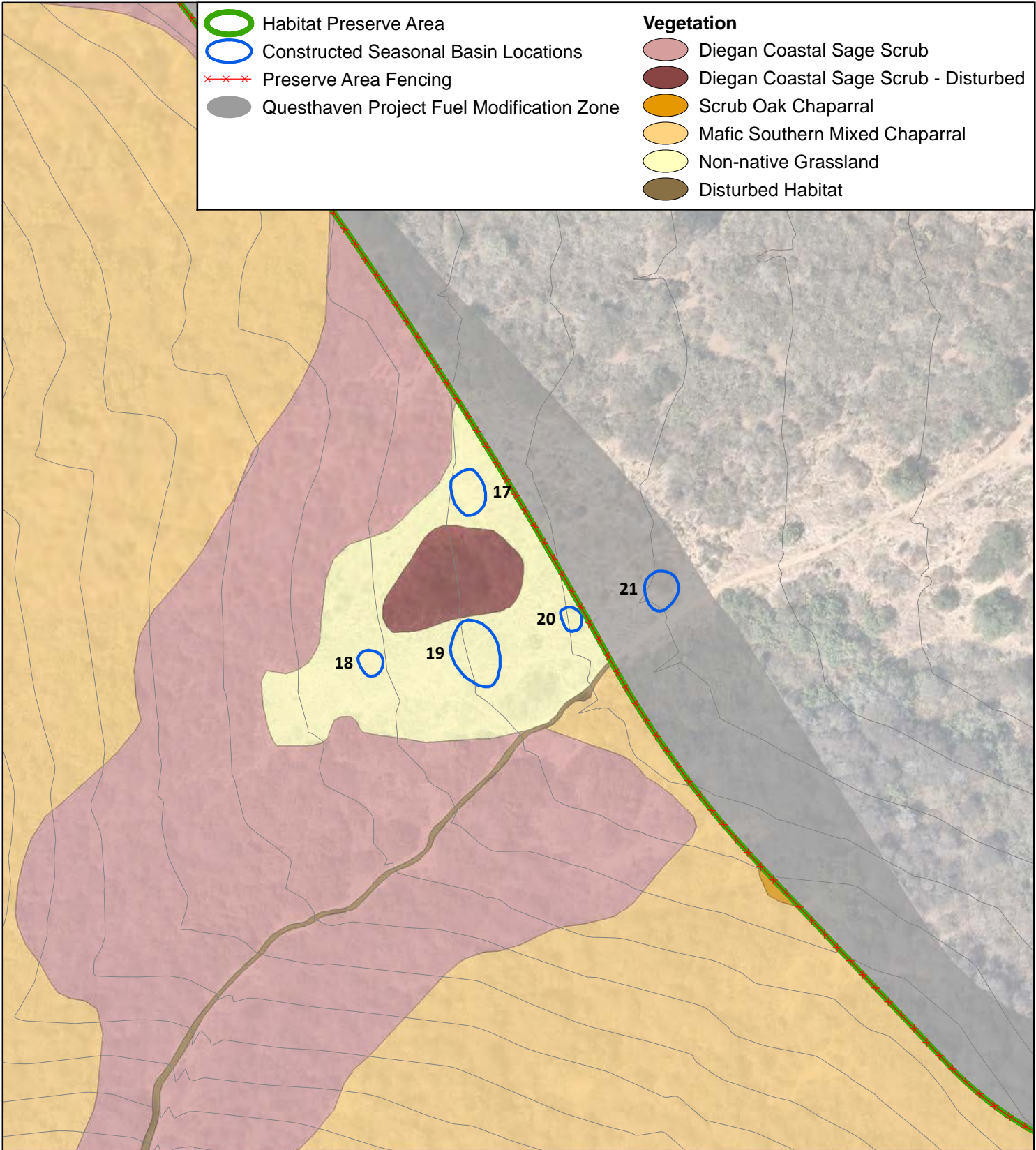
Aerial Photo: Nearthmap 2020

Figure 6b

Basin Creation Area 2

QUESTHAVEN
HABITAT RESTORATION PLAN



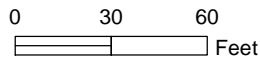
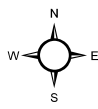


Aerial Photo: Nearmap 2020

Figure 6c

Basin Creation Area 3

QUESTHAVEN
HABITAT RESTORATION PLAN



5.0 IMPLEMENTATION PLAN

5.1 RATIONALE FOR EXPECTING IMPLEMENTATION SUCCESS

The sites selected for the restoration currently support non-native and disturbed habitats (Figure 3) adjacent to native vegetation communities. These areas previously supported native habitat and the soils are appropriate for the proposed restoration. Implementation of this plan would result in restoration of habitats that are present and previously occurred on the site. Therefore, it is expected that the restoration will be successful.

5.2 FINANCIAL ASSURANCES

Colrich Communities (or the owner at the time of implementation) will be responsible for financing the installation, maintenance, and monitoring of the restoration.

A restoration agreement shall be signed and notarized by the property owner following approval of this restoration plan and accompanied by the required security as agreed upon by the County of San Diego.

5.3 SCHEDULE

Implementation of the restoration program would commence prior to, or in conjunction with ground disturbance for the Questhaven development project. These activities are anticipated to take between 6 and 8 weeks to complete. A restoration plan checklist, by project phase, is provided as Table 3.

5.4 SITE PREPARATION

5.4.1 Pre-Construction Meeting

All activities will be carried out under the supervision of the restoration specialist. The restoration specialist will mark all work areas. Existing sensitive habitats and native plants to be avoided will be marked by the restoration specialist. Access routes also will be identified and marked. An on-site meeting will be held with the restoration specialist and all installation personnel to identify sensitive areas and devise a strategy for avoidance prior to initiation of restoration activities. Staging areas will be established and all vehicles and construction equipment will be restricted to the staging areas when not required for restoration activities.

5.4.2 Fencing

Prior the restoration effort, temporary orange construction fences will be installed along the perimeter of all work areas to restrict access. The larger open space easement area (preserved and restored lands) will include permanent fencing following restoration activities. Steel signs will be attached to the fencing that will provide notice, in both English and Spanish, that the area is an ecological preserve and that trespassing is prohibited.

The final restoration plan will include construction details and locations of permanent fencing and signage on the landscape plans.

**Table 3
Restoration Plan Checklist**

Construction Phase	Task	Applicable Parties			
		Project Proponent	Installation Contractor	Maintenance Contractor	Restoration Specialist
Pre-construction	Order seed and container stock		X		
	Attend pre-construction meeting	X	X		X
	Document pre-impact conditions,				X
	Identify site limits and staging area				X
Installation	Delineate mitigation boundaries		X		X
	Remove eucalyptus trees				X
	Debris removal		X		X
	Basin creation		X		X
	Pre-planting weed control		X		
	Install container stock and seed		X		X
	Install irrigation system		X		X
	Prepare/submit as-built report				X
Five-year Maintenance and Monitoring Period	Conduct maintenance monitoring and annual monitoring				X
	Prepare as needed maintenance monitoring memos				X
	Maintain and monitor site for 5 years - until signed off by County			X	X

5.4.3 Eucalyptus Removal

The initial site preparation will involve removal of the eucalyptus trees in the coastal sage scrub restoration area. All eucalyptus trees will be removed from the site and disposed of properly. Remaining stumps will be treated with herbicide (drill & inject method) to ensure that they do not resprout.

5.4.4 Site Cleanup/Dethatching

Refuse, debris, and deleterious soil that may be within the restoration areas will be removed and disposed of in a licensed landfill. Non-native habitat within the restoration areas will be mowed and dethatched prior to initiation of other activities. The dethatching will remove dead weed material that may have accumulated on the ground over time and that can inhibit the establishment and growth of native species. Dethatching consists of mowing or weed-whipping standing grass stalks, and raking, collecting, and removing the grass straw and other cut weeds from the site. All material will be removed from the site and be disposed of in a legal manner. Prior to dethatching, areas supporting native plants (if any) would be flagged for avoidance.

5.4.5 Basin Creation

The created basins are designed to have maximum depths of 8 to 10 inches, with the goal of having appropriate ponding for spadefoot toad breeding (i.e., retain water for approximately 30 days) and that the basins will have slopes of 12:1 to 15:1 to provide smooth, micro-topographic variance for spadefoot toad access. These basins would be unvegetated and intended to serve as vernal pool or wetland habitat. As such, there is no planting or introduction of inoculum.

5.5 PLANTING PLAN

5.5.1 Seed Mixes

Seeding will take place within the mafic southern mixed chaparral/coastal sage scrub ecotone area (Table 4; Figure 4) and the coastal sage scrub (including riparian transition) area (Tables 5 and 6; Figure 5). Seed will be sourced from as close to the site as possible. The source and proof (tags) for all seed will be provided.

Species	Pounds Per Acre
Black sage (<i>Salvia mellifera</i>)	3
Blue Dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	3
California melic (<i>Melica imperfecta</i>)	3
California sage brush (<i>Artemisia californica</i>)	3
Chamise (<i>Adenostoma fasciculatum</i>)	4
Chia (<i>Salvia columbariae</i>)	1
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	3
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	4
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Laurel sumac (<i>Malosma laurina</i>)	3
Lemonadeberry (<i>Rhus integrifolia</i>)	3
San Diego needlegrass (<i>Stipa lepida</i>)	5
TOTAL	54

Species	Pounds Per Acre
Blue Dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	3
California melic (<i>Melica imperfecta</i>)	5
California sage brush (<i>Artemisia californica</i>)	3
Chia (<i>Salvia columbariae</i>)	1
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	3
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	6
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Lemonadeberry (<i>Rhus integrifolia</i>)	1
San Diego needlegrass (<i>Stipa lepida</i>)	10
TOTAL	51

Table 6 Coastal Sage Scrub/Riparian Seed Mix	
Species	Pounds Per Acre
Arroyo willow (<i>Salix lasiolepis</i>)	3
Blue Dicks (<i>Dichelostemma capitatum</i>)	2
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	2
California deergrass (<i>Muhlenbergia rigens</i>)	3
California encelia (<i>Encelia californica</i>)	3
California everlasting (<i>Gnaphalium californicum</i>)	2
California melic (<i>Melica imperfecta</i>)	3
California sage brush (<i>Artemisia californica</i>)	3
Creeping wild rye (<i>Leymus triticoides</i>)	2
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	2
Elderberry (<i>Sambucus nigra</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	2
Flat-top buckwheat (<i>Eriogonum fasciculatum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
Mulefat (<i>Baccharis salicifolia</i>)	3
San Diego needlegrass (<i>Stipa lepida</i>)	3
San Diego sagewort (<i>Artemisia palmeri</i>)	3
Tarragon (<i>Artemisia dracunculus</i>)	3
Western ragweed (<i>Ambrosia psilostachya</i>)	3
Yerba mansa (<i>Anemopsis californica</i>)	3
TOTAL	55

A hydroseed slurry will be evenly applied in two stages such that an even, homogeneous distribution is made. The first stage will include the seed, a small amount of fiber mulch, and dye. This application will help ensure that maximum seed/soil contact is made. A second layer will be applied immediately following the first. The second layer will include additional fiber mulch, dye, and a tackifier. The tackifier will serve to help bind seed and soil until germination. Hydroseed specifications are presented in Table 7.

Table 7 Hydroseed Application Specifications		
Material	First Application	Second Application
Seed	As called for per site	N/A
Long fiber wood mulch	500 lbs/acre	1,000 lbs/acre
Dye	As necessary	As necessary
Tackifier	N/A	90 lbs/acre
Water	Sufficient to maintain slurry	Sufficient to maintain slurry

Hand seeding may be conducted in focused areas to help ensure targeted application of seed. Areas not treated with the hydroseed slurry will be hand seeded following hydroseeding to make sure all areas are seeded. These areas will be determined at the time of seeding and will include areas where hydroseeding may not be possible, where existing native plants may be negatively affected by the hydroseed slurry, or where it is thought that certain species may be appropriate in small areas. Seed of different species will only be mixed when they are to be applied to the same location. Individual species may be seeded separately as directed by the restoration specialist. Hand broadcasters will be used to help ensure a consistent application of seed. An inert carrier (sand, saw dust) may also be mixed with the seed to help maintain consistency. Seeding will not be conducted during windy conditions. Seed will be raked into soil after application to help increase seed/soil contact.

5.5.2 Container Stock

In addition to seed, native container stock will be planted within the restoration areas (Tables 8 and 9). The container stock will be sourced from as close to the site as possible. If container stock is unavailable from the site vicinity, the restoration specialist may substitute species as necessary. The source and proof for all plant material will be provided. All container stock will be inspected and approved by the restoration specialist prior to being installed. Specifically, the restoration specialist will ensure that:

- The correct number, size, and species ordered are delivered;
- Plants are healthy and showing no sign of disease;
- Roots fill the containers but are not root bound;
- There is no breakage of plants;
- Plants show no evidence of pests;
- Plants are in a state suitable for out-planting.

The restoration specialist will reject any plants not meeting these requirements.

Species²	Number Per Acre
Broom baccharis (<i>Baccharis sarothroides</i>)	15
California buckwheat (<i>Eriogonum fasciculatum</i>)	100
California sage brush (<i>Artemisia californica</i>)	100
Chamise (<i>Adenostoma fasciculatum</i>)	100
Coastal prickly pear (<i>Opuntia littoralis</i>)	10
Laurel sumac (<i>Malosma laurina</i>)	10
Lemonadeberry (<i>Rhus integrifolia</i>)	20
Nuttall's scrub oak (<i>Quercus dumosa</i>)	25
Toyon (<i>Heteromeles arbutifolia</i>)	30
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	30
TOTAL	440

¹All container stock is 1 gallon size

²If unavailable, restoration specialist shall substitute with other suitable species

Table 9 Coastal Sage Scrub Container Stock Species¹	
Species²	Number Per Acre
Laurel sumac (<i>Malosma laurina</i>)	10
Coastal prickly pear (<i>Opuntia littoralis</i>)	10
Broom baccharis (<i>Baccharis sarothroides</i>)	15
Lemonadeberry (<i>Rhus integrifolia</i>)	5
San Diego needlegrass (<i>Stipa lepida</i>)	300
California sage brush (<i>Artemisia californica</i>)	100
California buckwheat (<i>Eriogonum fasciculatum</i>)	100
TOTAL	540

¹All container stock is 1 gallon size

²If unavailable, restoration specialist shall substitute with other suitable species

5.6 IRRIGATION PLAN

A temporary, above ground irrigation systems will be installed in the restoration areas. The systems will provide head to head coverage to ensure adequate irrigation of the installed seed. The final restoration plan will include a detailed irrigation plan, compliant with the County’s Water Conservation in Landscaping Ordinance.

5.7 AS-BUILT CONDITIONS

The restoration specialist shall prepare and submit a map showing the as-built conditions of the restoration area within 6 weeks of completion of site preparation, planting, and basin creation.

6.0 MAINTENANCE DURING MONITORING

6.1 MAINTENANCE ACTIVITIES

A 5-year maintenance program is proposed to help ensure the successful establishment and persistence of the preserved and revegetated habitat. The maintenance program will involve removal of trash, weed control, fence and signage repair/replacement, and any remedial measures deemed necessary for restoration success (e.g., re-seeding).

6.1.1 Trash Removal

The maintenance contractor will remove any trash encountered within the restoration area during every maintenance event and dispose of it in a legally acceptable fashion.

6.1.2 Weed Control

Particular maintenance emphasis will be placed on pro-active weed control within the restoration area. The project would revegetate non-native grassland habitat, which is dominated by grass species that would otherwise be considered to be weeds. For this project, non-native grasses are the target species, and they will not be controlled as weeds. Other, non-grass weed species observed will be considered invasive and targeted for removal. All workers conducting weed removal activities will be educated to distinguish between native and non-native species, with special attention paid to special status plant species that may occur.

Weeds will be removed by hand or with small machinery (e.g., line trimmers) whenever possible, but focused herbicide application may be used if needed and requested by the restoration specialist. Herbicides will only be applied by workers licensed to use those chemicals. Additionally, herbicide will not be used during wet or windy conditions.

Weeds will be removed from the restoration areas and disposed of in a legal manner. All weeds will be removed prior to reaching 12 inches in height or before setting seed. Leaf and branch drop of native species will be left in place and not removed from the site.

6.2 SCHEDULE

Regular maintenance, trash removal, and weed control of the restoration area will be conducted during the first 5 years following implementation of the restoration program or until the restoration program is deemed successful. Maintenance personnel will visit the site at least bi-monthly for the 5-year maintenance and monitoring period. Additional visits will be conducted as directed by the restoration specialist during the rainy season (generally December through May) each year to keep weeds under control.

7.0 MONITORING PLAN FOR THE RESTORATION SITE

7.1 PERFORMANCE STANDARDS FOR TARGET DATES AND SUCCESS CRITERIA

The following sections provide performance standards to determine the successful completion of the 5-year restoration and monitoring program. Attainment of these standards indicates that restored habitat is progressing and performing the functions and services specified in this plan and by the end of the 5-year restoration and monitoring program. Methods used to measure these performance standards are described in the following text. If the restoration fails to meet the Year 5 standards after the full monitoring term, a specific set of remedial measures will be developed and implemented, and the monitoring and maintenance period will be extended until all Year 5 standards are met, or as otherwise provided in this document. Only when the entire restoration site has attained the Year 5 standards will the entire restoration be signed off.

7.1.1 Container Stock

During each annual monitoring event, there will be no less than 80 percent survival of the container stock plants for all 5 years unless they have been replaced by natural recruitment.

7.1.2 Native Species Richness

Species richness criteria have been established to determine the success. Species richness will be measured by visual assessment in Years 1 and 2, and by quantitative transect data in Years 3, 4, and 5. No specific richness criteria are established for Years 1 or 2, but annual success criteria for species richness in Years 3, 4, and 5 are provided in Table 10. Corrective measures will be implemented in areas not meeting the species richness goals in any given year.

Table 10		
SPECIES RICHNESS SUCCESS CRITERIA¹		
Year 3	Year 4	Year 5
8	10	10

¹Pre-determined, non-relative values

7.1.3 Native Species Cover

Native species cover success criteria have also been established to determine success of the restoration effort. Species cover will be measured by visual assessment in Years 1 and 2, and by quantitative transect data in Years 3, 4, and 5. No specific cover criteria are established for Years 1 or 2, but annual success criterion Years 3, 4, and 5 are provided in Table 11. Corrective measures will be implemented in areas not meeting the species richness goals in any given year.

Table 11		
CSS Native Species Cover Success Criteria¹		
Year 3	Year 4	Year 5
40	60	70

¹Pre-determined, non-relative values

7.1.4 Weed Cover

General and target weed cover success criteria have been established for the restoration effort. Given the size of the area and the extent of the weed seed bank, 100% weed eradication for all weed species is not a realistic goal (Some species are highly invasive and others are easier to eradicate). Therefore, species in Table 12 are zero tolerance species and will be controlled at 100% on a yearly basis. Other non-native species are more ubiquitous and can never be completely eliminated and will therefore be managed to a level of 10% or less. If the weed cover success criteria are not met in any given year, then remedial measures will be conducted.

Latin name	Common name	Cal-IPC Rating¹
<i>Atriplex semibaccata</i>	Australian saltbush	M
<i>Carpobrotus</i> spp.	Hottentot's fig	H/M
<i>Cynara cardunculus</i>	Artichoke thistle	M
<i>Cynodon dactylon</i>	Bermuda grass	M
<i>Euphorbia lathyris</i>	Gopher plant	N/A
<i>Foeniculum vulgare</i>	Fennel	H
<i>Hordeum</i> spp	barley	M
<i>Nicotiana glauca</i>	Tree tobacco	M
<i>Ricinus communis</i>	Castor bean	L
<i>Salsola tragus</i>	Russian thistle	L
<i>Silybum marianum</i>	Milk thistle	L
<i>Sorghum halepense</i>	Johnson grass	N/A
<i>Xanthium strumarium</i>	Cocklebur	N/A

¹H= High invasiveness, M= Moderate invasiveness, L= Low invasiveness N/A= Not listed.

7.2 MONITORING METHODS AND SCHEDULES

7.2.1 Installation Monitoring

The restoration specialist will be on-site daily during the installation period to direct all restoration activities including site preparation, weed control, seeding, planting, and watering. Upon completion, the restoration specialist will prepare an as-built map and letter and confirm that the 5-year maintenance and monitoring period may begin.

7.2.2 Maintenance Monitoring

The restoration specialist will conduct regular maintenance monitoring visits during the 5-year maintenance period. Visits will be conducted monthly in Year 1, every other month in Years 2 through 3, and quarterly in Years 4 through 5. Additional visits may be required as conditions warrant. During each visit the restoration specialist will assess the condition of the restoration site and identify remedial measures as necessary. A brief monitoring memo will be prepared and submitted to the maintenance contractor following each maintenance monitoring visit.

7.2.3 Annual Monitoring

Annual monitoring visits will be conducted by the restoration specialist in the late spring each year during the 5-year maintenance period. During each annual monitoring the success of the restoration effort will be evaluated and species richness and cover data will be collected. In Years 1 and 2 species richness and cover will be determined by visual assessment. In Years 3-5 quantitative transect data will be collected.

Quantitative transect data will be collected using the point intercept line transect sampling methods described in the California Native Plant Society's Field Sampling Protocol (Sawyer and Keeler-Wolf 1995). Four 50-m long sampling transects will be established in Year 3 within the CSS creation area. The ends of each transect will be marked with a re-bar stake and recorded with a Global Positioning System (GPS) unit.

Species cover will be determined by dividing each transect into 50 half meter intervals. A point will be projected into the vegetation each interval and any species intercepted by the point will be recorded. Species also will be divided into herb (0- 60 cm), shrub (60cm-3m), and tree (greater than 3 m) layers. Percent cover will be measured by dividing the number of hits by the number of possible hits. Total, native, and non-native cover values will be determined separately.

Native species richness (the number of species) will be calculated by counting all of the species encountered within a 5m wide belt transect along each transect (2.5m on each side). All plants observed will be categorized by origin (native/non-native) and height layer.

Photographs will be taken each year from the same photograph points used prior to initiation of site preparation. The photographs will help track project progress over time and will be included in the annual report each year.

7.3 MONITORING REPORTS

As part of the monitoring program, annual reports prepared by the restoration specialist will be prepared and submitted evaluating the success of the restoration effort to date, along with any recommendations for future work that may be deemed necessary. Each annual monitoring report will include data collected throughout the year in addition to the annual monitoring visit. To detect the overall trend of the restoration, beginning with the second annual monitoring report, the reports will contain comparisons of the monitoring data for the current year with the previous years' data.

In accordance with the Report Format and Content Requirements for Restoration plans (County 2007): "Any significant issue or contingency that arises on the job site (e.g., plant survival issues, fire, or flooding) shall be reported in writing to the County of San Diego within two weeks from the date of the incident. Accompanying the report shall be a plan for remediation, with an implementation schedule and a monitoring schedule."

8.0 COMPLETION OF RESTORATION

8.1 NOTIFICATION OF COMPLETION

The permittee shall notify the County upon the restoration obtaining the Year-5 performance standards through the submittal of the final (Year 5) monitoring report.

8.2 CONFIRMATION

After receipt of the final monitoring report, the County may inspect the restoration site to determine if the effort has been conducted in accordance with this plan.

9.0 CONTINGENCY MEASURES

9.1 INITIATING CONTINGENCY PROCEDURES

An integral part of a successful program is the ability to detect problems with the restoration early in the process, determine the cause of the problem, and attempt to modify the program to accommodate emerging issues or situations. Minor problems, such as trash, vandalism, or small-scale weed or pest infestations will be rectified as they are discovered during routine site monitoring and would not warrant the implementation of contingency measures.

If a performance standard is not met for all or any portion of the restoration site in any year, or if the final performance standards are not met, the restoration specialist will prepare an analysis of the cause(s) of failure, and if determined necessary by the County, propose remedial action for approval. These measures may include changes to the plant palette, adjustment of the management of the site, re-evaluation of species composition, or other design changes.

Should the restoration fail as a result of a natural disaster such as a flood, the permittee will still be held responsible for any additional measures that are required to re-establish the restoration site. The permittee is responsible to have the site meet performance standards in order to receive sign-off.

9.2 FUNDING

The Responsible Party shall be responsible for all costs associated with any contingency measures.

10.0 REFERENCES CITED

Alden Environmental, Inc. 2024. Biological Technical Report for the Questhaven Tentative Map Project. May 6.

County of San Diego. 2007. Report Format and Content Requirements-Restoration Plans. July 30. https://www.sandiegocounty.gov/content/dam/sdc/dplu/docs/Restoration_Report_Format_s.pdf

Sawyer, J.O. and T. Keeler-Wolf. 1995. A Manual of California Vegetation. 472 pp.

**Conceptual Upland Habitat Biological Resources
Management Plan
for the Questhaven Tentative Map Project
PDS2020-TM-5643**

May 6, 2024

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Conceptual Upland Habitat Resources Management Plan for the Questhaven Tentative Map Project

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**Conceptual Upland Habitat Resources Management Plan
for the Questhaven Tentative Map Project**

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LIST OF TERMS AND ACRONYMS

AMSL	Above Mean Sea Level
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Data Base
County	County of San Diego
DEH	Department of Environmental Health and Quality
ELM	Estimate for Long-term Management
MOU	Memorandum of Understanding
MSCP	Multiple Species Conservation Program
PAMA	Pre-approved Mitigation Area
PAR	Property Analysis Record
PDS	Planning and Development Services
RMA	Resource Management Area
RMP	Resources Management Plan
SDMMP	San Diego Management and Monitoring Program
USFWS	U.S. Fish and Wildlife Service

EXECUTIVE SUMMARY

This Conceptual Resources Management Plan (RMP) describes the biological resources within the approximately 50.3-acre Resource Management Area (RMA) on the Questhaven mitigation site and discusses, in detail, the steps to manage and maintain this Preserve Area. This land is being preserved and managed as a component of the required mitigation for the Questhaven Tentative Map (Development) Project. This RMP directs long-term management for the Preserve Area and addresses applicable management guidelines for the County of San Diego.

The main purpose of this RMP is to identify methods and means necessary to maintain and enhance habitat (and related wildlife) values of the RMA in perpetuity. This RMP provides a framework for long-term management of the RMA, which would begin at commencement of Development Project implementation. Management of the habitat restoration areas within the RMA would initially occur, as necessary, until the restoration is complete. Then, the restoration areas would be managed under the framework for long-term RMA management.

This RMP defines methods and schedules to sustain habitat function and value in the RMA, determines the parties responsible for management, and identifies associated costs and source of funding. The goal of this RMP is to preserve long-term viability, function, and value of native habitats in the RMA along with the sensitive species they support. Achieving this goal also would benefit and improve the quality of life for local residents through preservation and enhancement of a more diverse and balanced environment.

For information on biological conditions existing prior to development, please refer to the Biological Technical Report for the Questhaven Tentative Map Project (Alden 2024). In addition, refer to the Questhaven Tentative Map Project Habitat Restoration Plan (Alden 2024) for information regarding the proposed habitat restoration effort.

1.0 INTRODUCTION

1.1 PURPOSE OF BIOLOGICAL RESOURCES MANAGEMENT PLAN

This Conceptual Resources Management Plan (RMP) describes the biological resources within the approximately 50.3-acre Resource Management Area (RMA) on the Questhaven mitigation site (Figures 1 and 2) and discusses, in detail, the steps to manage and maintain the open space. This land is being preserved and managed as a component of the required mitigation for the Questhaven Tentative Map (Development) Project.

The purposes of this RMP are as follows:

- 1) To guide management of habitats, species, and programs described herein to protect and enhance wildlife values.
- 2) To serve as a descriptive inventory of the flora, fauna, and habitats that occur on the property.
- 3) To establish the baseline conditions of the preserved habitat.
- 4) To identify the target habitat characteristics from which adaptive management will be determined and long-term management success will be measured.
- 5) To provide an overview of the property’s operation, maintenance, and personnel requirements to implement management goals and serve as a budget planning aid.

The details of this conceptual plan may be modified when the Final RMP is prepared and submitted to the County for approval. The County will review the Final RMP to ensure that it meets the specified purposes and objectives.

1.1.1 Conditions and/or Mitigation Measures

The RMA contains mitigation acreage for the Questhaven Tentative Map Project impacts (Figure 3; Table 1). For specific information regarding impacts and mitigation ratios, refer to the Biological Technical Report for the Questhaven Tentative Map Project (Alden 2024).

Vegetation Community	Preserved	Restored	Total
Diegan coastal sage scrub	4.5	1.1	5.6
Scrub oak chaparral	0.4	-	0.4
Mafic chamise chaparral	0.4	-	0.4
Mafic southern mixed chaparral	37.9	4.8	42.7
Non-native grassland	1.0	-	1.0
Disturbed Habitat ¹	0.2	-	0.2
Total	44.4	5.9	50.3

¹An existing dirt road

1.2 GOALS, OBJECTIVES, AND STRATEGIES

1.2.1 Vision Statement

The ultimate goal for the RMA is to establish a habitat management approach that will sustain the biological values in perpetuity. The resources specifically covered by this RMP include those sensitive vegetation communities known to occur on site: Diegan coastal sage scrub, scrub oak chaparral, mafic southern mixed chaparral, mafic chamise chaparral, and non-native grassland. Sensitive plant species known to occur include Orcutt's brodiaea (*Brodiaea orcuttii*), Nuttall's scrub oak (*Quercus dumosa*), ashy spike-moss (*Selaginella cinerascens*), and southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*; Appendix A). Sensitive animal species known to occur include western spadefoot toad (*Spea hammondi*), Cooper's hawk (*Accipiter cooperii*; was observed flying overhead), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and coastal California gnatcatcher (*Polioptila californica californica*; Appendix B).

This RMP is also intended to include those sensitive plant and animal species with moderate potential to occur. Besides the sensitive plant species already known to occur on site that are listed above, all other sensitive plant species evaluated are considered to have low potential to occur (Appendix C). Sensitive animal species evaluated for potential to occur also are presented in Appendix C.

1.2.2 Goals, Objectives, and Strategies

The purpose of this RMP is to identify methods and means necessary to maintain and enhance habitat (and related wildlife) values of the RMA in perpetuity. The RMP provides framework for long-term management of the RMA. The goal of this RMP is to preserve long-term viability, function, and value of native habitats in the RMA along with the sensitive species they support. The methods in this RMP are considered adaptive and may need to be adjusted over time due to potentially changing conditions and unforeseen events. Therefore, this RMP may be revised, as necessary, over time.

Long-term habitat management guidelines are provided to preserve the diversity and function of the ecosystem through adaptive management and maintenance of the natural biotic community. These management guidelines are designed to limit human intrusion and disturbance and to maintain habitat values to benefit locally common and sensitive species, with specific attention given to the long-term success of the sensitive species listed above. The RMA will be maintained as an intact functioning ecosystem through management including, but not limited to, invasive species removal, access control, and trash and debris removal.

This RMP includes six goals for the overall management of biological resources within the RMA. These goals are presented below. In addition, each goal has accompanying objectives and strategies intended to ensure that the goals are met. The goals, objectives, and strategies are addressed in more detail in Section 4.0.

Goal 1: Native Vegetation Communities/Habitats

Manage and maintain preserved Diegan coastal sage scrub, scrub oak chaparral, mafic southern mixed chaparral, mafic chamise chaparral, and non-native grassland.

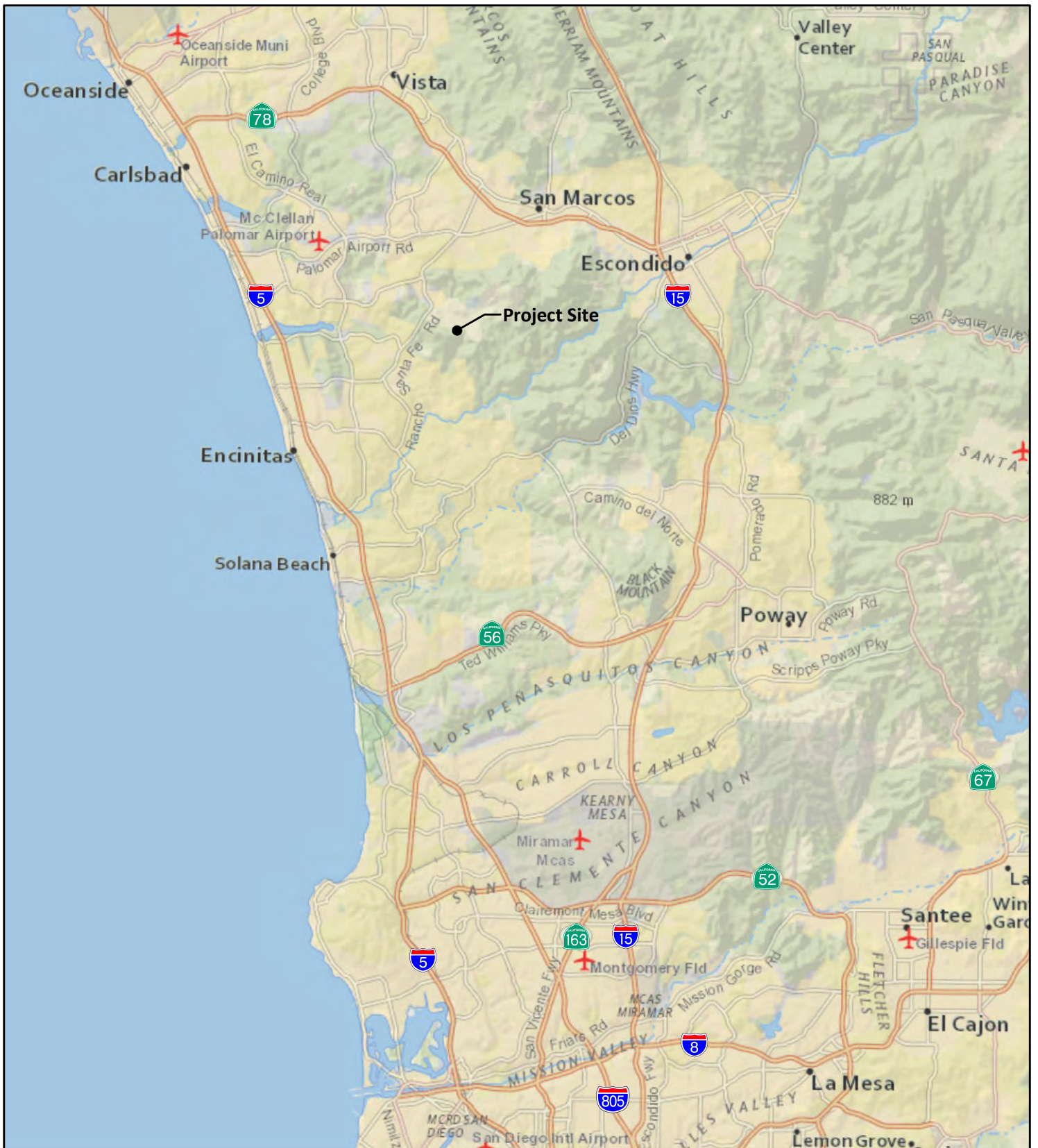
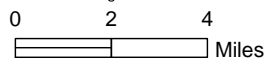
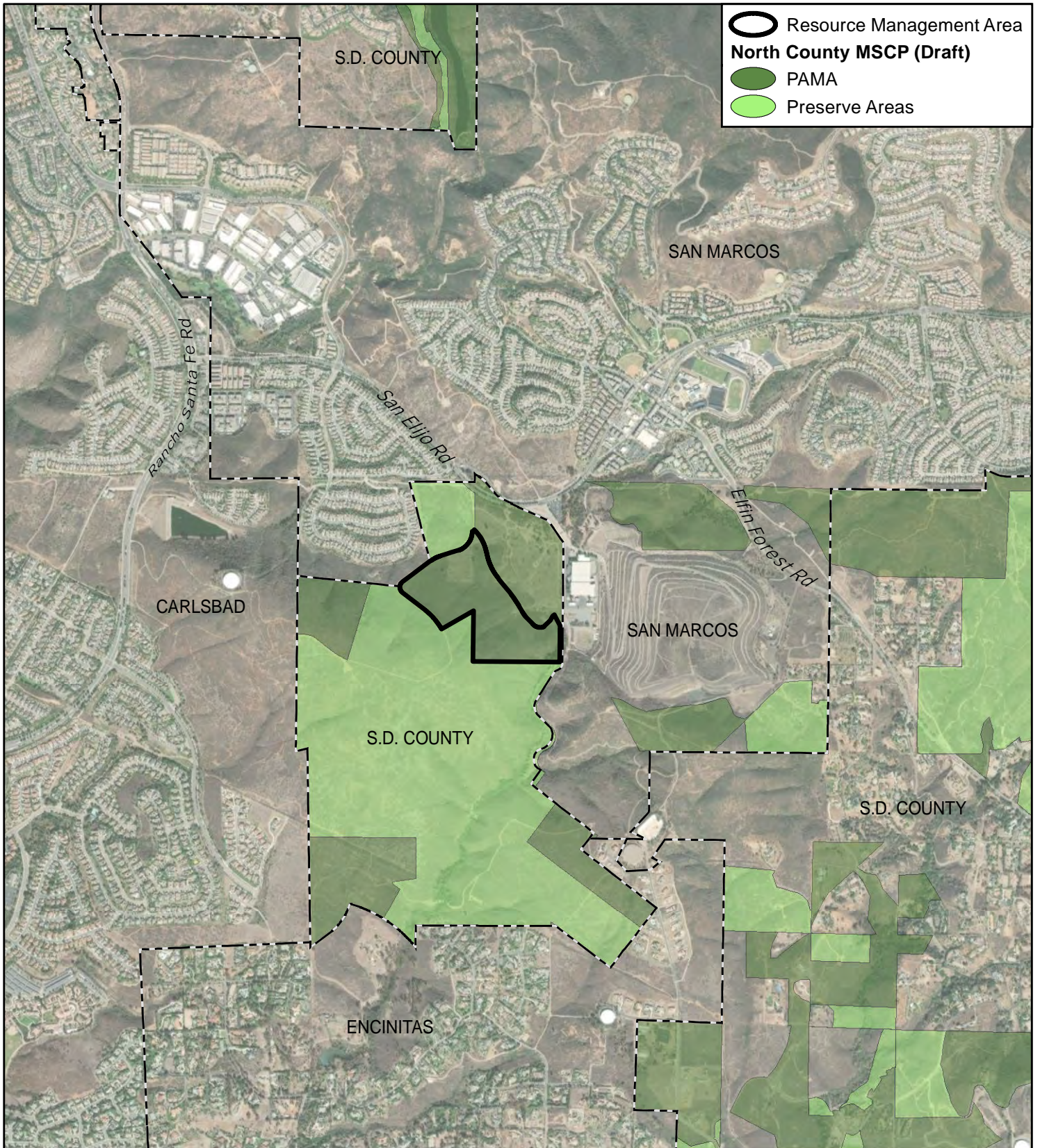


Figure 1

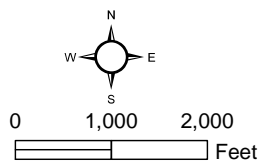
Regional Location

QUESTHAVEN
RESOURCE MANAGEMENT PLAN





Source: SanGIS

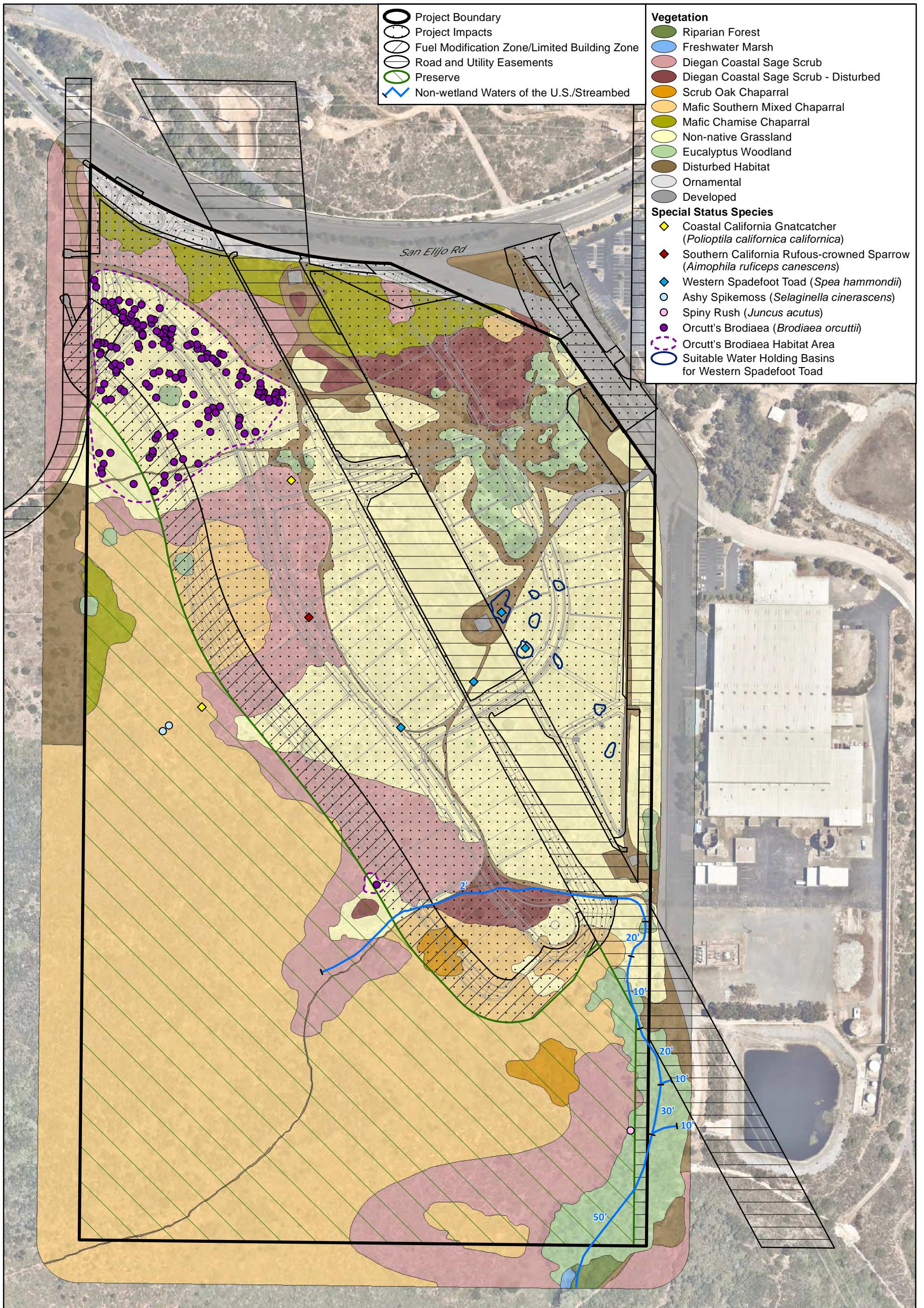


ALDEN
ENVIRONMENTAL, INC

Figure 2

Project Location

QUESTHAVEN
RESOURCE MANAGEMENT PLAN

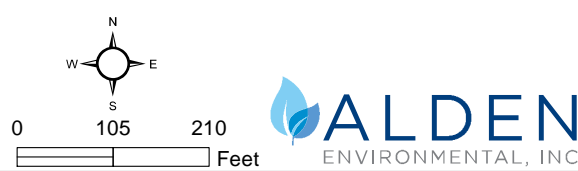


Aerial Photo: Nearmap 2023

Figure 3

Questhaven Project Impacts

QUESTHAVEN
 RESOURCE MANAGEMENT PLAN



Goal 2: Sensitive Wildlife and Plant Species

Monitor sensitive wildlife and plant species known to occur, or with potential to occur, within the RMA. Sensitive animal species to be managed within the RMA (refer to Section 3.0) include Orcutt's brodiaea, Nuttall's scrub oak, ashy spike-moss, southwestern spiny rush, western spadefoot toad, Cooper's hawk, southern California rufous-crowned sparrow, and coastal California gnatcatcher.

Goal 3: Physical Site Management

Maintain the physical conditions of the RMA and conduct the RMP activities in a way that is consistent with the conservation goals and mitigation purposes of the RMA.

Goal 4: Public Outreach and Education

Sustain strong positive relationships with adjacent owners/managers, allow access to the property for educational and scientific purposes, and share information with stakeholders and agencies.

Goal 5: Program Administration and Reporting

Provide program administration through planning and reporting on the RMP implementation in a consistent and efficient manner.

Goal 6: Property Coordination/Management

Coordinate/Integrate Management of the property with adjacent conserved lands managers.

1.3 OWNERSHIP AND MANAGEMENT RESPONSIBILITY

Fee title of the RMA may be held by the current owner, a land/resource manager, or another appropriate landowner (e.g., land trust, conservancy, or public agency) depending on the particular circumstances.

If the land is transferred in fee title to a non-governmental entity or retained by the current landowner, a Biological Open Space Easement or Conservation Easement must be recorded. This easement should be dedicated to the County but may also include other appropriate agencies as grantees or third-party beneficiaries. If title to the land is transferred in fee title to a public governmental agency (e.g., County of San Diego) then that agency shall determine the need for, and type of protective easement that would be required. Any easement or protective document will include an enforcement mechanism to ensure that the management requirements are being carried out as required in this RMP. It is anticipated that the enforcement mechanism will be through the County and Wildlife Agencies (i.e., USFWS, and CDFW) and be connected to the entity holding the endowment.

1.4 ADMINISTRATION

The Questhaven Tentative Map Project (project applicant) is responsible for meeting the mitigation requirements. Implementation of this RMP will be the responsibility of a Resource

Manager. The Resource Manager: (1) will be responsible for the implementation of this RMP and (2) will carry out the RMP's requirements and objectives.

The proposed Resource Manager is:

San Diego Foundation
2508 Historic Decatur Road, Suite 200
San Diego, CA 92106
(619) 235-2300

Any change in the designated Resource Manager shall also be approved in writing by the director of the County department that originally approved the Resource Manager and the Wildlife Agencies. Appropriate qualifications for the Resource Manager include, but are not limited to:

- Demonstrated ability to carry out habitat monitoring or mitigation activities including a minimum of 2 years of experience in field biology in southern California (San Diego County).
- Fiscal stability including preparation of an Estimate for Long-Term Management (ELM) to determine the initial endowment funding requirement.
- Have at least one staff member with a biology, ecology, or wildlife management degree from an accredited college or university, or have a Memorandum of Understanding (MOU) with a qualified person with such a degree.
- Experience with habitat management in southern California

The Resource Manager will take on the following responsibilities.

- Be an advocate of the preserved open space and its protection.
- Be familiar with this RMP, its appendices, and supporting documentation.
- Be familiar with requirements and restrictions or easement(s) that may be recorded over the mitigation area.
- Be responsible for all points noted in this RMP, as discussed in applicable sections of this document.
- Maintain all documents transferred by the project proponent, and be knowledgeable about the resources addressed in these reports.
- Educate the surrounding community about the presence and need for the RMA and be responsive to any community concerns or problems regarding the RMA.
- Document all field visits, and notify the County in a timely manner of all concerns, problems, and suggested solutions.
- Forward all applicable monitoring and management data to the County for incorporation into the Multiple Species Conservation Program (MSCP) database and annual report.
- Coordinate with the manager(s) of adjacent preserves/open space areas on management practices and tasks related to preservation and maintenance of the regional open space system and apply pertinent adaptive management recommendations received from the regional monitoring source.

1.5 FUNDING MECHANISM

The project applicant will fund this RMP. Said funds will be tied to the property, to be used by the Resource Manager to implement the RMP. The San Diego Foundation is proposed to hold and manage the endowment. The amount of the endowment deposit is calculated such that the annual interest generated will cover the annual management costs so not to deplete the initial investment.

Management costs will be calculated based upon the activities presented within this RMP. The San Diego Foundation would prepare a Property Analysis Record (PAR) or equivalent to determine the funding required for the initial endowment and the long-term management of the RMA.

The Resource Manager will request annual funding from the San Diego Foundation to implement the coming year tasks based on an annual work plan.

1.6 RMP AGREEMENT

The County requires an RMP Agreement with the project applicant. The Agreement will be executed when the County accepts the Final RMP. The Agreement will obligate the project applicant to implement the RMP and provide a source of funding to pay the cost to implement the RMP in perpetuity. The Agreement shall also provide a mechanism for the funds to be transferred to the County if the Resource Manager fails to meet the goals of the RMP.

The Agreement will specify that RMP funding or a funding mechanism be established prior to approval of grading or improvement plans, or prior to approval of the Final Map, whichever is first.

2.0 PROPERTY DESCRIPTION

2.1 LEGAL DESCRIPTION

The RMA is in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. It is located immediately south and west of the City of San Marcos and east of the City of Carlsbad. Interstate 5 is located approximately 5.3 miles to the west. Specifically, the RMA is located south of San Elijo Road and east of Denning Drive (Figures 1 and 2) and is within the west half of the northwest quarter of Section 33, Township 12 South, Range 3 West, San Bernardino Meridian on the U.S. Geological Survey (USGS) 7.5-minute Rancho Santa Fe quadrangle map. The RMA consists of all or part of the following Assessor Parcel Numbers: 22307007, 22307008, and 22308046.

2.2 ENVIRONMENTAL SETTING

The RMA contains a large area of steep hills that transition into a flatter area to the east, where the Questhaven Development Project would be built. Elevations range between approximately 700 feet above mean sea level (AMSL) in the west to 490 feet AMSL at the southeastern corner.

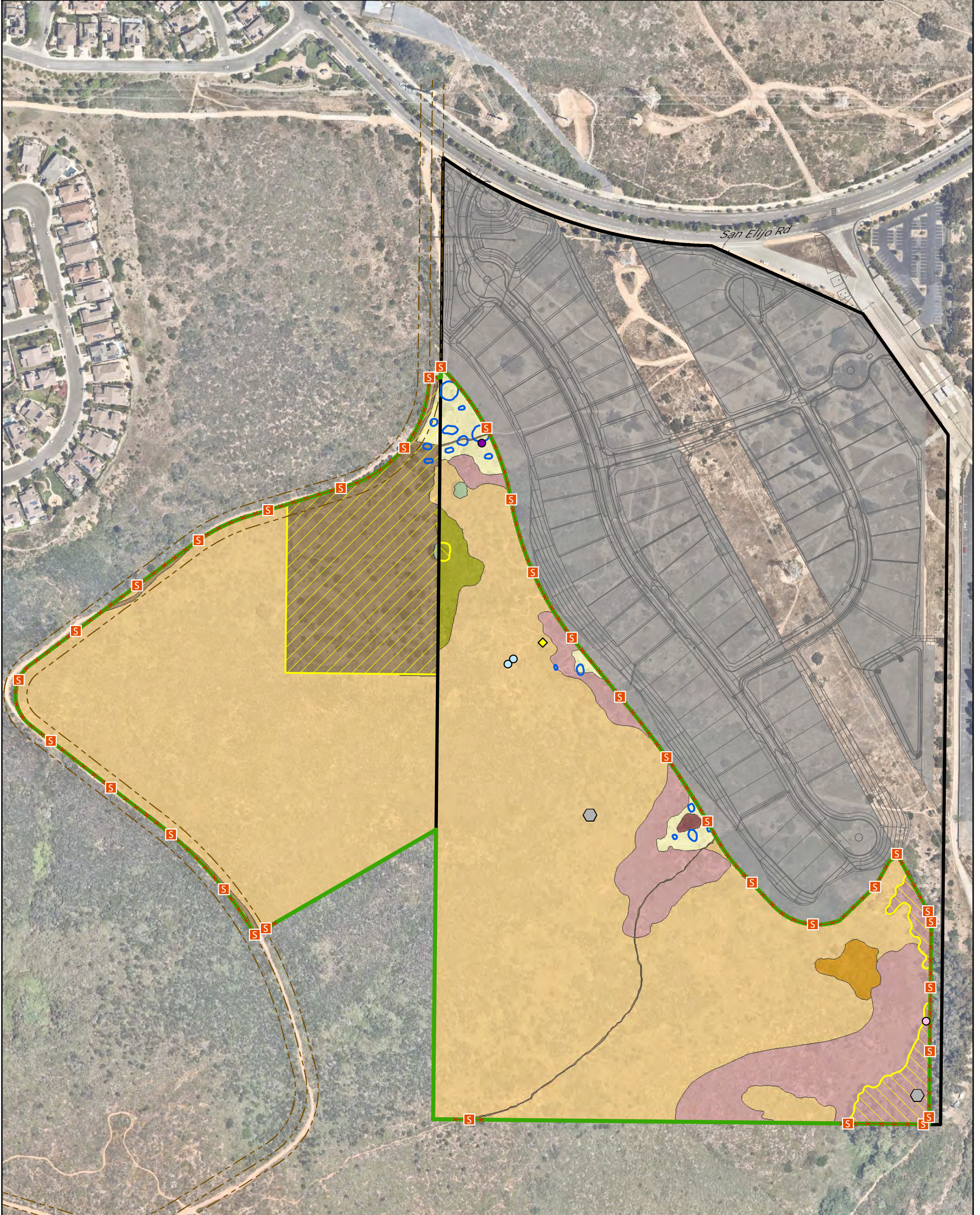
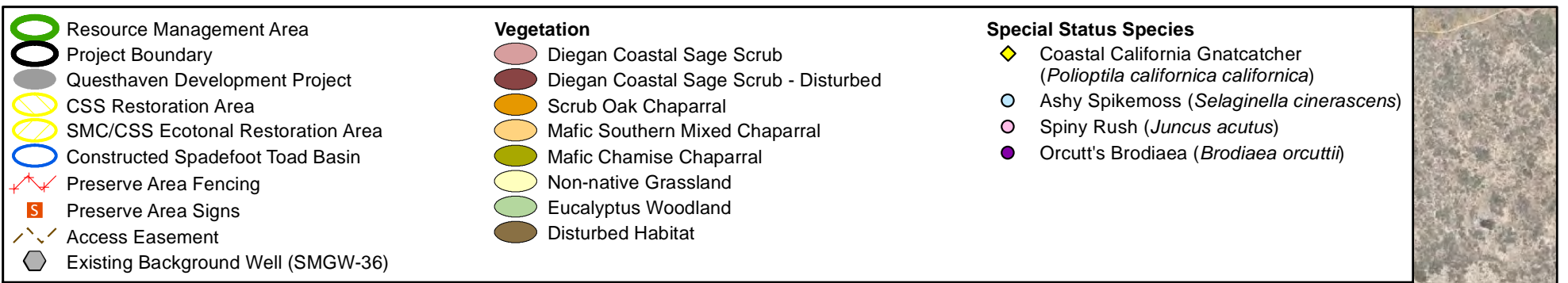
The RMA is within the boundaries of the draft North County MSCP (NCMSCP) area and is completely within the Pre-approved Mitigation Area (PAMA; Figure 2).

2.3 LAND USE

North, west, and south of the RMA is open space associated with the Rancho La Costa Habitat Conservation Area. To the east of the RMA is the proposed Questhaven Tentative Map Project development area. Further east is a former recycling facility that is currently used as an indoor sports complex known as “Edenpark,” and that is proposed for additional sports complex and commercial uses. Additional open space areas border the RMA to the west.

The RMA is undeveloped and supports primarily dense, native habitat. Historically, the northern portion of the RMA was subject to disturbance and was used for agricultural purposes (fig farm). The southeast corner of the RMA was disturbed and supports eucalyptus woodland habitat. Both of these areas would be restored to native habitat. Management of the habitat restoration areas would initially occur, as necessary, until the restoration is complete. Then, the restoration areas would be managed under the framework for long-term RMA management, which would begin at commencement of Development Project implementation.

The only proposed use within the RMA is management of preserved/restored habitat. The Development Project area to the east would be fully contained, and there would be no fuel management activities within the RMA. The RMA will be fenced (Figure 4) and will have signs posted stating that it is an environmentally sensitive area. The fencing proposed is heavy-gauge, three-strand, barbless wire. This will clearly delineate the RMA limits, while still allowing for animals to pass through.



Aerial Photo: Nearmap 2023

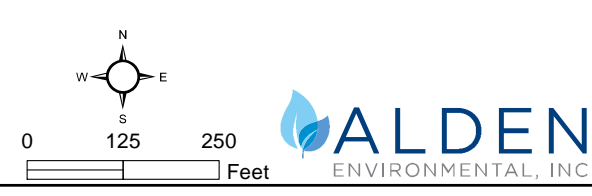


Figure 4
Resource Management Area
 QUESTHAVEN
 RESOURCE MANAGEMENT PLAN

2.4 GEOLOGY, SOILS, CLIMATE, AND HYDROLOGY

Soils on the site are mapped as San Miguel rocky silt loam (9–30 percent slopes), San Miguel-Exchequer rocky silt loams (9–70 percent slopes), and Exchequer rocky silt loam (30–70 percent slopes).

Warm, Mediterranean weather characteristic of southern California typifies the climate, precipitation, and seasons for the RMA. Relatively little precipitation is received during the dry summer months of May through August when the average temperature reaches 78 degrees Fahrenheit, and the high temperature reaches approximately 95 degrees Fahrenheit. Winter months take place from December through March when an average temperature of 50 degrees Fahrenheit and minimum temperature of approximately 30 degrees Fahrenheit are accompanied by a precipitation level averaging 2.2 inches. After the rains, the growing season initiates in April and lasts well into May.

2.5 TRAILS

There are several unimproved trails along the eastern boundary of the RMA that are used by the public for recreational purposes including hiking, dog walking, bicycling (BMX tracks), and remote-control car operation. These trails will be closed and fenced as there are no planned trails within the RMA. Trails and public access are not allowable uses within the RMA and are not part of the management requirements identified in this RMP.

2.6 EASEMENT OR RIGHTS

The only easement within the RMA is a 60-foot wide access easement that follows an existing dirt road along the western border (Figure 4). There are no other easements or rights issued to others within the RMA. The dirt road provides access from San Elijo Road, through the Rancho La Costa Habitat Conservation Area, to a water tank on top of the hill. Given that this easement provides access to preserved habitat areas that would not be subject to future development/expansion, the access easement is considered an allowable use within the RMA.

In addition, there is a County Department of Public Works (DPW) monitored Background Well (SMGW-36) located within the existing drainage area in the southeast corner of the RMA (Figure 4). This well consists of a single, small diameter pipe emerging from the ground in this drainage area. Given the minor footprint of this well, continued monitoring would not conflict with the habitat restoration effort and long term management of the RMA. As such, the well is considered an allowable use within the RMA.

2.7 FIRE HISTORY

The site has not burned recently. Potential fire threats to the RMA include spotting in a wind-driven fire, such as a fire starting most likely from off site to the west or south, which could result in airborne burning debris landing in on-site vegetation.

3.0 BIOLOGICAL RESOURCES DESCRIPTION

3.1 VEGETATION COMMUNITIES/HABITATS

As shown previously in Table 1, impacts to from the Questhaven Tentative Map Project are to be mitigated in the RMA through habitat preservation and restoration. When the required habitat restoration is complete, the RMA will support scrub oak chaparral, mafic southern mixed chaparral, mafic chamise chaparral, coastal sage scrub, and non-native grassland (Figure 4). A description of each of these habitat types on site is provided below.

3.1.1 Diegan Coastal Sage Scrub

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Four distinct coastal sage scrub geographical associations (northern, central, Venturan, and Diegan) are recognized along the California coast. Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage within the RMA are California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*).

3.1.2 Scrub Oak Chaparral

Scrub oak chaparral is a dense, evergreen community that may reach heights of 20 feet that is typically dominated by Nuttall's scrub oak with considerable mountain mahogany (*Cercocarpus betuloides*).

3.1.3 Mafic Chamise Chaparral

Mafic chamise chaparral in the RMA occurs on San Miguel series soils that are formed from metavolcanic rock that overlays metavolcanic bedrock. This chaparral in the RMA is dominated by chamise (*Adenostoma fasciculatum*). Associated species contribute little to the vegetative cover.

3.1.4 Mafic Southern Mixed Chaparral

Mafic southern mixed chaparral in the RMA occurs on San Miguel series soils that are formed from metavolcanic rock that overlays metavolcanic bedrock. This chaparral is composed of broad-leaved sclerophyllous shrubs that can reach six to 10 feet in height and form dense often nearly impenetrable stands with poorly developed understories. Characteristic plants in this community include black sage, fuchsia-flowered gooseberry (*Ribes speciosum*), spiny redberry (*Rhamnus ilicifolia*), holly-leaf redberry (*Rhamnus ilicifolia*), chamise, toyon (*Heteromeles arbutifolia*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*).

3.1.5 Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with native, annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Most of the introduced annual species that comprise non-native grassland originated from

the Mediterranean region of Europe, an area with a climate similar to that in California and a long history of agriculture. Non-native grassland in the RMA is comprised of the following characteristic non-native species including oats (*Avena barbata* and *A. fatua*), species of bromes (*Bromus diandrus*, *B. madritensis*, and *B. hordeaceus*), Italian ryegrass (*Festuca perennis*), and annual beard grass (*Polypogon monspeliensis*), along with some native and non-native and forbs.

3.2 PLANT SPECIES

3.2.1 Plant Species Present

A total of 121 species of plants were observed during surveys for the Questhaven Development Project, of which 43 (36 percent) are non-native species (Appendix A).

3.2.2 Sensitive Plant Species Present or Likely to Occur

Sensitive plant species known to occur within the RMA (Figure 4) include Orcutt’s brodiaea, Nuttall’s scrub oak (in scrub oak chaparral), ashy spike-moss, and southwestern spiny rush. A list of plant species evaluated for their potential to occur was prepared for the Biological Technical Report (Alden 2024) and is included as Appendix C.

3.2.3 Non-Native/Invasive Plant Species

Since non-native grassland is a naturalized habitat type and is important for owls and raptors, removal of non-native grass species from the preserved non-native grassland area is not included. Several species of weeds are particularly problematic in the vicinity of the RMA. Control of these target, invasive, site-specific, weed species shall be conducted. The initial target weed species are provided in Table 2. This list will be reevaluated by the Resource Manager and will be adapted as necessary to reflect site conditions. The goal will be to manage these species such that, over time, they are no longer present on the site (zero tolerance).

Latin name	Common name	Cal-IPC Rating¹
<i>Atriplex semibaccata</i>	Australian saltbush	M
<i>Carpobrotus</i> spp.	Hottentot’s fig	H/M
<i>Cynara cardunculus</i>	Artichoke thistle	M
<i>Euphorbia lathyris</i>	Gopher plant	N/A
<i>Foeniculum vulgare</i>	Fennel	H
<i>Nicotiana glauca</i>	Tree tobacco	M
<i>Ricinus communis</i>	Castor bean	L
<i>Salsola tragus</i>	Russian thistle	L
<i>Silybum marianum</i>	Milk thistle	L
<i>Sorghum halepense</i>	Johnson grass	N/A
<i>Xanthium strumarium</i>	Cocklebur	N/A

¹H= High invasiveness, M= Moderate invasiveness, L= Low invasiveness N/A= Not listed.

3.3 WILDLIFE SPECIES

3.3.1 Wildlife Species Present

A total of 89 animal species, including 26 invertebrates, two amphibians, two reptiles, 56 birds, and three mammals were observed/detected during surveys for the Questhaven Tentative Map Project (Alden 2024; Appendix B).

3.3.2 Sensitive Wildlife Species Present or Likely to Occur

Sensitive animal species including western spadefoot, southern California rufous-crowned sparrow, and coastal California gnatcatcher were observed within the RMA (Alden 2024). The sensitive Cooper's hawk was also observed flying overhead. A list of sensitive species evaluated for their potential to occur was prepared for the Biological Technical Report (Alden 2024) and is included as Appendix C.

3.3.3 Non-native and/or Invasive Wildlife Species

Non-native or invasive wildlife species are not expected to be of concern within the RMA.

3.4 OVERALL BIOLOGICAL AND CONSERVATION VALUE

The overall biological value of the open space habitat within the RMA is high. The RMA would connect to other identified preserve areas to create a larger, overall habitat preserve (Figure 2) that would not only compensate for the Development Project's impacts but would be a beneficial biological resource in the western portion of unincorporated San Diego County. The clustered design of the adjacent Questhaven Development Project allows for a larger, more contiguous habitat movement and wildlife corridor area. Extant sensitive species would be protected and, through long-term habitat management, other sensitive species may occur within the RMA over time.

3.5 ENHANCEMENT AND RESTORATION OPPORTUNITIES

Historically, the northern portion of the RMA was subject to disturbance and was used for agricultural purposes (fig farm). The southeast corner of the RMA was disturbed and supports eucalyptus woodland habitat. Both of these areas would be restored to native habitat.

4.0 MANAGEMENT ELEMENT, GOALS, AND TASKS

The ultimate goal of this RMP is to detail the methods to preserve and manage lands to the benefit of the flora, fauna, and native ecosystem functions reflected in the RMA. In addition, this RMP establishes the following goals with regard to biological resources.

4.1 GOAL 1: NATIVE VEGETATION COMMUNITIES/HABITATS

Manage and maintain preserved Diegan coastal sage scrub, scrub oak chaparral, mafic chamise chaparral, mafic southern mixed chaparral, and non-native grassland within the RMA, with the primary purpose of maintaining suitable habitat for Orcutt's brodiaea, Nuttall's scrub oak, ashy spike-moss, southwestern spiny rush, western spadefoot, Cooper's hawk, southern California rufous-crowned sparrow, and coastal California gnatcatcher.

Goal 1 is to manage the land to the benefit of the flora, fauna, and native ecosystem functions reflected in the native vegetation communities occurring within the RMA, recognizing that vegetation cover and conditions may vary over time. Targets of cover for the vegetation communities are tied to the previous mapping and baseline vegetation/habitat mapping to be conducted during the first year of implementation of this RMP. Specifically, the RMA is comprised of a total of 50.3 acres as shown previously in Table 1.

Objective 1.1: Conduct Initial Site Enhancement Activities

- Conduct initial enhancement and protection activities within the RMA at the onset of RMP implementation. This will be the responsibility of the Project Applicant as initial startup actions; as such, the costs associated with these initial activities are not included the long-term endowment cost. A list of all management tasks (strategies) is presented in Table 3.

Strategy 1.1.1 (Startup Task): Initial Fencing/Access Control

- Install fencing and signs along the perimeter of the RMA.

Heavy-gauge, three-strand barbless, wire fencing with three gates will be installed around the RMA (Figure 4).

To prevent human-induced degradation of the RMA due to illegal occupancy, trespassing (e.g., off-highway vehicle activity), removal of resources, or dumping of trash or debris, the Resource Manager will restrict access to the RMA. Permanent signage will be posted along the RMA fencing and will be maintained by the Resource Manager. All signs will be corrosion-resistant (e.g., constructed of steel), measure at minimum 6 by 9 inches in size, be posted on a metal post at least 3 feet above ground level, and provide notice in both English and Spanish that the area is an ecological preserve with trespassing prohibited. The signs will state the following:

Sensitive Environmental Resources

Area Restricted by Easement

Entry without express written permission from the County of San Diego is prohibited.

To report a violation or for more information about easement restrictions and exceptions contact the County of San Diego, Department of Planning and Land Use

Reference: PDS2020-TM-5643

Table 3 Management and Monitoring Schedule		
Strategy	Task	Timing
Goal 1: Native Vegetation Communities/Habitats		
1.1.1	Initial Fencing/Access Control	Startup task ¹
1.1.2	Initial Trash/Debris Removal	Startup task ¹
1.2.1	Baseline Mapping	First year of implementation of the RMP
1.2.2	Update Vegetation Mapping	Every 5 years
1.2.3	Establish and Maintain a Biological Database	Update annually/as needed, include with Annual Report by January 31 each year
1.3.1	Prepare and Update Invasive Species Map	Year 2 and every 3 years thereafter
1.3.2	Prioritize Areas for Weed Control	Ongoing, as needed
1.4.1	Weed Control in Priority Areas	Ongoing, as needed
1.4.2	Annual Assessment Weed-Related Monitoring	Annually, may be in conjunction with other task visits
1.5.1	Annual Habitat Enhancement Monitoring	Annually, may be in conjunction with other task visits
1.6.1	Habitat Restoration Installation	Prior to, or concurrent with project construction/grading
1.6.2	Habitat Restoration Monitoring and Maintenance	Monthly in Year 1, every other month in Years 2 through 3, and quarterly in Years 4 through 5. Additional visits may be required as conditions warrant. A brief monitoring memo will be prepared following each visit.
1.6.3	Annual Habitat Restoration Monitoring and Reporting	Conducted in the late spring during the 5-year maintenance period followed by preparation of an annual report.
Goal 2: Sensitive Wildlife and Plant Species		
2.1.1	General Survey	During baseline mapping in Year 1 (Strategy 1.2.1)
2.1.2	Monitor Sensitive Plant Species	Two out of every 5 years
2.1.3	Monitor Sensitive Animal Species	Every five years
2.2.1	Other Sensitive Species	As needed
Goal 3: Physical Site Management		
3.1.1	General Monitoring	At least monthly
3.1.2	Control Access	As needed
3.1.3	Remove trash and debris	As needed
3.2.1	Poaching/Collecting Prohibition	As needed, in conjunction with other monitoring tasks
3.3.1	Monitor for Encampments/Squatters	As needed, in conjunction with other monitoring tasks

Table 3 Management and Monitoring Schedule		
Strategy	Task	Timing
3.4.1	Predator/Pest Control	As needed, in conjunction with other monitoring tasks
3.5.1	Coordinate with Fire Services	Upon implementation and as needed thereafter
3.5.2	Prepare, Implement, and Update Fire Plan	Year 2 and as needed thereafter
3.5.3	Work Plan Adjustments Following Fires	As needed
3.6.1	Monitor Potential Erosion Within the RMA	As needed, in conjunction with other monitoring tasks
3.6.2	Install Erosion Control Measures	As needed
3.7.1	Monitor Shooting and Hunting	As needed, in conjunction with other monitoring tasks
3.7.2	Control Hunting/Shooting	As needed
3.8.1	Hazardous Materials Monitoring	As needed
Goal 4: Public Outreach and Education		
4.1.1	Direct Contact	Within the first 18 months of RMP implementation; as needed thereafter
4.2.1	Tours and Site Visits	As needed
4.2.2	Scientific Research	As needed.
4.2.3	MSCP Monitoring Program	As needed and in conjunction with annual reporting
4.3.1	Sensitive Species Data	Annually, in conjunction with annual reporting
Goal 5: Program Administration and Reporting		
5.1.1	Annual Report and Work Plan	Annually
5.1.2	Coordination with County, USFWS, and CDFW	At startup and as needed thereafter
5.2.1	RMP Review	Every 5 years
5.2.2	RMP Revisions	As needed
Goal 6: Property Coordination/Management		
6.1.1	Coordinate with Adjacent Property Owners/Managers, Utility Providers, Easement Holders, and Law Enforcement as Applicable	At startup and/or as needed thereafter

¹To be carried out by the project applicant

Strategy 1.1.2 (Startup Task): Initial Trash/Debris Removal

- Remove trash and debris from within the RMA.

At the onset of management, the project applicant will inspect the site for the presence of trash and debris that may be present. Trash and debris located on the site will be removed from the RMA and disposed of in a legal manner.

Objective 1.2: Vegetation Community/Habitat Mapping

- Maintain accurate vegetation/habitat mapping to guide management decisions.

Strategy 1.2.1 (Startup Task): Baseline Mapping

- Conduct baseline mapping during the first year.

The quantity and quality of vegetation communities within the RMA will be documented during the first year of active management. Vegetation mapping in the baseline survey will follow the latest SANDAG/CDFW vegetation classification system based on the Manual of California Vegetation. Species cover and richness will be visually evaluated. Plant species observed will be recorded and an estimate of the richness (number) of species present on site can be made. This list will be further broken down into native/non-native species. These data will allow the Resource Manager to measure habitat changes caused by natural and human effects and to evaluate management efforts during subsequent years.

The intent of this update is to document current conditions in the open space areas (including graphic and tabular depictions of habitat acreages), document all species observed (either directly or indirectly by sign such as scat, tracks, etc.) within each identified habitat type, and document the locations of any sensitive plant and animal species. Permanent photo documentation points also will be established during the baseline mapping.

The baseline inventory update will be conducted during the spring of the first year of active management. To optimize the probability of detecting sensitive species reported or expected to occur within the RMA, this survey should be conducted between March and May, when the majority of sensitive plant and animal species are most detectable.

Strategy 1.2.2 (Ongoing Task): Update Vegetation/Habitat Mapping

- Update vegetation/habitat mapping every 5 years.

The vegetation/habitat mapping produced under Objective 1.2, Strategy 1.2.1 will be updated every five years. The updates will follow the same methods as the baseline mapping and be based on a combination of field work, information collected during other RMP management activities, information from the regional database or other sources, site-specific mapping, and aerial imagery.

As part of each update, the Resource Manager will identify and evaluate: 1) changes in the amounts of vegetation communities compared with baseline map and specific changes since the last update; 2) the circumstances or likely cause of the changes; 3) whether Goal 1 targets have been met; and any remedial actions or changes to management activities recommended for the upcoming period.

Strategy 1.2.3 (Ongoing Task): Maintain a Biological Database

- Update annually as needed.

All data collected during the Baseline Mapping in Strategy 1.2.1 will be submitted to the San Diego Management and Monitoring Program (SDMMP) data portal to establish a biological database. The database will be updated annually as needed to record changed or new vegetation/habitat, sensitive plant, and/or sensitive animal conditions in the RMA.

Objective 1.3: Non-native and Invasive Plant Map

- Identify and map target invasive plant species.

Strategy 1.3.1 (Startup and Ongoing Task): Prepare and Update Invasive Species Map

- Complete a map of non-native and invasive plant species on the property by the end of Year 2 and update the map every three years thereafter.

In preparation for weed mapping, the Resource Manager will prepare a non-native and invasive plant (weed) watch list for the property. The weed watch list will include species of concern with a potential for occurring on the property. The species of concern will include but not be limited to plants with a Moderate or High rating by the California Invasive Plant Council (Cal-IPC). Table 2 contained the initial general list of weeds of concern for the RMA.

Plant locations will be recorded as either points or polygons depending on the size of the infestation. At a minimum, attribute information will include general and specific location data, GPS coordinates, aspect, infested area (acres, square feet), canopy closure, abundance, vegetation community and associated species, and overall site quality. In addition, each occurrence will be assigned a unique identifier name; these names will be used consistently in all documents, maps, and databases. Finally, an invasive species survey form will be completed for each unique occurrence. The map will be completed no later than the end of the second year of RMP implementation. The map of non-native and invasive plant species will be updated every three years. The weed watch list will be evaluated and modified as appropriate when the updates occur.

These species will form the starting point for identifying the target weed species within the RMA. The Resource Manager will determine priority of target treatment species and infestation areas. The overall weed abatement goal is to maintain a maximum level of five percent for species categorized as Cal-IPC List High or Moderate; excluding common non-native grassland species present prior to long-term management.

Strategy 1.3.2 (Startup and Ongoing Task): Prioritize Areas for Weed Control

- Prioritize locations on the property for weed control measures.

The Resource Manager will prioritize areas for weed control measures based on the results of the mapping effort, an evaluation of the threat posed by existing infestations to sensitive vegetation communities or the habitat of sensitive species, and a consideration of the potential benefits of preventative measures in specific areas. The intent is that priority areas would include locations where the spread of weeds could be prevented as well as locations where treatment would improve existing conditions. An initial list of priority areas may be prepared by the Resource Manager based on available information in Year 1 of RMP implementation. This will allow for

the initiation of some weed control measures in Year 1 and Year 2. The final list of priority areas will be completed no later than the end of Year 3.

The list of priority areas will be re-evaluated and updated when the non-native and invasive plant map is updated (every three years). The Resource Manager also may propose changes to the list at any time based on changed circumstances or new information.

Objective 1.4: Weed Control Strategy

- Implement a weed control strategy to reduce the extent of non-native and invasive plants and control the spread of such species to priority areas within the RMA.

The purpose of the weed control strategy is to address existing infestations that may threaten the long-term persistence and health of native vegetation communities in the RMA and deter the spread and recurrence of highly invasive species. Since eradication is likely infeasible, the treatment and maintenance of infested areas will require a long-term selective approach.

The weed abatement program will be flexible to reflect the potential diversity of weed issues and treatments on the sites. For example, mechanical techniques such as hand pulling would be more appropriate in vernal pools and line trimming and herbicide treatment would be more efficient in grassland areas. Weed abatement is most effective when weeds are removed before setting seed. The weed abatement program will be sensitive to the biology and ecology of resources targeted for protection, such as limiting weed removal in vernal pools to when the pools are dry.

Any herbicide use will be applied in accordance with all federal and state laws. All herbicide use will be under the direction of a licensed pest control and applicator.

The Resource Manager will also have the discretion to adjust the weeding schedule. Higher than normal rainfall can promote excessive weed growth. Under these conditions, an opportunity may exist to take a more proactive approach by expending more resources on the weed abatement program. A more intensive weeding schedule than initially planned, under such conditions and especially if such an opportunity arises in the first two years of the management program, could provide higher returns later. An aggressive weeding schedule during the first two years is expected to significantly reduce the exotic seed bank, while providing native species a competitive advantage. Such “upfront loading” will increase the probability of reducing weed infestations earlier than expected.

Hand pulling of exotic invasive species will be employed in areas interspersed with natives. Effective large-scale removal can be accomplished when plants are small, and soil is moist (e.g., late winter). Prior to implementation of any alternative methods the County, USFWS, and CDFW will be consulted for approval.

Strategy 1.4.1 (Startup and Ongoing Task): Weed Control in Priority Areas

- Implement the appropriate weed control treatments and maintenance measures in priority areas.

As soon as the priority areas have been identified, the Resource Manager will initiate treatment during appropriate seasonal treatment windows. A combination of physical and chemical treatments may be applied. The treatments will be identified in the annual work plan prepared by the Resource Manager each year.

- The Resource Manager will assess the need for weed control and determine the best approach. Weed removal may be performed by a combination of hand, mechanical, and chemical treatments, where and when these different methods are appropriate. The timing of weeding shall be such that impacts to nesting birds are avoided. Herbicides (if/when needed) will be applied in accordance with federal and state laws by a licensed applicator, as directed by the Resource Manager.

Other weed control methods may be proposed and implemented if approved in advance by the County, USFWS, and CDFW. Treatment in locations with sensitive plant or wildlife species will be overseen by a qualified biological monitor, as directed by the Resource Manager. All work will be conducted by a qualified contractor specializing in invasive plant control and habitat enhancement.

When implementation of the weed program commences, the goal each year at a minimum will be to treat an area equal to at least 20 percent of the RMA (approximately 10 acres). The locations and types of treatment may vary from year to year. Some locations may require multiple treatments in a given year or over consecutive years. Treated areas also will require follow-up maintenance and monitoring.

Strategy 1.4.2 (Startup and Ongoing Task): Annual Assessment Weed-Related Monitoring

- Annually monitor treated sites, priority areas, and other locations in the RMA for weed species on the watch list.

A qualified plant ecologist will monitor treated sites, priority areas, and other locations in the RMA on an annual basis for species listed on Table 2. The monitoring will occur through regularly scheduled site visits (at least two per year). Information collected in the monitoring visits will be used to update the weed map and a list of priority areas.

The entire RMA will be searched for new or rapidly expanding invasive plant species locations at least once per year. These observations will be incorporated into the latest map of invasive plant species. These rapid assessments are designed to identify potentially problematic invasive plant locations before they become outbreaks. Rapidly expanding invasive plant species locations will be targeted for removal during the year in which they are observed and will be included in the following year's work plan for follow-up treatment.

Objective 1.5: Habitat Enhancement Strategy

- Prepare and implement a habitat enhancement strategy to monitor and assess the RMA for potential future enhancement needs and opportunities.

Strategy 1.5.1 (Startup and Ongoing Task): Annual Habitat Enhancement Monitoring

- Annually monitor treated sites (if any), priority areas, and other locations on the property for seeding and habitat enhancement status and opportunities/needs.

The purpose of the habitat enhancement strategy is to address the potential that the property is affected by fire, vandalism, trespass, or large areas of weed removal where the affected areas will be monitored and addressed for potential enhancement needs. Spot enhancement, such as seeding or weeding, may occur if deemed necessary, using methods and techniques devised by the Resource Manager and approved by the County, USFWS, and CDFW.

If needed, seed collected from federal- or State-listed plant species will be collected only when population numbers are high locally (>20 individuals). No more than five percent of the projected annual seed population of any individual plant or discrete population of plants will be collected. Seed collection should follow the Center for Plant Conservation's "Genetic Sampling Guidelines for Conservation Collections of Endangered Plants" (Falk and Holsinger 1991). In poor years, such as drought years, there may only be a small number of individuals that produce seed, and there is a risk of collecting a disproportionate amount of seed that could deplete the seed bank. Personnel collecting seed shall be approved by the USFWS and CDFW and have appropriate federal/State collecting permits, as required.

Seed used for enhancement will not be distributed until after the first fall rains to avoid herbivory as well as improve germination and survival. Seed will mainly come from sources in the RMA, but if seed needs to be purchased from an outside source, that seed must come from a source as near as the RMA as possible and must be approved by the County, USFWS, and CDFW. Collection of the seed from the RMA is preferable as this would reduce the potential of genetic contamination from seed collected from distant populations that may be genetically different from populations in the RMA.

Objective 1.6: Habitat Restoration Strategy

- Prepare and implement a strategy to restore mafic southern mixed chaparral/coastal sage scrub ecotone and coastal sage scrub communities, as well create water-holding basins for spadefoot toad breeding.

Strategy 1.6.1 (Startup and Ongoing Task): Habitat Restoration Installation

- Install prior to, or concurrent with, Development Project construction/grading.

The purpose of the strategy is to restore mafic southern mixed chaparral/coastal sage scrub ecotone and coastal sage scrub communities, as well create water-holding basins for spadefoot toad breeding. The mafic southern mixed chaparral/coastal sage scrub ecotone restoration is intended to, over time, provide for a mature native community of shrub species. The coastal sage scrub component is included to help provide for interim native species cover and allow for the slower growing chaparral species to become established.

These communities are important components of the San Diego County ecosystem; they provide habitat for sensitive plant and animal species. Additionally, the constructed basins will specifically support extant populations of spadefoot toad, as well as other species that may utilize the basins when they are holding water.

Strategy 1.6.2 (Ongoing Task): Habitat Restoration Monitoring and Maintenance

- Monthly in Year 1, every other month in Years 2 through 3, and quarterly in Years 4 through 5. Additional visits may be required as conditions warrant. A brief monitoring memo will be prepared following each visit.

The purpose of the strategy is to implement a 5-year maintenance and monitoring program to help ensure the successful establishment and persistence of the habitat restoration.

Strategy 1.6.3 (Ongoing Task): Annual Habitat Restoration Monitoring and Reporting

- Conducted in the late spring each year during the 5-year maintenance period followed by preparation of an annual report.

The purpose of the strategy is to evaluate the success of the habitat restoration effort through the collection and analysis of species richness and cover data.

4.2 GOAL 2: WILDLIFE AND SENSITIVE PLANTS

Conserve, Maintain, and Monitor sensitive wildlife and plant populations.

The purpose of Goal 2 is to conserve sensitive species by collecting information about the status of wildlife and plants in the RMA and using that information in the planning and implementation of management activities. Goal 2 includes strategies that apply to the sensitive plant and animal species within the RMA.

Objective 2.1: Wildlife and Plant Species

- Keep a baseline inventory of wildlife and plants per Strategy 1.2.3 to Establish and Maintain a Biological Database.

Strategy 2.1.1 (Startup Task): General Survey

- Conduct a general biological survey of the RMA.

During baseline mapping in Objective 1.2, Strategy 1.2.1, all species observed (either directly or indirectly by sign such as scat, tracks, etc.) within each identified habitat type will be documented, and sensitive species will be mapped. To optimize the probability of detecting sensitive species reported or expected to occur within the RMA, this survey should be conducted between March and May, when the majority of sensitive plant and animal species are most detectable. Results of the survey will be reported to the SDMMP data portal.

Strategy 2.1.2 (Ongoing Task): Monitor Sensitive Plant Species

- Two out of every 5 years, monitor sensitive species locations and document any changes in the Biological Database.

All sensitive species observed within each identified habitat type will be documented and mapped. To optimize the probability of detecting sensitive species reported or expected to occur within the RMA, this survey should be conducted between March and May, when most sensitive plant species are detectable. Results of surveys will be reported at the end of each survey year to the Biological Database.

Strategy 2.1.3 (Ongoing): Monitor Sensitive Animal Species

- Every five years, conduct surveys for the western spadefoot, southern California rufous-crowned sparrow, and coastal California gnatcatcher.

Survey for the western spadefoot every five years during the rainy season when ponds on site are holding water. The survey will include visits to identify egg masses and tadpoles early in the rainy season. At least one survey visit will be conducted at night during this period to identify spadefoot toads by their calls and direct observation. Additional survey methods may be developed by the Resource Manager, in conjunction with established Wildlife Agency protocols.

Surveys for the sparrow and gnatcatcher shall occur every five years and consist of three site visits consistent with USFWS protocol for the coastal California gnatcatcher (USFWS 1997). If populations of either of these species fall below 80 percent of the baseline population numbers for two consecutive survey periods, initiate discussions with the County and Wildlife Agencies to identify feasible strategies to increase population numbers in the RMA. Such strategies might include habitat enhancement or assessment of potential for non-native predator/cowbird parasitism impacts. Contingency funds may be used for this purpose if deemed appropriate by the Resource Manager, County, and Wildlife Agencies.

Objective 2.2: Other Listed, Proposed, or Candidate Species

- Avoid adverse impacts to other listed, proposed, or candidate species and apply an adaptive management approach should they occur within the RMA.

The purpose of the strategies under this objective is to establish an adaptive management approach to addressing the needs and potential listing of other sensitive species on the property. The intent is to avoid circumstances where management activities (and their beneficial effects for listed and non-listed species) might be delayed or cancelled due to the presence of listed species not covered by this RMP. The intent also is to promote an inclusive approach to planning future management activities. The strategies also assume that all management activities will be conducted in accordance with federal and state regulations that protect listed and other sensitive species. Nothing in this RMP authorizes incidental take of federal- or State-listed species, State Candidate species, State fully protect species, bald or golden eagles, or birds protected by the Migratory Bird Treaty Act.

Strategy 2.2.1 (Startup and Ongoing Task): Other Sensitive Species

- As needed, apply an adaptive management approach to the needs and potential listing of sensitive species.

If a sensitive species that occurs within the RMA is proposed for federal listing or becomes a Candidate species under federal or California regulations, the Resource Manager will (1) prepare a map indicating where that species has been observed and where its habitat occurs on site and (2) identify the management activities planned for those areas. The information will be provided to the County, USFWS, and CDFW. The Resource Manager will work cooperatively with the agencies to determine if management activities need to be modified to avoid adverse impacts to the species and, if so, what the changes should be. The Resource Manager may initiate the assessment and discussions before any formal listing action by the agency with jurisdiction of the species. The Resource Manager also will be responsible for notifying the appropriate members of

the management team of the change in status of the species and any temporary or permanent changes in management activities.

If a species that occurs on site is emergency listed, the Resource Manager will provide the agencies with the same information as above and propose specific actions to ensure that no direct harm to the species would result from management activities. The agency with jurisdiction over the species must concur that the management activities as modified would not result in a take.

At its discretion, the Resource Manager may propose conservation measures for other sensitive species as Additional Activities. Such measures are contingent on additional planning and available funding. The measures also must be consistent with the goals of this plan and must not conflict with the mitigation purposes of the RMA.

4.3 GOAL 3: PHYSICAL SITE MANAGEMENT

Maintain the physical conditions of the RMA and conduct the RMP activities in a way that is consistent with the conservation goals and mitigation purposes of the RMA.

Objective 3.1: Maintenance and Monitoring Visits

- Conduct maintenance and monitoring inspection visits to the RMA at least monthly.

Strategy 3.1.1 (Ongoing Task): General Monitoring

- Conduct general maintenance and monitoring visits at least monthly.

General site visits will be conducted at least monthly each year. The type and purpose of each monthly visit may vary depending upon the season and site conditions. At a minimum, each visit will include an inspection of the fences, signs, general exotic species status, and general state of the preserved habitat. Necessary repairs will be performed during the monitoring visit, if possible. If not, necessary repairs will be scheduled to be performed as soon as possible/practical. These monthly visits may be conducted in conjunction with any other scheduled visits. Results of monthly visits and any actions taken will be reported in the annual report.

Strategy 3.1.2 (Ongoing Task): Control Access

- Maintain fences and signs installed at the onset of management (Strategy 1.1.1).

The Resource Manager will be responsible for ensuring that the fence, gates, and signs are maintained in good condition. Repair/replacement will be conducted as needed. The Resource Manager also will be responsible for altering the type and location of fencing to ensure site protection and to prohibit trespassing. Any additional fencing needs will be identified by the Resource Manager, and a fencing plan will be submitted to the County, USFWS, and CDFW for review prior to installation. Fencing maintenance and replacement costs, along with unforeseen contingency costs are incorporated into the ELM. Such fencing may be required for:

- Prevention of unauthorized vehicle access;
- Protection of focused species locations;
- Protection of open space boundaries; and/or

- Prevention of trail formation within the RMA.

Strategy 3.1.3 (Ongoing): Remove Trash and Debris

- Remove trash and debris from the RMA and dispose of it in a legal manner.

In conjunction with Strategy 1.1.3, continue to remove trash and debris from the RMA as needed. All materials will be removed from the RMA and disposed of in a legal manner.

Objective 3.2: Poaching/Collecting Prohibition

- Prevent unauthorized removal of any natural resources from the RMA.

Strategy 3.2.1 (Startup and Ongoing Task): Poaching/Collecting Prohibition

- The Resource Manager will maintain a log of illegal collecting and will report individuals caught removing natural resources from the RMA to the USFWS, CDFW, County, and/or Sheriff's Office. The collection of native seeds and plant cuttings within the RMA is allowed, as directed by the Resource Manager, to support any habitat management efforts. Any such collection will be limited to not adversely affect local plant populations.

Objective 3.3: Encampments

- Remove encampments from the RMA.

Strategy 3.3.1 (Startup and Ongoing Task): Monitor for Encampments/Squatters

- Concurrently with other site management activities, survey the RMA for evidence of squatting/encampments.

Illegal occupancy is common in open space areas, although this is not anticipated to be an issue in the RMA because of the open nature of the habitat. The Resource Manager will survey the RMA for evidence of illegal access concurrently with other site management activities and file a report with the Sheriff, DEH, and PDS, if necessary.

Objective 3.4: Predator/Pest Control

- Control predators/Pests in the RMA, to the extent practicable.

Strategy 3.4.1 (Ongoing Task): Predator/Pest Control

- Implement methods (e.g., pesticide use, trapping, etc.) as determined by the Resource Manager to minimize/reduce effects of predators/pests.

Pets escaping (cats and dogs) from the adjacent development area are anticipated to be the primary pest/predator issue within the RMA. The development project incorporates barriers to help reduce the potential for pets to enter the RMA. The Resource Manager will be responsible for continued outreach and communication with the adjacent residents to keep them informed on the need to keep their pets out of the RMA.

If other pests/predators become an issue, control/eradication programs should be implemented at the appropriate time of year, depending on the pest species and field conditions, and should be coordinated with efforts on adjacent properties. A moderate tolerance for pest species will be permitted, but if the Resource Manager determines that pest reduction/eradication measures are

required, the County, USFWS, and/or CDFW will be contacted to determine the need and appropriate methods, including potentially hiring a licensed pest control advisor.

Objective 3.5: Fire Management

- Coordinate with applicable fire/emergency agencies and prepare a fire management plan.

Strategy 3.5.1 (Ongoing Task): Coordinate with Fire Services

- The Resource Manager will coordinate with the law enforcement and emergency services, as needed, to provide access and coordinate response planning. This will include providing applicable emergency agencies with any access codes and gate keys.

Strategy 3.5.2 (Year 2 and Ongoing Task): Prepare, Implement, and Update Fire Plan

- Prepare, implement, and periodically update a Fire Plan that addresses wildlife risk management, brush (fuel) management, fire event response, fire suppression methods, and post fire habitat rehabilitation methods. See also Strategy 3.5.3, Work Plan Adjustments Following Fires.

Strategy 3.5.3 (Startup and Ongoing Task): Work Plan Adjustments Following Fires

- Confer with the County, USFWS, and CDFW and modify planned tasks and funding allocations as needed to allow for immediate and long-term fire recovery actions within the RMA.

Following fire events, the Resource Manager will confer with the County, USFWS, and CDFW regarding the extent of damage and will modify the current work plan and structure future work plans to support fire recovery measures within the RMA. Post-fire work plans will focus on the recovery of sensitive vegetation communities and sensitive animal habitat within the RMA. The resulting modifications to any already approved work plan and changes to the frequency and type of tasks identified in this RMP (e.g., required surveys or mapping updates) will not constitute revisions to the RMP. Strategies included in this RMP will be modified and adapted as appropriate into fire recovery measures and will not require separate approval by the County, USFWS, and CDFW. Measures that are not adaptations of strategies in the RMP will require County, USFWS, and CDFW approval in advance of implementation.

Objective 3.6: Erosion Control

- Provide erosion control measures, if necessary, to prevent erosion within the RMA.

Strategy 3.6.1 (Startup and Ongoing Task): Monitor Potential Erosion Within the RMA

- Identify any foreseeable erosion issues onsite during other site visits.

At the present time, erosion is not an identified problem within the Preserve. Erosion control actions, if deemed necessary by the Resource Manager, will be accomplished in a manner approved by the County, USFWS, and CDFW.

Strategy 3.6.2 (Ongoing Task): Install Erosion Control Measures

- Prevent erosion by installing appropriate erosion control measures as needed.

Efforts for potential future erosion areas will include but not be limited to reseeded with a seed mix consisting of native species known to prevent erosion. In addition, such measures as revegetation, slope stabilization, and installation of structural or nonstructural erosion control features, such as fiber rolls, that contribute to erosion control efforts, will be evaluated based upon the advice of an erosion control specialist.

Objective 3.7: Hunting

- Prevent shooting or hunting within the RMA.

Strategy 3.7.1 (Startup and Ongoing Task): Monitor Shooting and Hunting

- Identify any hunting or shooting on site during regular site visits.

The primary goal of the RMA is to serve as preserved open space. As shooting and hunting are inconsistent with this goal and may be in violation of federal, state, and local law, no shooting or hunting of any kind will be allowed on site. At the present time, regular hunting or shooting is not an identified problem within the RMA.

Strategy 3.7.2 (Ongoing Task): Control Hunting/Shooting

- Prevent hunting and shooting within the RMA .

The Resource Manager will report anyone shooting or hunting within the open space to the Sheriff's Office and to the County, USFWS, and CDFW, as applicable.

Objective 3.8: Hazardous Materials Monitoring

- Monitor the RMA for release of hazardous materials.

Strategy 3.8.1 (Ongoing Task): Hazardous Materials Monitoring

- Prevent release of hazardous materials and remove is necessary.

The release of hazardous materials such as fuels, oil, vegetation clippings, trash, and landscaping related chemicals (e.g., pesticides and herbicides) has potential to affect the RMA negatively. Although no specific survey will be conducted, if such hazardous materials are observed within the RMA during regular site visits, remedial measures to remove the material will occur, as directed by the Resource manager.

4.4 GOAL 4: PUBLIC OUTREACH AND EDUCATION

Sustain strong positive relationships with adjacent owners/managers, allow access to the property for educational and scientific purposes, and share information with stakeholders and agencies.

Objective 4.1: Adjacent Owners and Residents

- Establish and maintain direct contact with adjacent owners and residents.

Strategy 4.1.1 (Startup Task): Direct Contact

- Within the first 18 months of RMP implementation, make direct contact with each landowner/resident of adjacent properties.

The Resource Manager will introduce the organization and describe the property's new status as conserved land. Residents will also be provided with the information on the planned 24-hour cell phone number, website, and online reporting system.

Objective 4.2: Public Uses

- Allow limited public access for educational and research purposes.

Strategy 4.2.1 (Startup and Ongoing Task): Tours and Site Visits

- Establish parameters and a protocol for authorizing tours and site visits.

Tours and site visits will be allowed on a limited basis for educational purposes. All tours and site visits will be accompanied by the Resource Manager.

Strategy 4.2.2 (Startup and Ongoing Task): Scientific Research

- Establish parameters and protocol for authorizing research within the RMA.

The RMA will be made available for environmental studies by qualified researchers. Research that entails ground disturbance or habitat disturbance must be approved by the County, USFWS, and CDFW in advance.

Strategy 4.2.3 (Startup and Ongoing Task): MSCP Monitoring Program

- Coordinate with MSCP regional monitoring efforts to ensure access to the RMA for regional surveys.

For draft NCMSCP-covered species, regional monitoring and research may be the most effective means of identifying important habitat features that may improve species-specific management objectives. Coordinate with County MSCP personnel as needed to provide current data, in conjunction with annual reporting.

Objective 4.3: Information Sharing

- Contribute to regional databases.

Strategy 4.3.1 (Startup and Ongoing Task): Sensitive Species Data

- Report data on sensitive species observations.

The Resource Manager will maintain a database of biological resources within the RMA and share this data with the County of San Diego's SanBIOS, the State of California's Biogeographic Information and Observation system (BIOS), California Natural Diversity Database (CNDDDB), and SDMMMP data portal.

4.5 GOAL 5: PROGRAM ADMINISTRATION AND REPORTING

Provide program administration through planning and reporting on the RMP implementation in a consistent and efficient manner.

Objective 5.1: RMP Implementation

- Plan and report RMP implementation annually.

Strategy 5.1.1 (Startup and Ongoing Task): Annual Report and Work Plan

- Prepare and submit an annual report and work plan for the County, USFWS, and CDFW approval.

The annual report and work plan will be a single document in a format determined in cooperation with the County, USFWS, and CDFW. The format will be determined before the first report is prepared and may be changed over time with the concurrence of all parties. The annual report is due by January 31. Each annual report should include the following:

- **General**
 - Photographs and documentation explaining any issues relevant to management of the RMA during that year
 - Summary of the status of the endowment, funds generated, and expenses incurred to performing site management
 - List of all individuals and organizations involved with the management of the RMA and the preparation of the annual report

- ***Management***

- Summary of any enhancement activities, if conducted
- Summary of all relevant management actions taken during the year
- Summary report on the effectiveness of any exotic species eradication programs carried out, including:
 - Graphic representation of locations and extent of exotic species locations
 - Discussion of on-site activities carried out to remove exotic species, a comparison of those efforts to activities carried out in previous years, and an outline of activities to be performed during the following year
 - Photographs of before and after exotic species control measures implemented
 - Discussion of potential reasons for any observed habitat degradation
 - Summary of seed collection and areas needing enhancement
 - Summary of any fire activity on site, including details and maps on suppression efforts and burn severity
 - Discussion of weed control activities, results, and future needs
 - Discussion of pests and exotic or feral animal problems and control measures taken during the year
 - Discussion of management problems confronted during the year, including maps illustrating areas of illegal poaching/collecting, dumping, trespass, erosion, squatting, hunting, or other disturbance
 - Summary of the effectiveness of access/fencing control measures taken to preserve habitat and resource integrity on site

- ***Monitoring***

- Updated list of all plant and animal species occurring on site and general abundance of each of these species in the RMA (attached as appendices)
- Inventory of draft NCMSCP-covered species and other sensitive species observed within the RMA, and how each species was using the habitat
- Map illustrating the locations of draft NCMSCP-covered species and other sensitive species observed within the RMA
- Discussion of potential reasons for any notable absences of sensitive species within the RMA
- Description of existing conditions within the RMA for that year, including general vegetation survey results
- Ground photos from permanent photo stations within the RMA

Each annual report and work plan will be submitted to County, USFWS, and CDFW for review and approval at least 45 days prior to the scheduled start of the new work plan. If comments are received, the Resource Manager will provide any requested information and work with the County, USFWS, and CDFW to make appropriate revisions to the report and work plan. With the written concurrence of the County, USFWS, and CDFW, the Resource Manager may proceed with portions of the work plan that are not in dispute. Implementation of items in dispute may not begin until the County, USFWS, and CDFW document their approval.

Strategy 5.1.2 (Startup and Ongoing Task): Coordination with County, USFWS, and CDFW

- Establish a procedure and schedule for coordinating activities and providing reports to the County, USFWS, and CDFW.

The purpose of this strategy is to coordinate the preparation and delivery of required materials to the County, USFWS, and CDFW and allocate adequate time for communications with the agencies during RMP implementation.

Objective 5.2: RMP Review/Revision

- Review/revise RMP as needed.

Strategy 5.2.1 (Ongoing Task): RMP Review

- Conduct a review of the RMP goals, objectives, and strategies in cooperation with the County, USFWS, and CDFW every five years or other appropriate interval.

The Resource Manager will work in cooperation with the County, USFWS, and CDFW to conduct a periodic review of the RMP goals objectives, and strategies. The first review will occur at the end of Year 5. Subsequent reviews will occur every five years or other interval agreed to by the Resource Manager, County, USFWS, and CDFW. The purpose of the review is to examine the overall management program and identify where modifications to goals, objectives, and strategies are needed.

Strategy 5.2.2 (Ongoing Task): RMP Revisions

- Revise the RMP as needed over time, subject to County, USFWS, and CDFW approval of the modifications.

Modifications to the RMP may be proposed by the Resource Manager at any time, including but not limited to in connection with annual reports or the periodic reviews. Proposed changes will be submitted in writing for County, USFWS, and CDFW approval. The Resource Manager will respond to comments received and will incorporate the changes into the RMP document and distribute electronic copies of the revised RMP to the County, USFWS, and CDFW.

The proposed change must be submitted in writing and will require the concurrence of the County, USFWS, and CDFW. Except where the County, USFWS, and CDFW agree that the change is minor, the 45-day review process will apply.

4.6 GOAL 6: PROPERTY COORDINATION/MANAGEMENT

Coordinate/Integrate Management of the property with adjacent conserved lands.

Objective 6.1: Coordination

- The Resource Manager will coordinate weed control actions, fire management, and public access controls with the County, SDMMMP, and adjacent landowners/managers at least annually.

Strategy 6.1.1 (Ongoing Task): Coordinate with Adjacent Property Owners

- The Resource Manager will meet at least annually with adjacent property owners and regional land managers to coordinate weed control actions, fire management, and access control.

5.0 RESOURCE MANAGEMENT PLAN SUMMARY AND BUDGET

5.1 OPERATIONS AND BUDGET SUMMARY

Management of the RMA will require tasks associated with the biological resources of the property. The primary operation will be protection of the RMA from impacts and vandalism, removal of exotic plant and animal species where applicable, monitoring of sensitive species population sizes, and reporting. A detailed breakdown of the tasks and costs will be presented in the PAR to be prepared.

5.2 MANAGEMENT CONSTRAINTS

This RMP follows the County's regulatory requirements, in accordance with the CDFW and USFWS. Although it anticipates measures for foreseeable contingencies, several external constraints remain. For example, trespassing could negatively impact sensitive species, and environmental factors, such as prolonged drought, could have detrimental effects on vegetation.

5.3 CHANGES/AMENDMENTS

The Resource Manager will have discretion in the use of adaptive management actions deemed necessary for management of the RMA under this RMP. Each annual report will identify actions taken during the previous year and identify deviations from the RMP. Additionally, each annual workplan will identify proposed changes that would be employed in the upcoming year.

In the event of major changes or management failure, the County, UWSFS, and CDFW would be immediately notified. This may include, but would not be limited to, transference of management responsibility, alterations to allowable uses, insufficient endowment funds, and extreme landform changes (fire/flood, etc.).

5.4 EXISTING STAFF AND ADDITIONAL PERSONNEL NEEDS SUMMARY

The proposed Resource Manager (San Diego Foundation) has experience with management of lands and will be sufficient to implement this RMP. Additional staff will not be required.

6.0 REFERENCES

Alden Environmental, Inc. 2024. Biological Technical Report for the Questhaven Tentative Map Project. May 6.

2024. Questhaven Tentative Map Project Habitat Restoration Plan. May 6.

Falk, D.A. and K.E. Holsinger, editors. *Genetics and Conservation of Rare Plants*. Oxford University Press; New York; 1991.

U.S. Fish and Wildlife Service. 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol.
<https://www.fws.gov/sites/default/files/documents/survey-protocol-for-coastal-california-gnatcatcher.pdf>

Appendix A

Plant Species Observed

Appendix A
PLANT SPECIES OBSERVED – QUESTHAVEN SITE

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HABITAT</u> ¹
<u>Monocotyledoneae</u>		
Cyperaceae		
<i>Carex spissa</i>	San Diego sedge	EW
<i>Cyperus involucratus</i> ¹	umbrella plant	EW
Juncaceae		
<i>Juncus acutus</i> ssp. <i>Leopoldii</i> ²	southwestern spiny rush	EW
<i>Juncus xiphioides</i>	iris-leaved rush	DCSS, NNG
Liliaceae		
<i>Calochortus splendens</i>	lilac mariposa lily	SMC
Poaceae		
<i>Avena barbata</i> ¹	slender oat	NNG
<i>Avena fatua</i> ¹	wild oats	DCSS, DH, NG, NNG
<i>Brachypodium distachyon</i> ¹	purple false brome	DH, NG, NNG, SMC
<i>Bromus diandrus</i> ¹	common ripgut grass	DCSS, EW, NNG
<i>Bromus hordeaceus</i> ¹	soft brome	NNG
<i>Bromus madritensis</i> ¹	foxtail chess	DCSS, NNG, SMC
<i>Cynodon dactylon</i> ¹	Bermuda grass	NNG
<i>Distichlis spicata</i>	saltgrass	NNG
<i>Ehrharta erecta</i> ¹	panic veldtgrass	EW
<i>Festuca perennis</i> ¹	Italian ryegrass	NNG
<i>Gastridium phleoides</i> ¹	nit grass	NNG
<i>Lamarckia aurea</i> ¹	goldentop	DH, NNG
<i>Polypogon monspeliensis</i> ¹	annual beardgrass	NNG
<i>Stipa lepida</i>	foothill needlegrass	NG, NNG
<i>Stipa miliacea</i> ¹	smilo grass	DCSS, EW, NNG
Themidaceae		
<i>Brodiaea orcuttii</i> ²	Orcutt's brodiaea	NNG
<u>Dicotyledoneae</u>		
Adoxaceae		
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	DCSS, SMC
Agavaceae		
<i>Chlorogalum pomeridianum</i>	soap plant	SMC

Appendix A (cont.)
PLANT SPECIES OBSERVED – QUESTHAVEN SITE

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HABITAT</u>¹
Aizoaceae		
<i>Carpobrotus edulis</i> ¹	hottentot-fig	DH, NNG
Anacardiaceae		
<i>Malosma laurina</i>	laurel sumac	DCSS, NG, SMC
<i>Rhus integrifolia</i>	lemonadeberry	DCSS
<i>Schinus molle</i> ¹	Peruvian pepper tree	NNG
<i>Toxicodendron diversilobum</i>	poison oak	EW
Apiaceae		
<i>Daucus pusillus</i>	rattlesnake weed	SMC
<i>Foeniculum vulgare</i> ¹	fennel	EW, NNG
Asteraceae		
<i>Artemisia californica</i>	California sagebrush	DCSS
<i>Artemisia dracunculus</i>	tarragon	EW
<i>Baccharis pilularis</i>	coyote brush	DCSS, NNG
<i>Baccharis salicifolia</i>	mule fat	EW
<i>Carduus pycnocephalus</i> ¹	Italian thistle	EW, NNG, SMC
<i>Centaurea melitensis</i> ¹	toçalote	DCSS, NNG
<i>Corethrogyne filaginifolia</i>	sand aster	DCSS, DH, NNG
<i>Cynara cardunculus</i> ¹	artichoke thistle	NNG
<i>Deinandra fasciculata</i>	fascicled tarplant	DCSS, DH, NG, NNG, SMC
<i>Encelia californica</i>	California encelia	EW
<i>Grindelia camporum</i>	gum plant	NNG
<i>Hazardia squarrosa</i>	saw-toothed goldenbush	SMC
<i>Hedypnois cretica</i> ¹	Crete hedypnois	NNG
<i>Helminthotheca echioides</i> ¹	bristly ox-tongue	NNG
<i>Isocoma menziesii</i>	goldenbush	DCSS, NNG
<i>Lactuca serriola</i> ¹	wild lettuce	DCSS, EW, NG, NNG, SMC
<i>Logfia gallica</i> ¹	narrow-leaf filago	DCSS, DH
<i>Osmadenia tenella</i>	osmadenia	DCSS
<i>Pseudognaphalium californicum</i>	California everlasting	DCSS, NNG
<i>Pseudognaphalium luteoalbum</i> ¹	everlasting cudweed	NNG
<i>Sonchus asper</i> ¹	prickly sow thistle	NNG
<i>Stephanomeria virgata</i>	virgate wreath-plant	DCSS, NG
Cactaceae		
<i>Opuntia sp.</i>	prickly pear	DCSS, NNG

Appendix A (cont.)
PLANT SPECIES OBSERVED – QUESTHAVEN SITE

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HABITAT</u> ¹
Chenopodiaceae		
<i>Atriplex semibaccata</i> ¹	Australian saltbush	DH, NNG
<i>Salsola tragus</i> ¹	Russian-thistle, tumbleweed	NNG
Cistaceae		
<i>Cistus</i> sp. ¹	ornamental rock rose	NNG
<i>Helianthemum scoparium</i>	peak rush-rose	DCSS, SMC
Convolvulaceae		
<i>Calystegia macrostegia</i>	morning-glory	DCSS, NNG
<i>Convolvulus arvensis</i> ¹	bindweed	DCSS, NNG
Cucurbitaceae		
<i>Marah macrocarpa</i>	wild cucumber	SMC
Euphorbiaceae		
<i>Chamaesyce</i> sp. ¹	spurge	NNG
<i>Croton setigerus</i>	dove weed	DCSS, DH, NNG
<i>Ricinus communis</i> ¹	castor bean	EW
Fabaceae		
<i>Acacia</i> sp. ¹	acacia	EW, NNG
<i>Acmispon americanus</i>	Spanish-clover	NNG
<i>Acmispon glaber</i>	deerweed	DCSS, DH, NG, NNG, SMC
<i>Lathyrus vestitus</i>	sweet pea	SMC
Fagaceae		
<i>Quercus dumosa</i> ²	Nuttall's scrub oak	SMC, SOC
Gentianaceae		
<i>Zeltnera venusta</i>	canchalagua	DCSS, NG, NNG, SMC
Geraniaceae		
<i>Erodium botrys</i> ¹	long-beak filaree	DH, NG, NNG
<i>Erodium cicutarium</i> ¹	redstem filaree	DH, NG, NNG

Appendix A (cont.)
PLANT SPECIES OBSERVED – QUESTHAVEN SITE

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HABITAT</u> ¹
Grossulariaceae		
<i>Ribes indecorum</i>	white flowering currant	EW
<i>Ribes speciosum</i>	fuschia-flowered gooseberry	SMC
Iridaceae		
<i>Sisyrinchium bellum</i>	blue-eyed grass	DCSS, NNG
Lamiaceae		
<i>Salvia mellifera</i>	black sage	DCSS, SMC
<i>Stachys</i> sp.	hedge-nettle	EW
Lythraceae		
<i>Lythrum hyssopifolia</i> ¹	grass poly	NNG
Malvaceae		
<i>Malacothamnus fasciculatus</i>	chaparral mallow	DCSS
<i>Malvella leprosa</i> ¹	alkali-mallow	EW
Myrsinaceae		
<i>Anagallis arvensis</i> ¹	scarlet pimpernel	DH, NNG
Myrtaceae		
<i>Eucalyptus</i> spp. ¹	eucalyptus	EW
Oleaceae		
<i>Fraxinus uhdei</i> ¹	shamel ash	EW
Onagraceae		
<i>Clarkia purpurea</i>	wine-cups	DCSS, NNG
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	four-spot clarkia	NNG
Orobanchaceae		
<i>Castilleja affinis</i> ssp. <i>affinis</i>	coast paint-brush	SMC
Phrymaceae		
<i>Mimulus guttatus</i>	monkey-flower	CC, DCSS, SMC

Appendix A (cont.)
PLANT SPECIES OBSERVED – QUESTHAVEN SITE

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HABITAT</u> ¹
Polemoniaceae <i>Navarretia hamata</i>	skunkweed	DCSS, SMC
Polygonaceae <i>Eriogonum fasciculatum</i> <i>Rumex conglomeratus</i> ¹ <i>Rumex crispus</i> ¹	buckwheat dock curly dock	DCSS, EW EW EW, NNG
Primulaceae <i>Samolus parviflorus</i>	water pimpernel	EW
Ranunculaceae <i>Thalictrum fendleri</i>	meadow rue	EW, SMC
Rhamnaceae <i>Rhamnus crocea</i> <i>Rhamnus ilicifolia</i>	spiny redberry holly-leaf redberry	SMC SMC
Rosaceae <i>Adenostoma fasciculatum</i> <i>Heteromeles arbutifolia</i>	chamise toyon	CC, SMC SMC
Rubiaceae <i>Galium porrigens</i> var. <i>porrigens</i>	San Diego bedstraw	SMC
Salicaceae <i>Salix lasiolepis</i>	arroyo willow	EW
Selaginellaceae <i>Selaginella cinerascens</i> ²	ashy spike-moss	SMC

Appendix A (cont.)
PLANT SPECIES OBSERVED – QUESTHAVEN SITE

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HABITAT</u> ¹
Solanaceae		
<i>Nicotiana glauca</i> ¹	tree tobacco	EW
<i>Solanum</i> sp.	nightshade	DCSS, SMC
Verbenaceae		
<i>Verbena lasiostachys</i>	verbena	NNG

¹Habitat acronyms:

CC = chamise chaparral

DCSS= Diegan coastal sage scrub (including disturbed)

DH=disturbed habitat

EW = eucalyptus woodland

NG = native grassland

NNG = non-native grassland

SMC = southern mixed chaparral

SOC = scrub oak chaparral

¹ = Non-native species

² = Special status species

Appendix B

Animal Species Observed

Appendix B
ANIMAL SPECIES OBSERVED OR DETECTED – QUESTHAVEN

SCIENTIFIC NAME

COMMON NAME

INVERTEBRATES

Butterflies

<i>Apodemia mormo virgulti</i>	Behr's metalmark
<i>Erynnis funeralis</i>	funereal duskywing
<i>Junonia coenia</i>	common buckeye
<i>Leptotes marina</i>	marine blue
<i>Plebejus acmon</i>	Acmon blue
unidentified	sulphur butterfly
unidentified	white butterfly

VERTEBRATES

Amphibians

<i>Spea hammondi</i> ¹	western spadefoot toad
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Reptiles

<i>Crotalus oreganus helleri</i>	southern Pacific rattlesnake
<i>Sceloporus</i> sp.	lizard

Birds

<i>Accipiter cooperii</i> ¹	Cooper's hawk
<i>Aeronautes saxatalis</i>	white-throated swift
<i>Aimophila ruficeps canescens</i> ¹	southern California rufous-crowned sparrow
<i>Anas platyrhynchos</i>	mallard
<i>Aphelocoma californica</i>	California scrub jay
<i>Archilochus alexandri</i>	black-chinned hummingbird
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Callipepla californica</i>	California quail
<i>Calypte anna</i>	Anna's hummingbird
<i>Cardellina pusilla</i>	Wilson's warbler
<i>Chaetura vauxi</i>	Vaux's swift
<i>Chamaea fasciata</i>	wrentit
<i>Chondestes grammacus</i>	lark sparrow
<i>Colaptes auratus</i>	northern flicker
<i>Corvus corax</i>	common raven
<i>Dryobates nuttallii</i>	Nuttall's woodpecker
<i>Empidonax difficilis</i>	Pacific slope flycatcher
<i>Geococcyx californianus</i>	greater roadrunner
<i>Geothlypis trichas</i>	common yellowthroat
<i>Haemorhous mexicanus</i>	house finch
<i>Icterus bullockii</i>	Bullock's oriole

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED – QUESTHAVEN

SCIENTIFIC NAME

COMMON NAME

VERTEBRATES (cont.)

Birds (cont.)

<i>Icterus cucullatus</i>	hooded oriole
<i>Lonchura punctulata</i>	scaly-breasted munia
<i>Melanerpes formicivorus</i>	acorn woodpecker
<i>Melospiza crissalis</i>	California towhee
<i>Melospiza melodia</i>	song sparrow
<i>Mimus polyglottos</i>	northern mockingbird
<i>Molothus ater</i>	brown-headed cowbird
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Passerina caerulea</i>	blue grosbeak
<i>Petrochelidon pyrrhonota</i>	cliff swallow
<i>Pheucticus melanocephalus</i>	black-headed grosbeak
<i>Picooides pubescens</i>	downy woodpecker
<i>Pipilo maculatus</i>	spotted towhee
<i>Polioptila caerulea</i>	blue-gray gnatcatcher
<i>Polioptila californica californica</i> ¹	coastal California gnatcatcher
<i>Psaltiriparus minimus</i>	bushtit
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Selasphorus rufus</i>	rufous hummingbird
<i>Selasphorus sasin</i>	Allen's Hummingbird
<i>Setophaga coronata</i>	yellow-rumped warbler
<i>Spinus psaltria</i>	lesser goldfinch
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
<i>Sturnus vulgaris</i>	European starling
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Toxostoma redivivum</i>	California thrasher
<i>Troglodytes aedon</i>	house wren
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Vermivora celata</i>	orange-crowned warbler
<i>Vireo gilvus</i>	warbling vireo
<i>Vireo huttoni</i>	Hutton's vireo
<i>Zenaida macroura</i>	mourning dove
<i>Zonotrichia leucophrys</i>	white-crowned sparrow

Mammals

<i>Canis latrans</i>	coyote
<i>Otospermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus audubonii</i>	desert cottontail

¹ = Special status species

Appendix C

Sensitive Species Evaluated for Potential

to Occur on Site

Appendix C
SENSITIVE SPECIES¹ EVALUATED FOR POTENTIAL TO OCCUR ON SITE

PLANTS				
SPECIES	SENSITIVITY² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Acanthomintha ilicifolia</i> San Diego thornmint	FT SE Rare Plant Rank 1B.1 List A	Clay lenses in grassy openings in chaparral or sage scrub. Prefers friable or broken, clay soils.	April to June	Low. This annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Adolphia californica</i> San Diego adolphia	-- -- Rare Plant Rank 2B.1 List B	Sage scrub but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks. Usually associated with xeric locales where shrub canopy reaches 4 or 5 feet.	December to May	Low. A perennial shrub that was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Ambrosia pumila</i> San Diego ambrosia	FE -- Rare Plant Rank 1B.1 List A	Grasslands, valley bottoms and dry drainages, also can occur on slopes, disturbed places, and in coastal sage scrub.	April to October	Low. This perennial, annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> Del Mar manzanita	FE -- Rare Plant Rank 1B.1 List A	Maritime chaparral with sandy soil.	December to June	Not expected. Maritime chaparral is not present on site; the species was not found on site; and this perennial, evergreen shrub has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Artemisia palmeri</i> San Diego sagewort	-- -- Rare Plant Rank 4.2 List D	Sandy soils in mesic chaparral; coastal scrub; and riparian forest, scrub, and woodland.	(February) May to September	Low. This perennial, deciduous shrub was not found on site, and it has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Atriplex pacifica</i> South coast saltscale	-- -- Rare Plant Rank 1B.2 List A	Coastal bluff scrub, coastal dunes, coastal scrub, and playas.	March to October	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Baccharis vanessae</i> Encinitas baccharis	FT SE Rare Plant Rank 1B.1 List A	Sandstone soils in chaparral. Known mainly from the Encinitas area from which it has been nearly extirpated.	August to November	Low. This perennial, deciduous shrub was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Bloomeria clevelandii</i> San Diego goldenstar	-- -- Rare Plant Rank 1B.1 List A	Clay soils on dry mesas and hillsides in coastal sage scrub, chaparral, grassland, and around vernal pools.	April to May	Low. While this species has been reported to the SanBios database or the CNDDDB within 1,000 feet of the site, this perennial, bulbiferous herb was not found on site.
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	FT SE Rare Plant Rank 1B.1 List A	Clay soils in vernal moist grasslands and vernal pool periphery.	March to June	Low. This perennial, bulbiferous herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Brodiaea orcuttii</i> Orcutt's brodiaea	-- -- Rare Plant Rank 1B.1 List A	Mesic closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools—often associated with clay soil.	May to July	Present
<i>Calandrinia breweri</i> Brewer's calandrinia	-- -- Rare Plant Rank 4.2 List D	Chaparral and coastal scrub with sandy or loamy soils; on disturbed sites and burns.	(Jan) March to June	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Ceanothus verrucosus</i> Wart-stemmed ceanothus	-- -- Rare Plant Rank 2B.2 List B	Chaparral	December to May	Low. While this species has been reported to the SanBios database and/or the CNDDDB within 1,000 feet of the site, this perennial, evergreen shrub was not found on site.
<i>Centromadia parryi</i> ssp. <i>australis</i> Southern tarplant	-- -- Rare Plant Rank 1B.1 List A	Margins of marsh and swamps, vernal mesic grasslands, and vernal pools.	May to November	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Chorizanthe orcuttiana</i> Orcutt's spineflower	FE SE Rare Plant Rank 1B.1 List A	Sandy openings in closed-cone coniferous forest, maritime chaparral, and coastal scrub.	March to May	Low. This annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> Long-spined spineflower	-- -- Rare Plant Rank 1B.2 List A	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools, often with clay soil.	April to July	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> Summer holly	-- -- Rare Plant Rank 1B.2 List A --	Chaparral and cismontane woodland.	April to June	Low. While this species has been reported to the SanBios database and/or the CNDDDB within 1,000 feet of the site, this perennial, evergreen shrub was not found on site.
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> Del Mar Mesa sand aster	-- -- Rare Plant Rank 1B.1 List A	Sandy soils in maritime chaparral, coastal scrub, or coastal bluff scrub.	May, July to September	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Cryptantha wigginsii</i> Wiggins' cryptantha	-- -- Rare Plant Rank 1B.2 --	Coastal scrub habitat, often with clay soil.	February to June	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya	-- -- Rare Plant Rank 1B.1 List A	Coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland habitats with rocky, often clay or serpentinite soils.	April to June	Low. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Dudleya variegata</i> Variegated dudleya	-- -- Rare Plant Rank 1B.2 List A	Clay soils near vernal pools, and on metavolcanic rocky soils in open coastal sage scrub, chaparral, and grasslands.	April to June	Not expected. Potential habitat not present. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Dudleya viscida</i> Sticky dudleya	-- -- Rare Plant Rank 1B.2 List A	Grows predominantly on very steep, north-facing slopes in rocky areas of coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub.	May to June	Not expected. Steep slopes not present. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Eryngium aristulatum</i> <i>parishii</i> San Diego button-celery	FE SE Rare Plant Rank 1B.1 List A	Vernal pools or mima mound areas with vernal moist conditions.	April to June	Not expected. Potential habitat not present; the species was not found on site; and this annual/perennial herb has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Ferocactus viridescens</i> San Diego barrel cactus	-- -- Rare Plant Rank 2B.1 List B	Coastal scrub hillsides, often at the crest of slopes and growing among cobbles.	May to June	Low. This perennial stem succulent was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Harpagonella palmeri</i> Palmer's grapplinghook	-- -- Rare Plant Rank 4.2 List D	Open grassy areas with shrubland (chaparral, coastal scrub) and clay soil.	March to May	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Hazardia orcuttii</i> Orcutt's hazardia	-- ST Rare Plant Rank 1B.1 List A	Maritime chaparral and coastal scrub, often with clay soil.	August to October	Not expected. This perennial, evergreen shrub was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Horkelia truncata</i> Ramona horkelia	-- -- Rare Plant Rank 1B.3 List A	Clay or gabbroic soils in chaparral and cismontane woodland.	May to June	Low. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Iva hayesiana</i> San Diego marsh-elder	-- -- Rare Plant Rank 2B.2 List B	Marshes, swamps, and playas.	April to October	Low. Potential habitat absent or very limited. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Juncus acutus</i> ssp. <i>leopoldii</i> Southwestern spiny rush	-- -- Rare Plant Rank 4.2 List D	Mesic coastal dunes; alkaline meadows and seeps; coastal salt marshes and swamps.	(March) May to June	Present
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	-- -- Rare Plant Rank 1B.1 List A	Coastal salt marshes and swamps; playas; vernal pools.	February to June	Low. Potential habitat absent or very limited. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson pepper grass	-- -- Rare Plant Rank 4.3 List A	Openings in chaparral and sage scrub.	January to July	Low. This annual herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Leptosyne maritima</i> Sea dahlia	-- -- Rare Plant Rank 2B.2 List B	Coastal bluff scrub and coastal scrub.	March to May	Low. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Monardella hypoleuca</i> ssp. <i>lanata</i> Felt-leaved monardella	-- -- Rare Plant Rank 1B.2 List A	Chaparral and cismontane woodland.	June to August	Low. This perennial, rhizomatous herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Navarretia fossalis</i> Spreading navarretia	FT -- Rare Plant Rank 1B.1 List A	Chenopod scrub, marshes and swamps (assorted freshwater habitats), playas, and vernal pools.	April to June	Low. This annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Orobanche parishii</i> ssp. <i>brachyloba</i> Short-lobed broomrape	-- -- Rare Plant Rank 4.2 List D	Sandy soils in coastal bluff scrub, coastal dunes, and coastal scrub.	April to October	Low. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Pogogyne abramsii</i> San Diego mesa mint	FE SE Rare Plant Rank 1B.1 List A	Vernal pools	March to July	Not expected. No potential habitat on site. This annual herb was not found on site, and it has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Selaginella cinerascens</i> Ashy spike-moss	-- -- Rare Plant Rank 4.1 List D	Chaparral and coastal scrub	--	Present
<i>Stemodia durantifolia</i> Purple stemodia	-- -- Rare Plant Rank 2B.1 List B	Sonoran desert scrub	(January) April, June, August to October, December	Not expected. Potential habitat not present. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

PLANTS				
SPECIES	SENSITIVITY ² Federal State CNPS County	HABITAT(S)	BLOOM PERIOD	POTENTIAL TO OCCUR ON SITE
<i>Suaeda esteroa</i> Estuary seablite	-- -- Rare Plant Rank 1B.2 List A	Marshes and swamps	(May) July to October (January)	Not expected. Potential habitat not present. This perennial herb was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Tetracoccus dioicus</i> Parry's tetracoccus	-- -- Rare Plant Rank 1B.2 List A	Chaparral and coastal scrub	April to May	Low. This perennial, deciduous shrub was not found on site, and it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Viguiera laciniata</i> San Diego County viguiera	-- -- Rare Plant Rank 4.3 List D	Chaparral and coastal scrub	February to June (Aug)	Low. This perennial shrub was not found on site, and it has not been reported to the database or the CNDDDB within 1,000 feet of the site.

¹ List of species is from a search of the SanBios and USFWS databases and the CNDDDB for the project site plus a 5-mile radius.

² Explanation of Sensitivity Codes

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Accipiter cooperii</i> Cooper's hawk	-- WL Group 1	In San Diego County, tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrubland or fields.	Present. Seen flying overhead potentially foraging on site and has potential to nest in the trees on site.
<i>Accipiter striatus</i> Sharp-shinned hawk	-- WL Group 1	Usually observed in areas with tall trees or other vegetative cover but can be observed in a variety of habitats. In San Diego County occurs in small numbers and only in winter.	Low. It only occurs in small numbers and only in winter. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Agelaius tricolor</i> Tricolored blackbird	BCC ST, SSC Group 1	Highly colonial species occurring mostly in coastal lowland grasslands near open water sources for foraging.	Low. Potentially suitable habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Aimophila ruficeps canescens</i> Southern California rufous-crowned sparrow	-- WL Group 1	Coastal sage scrub and open chaparral as well as shrubby grasslands.	Present
<i>Ammodramus savannarum</i> Grasshopper sparrow	-- SSC Group 1	Typical habitat is dense grasslands that have little or no shrub cover.	Low. This species was not observed/detected on site during the site surveys conducted over the period January through June 2020, including the BUOW survey, which occurred in the grasslands on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Anniella stebbinsi (pulchra pulchra)</i> Southern California (silvery) legless lizard	-- SSC Group 2	Areas with loose soil, particularly in sand dunes and or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, and desert scrub.	Low. The soils on site consist primarily of rocky silt loams. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Antrozous pallidus</i> Pallid bat	-- SSC Group 2	Most commonly associated with arid open scrub or grassland and gentle terrain with scattered rocky outcrops.	Low, as rocky outcrops are not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Aquila chrysaetos</i> Golden eagle	BCC, BGEPA WL, FP Group 1	Typical foraging habitat includes grassy and open, shrubby habitats. Generally nests on remote cliffs; requires areas of solitude at a distance from human habitation.	Low. Site and immediate environs are not at distance to human habitation. No reports to the CNDDDB within 5 miles of the site. A record in the SanBios database is from 1998 for the San Diego Natural History Museum in an 8-kilometer area that overlaps with the 5-mile radius of the site.
<i>Ardea herodias</i> Great blue heron	-- -- Group 2	Wetland habitats, but can be observed foraging away from water.	Low. Commonly associated with marshes, mudflats, and agricultural areas not present on site. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Arizona elegans occidentalis</i> California glossy snake	-- SSC --	Arid scrub, rocky washes, grasslands, chaparral. Appears to prefer open areas and areas with soil loose enough for burrowing.	Low. Rocky habitat is not present, and soils may not be suitable for burrowing. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Artemisiospiza belli belli</i> Bell's sage sparrow	BCC WL Group 1	Chaparral and sage scrub. The habitat must not be too dense or have too much leaf litter as this species spends most of its time running on the ground.	Moderate. Potential habitat is present on site and has been reported to the SanBios database within 1,000 feet of the site.
<i>Asio otus</i> Long-eared owl	-- SSC Group 1	Shady oak woodlands and broad riparian forests.	Not expected. No potential habitat is present on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Aspidoscelis hyperythra</i> Orange-throated whiptail	-- WL Group 2	Coastal sage scrub, chaparral, edges of riparian woodlands and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas; shaded areas; and abundant invertebrate prey base, particularly termites (<i>Reticulitermes</i> sp.).	Moderate. Potential habitat is present on site, although it has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Aspidoscelis tigris stejnegeri</i> Coastal whiptail	-- SSC Group 2	Open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of insects, spiders, or scorpions.	Moderate. Potential habitat is present on site, although it has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Athene cunicularia hypugea</i> Burrowing owl	BCC SSC Group 1	Open areas such as grasslands, pastures, coastal dunes, desert scrub, and edges of agriculture fields, with underground burrows often excavated by California ground squirrels (<i>Otospermophilus beecheyi</i>), for breeding and foraging.	Low. A focused survey for the BUOW was conducted on site in 2020, and no BUOW was observed nor was any sign of BUOW observed. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Bombus crotchii</i> Crotch's bumble bee	-- SCE --	Found between San Diego and Redding, California in a variety of habitats including open grasslands, shrublands, chaparral, desert margins including Joshua tree and creosote scrub, and semi-urban settings (CDFW 2022). Food plants include <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Phacelia</i> , and <i>Salvia</i> (Williams et al. 2014). The species is near endemic to California, with only a few records from Nevada and Mexico (CDFW 2022).	Low. Much of the project footprint is densely vegetated with non-native grasses. Portions of the site do support nectar and pollen resources. A focused survey for the species was conducted in spring 2023, and the species was not found.
<i>Branchinecta sandiegonensis</i> San Diego fairy shrimp	FE -- Group 1	Seasonally astatic pools which occur in tectonic swales or earth slump basins and other areas of shallow, standing water. Often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral.	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Buteo lineatus</i> Red-shouldered hawk	-- -- Group 1	Riparian woodland, oak woodland, orchards, eucalyptus groves, or other areas with tall trees.	Moderate, as potential habitat is present on site. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Buteo regalis</i> Ferruginous hawk	BCC WL Group 1	In San Diego County, occurs only in winter. Found in open country, primarily prairies, plains, and badlands.	Low, as the site is not in open country, and the species only occurs in winter. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Campylorhynchus brunneicapillus couesi</i> (sandiegensis) San Diego cactus wren	BCC SSC Group 1	Habitat consists of cactus thickets in coastal lowlands of San Diego County.	Low, as cactus thickets are not present on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Cathartes aura</i> Turkey vulture	-- -- Group 1	Foraging habitat includes most open habitats with breeding occurring in crevices among boulders.	Moderate potential to forage on site. No breeding habitat is present. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Chaetodipus californicus femoralis</i> Dulzura pocket mouse	-- SSC Group 2	Primarily associated with mature chaparral. It is known to occur in coastal sage scrub.	Moderate, as potential habitat is present on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Chaetodipus fallax fallax</i> Northwestern San Diego pocket mouse	-- SSC Group 2	Occurs in open areas of coastal sage scrub and weedy growth, often on sandy substrates.	Low, as the site's substrates are primarily rocky silt loams. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT, BCC SSC Group 1	Beaches, dunes, and salt flats.	Not expected due to a lack of potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Charina trivirgata roseofusca</i> Rosy boa	-- -- Group 2	Occurs among rocky outcrops in coastal sage scrub, chaparral, and desert scrub.	Low, as rocky outcrops are not present. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Choeronycteris mexicana</i> Mexican long-tongued bat	-- SSC --	Arid habitats along the coast and in inland valleys in urban and suburban situations. Roosts in natural and man-made crevices and structures.	Moderate, as potential habitat is present on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Circus (cyaneus) hudsonius</i> Northern harrier	-- SSC Group 1	Coastal, salt, and freshwater marshlands; grasslands; and prairies.	Low. Not observed during the site surveys conducted over the period January through June 2020. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Clemmys marmorata pallida</i> Southwestern pond turtle (<i>Emys marmorata</i> , western pond turtle)	-- SSC Group 1	Almost entirely aquatic; occurs in ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Requires basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Low. The drainage on site has an overstory of eucalyptus trees with no suitable basking sites. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Coleonyx variegatus abbottii</i> San Diego banded gecko	-- SSC Group 1 --	Chaparral and coastal sage scrub in areas with rock outcrops.	Low. The site does not contain rock outcrops. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-- SSC Group 2	Most abundant in mesic habitats. Considered uncommon in California (California Department of Fish and Game 1990). Drinks water and requires caves, mines, tunnels, buildings, or other man-made structures for roosting.	Low, due to its uncommon occurrence in California. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Crotalus ruber</i> Red-diamond rattlesnake	-- SSC Group 2	Chaparral, coastal sage scrub, along creek banks, particularly among rock outcrops or piles of debris with a supply of burrowing rodents for prey.	Low, as rock outcrops and piles of debris are not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Diadophis punctatus similis</i> San Diego ringneck snake	-- -- Group 2	Generally occurs in moist habitats such as oak woodlands and canyon bottoms but is also sometimes encountered in grassland, chaparral, and coastal sage scrub; generally restricted to leaf litter and rarely crosses open areas.	Moderate due to the presence of potential habitat on site. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Elanus leucurus</i> White-tailed kite	-- FP Group 1	Riparian woodlands and oak or sycamore groves adjacent to grassland on coastal slopes in San Diego County. Nests in the crowns of trees, especially coast live oak (<i>Quercus agrifolia</i>).	Low, as potential habitat is not present. Not observed during the site surveys conducted over the period January through June 2020. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Eremophila alpestris actia</i> California horned lark	-- WL Group 1	Sandy beaches and in agricultural fields, grassland, and open areas.	Moderate due to the presence of potential habitat on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Eumops perotis californicus</i> Western mastiff bat	-- SSC Group 2	Suitable habitat consists of extensive open areas with abundant roost locations (crevices in cliff faces, high buildings, trees, tunnels).	Moderate due to the presence of potential habitat on site. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Euphydryas editha quino</i> Quino checkerspot butterfly	FE -- Group 1	Potential habitat includes areas of low-growing and sparse vegetation with primary larval host plants, dwarf plantain (<i>Plantago erecta</i>) and owl's clover (<i>Castilleja exserta</i>).	Not expected. The project site is outside the USFWS' recommended Quino survey area (USFWS 2014). It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Ictera virens</i> Yellow-breasted chat	-- SSC Group 1	Dense riparian habitats.	Not expected. Potential habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Ixobrychus exilis</i> Least bittern	BCC SSC Group 2	Freshwater or brackish marshes with tall grasses, cattails, and reeds.	Not expected. Potential habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Lasiurus blossevillii</i> Western red bat	-- SSC Group 2	Riparian areas dominated by cottonwoods, oaks, sycamores, and walnuts.	Not expected. Potential habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Lasiurus xanthinus</i> Western yellow bat	-- SSC --	Primarily roosts in the skirts of dead palm tree fronds. Strongly associated with native palm groves with open water.	Not expected. Potential habitat is not present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Lepus californicus bennetii</i> San Diego black-tailed jackrabbit	-- SSC Group 2	Primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.	Moderate. Potential habitat is present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Lycaena hermes</i> Hermes copper	FC -- Group 1	Southern mixed chaparral and coastal sage scrub with mature specimens of its larval host plant, spiny redberry (<i>Rhamnus crocea</i>) with California buckwheat (<i>Eriogonum fasciculatum</i>) generally within 10 feet of the spiny redberry (Attachment B [County of San Diego Guidelines for Hermes Copper] to County 2010).	Low. The entire site was assessed in the field for the species' potential to occur, and no spiny redberry was found in proximity to California buckwheat. It has not been reported to the SanBios or USFWS databases or CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Myotis ciliolabrum</i> Small-footed myotis	-- -- Group 2	Occurs in arid, upland habitats. Prefers open stands in forests and woodlands as well as brushy habitats. Feeds over and drinks from streams, ponds, springs, and stock tanks.	Low. Potentially suitable habitat on site is limited or absent. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Myotis yumanensis</i> Yuma myotis	-- -- Group 2	Open forests and woodland are optimal habitat. Closely tied to bodies of water for foraging and drinking. Roosts in buildings, mines, crevices, caves, and under bridges.	Low. Potentially suitable habitat on site is limited or absent. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	-- SSC Group 2	Occurs in open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.	Moderate. Potential habitat is present. It has not been reported to the SanBios database or CNDDDB within 1,000 feet of the site.
<i>Nyctinomops femorosaccus</i> Pocketed free-tailed bat	-- -- Group 2	Prefers desert habitats with high cliffs or rock outcrops.	Not expected. Potentially suitable habitat is not present. It has not been reported to the SanBios database within 1,000 feet of the site.
<i>Odocoileus hemionus</i> Mule deer	-- -- Group 2	Occurs within a wide range of open habitats associated with expansive open space.	Moderate. Potentially suitable habitat is present, and while not reported to the SanBios database within 1,000 feet of the site, this wide-ranging species has been reported to the SanBios database within 5 miles of the site.
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow	-- SE Group 1	Coastal marshes dominated by pickleweed (<i>Salicornia</i> spp.).	Not expected. Suitable habitat is not present. It has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Perognathus longimembris pacifica</i> Pacific pocket mouse	FE SSC Group 1	Open coastal sage scrub; fine, alluvial sands near ocean.	Not expected. Currently known from Dana Point Headlands in Orange County, CA and three locations on Marine Corps Base Camp Pendleton in San Diego County (Spencer 2005). It has not been reported to the SanBios or USFWS databases or CNDDDB within 1,000 feet of the site.
<i>Phalacrocorax auratus</i> Double-crested cormorant	-- WL Group 2	Fresh and salt water habitats.	Not expected. Suitable habitat is not present. It has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Phrynosoma blainvillii</i> Coast horned lizard	-- SSC Group 2	Coastal sage scrub and open areas in chaparral, oak woodlands, and coniferous forests with sufficient basking sites, adequate scrub cover, and areas of loose soil; require native ants, especially harvester ants (<i>Pogonomyrmex</i> sp.), and are generally excluded from areas invaded by Argentine ants (<i>Linepithema humile</i>).	Moderate. Potentially suitable habitat present, although it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Plestiodon skiltonianus interparietalis</i> Coronado skink	-- WL Group 2	Grasslands, coastal sage scrub, and open chaparral where there is abundant leaf litter or low herbaceous growth.	Moderate. Potentially suitable habitat present, although it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Polioptila californica californica</i> Coastal California gnatcatcher	FT SSC Group 1	Coastal sage scrub	Present
<i>Pyrocephalus rubinus</i> Vermilion flycatcher	-- SSC Group 1	Riparian habitat	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Rallus obsoletus levipes</i> Light-footed Ridgway's rail	FE SE, FP Group 1	Coastal salt marshes, especially those dominated by cordgrass (<i>Spartina</i> sp.), but has been known to use brackish and freshwater sites.	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Salvadora hexalepis virgultea</i> Coast patch-nosed snake	-- SSC Group 2	Semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	Moderate. Potentially suitable habitat present, although it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Spea hammondi</i> Western spadefoot	-- SSC Group 2	Open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (<i>Rana catesbiana</i>) or crayfish (<i>Procambarus</i> sp.).	Not expected to occur. Although it has been reported to the CNDDDB within 1,000 feet of the site, there is no potential habitat on site.
<i>Sternula antillarum browni</i> California least tern	FE SE, FP Group 1	Coastal areas adjacent to the ocean. Nests in colonies at sites typically located on barrier dunes at river mouths, at lagoon entrances, and along sandy strips of sparse coastal strand vegetation.	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.
<i>Taxidea taxus</i> American badger	-- SSC Group 2	Grasslands, alluvial fans, meadows, and desert. In San Diego County, persists mainly in large blocks of undeveloped land and avoids urbanization.	Low. Potentially suitable habitat limited or absent. It has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.

ANIMALS			
SPECIES	SENSITIVITY ² Federal State County	HABITAT(S)	POTENTIAL TO OCCUR ON SITE
<i>Thamnophis hammondi</i> Two-striped garter snake	-- SSC Group 1	Primarily along permanent creeks and streams but also around vernal pools and along intermittent streams. Occasionally found in chaparral or other habitats relatively far from permanent water.	Moderate. Potentially suitable habitat present, although it has not been reported to the SanBios database or the CNDDDB within 1,000 feet of the site.
<i>Vireo bellii pusillus</i> Least Bell's vireo	FE SE Group 1	Riparian woodland and is most frequent in areas that combine an understory of dense, young willows or mule fat (<i>Baccharis salicifolia</i>) with a canopy of tall willows (<i>Salix</i> spp.).	Not expected to occur. There is no potential habitat on site. It has not been reported to the SanBios or USFWS databases or the CNDDDB within 1,000 feet of the site.

¹ List of species is from a search of the SanBios and USFWS databases and the CNDDDB for the project site plus a 5-mile radius.

² Explanation of Sensitivity Codes

Federal - U.S. Fish and Wildlife Service

FE Federal listed endangered
 FT Federal listed threatened
 FC Candidate for federal listing
 BCC Non-listed subspecies or populations of federal threatened or endangered species
 BGEPA Prohibits the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald (and golden) eagle "at any time or in any manner"

State – California Department of Fish and Wildlife

SE State listed endangered
 ST State listed threatened
 FP State fully protected (may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW)
 SSC State species of special concern (declining population levels, limited ranges, and/or continuing threats)
 WL Previously SSC but no longer merits SSC status, or which does not meet SSC criteria but for which there is concern and a need for additional information to clarify status.

County of San Diego

Plant Sensitivity

- List A Plants rare, threatened or endangered in California or elsewhere.
- List B Plants rare, threatened or endangered in California but more common elsewhere.
- List C Plants that may be quite rare, but more information is needed to determine rarity status.
- List D Plants of limited distribution and are uncommon, but not presently rare or endangered.

Animal Sensitivity

- Group 1 Animals that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements.
- Group 2 Animal species that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

CNPS - California Native Plant Society

California Rare Plant Rank

Threat Rank

- | | |
|--|---|
| 1A = Presumed extirpated in California and either rare or extinct elsewhere. | .1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat) |
| 1B = Rare, threatened, or endangered in California and elsewhere. | |
| 2A= Presumed extirpated in California but more common elsewhere. | .2 = Moderately endangered in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat) |
| 2B= Rare, threatened, or endangered in California but more common elsewhere. | |
| 3 = More information is needed. | .3 = Not very threatened in California (less than 20 percent of occurrences threatened/ low degree and immediacy of threat or no current threats known) |
| 4 = A watch list for species of limited distribution. | |

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**Orcutt's Brodiaea
Translocation Plan for the
Questhaven Tentative Map Project**

May 6, 2024

Prepared for:

Colrich Communities
444 West Beech Street, Suite 300
San Diego, CA 92101

Prepared by:

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3245 University Avenue, #1188
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**Orcutt’s Brodiaea
Translocation Plan for the
Questhaven Tentative Map Project**

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1.0 INTRODUCTION

This translocation plan provides the mitigation approach for direct impacts to the Orcutt's brodiaea (*Brodiaea orcuttii*), resulting from development of the Questhaven Tentative Map Project (Questhaven project). Orcutt's brodiaea has a California Native Plant Society (CNPS) Rare Plant Rank of 1B.1 and is a San Diego County List A sensitive plant species. It is a perennial herb with underground bulb-like storage stems, known as corms, in the Themidaceae family. Individual plants are up to 25 centimeters tall, which bears flowers on pedicels each a few centimeters long. The flower has six purple petals each between 1 and 2 centimeters long (CNPS 2022). The measures identified herein are based on those contained in the Questhaven project's Biological Technical Report (Alden Environmental, Inc. [Alden] 2024a).

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The approximately 69.1-acre Questhaven project site is located in the western portion of unincorporated San Diego County within the San Dieguito Community Plan Area. The Questhaven project site is located immediately south and west of the City of San Marcos and east of the City of Carlsbad. Interstate 5 is located approximately 5.3 miles west of the Questhaven project site. Specifically, the Questhaven project site is located south of San Elijo Road and east of Denning Drive (Figures 1 and 2). The Questhaven project site encompasses Assessor's Parcel Number 223-080-46-00 and is located in the west half of the northwest quarter of Section 33, Township 12 South, Range 3 West, San Bernardino Meridian on the U.S. Geological Survey (USGS) 7.5-minute Rancho Santa Fe quadrangle map (Figure 2).

2.2 PROJECT IMPACTS

The project consists of a Tentative Map, Density Bonus Permit, Site Plan Review, and an Administrative Permit for the site. The total number of lots proposed is 93, with 76 residential and 17 non-residential. The project would provide for development of 69 market-rate units and 7 reserved units for affordable housing (18.27 acres), 4 water quality detention basins (2.40 acres), 1 private park parcel (0.31 acres), 4 private road lots (4.34 acres), and 7 open space HOA lots for fire buffer area (10.77 acres). The project also includes a 50.3 acre biological open space area that would provide habitat mitigation for the project and be contiguous with open space lands to the south and west.

Alden prepared a Biological Technical Report that details all of the impacts and required mitigation for the Questhaven project (Alden 2024a). Specifically, this translocation plan addresses only the compensatory mitigation for impacts to Orcutt's brodiaea resulting from the proposed development.

Alden conducted surveyed for Orcutt's brodiaea on site on June 3 and 11, 2020 and again on May 13 and 25, 2023. The staminodia of *Brodiaea* found on site was closely inspected to determine which species is present. All brodiaea found were mapped using global positioning system (GPS) technology with sub-meter accuracy. No *Brodiaea* species other than *orcuttii* was found.

2.3 OWNERSHIP STATUS

The on-site biological open space where the Orcutt's brodiaea would be translocated is owned by Colrich Communities:

Colrich Communities
444 West Beech Street, Suite 300
San Diego, CA 92101

The brodiaea translocation areas are within on-site biological open space to be preserved that is adjacent to off-site Questhaven project mitigation land, all of which is connected to conserved lands to the east, farther west, and south (Figure 2).

3.0 TRANSLOCATION SUMMARY AND GOALS

This effort includes translocation of brodiaea corms from within the Questhaven project impact footprint (donor site) to receptor sites located within the on-site biological open space and associated planting of native grassland habitat.

3.1 DONOR SITE

The donor site (Figure 3) is comprised of non-native grassland totaling approximately 3.4 acres, out of 3.7 acres of suitable habitat for the species mapped there. The majority of the Orcutt's brodiaea plants on site were found in this area. This location is underlain with a majority of Huerhuero loam soil (2 to 9 percent slopes) and a minority of San Miguel rocky silt loam soil (9 to 30 percent slopes).

3.2 RECEPTOR SITE

The receptor site(s) includes 3 areas of non-native grassland on site (Figure 3). The first site is located immediately adjacent to the donor site within the mapped suitable habitat for the species (with the same Huerhuero loam and San Miguel rocky silt loam soils), and Orcutt's brodiaea was observed there, as well. This location also will support several ponds for the spadefoot toad (*Spea hammondi*). The corm translocation will avoid these ponds.

The other 2 areas of non-native grassland to be receptor sites are located to the southeast of the donor site by approximately 525 feet and 1,050 feet (Figure 3). The former is on a southwest-facing slope underlain with San Miguel rocky silt loam soil (9 to 30 percent slopes). The latter is on a southwest-facing slope underlain with San Miguel rocky silt loam soil (9 to 30 percent slopes) and San Miguel-Exchequer rocky silt loam (9 to 70 percent slopes). A small population of Orcutt's brodiaea was found immediately adjacent to this latter receptor site in the Questhaven project impact footprint.

Salvaged Orcutt's brodiaea corms from the donor site will be relocated to the receptor sites. These sites were selected because they have similar soils, slope steepness, slope aspect, and elevation to

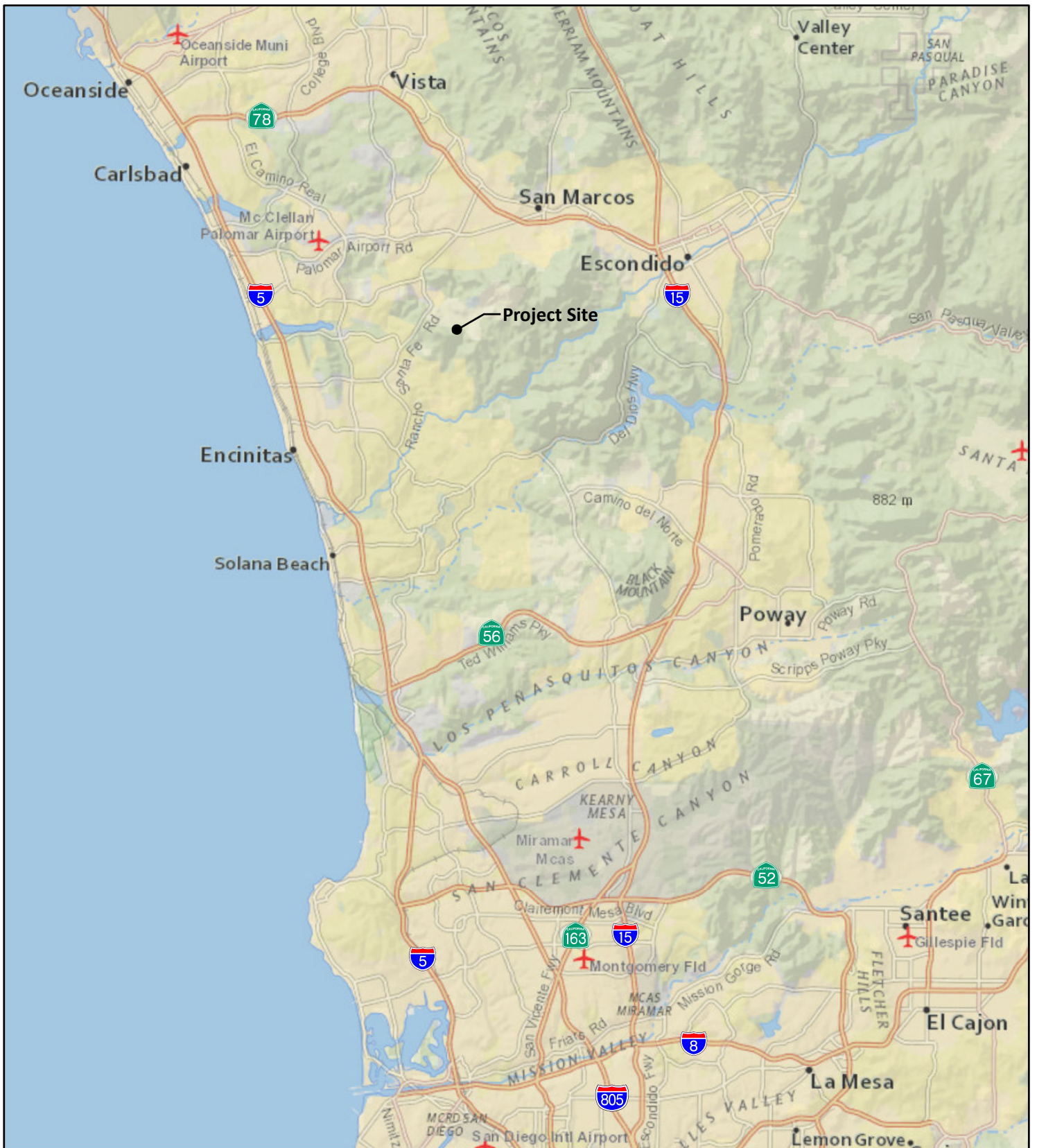
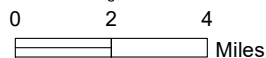
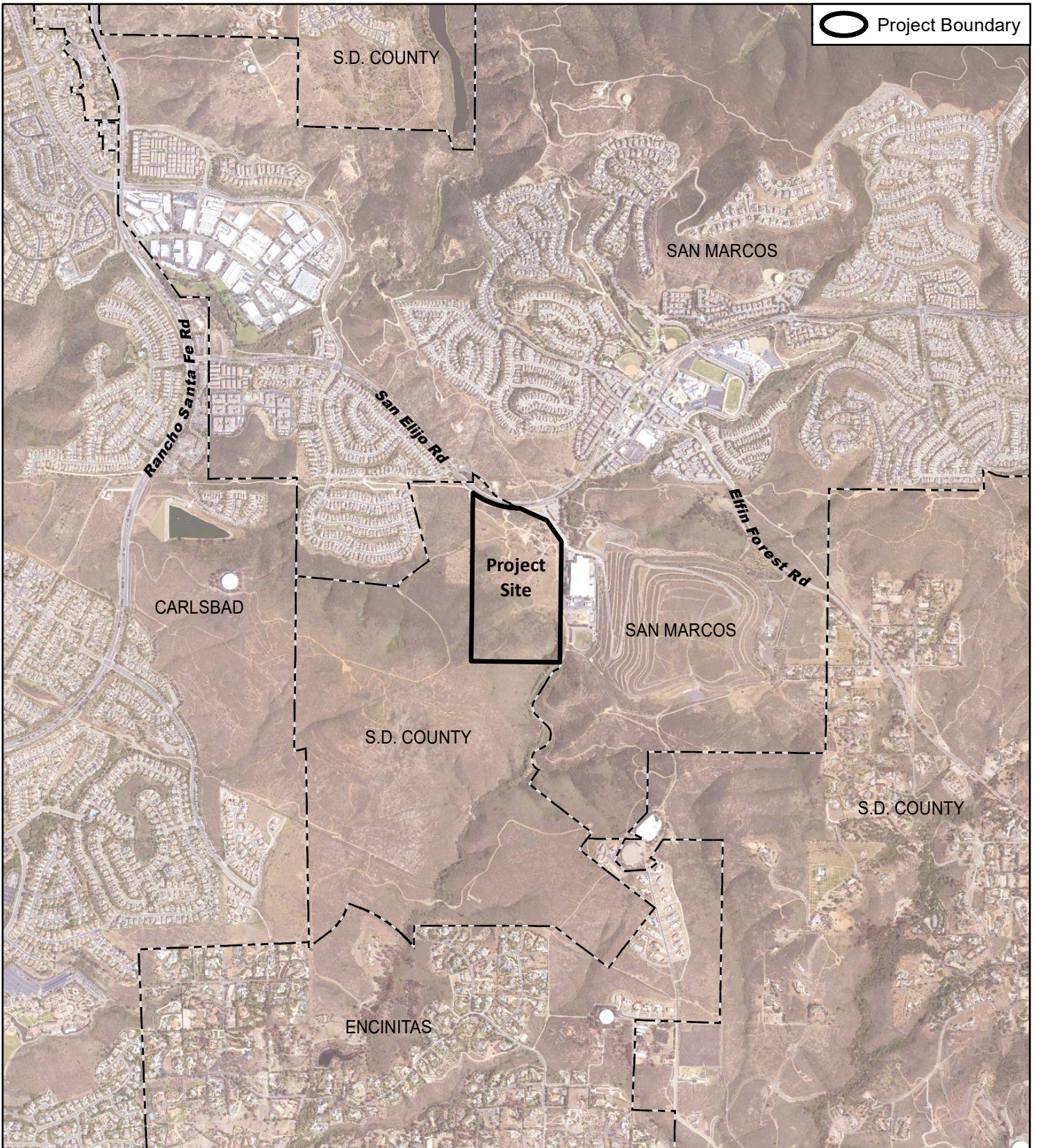


Figure 1

Regional Location

ORCUTT'S BRODIAEA
 TRANSLOCATION PLAN FOR THE
 QUESTHAVEN TENTATIVE MAP PROJECT



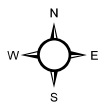


○ Project Boundary

Figure 2






Project Location

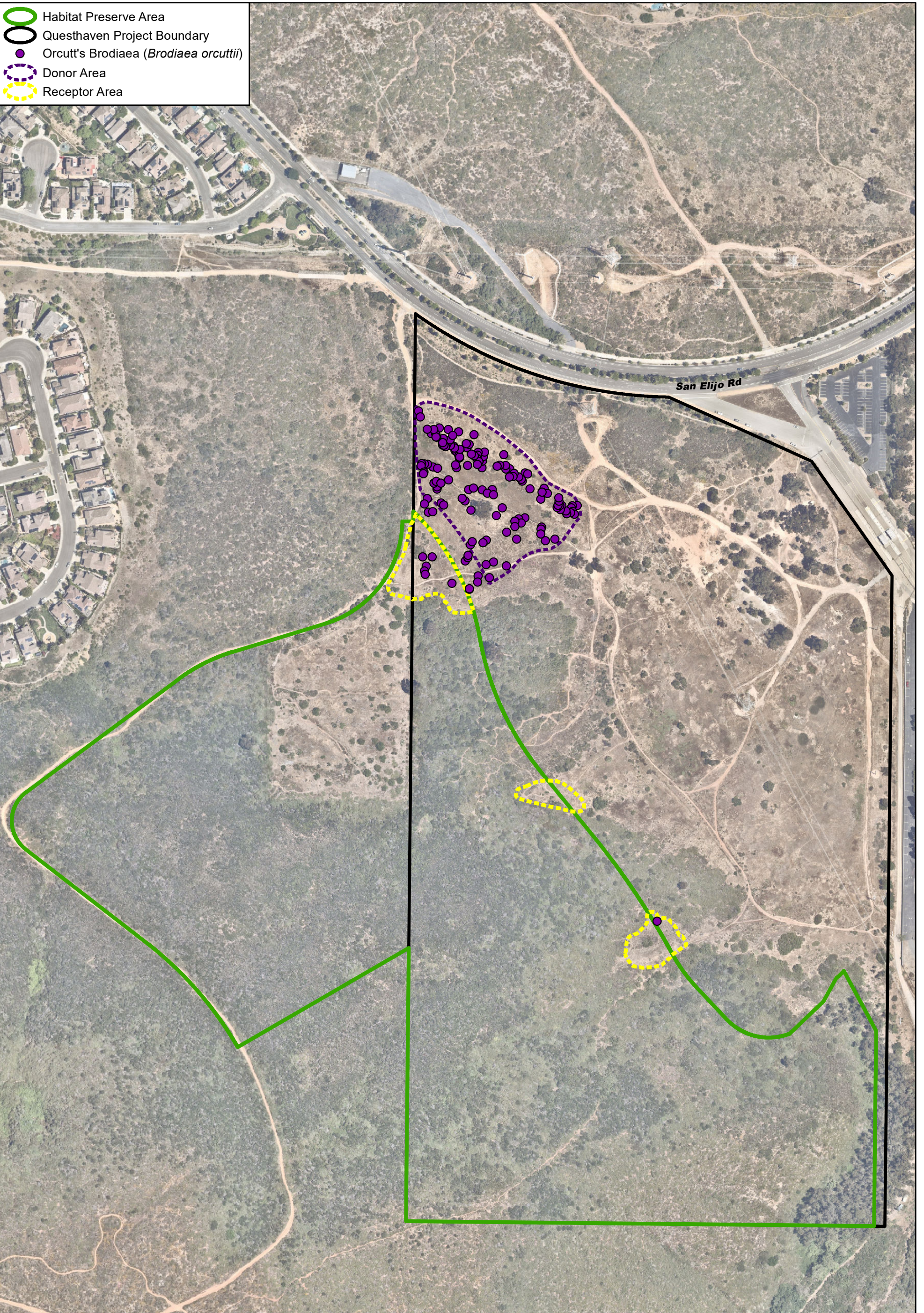
ORCUTT'S BRODIAEA
 TRANSLOCATION PLAN FOR THE
 QUESTHAVEN TENTATIVE MAP PROJECT



0 1,000 2,000
 Feet



-  Habitat Preserve Area
-  Questhaven Project Boundary
-  Orcutt's Brodiaea (*Brodiaea orcuttii*)
-  Donor Area
-  Receptor Area



Aerial Photo: Nearmap 2023

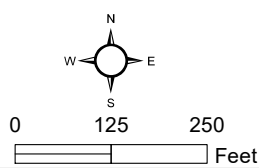


Figure 3

**Orcutt's Brodiaea
Translocation Area**

ORCUTT'S BRODIAEA
TRANSLOCATION PLAN FOR THE
QUESTHAVEN TENTATIVE MAP PROJECT

the donor site. The receptor sites are within the on-site biological open space to be managed in perpetuity, and there are no easements or other potential uses that would conflict with the translocation effort.

The Restoration Specialist will determine how the translocation from donor to receptor sites will occur based on the number of corms to be translocated and site-specific conditions within the receptor sites.

4.0 IMPLEMENTATION PLAN

The brodiaea translocation effort will consist of several components, including:

- Donor site corm salvage
- Receptor site preparation and fencing
- Corm translocation
- Native grassland seeding/planting
- Maintenance and monitoring for a 5-year period

4.1 RATIONALE FOR EXPECTING IMPLEMENTATION SUCCESS

As noted above, the receptor sites selected for the translocation effort currently supports suitable habitat characteristics to support the Orcutt's brodiaea. Additionally, the species occurs in the vicinity in areas exhibiting the same physical characteristics as the receptor sites.

4.2 RESPONSIBLE PARTIES

4.2.1 Project Proponent

Colrich Communities (or the owner at the time of implementation) will be responsible for financing the installation, maintenance, and monitoring of the restoration/enhancement measures of the translocation project.

4.2.2 Restoration Specialist

Overall supervision of the installation, maintenance, and monitoring of this translocation program will be the responsibility of a Restoration Specialist with a minimum of 5 years of habitat restoration experience. Additionally, the Restoration Specialist must have experience identifying, salvaging, and translocating brodiaea species as well as the ability to distinguish brodiaea corms from those of other geophytes. The Restoration Specialist will educate all participants with regard to program goals and directly oversee all aspects of the translocation project. In addition, the specialist will conduct all monitoring data collection, annual assessments, and prepare all required reports. If necessary, the Restoration Specialist will provide the translocation project proponent and contractor with a brief report, including a written list of items in need of attention following each monitoring visit. The contractor will be responsible for carrying out all required measures in a timely manner. The Restoration Specialist will notify the contractor and responsible party if any requested remediation is not addressed. A checklist with the main tasks and responsibilities is included in Table 1.

4.2.3 Installation/Maintenance Contractor

The installation and maintenance contractor(s) will have habitat restoration experience and will, under the direction of the Restoration Specialist, be responsible for pre-planting weed control, planting, seeding, and maintenance. The Restoration Specialist will educate the contractor(s) on the installation and maintenance of native plant species.

After the installation is complete, maintenance personnel will initiate the 5-year maintenance program under the direction of the Restoration Specialist. Maintenance crews will service the entire enhancement area regularly following installation. Service will include but not be limited to weed control, trash removal, watering, dead plant replacement, and re-seeding. All activities conducted will be seasonally appropriate and approved by the Restoration Specialist. The maintenance crew will meet the Restoration Specialist at the site when requested and will perform all checklist items in a timely manner as directed by the Restoration Specialist. The Restoration Specialist will ensure that maintenance personnel are capable of discerning between native plant species and non-native weed species.

4.3 IMPLEMENTATION SCHEDULE

Implementation of the mitigation program would commence prior to, or in conjunction with the grading of the Questhaven project. The brodiaea corm identification and salvage effort must occur prior to grading within the brodiaea donor site.

4.4 SITE PREPARATION

As described above, the initial site preparation of the receptor sites will involve removal of weeds, refuse, debris, and other deleterious material will be removed and disposed of in a licensed landfill. No grading is proposed as part of this translocation effort.

4.5 FENCING

Prior to and during implementation of the translocation effort, a temporary 3-strand barbless wire fence will restrict access to the receptor sites. As this effort is a part of a larger on-site preserve area for the Questhaven project, no permanent fencing or signs will be installed.

**Table 1
MITIGATION PLAN CHECKLIST**

PHASE	TASK	APPLICABLE PARTIES			
		LAND OWNER	INSTALLATION CONTRACTOR	MAINTENANCE CONTRACTOR	RESTORATION SPECIALIST
Preparation	Order seed and container stock		X		
	Attend pre-construction meeting	X	X		X
	Document pre-start conditions				X
	Identify site limits and staging area				X
Corm Salvage	Flag limits of donor site				X
	Excavate soil to search for corms		X		X
	Identify and record corm results				X
	Prepare corms/soil blocks for translocation		X		X
Installation	Delineate boundary of receptor sites		X		X
	Dethatch and mow receptor sites		X		X
	Install temporary fence		X		X
	Install collected corms/soil blocks		X		X
	Install grassland seed mix		X		X
	Prepare/submit as-built report				X
Five-year Maintenance & Monitoring Period	Conduct maintenance monitoring and annual monitoring				X
	Maintenance for remainder of 5 years			X	X

4.6 CORM SALVAGE

The donor site within Questhaven project site must be thoroughly searched for brodiaea corms prior to initiation of grading activity. In order to find and salvage brodiaea corms, the Restoration Specialist will lead an exploratory effort within the donor site. Shovels, hand tools or other equipment will be used to locate corms within the area mapped that would be impacted. The first step will be to lay a search grid pattern over the donor site. Next, a rubber-tired loader (or similar) will use a ripping tyne to turn the soil along a path (determined by the search grid). The Restoration Specialist will follow behind as the machine slowly transits the area. The machine will be halted when corms or corm-like structures are exposed so that they can be identified by the Restoration Specialist. If Orcutt's brodiaea corms are identified, the hand crew will be directed to dig exploratory holes in an effort to identify additional corms and determine if there is a patch or just scattered individuals. Scattered individual brodiaea corms will be collected by hand and placed in a cardboard box for temporary storage.

In the event that larger groupings of corms are encountered, the Restoration Specialist will direct a hand crew to remove soil blocks that contain the corms. The size and depth of the blocks to be removed will depend upon the number of corms present, the depth of the corms, and the condition of the soil (i.e. loose and fragile vs intact clay). It is anticipated that soil blocks will typically be have a depth of 8-12 inches and a surface area of approximately 2-4 square feet. The intent of the soil block method is to ensure that the corms remain undamaged and in their original orientation in the soil. To this end, the soil blocks will be carefully handled and placed in boxes with sufficient soil or other filler material to help maintain their integrity prior to being installed at the receptor sites. If necessary, machinery may be used to help remove the soil blocks from the ground to help keep them intact. Wood also may be used to create box frames for soil blocks that appear to be in danger of collapsing.

The Restoration Specialist will take pre- and post- salvage photographs of the donor site and record all activities undertaken. The numbers of individual corms and soil blocks collected will be recorded, along with specific information regarding the condition of the corms, where they were located within the donor site, and their relative spacing from each other in the soil.

4.7 CORM TRANSLOCATION

Depending on the number of brodiaea corms found and the time of year, individual corms and/or soil blocks containing the corms will be removed from the donor site and translocated immediately to the receptor sites. For individual corms, a pipe- or similar device will be used to create a hole just wide enough to plant a single corm 3-5 inches deep. If soil blocks are used, soil at the receptor site will be excavated to a depth slightly greater than the height of the soil blocks that contain the corms to be transplanted (i.e., 10-14 inches deep). The corms and soil blocks will be spaced in such a way as to mimic the relative spacing observed at the donor site. Displaced soil will be replaced in a manner that will maintain drainage and prevent ponding over the brodiaea. Gaps on the edges of soil blocks will be filled in with native soil and compacted maintain soil structure and stability as much as possible. The receptor sites also may be watered once the corms and soil blocks have been installed. This will help soil to settle in any cracks and fill in air pockets. The location

of each translocated corm and soil block will be recorded with a sub-meter GPS unit to help in relocation and success monitoring.

The Restoration Specialist will notify the County, California Department of Fish and Wildlife (CDFW), and U.S. Fish and Wildlife Service (USFWS) immediately if brodiaea corms are identified at a receptor site. Notification will include the date, time, locations of the corms, and information as to the extent of the occurrence within the receptor site(s). The Restoration Specialist will rebury and flag the previously unmapped corms within the receptor site and will move into areas of the receptor site(s) not occupied by the species to continue the translocation process.

4.8 NURSERY STOCK

Up to 50 percent of any corms found at the donor site will be transferred to a native plant nursery as approved by County, CDFW, and USFWS where they will be propagated. Nursery plants will initially be reserved for planting at the receptor sites if, at any point during the monitoring period, it is determined that the number of the brodiaea individuals originally translocated to the receptor site is not enough to meet the success criteria. The Restoration Specialist will confer with the County, CDFW, and USFWS prior to planting any nursery plants within the receptor sites to determine the reasons for the need for the plantings and to consider whether a receptor site(s) is not functioning adequately and a new receptor site(s) is needed to meet the project requirements. The nursery plants will be used only if their condition is considered satisfactory by the Restoration Specialist and the nursery staff. Any nursery corms or plants left at the end of the monitoring period will be planted at the receptor sites.

4.9 NATIVE GRASSLAND

4.9.1 Seed Mix

Seeding with a native grassland mix (Table 2) will take place within the receptor sites (Figure 3). The species included in the mix were selected because they are native and occur either on the project site or in the project vicinity. The seed will be sourced from as close to the site as possible. The source and proof (tags) for all seed will be provided.

Because of the small size of the receptor sites, the seed will be applied by hand. Seed of different species will only be mixed when they are to be applied to the same location. Individual species may be seeded separately as directed by the Restoration Specialist. Hand broadcasters will be used to help ensure a consistent application of seed. An inert carrier (sand, saw dust) may also be mixed with the seed to help maintain consistency. Seeding will not be conducted during windy conditions. Seed will be raked into soil after application to help increase seed/soil contact.

Table 2 NATIVE GRASSLAND SEED MIX	
SPECIES	POUNDS/ ACRE
Blue dicks (<i>Dichelostemma capitatum</i>)	3
Blue-eyed grass (<i>Sisyrinchium bellum</i>)	3
California everlasting (<i>Pseudognaphalium californicum</i>)	3
Deerweed (<i>Acmispon glaber</i>)	2
Dot-seed plantain (<i>Plantago erecta</i>)	3
Fascicled tarweed (<i>Deinandra fasciculata</i>)	2
Golden yarrow (<i>Eriophyllum confertiflorum</i>)	3
Goldfields (<i>Lasthenia californica</i>)	2
San Diego needlegrass (<i>Stipa lepida</i>)	8
TOTAL	29

4.9.2 Container Stock

In addition to seed, San Diego needle grass plugs will be planted in the receptor sites at a rate of 300 per acre. The grass plugs will be evenly spaced throughout the receptor sites, as well as in a 15-foot buffer area. No grass plugs will be planted within translocated soil blocks. The plant material will be sourced from as close to the site as possible. If container stock is unavailable from the project vicinity, the Restoration Specialist may substitute species as necessary. The source and proof for all plant material will be provided. All container stock will be inspected and approved by the Restoration Specialist prior to being installed.

Specifically, the Restoration Specialist will ensure that:

- The correct number, size, and species ordered are delivered;
- Plants are healthy and showing no sign of disease;
- Roots fill the containers, but are not root bound;
- There is no breakage of plants;
- Plants show no evidence of pests;
- Plants are in a state suitable for outplanting.

The Restoration Specialist will reject any plants not meeting these requirements.

The Installation Contractor will be responsible for planting all container stock within four days following delivery. Container stock will be planted in such a way as to mimic a natural species distribution within the receptor sites, while avoiding the installed soil blocks. The project Restoration Specialist will specify the locations for all planting.

4.9.3 Material Salvage

The seed and container stock identified above is intended to be implemented without using any native plant/soil material salvaged from adjacent development projects. If salvaged upland soil/plant material is made available to the translocation project during the installation phase, it will be incorporated into the receptor sites, to the extent practicable.

4.10 HERBIVORE EXCLUSION

Upon completion of the translocation and native grassland planting efforts, herbivore exclusion fencing will be installed around the limits of the translocated corms within the receptor sites. The exclusion fencing will be trenched at least 12 inches to discourage herbivory. The herbivore exclusion fencing will be removed 2 years after its installation.

4.11 IRRIGATION

The brodiaea translocation effort is designed to be a non-irrigated project. While there will be no irrigation system, maintenance crews may hand water the receptor sites during dry years, as directed by the Restoration Specialist.

4.12 AS-BUILT CONDITIONS

The Restoration Specialist shall prepare and submit a map using showing the as-built conditions of the receptor sites within 8 weeks of completion of site preparation and translocation. Areas of corm/soil block translocation and all seeding and planting shall be shown on the map. The map shall be submitted to the County, CDFW, and USFWS.

5.0 MAINTENANCE PLAN

5.1 HABITAT MAINTENANCE ACTIVITIES

A 5-year maintenance program is proposed to help ensure the successful establishment and persistence of the translocated brodiaea. The maintenance program will involve removal of trash, weed control, fence repair/replacement, and any remedial measures deemed necessary for translocation program success (e.g., re-seeding). Maintenance personnel will visit the site at least monthly as part of the 5-year maintenance program.

5.1.1 Trash Removal

The Maintenance Contractor will remove any trash encountered within the receptor sites during every maintenance event and dispose of it in a legally acceptable fashion.

5.1.2 Weed Control

Particular maintenance emphasis will be placed on pro-active weed control within the receptor sites. All weed species observed will be considered invasive and targeted for removal. All workers conducting weed removal activities will be educated to distinguish between native and non-native species, with special attention paid sensitive plant species.

Weeds will be removed by hand or with small machinery (e.g., line trimmers) whenever possible, but focused herbicide application may be used if needed and requested by the Restoration Specialist. Herbicides will only be applied by workers licensed to use those chemicals. Additionally, herbicide will not be used during wet or windy conditions. Weed control tasks that involve machinery or herbicide use will be timed to avoid the vegetative and flowering period for the brodiaea and would not occur between January through July.

Weeds will be removed from the receptor sites and disposed of in a legal manner. All weeds will be removed prior to reaching 12 inches in height or before reaching seed stage. Leaf and branch drop of native species should be left in place and not removed. Vegetation clearing would be limited to above-ground methods, with vegetation being cut to a height of no more than two inches from the soil surface, with roots left in place. There would be no soil disturbance (e.g., from disking, tilling, etc.).

5.2 HABITAT MAINTENANCE SCHEDULE

Regular maintenance, trash removal, and weed control of the receptor sites will be conducted during the first 5 years following implementation of the translocation program or until the program is deemed successful. Maintenance personnel will visit the site at least monthly for the 5-year maintenance and monitoring period.

6.0 PERFORMANCE STANDARDS

The following sections provide performance standards to determine the successful completion of the 5-year maintenance and monitoring program. Attainment of these standards indicates the brodiaea translocation effort is progressing toward the habitat functions and services specified for this plan. Methods used to measure these performance standards are described in the following text. If the receptor sites fail to meet the Year 5 standards after the full monitoring term, a specific set of remedial measures will be developed, implemented, and the monitoring and maintenance period would be extended until all Year 5 standards are met, or as otherwise provided in this document. If a site does not meet Year 5 standards, the monitoring and maintenance period would be extended at least a full year and until all are standards are met. Only when all receptor sites have attained the Year 5 standards for at least 2 years without irrigation will the entire translocation program be signed off.

6.1 ORCUTT'S BRODIAEA

The brodiaea translocation effort will be considered successful when the following success criteria are met during any 2 of the last 4 years of the monitoring period.

- At least 60% of the translocated corms produce vegetative growth
- 100% of the translocated corms produce flowers
- The receptor sites must be free of human intervention (i.e., supplemental watering and/or planting, excluding measures required by the plan) such that the translocated corms are determined to be self-sustaining.

6.2 CONTAINER STOCK

During each of the 5 annual monitoring events there will be no less than 80% of the initially planted container plants surviving (unless their function has been replaced by natural recruitment).

6.3 NATIVE SPECIES RICHNESS/COVER

At the end of the 5-year monitoring period, the native grassland planting (receptor sites plus a 15-foot buffer) will achieve 80% cover overall of native grassland species and support a minimum of 2 native perennial grassland species that are reproducing. Corrective measures will be implemented in areas not meeting the species richness goals in any given year.

6.4 WEED COVER

General and target weed cover success criteria have been established for the translocation effort. Given the small sizes of the receptor sites and the extent of the existing weed seed bank, 100% eradication for all weed species is not a realistic goal (some species are highly invasive and others are easier to eradicate). Therefore, species in Table 3 are zero tolerance species and will be controlled at 100% on a yearly basis. Other non-native species are more ubiquitous and can never be completely eliminated and will, therefore, be managed to a level of 25% cover or less. If the weed cover success criteria are not met in any given year, then remedial measures will be implemented.

Table 3 ZERO TOLERANCE WEED SPECIES		
Latin name	Common name	Cal-IPC Rating¹
<i>Acacia</i> sp.	Acacia	L/M
<i>Atriplex semibaccata</i>	Australian saltbush	M
<i>Carpobrotus</i> spp.	Ice plant, Hottentot's fig	H/M
<i>Cynara cardunculus</i>	Artichoke thistle	M
<i>Cynodon dactylon</i>	Bermuda grass	M
<i>Erodium botrys</i>	Long-beak filaree	NR
<i>Erodium cicutarium</i>	Redstem filaree	L
<i>Foeniculum vulgare</i>	Fennel	H
<i>Lythrum hyssopifolium</i>	Grass poly	M
<i>Nicotiana glauca</i>	Tree tobacco	M
<i>Ricinus communis</i>	Castor bean	L
<i>Rumex conglomeratus</i>	dock	NR
<i>Rumex crispus</i>	Curly dock	L
<i>Salsola tragus</i>	Russian thistle	L
<i>Carduus pycnocephalus</i>	Italian thistle	L

¹H= High invasiveness, M= Moderate invasiveness, L= Low invasiveness NR= Not rated

7.0 MONITORING PLAN

7.1 INSTALLATION MONITORING

The Restoration Specialist will be on site daily during the corm collection and translocation to direct all translocation activities including site preparation, weed control, seeding, planting, and watering. Upon completion, the Restoration Specialist will prepare an as-built map and letter and confirm that the 5-year maintenance and monitoring period may begin.

7.2 MAINTENANCE MONITORING

The Restoration Specialist will conduct regular monitoring of the maintenance conducted by the Installation and Maintenance Contractor(s) during the 5-year maintenance period. Maintenance monitoring visits will be conducted by the Restoration Specialist monthly in Years 1 and 2, and every other month in Years 3-5. Additional visits may be required as conditions warrant. During each visit the Restoration Specialist will assess the condition of the receptor sites and identify any necessary remedial measures. Fencing (including the herbivory exclusion fencing) will be inspected, and any trash, debris, or other disturbances will be recorded. The Restoration Specialist also will monitor soil moisture to determine whether seasonal rains are adequate to keep the soil moist throughout the first 3 growing seasons. Supplemental irrigation of the receptor sites may be needed depending on natural rainfall, temperatures, and day length. A brief monitoring memo will be prepared and submitted to the Maintenance Contractor following each maintenance monitoring visit.

7.3 ANNUAL MONITORING

Two quantitative monitoring visits will be conducted by the Restoration Specialist each year. The first will be conducted in January/February to search for and count the number of brodiaea corms that have produced vegetative growth. The second visit will be conducted in May/June/July to identify and record the extent of brodiaea that are flowering. During the annual monitoring events, the number, average size, and overall health of the transplanted corms will be recorded. A qualitative assessment of health and the number of Orcutt's brodiaea observed (vegetative and flowering) also will be conducted. Brodiaea plants also will be inspected to determine if they are producing viable seeds. If viable seeds are present, then up to 2% may be collected for conservation seed storage at the Rancho Santa Ana Botanic Garden. Photographs will be taken from established photo documentation locations. During each annual monitoring event, the success of the translocation effort will be evaluated, and species richness and cover data will be collected. In Years 1 and 2, species richness and cover will be determined by visual assessment. In Years 3-5, quantitative transect data will be collected.

Quantitative transect data will be collected using the point intercept line transect sampling methods described in the California Native Plant Society's Field Sampling Protocol (Sawyer and Keeler-Wolf 1995). A single sampling transect will be established in Year 3 within each receptor site. The ends of each transect will be marked with a re-bar stake and recorded with a GPS unit. The location and length of each transect will depend upon the number of transplanted corms and the size of each receptor site.

Species cover will be determined by dividing each transect into half-meter intervals. A point will be projected into the vegetation at each interval, and any species intercepted by the point will be recorded. Species also will be divided into herb (0-60 cm), shrub (60 cm-3 m), and tree (greater than 3 m) layers. Percent cover will be measured by dividing the number of hits by the number of possible hits. Total native and non-native cover values will be determined separately.

Native species richness (the number of species) will be calculated by counting all of the species encountered within a 5 m-wide belt transect along each transect (2.5 m on each side). All plants observed will be categorized by origin (native/non-native) and height layer.

7.4 ANNUAL REPORTS

As part of the monitoring program, annual reports prepared by the Restoration Specialist will be prepared and submitted evaluating the success of the translocation effort to date, along with any recommendations for future work that may be deemed necessary. Each annual monitoring report will include data collected throughout the year in addition to the annual monitoring visit. To detect the overall trend of the program, the annual monitoring report will contain comparisons of the monitoring data for the years that data are collected. Annual reports will be submitted to the County, CDFW, and USFWS.

7.5 REMEDIAL MEASURES/ADAPTIVE MANAGEMENT

If the program is not progressing as desired, corrective measures may be implemented. Corrective measures may include, but are not limited to: additional planting or seeding, altered maintenance effort, and increased watering regime.

7.6 MONITORING SCHEDULE

As described above, monthly inspections of the translocation and maintenance effort would be performed during Years 1 and 2, and every other month for the remainder of the 5-year maintenance and monitoring period. The first annual botanical monitoring event will occur in the first spring following installation. Reports will be prepared and submitted within 3 months of the annual monitoring visit.

8.0 COMPLETION OF PROGRAM

8.1 NOTIFICATION OF COMPLETION

The land owner shall notify the County, CDFW, and USFWS upon the mitigation site obtaining the Year 5 performance standards through the submittal of the final (Year 5) monitoring report.

8.2 CONFIRMATION

After receipt of the final monitoring report, the County, CDFW, and USFWS may inspect the sites to determine if the brodiaea translocation has been conducted in accordance with this plan.

8.3 LONG-TERM MANAGEMENT

The brodiaea receptor sites are located within the on-site biological open space of the Questhaven project. The Questhaven project will be responsible for establishing a conservation easement over the entire open space area (which also includes adjacent, off-site mitigation land) and will provide for long-term maintenance and monitoring until the sign-off of all on- and off-site mitigation efforts—including the translocation program. At that point, a designated long-term management entity will be responsible for managing the open space in accordance with an approved management plan. A Conceptual Upland Habitat Biological Resources Management Plan (Alden 2024b) has been prepared to guide the long-term management of the entire open space area.

9.0 CONTINGENCY MEASURES

9.1 INITIATING PROCEDURES

An integral part of a successful translocation effort is the ability to detect problems early in the process, determine the cause of the problem, and attempt to modify the program to accommodate emerging issues or situations. Minor problems such as trash, vandalism, isolated instances of plant mortality, or small-scale weed or pest infestations will be rectified as they are discovered during routine monitoring and would not warrant the implementation of contingency measures.

If a performance standard is not met for all or any portion of a receptor site in any year, or if the final performance standards are not met, the Restoration Specialist will prepare an analysis of the cause(s) of failure, and propose remedial action for approval by the County, CDFW, and USFWS. These measures may include additional planting/seeding, adjustment of the management activities, or other design changes.

9.2 FUNDING MECHANISM

The land owner shall be responsible for all costs associated with any remedial measures.

9.3 RESPONSIBLE PARTIES

The land owner shall be the responsible party for any remedial measures.

10.0 REFERENCES CITED

Alden Environmental, Inc. 2024a. Biological Technical Report for the Questhaven Tentative Map Project. May 6.

2024b. Conceptual Upland Habitat Biological Resources Management Plan for the Questhaven Tentative Map Project PDS2020-TM-5643. May 6.

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