

DRAFT
LOW-EFFECT HABITAT CONSERVATION PLAN

For the

FEDERAL ENDANGERED MORRO SHOULDERBAND SNAIL
(Helminthoglypta walkeriana)

SINGH PARCEL (APN 074-052-036)
2050 PINE AVENUE
LOS OSOS, CALIFORNIA 93402

Prepared for:

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- Appendix C – Cultural Resources Compliance Form

1.0 INTRODUCTION AND BACKGROUND

1.1 Overview and Background

Kevin Merk Associates (KMA) has prepared this Habitat Conservation Plan (HCP) pursuant to the requirements of section 10(a) of the Federal Endangered Species Act (Act) for the development of a single family residence on a 4.7-acre parcel in Los Osos, San Luis Obispo County, California (refer to Figures 1 and 2). The HCP is intended to provide the basis for issuance of a section 10(a)(1)(B) permit to Ms. Stephanie Singh (the Applicant) to authorize take of the federally endangered Morro shoulderband (=banded dune) snail (*Helminthoglypta walkeriana*; MSS) that is likely to result incidental to an otherwise lawful activity. Although no protocol-level surveys for MSS have been conducted on the site, a habitat assessment conducted in 2017 following mowing of the entire site observed a single empty MSS shell in the central eastern portion of the site (KMA, 2017). No other federal listed animal or plant species are known or expected to be present on the site.

To mitigate the effects of the taking of MSS, the Applicant proposes to set aside 2.0 acres of the 4.7-acre property under a conservation easement that would be dedicated, in perpetuity, to the County of San Luis Obispo. The easement area would be located on the eastern half of the parcel (refer to Figure 3). Coastal dune scrub habitat will be restored within the easement area.

1.2 Permit Holder / Permit Duration

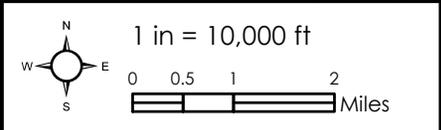
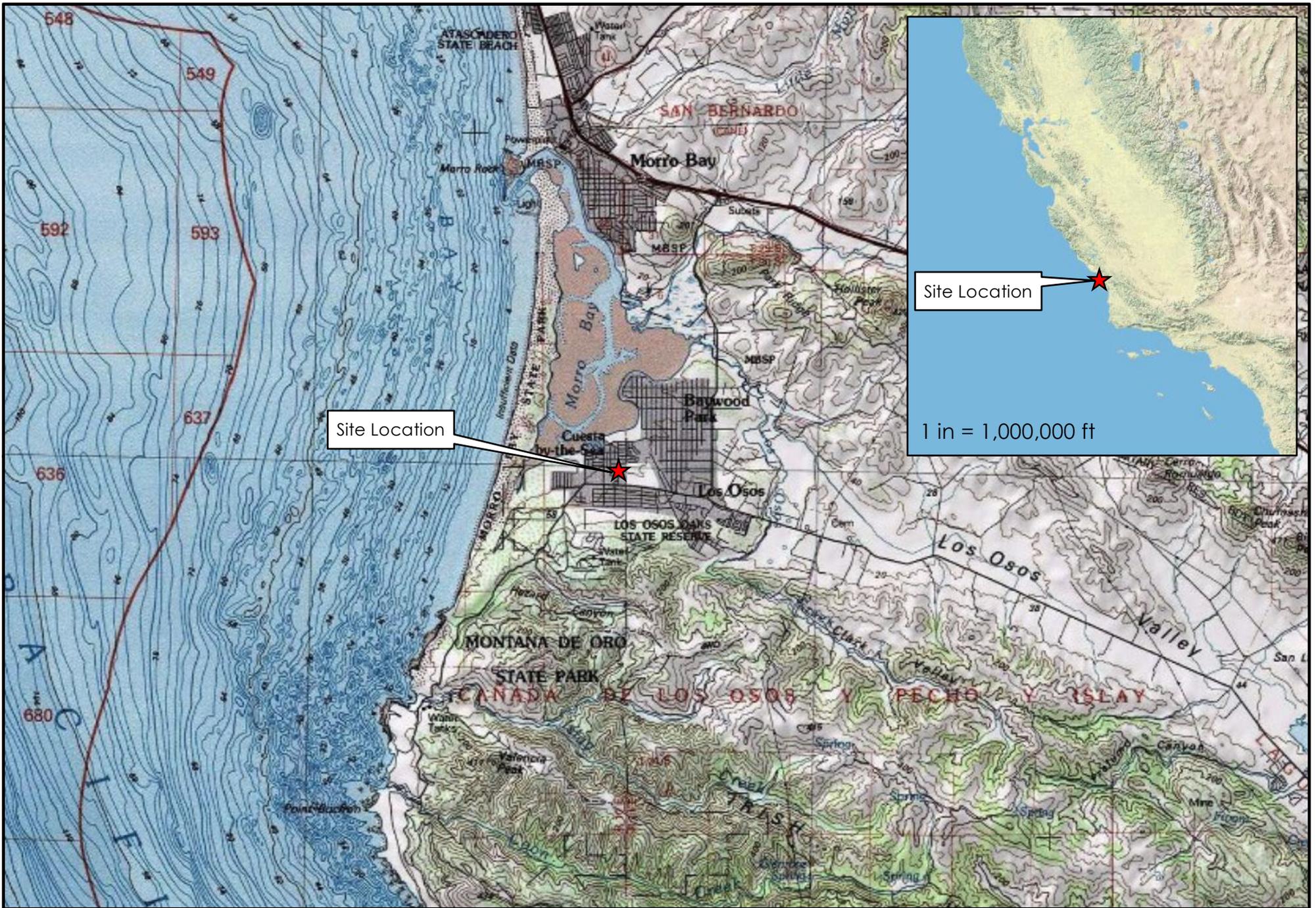
Ms. Stephanie Singh and her husband are the property owners and Ms. Singh will be the holder of the section 10(a)(1)(B) permit. Any transfer of the permit will be processed in accordance with the procedures set forth in section 6.0 below. A 10-year permit period is requested to provide the time necessary to allow the Permittee to complete the proposed project, to carry out the proposed habitat restoration measures, and to incorporate flexibility into the schedule for these activities in the event unforeseen circumstances arise.

1.3 Permit Boundary / Covered Lands

The 4.7-acre undeveloped parcel (APN 074-052-036) located at 2050 Pine Avenue in the community of Los Osos (refer to Figures 1 and 2) constitutes the permit boundary and covered lands. The property is located on the Morro Bay South 7.5-minute U.S. Geological Survey (USGS) quadrangle, in Township 30 S, Range 10 E, section 13. The permit boundaries will encompass the project impact area and conservation area. All impacts and mitigation proposed under this LEHCP will occur on the parcel as shown on Figure 3.

1.4 Species to be Covered by Permit

The MSS would be the “covered species” related to the Incidental Take Permit, if issued. It is listed as federally endangered and is not listed as threatened or endangered under the State of California’s Endangered Species Act.



2050 Pine Avenue, Los Osos, CA
Stephanie Singh

Figure 1
Site Location



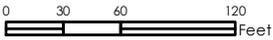
 Approximate Study Area Boundary
Habitat Type
 Coast Live Oak
 Eucalyptus
 Ice Plant
 Monterey Pine
 Remnant Dune Scrub
 MSS shell

Google

Source: Google 2017, County of San Luis Obispo 2017



KEVIN MERK ASSOCIATES


 1 in = 100 ft
 Feet

2050 Pine Avenue, Los Osos, CA
 Stephanie Singh

Figure 2
 Current Habitat Conditions

1.5 Regulatory Framework

1.5.1 Regulatory Framework

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Pursuant to section 11(a) and (b) of the Act, any person who knowingly violates this section 9 of the Act or any permit, certificate, or regulation related to section 9, may be subject to civil penalties of up to \$25,000 for each violation or criminal penalties up to \$50,000 and/or imprisonment of up to one year.

Individuals and State and local agencies proposing an action that is expected to result in the take of federally listed species are encouraged to apply for an incidental take permit under section 10(a)(1)(B) of the Act to be in compliance with the law. Such permits are issued by the Service when take is not the intention of and is incidental to otherwise legal activities. An application for an incidental take permit must be accompanied by a conservation plan, commonly referred to as an HCP. The regulatory standard under section 10(a)(1)(B) of the Act is that the effects of authorized incidental take must be minimized and mitigated to the maximum extent practicable. Under section 10(a)(1)(B) of the Act, a proposed project also must not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and adequate funding for a plan to minimize and mitigate impacts must be ensured.

Section 7 of the Act requires Federal agencies to ensure that their actions, including issuing permits, do not jeopardize the continued existence of listed species or destroy or adversely modify listed species' critical habitat. "Jeopardize the continued existence of..." pursuant to 50 Code of Federal Regulations (CFR) 402.2, means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. Issuance of an incidental take permit under section 10(a)(1)(B) of the Act by the Service is a Federal action subject to section 7 of the Act. As a Federal agency issuing a discretionary permit, the Service is required to consult with itself (i.e., conduct an internal consultation).

1.5.2 The Incidental Take Permit Process – HCP Requirements and Guidelines

The section 10(a)(1)(B) process for obtaining an incidental take permit has three primary phases: (1) the HCP development phase; (2) the formal permit processing phase; and (3) the post-issuance phase. During the HCP development phase, the project applicant prepares a plan that integrates the proposed project or activity with the protection of listed species. An HCP submitted in support of an incidental take permit application must include the following information:

- impacts likely to result from the proposed taking of the species for which permit coverage is requested;

- measures that will be implemented to monitor, minimize, and mitigate impacts;
- funding that will be made available to undertake such measures; and procedures to deal with unforeseen circumstances;
- alternative actions considered that would not result in take; and,
- additional measures the Service may require as necessary or appropriate for purposes of the plan.

The HCP development phase concludes and the permit processing phase begins when a complete application package is submitted to the appropriate permit-issuing office. A complete application package consists of: 1) an HCP, 2) an Implementing Agreement (IA), if applicable, 3) a permit application, and 4) a \$100 fee from the applicant. The Service must also publish a Notice of Availability of the HCP package in the *Federal Register* to allow for public comment. The Service also prepares an Intra-Service section 7 Biological Opinion and a Set of Findings, which evaluates the section 10(a)(1)(B) permit application in the context of permit issuance criteria (see below). An Environmental Action Statement, Environmental Assessment, or Environmental Impact Statement serves as the Service's record of compliance with the National Environmental Policy Act (NEPA), which has gone out for a 30-day, 60-day, or 90-day public comment period. An implementing agreement is required for HCPs unless the HCP qualifies as a low-effect HCP. A section 10(a)(1)(B) incidental take permit is granted upon a determination by the Service that all requirements for permit issuance have been met. Statutory criteria for issuance of the permit specify that:

- the taking will be incidental;
- the impacts of incidental take will be minimized and mitigated to the maximum extent practicable;
- adequate funding for the HCP and procedures to handle unforeseen circumstances will be provided;
- the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild;
- the applicant will provide additional measures that the Service requires as being necessary or appropriate; and,
- the Service has received assurances, as may be required, that the HCP will be implemented.

During the post-issuance phase, the Permittee and other responsible entities implement the HCP, and the Service monitors the Permittee's compliance with the HCP as well as the long-term progress and success of the HCP. The public is notified of permit issuance by means of a notice in the *Federal Register*.

1.5.3 National Environmental Policy Act

The purpose of NEPA is two-fold: to ensure that Federal agencies examine environmental impacts of their actions (in this case deciding whether to issue an incidental take permit) and to utilize public participation. NEPA serves as an analytical tool on direct, indirect, and cumulative impacts of the proposed project alternatives to help the Service decide whether to issue an incidental take permit (or section 10(a)(1)(B) permit). NEPA analysis must be done by the Service as part of the incidental take permit process.

1.5.4 National Historic Preservation Act

All Federal agencies are required to examine the cultural impacts of their actions (e.g., issuance of a permit). This may require consultation with the State Historic Preservation Office (SHPO) and appropriate American Indian tribes.

1.5.5 California Environmental Quality Act

The California Environmental Quality Act (CEQA) (Public Resources Code [PRC] section 21000 seq.) requires state and local governmental agencies to complete an environmental review of discretionary projects that could impact environmental resources. CEQA applies to projects undertaken, funded or requiring an issuance of a permit by a public agency. CEQA differs from NEPA in that it requires that significant environmental impacts of proposed projects be reduced to a less-than significant level through adoption of feasible avoidance, minimization, or mitigation measures unless overriding considerations are identified and documented.

Local government, the County of San Luis Obispo, was in the process of issuing a Minor Use Permit/Coastal Development Permit (MUP/CDP) for the proposed project, but the permit was not issued due to concerns raised by the Service regarding the potential take of MSS on the property from fuel modification activities. A biological study was not required by the County for issuance of the MUP/CDP, and surveys to confirm presence or absence of MSS were not conducted prior to site disturbance. Fuel modification activities occurred on the entire parcel, which resulted in the removal of coastal dune scrub, and likely take of MSS. The County's issuance of the permit would allow an activity that could result in take of MSS, e.g., grading permit, approval of improvement plans, vegetation removal, and/or ground disturbance. As a result, the Applicant is now required to demonstrate compliance with the Act by possession of a valid incidental take permit for the MSS prior to County issuance of their MUP and CDP.

1.5.6 San Luis Obispo County Local Coastal Program

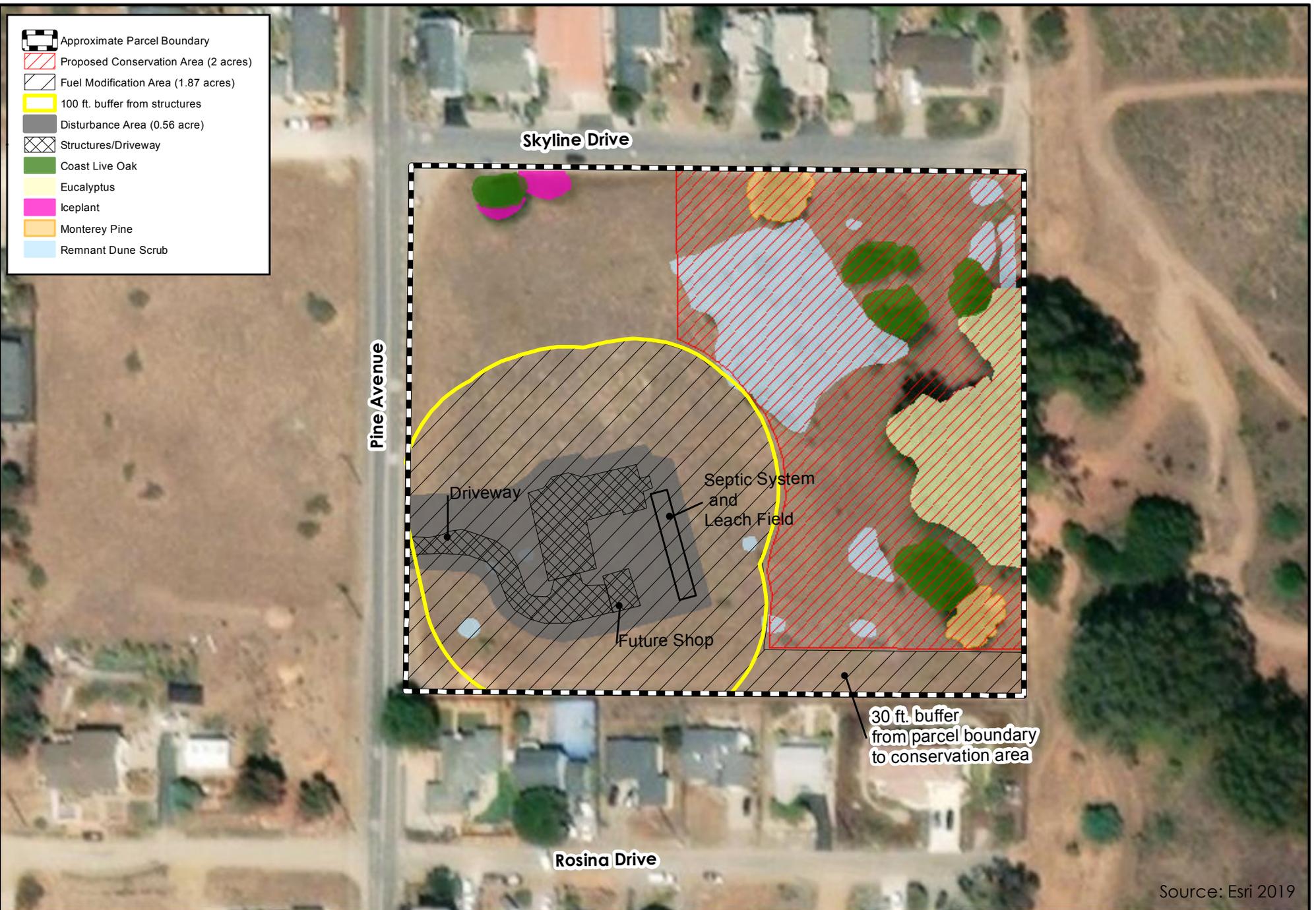
The project parcel is subject to the Coastal Zone Land Use Ordinance (CZLUO) for San Luis Obispo County. The San Luis Obispo County Local Coastal Program (LCP) as certified by the California Coastal Commission, applies to all areas of the County located within the CZLUO. The County is the lead agency with regard to California Coastal Act compliance and is responsible for reviewing the proposed residential project on the subject parcel for compliance with the LCP and for issuing a MUP/CDP for the project.

2.0 PROJECT DESCRIPTION / ACTIVITIES COVERED BY PERMIT

2.1 Project Description

The proposed project consists of construction of a two-story single family residence located at the southwest corner of the parcel near Pine Avenue (refer to Figure 3 and the Site Plan included as Appendix A). A driveway accessing the home site would be constructed off Pine Avenue, and other infrastructure such as a septic system/leach field and a future detached workshop would be

-  Approximate Parcel Boundary
-  Proposed Conservation Area (2 acres)
-  Fuel Modification Area (1.87 acres)
-  100 ft. buffer from structures
-  Disturbance Area (0.56 acre)
-  Structures/Driveway
-  Coast Live Oak
-  Eucalyptus
-  Iceplant
-  Monterey Pine
-  Remnant Dune Scrub



Source: Esri 2019

constructed immediately adjacent to (east of) the homesite. The development would include a 3,466 square foot residence, 675 square foot garage, 790 square foot veranda, and 354 square foot upper deck area. The proposed development, including the home, infrastructure, future detached workshop and all associated disturbance areas, would be sited on approximately 0.56 acre of the 4.7-acre property. No development of the remaining portion of the parcel is currently proposed, but fuel modification consisting of annual mowing will be required in a 100-foot buffer around all structures onsite, as well as along a 30-foot wide swath on the southern property line consistent with CAL FIRE guidance.

The 2.0-acre conservation area as shown on Figure 3 was developed to provide a 100 foot fuel modification buffer from onsite structures and a 30 foot fuel management zone north of the properties along Rosina Drive. This is consistent with CAL FIRE requirements for defensible space on the property. The conservation area will be preserved under a conservation easement that will be dedicated, in perpetuity, to the County of San Luis Obispo.

2.2 Activities Covered by Permit

The following activities would be covered by the incidental take permit:

Temporary Impacts:

- Surveys for and relocation of MSS within the 0.56 acre disturbance area prior to and during construction;
- Defined staging areas for construction equipment within the approved 0.56 acre disturbance area; and
- Habitat restoration activities within the 2.0 acre conservation easement area.

Permanent Impacts:

- Vegetation removal, site grubbing, and grading for proposed development within 0.56-acre identified on Figure 3;
- Residential housing construction;
- Trenching for installation of utilities and other infrastructure within the 0.56 acre disturbance area;
- Installation of septic tank and leach field within the 0.56 acre disturbance area;
- Installation and maintenance of landscaping around the house and shop; and
- Hazard abatement activities on approximately 1.87 acres of the site as required by CAL FIRE (Figure 3).

The proposed activities are described in more detail below.

Temporary Impacts

Surveys for and relocation of MSS – Prior to construction activities, a Service-approved biologist in possession of a valid section 10(a)(1)(A) permit will survey the 0.56 acre development area for MSS. Surveys will involve disturbance to vegetation, handling MSS, and moving MSS to appropriate areas such as under native shrubs within the conservation area. If pre-construction surveys occur during the summer months, when MSS are aestivating, one comprehensive survey immediately prior to construction would be sufficient to remove MSS from the impact area. If major construction activities that have the potential to affect MSS or their habitat, such as grading and cement pouring,

occur during the rainy season (November to March or after any rain event), surveys will be conducted during these construction phases to remove any snails that are present or may enter the construction area.

Staging areas for construction equipment – Vehicles and construction materials would typically be stored in a separate area. Temporary damage could occur from compacted and disturbed soils in these areas. For this project, staging will occur in the disturbance area as shown on Figure 3.

Restoration activities – Non-native species in the 2.0-acre easement area, particularly veldt grass (*Ehrharta calycina*) and narrow-leaved ice plant (*Conicosia pugioniformis*), will be removed by hand pulling and selective herbicide application. Progress of restoration efforts will be monitored at regular intervals in accordance with the restoration and enhancement activities detailed in section 5.2.3 below for measures to mitigate unavoidable impacts. In the long-term, these activities will benefit habitat for MSS onsite. In the short-term, soils disturbance during weeding could occur, and without permitted biologists conducting the work, take of MSS is possible. Restoration and monitoring will last for five years following the approximately 18-month construction period or until that time the final success criteria have been met.

Permanent Impacts

All permanent impacts resulting from the proposed development, including the home, infrastructure, future detached workshop and all associated disturbance would occur on approximately 0.56 acre of the 4.7-acre property.

Vegetation removal and grading – To prepare the footprint areas for construction, vegetation will be removed and grading will take place using heavy machinery over an approximately one week period. Vegetation removal and ground disturbing (e.g., grading activities) will be monitored by a Service-approved, permitted biologist who will capture and relocate any MSS observed out of harm's way into suitable habitat within the conservation easement.

Residential housing construction – A single-family house, detached workshop, driveway, and septic system will be constructed on the southwestern corner of the parcel (refer to Figure 3). Activities associated with house construction include pouring foundation, framing, installation of siding, roofing, electrical, plumbing, insulation, drywall, painting, and installation of a septic system. Construction will last approximately 18 months. Additionally, the ingress to and egress from the construction site could cause take of MSS individuals.

Trenching for installation of utilities – Electric, water, and other utilities will require connection to main lines, usually within the road right-of-way. Trenching for these utilities will be within the identified disturbance area as shown on Figure 3.

Installation of septic system and leach field – The area for the septic system and leach field will be graded and excavated causing temporary disturbance to soils. The septic system and leach field area will not be paved, but will be maintained in the identified development disturbance area.

Installation and maintenance of landscaping – It is assumed that landscaping will surround the residence, and an area for this has been included in the project disturbance area of 0.56 acre. Due to regular maintenance requirements, this constitutes a permanent habitat loss.

Hazard abatement activities required by CAL FIRE – CAL FIRE generally requires fuel abatement within 100 feet of a residence. In some instances, such as along the property’s southern boundary, a modified approach has been allowed (per Greg Alex, 2018). With this approach, the first 30 feet abutting the back fences of residences along Rosina Drive would be mowed annually consistent with current practices that have been approved by CAL FIRE. Because the conservation area on the site will contain coastal dune scrub habitat, the conservation area was developed to provide a 100 foot fuel modification zone from the edge of structures as shown on Figure 3. This area may be mowed and maintained consistent with CAL FIRE requirements.

3.0 ENVIRONMENTAL SETTING / BIOLOGICAL RESOURCES

3.1 Environmental Setting

The property is located on the east side of Pine Avenue, and is bordered by residential development to the north and south, which is accessed from Rosina Drive and Skyline Drive. The eastern property boundary abuts the undeveloped Broderson Avenue right of way, which consists of a narrow, bare sand road created by off-road vehicles. The sand road does not occupy the entire County right of way, but meanders along the general right-of-way alignment. Soils onsite consist of Baywood fine sands, with some road base present along the edges of Pine Avenue within the County right of way. The southwest corner of the site adjacent to the existing residences closest to Pine Avenue has wood chips spread over a small area that appears to be used for vehicle access and parking.

In early 2017, all areas of the property except for the ice plant areas, buck brush (*Ceanothus cuneatus*) shrubs, coast live oak (*Quercus agrifolia*) and blue gum eucalyptus (*Eucalyptus globulus*) trees, and remaining large shrubs were mowed to a height of less than four (4) inches. Overall, approximately 85% of the lot, including the 0.56-acre disturbance area was mowed in 2017. The habitat assessment noted the mowed remains of many native plants characteristic of coastal dune scrub habitat, including mock heather and coyote brush shrubs, which as stated above, are re-sprouting near their stumps (Appendix B). In some areas where the larger shrubs were mowed, several inches of leaf litter and mulch composed of mowed woody debris was present. The mowed areas now consist of bare sand, veldt grass clumps, and California croton.

The western portion of the parcel is relatively level, and contains large areas of bare sand and mowed veldt grass clumps, interspersed with scattered remnants of native coastal dune scrub habitat, primarily mock heather (*Ericameria ericoides*). Since the mowing of the site occurred, shrubs that had been mowed to near ground level were observed sprouting new shoots from cut stumps. A large coast live oak tree and several patches of ice plant are present near the northwest corner along Skyline Drive, and a large coyote brush shrub is present near the southwest corner near Pine Avenue. The eastern half of the property slopes gently downward to the northeast, and contains numerous coast live oak trees, several Monterey pine (*Pinus radiata*) trees, and scattered remaining occurrences of coyote brush, mock heather, dune lupine, sand almond (*Prunus fasciculata* var. *punctata*), and buck brush. Several large blue gum eucalyptus trees are present along the eastern edge of the parcel, near the Broderson Avenue right of way.

All areas of the property except for the ice plant areas, buck brush shrubs, oak and eucalyptus trees, and remaining large shrubs were mowed to a height of less than four (4) inches in early 2017. The mowed areas now consist of bare sand, veldt grass clumps, and California croton. Overall, approximately 85% of the lot was mowed in 2017. The assessment noted the mowed remains of many native plants characteristic of coastal dune scrub habitat, including mock heather and coyote

brush shrubs, which as stated above, are re-sprouting near their stumps. In some areas where the larger shrubs were mowed, several inches of leaf litter and mulch composed of mowed woody debris was present.

3.1.1 Climate

In the plan area, the summer temperature range is from 50 degrees Fahrenheit (°F) to 70°F, and average is 58°F. The winter temperature range is from 52°F to 55°F, and average is 53°F. Fog is common during the late spring and summer months and moderates summer temperatures.

Annual precipitation is approximately 17 inches per year. Most precipitation falls as rain, but a very small amount is attributed to coastal fog. The rainy season is from October to March, with the majority of the rainfall occurring between January and March.

3.1.2 Topography / Geology

Elevations on the site range from a high of approximately 80 feet in the proposed development area to a low of approximately 46 feet near the northeast corner. The site slopes slightly downhill to the north and east, and the soil type is mapped as the Baywood fine sand series (USDA, Soil Conservation Service 1984), which is considered to be a unifying characteristic of habitat for MSS.

3.1.3 Hydrology / Streams, Rivers, Drainages

The site is within the Morro Bay watershed. No rivers or drainages are present on or adjacent to the project site, nor does the project site lie within a flood zone. The unpaved dirt road on the east side of the parcel has formed a gully in the northeastern corner just off-site that occasionally fills with stormwater runoff water.

3.1.4 Existing Land Use

The project parcel is zoned Residential Single Family (RSF) and is bounded by residential development to the north and south. Adjacent parcels are also zoned RSF. Morro Shores Mobile Home Park is located to the northeast, and Trinity United Methodist Church is located to the southwest. Currently, the property is undeveloped, and contains no structures or improvements.

3.2 **Covered Wildlife Species**

3.2.1 Morro Shoulderband Snail (*Helminthoglypta walkeriana*)

Status, Distribution, and Trends – MSS was listed as federal endangered on December 15, 1994. The recovery plan for the MSS and four plants from western San Luis Obispo County, California, was finalized on September 26, 1998. The final rule on critical habitat for the MSS was published in the *Federal Register* on February 7, 2001.

MSS occurs on sandy soils of central dune scrub, coastal sage scrub, and anthropogenic influenced plant communities near Morro Bay. In 1985, Roth found that the geographic limits of this species generally coincided with the limits of stabilized, vegetated, dune habitats located east, southeast, and south of Morro Bay. Too few population or demographic surveys have been conducted to determine population trends for this species. Since its listing, more surveys have been conducted,

and information on the distribution and abundance of this species is increasing. However, the increase in number of known populations may be attributed to the increase in surveys. These data are not sufficient to determine a population trend. MSS populations may be increasing, or are at least stable and or increasing and not decreasing (U.S. Fish and Wildlife Service [Service] 2006).

Habitat Characteristics / Use – MSS occurs in a variety of native and non-native habitat types. It requires coastal scrub, coastal dune scrub, and maritime chaparral communities that are typically underlain by Baywood fine sands substrates. In the absence of ideal habitat provided by native vegetation, it will also utilize non-native stands that are dominated by iceplant and/or perennial veldt grass (*Ehrharta calycina*) within its range. They have been documented occurring in iceplant mats, veldt grass clumps, along perimeters of eucalyptus stands, and in human generated debris where historically the area was likely composed of native coastal scrub habitat. The species is closely associated with several species of native shrubs including mock heather (*Ericameria ericoides*), seaside golden yarrow (*Eriophyllum staechadifolium*), deerweed (*Lotus scoparius*), and sand almond, and with introduced ice plant (*Carpobrotus* spp. and *Conicosia* spp.); however, MSS is found most frequently within mock heather (Roth 1985). Other plants that commonly occur in areas occupied by this species include black sage, dune buckwheat (*Eriogonum parvifolium*), California sagebrush, dune lupine (*Lupinus chamissonis*), and California croton (Roth 1985). Typically, shrubs that support MSS exhibit dense, low growth with ample contact with the ground.

Mating, egg-laying, and most individual growth of MSS is assumed to occur primarily during the rainy season (Roth 1985). During the dry season, individuals of this species can be found aestivating in the accumulated litter beneath various shrubs. Within the vicinity of Morro Bay, individuals of the Big Sur shoulderband snail (*Helminthoglypta umbilicata*) have been found aestivating in coastal dune scrub habitats on the lower and outer branches of mock heather or within the leaf litter located adjacent to or beneath mock heather. Although MSS has been found to aestivate in close association with mock heather, similar to the Big Sur shoulderband, it is not known whether individuals of this species aestivate on the branches or within the leaf litter (Roth 1985). On occasion small individuals of *Helminthoglypta* have been found under pieces of wood on the ground and in clumps of the introduced ice plant (Roth 1985).

Occurrences within the Project – Surveys following Service guidelines have not been conducted for MSS on the parcel to date. A habitat assessment conducted after the site was mowed in 2017 observed a single empty MSS shell on the eastern portion of the site (refer to Appendix B - KMA, 2017). This shell was sun bleached and weathered, and met Roth's criteria for classification as Class C: 2-10 years old. Based on the complete absence of the periostracum layer and lack of pigmentation except for a faint remnant shoulderband line, and extensive pitting of the shell material, this shell was estimated to be over five years old. One bleached and crushed common garden snail shell (*Helix aspera*) was observed in association with veldt grass in the southern portion of the property. No other snail shells or fragments were observed on the site since the site was mowed to a height of less than four inches in 2017.

Occurrences Nearby - Additional information regarding MSS occurrence patterns in the general area were found in the 2014 Annual Construction Monitoring Report for the Los Osos Wastewater Project, which documents MSS occurrences encountered during project construction in 2012, 2013, and 2014. The observations made during construction of the project showed MSS to be located throughout the general area. The nearest recorded MSS occurrence consists of 20 MSS found in 2013, approximately 0.20-mile to the southwest along Los Osos Valley Road. The Survey Map included in the report shows that within Collection Area B, which includes the subject property, the only MSS occurrences found were within the Mid-Town Site, approximately 0.35-mile to the

southeast. In the adjacent Area C located on the south side of LOVR, surveys found only six (6) MSS, in four (4) locations. In comparison, Areas A and D, located to the east and north of Area B, had numerous MSS occurrences. While available survey results from surrounding areas appear to show a generally low MSS population density in this portion of Los Osos, the species has been found throughout the general area in a wide range of vegetation types.

Based on surveys conducted 2017 (refer to Appendix B - KMA, October 2017), no other federal threatened or endangered animal species are known or expected to be present on the site.

3.3 Federal Plant Species

No federal listed threatened, endangered plants or candidate plants proposed for listing are present onsite, and none will be affected by the proposed project.

4.0 TAKE ASSESSMENT

4.1 Direct and Indirect Impacts

This section analyzes potential direct and indirect effects of the proposed residential construction as they would relate to take of MSS. Typically, the majority of take is expected to occur during vegetation removal and grading during the initial construction phase of the project. Since mowing of the site in 2017 removed all MSS habitat that may have been present in the proposed disturbance area, it is unlikely that any MSS are still remaining in this part of the site. It is possible, albeit unlikely, that MSS could have moved back onto the site from surrounding areas since the mowing occurred in 2017. Indirect impacts could potentially occur in areas directly adjacent to impact areas, and could potentially occur in the conservation area during habitat restoration and enhancement activities.

Direct impacts of the project will include:

- Permanent loss of 0.56 acre of mowed coastal dune scrub and low-quality veldt grass habitat areas suitable for MSS.
- Take of MSS found in the impact area during capture and relocation activities, as well as injury or mortality for those individuals not found during clearance survey.

Indirect and temporary impacts of the project may include:

- Take of MSS in the conservation area during restoration, monitoring, and management activities.

It is anticipated that take of MSS as identified above can be avoided and minimized by completion of pre-activity clearance surveys, worker education training, and monitoring during construction activities. Incidental take can also be mitigated by the establishment of a conservation area that will be restored with native coastal dune scrub habitat.

4.2 Anticipated Take on Morro Shoulderband Snail

The anticipated take of the MSS resulting from implementation of the covered activities is expected to be low due to the previous mowing disturbance in the impact area. The direct

removal of approximately 0.56 acre of mowed coastal dune scrub and veldt grass habitats could result in injury or mortality for MSS that are present in the impact area. MSS survey and relocation activities prior to construction, initial grading, and residential construction activities could also result in take of individual snails in the form capture, injury, and/or mortality. Even though handling is a form of take, the proposed survey, capture and relocation efforts prior to site disturbance would reduce the potential for injury or mortality.

The proposed development within the 0.56-acre disturbance area will result in a loss of mowed coastal dune native habitat and non-native habitat provided by veldt grass for MSS in the near term. However, the long-term habitat preservation activities within the conservation easement are expected to benefit the species by focusing on restoration of native habitat. Moreover, monitoring during initial vegetation removal and grading will also help minimize the potential for injury or mortality of individuals.

Take of Morro shoulderband snail is anticipated to result from the actions necessary to implement the proposed project and would be negligible in terms of the species' overall survival and recovery. Information from past surveys about species' presence in the surrounding area indicates that the number of individuals subject to incidental take would be very low. Take would be predominantly in the form of capture and relocation of individuals out of harm's way. Additionally, the implementation of avoidance and minimization measures would result in very low mortality and would not contribute to the loss of viability of the species.

4.3 Potential Impacts to Federal Plant Species

While surveys of the site occurred after the mowing incident, no federal listed or candidate plant species proposed for listing are anticipated to be present on site. Therefore, no potential impacts to federal plant species are expected to occur from the proposed project.

4.4 Effects on Critical Habitat

Critical habitat for MSS was finalized on February 7, 2001 (66 *Federal Register* 9233). Critical habitat for MSS consists of three units covering 2,566 acres in San Luis Obispo County. Unit 1, Morro Spit and West Pecho, covers 1,830 acres and encompasses the length of the Morro Bay sand spit and the foredune areas south to Hazard Canyon and the area east of the Morro Spit between Pecho Road and the community of Los Osos. Unit 2, South Los Osos, covers 320 acres and is located south of Highland Drive in Los Osos. Unit 3, Northeast Los Osos, covers 416 acres and lies between Los Osos Creek and Baywood Park, including the area known as the Elfin Forest.

The project site is not within or contiguous with designated critical habitat for MSS. The northern boundary of Unit 2 is located approximately one-half mile to the south of the project site. As such, critical habitat for MSS will not be affected by the proposed project.

4.5 Cumulative Impacts

In contrast with the analysis of cumulative impacts under section 7, section 10 of the Act and HCPs analyze cumulative impacts as incremental impacts of the action on the environment when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. The geographic area for analysis should be defined by the manifestation of direct or indirect impacts as a result of covered activities.

Cumulative impacts under section 10 of the Act can result from individually minor but collectively significant actions taking place over a period of time.

Lands surrounding the project site currently contain roadways, residential development, and remnant natural habitat areas. Many of the residential uses predate the listing of MSS under the ESA. The construction of surrounding residential developments removed and fragmented habitat for MSS, and may have caused direct mortality of MSS. The current project is similar in scale to these earlier developments. The net effect of this project will be that 0.56 acres of the site are developed and 2.0 acres of suitable native habitat for MSS are set aside and protected in perpetuity. While the site development will cumulatively impact potential MSS habitat in the urban reserve area of Los Osos, regional planning efforts including habitat conservation around the perimeter of the community will protect occupied habitat for the species, and thereby effects of the project would not contribute to cumulative impacts to the species. Lastly, given the activities proposed and the scale of the project, we anticipate negligible impact on climate change.

4.6 Anticipated Impacts of the Taking

As stated above, the effects of the take of MSS during this project is expected to have negligible effects on the species' overall survival. This is because the percentage of the species' habitat relative to the species' entire range is very small. While survey data prior to the mowing event that removed onsite habitat are not available for this property, the number of individual MSS that could be taken during the construction of the proposed project is expected to be small now that the site was disturbed. The overall effect of the proposed project will be a net increase in the amount of habitat for MSS that will be protected from development and other disturbance. Neither any mortality of MSS potentially occupying the areas proposed to be disturbed, nor the permanent removal of habitat for MSS due to the construction of this project, are anticipated to affect the recovery of the population of MSS in the Los Osos region.

5.0 CONSERVATION PROGRAM / MEASURES TO MINIMIZE AND MITIGATE FOR IMPACTS

5.1 Biological Goals and Objectives

Section 10(a)(2)(A) of the Act requires that an HCP specify the measures that the Permittee will take to minimize and mitigate to the maximum extent practicable the impacts of the taking of any federally listed animal species as a result of activities addressed by the plan.

As part of the "Five Point" Policy adopted by the Service in 2000, HCPs must establish biological goals and objectives (65 *Federal Register* 35242, June 1, 2000). The purpose of the biological goals is to ensure that the operating conservation program in the HCP is consistent with the conservation and recovery goals established for the species. The goals are also intended to provide to the applicant an understanding of why these actions are necessary. These goals are developed based upon the species' biology, threats to the species, the potential effects of the covered activities, and the scope of the HCP.

The biological goals and objectives of this LEHCP are as follows:

Goal 1: Minimize adverse effects and avoid and minimize adverse impacts to MSS within the project site.

Objective 1.1: Remove MSS from impact areas by performing surveys prior to and, if necessary, during construction, and relocate any MSS to suitable habitat within the conservation area outside impact areas.

Goal 2: Preserve and maintain suitable native habitat for MSS.

Objective 2.1: Create a 2.0 acre conservation easement area, which will restore and protect MSS habitat.

Objective 2.2: Restore MSS habitat in the 2.0 acre conservation area through control of exotic species, particularly veldt grass and narrow-leaved ice plant, and seeding with native species characteristic of coastal dune scrub habitat.

Objective 2.3: Maintain habitat within the conservation easement area during the term of the permit through regular weed control efforts.

5.2 Avoidance, Minimization and Mitigation Measures

Section 10 of the Act requires that all applicants submit HCPs that “minimize and mitigate” the impacts of take authorized by an incidental take permit, and that issuance of the permit will not “appreciably reduce the likelihood of the survival and recovery of the species in the wild.” In general, HCPs need to include mitigation programs that are based on sound biological rationale, and are practicable and commensurate with the impacts of the project on species for which take is requested. Additionally, the Service encourages applicants to develop HCPs that contribute to the recovery of a listed species. If the proposed project is expected to result in permanent habitat loss, then the mitigation strategy must include compensatory mitigation consisting of the permanent preservation of suitable habitat or similar measures.

In accordance with these guidelines and the requirements of the Act, the Conservation Program of this HCP is intended to achieve its biological goals and objectives and to ensure that the take of MSS as a result of Covered Activities are minimized and mitigated to the maximum extent practicable.

5.2.1 Measures to Avoid Impacts

Design of Impact Areas

The proposed development is sited in the southwest section of a 4.7-acre property. The project impact areas and building envelope are located near Pine Avenue and residences on adjoining lots to the south. The proposed conservation area contains remnant coastal dune scrub habitat elements, and will be enhanced and restored to increase areal cover of native species and suitable habitat for MSS.

Section 1276.01 of the Fire Safe Regulations requires all parcels one (1) acre and larger to provide a minimum 100-foot defensible space around buildings and accessory buildings. PRC section 4291(c)(1) allows the director to vary the requirements respecting the removing or clearing away of flammable vegetation or other combustible growth around a structure with an exterior constructed entirely of nonflammable materials. The project site layout and building materials have been chosen to negate the need for any fire control clearing in the Conservation Easement area. The proposed structures will be located a minimum of 100 feet from the easement boundary and will have fire resistant construction materials and irrigated landscaping to buffer development from the conservation area. CAL FIRE has been consulted to confirm removing vegetation in the

Conservation Easement area will not be mandated since it is over 100 feet from the edge of onsite structures. CAL FIRE has requested that a 30 foot swath along the southern property boundary abutting residences along Rosina Drive be included in the annual fuel modification activities as shown on Figure 3.

Protective Fencing

Before heavy equipment begins work at the project site, the disturbance area will be fenced to establish the limits of the construction area. This fencing will consist of orange construction fencing to protect native habitat outside the impact areas. Fencing will be set at least 3 feet outside the boundary of the conservation easement boundary to reduce the potential for soil or material stockpiles to slump or fall into this area.

Sediment and Erosion Control

All sediment and erosion control measures established for the project shall direct stormwater flows away from the HCP conservation easement area.

5.2.2 Measures to Minimize Impacts

MSS Surveys and Relocation

To reduce the potential for direct injury or mortality of individual snails, Service-approved biologist in possession of a valid 10(a)(1)(A) permit for MSS will survey the impact area and clear the surveyed areas, of all live snails and empty shells. Surveys will be conducted within 24 hours prior to commencement of initial ground disturbance activities. If pre-construction surveys occur during the summer months (April through October), when MSS are aestivating, one comprehensive survey immediately prior to construction will likely be sufficient to remove MSS from the impact areas. If pre-construction surveys occur during the rainy season (November through March or after a rainfall event) several surveys prior to disturbance may be needed. If major construction activities that have the potential to affect MSS or their habitat, such as grading and cement pouring, occur during the rainy season, daily surveys will be conducted during these construction phases to remove any snails that enter the construction area.

All living snails identified will be captured and relocated out of harm's way into suitable habitat within the Conservation Easement area. The size, age-class, location of capture, and release site location will be recorded for each individual live MSS relocated from the affected work area. Empty shells will be counted and classified by size and age, and will be placed in the Conservation Easement area. The Service-approved biologist will document all activities associated with all surveys and a report will be submitted to the Service.

Contractor and Employee Education (Environmental Awareness Training)

The Service-approved biologist will conduct an orientation program for all persons who will work on-site during grading and construction. The program will consist of a brief presentation about the biology of the MSS and the terms of the HCP and be given as many times as necessary to accommodate new personnel. The purpose of the orientation will be to inform contractors, construction workers, and equipment operators of construction activity restrictions. There will also be a discussion of the appropriate protocol should MSS be encountered onsite at any time during construction activities.

5.2.3 Measures to Mitigate Unavoidable Impacts

Onsite Conservation Area

The Applicant proposes to set aside and restore to coastal dune scrub 2.0 acres of disturbed habitat in a Conservation Easement (refer to Figure 3). As a condition of the incidental take permit, the Applicant will dedicate the easement prior to conducting any activity that could result in take or use/reliance on any permit issued by the County. The easement will have specific allowable uses.

Habitat Restoration and Enhancement

The proposed Conservation Easement Area will be restored to coastal dune scrub habitat suitable for occupation by MSS through removal of non-native plants, natural regeneration of native coastal scrub species, and seeding with native species characteristic of coastal dune scrub habitat. Non-native species to be removed include, but are not limited to, narrow-leaved ice plant and veldt grass. A grass-specific herbicide such as Arrow 2EC will be used to kill the veldt grass consistent with other habitat management projects in Los Osos being completed by the County (refer to Los Osos Habitat Management Plan for the Wastewater Treatment Facility). Narrow-leaved iceplant would be killed using a glyphosate based herbicide and by hand removal. All herbicide application activities would follow manufacturer's guidelines and occur when no rain is in the 48-hour forecast. Herbicide will be applied using backpack sprayers or with a truck mounted spray rig on an as needed basis during the five year monitoring period. Herbicide application will terminate once incidental take permit coverage is over, which is expected to be a 10 year period.

Seed from mock heather, coyote brush (*Baccharis pilularis*), dune lupine, black sage and California sagebrush will be collected from the site and surrounding areas, then broadcast in the conservation area. Seed collection and broadcasting will be overseen by a Service-approved biologist and occur in the fall and winter months to be timed with the winter rain season. It is envisioned that multiple applications of seed will occur over a two year period to support the restoration effort and meet the final success criteria of having greater than 50% areal cover of native vegetation with less than 25% areal cover of non-native species.

The proposed restoration of habitat is intended to restore and improve the overall habitat quality of the conservation easement area for MSS and other species associated with coastal dune scrub plant communities. As stated above, habitat restoration activities will be done by or under the supervision of a Service-approved biologist familiar with MSS and coastal dune habitat restoration.

Prior to undertaking the restoration effort in the conservation easement area, vegetation cover estimates will be generated using methods described by Bonham (1989) to establish a baseline from which to judge the success of the effort. Successful restoration of the conservation easement area will be recognized when areal cover of non-native species has been reduced to 25% or less and native vegetation comprises 50% or greater areal cover in the conservation easement area.

5.3 Monitoring

Monitoring tracks compliance with the terms and conditions of the incidental take permit. There are three types of monitoring: (1) compliance monitoring to track the permit holder's compliance with the requirements specified in the HCP and permit; (2) effects monitoring to track the impacts of the covered activities on the covered species; and (3) effectiveness monitoring to track the

progress of the conservation strategy in meeting the HCP's biological goals and objectives, includes species surveys, reproductive success, etc. Monitoring provides information for making adaptive management decisions.

5.3.1 *Compliance Monitoring*

The applicant will retain a Service-approved MSS biologist to conduct compliance monitoring during construction of the project. The monitoring biologist will ensure that the required minimization measures, such as protective fencing and environmental training are implemented. Results of the compliance monitoring will be reported in the first annual report for the project.

5.3.2 *Effects Monitoring*

To quantify the amount of incidental take resulting from project implementation, this biologist will count the number of individual MSS that were captured and relocated, and the number of MSS injured or killed during construction. This information will be included in the first annual report for the project.

5.3.3 *Effectiveness Monitoring*

The conservation easement area will be monitored annually for five years following construction. During the first year, monitoring will occur on a monthly basis to document the restoration effort. Depending on the results of the first year's monitoring observations, monitoring will be reduced to quarterly during the second year, and then will occur twice per year (i.e., once in the fall and once in the spring) during years three through five. The annual monitoring will focus on measuring vegetation cover to determine extent of non-native plants and ensure that the site is meeting the performance standards outlined in this HCP. During the monitoring period, the conservation area will be visually inspected for disturbance that could negatively affect MSS. Effectiveness monitoring results will be reported annually.

5.4 **Performance and Success Criteria**

The overall goal of this LEHCP is to restore and maintain high quality habitat for MSS within the identified conservation easement area. Success criteria for each objective stated in Section 5.1 are as follows:

Objective 1.1: Capture MSS from impact areas by performing surveys prior to and, if necessary, during construction. Captured individuals will be moved out of harm's way into suitable habitat composed of young shrubs growing within the conservation easement area.

Performance criteria: A qualified biologist holding a 10(a)(1)(A) permit for MSS will conduct all surveys and relocation efforts for MSS. At the end of the survey period, the biologist will submit a report to the Service detailing survey methods, number and location of MSS found, number and location of MSS moved, and any mortality of MSS.

Objective 2.1: Establish and dedicate to the County of San Luis Obispo a 2.0-acre conservation easement in substantial conformance with that area depicted on Figure 3.

Performance criteria: Quantitative performance criteria are not appropriate for this objective. Applicant shall provide proof to the Service that the conservation easement has been dedicated to the County of San Luis Obispo prior to engaging in any capture and relocation activities as discussed in objective 1.1.

Objective 2.2: Restore MSS habitat within the conservation easement area through removal of exotic species, particularly veldt grass and narrow-leaved ice plant, to encourage natural regeneration of coastal dune scrub plant species, and increase native habitat cover by seeding of native plants characteristic of coastal dune scrub habitat.

Performance criteria:

- Cover of non-native plants within the conservation easement area will not exceed 50% during Year 1 of monitoring and will not exceed 35% during Years 2 and 3 and be reduced to less than 25% by Year 5.
- Any potential habitat degradation or other threats to MSS will be identified during annual monitoring activities. Remedial measures and adaptive management strategies will be identified and implemented under the direction of the Service-approved biologist.

Objective 2.3: Maintain the conservation easement area in perpetuity. Regular weed abatement and restoration activities would occur during the 10-year term of the incidental take permit, and then it is envisioned that the conservation area will support self-sustaining native habitat that will not require weed removal or other activities that could result in take of MSS.

Performance criteria:

- Areal cover of non-native weed plants in the conservation easement area will not exceed 25% of total habitat cover in year 5. As stated above, once intact coastal dune scrub habitat is restored in the conservation easement area, weed removal or herbicide application will not be required after the 10 year permit term.

5.5 Adaptive Management Strategy

For some HCPs, the adaptive management strategy is an integral part of an operating conservation program that addresses the uncertainty in the conservation of a species covered by an HCP. Adaptive management should identify and address the uncertainty, incorporating a range of previously agreed-upon alternatives for addressing those uncertainties, integrating a monitoring

program that detects the necessary information, and incorporating a feedback loop that links implementation and monitoring to a decision-making process that results in appropriate changes in management. Adaptive management should help the Permittee achieve the biological goals and objectives of the HCP.

Adaptive management will be used if success criteria prove insufficient to achieve the biological goals or objectives set forth in this HCP or if success criteria require more than is necessary to achieve the biological goals and/or objectives. Success criteria may be modified to more quickly and more efficiently achieve biological goals, and may include changes in restoration techniques, access controls, and non-native species eradication techniques that have been used successfully at other similar sites in the vicinity of the project site. The Permittee shall determine specific applications of these techniques in coordination with the Service and shall modify them as approved by the Service based on monitoring data.

5.6 Reporting

Annual reports will be submitted to the Service at the completion of construction activities and annually during restoration activities. Reports will describe site conditions, methods, and results of vegetation control and monitoring, and recommendations for meeting performance criteria.

Annual Reports to the Service will include:

1. Brief summary or list of project activities accomplished during the reporting year (e.g., this includes development / construction activities, and other covered activities);
2. Project impacts (e.g., quantified area graded, number of buildings constructed, etc.);
3. Description of any take of covered species that occurred (includes cause of take, form of take, take amount, location of take and time of day, and deposition of dead or injured individuals);
4. Brief description of conservation strategy implemented;
5. Monitoring results (compliance, effects, and effectiveness monitoring) and survey information (if applicable);
6. Description of circumstances that made adaptive management necessary, how changes were implemented, and a brief summary of the actions taken;
7. Description of any changed or unforeseen circumstances that occurred and how they were dealt with;
8. Funding expenditures, balance, and accrual; and
9. Description of any minor or major amendments.

6.0 PLAN IMPLEMENTATION

6.1 Changed Circumstances

6.1.1 *Summary of Circumstances*

Section 10 regulations (69 *Federal Register* 71723, December 10, 2004 as codified in 50 CFR, Sections 17.22(b)(2) and 17.32(b)(2)) require that an HCP specify the procedures to be used for dealing with changed and unforeseen circumstances that may arise during the implementation of

the HCP. In addition, the HCP No Surprises Rule (50 CFR 17.22 (b)(5) and 17.32 (b)(5)) describes the obligations of the Permittee and the Service. The purpose of the No Surprises Rule is to provide assurance to the non-Federal landowners participating in habitat conservation planning under the Act that no additional land restrictions or financial compensation will be required for species adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the Permittee.

Changed circumstances are defined in 50 CFR 17.3 as changes in circumstances affecting a species or geographic area covered by an HCP that can reasonably be anticipated by plan developers and the Service and for which contingency plans can be prepared (e.g., the new listing of species, a fire, or other natural catastrophic event in areas prone to such events). If additional conservation and mitigation measures are deemed necessary to respond to changed circumstances and these additional measures were already provided for in the plan's operating conservation program (e.g., the conservation management activities or mitigation measures expressly agreed to in the HCP or IA), then the Permittee will implement those measures as specified in the plan. However, if additional conservation management and mitigation measures are deemed necessary to respond to changed circumstances and such measures were not provided for in the plan's operating conservation program, the Service will not require these additional measures absent the consent of the Permittee, provided that the HCP is being "properly implemented" (properly implemented means the commitments and the provisions of the HCP and the IA, when require, have been or are fully implemented).

6.1.2 Newly Listed Species and Changed Circumstance

If a new species that is not covered by the HCP but that may be affected by activities covered by the HCP is listed under the Act during the term of the section 10(a)(1)(B) permit, this permit will be reevaluated by the Service and the HCP covered activities may be modified, as necessary, to insure that the activities covered under the HCP are not likely to jeopardize or result in the take of the newly listed species or adverse modification of any newly designated critical habitat. The Applicant shall implement the modifications to the HCP covered activities identified by the Service as necessary to avoid the likelihood of jeopardy to or take of the newly listed species or adverse modification of newly designated critical habitat. The Applicant shall continue to implement such modifications until such time as the Permittee has applied for and the Service has approved an amendment of the section 10(a)(1)(B) permit, in accordance with applicable statutory and regulatory requirements, to cover the newly listed species. The Permittee would implement any such modifications, which the Service may choose to incorporate into the terms and conditions of the newly issue permit. Alternatively, the Service may notify the Permittee in writing that the modifications to the HCP covered activities are no longer required to avoid the likelihood of jeopardy or take of the newly listed species or adverse modification of newly designated critical habitat.

6.1.3 Wildfires and Prolonged Drought

Wildfires are common occurrences in central California, and are part of the natural ecology of native scrub habitats. Wildfires within the permit boundaries would be expected to remove vegetation necessary to the life cycle of MSS as well as to directly injure or kill individual MSS. Scrub habitat is adapted to this type of disturbance, and early successional plants quickly regrow in burned areas. Burns can also open habitat for invasive, non-native weedy species, which can invade and overtake the burned area. If a wildfire occurs in the project area during the course of the permit, the Permittee will consult with the Service to determine appropriate measures, which may

include revegetation efforts to reestablish native vegetative cover, planting of native species, and relocation of MSS onto burned portions of easement areas. Additionally, the Permittee shall implement the appropriate measures determined by the Service.

Periods of prolonged drought may be experienced during the restoration efforts in the conservation area. The plant palette consisting of coastal dune scrub species are adapted to periods of prolonged drought, and the use of seed rather than container stock will be important to establish the target vegetation community without the need for supplemental irrigation.

6.2 Unforeseen Circumstances

Unforeseen circumstances are defined in 50 CFR 17.3 as changes in circumstances that affect a species or geographic area covered by the HCP that could not reasonably be anticipated by plan developers and the Service at the time of the HCP's negotiation and development and that result in a substantial and adverse change in status of the covered species. The purpose of the No Surprises Rule is to provide assurances to non-Federal landowners participating in habitat conservation planning under the Act that no additional land restrictions or financial compensation will be required for species adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the Permittee.

In case of an unforeseen event, the Permittee shall immediately notify the Service staff that have functioned as the principal contacts for the proposed action. In determining whether such an event constitutes an unforeseen circumstance, the Service shall consider, but not be limited to, the following factors: size of the current range of the affected species; percentage of range adversely affected by the HCP; percentage of range conserved by the HCP; ecological significance of that portion of the range affected by the HCP; level of knowledge about the affected species and the degree of specificity of the species' conservation program under the HCP; and whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

If the Service determines that additional conservation and mitigation measures are necessary to respond to the unforeseen circumstances where the HCP is being properly implemented, the additional measures required of the Permittee must be as close as possible to the terms of the original HCP and must be limited to modifications within any conserved habitat area or to adjustments within lands that are already set-aside in the HCP's operating conservation program. Additional conservation and mitigation measures shall involve the commitment of additional land or financial compensation or restrictions on the use of land or other natural resources otherwise available for development or use under original terms of the HCP only with the consent of the Permittee.

6.3 Amendments

6.3.1 Minor Amendments

Minor amendments are changes that do not affect the scope of the HCP's impact and conservation strategy, change amount of take, add new species, and change significantly the boundaries of the HCP. Examples of minor amendments include correction of spelling errors or minor corrections in boundary descriptions. The minor amendment process is accomplished through an exchange of letters between the Permittee and the Service's Field Office.

6.3.2 Major Amendments

Major amendments to the HCP and permit are changes that do affect the scope of the HCP and conservation strategy, increase the amount of take, add new species, and change significantly the boundaries of the HCP. Major amendments often require amendments to the Service's decision documents, including the NEPA document, the biological opinion, and findings and recommendations document. Major amendments often require additional public review and comment.

6.3.3 Suspension / Revocation

The Service may suspend or revoke their respective permits if the Permittee fails to implement the HCP in accordance with the terms and conditions of the incidental take permit or if suspension or revocation is otherwise required by law. Suspension or revocation of the section 10(a)(1)(B) permit, in whole or in part, by the Service shall be in accordance with 50 CFR 13.27-29, 17.32 (b)(8) or current regulation.

6.3.4 Permit Renewal

Permit renewal may be necessary if all facets of the project are not completed within the permit term, including construction activities and restoration efforts. Any ESA section 10 permit is eligible to be renewed before the term expires if so stated on the permit. FWS regulations at 50 CFR 13.22 and NMFS regulations at 50 CFR 222.304 allow a permit to remain in effect while we consider a renewal request, but only if the renewal request is received at least 30 days before expiration

Prior to expiration, the section 10(a)(1)(B) permit may be renewed without the issuance of a new permit, provided that the permit is renewable, and that biological circumstances and other pertinent factors affecting covered species are not significantly different than those described in the original HCP. To renew the permit, the Applicant shall submit to the Service, in writing:

- a request to renew the permit; reference to the original permit number;
- certification that all statements and information provided in the original HCP and permit application, together with any approved HCP amendments, are still true and correct, and inclusion of a list of changes;
- a description of any take that has occurred under the existing permit; and
- a description of any portions of the project still to be completed, if applicable, or what activities under the original permit the renewal is intended to cover.

If the Service concurs with the information provided in the request, they shall renew the permit consistent with permit renewal procedures required by Federal regulation (50 CFR 13.22) or current regulation. If the Applicant files a renewal request and the request is on file with the issuing Service office at least 30 days prior to the permits expiration, the permit shall remain valid while the renewal is being processed, provided the existing permit is renewable. However, the Applicant may not take listed species beyond the quantity authorized by the original permit. If the Applicant fails to file a renewal request within 30 days prior to permit expiration, the permit shall become invalid upon expiration. The Applicant must have complied with all annual reporting requirements to qualify for a permit renewal.

6.3.5 *Permit Transfer*

The incidental take permit would need to be transferred if property covered under this HCP is sold or transferred or if the Applicant is not able to oversee the completion of the requirements of the incidental take permit.

The new owner will assume the responsibilities associated with the HCP and will also expect to receive the benefits of the permit. An assumption agreement is a key component of such a transaction. It outlines the roles and responsibilities of all the parties including the Service. The assumption agreement addresses any outstanding obligations and how they will be completed. An assumption agreement, at its simplest, is a joint submittal by the transferor and transferee as prescribed by 50 CFR 13.25 and 50 CFR 222.305, or it can resemble a memorandum of understanding.

In the event of a sale or transfer of ownership of the property during the life of the permit, the following will be submitted to the Service by the new owner(s): a new permit application, permit fee, and written documentation providing assurances pursuant to 50 CFR 13.25 (b)(2) that the new owner will provide sufficient funding for the HCP and will implement the relevant terms and conditions of the permit, including any outstanding minimization and mitigation. The new owner(s) must commit to all requirements regarding the take authorization and mitigation obligations of this HCP unless otherwise specified in writing and agreed to in advance by the Service.

7.0 FUNDING

7.1 Costs of HCP Implementation

The costs of HCP implementation have been estimated based on previous experience in MSS survey, relocation, and habitat restoration efforts in the Los Osos area. Table 2 provides estimated costs for all aspects of the conservation strategy and monitoring and reporting effort, based on use of consultants to perform most tasks. Actual costs may be significantly less if some tasks are performed by the Applicant. An amount to cover any unforeseen circumstances is also included in the estimate to ensure that any such instances will be addressed.

Table 1. Estimated Costs for HCP implementation

Item / Activity	Unit Cost	Units	Total
<i>Conservation Strategy</i>			
Protective Fencing	\$50 per 100 feet	4	\$200
Pre-construction surveys, MSS relocation, and project management	\$125/hour	16	\$2,000
Contractor and Employee Education (up to 4 training sessions assumed)	\$125/hour	4	\$500
Construction Compliance Monitoring / Reporting (as needed during 18-month construction process)	\$125/hour	24	\$3,000
Coastal Dune Scrub Restoration in the Conservation Easement Area (Oversight) (initial weeding / seed collection / seeding)	\$125/hour	20	\$2,500
Herbicide Application (Year 1 Labor and Expenses)	\$100/hour	40	\$4,000
Coastal Dune Scrub Restoration in the Conservation Easement Area (Labor) (initial weeding / seed collection / seeding)	\$50/hour	40	\$2,000
<i>Subtotal</i>			\$14,200
<i>4-Year Maintenance, Monitoring, and Reporting</i>			
Conservation Area Monitoring and Reporting (four hours per year)	\$125/hour	16	\$2,000
Conservation Area Maintenance (Oversight)	\$125/hour	16	\$2,000
Conservation Area Maintenance (Labor)	\$50/hour	48	\$2,400
<i>Subtotal</i>			\$6,400
<i>Funding for Unforeseen Circumstances</i>			
Contingency for Remedial Actions	n/a	n/a	\$5,000
<i>Subtotal</i>			\$5,000
GRAND TOTAL			\$25,600

7.2 Funding Source

The Applicant, as the Permittee, will pay for all costs associated with implementing the LEHCP conservation strategy.

7.3 Funding Mechanism and Management

The Applicant, as the Permittee, will provide all funds required to implement the conservation strategy outlined in Table 2 and understands that failure to provide adequate funding and

consequent failure to implement the terms of this LEHCP in full could result in permit suspension or permit revocation.

8.0 ALTERNATIVES

8.1 Summary

Section 10(a)(2)(A)(iii) of the Act, as amended (and 50 CFR 17.22(b)(1)(iii) and 17.32(b)(1)(iii)), requires that alternatives to the taking of species be considered and reasons why such alternatives are not implemented be discussed. Three alternatives to the proposed project were considered. These alternatives are: the No Action Alternative, the Alternate Design Alternative and the Proposed Action. A discussion of each alternative is provided below.

8.2 No Action Alternative

The No Action Alternative means that an HCP and incidental take permit would not be issued. A single family home would not be built and 0.56 acre of coastal dune scrub/veldt grass habitat that was mowed in 2017 would likely revert to dominantly veldt grass. Given the site disturbance, it is more likely that veldt grass would continue to spread and out compete the remnant coastal dune scrub habitat. It is possible that the area could potentially be recolonized by MSS. Ongoing seasonal mowing around the perimeter of the property that could cause take of MSS would continue.

Under this alternative, the 2.0 acres of habitat for MSS would not be set aside under a Conservation Easement, and weed eradication and habitat enhancement would not occur in this area. Since the property is privately owned, there are ongoing economic considerations associated with retaining the property, including, but not limited to, payment of associated property taxes. The sale of the property for purposes other than the identified activity is not economically feasible. Because of economic considerations and because this LEHCP results in a net benefit for the covered species, the No Action Alternative has been rejected.

8.3 Alternative 2 – Alternate Design

Under this alternative, the project would be redesigned to reduce take. Because the eastern half of the property contains areas of higher quality coastal dune scrub/veldt grass habitat along with coast live oaks and connection to offsite open space that may provide habitat for MSS, development in the eastern half of the property would likely result in the higher potential for take of MSS. Situating the development in the northwest part of the site would impact ice plant that could potentially support MSS. Therefore, it is not feasible to design the project to avoid take of MSS and impacts to potentially suitable habitat. The proposed project has been designed to remove or impact as little habitat as possible. The driveway and building envelope have been placed to reduce the size as much as possible and to avoid fragmenting the conservation easement. Further reducing the size of the development would not meet the Applicant's needs and would not significantly reduce impacts to MSS. For these reasons, this redesign alternative has been rejected.

8.4 Alternative 3 – Proposed Action

Under the Proposed Action alternative, the residential development would occur as described in Section 2 and as shown on project plans and Figure 3. The Proposed Action requires the issuance of a section 10(a)(1)(B) permit to allow construction of the project and a LEHCP was developed to assure that the applicant will minimize any direct and indirect impacts of the project and mitigate

for adverse effects to covered species and their habitat to the fullest extent practicable. The proposed project could cause mortality to individual MSS and would remove 0.56 acre of coastal dune scrub and veldt grass habitat that may support MSS.

This LEHCP establishes procedures to minimize the impacts created by the project. The LEHCP also provides mitigation for the direct loss of coastal dune scrub/veldt grass habitat for construction of the proposed project by establishing a 2.0-acre conservation area, which will restore and manage coastal dune scrub and other habitats during the permit term. The conservation area would be protected in perpetuity. In addition, the LEHCP conservation strategy details the removal of non-native plants in the conservation easement area, thus reducing the presence of non-native plants on the site and in the region that would displace native habitat and species. This LEHCP will offset the adverse effects to covered species and their habitat caused by the project, and will benefit the covered species in the long term because of the conservation program it establishes and the long-term assurances it provides. For these reasons and because this proposed alternative best meets the goals of the Applicant, this is the preferred alternative.

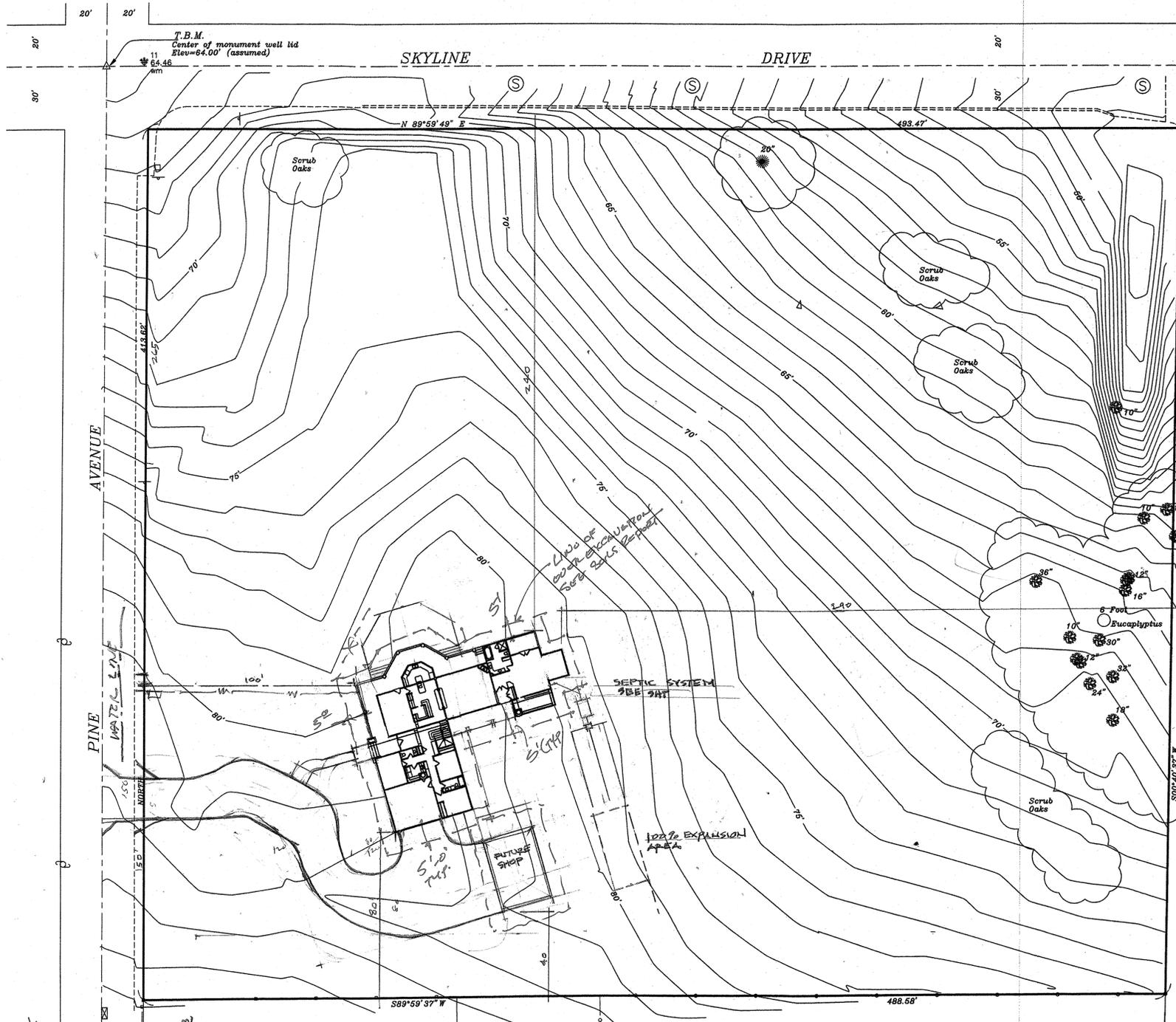
9.0 LITERATURE CITED

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- . 2005. Habitat Conservation Plan (HCP) Template. Ventura Fish and Wildlife Office, Ventura, CA.
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APPENDIX A

Site Plans



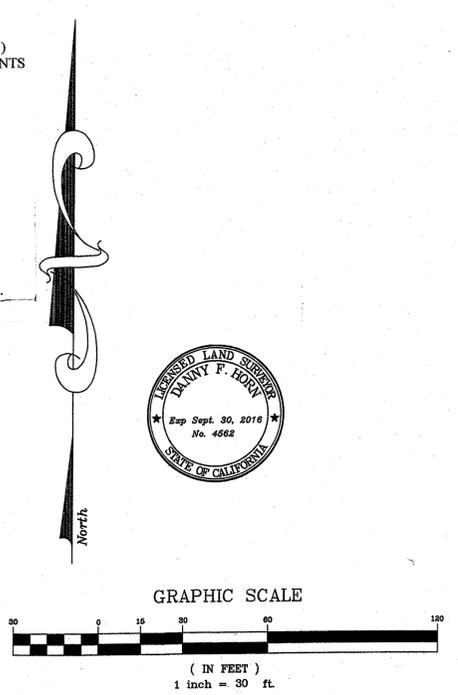


SITE PLAN

*DATE -
CHECK SLO CO
WITH SITE PLAN
SYSTEM DESIGN
THINK THE DESIGN
THIS TO BE PRELIMINARY
THE KERR - How Long?*

- APPLICABLE CODES**
- 2013 CALIF. BUILDING CODES VOL. 1 & 2
 - 2013 CALIF. ELECTRICAL CODE (2008 NEC w/ CA AMEND.)
 - 2013 CALIF. ENERGY CODE
 - 2013 CALIF. FIRE CODE
 - 2013 CALIF. GREEN BUILDING STANDARDS CODE - CAL GREEN
 - 2013 CALIF. MECHANICAL CODE (2009 IAPMO UPC w/ CA. AMEND.)
 - 2013 CALIF. PLUMBING CODE (2009 IAPMO UPC w/ CA. AMENDMENTS)
 - 2013 CALIF. REFERENCE STANDARDS CODE
 - 2013 CALIF. RESIDENTIAL CODE-2009 IRC w/ CA. AMEND.
 - SLO COUNTY BUILD & CONSTRUCT. CODE TITLE 19
 - COASTAL ZONE LAND USE ORDINANCE TITLE 23
 - SLO COUNTY FIRE CODE ORDINANCE - TITLE 16
 - SLO COUNTY LAND USE ORDINANCE - TITLE 22
 - CALIF. CODE OF REGULATIONS TITLE 24
 - 2013 CALIF. BUILDING STANDARDS ADMINISTRATIVE CODE
 - 2013 CALIF. BUILDING CODE (2009 IBC w/ CA. AMENDANTS)
 - SLO COUNTY APPENDIX CHAPTER 33, 1997 UBC

NOTE: ALL WORK TO BE IN COMPLIANCE WITH THE ABOVE CODE REQUIREMENTS. VERIFY ALL DIMENSIONS IN FIELD. INSTALL ALL MATERIALS AND DEVICES AS PER MANUFACTURERS SPECIFICATIONS.



- LEGEND:**
- - - Edge of Existing Pavement
 - - - Centerline of Road
 - - - Existing Wire Fence
 - - - Existing Wood Fence
 - Existing Utility Pole
 - ⊕ Existing Street Sign
 - Existing Mail Box
 - ⊙ Existing Sewer Manhole
 - ⊕ Existing Water Shut Off
 - ⊕ Existing Fiber Optic Box
 - ⊙ Existing Pine Tree (approx. size noted)
 - ⊙ Existing Eucalyptus Tree (approx. size noted)

PROJECT OWNER
GREG AND TESS SCHMALL
P O BOX 1236
MORRO BAY, CA. 93443
805 459 7783 TESS
559 392 1083 GREG

PROJECT LOCATION
2050 PINE STREET
LOS OSOS, CA.
A P No. 074-052-036

PROJECT DESCRIPTION
CONSTRUCT A NEW, TWO STORY SINGLE FAMILY RESIDENCE WITH AN ATTACHED GARAGE, VERANDA, LANDSCAPE TRELLIS OVER PATIO. AND A DETACHED WORKSHOP

PROJECT DATA

LOT AREA	APPROX 4.7 ACRES
RESIDENCE AREA	
LOWER FLOOR	3141 SF
UPPER FLOOR	325 SF
TOTAL LIVING AREA	3466 SF
GARAGE AREA	675 SF
VERANDA AREA	790 SF
UPPER DECK AREA	354 SF

CONSULTANTS

SURVEYOR - HORN SURVEYS
JODY HORN 239 0355

SOILS AND PERCOLATION - DOUG HALLIN
GEOTECHNICAL 975 7361

TITLE 24 ENERGY CALCS - TIM CARSTAIRS
904 9048 S.L.O.

STRUCTURAL ENGINEERING- G ROBERT
MAHRT 781 4396, 909 1469

REVISIONS	BY

DANNY F. HORN - Land Surveyor
566 Spring Street
Paso Robles, CA. 93446
Office: (805) 239-0355 Fax: (805) 239-1349

SCHMALL RESIDENCE
2050 PINE STREET
LOS OSOS, CALIFORNIA
SAN LUIS OBISPO COUNTY, STATE OF CALIFORNIA

DRAWN: _____ CHECKED: _____

DATE: _____

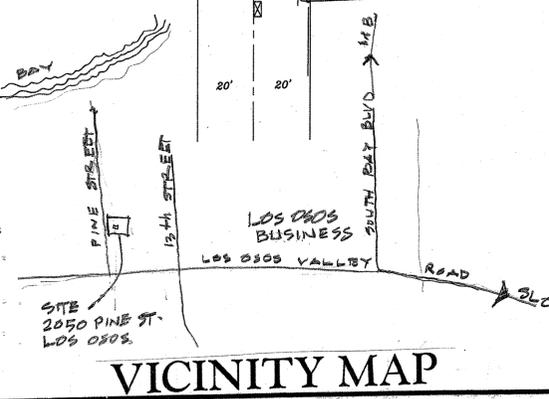
SCALE: 1" = 30'

JOB No: _____

SHEET

A1

OF 1 SHEETS



APPENDIX B

**MSS Habitat Assessment for
250 Pine Avenue, Los Osos, CA
(KMA, 2017)**





October 26, 2017

Stephanie Singh
P.O. Box 1236
Morro Bay, CA 93443

Subject: Morro Shoulderband Snail Habitat Assessment and Impact Analysis for 2050 Pine Avenue, Los Osos, San Luis Obispo County, California

Dear Ms. Singh:

At your request, Kevin Merk Associates, LLC (KMA) conducted a Morro shoulderband snail (*Helminthoglypta morroensis*; MSS) habitat assessment on your approximately 4.7-acre undeveloped property located at 2050 Pine Avenue in Los Osos, California. The purpose of the investigation was to determine the extent of suitable MSS habitat on the property and provide an analysis of potential impacts to the species from recent fuel modification activities. This report includes a discussion of historical habitat conditions for MSS, an assessment of recent impacts to that habitat from fuel modification (i.e., mowing), and recommended options for federal Endangered Species Act (FESA) compliance to allow future development onsite. Attached to this report are a Site Location Map (Figure 1), a Current Habitat Conditions Map (Figure 2), and a site plan prepared by Horn Land Surveying showing the proposed residential development. A photo plate containing current site and historic aerial photographs is also attached.

Proposed Project

The proposed project consists of construction of a single family residence located at the southwest corner of the parcel, near Pine Avenue (refer to attached Site Plan). A driveway accessing the home site would be constructed off Pine Avenue, and other infrastructure such as a septic system and leach field would be constructed immediately adjacent to the homesite. The proposed development, including the home, infrastructure, future shop and all development disturbance areas, would be sited on approximately 15,000 square feet (0.34 acre) of the 4.7 acre property. No development of the remaining portion of the parcel is currently proposed.

MORRO SHOULDERBAND SNAIL HABITAT ASSESSMENT

Species Account and Habitat Description

MSS is a member of the land snail family Helminthoglyptidae, and is closely related to the surf shoulderband snail (*Helminthoglypta fieldii*), which occurs in coastal dune habitats south of the San Luis range to Point Arguello. The MSS is associated with sandy soils of coastal dune and coastal sage scrub communities near Morro Bay, California. Native plant species associated with MSS include mock heather (*Ericameria ericoides*), coast buckwheat (*Eriogonum parvifolium*), dune bush lupine (*Lupinus chamissonis*), deerweed (*Acmispon glaber*), California croton (*Croton californicus*), seaside golden yarrow (*Eriophyllum staechadifolium*), black sage (*Salvia mellifera*) and California sagebrush (*Artemisia californica*). MSS is also commonly found in association with non-native plant species such as veldt grass (*Ehrharta calycina*), ice plant (*Carpobrotus edulis* and *C. chiloensis*), and anthropogenic structures or debris/garbage (i.e. building foundations, woodpiles, cardboard, etc.).

Due to threats from habitat destruction, colonization of invasive plant species, aging habitat, and off-road vehicle use, MSS was listed as endangered by the USFWS on December 15, 1994. In 2006, following a five-year review conducted by the USFWS, the species was recommended for downlisting from endangered to threatened, however, the final rulemaking process for this action has not been completed.

Existing Site Conditions

The property is located on the east side of Pine Avenue, and is bordered by residential development to the north accessed from Rosina Drive and Skyline Drive to the south. The eastern property boundary abuts the undeveloped Broderson Avenue right of way, which consists of a narrow, bare sand road created by off-road vehicles. The sand road does not occupy the entire County right of way, but meanders along the general right-of-way alignment. Soils onsite consist of Baywood fine sands, with some road base present along the edges of Pine Avenue within the County right of way. The southwest corner of the site adjacent to the existing residences closest to Pine Avenue has wood chips spread over a small area that appears to be used for vehicle access and parking. A vehicle was parked on the wood chipped area during the assessment, and a pile of wood chips was present in the vicinity.

The western portion of the parcel is relatively level, and contains large areas of bare sand and mowed veldt grass clumps, interspersed with scattered remnants of native coastal dune scrub habitat. During the survey, shrubs that had been mowed were observed sprouting new shoots from cut stumps. A large coast live oak tree (*Quercus agrifolia*) and several patches of ice plant are present near the northwest corner, along Skyline Drive, and a large coyote brush shrub is present near the southwest corner near Pine Avenue. The eastern half of the property slopes gently downward to the northeast, and contains numerous coast live oak trees, several Monterey pine (*Pinus radiata*) trees, and scattered remaining occurrences of coyote brush, mock heather, dune lupine, sand almond (*Prunus fasciculata* var. *punctata*), and buckbrush (*Ceanothus cuneatus*). Several large blue gum eucalyptus (*Eucalyptus globulus*) trees are present along the eastern edge of the parcel, near the Broderson Avenue right of way. Coast live oak, Monterey pine, Eucalyptus, sand almond, and buckbrush are not normally considered to provide habitat for MSS.

All areas of the property except for the ice plant areas, oak and eucalyptus trees, and remaining large shrubs were mowed to a height of less than four (4) inches. The mowed areas now consist of bare sand, veldt grass clumps, and California croton. Where shrubs were present, cut stumps were present. Overall, approximately 85% of the lot was mowed for fuel modification purposes in 2017. The assessment noted the mowed remains of many native plants characteristic of coastal dune scrub habitat, including mock heather and coyote brush shrubs, which as stated above, are re-sprouting near their stumps. In many areas where the larger shrubs were mowed, approximately several inches of leaf litter and mulch composed of mowed woody debris was present.

Aerial Photograph Review

Based on review of aerial photographs provided by the County of San Luis Obispo (1999-2014) and Google Earth (1994-2017), the site has maintained a relatively undisturbed cover of coastal dune scrub habitat mixed with veldt grass from at least 1994 through April 2015. The succession of photographs shows regular fuel modification/weed abatement activities occurring on an annual basis around the perimeter of the property, with little disturbance to the central portion of the site through 2015. Aerial imagery from 2004 shows an "x" or "+" mowed through the center of the site.

A June 2017 aerial photograph shows mowing over the majority of the site, consistent with observations made during preparation of this report.

Potential For MSS Presence Onsite

Because the site contains Baywood fine sand soils and suitable native and non-native habitat for MSS, and is adjacent to undeveloped property with similar habitat conditions, MSS have a potential to be present on the site. The remnant leaf litter/duff and mulch deposits in some mowed areas could also provide protection for estivating MSS, if any are present. The un-mowed native shrubs and ice plant areas in the northern and eastern part of the property continue to provide suitable habitat for MSS, and following winter rains, veldt grass regrowth could provide additional non-native habitat for the species.

USFWS senior biologist Julie Vanderwier stated during a phone conversation in August 2017 that the USFWS has no records of MSS surveys being conducted at 2050 Pine Avenue, and therefore, no definitive information regarding presence/absence of the species on the site is available. Surveys have been conducted on other nearby properties where MSS have been located, and similar habitat conditions are present onsite. As we understand through consultation with other MSS biologists, a series of six (6) protocol surveys were conducted on the approximately two-acre property located directly west of the site at 2045 Pine Avenue in 2014, 2015, and 2017 and no live MSS were identified (only one empty MSS shell was observed). Seven (7) additional empty MSS shells were found in the adjacent undeveloped county right of way along Skyline Drive. MSS are also known to be present within coastal dune scrub habitat areas of the Sweet Springs Nature Preserve, located approximately 0.4 mile to the north of the property.

Additional information regarding MSS occurrence patterns in the general area can be found in the 2014 Annual Construction Monitoring Report for the Los Osos Wastewater Project, which documents all MSS occurrences encountered during project construction in 2012, 2013, and 2014. The nearest recorded MSS occurrence consists of 20 MSS found in 2013, approximately 0.20-mile to the southwest along Los Osos Valley Road. The Survey Map included in the report shows that within Collection Area B, which includes the subject property, the only MSS occurrences found were within the Mid-Town Site, approximately 0.35-mile to the southeast. In the adjacent Area C located on the south side of LOVR, surveys found only six (6) MSS, in four (4) locations. In comparison, Areas A and D, located to the east and north of Area B, had numerous MSS occurrences.

As discussed above, available survey results from surrounding areas appear to show a generally low MSS population density in this portion of Los Osos. The results appear to indicate that if MSS are present on 2050 Pine Avenue, their numbers would be expected to be relatively low, even though suitable habitat conditions are present.

Habitat Assessment Survey Methods

KMA biologist Robert "Bob" Sloan conducted a habitat assessment of the property on August 17, 2017. Bob Sloan is permitted to conduct MSS protocol surveys and habitat assessments under federal recovery permit TE-43937B-0. The habitat assessment was conducted following current USFWS survey guidelines to identify key habitat features within and adjacent to the property. The assessment was conducted from 11:45 AM to 1:45 PM under clear skies and sunny conditions in the middle of summer, and did not constitute a protocol survey effort.

Assessment methods consisted of recording vegetative conditions of the site, and walking meandering transects through the mowed and un-mowed portions of the property looking for empty or crushed shells on the surface, at the bottom of slopes, under old boards, and associated with mowed debris such as dense leaf litter/mulch areas. This survey was geared toward assessing the extent of potentially suitable habitat onsite, and looking for MSS that may have been impacted in mowed areas to provide information on whether recent fuel modification activities resulted in take of the species as defined under FESA. The assessment did not thoroughly examine every square foot of the disturbed areas on the property, but the combination of visual scanning exposed areas while walking meandering transects and limited exploration under potentially suitable structural features (i.e., looking under old debris, etc.) provided a sufficient assessment of the property. Because this assessment was conducted during the dry season, areas within the dripline of remaining shrubs were visually examined, but leaf litter/duff was not disturbed to avoid exposing and disturbing estivating MSS (if present) during the dry season. Similarly, iceplant areas were visually searched but not disturbed to avoid potentially estivating individuals.

USFWS biologist, Julie Vanderwier, accompanied KMA biologists on a site visit on September 22, 2017. The purpose of the site visit was to assess current conditions and the results of the initial habitat assessment. While in the field, solutions and options for FESA compliance were discussed, which were compiled by KMA and detailed in a memorandum submitted to Ms. Vanderwier on September 28, 2017. Following their review of this memorandum, the USFWS provided comments and recommendations in an October 6, 2017 email (please see attached).

Habitat Assessment Results

The habitat assessment conducted on the property in August 2017 found no live MSS. One empty medium sized adult MSS shell was found on bare sand in a mowed area of the western portion of the site (refer to attached Figure 2 and Photo 5 in the Photo Plate). This shell was sun bleached and weathered, and met Roth's criteria for classification as Class C: 2-10 years old. Based on the complete absence of the periostracum layer and lack of pigmentation except for a faint remnant shoulderband line, and extensive pitting of the shell material, this shell was estimated to be over five years old. One bleached and crushed common garden snail shell (*Helix aspera*) was observed in association with veldt grass in the southern portion of the property. No other snail shells or fragments were observed on the site during the assessment. As discussed above in the Methods section, the assessment did not examine undisturbed shrub and iceplant areas, and did not thoroughly examine all potential locations where live MSS or empty shells could be present to avoid impacts to estivating individuals potentially present onsite.

The property does not contain Critical Habitat for MSS as designated by USFWS on February 7, 2001. The nearest Critical Habitat is Unit 1, located approximately 0.6-mile to the west. The habitat assessment found elements of both native coastal dune scrub and non-native veldt grass and ice plant habitats suitable for MSS to be present on the site. Habitats considered unsuitable for MSS include areas underneath or dominated by oak and eucalyptus leaf litter, disturbed road edges with base rock or bare soils, and areas where wood chips have been stockpiled and spread. Dense veldt grass habitat with remnant coastal dune scrub species is also present immediately east of the property on the Mid-Town site, which would be considered suitable for the species.

MORRO SHOULDERBAND SNAIL IMPACT ANALYSIS

The habitat assessment did not observe any direct evidence of take on the site, but did document the degradation of potentially suitable habitat for the species from fuel modification/weed

abatement activities (refer to the attached Figure 2 - Current Habitat Conditions Map). Recent mowing appeared to have affected approximately 85% of the property. This estimate includes the perimeter of the site along Skyline Drive, Pine Avenue and northern boundary of homes along Rosina Drive that is mowed for fuel management on a regular basis. While review of historic aerial imagery on Google Earth showed an “x” or a “+” pattern that was mowed through the center of the site sometime prior to July 2004, the interior portions of the property have been relatively unaffected by annual weed abatement activities conducted onsite prior to 2015.

The recent mowing of the site did leave some shrubs, primarily coyote brush and buck brush, in tact in the northeastern portion of the property, and reduced the height of veldt grass throughout the property. Tractor tire tracks through the sandy soils and areas where the mower blade made contact with the ground surface were also noted. Mowing removed many native shrubs visible in the historic aerial photographs present in the western and southern portions of the property. Based on vegetation signatures visible in the aerial imagery as well as on the ground identification of remnant plant material, it appears that mock heather, coyote brush, and dune lupine were the primary species that were mowed to ground level.

The investigation used ARC GIS to create Figure 2 and estimate impacts to onsite habitats from mowing. A total of 0.44 acre of remnant coastal dune scrub habitat, and two small iceplant patches totaling approximately 0.02 acre were unaffected by mowing activities. An additional 0.53 acre covered by coast live oak, eucalyptus, and pine trees was also not affected during recent mowing. The remaining roughly 3.7 acres of the site consisting of coastal dune scrub/veldt grass habitat and bare sand were impacted by mowing.

Regulatory Implications

Section 3(18) of the FESA defines “take” to mean “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” As further defined by the USFWS, “harm” includes significant habitat modification or degradation which actually kills or injures listed wildlife by “significantly impairing essential behavioral patterns, which include, but are not limited to, breeding, feeding, or sheltering.” Therefore, activities such as construction, mowing, brush or debris removal, or grading within a property that is known to support MSS or MSS habitat could result in take as defined above. Take can occur through both direct impact, and by loss of or degradation of occupied habitat that results in harm to the species. Unauthorized take is a violation of the FESA and could result in penalties of up to \$100,000 and/or one-year imprisonment.

The one survey conducted for this assessment is not sufficient to determine presence/absence of the species, or whether take of live MSS individuals occurred as a result of recent fuel modification activities. No broken snail shells or other evidence that mowing directly impacted a live MSS was observed. A presence/absence determination would require completion of protocol-level surveys on the site. A determination of take would require an exhaustive, 100% examination of all duff and debris in the mowed areas by experienced biologists, using rakes to move and search the material for live MSS, shells, and shell fragments. Given the time lapse when the mowing occurred, finding a dead MSS would be challenging. Discovery of empty or crushed MSS shells that meet the criteria for Class A or Class B age limits as described in USFWS guidelines during the survey could be considered as potential evidence that mowing activities and associated habitat degradation resulted in take of the species. If the only shells discovered are additional Class C MSS shells (which are between 2 and 10 years old), those results would indicate that although the site supported the species in the past, live individuals may not have been present during recent mowing activities.

If protocol surveys or an exhaustive examination did not find live MSS, or Class A or B shells or shell fragments, those results would indicate that no take occurred, and that the species was not present within the examined areas. However, given the habitat disturbance and difficulty in finding evidence of MSS crushed or killed during mowing activities, the USFWS during the September site visit and following email correspondence and phone conversations indicated that they would not concur with protocol surveys producing a negative finding given the extent of habitat modification.

CONCLUSION

Based on field reconnaissance and review of historic aerial photographs, fuel modification activities consisting of mowing vegetation to a height of approximately four (4) inches or less above ground level were conducted over a majority of the site (estimated at 85%) starting sometime after April 2015. These activities impacted approximately 3.7 acres of native coastal dune scrub and non-native veldt grass habitat. Less than 0.5 acre of native shrub habitat was not mowed, and was generally in tact at the time of the 2017 habitat assessment. Between 1994 and April 2015, fuel modification activities consisted primarily of mowing the perimeter of the property along roadways and adjacent properties, and only minor disturbance of the interior portion of the site occurred (such as the “x” pattern observed in the July 2004 aerial).

The assessment found no live MSS or crushed shells onsite. One empty Class C MSS shell (estimated at over five years old), as well as suitable native and non-native habitat conditions for the species were observed within the property. No evidence of take pursuant to FESA was observed during the field work, but additional survey efforts would be required to make a positive determination. The assessment results and observed site conditions indicate MSS could potentially occur onsite despite recent disturbance from fuel modification activities. Suitable habitat and known MSS occurrences are also present in close proximity to the site such as to the east on the Mid-Town site. Although presence of eucalyptus trees and a dirt roadway may limit the potential for MSS to migrate onto the property, there is still suitable habitat present to facilitate MSS movement/dispersal between known occurrences and the subject site.

The results of the habitat assessment and impact analysis indicate MSS could have been affected by fuel modification activities since suitable habitat was removed. Moreover, future disturbance of native shrubs, veldt grass, or thick deposits of mowed debris from development of the proposed single family residence and associated infrastructure has potential to result in take of the species, assuming individuals are in fact present on the site. Although documented MSS occurrences in the surrounding area are low density, performance of at least five surveys that follow the USFWS 2003 Protocol Survey Guidelines for MSS would be required to determine presence or absence of live MSS on the site. However, based on the habitat disturbance and current conditions of the site, negative findings of surveys conducted in the 2017-2018 winter rain season would be inconclusive to determine if take actually occurred during the mowing activities.

Potential Options for Development

Several options to move the proposed development plan forward were discussed during the on-site meeting with USFWS senior biologist Julie Vanderwier on September 22, 2017. Subsequent email correspondence and phone conversations occurred to clarify the USFWS's position and the recommended options to proceed with development of the site. Based on a review of a KMA memorandum (9/28/2017) by Ms. Vanderwier and her supervisor, the following options provided by the USFWS are listed in the order of preference:

Option 1 – Wait for the Los Osos Communitywide Habitat Conservation Plan (LOHCP) to be completed and the Incidental Take Permit (ITP) issued. Option 1 would allow development of the site to proceed by paying an in-lieu fee and implementing avoidance and minimization measures consistent with the LOHCP once it is complete. Unfortunately, the LOHCP is still in preparation, and Option 1 would equate to an unknown time delay (possibly several years) in site development. The primary benefit of Option 1 is that mitigation would be in the form of a fee and onsite mitigation/conservation requirements associated with the other options identified below would not be required.

This option is preferred by USFWS because it would be consistent with the streamlined management strategy proposed for the species, and would allow USFWS staff to focus on the completion of the community wide plan. The uncertainty with the timely completion of the LOHCP is not favorable from an applicant's perspective and Option 2 below consisting of assuming presence and preparing an individual ITP and associated Low-Effect Habitat Conservation Plan (LEHCP) may be the best approach to allow development of the proposed residence.

Option 2 – Assume presence of MSS and apply for an Incidental Take Permit. Option 2 would assume presence of MSS on the site and the landowner would apply for an individual ITP and prepare a Low-Effect Habitat Conservation Plan (LEHCP) for the proposed project. This would allow development of the proposed home site in the western half of the parcel in exchange for preserving and restoring onsite habitat for MSS. Based on discussions to date with USFWS, a portion of the property (i.e., likely the eastern half) would be protected in a conservation easement or other mutually agreeable form of open space agreement. Option 2 would require the applicant commit to the preparation, implementation, management, and funding of habitat restoration for MSS in the preserved portion of the property. Completion of an approved LEHCP and ultimate issuance of an ITP by the USFWS could theoretically take less time than waiting for the LOHCP, but could still take one to two years depending on USFWS's staff work load and other variables outside the applicant's control.

This option is less preferable to the USFWS compared to Option 1 because of their commitment to complete the LOHCP, and additional staff time would be required to issue an individual ITP. Option 2 would be more favorable from a development perspective, however may not provide a significantly shorter timeline than waiting for the LOHCP to be complete.

Option 3 – Propose habitat preservation onsite and prepare an Open Space Management Plan (OSMP). As detailed in the 9/28/17 memorandum and subsequent email response from Ms. Vanderwier, the USFWS has reservations about this option since it would have to proceed under a law enforcement settlement. KMA had proposed that development could be authorized without acquisition of an ITP if protocol surveys were conducted and MSS were confirmed absent from the development footprint. In that scenario, the USFWS could agree to lift the information hold through the County in return for applicant proposed preservation and restoration of suitable MSS habitat within an onsite conservation easement area, protected by a deed restriction or other suitable open space agreement. An OSMP (or equivalent type of habitat restoration plan) that guides the protection, restoration and management of the conservation easement area would be required, and other avoidance measures would be implemented during construction.

While this option could be acceptable to USFWS as part of a law enforcement settlement process if take was determined to have occurred on the site, determining take would be difficult given the time lapse since mowing occurred. Further, given the habitat modification that occurred onsite, the

USFWS stated during the September site visit that they would not concur with negative findings should protocol surveys be conducted onsite. As such, Option 3 is not the preferred approach for approval of a development plan, and is also not expected to be consistent with the proposed LOHCP. Therefore, it appears at this time that Option 2 would be the preferred approach to developing the proposed project.

REFERENCES

- Roth. 1985. Status Survey of the Banded Dune Snail, (*Helminthoglypta walkeriana*). Prepared for the U.S. Fish and Wildlife Service. Sacramento, California.
- SWCA Environmental Consultants. 2014. Annual Construction Monitoring Report for the Los Osos Wastewater Project, San Luis Obispo, California.
- U.S. Fish and Wildlife Service. 1998. Recovery Plan for the Morro Shoulderband Snail and Four Plants from Western San Luis Obispo County, California. U.S. Fish and Wildlife Service, Portland, Oregon.
- U.S. Fish and Wildlife Service. 2003. Protocol Survey Guidelines for the Morro Shoulderband Snail. U.S. Fish and Wildlife Service, Portland, Oregon.
- U.S. Fish and Wildlife Service. 2006. Morro Shoulderband Snail 5-Year Review. U.S. Fish and Wildlife Service. Ventura Fish and Wildlife Field Office, Ventura California.



Thank you for the opportunity to provide environmental consulting services for this project. We recognize that this is a complicated situation, and the options presented above may require additional discussion during your decision-making process. We are happy to discuss these options with you further at your convenience, and also recommend that you continue to communicate with Ms. Julie Vanderwier of the USFWS to discuss our findings and future development on the site. If you have any questions regarding the information contained herein, please do not hesitate to contact Kevin Merk at 805-748-5837 or kmerk@kevinmerkassociates.com.

Sincerely,
KEVIN MERK ASSOCIATES, LLC

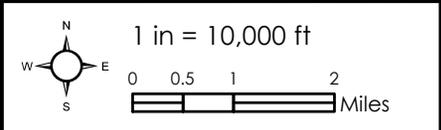
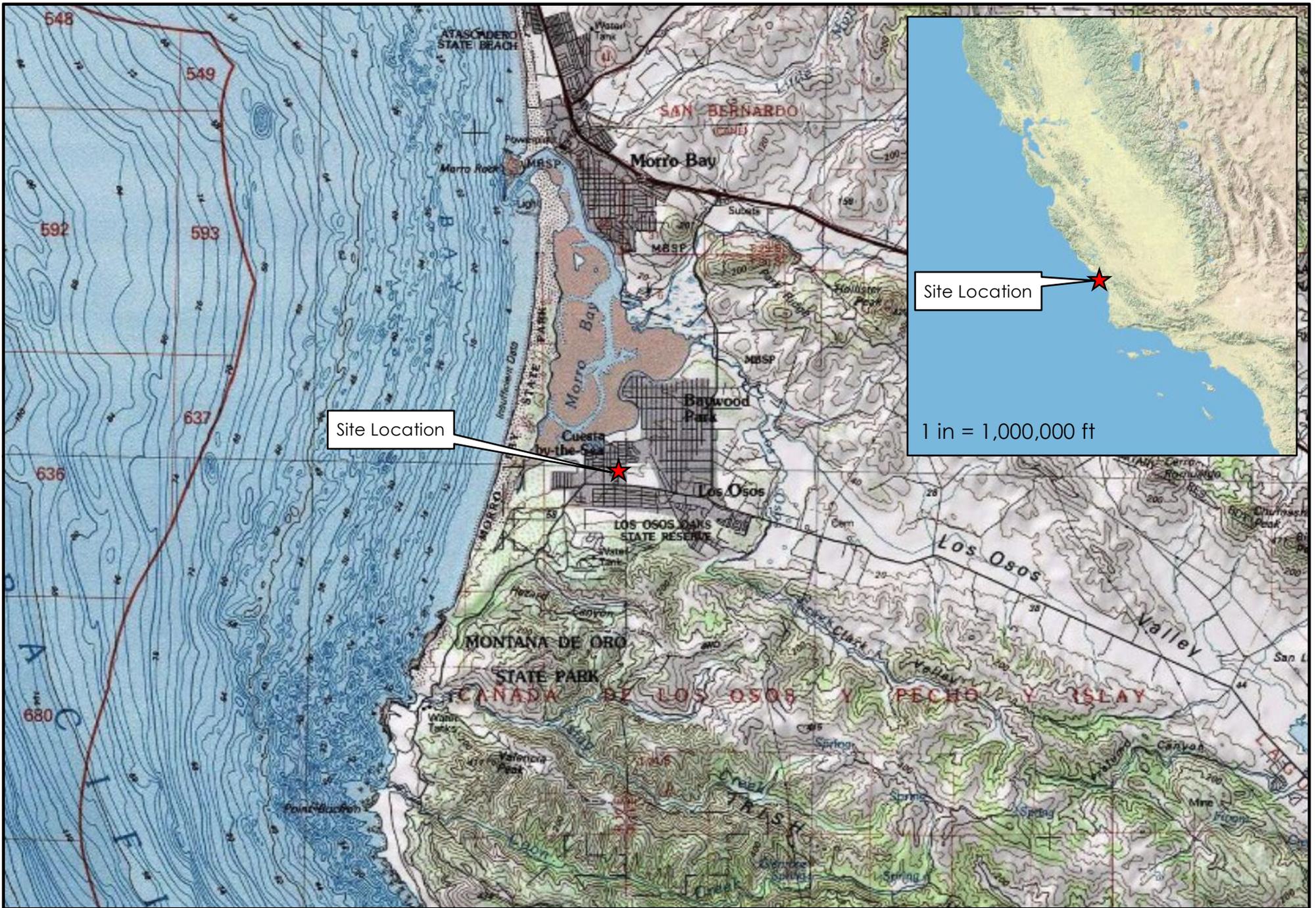
Handwritten signature of Kevin B. Merk in blue ink.

Kevin B. Merk
Principal Biologist

Handwritten signature of Robert L. Sloan in blue ink.

Robert L. Sloan
Senior Biologist

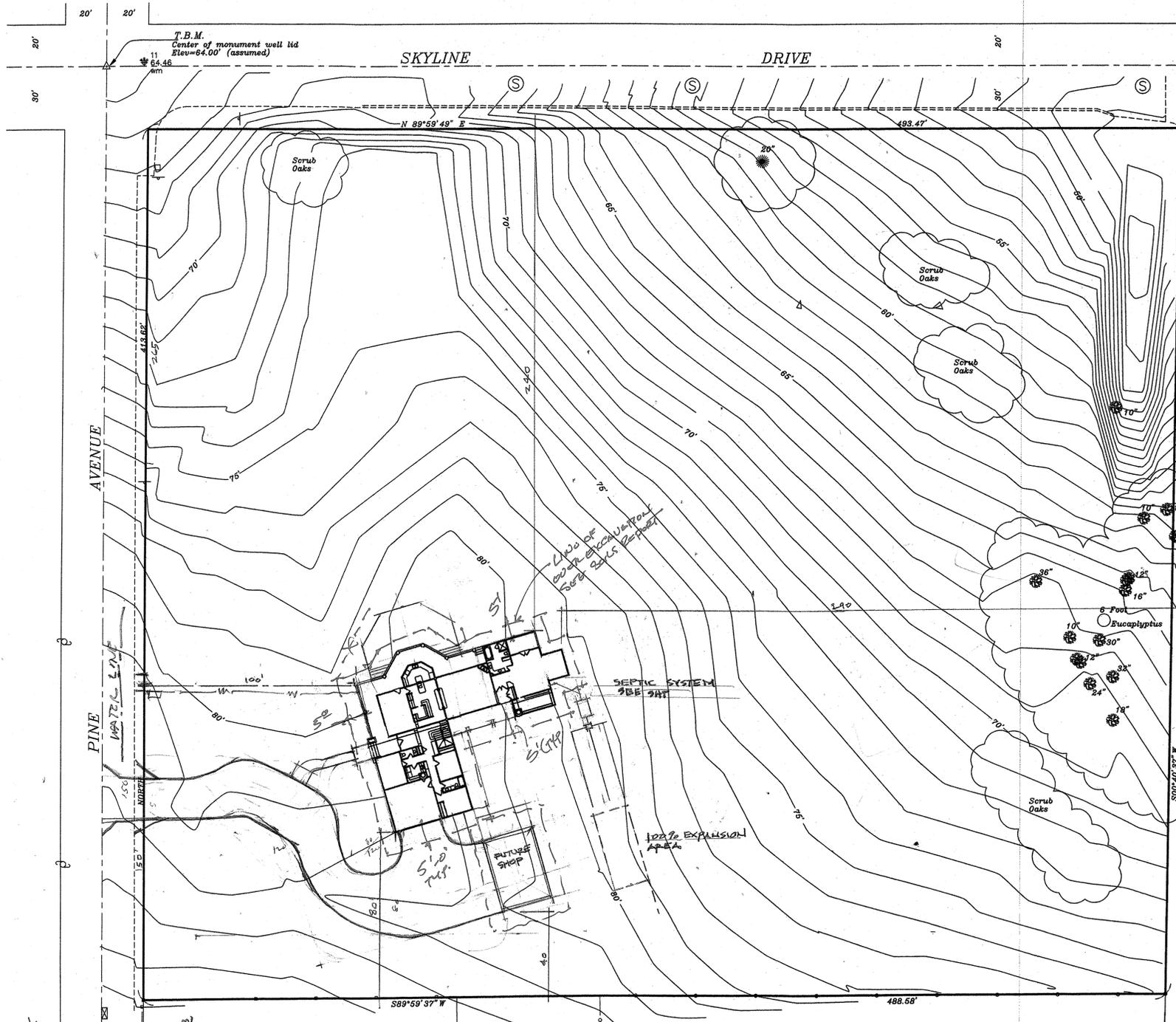
*Attachments: Figure 1 – Site Location Map
Figure 2 – Current Habitat Conditions Map
Site Plan
Photo Plate
KMA 9/28/17 Memo To Julie Vanderwier, USFWS
Email from Julie Vanderwier to Kevin Merk regarding 9/28/17 Memo*



2050 Pine Avenue, Los Osos, CA
Stephanie Singh

Figure 1
Site Location



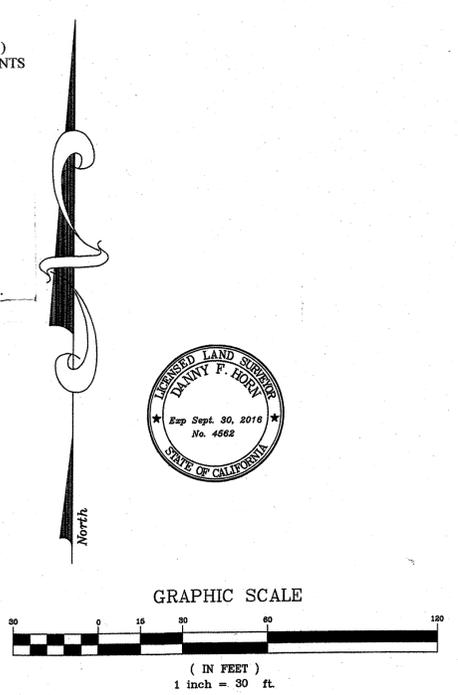


SITE PLAN

*DATE -
CHECK SLO CO
WITH SITE PLAN
SYSTEM DESIGN
THINK THE DESIGN
THIS TO BE PRELIMINARY
THE KERO - How Long?*

- APPLICABLE CODES**
- 2013 CALIF. BUILDING CODES VOL. 1 & 2
 - 2013 CALIF. ELECTRICAL CODE (2008 NEC w/ CA AMEND.)
 - 2013 CALIF. ENERGY CODE
 - 2013 CALIF. FIRE CODE
 - 2013 CALIF. GREEN BUILDING STANDARDS CODE - CAL GREEN
 - 2013 CALIF. MECHANICAL CODE (2009 IAPMO UPC w/ CA. AMEND)
 - 2013 CALIF. PLUMBING CODE (2009 IAPMO UPC w/ CA. AMENDMENTS)
 - 2013 CALIF. REFERENCE STANDARDS CODE
 - 2013 CALIF. RESIDENTIAL CODE-2009 IRC w/ CA. AMEND.
 - SLO COUNTY BUILD & CONSTRUCT. CODE TITLE 19
 - COASTAL ZONE LAND USE ORDINANCE TITLE 23
 - SLO COUNTY FIRE CODE ORDINANCE - TITLE 16
 - SLO COUNTY LAND USE ORDINANCE - TITLE 22
 - CALIF. CODE OF REGULATIONS TITLE 24
 - 2013 CALIF. BUILDING STANDARDS ADMINISTRATIVE CODE
 - 2013 CALIF. BUILDING CODE (2009 IBC w/ CA. AMENDANTS)
 - SLO COUNTY APPENDIX CHAPTER 33, 1997 UBC

NOTE : ALL WORK TO BE IN COMPLIANCE WITH THE ABOVE CODE REQUIREMENTS. VERIFY ALL DIMENSIONS IN FIELD. INSTALL ALL MATERIALS AND DEVICES AS PER MANUFACTURERS SPECIFICATIONS.



- LEGEND:**
- - - Edge of Existing Pavement
 - - - Centerline of Road
 - - - Existing Wire Fence
 - - - Existing Wood Fence
 - - - Existing Utility Pole
 - - - Existing Street Sign
 - - - Existing Mail Box
 - ⊙ Existing Sewer Manhole
 - ⊕ Existing Water Shut Off
 - ⊛ Existing Fiber Optic Box
 - ⊗ Existing Pine Tree (approx. size noted)
 - ⊗ Existing Eucalyptus Tree (approx. size noted)

PROJECT OWNER
GREG AND TESS SCHMALL
P O BOX 1236
MORRO BAY, CA. 93443
805 459 7783 TESS
559 392 1083 GREG

PROJECT LOCATION
2050 PINE STREET
LOS OSOS, CA.
A P No. 074- 052 -036

PROJECT DESCRIPTION
CONSTRUCT A NEW, TWO STORY SINGLE FAMILY RESIDENCE WITH AN ATTACHED GARAGE, VERANDA, LANDSCAPE TRELLIS OVER PATIO. AND A DETACHED WORKSHOP

PROJECT DATA

LOT AREA	APPROX 4.7 ACRES
RESIDENCE AREA	
LOWER FLOOR	3141 SF
UPPER FLOOR	325 SF
TOTAL LIVING AREA	3466 SF
GARAGE AREA	675 SF
VERANDA AREA	790 SF
UPPER DECK AREA	354 SF

CONSULTANTS

SURVEYOR - HORN SURVEYS
JODY HORN 239 0355

SOILS AND PERCOLATION - DOUG HALLIN
GEOTECHNICAL 975 7361

TITLE 24 ENERGY CALCS - TIM CARSTAIRS
904 9048 S.L.O.

STRUCTURAL ENGINEERING- G ROBERT
MAHRT 781 4396, 909 1469

REVISIONS	BY

DANNY F. HORN - Land Surveyor
566 Spring Street
Paso Robles, CA. 93446
Office: (805) 239-0355 Fax: (805) 239-1349

SCHMALL RESIDENCE
2050 PINE STREET
LOS OSOS, CALIFORNIA
SAN LUIS OBISPO COUNTY, STATE OF CALIFORNIA

DRAWN: _____ CHECKED: _____

DATE: _____

SCALE: 1" = 30'

JOB No: _____

SHEET

A1

OF 1 SHEETS

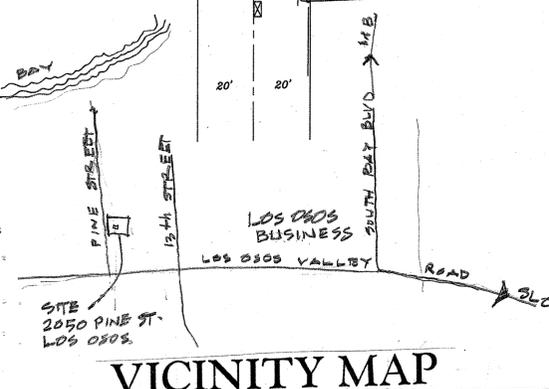


Photo Plate

Photo 1. View of the western portion of the parcel, looking south.



Photo 2. View of the eastern portion of the parcel, looking southeast. Note remnant dune scrub plants, and eucalyptus trees in background.



Photo 3. View of the proposed development area, looking east from Pine Avenue.



Photo 4. View of ice plant area and oak tree on north side of parcel, near Skyline Drive.



Photo 5. View of Class C MSS shell discovered on a mowed portion of the site in 2017.



Photo 6. June 2017 aerial view, showing current conditions. Note that the majority of the site has been mowed.



Photo 7. 2015 aerial view, looking south. Note undisturbed conditions on the majority of the site, and dense occurrence of native shrub habitat in the northern and eastern portions.



Photo 8. 2011 aerial view, showing conditions similar to the 2015 photo.

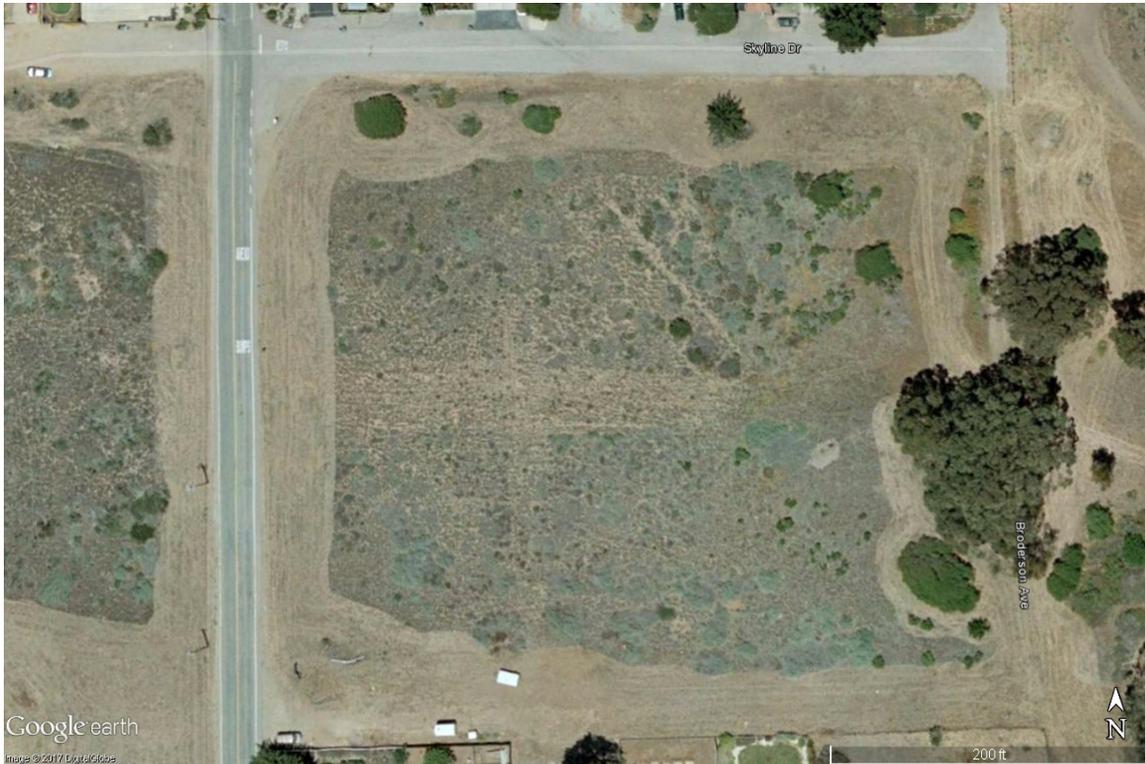


Photo 9. 2007 aerial view, showing edge mowing impacts, and outline of earlier center mowing impacts from 2004.



Photo 10. 1994 aerial view, showing edge mowing and several trails through the site, and similar habitat conditions on adjacent undeveloped parcels.



KEVIN MERK ASSOCIATES, LLC

P.O. BOX 318

SAN LUIS OBISPO, CA 93406

805-748-5837 (O)

Environmental Consulting Services

MEMORANDUM

Date: September 28, 2017
To: Ms. Julie Vanderwier, Fish and Wildlife Biologist
Organization: U.S. Fish and Wildlife Service – Ventura Field Office
From: Kevin Merk
Email: kmerk@kevinmerkassociates.com
cc: Ms. Stephanie “Tess” Singh; Ms. Kerry Brown, County of San Luis Obispo
Re: 2050 Pine Avenue, Los Osos, CA

Thank you very much for taking the time to conduct a site visit to review the existing conditions of the property and assess habitat disturbance that has occurred over the last two years. As we discussed in the field on September 22, 2017, fire abatement/fuel modification activities (i.e., mowing) removed and disturbed suitable Morro shoulderband snail (*Helminthoglypta morroensis*; MSS) habitat onsite. In order to facilitate development of the proposed project (plans prepared by David Brown, 2017) and remove the County of San Luis Obispo’s (County) information hold on the proposed project, we discussed several strategies to comply with the federal Endangered Species Act (FESA) as it pertains to incidental take coverage for the MSS.

During the field visit, you stated that in order to allow development of the site to occur before completion of the Los Osos Community-wide Habitat Conservation Plan, USFWS will require protocol surveys for MSS be conducted to determine if the species is present onsite and in the current development footprint. Based on the findings of the surveys, the applicant may need to acquire an individual Incidental Take Permit (ITP) to comply with FESA and allow development of the site. Ultimately, the following options were identified that would support the USFWS’s removal of the information hold and allow the applicant to proceed with the development of the proposed single family residence:

Option 1 – Wait for the Los Osos Communitywide Habitat Conservation Plan (LOHCP) to be completed and the Incidental Take Permit (ITP) issued. Option 1 would allow development of the site to proceed by paying an in-lieu fee and implementing avoidance and minimization measures consistent with the LOHCP once it is complete. While this would equate to an unknown time delay in site development, it would not be expected to encumber the entire property with onsite conservation requirements associated with the other options identified below. Based on current discussions with the applicant, Option 1 is not the preferred approach.

Option 2 – Assume presence of MSS and apply for an Incidental Take Permit. Option 2 would include the preparation of a Low-Effect Habitat Conservation Plan for the proposed project, and issuance of an individual ITP. Mitigation in the form of onsite habitat preservation and restoration would be required,

and suitable MSS habitat present in the eastern part of property could be protected as permanent open space and restored to increase the habitat function and value for MSS. Option 2 would require protocol surveys for MSS be conducted to determine presence or absence of the species from the proposed disturbance footprint.

Option 3 – Propose habitat preservation onsite and prepare an Open Space Management Plan (OSMP). Assuming the protocol surveys confirm MSS are absent from the development footprint, the USFWS would agree to work with the County and lift the information hold with applicant proposed preservation and restoration of suitable MSS habitat onsite. An OSMP (or equivalent type of habitat restoration plan) that guides the protection, restoration and management of the preserved area would be required. This would be the preferred option for the applicant since the OSMP could be initiated prior to starting the MSS protocol surveys. The OSMP would be tailored to contain information consistent with a Low-Effect HCP in case the surveys identified MSS within the proposed disturbance footprint and an ITP was required.

For both Options 2 and 3, protocol-level MSS surveys are required and would cover the entire property to determine if MSS are present. If MSS were identified in the development footprint, then only Options 1 and 2 would be viable since incidental take coverage would be required. Should MSS protocol surveys determine that the species was not present in the development footprint, then Option 3 would be the preferred approach and the USFWS could work with the County to release the information hold and allow development to proceed with applicant proposed preservation and restoration of suitable MSS in the eastern part of the site.

Thank you again for your assistance with this project. Please review the above options with your supervisor and respond with your guidance so we may start preparing the habitat restoration and open space management sections of the plan that could be used in either the LEHCP or OSMP depending on the findings of the MSS surveys. We will also get prepared to initiate surveys on the property once the fall rains start, and will keep you and the County apprised of the findings during the course of the investigation.

From: "Vanderwier, Julie" <julie_vanderwier@fws.gov>
Subject: KMA memorandum response
Date: October 6, 2017 at 1:45:35 PM PDT
To: Kevin Merk <kmerk@kevinmerkassociates.com>
Cc: <winedesigns@att.net>, Kerry Brown <kbrown@co.slo.ca.us>, Leilani Takano <leilani_takano@fws.gov>, Christopher Diel <christopher_diel@fws.gov>

2018-B-0003

Kevin. I have discussed the contents of your September 28, 2017, memorandum with my supervisors in the context of our field meeting on September 22, 2017. Our thoughts are provided below. Please let me know if you'd like to schedule a call to further discuss.

Of the three paths, we continue to recommend that your client wait for the completion and permitting of the Los Osos HCP ('Option 1'). Recognizing that the uncertainty regarding this time frame is not favorable to your client, we then recommend the preparation of an HCP and application for an individual ITP ('Option 2'). This would allow the landowner to develop the western half of the parcel in exchange for preserving the eastern half in a conservation easement and committing to the preparation, implementation, management, and funding of habitat restoration for Morro shoulderband snail therein. There is some misunderstanding regarding the need for surveys with this option. Perhaps I misspoke when we met but this option would not require surveys as your client, as the applicant for an ITP, would be assuming presence of Morro shoulderband snail.

We have reservations regarding 'Option 3' as it would create uncertainty for the Service and, likely, your client. This path could be acceptable to us as part of a law enforcement settlement with our agency; however, this is not our preference.

I very much appreciate you and Bob Sloan meeting with me in the field and the creative brainstorming that ensued. The identification of a mutually agreeable and feasible solution to

these very difficult situations has always been problematic. We remain committed to try and find a resolution for your client but, as we've discussed, need to ensure consistency in how we deal with issues regarding Morro shoulderband snail.

julie

julie m. vanderwier, fish and wildlife biologist
ventura fish and wildlife office
u.s. fish and wildlife service
2493 portola road, suite b
ventura, california 93003
805.677.3400

APPENDIX C

Cultural Resources Compliance Form



REQUEST FOR CULTURAL RESOURCE COMPLIANCE

U.S. Fish and Wildlife Service, Region 1 and Region 8

Date of Request:	Proposed Start Date:

Project Name:	SINGH PARCEL, 2050 PINE AVENUE				FWS Program: (ES, Refuges, Fisheries, Fire...)	Ecological Services (ES)		
					Funding Source: (Partners, Refuges, TEA-21, HCP, NAWCA...)	HCP		
State: CA, ID, HI, NV, OR, WA	CA	EcoRegion: CBE, IPE, KCE, NCE			FWS Unit:	Ventura Fish and Wildlife Office		
					Org Code:	FF08EVEN00		
Project Location:	County	Township	Range	Section	FWS Contact: Name, Tel#, Address	Amrita Duggal		
	San Luis Obispo					30S	10E	13
							805-677-3346	
							2493 Portola Rd., Suite B Ventura, CA, 93003	

USGS Quad:	Morro Bay South	Date of Request:	Proposed Project Start Date:
Total project acres/ linear ft/m:		APE Acres / linear ft/m (if different)	
4.7 total project area			

Have you consulted with Tribe(s)?				Have you consulted with other interested parties?				Is there another federal agency involved with this project?			<input checked="" type="checkbox"/>	No	If yes, provide name:	
Yes		No	<input checked="" type="checkbox"/>	Yes		No	<input checked="" type="checkbox"/>				Yes			

MAPS Attached				Check below				Note: Contact the CRT before making FWS the Lead Agency if yes, which agency is taking lead for Section 106 compliance?			FWS	Other Agency	
Copy of portion of USGS Quad with project area marked clearly (required)				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Project (sketch) map showing Area of Potential Effect with locations of specific ground altering activities (required)				
Photocopy of aerial photo showing location (if available)							<input checked="" type="checkbox"/>	Any other project plans, photographs, or drawings that may help CRT in making determination (if available)					

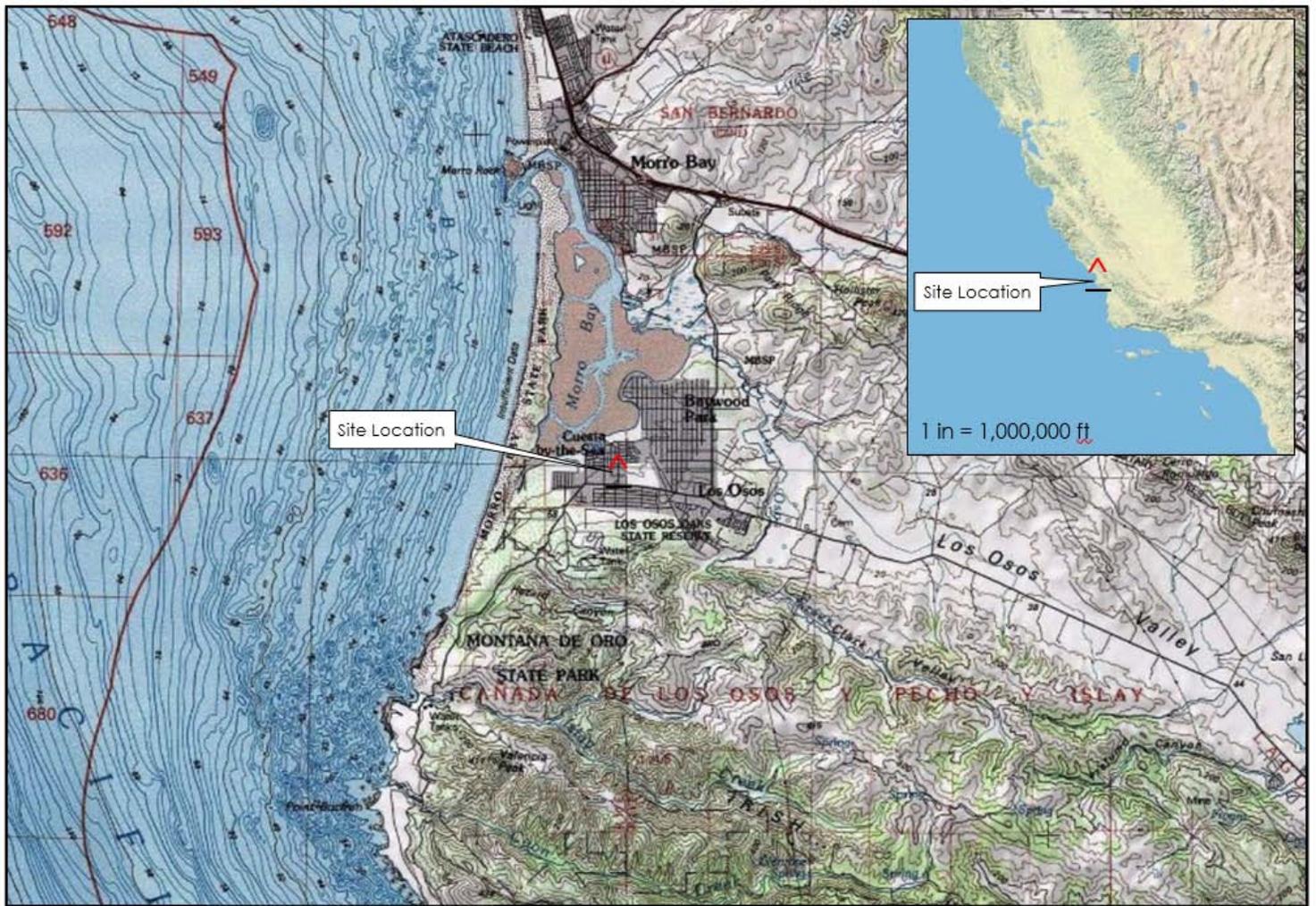
Directions to Project: <small>(if not obvious)</small>	The undeveloped parcel (APN 074-052-036) is located at 2050 Pine Avenue in the community of Los Osos, San Luis Obispo County, California.
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Description of Undertaking:	Describe proposed project and means to facilitate (e.g., provide funds to revegetate 1 mile of riparian habitat, restore 250 acres of seasonal wetlands, and construct a 5-acre permanent pond). How is the project designed (e.g., install 2 miles of fence and create approximately 25' of 3' high check dam)?
	The proposed project consists of construction of a two-story single family residence located at the southwest corner of the parcel near Pine Avenue. A driveway accessing the home site would be constructed off Pine Avenue, and other infrastructure such as a septic system/leach field and a future detached workshop would be constructed immediately adjacent to (east of) the homesite. The development would include a 3,466 square foot residence, 675 square foot garage, 790 square foot veranda, and 354 square foot upper deck area. The proposed development, including the home, infrastructure, future detached workshop and all associated disturbance areas, would be sited on approximately 0.56 acre of the 4.7-acre property. No development of the remaining portion of the parcel is currently proposed, but fuel modification consisting of annual mowing will be required in a 100-foot buffer around all structures onsite, as well as along a 30-foot wide swath on the southern property line consistent with CAL FIRE guidance.

Return Form and maps to: Virginia_parks@fws.gov
 If unable to send digitally, mail or fax to USFWS Region 1 Cultural Resources Team, 20555 SW Gerda Lane, Sherwood, OR 97140
 Questions: 503-625-4377 or fax 503-625-4887

Area of Potential Effects (APE):	<p>Describe where disturbance of the ground will occur. What are the dimensions of the area to be disturbed? How deep will you excavate? How far apart are fenceposts? What method are you using to plant vegetation? Where will fill be obtained? Where will soil be dumped? What tools or equipment will be used? Are you replacing or repairing a structure? Will you be moving dirt in a relatively undisturbed area? Will the project reach below or beyond the limits of prior land disturbance? Differentiate between areas slated for earth movement vs. areas to be inundated only. Is the area to be inundated different from the area inundated today, in the recent past, or under natural conditions? Provide acres and/or linear ft/m for all elements of the project.</p> <p>To prepare the footprint areas for construction, vegetation will be removed and grading will take place using heavy machinery over an approximately one week period. Vegetation removal and ground disturbing (e.g., grading activities) will be monitored by a Service-approved, permitted biologist who will capture and relocate any MSS observed out of harm's way into suitable habitat within the conservation easement. A single-family house, detached workshop, driveway, and septic system will be constructed on the southwestern corner of the parcel. Activities associated with house construction include pouring foundation, framing, installation of siding, roofing, electrical, plumbing, insulation, drywall, painting, and installation of a septic system. Construction will last approximately 18 months.</p> <p>Electric, water, and other utilities will require connection to main lines, usually within the road right-of-way. Trenching for these utilities will be within the identified disturbance area. The area for the septic system and leach field will be graded and excavated causing temporary disturbance to soils. The septic system and leach field area will not be paved, but will be maintained in the identified development disturbance area. It is assumed that landscaping will surround the residence, and an area for this has been included in the project disturbance area of 0.56 acre. Due to regular maintenance requirements, this constitutes a permanent habitat loss.</p>
Environmental and Cultural Setting:	<p>Briefly describe the environmental setting of the APE. A) What was the natural habitat prior to modifications, reclamation, agriculture, settlement? B) What is land-use history? When was it first settled, modified? How deep has it been cultivated, grazed, etc.? C) What is land use and habitat today? What natural agents (e.g., sedimentation, vegetation, inundation) or cultural agents (e.g., cultivation) might affect the ability to discover cultural resources? D) Do you (or does anybody else) know of cultural resources in or near the project area?</p> <p>The property is located on the east side of Pine Avenue, and is bordered by residential development to the north and south, which is accessed from Rosina Drive and Skyline Drive. The eastern property boundary abuts the undeveloped Broderson Avenue right of way, which consists of a narrow, bare sand road created by off-road vehicles. The sand road does not occupy the entire County right of way, but meanders along the general right-of-way alignment. Soils onsite consist of Baywood fine sands, with some road base present along the edges of Pine Avenue within the County right of way. The southwest corner of the site adjacent to the existing residences closest to Pine Avenue has wood chips spread over a small area that appears to be used for vehicle access and parking.</p> <p>The western portion of the parcel is relatively level, and contains large areas of bare sand and mowed veldt grass clumps, interspersed with scattered remnants of native coastal dune scrub habitat, primarily mock heather (<i>Ericameria ericoides</i>). Since the mowing of the site occurred, shrubs that had been mowed to near ground level were observed sprouting new shoots from cut stumps. A large coast live oak tree (<i>Quercus agrifolia</i>) and several patches of ice plant are present near the northwest corner along Skyline Drive, and a large coyote brush shrub is present near the southwest corner near Pine Avenue. The eastern half of the property slopes gently downward to the northeast, and contains numerous coast live oak trees, several Monterey pine (<i>Pinus radiata</i>) trees, and scattered remaining occurrences of coyote brush, mock heather, dune lupine, sand almond (<i>Prunus fasciculata</i> var. <i>punctata</i>), and buck brush (<i>Ceanothus cuneatus</i>). Several large blue gum eucalyptus (<i>Eucalyptus globulus</i>) trees are present along the eastern edge of the parcel, near the Broderson Avenue right of way. All areas of the property except for the ice plant areas, buck brush shrubs, oak and eucalyptus trees, and remaining large shrubs were mowed to a height of less than four (4) inches in early 2017. The mowed areas now consist of bare sand, veldt grass clumps, and California croton. Overall, approximately 85% of the lot was mowed in 2017. The assessment noted the mowed remains of many native plants characteristic of coastal dune scrub habitat, including mock heather and coyote brush shrubs, which as stated above, are re-sprouting near their stumps. In some areas where the larger shrubs were mowed, several inches of leaf litter and mulch composed of mowed woody debris was present.</p>
<p>Please return this RCRC and map showing APE digitally, if possible, to virginia_parks@fws.gov. Questions, call 503-625-4377</p>	

Return Form and maps to: Virginia_parks@fws.gov
If unable to send digitally, mail or fax to USFWS Region 1 Cultural Resources Team, 20555 SW Gerda Lane, Sherwood, OR 97140
Questions: 503-625-4377 or fax 503-625-4887



2

0 0.5 1 2
in 1:10,000 ft Miles

2050 Pine Avenue, Los Osos, CA

Stephanie Singh

Figure 1

Site Location

Return Form and maps to: Virginia_parks@fws.gov
 If unable to send digitally, mail or fax to USFWS Region 1 Cultural Resources Team, 20555 SW Gerda Lane, Sherwood, OR 97140
 Questions: 503-625-4377 or fax 503-625-4887



	<p>2 1 in = 100 ft</p>	<p>2050 Pine Avenue, Los Osos, CA</p> <p>Stephanie Singh</p>	<p>Figure 3</p> <p>Impact Map 9/17/2019</p>
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Return Form and maps to: Virginia_parks@fws.gov
 If unable to send digitally, mail or fax to USFWS Region 1 Cultural Resources Team, 20555 SW Gerda Lane, Sherwood, OR 97140
 Questions: 503-625-4377 or fax 503-625-4887