

**Low-Effect Habitat Conservation Plan
for the Federally Endangered
Morro Shoulderband Snail on the
Moreno Property, Los Osos,
San Luis Obispo County, California**

Prepared for

Cayetano Moreno

Prepared by

SWCA Environmental Consultants

November 2013

**Low-Effect Habitat Conservation Plan for the
Federally endangered Morro Shoulderband Snail on the
Moreno Property (APN 074-323-020), Los Osos, California**

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EXECUTIVE SUMMARY

Cayetano Moreno intends to apply for a permit pursuant to Section 10(a)(1)(B) of the Endangered Species Act of 1973 (16 United States Code 1531-1544, 87 Stat. 884), as amended from the U.S. Fish and Wildlife Service (Service) for the lawful, incidental take of the federal endangered Morro shoulderband snail (MSS) (*Helminthoglypta walkeriana*). The potential taking would occur incidental to construction of a single-family home and guest house on an undeveloped lot located on Chumash Drive in the southwestern portion of the community of Los Osos, San Luis Obispo County, California (refer to Figures 1 and 2). The 1.25-acre parcel is bounded by residential properties, one of which (the former Gosnell property) has an incidental take permit (ITP) and an area conserved for the snail. The proposed project will result in the loss of 0.625 acre of maritime chaparral, associated coastal dune scrub, and veldt grass (*Ehrharta calycina*) habitats suitable for the MSS. The proposed mitigation strategy will preserve, in perpetuity, 0.625 acre of maritime chaparral and associated coastal dune scrub habitat located adjacent to the development area and contiguous with an adjoining area preserved for MSS (refer to Figure 3). The project site also supports the federal threatened plant Morro manzanita (*Arctostaphylos morroensis*).

As a result of the anticipated take of MSS, Mr. Moreno will apply for a Section 10(a)(1)(B) ITP and proposes to implement this Habitat Conservation Plan (HCP) as described herein, that provides measures for minimizing and mitigating take of MSS and impacts to Morro manzanita. The ITP is requested for a period of 8 years.

Prior to the issuance by the County of San Luis Obispo (County) of any permit that 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), Mr. Moreno will provide proof that he is in possession of a current, valid ITP for the species.

This HCP summarizes the project and identifies the responsibilities of the Service and Mr. Moreno, as the applicant. The biological goals of the plan include:

- a) to mitigate for the loss of 0.625 acre of MSS habitat by designating a 0.625-acre Conservation Easement on the 1.25-acre lot and enhancing the MSS habitat in the easement area by increasing native coastal dune scrub cover;
- b) to minimize direct impacts of the proposed project on MSS and Morro manzanita;
- c) to minimize the potential for indirect impacts to the species and ensure that the proposed action does not reduce the potential for survival and recovery of MSS throughout its range; and,
- d) to preserve and maintain high-quality native habitat suitable for occupation by the MSS.

This HCP also describes measures that will be implemented to minimize and mitigate the impacts of the project to protected species and their habitat and to further the conservation of these species. These measures include:

- a) design of project to minimize removal of maritime chaparral and coastal dune scrub habitat and Morro manzanita;
- b) surveys for and capture of MSS to move them from the development area into the Conservation Easement;

- c) fencing, worker education/training, and monitoring prior to and during grading and construction activities to protect sensitive habitat and minimize take, in the form of injury or mortality, of MSS;
- d) removing invasive plants and re-seeding with native coastal dune scrub species; and,
- e) monitoring and maintenance of the Conservation Easement area for a period of 4 years following construction.

The net effect of these measures will cause a total of 0.625 acre of native habitat to be preserved in perpetuity under a Conservation Easement held by the County. The habitat value of the Conservation Easement area will be enhanced through removal of non-native plant species and annual seeding of native coastal dune scrub species for 4 years post-construction. These measures will benefit both MSS and Morro manzanita on the site. The HCP also describes measures to ensure that the elements of the plan are implemented in a timely manner. Funding sources for implementation of the minimization and mitigation measures, actions to be taken for changed circumstances and unforeseen events, alternatives to the proposed action, and other measures required by the Service are also discussed.

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1 INTRODUCTION AND BACKGROUND

1.1 Overview and Background

This Low-effect Habitat Conservation Plan (HCP), for the construction and occupation of a single-family home and guest house on a 1.25-acre parcel in Los Osos, San Luis Obispo County, California (refer to Figures 1 and 2), has been prepared pursuant to the requirements of Section 10(a) of the Federal Endangered Species Act of 1973, as amended (Act).

The HCP is intended to provide the basis for issuance of a Section 10(a)(1)(B) incidental take permit (ITP) to Cayetano Moreno (the Applicant) to allow incidental take of the federal endangered Morro shoulderband (=Banded dune) snail (MSS) (*Helminthoglypta walkeriana*). Project implementation is likely to result in take of a federally endangered species and would remove habitat that may alter essential behaviors such as breeding, feeding, or sheltering. Although not covered by the ITP, this HCP also outlines measures to avoid and reduce impacts to Morro manzanita (*Arctostaphylos morroensis*), a federally threatened plant species present on the site.

This HCP provides an assessment of the existing habitat on the site relative to the listed species present, and evaluates the effects of the proposed development on these species. The HCP presents a mitigation plan to offset habitat losses and direct impact to these species that could result from implementation of the proposed project.

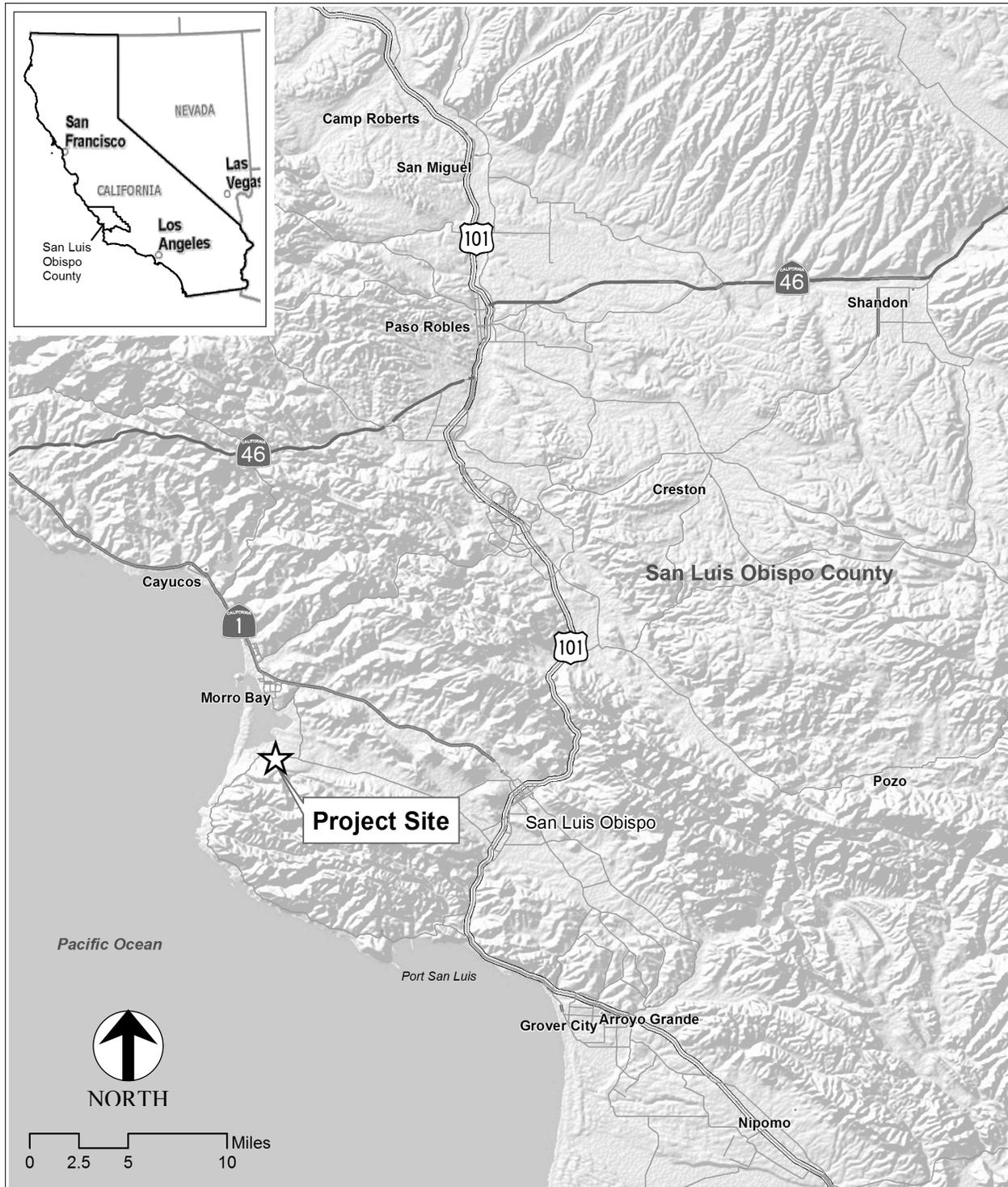
1.1.1 Species Survey Summary

The Applicant purchased the undeveloped parcel in 2010. The previous owner had a protocol series of MSS surveys conducted on the parcel in 2008. Additional protocol surveys were performed in 2010/11 (refer to Appendices A and B). The 2010/2011 surveys identified five live MSS; the 2008 surveys identified one live MSS. A total of 13 empty MSS shells were found during the two surveys. It was recommended that, because the project could result in take of MSS and suitable native habitat, the project proponents prepare an HCP in support of an application for an ITP prior to engaging in any activities that could result in take (i.e., residential construction). Therefore, the Applicant is pursuing a Section 10(a)(1)(B) permit through an individual HCP.

1.1.2 Conservation Easement

As part of mitigation under the proposed HCP, an on-site Conservation Easement (easement) will be established to preserve MSS and supporting habitat in perpetuity. The County of San Luis Obispo Department of Planning and Building (County) would hold the easement. To mitigate the incidental taking of MSS, the Applicant proposes to set aside half of the 1.25-acre property under a County Conservation Easement. The easement area would be located on the northern half of the parcel and would abut an existing area set aside in perpetuity for MSS (refer to Figure 3). Recent communication with County Planner Kerry Brown determined that the County would accept the easement and will be the entity responsible for holding it in perpetuity (Brown 2011).

Figure 1. Project Vicinity Map



Source: ARCGISONLINE

Figure 2. Project Location Map

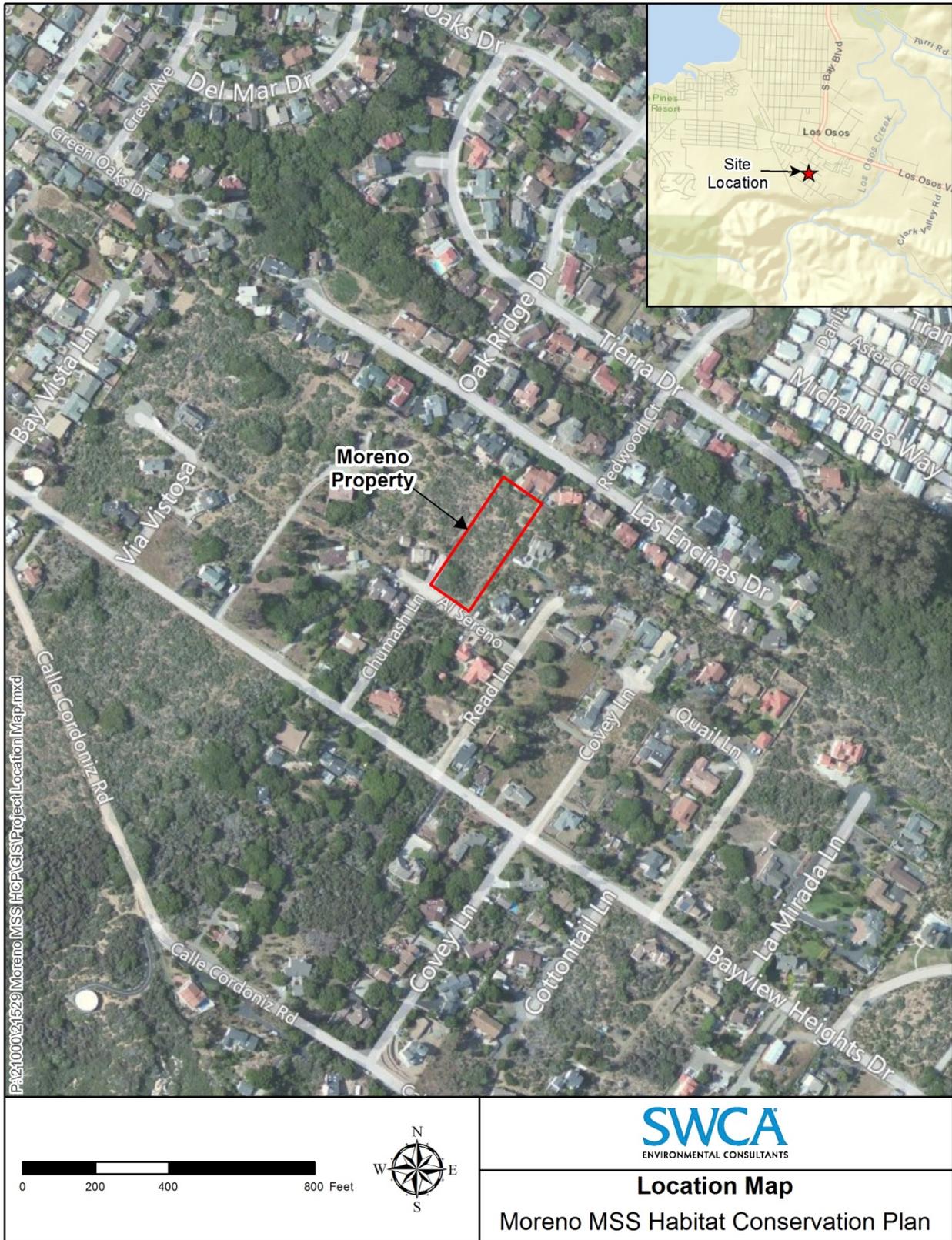
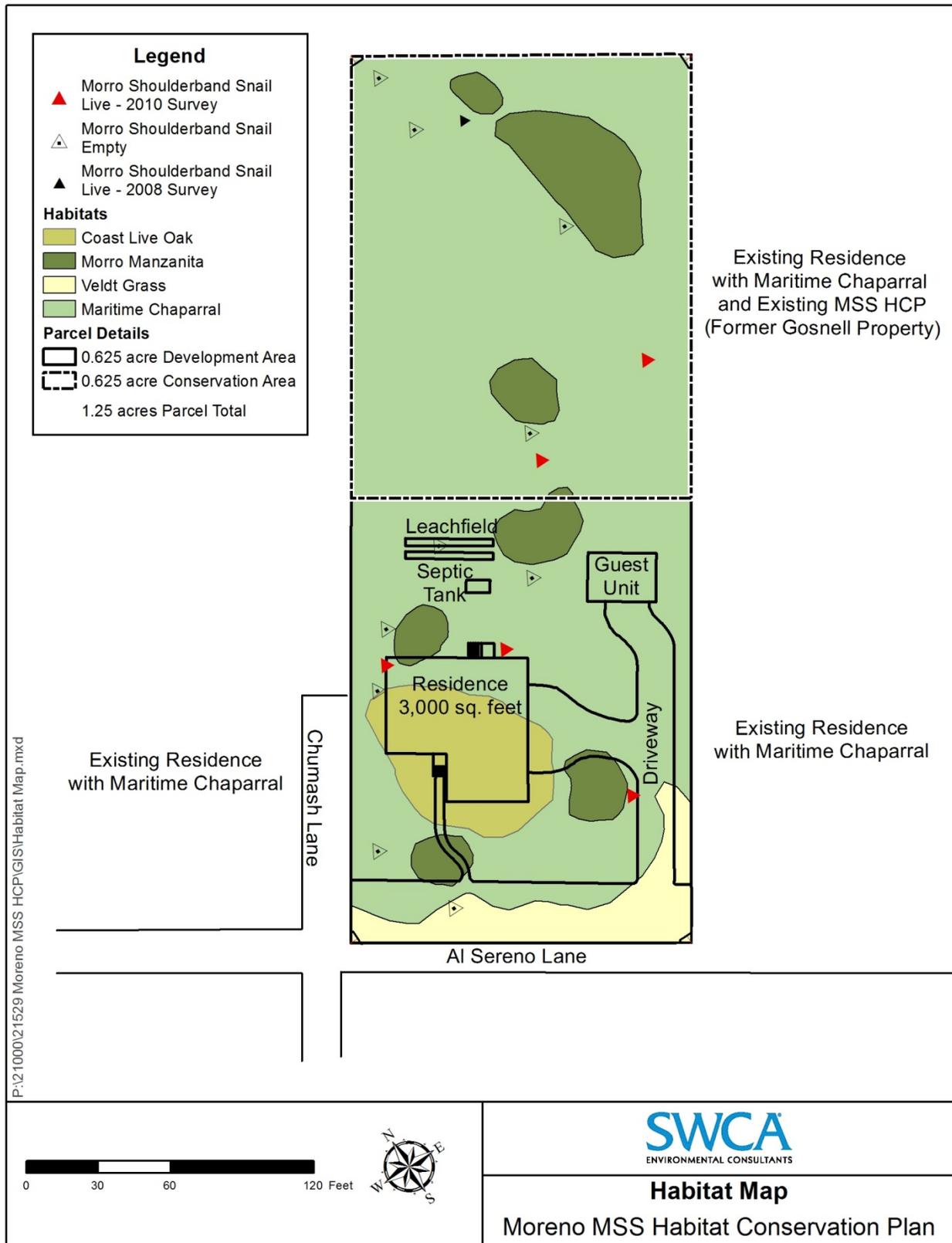


Figure 3. Habitat Map



1.2 Permit Holder / Permit Duration

Mr. Moreno is the property owner and will be the holder of the ITP. The permit is requested for 8 years, and will cover construction activities, which are expected to last 12 months, and subsequent restoration and habitat maintenance activities for an additional 4-year period following completion of the project. The restoration activities and associated success criteria monitoring will cease after the fifth year. However, the permit term will continue through the eighth year; therefore, a third party monitor will continue annual ITP monitoring in years 6, 7, and 8. Any transfer of the permit shall be processed in accordance with the procedures set forth in Section 6.6 herein, below.

1.3 Permit Boundary / Covered Lands

The 1.25-acre undeveloped project parcel, identified legally as County Assessor's Parcel Number 074-323-020, is located at the intersection of Chumash Lane and Al Sereno Lane in the southwestern portion of the community of Los Osos (refer to Figures 1 and 2). The project parcel is subject to the Coastal Zone Land Use Ordinance for San Luis Obispo County. The permit boundaries will encompass the project development and mitigation areas located on the Morro Bay South 7.5-minute U.S. Geological Survey quadrangle, in Township 30 S, Range 10 E, Section 24. All impacts and all mitigation proposed under this HCP will occur on the parcel as shown on Figure 3.

1.4 Species to be Covered by Permit

The MSS would be the species covered by the ITP, if it is issued. It is federally listed as endangered; however, is not listed by the State of California.

Morro manzanita is discussed within the HCP but will not be covered under an ITP. It is a federally threatened species and is on the California Native Plant Society (CNPS) 1B.1 List of seriously endangered plants in California. It is not listed by the State of California. Mitigation for Morro manzanita impacts will be implemented under County requirements.

1.5 Regulatory Framework

1.5.1 Federal Endangered Species Act

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 harass, 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 U.S. Fish and Wildlife Service (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. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying them to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, 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 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 1 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 ITP 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 ITP must be accompanied by 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 ITP 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). Delivery of the HCP and a Section 10(a)(1)(B) permit application initiates the Section 7 consultation process within the Service.

1.5.2 Section 10(a)(1)(B) Process – Habitat Conservation Plan Requirements and Guidelines

The Section 10(a)(1)(B) process for obtaining an ITP 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 ITP 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 ensure such measures are implemented in accordance with permit conditions; and procedures to deal with unforeseen circumstances;
- alternative actions considered that would not result in take; and,
- any 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) the draft HCP; 2) an Implementing Agreement (IA), if applicable; 3) a permit application; and 4) a \$100 fee from the applicant. The Service must 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 to evaluate 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). An IA is required for HCPs unless the HCP qualifies as a low-effect HCP. A Section 10(a)(1)(B) ITP is granted upon a determination by the Service that the following criteria for permit issuance have been met:

- The taking will be incidental;

- The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking;
- The applicant will ensure that adequate funding for the HCP and procedures to deal with 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 ensure that other measures that the Service may require as being necessary or appropriate will be provided; and,
- The Service has received such other assurances as may be required that the HCP will be implemented.

During the post-issuance phase, the permittee (formerly the Applicant) 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 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 ITP) 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 ITP (or Section 10(a)(1)(B) permit). NEPA analysis must be done by the Service for each HCP as part of the ITP application 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 and appropriate American Indian tribes. All ITP applicants are required to submit a Request for Cultural Resources Compliance form to the Service. To complete compliance, the applicants may be required to contract for cultural resource surveys and possibly to develop and implement mitigation.

1.5.5 California Endangered Species Act

Sensitive, endangered, and threatened plants and animals of California are listed pursuant to Section 1904 (Native Plant Protection Act of 1977) and Section 2074.2 and 2077.5 (California Endangered Species Act of 1984 [CESA]) of the California Department of Fish and Wildlife (CDFW) Code (California Fish and Game Code [CF&GC]). Under CESA, the CDFW has the responsibility for maintaining a list of threatened and endangered species. The CDFW also maintains lists of "species of special concern" which serve as "watch lists." Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project which may impact a candidate species.

In addition, it is prohibited to "take" (CF&GC Section 86) species listed as threatened or endangered under CESA (CF&GC 2080) or as fully protected (CF&GC 3511, 4700, and 5050), which is defined as the following:

- Direct mortality;
- Permanent or temporary loss of occupied habitat that would result in mortality to or disruption of reproduction of at least one individual of the species; or,
- Avoidance by individuals of biologically important habitat for substantial periods that would result in the mortality or disruption of reproduction to at least one individual of the species.

No species covered in this HCP are listed under CESA, and so this HCP will not further address CESA permitting requirements.

1.5.6 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 review consisting of issuance of a Minor Use Permit will be conducted by the County. Prior to the issuance by the County of any permit that 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), the applicant will provide proof that they are in possession of a current, valid ITP for the MSS.

1.5.7 California Coastal Act

The proposed project is located within the Coastal Zone of California, and implementation of the project will likely require a Coastal Development Permit to satisfy provisions of the California Coastal Act of 1976 (CCA). The proposed project falls within the County's Estero Planning Area, and must remain in compliance with the policies of the County's Coastal Zone Land Use Ordinance and Local Coastal Program. It is anticipated that the applicant will need to consult with the County Department of Planning and Building regarding the proposed project, at which point the County would decide to exert permitting authority to issue a Coastal Development Permit, or would defer the permitting authority to the California Coastal Commission.

2 PROJECT DESCRIPTION/ACTIVITIES COVERED BY PERMIT

2.1 Project Description

The proposed project will create a single-family home and a detached guest house on an undeveloped 1.25-acre lot, converting a total of 0.625 acre of undeveloped land for residential uses in the community of Los Osos (refer to Figure 3). The southern half of the parcel has been identified for development of the residential structures and associated improvements, which will cover approximately 0.2 acre. Although development is not proposed on the remaining 0.425 acre, this area will likely be impacted to various degrees by ongoing residential uses associated with the occupation of the property. The northern 0.625-acre portion of the lot will be preserved under a Conservation Easement with the County.

2.2 Activities Covered by Permit

The following is a list of all the activities that are to be covered in the HCP.

- Surveys, capture, and moving of MSS;
- Vegetation removal and grading within the development area;
- Construction of the primary residence and guest house, including installation of associated infrastructure, including septic systems and driveways; and,
- Habitat enhancement activities (e.g., invasive species removal, seeding/planting native plants) in the easement area.

The following is a short description of all the activities to be covered in the HCP.

2.2.1 *Surveys, Capture, and Moving of Morro Shoulderband Snail*

Prior to construction activities, a permitted biologist will survey the impact areas for MSS. Surveys will involve significant disturbance to existing vegetation, and will require handling MSS and moving MSS to undisturbed, suitable habitat within the Conservation Easement. If construction activities occur during the summer months when MSS are aestivating, one pre-construction survey immediately prior to start of construction is considered to be sufficient to remove MSS from the impact areas. If 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), surveys will be conducted during these construction phases to remove any MSS that may be present in the construction area.

2.2.2 *Vegetation Removal and Grading within the Development Area*

To prepare the development footprint for construction, vegetation will be removed and grading will take place using heavy machinery over an approximately 1-week period. During all grading and grubbing activities, a permitted biologist will be present to capture and move any additional MSS discovered.

2.2.3 *Construction of the Primary Residence and Guest House, including Installation of Infrastructure*

A single-family house, detached guest house, driveway, and septic system will be constructed on the southern half of the parcel (refer to Figure 3). Activities associated with house construction include

foundation pouring; framing; installation of siding, roofing, electrical, plumbing, insulation, and drywall; painting; and installation of a septic system. Construction is anticipated to last approximately 12 months.

2.2.4 Habitat Enhancement Activities

Non-native plant species in the 0.625-acre easement area, particularly veldt grass (*Ehrharta calycina*) and narrow-leaved ice plant (*Conicosia pugioniformis*), will be removed by hand pulling. Seed from mock heather (*Ericameria ericoides*), coyote brush (*Baccharis pilularis*), dune lupine (*Lupinus chamissonis*), and black sage (*Salvia mellifera*) will be collected from the site and surrounding areas, and will be broadcast in and adjacent to portions of the easement area currently containing coastal dune scrub plants. As mitigation for impacts to Morro manzanita, up to 10 manzanita may be planted in easement areas that do not contain coastal dune scrub habitat. Progress of restoration efforts will be monitored at regular intervals. Restoration and monitoring will last for 4 years following completion of construction.

3 ENVIRONMENTAL SETTING/BIOLOGICAL RESOURCES

3.1 Environmental Setting

The 1.25-acre undeveloped parcel is located at the intersection of Chumash Lane and Al Sereno Lane. The lot slopes gently to the north, and is bounded by residences to the north, south, east, and west (refer to Figure 3 and Appendix A, Photo Documentation). The contiguous former Gosnell property to the east has conserved a small easement area for MSS.

Vegetation on the site consists of a senescent stand of maritime chaparral, with some coastal dune scrub associates present, and a coast live oak (*Quercus agrifolia*) tree cluster. Occurrences of veldt grass are present in disturbed areas along Al Sereno Lane and a portion of the eastern property line, but the majority of the site is dominated by native maritime chaparral species. The maritime chaparral plant community is dominated by chamise (*Adenostoma fasciculatum*) and buck brush (*Ceanothus cuneatus*). Coastal dune scrub species on the site include mock heather, black sage, and California sagebrush (*Artemisia californica*). Other native plant species observed on the site include Morro manzanita, California croton (*Croton californicus*), and horkelia (*Horkelia cuneata*).

The maritime chaparral habitat and associated coastal dune scrub vegetation on the site is senescent and relatively undisturbed. With exception of the northern property boundary, the vegetative structure lacks woody refuse, debris, and duff. The northern property boundary has a significant amount of woody refuse and debris. The vegetative structure found on the remaining portions of the property is characterized by open canopies with minimal contact to the ground surface. The observed vegetative structure provides suitable but marginal habitat for MSS. The adjacent properties to the east and west are composed of similar maritime chaparral communities with associated coastal dune scrub species.

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. Annual precipitation is approximately 17 inches per year. All precipitation falls as rain. The rainy season is from October to March, with the majority of the rainfall occurring between January and March.

3.1.2 Topography / Geology

Elevation on the site is approximately 240 feet. The site slopes slightly to the north and soils in the area are mapped as Baywood fine sand. The Baywood series consists of deep, somewhat excessively drained soils that formed in old sand dunes near the coast. Baywood soils have slope gradients ranging from 0 to 50 percent.

3.1.3 Hydrology / Streams, Rivers, Drainages

The plan area is within the Los Osos Creek watershed. No rivers or drainages are present on the project site, nor does the project site lie within a flood zone.

3.1.4 Existing Land Use

The project parcel is zoned Residential Single Family and is bounded by residential developments to the north, west, east, and south. The neighboring parcels in the vicinity are also zoned for single-family residence; as such, the project parcel does not adjoin any public open space or significant wildlife areas. Currently, the property is undeveloped, and contains no structures or improvements.

3.2 Covered Wildlife Species

3.2.1 Morro Shoulderband Snail

3.2.1.1 STATUS, DISTRIBUTION, AND TRENDS

The MSS is a native gastropod endemic to the Los Osos, Baywood Park, and southern Morro Bay region of coastal central San Luis Obispo County, California. The species was listed as federally 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 MSS was published in the *Federal Register* on February 7, 2001. A 5-year status review for the snail was prepared by the Service in 2006. The status review concluded that the MSS population is stable and that threats to the species have been reduced considerably.

MSS is restricted to sandy soils of central dune and coastal dune scrub 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. The current known range is slightly expanded and covers approximately 7,700 acres, extending from Morro Strand State Beach in northern Morro Bay southward to Montaña de Oro State Park and inland to at least Los Osos Creek in eastern Los Osos (Service 2006). Too few population or demographic surveys have been conducted to accurately 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 are increasing and not decreasing (Service 2006).

3.2.1.2 HABITAT CHARACTERISTICS / USE

Within the known range, the MSS is most commonly found in coastal dune and coastal sage scrub vegetation on sandy soils. MSS has been found to be closely associated with several species of native shrubs including mock heather, seaside golden yarrow (*Eriophyllum staechadifolium*), deerweed (*Lotus scoparius*), and sand almond (*Prunus fasciculata* var. *punctata*), 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, and California croton (Roth 1985). Typically, shrubs that support MSS exhibit dense, low growth with ample contact with the ground. Survey data indicates that MSS are opportunistic, and will utilize almost anything that provides structure and protection. Surveys have found MSS associated with old tires, wood and brush piles, deadwood, trash and debris, building foundations, fence boards, and other protected areas, sometimes with little or no coastal scrub habitat present nearby.

Mating, egg-laying, and most individual growth of MSS is assumed to occur primarily during the rainy season (Roth 1985). Surveys conducted per the protocol requirements in wet conditions regularly find active MSS. During the dry season, MSS are found aestivating in the accumulated litter beneath various shrubs, or associated with other structural materials as described above. The related Big Sur shoulderband snail (*Helminthoglypta umbilicata*) is also found aestivating in coastal dune scrub habitats and other structures suitable for MSS, but does not appear to be restricted to sandy soils.

3.2.1.3 OCCURRENCE WITHIN THE PROJECT

Protocol surveys following Service guidelines were conducted for MSS on the parcel in 2008 and 2011. Six live MSS were observed on the property during the 10 protocol-level surveys conducted in 2008 and 2011 (refer to Appendices A and B). The observed snails included four juveniles and two adults

sporadically located on the property. A total of 18 empty MSS shells were also found in various areas of the property during the two surveys. One live individual and 15 empty shells of common brown garden snail (*Helix aspersa*) were also observed during the surveys.

3.3 Federal Plant Species Present

3.3.1 Morro Manzanita

3.3.1.1 STATUS AND DISTRIBUTION

Morro manzanita was listed as federally threatened on December 15, 1994. The recovery plan for the Morro manzanita was finalized on September 28, 1998.

3.3.1.2 HABITAT CHARACTERISTICS

The following information is taken from the 5-year review of the Morro manzanita (Service 2008). Morro manzanita is found scattered within maritime chaparral and coastal oak woodland communities, ranging from the northeast side of Morro Bay to the southern end of Montaña de Oro State Park, a distance of less than 10 miles. Morro manzanita is found in association with coastal dune scrub, maritime chaparral, and coast live oak woodland communities in sites with no or low to moderate slopes. On steeper slopes, particularly on the north-facing slopes of the Irish Hills, Morro manzanita occurs in almost pure stands. Where Morro manzanita occurs in dense stands, few understory species are present (Tyler and Odion 1996).

Like MSS, the species' distribution is correlated with the distribution of Baywood fine sands. The area historically occupied was estimated to be between 2,000 and 2,700 acres. Currently, the range of Morro manzanita is estimated to be approximately 840-890 acres, with the total number of individuals ranging between 86,000 and 153,000 (Crawford et al. 2004). Approximately 65% of remaining habitat for the species is in private ownership (Crawford et al. 2004).

3.3.1.3 OCCURRENCES WITHIN THE PROJECT

Twelve Morro manzanita plants are scattered throughout the parcel (refer to Figure 3). Sizes range from 2 feet tall to approximately 6 feet tall.

4 POTENTIAL BIOLOGICAL IMPACTS/TAKE ASSESSMENT

4.1 Impacts

This section analyzes potential direct and indirect effects of the proposed residential construction on the MSS. Most direct impacts will occur during vegetation removal and grading during the initial construction phase of the project. Indirect impacts are expected to occur in areas directly adjacent to impact areas and during habitat restoration and enhancement activities within the easement area.

Direct impacts of the project will include:

- Permanent loss or fragmentation of 0.625 acre of maritime chaparral and associated coastal dune scrub, and veldt grass habitat areas suitable for MSS. Impact areas have been designed to reduce fragmentation of suitable habitat where possible.
- Disturbance to MSS that are found in the impact area during capture and moving of individuals out of harm's way into the easement area.

Indirect impacts of the project may include:

- Potential disturbance of MSS in the easement area during restoration and maintenance activities. This type of disturbance is anticipated to be minimal.

4.2 Anticipated Take of Morro Shoulderband Snail

Direct removal of approximately 0.625 acre of maritime chaparral, associated coastal dune scrub species, and veldt grass could result in harassment, injury, or mortality for MSS present in the development area. Loss of this habitat will also result in a reduction of available habitat for MSS. The loss of native habitat will be offset by the conservation of 0.625 acre of maritime chaparral and coastal dune scrub that will be established as a Conservation Easement dedicated to the County. MSS survey, capture, and moving activities that will occur prior to construction, initial grading, and residential construction activities will result in take of individual snails. The potential for such individual take is considered low due to low species presence and proposed minimization measures, and would likely not exceed five individuals.

4.3 Anticipated Impacts on Morro Manzanita

Two Morro manzanita will be trimmed or removed during construction of the primary residence (refer to Figure 3). The impacts to or loss of these two plants will be offset by establishment of the easement that will preserve 0.625 acre of native maritime chaparral habitat, including six mature Morro manzanita. However, natural regeneration of the species in the easement area over time is unlikely to compensate for the proposed impacts, and mitigation by planting may be required by the County. The required mitigation ratio is 5:1, meaning a total of 10 plants may be required as mitigation. If plantings are required, some are likely to occur in the easement area. Any Morro manzanita plantings in the easement area shall occur within areas dominated by maritime chaparral plants, and shall not disturb coastal dune scrub plants. The mitigation plantings would result in a net benefit to the species by increasing the number of individuals in the area.

4.4 Effects on Critical Habitat

The project site is not within designated critical habitat for MSS. Critical habitat for MSS will not be affected by the proposed project. Critical habitat has not been proposed for Morro manzanita.

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 city of Los Osos. Unit 2: South Los Osos covers 320 acres and is located south of Los Osos in the lower slopes of the Irish Hills. Unit 3: Northeast Los Osos covers 416 acres and lies between Los Osos Creek and Baywood Park.

The project site lies to the southeast of the Unit 2 designated critical habitat area.

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.

Land surrounding the project site currently contains residential housing and remnant natural habitat areas. Much of the residential development predates the listing of MSS. Surrounding residential developments removed and caused the fragmentation of habitat for MSS, and likely resulted in direct mortality of MSS. The current project is similar in scale to these earlier developments; however, the net effect of this project will be that 0.625 acre of suitable native habitat for MSS will be set aside, enhanced to increase its suitability for MSS, and protected in perpetuity by the County. Due to the proposed minimization and mitigation measures, it is anticipated that the project will have a net long-term benefit for MSS and Morro manzanita.

A 0.34-acre portion of the parcel immediately to the east of the project site is currently held in a conservation easement resulting from the issuance of an ITP to Jim and Holly Gosnell associated with the construction of a single-family home on that property. This conserved area is immediately adjacent to and contiguous with the easement proposed for the Moreno property. Land west of the project site contains habitat for MSS, and would also likely require similar permitting by the Service and County prior to development. Because of current and proposed habitat preservation in the project area, the cumulative impacts of this project on the persistence of MSS are expected to be negligible.

4.6 Anticipated Effects of the Taking

The effect of take on MSS that would result from this project is expected to be negligible when considered in terms of the species' overall survival. This is because the percentage of the species' habitat onsite relative to the species' entire range is extremely small and the number of individual MSS that could be taken, even in the form of capture, is also very small. The overall effect of the proposed project will be an increase in the amount of habitat for MSS that is protected from development and other disturbance, and an increase in connectivity between habitat preserves. Neither the mortality of MSS 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 persistence of the population of MSS in the south Los Osos region or persistence of the species as a whole.

5 CONSERVATION PROGRAM/MEASURES TO MINIMIZE AND MITIGATE FOR IMPACTS

5.1 Biological Goals

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.

5.2 Biological Goals and Objectives

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

Goal 1: Avoid and minimize take of MSS and disturbance to Morro manzanita within the project site.

Objective 1.1: Capture MSS from impact areas by performing surveys prior to and during construction, and move these individuals to suitable habitat in the proposed easement area.

Objective 1.2: Avoid removal of Morro manzanita through project design and protect existing Morro manzanita with temporary fencing during construction.

Goal 2: Preserve and maintain occupied habitat for MSS.

Objective 2.1: Secure a 0.625-acre Conservation Easement that will protect MSS habitat in perpetuity and be contiguous with adjacent preserved habitat.

Objective 2.2: Enhance the MSS habitat in the easement area through control of exotic species, particularly veldt grass and narrow-leaved ice plant, and re-seeding with native coastal dune scrub species.

Objective 2.3: Maintain the easement area in perpetuity through invasive plant species removal efforts.

5.3 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 ITP, 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 should include mitigation programs that are based on a 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 impacts of Covered Activities on the MSS are minimized and mitigated to the maximum extent practicable (refer to Table 2).

5.3.1 Measures to Avoid Impacts

5.3.1.1 DESIGN OF IMPACT AREA

The proposed development has been designed to minimize impacts to native habitat and Morro manzanita. The project building envelope is located near residences on adjoining lots, leaving undisturbed natural habitat areas on both sides of the proposed easement. This design reduces habitat fragmentation and mitigation requirements.

5.3.1.2 CAL FIRE VEGETATION CLEARANCE REQUIREMENTS

Section 1276.01 of the Fire Safe Regulations requires all parcels 1 acre and larger to provide a minimum 30-foot defensible space around buildings and accessory buildings. PRC Section 4291(c)(1) allows the California Department of Forestry and Fire Protection (CAL FIRE) director to vary the requirements for removing or clearing of flammable vegetation or other combustible growth around a structure with an exterior constructed entirely of nonflammable materials. The CAL FIRE/San Luis Obispo County Fire Station 15-South Bay Hazard Abatement requirements recognize the presence of sensitive species in the Los Osos area, and specifically exempt properties designated by the Service as sensitive habitat for MSS from hazard abatement requirements if alternate methods of protecting structures are implemented.

The main residence will be located over 60 feet from the easement boundary. The proposed guest house structure will be located a minimum of 20 feet from the easement boundary, providing at least 20 feet of defensible space between the structure and native vegetation. CAL FIRE has provided a letter to the applicant that acknowledges the need to account for Habitat Conservation Areas when requiring vegetation clearance around structures, and indicates that use of proper building materials will serve as mitigation for proposed setbacks (refer to Appendix E).

Both structures will be designed and built to utilize building materials and features that comply with California Building Code (CBC) requirements for buildings located in Wildland-Urban Interface Fire Areas. CBC requirements for these areas include standards for roofs, exterior walls, structure projections, and structure openings. The standards require use of ignition resistant materials for roofs and exterior walls, and design of roof eaves and attic vents to resist intrusion of flame and embers into attics. Compliance with these requirements will be enforced by the County Department of Planning and Building during plan check, building permit issuance, and building inspection during construction.

The proposed location, construction design and materials, and County compliance enforcement negate any need to conduct fire control clearing in the easement area. Compliance with the CBC requirements for fire areas satisfies CAL FIRE requirements for the proposed structures.

5.3.1.3 PROTECTIVE FENCING

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

During or immediately following construction, a permanent fence will be installed along the boundary between the easement area and the development area. This fence will be constructed from wood or other

durable material, and will provide a clear boundary barrier between the easement area and the residential portion of the property.

5.3.1.4 SEDIMENT AND EROSION CONTROL

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

5.3.2 Measures to Minimize Impacts

5.3.2.1 MSS SURVEYS, CAPTURE, AND MOVING OF INDIVIDUALS

To reduce the potential for direct injury or mortality of individual snails, a Service-approved biologist holding a valid Section 10(a)(1)(A) permit for MSS will survey the impact areas and clear them, to the greatest extent feasible, of all live snails in all life stages as well as empty shells of the species. All living snails, in all life stages, that are identified will be captured and moved to suitable areas within the easement area. The size, age-class, location of capture, and release site location will be recorded for each individual MSS moved from the affected work area. Empty shell locations will be noted on a map, and shells will be counted and classified by size and age. These shells will be left in place on the site. The biologist will document all activities associated with all surveys, and reports will be submitted to the Service in accordance with the reporting section to follow.

Surveys will be conducted immediately 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 intensive survey conducted by at least two permitted biologists immediately prior to construction should be sufficient to remove the majority of MSS from the impact areas. The survey process will involve moving and searching under all vegetation and all artifacts present (e.g. woodpiles, tires, debris), and will result in destruction or uprooting of vegetation. If pre-construction surveys occur during the rainy season (November through March) multiple surveys prior to initial disturbance may be needed to remove MSS.

The intent of the pre-construction survey(s) is to remove all MSS observed during an intensive search of the impact area. However, previous experience has shown that due to the small size and cryptic nature of the species, some individuals can be missed during even the most thorough effort, and may then become visible during ground disturbance. To address this possibility, a permitted biologist will be present to capture and move any additional MSS discovered during all grading and grubbing activities.

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 at the beginning of each work day to check for and remove any MSS that may have entered the construction area.

5.3.2.2 CONTRACTOR AND EMPLOYEE TRAINING/EDUCATION

The monitoring 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 and conditions of the ITP/HCP. The purpose of the orientation will be to inform contractors and equipment operators of construction activity restrictions and the ramifications of non-compliance. There will also be a discussion of the appropriate protocol should MSS be encountered during construction activities.

5.3.3 Measures to Mitigate Unavoidable Impacts

5.3.3.1 CONSERVATION EASEMENT

The permittee proposes to set aside 0.625 acre of maritime chaparral and coastal dune scrub habitat in a Conservation Easement (refer to Figure 3) to mitigate for the 0.625 acre of habitat permanently lost as a result of the proposed project implementation. The purpose of the easement area is to preserve and enhance existing habitat values for MSS and for maritime chaparral. The easement will restrict development and other uses, and its perimeters will be fenced to restrict unauthorized activity. This fence will be constructed from wood or other durable material, and will provide a clear boundary barrier between the easement area and the residential portion of the property. The fence is intended to limit access by people and pets, and reduce the potential for inadvertent impacts to MSS and habitat from adjacent residential uses.

Planting of landscape plants, or other plants not commonly found in local maritime chaparral and coastal dune scrub habitat will be prohibited. The easement area may not be used for a mitigation planting area for coast live oak trees. If mitigation planting of Morro manzanita is conducted in the easement area, all such plantings shall occur within areas dominated by maritime chaparral plants. Morro manzanita planting conducted in the easement area shall not remove or encroach on existing coastal dune scrub species.

5.3.3.2 HABITAT ENHANCEMENT

The existing maritime chaparral habitat and associated coastal dune scrub plants within the easement will be enhanced through removal of non-native plant species and seeding with native coastal dune scrub species. Non-native species to be removed include narrow-leaved ice plant and veldt grass. All removal activities shall be conducted by hand—no herbicides will be used within the easement area. Seed from mock heather, coyote brush, dune lupine, and black sage will be collected from the site and surrounding areas, and then broadcast in and adjacent to portions of the easement area currently containing coastal dune scrub plants. Seed broadcasting will occur in the fall and winter months of the first 3 years of the ITP period. Seed amounts applied each year shall consist of at least 1 pound of collected materials (including seed heads and pods).

The proposed habitat enhancement is intended to improve the overall habitat quality in the conservation easement area for MSS and other species associated with maritime chaparral and coastal dune scrub communities. Habitat enhancement activities including non-native species removal and native species seed broadcasting will be conducted by the applicant. Habitat enhancement success criteria monitoring will be conducted by a biologist familiar with MSS and that has been approved by the Service.

5.4 Monitoring

Monitoring tracks compliance with the terms and conditions of the HCP, IA (if needed), and 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, including species surveys, reproductive success, etc. Monitoring provides information for making adaptive management decisions.

5.4.1 Compliance Monitoring

The applicant will retain a Service-approved MSS biologist to conduct compliance monitoring during construction of the project. This monitoring biologist will ensure that the required minimization measures,

such as protective fencing, environmental training, and construction monitoring, are implemented. Results of the compliance monitoring will be reported in the first annual report for the project.

5.4.2 Effects Monitoring

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

5.4.3 Effectiveness Monitoring

A biologist familiar with MSS and Service requirements will monitor the easement area for 7 years following the 12-month construction period. The annual monitoring during years 2 through 5 will focus on measuring cover of non-native plants and ensuring that the site is meeting the performance standards outlined in this HCP. During years 2 through 8, the third-party biologist will visually inspect the easement area for disturbance that could negatively affect MSS and Morro manzanita. Effectiveness monitoring results will be included in all annual reports.

Table 1. Summary of Minimization and Mitigation Measures and Corresponding Biological Goals and Objectives Based on the Level of Impacts Resulting from Covered Activities

Covered Activity	Form of Take	Expected Take or Impact	Avoidance, Minimization, & Mitigation Measures	Biological Goals and Objectives met
MSS surveys, capture, and moving	Harassment, injury, or mortality of MSS	0.625-acre development area would be surveyed for MSS. Identified MSS would be captured and moved to suitable habitat within the easement area. Expected to be less than 10 individuals.	MSS surveys, capture, and moving of individuals will be performed by a Service-approved biologist holding a Section 10(a)(1)(A) permit for MSS.	Minimize take of MSS within the development area
Vegetation removal and grading	Harassment, injury, or mortality of MSS in development area	Expected to be very few; only individuals that were not identified and removed during pre-construction surveys.	Design of impact areas, MSS surveys and relocation, contractor and worker education, and monitoring.	Minimize take of MSS within the development area
Construction of primary residence/guest house and associated infrastructure	Harassment; injury, or mortality of MSS that may move into construction areas	Expected to be few; only individuals found during daily pre-construction surveys conducted for work performed in the rainy season.	MSS surveys and relocation, protective fencing, contractor and worker education, and monitoring.	Minimize take of MSS within the development area
Habitat enhancement activities	Harassment, injury, or mortality of MSS	Expected to be very few, and will decrease as exotic species are removed from HCP area, and less remedial activity is required.	Habitat restoration activities will be conducted by the permittee and overseen by an approved biologist familiar with MSS.	Preserve and maintain occupied coastal dune scrub habitat for MSS in the easement area; enhance MSS habitat values

5.5 Performance and Success Criteria

The overall goal of this HCP is to maintain high quality, occupied habitat for MSS within the identified mitigation area. Success criteria for each objective stated in Section 5.1 are as follows:

Objective 1.1: Remove MSS from development areas by performing surveys prior to and, as necessary, during construction, and moving all identified MSS (in all life stages) to suitable habitat within the easement area.

Performance Criteria

- A qualified biologist holding a valid Section 10(a)(1)(A) permit for MSS will conduct all surveys for, capture of, and moving of MSS. Upon completion of all necessary surveys, this 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 1.2.: Minimize removal of Morro manzanita through project design and protect existing Morro manzanita with protective fencing during construction.

Performance Criteria

- During compliance monitoring, a qualified biologist will inspect the project site on a regular basis to ensure that construction activities are taking place only in approved areas and that protective fencing is properly in place. The project area will also be inspected for any other factors that could impact Morro manzanita. A monitoring report detailing observations of the compliance monitoring will be provided to the County and Service.

Objective 2.1: Dedicate a 0.625-acre Conservation Easement to the County to protect MSS, Morro manzanita, and their habitats.

Performance Criteria

- Quantitative performance criteria are not appropriate for this objective.

Objective 2.2: The applicant will enhance existing MSS habitat within the easement area through removal of non-native species, particularly veldt grass and ice plant, and seeding of native plants in appropriate areas.

Performance Criteria

- A third-party biologist with knowledge of MSS will monitor the percent cover of non-native vegetation in the easement area. Cover of non-native weed plants within the easement area will not exceed 20% during Year 1 of monitoring and will not exceed 15% during Years 2 through 4.
- Any potential habitat degradation or other threats to MSS will be identified during habitat enhancement monitoring to be conducted by the approved biologist. The applicant will also identify threats to MSS while conducting habitat maintenance and enhancement activities. Suitable measures to remediate identified habitat degradation or potential threats will be implemented with concurrence from the Service.

Objective 2.3: Maintain the habitat value of the easement area in perpetuity through regular weed control efforts as required by the Service under this HCP.

Performance Criteria:

- Cover of non-native weed plants in easement areas will not exceed 10% of total habitat cover after the completion of year 5.

5.6 Adaptive Management Strategy

For some HCPs, the adaptive management strategy will be 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 result 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 monitoring identifies a failure to achieve the biological goals or objectives set forth in this HCP. Activities may be modified to more quickly or 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. The permittee shall determine specific applications of all adaptive management actions in coordination with the Service and shall modify them as approved by the Service based on monitoring data.

5.7 Reporting

Project implementation and annual monitoring reports will be submitted to the Service during the 8-year ITP period.

Project implementation reports will be submitted during the first-year construction phase. A total of 12 first-year visits and reports are included in the proposed funding costs for the project. These reports will include:

1. Reason for monitoring visit.
2. Summary of project activities accomplished since the previous visit.
3. Summary of current and upcoming project activities.
4. Discussion of any issues or problems noted, and the steps taken to address the issue.
5. Recommendations and a tentative schedule for the next visit.

Annual monitoring reports will be submitted each year of the 8-year permit period. Annual Reports to the Service will include:

1. Brief summary or list of project activities accomplished during the reporting year (e.g., development/construction activities, restoration efforts, and other covered activities).
2. Project impacts (e.g., acres 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).
 - a. Annual reports for years 2, 3, 4, and 5 will include the results of the non-native species cover measurements conducted by the third-party monitoring biologist (refer to Objectives 2.2 and 2.3). Provided the habitat enhancement success criteria are satisfied at the completion of year 5, habitat enhancement monitoring can cease. Therefore, the annual reports in years 6, 7, and 8 will focus on ensuring that the easement area has not been subject to disturbance that could negatively affect MSS and Morro manzanita.
6. Description of any 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.
9. Description of any minor or major amendments.

6 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 have been or are fully implemented).

6.1.2 Newly listed species

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, the Section 10 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 or until the Service notifies the Applicant in writing that the modifications to the HCP covered activities are no longer required to avoid the likelihood of jeopardy of the newly listed species or adverse modification of newly designated critical habitat.

6.1.3 Wildfires

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 grow 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 contact the Service to determine appropriate measures, which may include revegetation efforts to reestablish native vegetative cover if such a procedure is deemed beneficial.

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, or 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 appropriate Service 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 will 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 permits 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).

6.3.4 Permit Renewal

Permit renewal may be necessary if all facets of the project are not completed within the designated time, including construction activities and restoration efforts.

Upon 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, including 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). If the permittee 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 permittee may not take listed species beyond the quantity authorized by the original permit. If the permittee fails to file a renewal request within 30 days prior to permit expiration, the permit shall become invalid upon expiration. The permittee must have complied with all annual reporting requirements to qualify for a permit renewal.

6.3.5 Permit Transfer

The ITP would need to be transferred if property covered under this HCP is sold or transferred or if the permittee is not able to oversee the completion of the requirements of the ITP.

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) will 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 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 permittee. An amount to cover any unforeseen circumstances is also included in the estimate to ensure that any such instances will be addressed.

Table 2. Estimated Funding Costs (for a 5-year Permit)

Item/Activity	Unit Cost	One-Time Cost	Re-occurring Costs	Total
<i>Protective Fencing</i>				
Temporary fencing materials/installation/maintenance	\$450	\$450	n/a	\$450
Permanent fencing materials and installation	\$2,000	\$2,000	n/a	\$2,000
<i>Subtotal</i>				\$2,450
<i>MSS Surveys, Construction and Restoration Monitoring (12 months)</i>				
Pre-construction survey of development area (includes capture and moving of MSS and a brief report)	\$1,500	\$1,500	n/a	\$1,500
Worker Awareness Training	\$100		up to 4 events	\$400
Additional survey during grubbing/grading activities (includes capture and moving of MSS and a brief report)	\$600	\$600	n/a	\$600
Construction monitoring and reporting as needed during 12-month construction period	\$400	n/a	up to 12 visits and reports	\$4,800
Restoration monitoring and assistance with seed collection and general implementation	\$200		up to 4 events	\$800
<i>Subtotal</i>				\$8,100
<i>Easement Area Maintenance (5 years, conducted by permittee)</i>				
Weeding, seed collection and spreading, trash removal	by permittee	n/a	n/a	n/a
<i>Annual Monitoring and Reporting (8 years, conducted by third-party monitor)</i>				
Annual Monitoring and Reporting (Years 2-5)	\$500	n/a	4 reports	\$2,000

Table 2. Estimated Funding Costs (for a 5-year Permit)

Item/Activity	Unit Cost	One-Time Cost	Re-occurring Costs	Total
Annual Monitoring and Reporting (Years 6, 7, and 8)	\$600	n/a	3 reports	\$1,800
<i>Subtotal</i>				<i>\$3,800</i>
<i>Changed Circumstances</i>				
Contingency for Remedial Actions	\$1,000		n/a	\$1,000
<i>Subtotal</i>				<i>\$1,000</i>
TOTAL COST				\$15,350

7.2 Funding Source(s)

Mr. Moreno, as the permittee, will be responsible for the full cost of implementing the minimization and mitigation measures as described in Section 7.1 and Table 2, as well as those changed circumstances described in Section 6.2 above. The permittee understands that failure to provide adequate funding and consequent failure to implement the terms of this HCP and the ITP in full could result in temporary permit suspension or permit revocation.

8 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 would not be prepared and no ITP would be issued. Site development would not occur and MSS and its habitat within the project area would not be impacted. Normal neighborhood uses of vacant lots (dog walking, children playing) that could cause take of federally listed species and impacts to suitable native habitats would continue.

Under this alternative, no native habitat for MSS and Morro manzanita would be conserved in perpetuity. Habitat enhancement activities would not occur, resulting in a continued decline in habitat suitability for MSS on the site. Since the property is privately owned, there are ongoing economic considerations associated with retaining the property in its undeveloped state (e.g., payment of taxes). The sale of the property for purposes other than the identified activity is not economically feasible. Because of these reasons, and because this HCP results in a benefit for MSS, 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 entire property contains areas of native habitat, it is not feasible to design the project to avoid take. The proposed development is adjacent to existing residential development on either side, and has been designed to minimize native habitat impacts in the development area, to avoid fragmenting the conservation easement, and to locate the easement contiguous with adjacent easement and native habitat areas. Further reducing the size of the development area would not significantly reduce impacts to MSS habitat, or meet the Applicant's needs. 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 resulting in the permanent loss of 0.625 acre of maritime chaparral/coastal dune scrub habitat occupied by MSS. For this reason, the proposed project requires the preparation of an HCP to support the issuance of an ITP. The HCP and terms and conditions likely to be made part of ITP issuance would assure that the take of MSS is minimized and unavoidable take is mitigated to the fullest extent practicable.

The HCP establishes procedures to minimize take associated with project implementation, and compensates for unavoidable take by establishing a 0.625-acre Conservation Easement, which will protect habitat occupied by MSS in perpetuity.

In addition, the HCP provides for the removal of non-native plant species and seeding of coastal dune scrub species in the easement area, thereby improving the quality of the native habitat for MSS. This HCP will offset the adverse effects to covered species and their habitat caused by the project, and will benefit MSS in the long term because of the conservation it effects. For these reasons and because this proposed alternative best meets the goals of the Applicant, this is the preferred alternative.

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Appendix A.
**Morro Shoulderband Snail
Protocol Survey Report (2011)**

**Morro Shoulderband Snail
Protocol Survey Report for the
Moreno Property on Chumash Drive,
Los Osos, San Luis Obispo County,
California**

Prepared for:

The Moreno Family

Prepared by:

SWCA Environmental Consultants

June 2011

**MORRO SHOULDERBAND SNAIL PROTOCOL SURVEY REPORT
FOR THE
MORENO PROPERTY**

Prepared for:

Cayetano Moreno
2482 Sea Horse Lane
Los Osos, CA 93402

Prepared by:

SWCA Environmental Consultants
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401
Contact: Travis Belt, Project Manager

June 15, 2011

SWCA Project Number: 17105

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1. INTRODUCTION

SWCA Environmental Consultants (SWCA) prepared this protocol survey report at the request of the Moreno Family. This report is intended for use by the Moreno family (applicant), County of San Luis Obispo (County), and regulatory agencies for permitting and planning purposes. The objective of this report is to provide protocol-level survey results for the federally listed Morro shoulderband snail (MSS) (*Helminthoglypta walkeriana*) on an approximately 1.25-acre lot (Assessor's Parcel Number [APN] 074-323-020) located on Chumash Drive, in the community of Los Osos, in San Luis Obispo County, California (refer to Figures 1 and 2). The data in this report is a compilation of information received from regulatory agencies, literature reviews, and 10 protocol-level surveys conducted on the property in 2008 and 2010 by SWCA.

The applicant's intent is to develop a single family residence and a Habitat Conservation Plan (HCP) on the property. Based on the 2008 surveys, the applicant was aware of the presence of MSS on the property prior to purchase. To facilitate their plans, the applicant retained SWCA to conduct the 2010 surveys and evaluate the potential impacts to MSS associated with improving the property. This MSS Protocol Survey Report compiles the findings of the 10 MSS surveys, evaluates project related impacts, and provides recommendations for developing an HCP on the property.

2. SURVEY METHODS

According to the 2003 United States Fish and Wildlife Service (USFWS) *Protocol Survey Guidelines for the Morro Shoulderband Snail*, five protocol surveys must be performed during rainy or heavy fog conditions to establish the presence/absence of MSS. Per the USFWS requirements, SWCA conducted five surveys in 2008 and five surveys in 2010 during or immediately following rainfall events (refer to Table 1). The 2008 surveys were conducted at the request of the previous owner; whereas, the 2010 surveys were conducted at the request of the applicant. SWCA biologists, Travis Belt, Barrett Holland, or Jon Claxton, conducted the surveys and are authorized to perform MSS surveys under federal permit PRT-824123-4.

All 10 surveys were conducted on foot, over a 45- to 70-minute period. All areas of the site were thoroughly examined in order to determine the presence/absence of live MSS, empty shells, suitable habitat, or other resources considered sensitive by USFWS. Although the entire area was surveyed, the biologists focused the survey efforts in areas of potential habitat including: woody refuse, stems of woody vegetation, areas of detritus or debris, shrubs, fence lines, and ground cover plants.

3. MORRO SHOULDERBAND SNAIL SPECIES AND HABITAT DESCRIPTION

On December 15, 1994, the USFWS listed the MSS as an endangered species, under the Federal Endangered Species Act. MSS are a member of the land snail family Helminthoglyptidae and are most 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 most often found in sandy soils of coastal dune and coastal sage scrub communities near Morro Bay. MSS has been found to be closely associated with several species of shrubs including mock heather (*Ericameria ericoides*), seaside golden yarrow (*Eriophyllum staechadifolium*), deerweed (*Lotus scoparius*), sand almond (*Prunus fasciculata punctata*), and with the introduced veldt grass (*Ehrharta calycina*). Other plants that commonly occur in areas occupied by this species include black sage (*Salvia mellifera*), dune buckwheat (*Eriogonum parvifolium*), California sagebrush (*Artemisia californica*), dune lupine (*Lupinus chamissonis*), and California croton (*Croton californicus*). Typically, live snails have been found in association with shrubs that exhibit dense, low growth with ample contact with the ground.

Figure 1. Project Vicinity Map

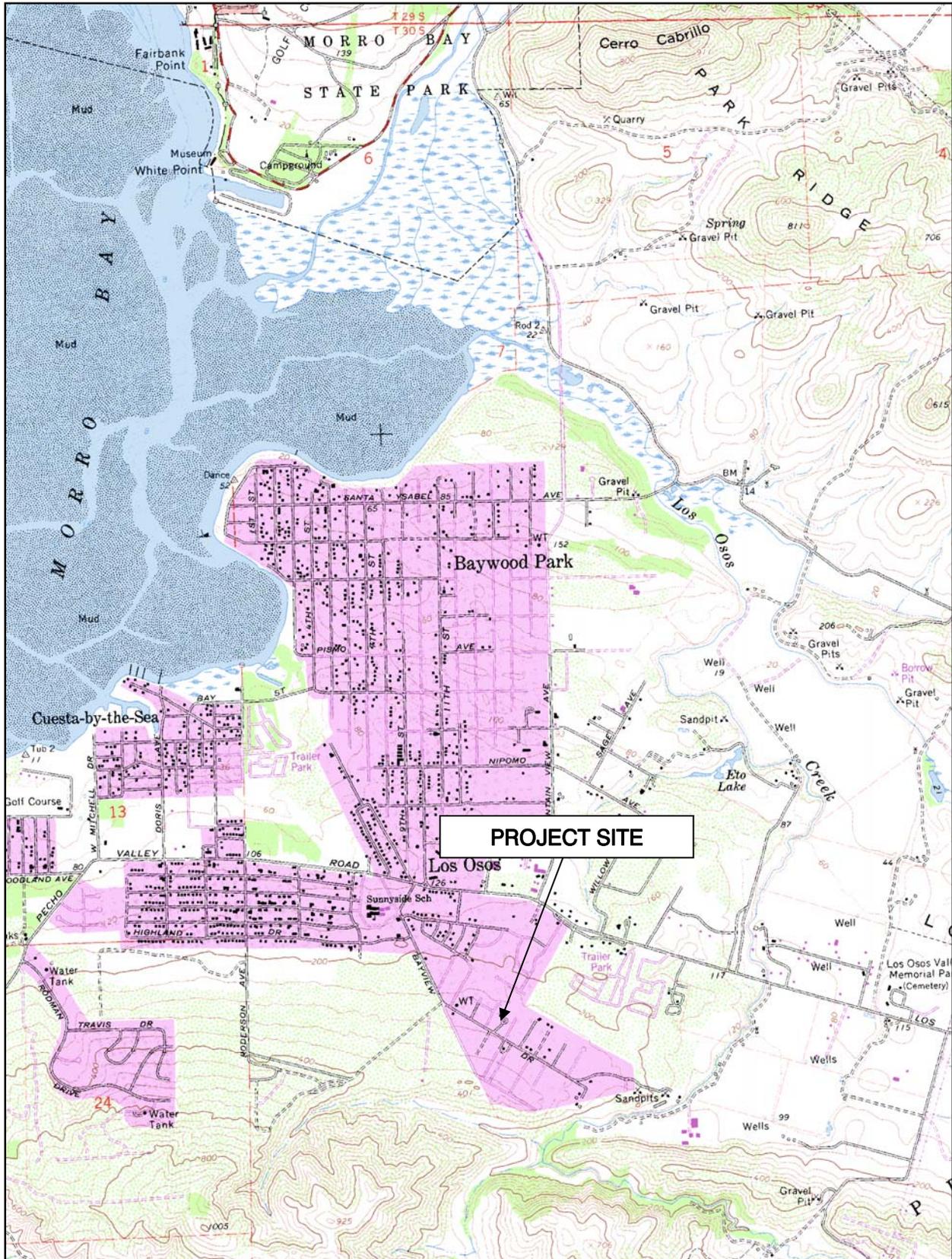


Figure 2. Location Map



4. PROPOSED PROJECT

The applicant proposes to build a single family residence on the currently undeveloped property. The residence would include a two-level house, attached three-car garage, detached guest house, driveway, and septic and leach field system. The house would be approximately 3,000 square feet (sf), the guest house would be approximately 600 sf, the septic and leach field system would be approximately 900 sf, and the driveway would cover approximately 4,200 sf. The proposed project would have an approximately 8,700-sf foot print, which would be entirely within the southern half of the property. The driveway and structures have been situated to maximize the use of existing native vegetation for landscaping. Temporarily disturbed areas would be landscaped with drought tolerant species. The applicant does not anticipate having any lawn or turf. It is assumed that the California Department of Forestry and Fire Protection (CAL FIRE) will require the vegetation within 35 feet of the structures to be cleared. As proposed, the southern half of the property would be either developed, landscaped, or disturbed by normal residential uses; the northern half of the property would be conserved under an HCP for MSS.

5. EXISTING CONDITIONS

The 1.25-acre undeveloped parcel is located at the intersection of Chumash Drive and Al Sereno Lane. The lot slopes gently to the north and residences are located to the north, south, east, and west (refer to Figure 3 and Appendix A, Photo Documentation). The Gosnell property to the east currently has an HCP in place for MSS.

The soil in the vicinity is Baywood fine sand and the elevation of the parcel is approximately 240 feet above sea level. Vegetation on the site consists of a senescent stand of coastal maritime chaparral, with some coastal sage scrub associates present. This plant community is dominated by chamise (*Adenostoma fasciculatum*) and buck brush (*Ceanothus cuneatus*). Several coastal sage scrub species associated with MSS are present, as well. Coastal sage scrub species on the site include mock heather (*Ericameria ericoides*), black sage (*Salvia mellifera*), and California sagebrush (*Artemisia californica*). Other plant species observed on the site include Morro manzanita (*Arctostaphylos morroensis*), coast live oak (*Quercus agrifolia*), croton (*Croton californicus*), and horkelia (*Horkelia cuneata*).

The coastal sage scrub and maritime chaparral vegetation on the site is senescent and relatively undisturbed. With exception to the northern property boundary, the vegetative structure lacks woody refuse, debris, and duff. The northern property boundary has a significant amount of woody refuse and debris. The vegetative structure found on the remaining portions of the property is characterized by open canopies with minimal contact to the ground surface. The observed vegetative structure provides suitable but marginal habitat for MSS. The adjacent properties to the east and west are composed of similar coastal sage scrub and coastal maritime chaparral communities.

6. RESULTS

Six live Morro shoulderband snails were observed on the property during the 10 protocol-level surveys conducted in 2008 and 2010 (refer to Table 1). The observed snails included four juveniles and two adults sporadically located on the property (refer to Figure 3). Ten empty MSS Class A, B, and C shells were also found in various areas of the property. Sixteen live and empty shells of common brown garden snail (*Helix aspersa*) were also observed during the surveys.

Thirteen Morro manzanitas were observed in various locations on the site (refer to Figure 3). Morro manzanita is a federally threatened species and is included on the California Native Plant Society's (CNPS) 1B.1 list. Plants that are on the CNPS 1B.1 list are rare, threatened, or endangered in California and elsewhere.

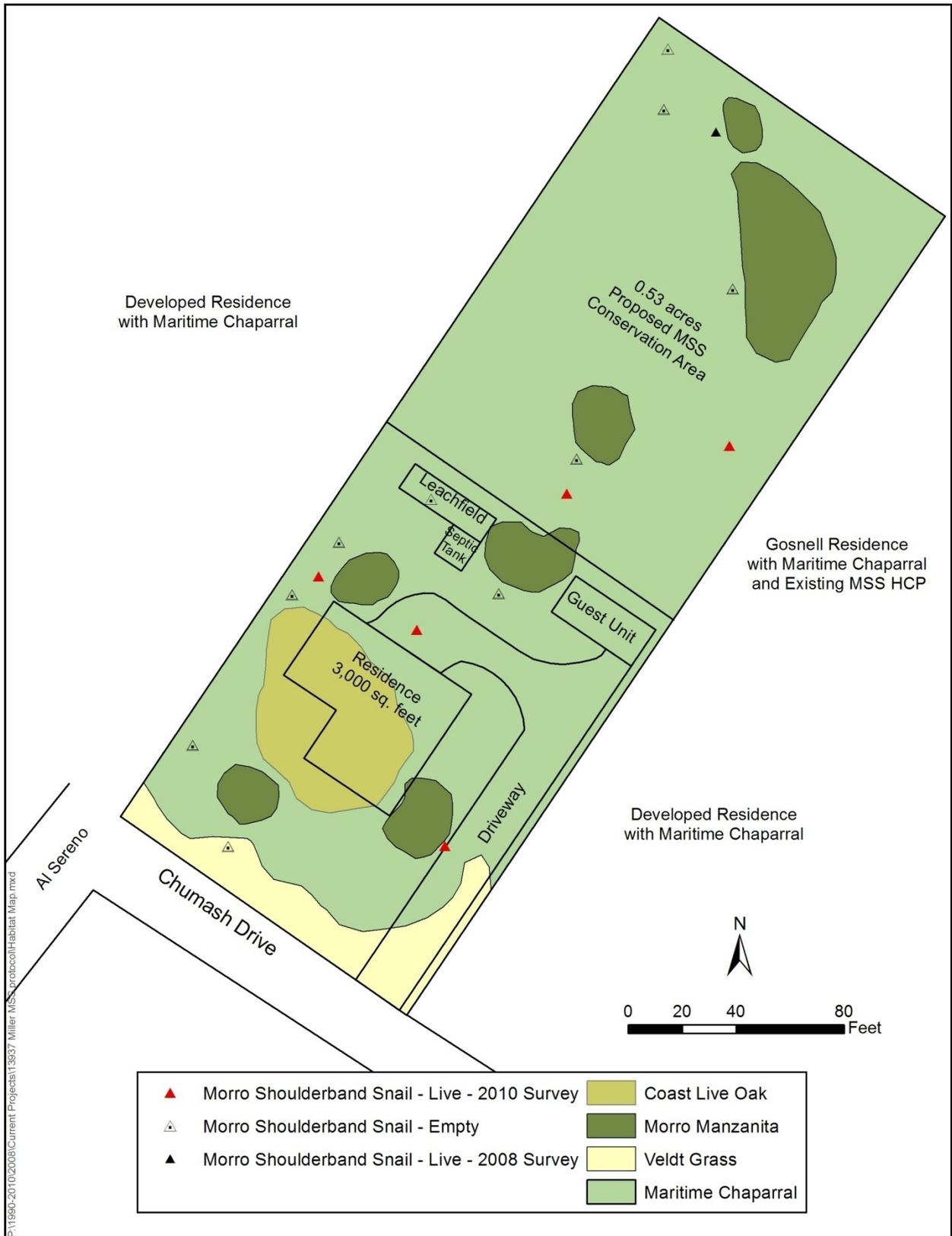
A small but dense stand of coast live oak trees is located near the southern property boundary (refer to Figure 3). This stand contains three to six multi-trunked oak trees, with trunks ranging from 3 to 10 inches diameter at breast height (dbh). The sandy soils on the site have contributed to the short sprawling nature of these oak trees. A San Luis Obispo County regulation requires mitigation for impact to oak trees.

Table 1. Survey Dates, Time, and Findings

Survey Number	Survey Date and Time	Rainfall Activity	Temp.	Findings	Biologist
2010 Surveys					
1	10/25/10 11:15 a.m. to 12:23 a.m.	Clear skies during survey. Ground was wet from approximately 0.17" of rain in previous 12 hours.	55°F	MSS –1 live, 3 empty <i>Helix aspersa</i> – 1 live, 0 empty	T. Belt
2	11/8/10 7:45 a.m. to 8:45 a.m.	Clear skies during survey. Ground was wet from approximately 1.01" of rain in previous 48 hours.	53°F	MSS –1 live, 2 empty <i>Helix aspersa</i> – 0 live, 0 empty	T. Belt
3	11/23/10 3:15 p.m. to 4:25 p.m.	Showers during survey. Ground was wet from approximately 0.28" of rain in previous 24 hours.	54°F	MSS –2 live, 0 empty <i>Helix aspersa</i> – 0 live, 0 empty	T. Belt
4	12/6/10 12:30 p.m. to 1:25 p.m.	Clear skies during survey. Ground was wet from approximately 0.59" of rain in previous 48 hours.	64°F	MSS –0 live, 0 empty <i>Helix aspersa</i> – 0 live, 0 empty	T. Belt
5	12/18/10 9:00 a.m. to 10:00 a.m.	Rain and wind during survey. 1.92" of rain in previous 36 hours.	57°F	MSS –1 live, 0 empty <i>Helix aspersa</i> – 0 live, 0 empty	T. Belt
2008 Surveys					
1	1/05/08 3:30 p.m. to 5:00 p.m.	Approximately 2.03-inches of rain in last 24 hours.	59 °F	MSS – 0 live, 0 empty <i>Helix aspersa</i> –0 live, 1 empty	J. Claxton, B. Holland
2	1/23/08 3:10 p.m. to 4:30 p.m.	Approximately 2.9 inches of rain in last 48 hours.	57 °F	MSS – 1 live, 1 empty <i>Helix aspersa</i> –0 live, 5 shells	T. Belt, B. Holland
3	1/28/08 9:00 a.m. to 11:00 a.m.	Approximately 1.5-inches of rain in last 48 hours.	58°F	MSS –0 live, 4 empty. <i>Helix aspersa</i> – 0 live, 10 shells.	T. Belt, B. Holland
4	2/3/08 2:30 p.m. to 4:00 p.m.	Approximately 1.25 inches of rain in last 24 hours.	57 °F	MSS –0 live, 1 empty <i>Helix aspersa</i> – 0 live, 0 empty	T. Belt
5	2/20/08 9:00 a.m. to 10:30 a.m.	Approximately 0.4 inches of rain in last 12 hours.	58°F	MSS –0 live, 2 empty <i>Helix aspersa</i> – 0 live, 0 empty	T. Belt, B. Holland

MSS = Morro shoulderband snail
Helix aspersa = Common brown garden snail

Figure 3. Habitat Map



7. REGULATORY IMPLICATIONS

Section 3(18) of the Endangered Species Act 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 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 can result in take. Take can occur through both direct impact and by loss of or degradation of known habitat. Unauthorized take is a violation of the Endangered Species Act and could result in penalties of up to \$100,000 and/or up to one year imprisonment. To avoid violation of the Endangered Species Act, the applicant should coordinate with the USFWS to develop a Low Effect HCP for MSS prior to construction. The HCP should incorporate Morro manzanita to mitigate impacts to this species.

In order to satisfy California Environmental Quality Act (CEQA) requirements, any potential impact to oak trees or special-status plant species resulting from a development project must be addressed during the County permitting process. Mitigation for impacts to coast live oaks and/or Morro manzanita will likely be included in the County Conditions of Approval for the project.

8. CONCLUSIONS AND EFFECTS DETERMINATION

8.1 MORRO SHOULDERBAND SNAIL AND MORRO MANZANITA

The findings as described within Section 6, Results, are sufficient to establish that six live MSS, 1.25 acres of MSS habitat, and 13 Morro manzanita exist within the property boundaries. Three of the live MSS were observed on the northern section of the property and three were observed in the southern portion of the property. Based on the site conditions and results of the 2008 and 2010 MSS surveys, the proposed project could take three to six MSS and up to five Morro manzanita. The proposed development would remove approximately 0.2 acre of MSS habitat. However, it is assumed that normal residential uses of the property would result in a gradual decline or loss of the MSS habitat located in the southern half of the parcel. The development and future normal residential uses could result in the loss or disturbance of up to 0.625 acre of MSS habitat. Since the proposed project would result in take of MSS and loss of MSS habitat and Morro manzanita, the applicant intends to develop a Low Effect HCP on the property that outlines a conservation program aimed at protecting the affected species.

Section 10(a)(2)(A) of the Endangered Species Act requires that an HCP specify the measures that the permittee will implement 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 USFWS 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. Based on the proposed project, anticipated take, and existing conditions on the property, the Moreno Family HCP should include the following goals and objectives:

Goal 1: Avoid and minimize take of MSS and disturbance to Morro manzanita within the project site.

Objective 1.1: Remove MSS from the southern half of the parcel by performing surveys prior to and, if necessary, during construction, and relocate the MSS to suitable habitat in the designated conservation area.

Objective 1.2: Avoid removal of Morro manzanita through project design and protect existing Morro manzanita with protective fencing during construction.

Goal 2: Preserve and maintain high quality, occupied habitat for MSS.

Objective 2.1: Secure a 0.625-acre open space easement, which will protect MSS and MSS habitat.

Objective 2.2: Enhance the MSS habitat within the open space easement area through control of exotic species, particularly veldt grass and iceplant, and re-seeding with native species as appropriate.

Objective 2.3: Maintain the easement area in perpetuity through regular weed control efforts.

The HCP should be developed and sent to the USFWS for review and approval prior to initiating any construction or land clearing activities on the property. If the applicant determines that preparation of an individual HCP is undesirable, then participation in a future Los Osos community-wide HCP should be considered. This HCP will be prepared as part of the current County-proposed sewer project, but it is uncertain when this HCP would be completed and available for landowner participation. The mitigation requirements of the HCP are not finalized at this time, but it is anticipated that projects outside of the Los Osos urban area will require in-lieu fees and/or on-site mitigation.

8.2 IMPACTS TO COAST LIVE OAK TREES

Based on the conceptual project plans, the proposed project would remove or trim up to three coast live oak trees that are located in the southwest corner of the property. The applicant will need to submit an Oak Tree Mitigation Plan to the County that minimizes impacts to oak trees. The Plan will need to show all trees with a trunk size of 5.0 inches or larger on the property. The applicant will then need to replace all oak trees proposed for removal at a 5:1 ratio and all impacted oak trees at a 2:1 ratio. Oak trees are not considered to be good MSS habitat; therefore, oak tree mitigation plantings should not be located within the MSS HCP area. Oak tree plantings should be situated in the southern half of the parcel in areas subject to temporary project disturbance.

9. REFERENCES

- California Department of Fish and Game (CDFG). 2006. *State and Federally Listed Endangered and Threatened Animals of California*. Sacramento, California.
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**APPENDIX A:
Photo Documentation**



PHOTO 1:

View from the southeast corner of the property looking north. Note residences to the north and maritime chaparral habitat.

Picture taken on February 20, 2008.



PHOTO 2:

View from the northwest corner of the property looking south. The residence in the upper right corner of the photo is located on the west boundary of the site.

Picture taken on February 20, 2008.

PHOTO DOCUMENTATION



PHOTO 3:

View of a mock heather shrub where one live MSS was observed along the north boundary of the property. Yellow notebook marks location where the snail was observed.

Picture taken on February 20, 2008.



PHOTO 4:

View of an adult MSS shell observed near the southwest corner of the property. This shell was located along the drip line of a dense stand of coast live oak trees.

Picture taken on February 20, 2008.

PHOTO DOCUMENTATION



PHOTO 5:

View of the southeast corner of the property showing a disturbed area, Morro manzanita, and coast live oak trees. Chumash Drive is seen in the forefront of the photo.

Photo taken November 23, 2010.



PHOTO 6:

View of the maritime chaparral and coastal scrub in the central portion of the property.

Photo taken November 23, 2010.

PHOTO DOCUMENTATION



PHOTO 7:

View of a live Morro shoulderband snail observed on the eastern portion of the property.

Photo taken
November 23, 2010.

Appendix B.
**Morro Shoulderband Snail
Protocol Survey Report (2008)**

May 12, 2008

Mr. Robert Miller
PO Box 469
Grover Beach, CA 93483



**MORRO
GROUP, INC.**
A DIVISION OF
SWCA
ENVIRONMENTAL CONSULTANTS

SUBJECT: *Morro Shoulderband Snail Protocol Survey Results for your Chumash Drive property (SWCA # 13937).*

Dear Mr. Miller:

Morro Group has completed five protocol surveys of your property located on Chumash Drive in Los Osos, California. The surveys were performed to establish presence/absence, and distribution of the federally endangered Morro shoulderband snail (*Helminthoglypta walkeriana*) on the property. Our findings and recommendations are included in the enclosed report. One live MSS was observed during the protocol surveys. Due to these findings and the habitat conditions observed on the property and in adjacent areas, it is unlikely that the USFWS would provide a concurrence determination for a project at this time. Per our permit requirements, a copy of this survey report has been sent to the U.S. Fish & Wildlife Service Ventura Field Office. I addressed the report to Julie Vanderwier so that she will be able to discuss the survey results and site conditions as you proceed through the regulatory process.

If you have any questions or comments regarding these findings, recommendations, or the regulatory process, please do not hesitate to call me at (805) 543-7095, extension 108.

Sincerely,
MORRO GROUP a Division of SWCA.

Travis Belt
Associate Biologist

Cc: United States Fish and Wildlife Service
Ventura Office
Julie Vanderwier
2493 Portola Road
Ventura, CA, 93003

**Miller Property
Los Osos, California**

**MORRO SHOULDERBAND SNAIL
PROTOCOL SURVEY REPORT**

Prepared for:

Robert Miller
1732 Strand Way
Oceano, CA 93445

Prepared by:



March, 2008

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APPENDIX

Appendix A Photo-documentation

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I. INTRODUCTION

This protocol survey report has been prepared by Morro Group / SWCA for Robert Miller, and is intended for use by the County of San Luis Obispo and regulatory agencies for permitting and planning purposes. The objective of this report is to provide protocol-level survey results for the federally listed Morro shoulderband snail (*Helminthoglypta walkeriana*) on an approximately 1.25-acre lot (APN 074-323-020) located on Chumash Drive, in the community of Los Osos, California (refer to Figures 1 and 2). The data presented in this report is a compilation of information received from regulatory agencies, literature reviews, and five protocol-level surveys of the property by Morro Group biologists.

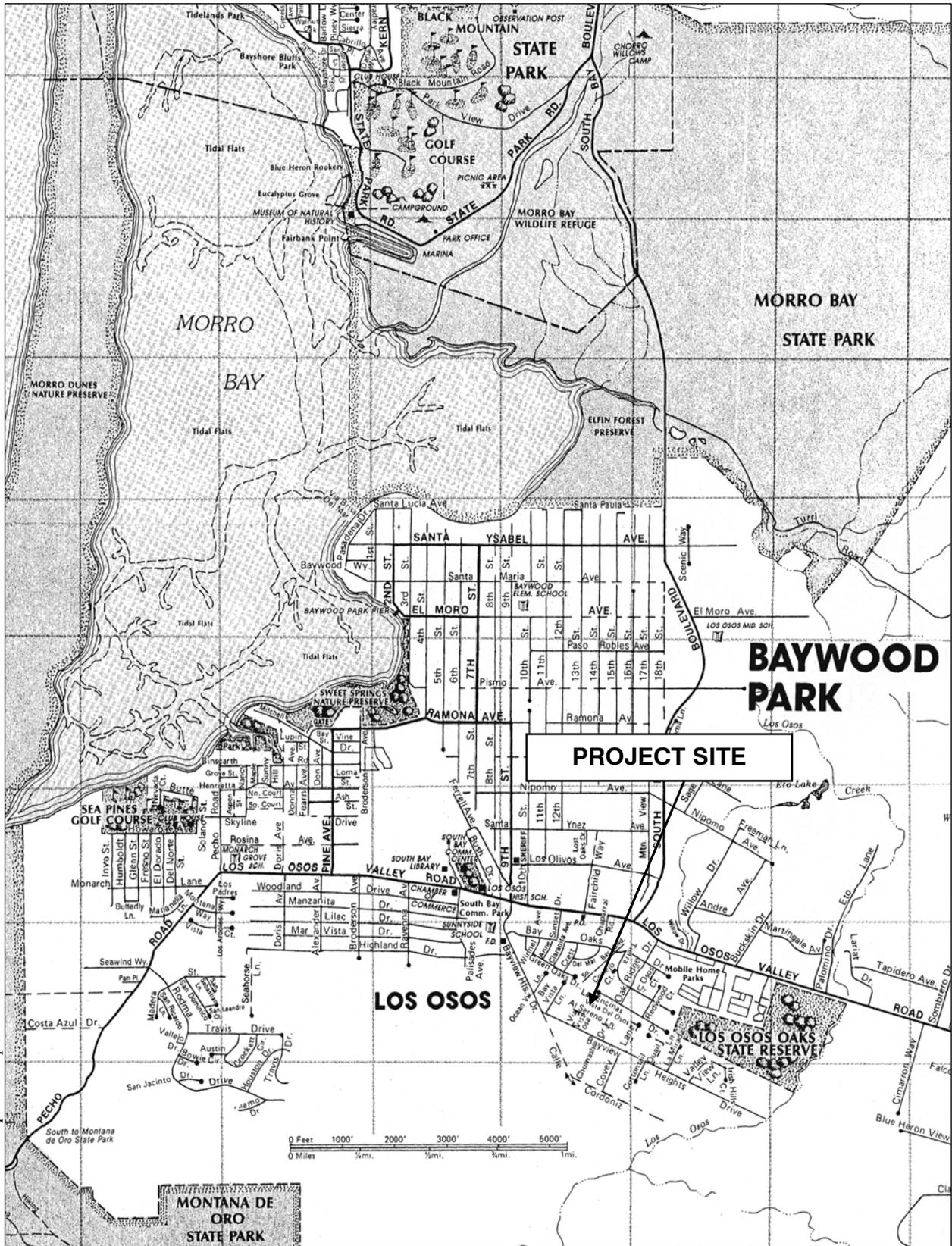
II. SURVEY METHODS

According to the 2003 United States Fish and Wildlife Service (USFWS) Protocol Survey Guidelines for Morro shoulderband snail (MSS), five protocol surveys must be performed during rainy or heavy fog conditions to establish the presence/absence of MSS. Per the USFWS requirements, Morro Group conducted five surveys during or immediately following rainfall events (refer to Table 1), between January 5, 2008 and February 20, 2008. All surveys were conducted by Morro Group biologists Travis Belt, Barrett Holland and Jon Claxton. Morro Group biologists Travis Belt and John Claxton are authorized to perform MSS surveys under federal permit PRT-824123-3.

All five surveys were conducted on foot, over a 90 to 120 minute period. All areas of the site were thoroughly examined in order to determine the presence/absence of live MSS, empty shells, suitable habitat, or other resources considered sensitive by USFWS. Although the entire area was surveyed, Morro Group biologists focused the majority of survey efforts within areas of potential habitat including, but not limited to: woody refuse, stems of woody vegetation, areas of detritus or debris, shrubs, fence lines, and ground cover plants.

III. MORRO SHOULDERBAND SNAIL SPECIES AND HABITAT DESCRIPTION

On December 15, 1994 the USFWS listed the MSS as an endangered species, under the Federal Endangered Species Act. MSS are a member of the land snail family Helminthoglyptidae and are most 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 most often found associated with sandy soils of coastal dune and coastal sage scrub communities near Morro Bay. MSS has been found to be closely associated with several species of shrubs including mock heather, seaside golden yarrow, deerweed, sand almond, and with the introduced hottentot fig (ice plant). Other plants that commonly occur in areas occupied by this species include black sage, dune buckwheat, California sagebrush, dune lupine, and California croton. Typically, live snails have been found to be associated with shrubs that exhibit dense, low growth with ample contact with the ground.



Source: Compass Maps

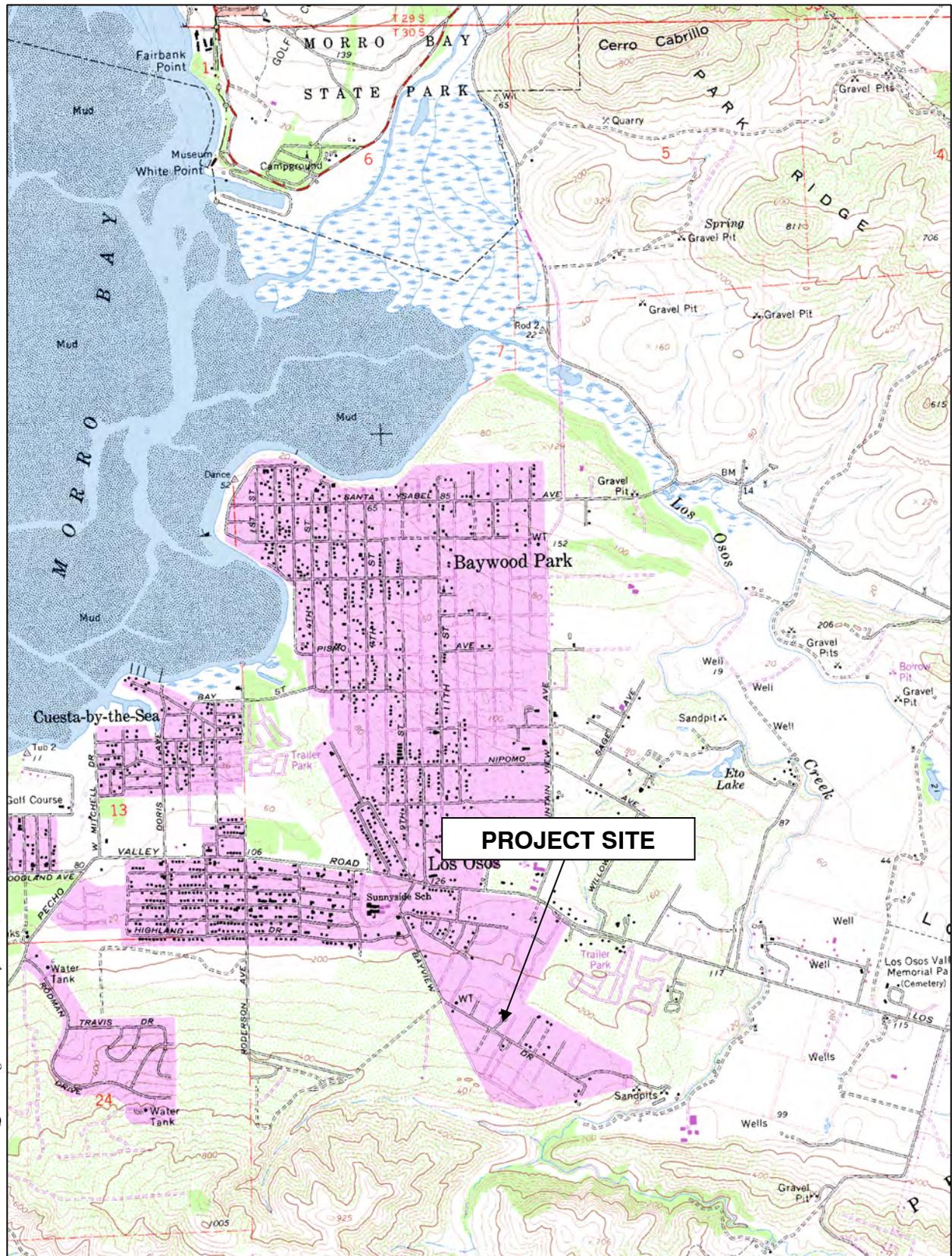


NORTH

Not to Scale

Morro Group - A Division of SWCA

**Vicinity Map
FIGURE 1**



Source: USGS 7.5 Quadrangle – Morro Bay South.



NORTH
Not to Scale

**Location Map – USGS Quad
FIGURE 2**

IV. PROPOSED PROJECT

No project is currently proposed for the lot. MSS surveys were conducted to provide disclosure information for sensitive species prior to sale of the property. If sold, it is likely that a single family residence would be proposed for construction on the site.

V. EXISTING CONDITIONS

The undeveloped property is located at the intersection of Chumash Drive and Al Sereno Lane. The lot slopes gently to the north and residences are located to the north, south, east and west. (Refer to Figure 3, and attached photographs). The Gosnell property to the east, currently has a Habitat Conservation Plan (HCP) in place for MSS

Vegetation on the site consists of a senescent stand of coastal maritime chaparral, with some coastal sage scrub associates present. This plant community is dominated by chamise (*Adenostoma fasciculatum*) and buck brush (*Ceanothus cuneatus*); however, several coastal sage scrub species associated with MSS are present. Coastal sage scrub species on the site include mock heather (*Ericameria ericoides*), black sage (*Salvia mellifera*), and California sagebrush (*Artemisia californica*). Other plant species observed on the site include Morro manzanita (*Arctostaphylos morroensis*), coast live oak (*Quercus agrifolia*), croton (*Croton californicus*), and horkelia (*Horkelia cuneata*).

The coastal sage scrub and maritime chaparral vegetation on the site is senescent and relatively undisturbed. With exception to the northern property boundary, the vegetative structure lacks woody refuse, debris, and duff. The northern property boundary has a significant amount of woody refuse and debris. The vegetative structure found on the remaining portions of the property is characterized by open canopies with minimal contact to the ground surface. The observed vegetative structure provides suitable but marginal habitat for MSS. The adjacent properties to the east and west are composed of similar coastal sage scrub and coastal maritime chaparral communities.



**MSS Habitat Map
FIGURE 3**

Back of Figure 3

VI. RESULTS

One live Morro shoulderband snail was observed on the property during the five protocol-level surveys conducted in 2008 (refer to Table 1). This adult snail was observed near the northern property boundary and beneath a mock heather shrub (refer to Figure 3). Eight empty MSS Class A, B, and C shells were also found in various areas of the property. Fifteen empty shells of common brown garden snail (*Helix aspersa*) were also observed during the surveys. Competition with *Helix aspersa* is a known threat to MSS (USFWS, 1998).

Thirteen Morro Manzanitas were observed in various locations on the site (refer to Figure 3). Morro manzanita is a federally threatened species and is included on the California Native Plant Society's (CNPS) 1B.1 list. Plants that are on the CNPS 1B.1 list are rare, threatened, or endangered in California, and elsewhere.

A small but dense stand of coast live oak trees is located near the southern property boundary (refer to Figure 3). This stand contains 3-6 multi-branched oak trees, with branches ranging from 3" to 10" diameter at breast height (dbh). The sandy soils on the site have contributed to the short sprawling nature of these oak trees.

TABLE 1
Survey Dates, Time and Findings

Survey Number	Survey Date and Time	Rainfall Activity	Temperature	Findings	Biologist(s)
1	1/05/08 3:30 p.m. to 5:00 p.m.	Approximately 2.03- inches of rain in last 24 hours.	59°F	<i>Helix aspersa</i> – 0 live, 1 shell.	J. Claxton, B. Holland
2	1/23/08 3:10 p.m. to 4:30 p.m.	Approximately 2.9 inches of rain in last 48 hours.	57 °F	MSS – 1 live, 1 shell <i>Helix aspersa</i> –0 live, 5 shells	T. Belt, B. Holland
3	1/28/08 9:00 a.m. to 11:00 a.m.	Approximately 1.5- inches of rain in last 48 hours.	58°F	MSS –0 live, 4 shells. <i>Helix aspersa</i> – 0 live, 10 shells.	T. Belt, B. Holland
4	2/3/08 2:30 p.m. to 4:00 p.m.	Approximately 1.25 inches of rain in last 24 hours.	57 °F	MSS –0 live, 1 shell.	T. Belt
5	2/20/08 9:00 a.m. to 10:30 a.m.	Approximately 0.4 inches of rain in last 12 hours.	58°F	MSS – 0 live, 2 shells.	T. Belt, B. Holland

MSS = Morro shoulderband snail

BSSS = Big Sur shoulderband snail

Helix aspersa = Common brown garden snail

VII. REGULATORY IMPLICATIONS

Section 3(18) of the Endangered Species Act 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 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 the property have potential to result in “take” of Morro shoulderband snail, through both direct impact and by loss of or degradation of known habitat.

Therefore, activities such as construction, mowing, brush or debris removal or grading within a property that is known to support MSS has potential to result in “take” of the species, as well as modification and/or degradation to known habitat. Unauthorized “take” is a violation of the Endangered Species Act and could result in penalties of up to \$100,000 and/or up to one year imprisonment.

If a project can be shown to have no adverse impacts to MSS or their habitat, USFWS may grant a “Concurrence Authorization”. Concurrence authorization is USFWS acknowledgement that a project has no potential to result in take of the species. If a concurrence authorization is not granted by USFWS, mitigation through preparation of an HCP may be necessary prior to construction.

In order to satisfy California Environmental Quality Act (CEQA) requirements, any potential impact to oak trees or special-status plant species resulting from a development project must be addressed during the County permitting process. If impacts to coast live oaks and/or Morro manzanita are proposed, the County Conditions of Approval for the project will contain measures designed to mitigate for those impacts.

VIII. CONCLUSIONS AND EFFECTS DETERMINATION

The findings as described within Section VI are sufficient to establish that one live MSS and habitat for this species exists within the property boundaries. Considering the presence of MSS within the property, the presence of MSS on adjacent properties, and recent communications with USFWS Biologist Julie Vanderwier; it is unlikely that concurrence authorization would be granted for a project on the Chumash Drive property. If an individual is interested in implementing a project on the property, Morro Group/SWCA recommends that they contact Ms. Julie Vanderwier at USFWS to discuss the options for developing an Individual Low-effect HCP on the property. One option to consider and discuss with the USFWS is the potential to extend and enhance the Gosnell HCP, which is located on the adjacent property to the east. To facilitate HCP planning, we recommend that the following measures and design features are incorporated in the project plans. The following recommendations are suggested to reduce potential impacts to MSS during construction of a single-family residence on the site:

1. Develop a site plan that avoids areas where MSS were found during protocol surveys and consult with USFWS on developing an Individual Low-effect HCP that will mitigate for project related impacts to MSS. Due to the current lack of a mitigation bank in San Luis Obispo County, mitigation for the HCP would be performed on-site. Native plantings, maintenance requirements, and a deed restriction for the set-aside area would be included in the HCP conditions.
2. If preparation of an individual HCP is not deemed appropriate by the USFWS, then participation in a future Los Osos community-wide HCP is recommended. This HCP will be prepared as part of the current County-proposed sewer project, but it is uncertain when this HCP would be completed and available for landowner participation.
3. Participation in a USFWS / County mitigation bank is another future option. However, like the community-wide HCP, no definite timetable for implementation of mitigation bank has been established.

Based on the results of the five protocol-level surveys and the recommendations above, it is unlikely that the USFWS would grant authorization to develop the undisturbed portions of the site without an HCP. An HCP for MSS has been established on the adjacent property to the east. If an individual HCP is developed for the Miller property, we recommend that the preserve location include the northern section of the site where the live MSS was found. We also recommend that it be contiguous with the neighboring HCP to the east for MSS habitat connectivity.

A. IMPACTS TO OAK TREES AND MORRO MANZANITA

If it is determined that coast live oak trees in the southwest corner of the site would be impacted or removed, then the applicant will need to submit an Oak Tree Mitigation Plan to the County that minimizes oak tree removals and impacts. The Plan will need to show all trees with a trunk size of 5.0 inches or larger on the property. The applicant will then need to replace all oak trees proposed for removal at a 5:1 ratio and all impacted oak trees at a 2:1 ratio.

If impacts to Morro manzanita are proposed, the County Conditions of Approval for the project will contain measures designed to mitigate for those impacts. This mitigation could involve the establishment of dedicated open space areas or conservation easements as on-site Morro manzanita preserves, establishment of new Morro manzanita populations in suitable, presently unpopulated on-site areas, or compensatory purchase and preservation of off-site Morro manzanita habitat. In the past the County of San Luis Obispo has accepted a mitigation ratio of 4:1 replacement for impacts to this species.

IX. REFERENCES

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- U.S. Fish and Wildlife Service. 2003. Protocol Survey Guidelines for the Morro Shoulderband Snail. U.S. Fish and Wildlife Service, Portland, Oregon.

APPENDIX A

- **Photo-documentation**



Photo 1:

View from the southeast corner of the property looking north. Note residences to the north and maritime chaparral habitat.

Picture taken on February 20, 2008



Photo 2:

View from the northwest corner of the property looking south. The residence in the upper right corner of the photo is located on the west boundary of the site.

Picture taken on February 20, 2008

PHOTO DOCUMENTATION



Photo 3:

View of a mock heather shrub where one live MSS was observed along the north boundary of the property. Yellow notebook marks location where the snail was observed.

Picture taken on February 20, 2008



Photo 4:

View of an adult MSS shell observed near the southwest corner of the property. This shell was located along the drip line of a dense stand of coast live oak trees.

Picture taken on February 20, 2008

PHOTO DOCUMENTATION

Appendix C.
Cultural Resources Compliance Form

REQUEST FOR CULTURAL RESOURCE COMPLIANCE

U.S. Fish and Wildlife Service, Region 1

Project Name:	Moreno Residential Project				FWS Program: (ES, Refuges, Fisheries, Fire...)		
					Funding Program: (Partners, Refuges, TEA-21, HCP, NAWCA...)		
State: CA, ID, HI, NV, OR, WA	CA	EcoRegion: CBE, IPE, KCE, NCE		FWS Unit:		Org Code:	
Project Location:	County	Township	Range	Section	FWS Contact: Name, Tel#, Address		
	San Luis Obispo	30 S	10 E	24			
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)			September 2012	Fall 2013	
1.25		1.25					
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	X	Yes			X	No
MAPS Attached		Check below		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)		X		Project (sketch) map showing Area of Potential Effect with locations of specific ground altering activities (required)			
Photocopy of aerial photo showing location (if available)		X		Any other project plans, photographs, or drawings that may help CRT in making determination (if available)			
Directions to Project: <small>(if not obvious)</small>	Take Los Osos Valley Road west from Highway 101, turn left on Bayview Heights Drive, then left on Chumash Drive, and then right on Al Sereno Lane.						
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 will construct a single family home and a guest house on the 1.25 acre undeveloped parcel. The project will convert a total of 0.625 acres of undeveloped land for residential uses in the community of Los Osos, California. The remaining 0.625 acre of the parcel will be conserved for a Habitat Conservation Plan for Morro shoulderband snail. The Conservation Easement will be held by the County of San Luis Obispo.						
	Non-native species in the 0.625-acre easement area, particularly veldt grass (<i>Ehrharta calycina</i>) and narrow-leaved iceplant (<i>Conicosia pugioniformis</i>), will be removed by hand pulling. Progress of restoration efforts will be monitored at regular intervals. Restoration and monitoring will last for 4 years following the approximately 13-month residential construction period.						
The Applicant will provide all funds required to implement the conservation strategy. The Applicant understands that failure to provide adequate funding and consequent failure to implement the terms of this HCP in full could result in temporary permit suspension or permit revocation.							

Return Form and maps to: Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, California 93003
Questions: 805-644-1766 or fax 805-644-3958

Area of Potential Effects (APE):	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.
	Activities associated with house construction will include grading, excavation, foundation pouring; framing; installation of siding, roofing, electrical, plumbing, insulation, and drywall; painting; and installation of a septic system. Normal construction methods and equipment will be used. No structures are currently present on the lot-all construction will be in undisturbed areas. Approximately 0.2 acres will be disturbed by proposed construction. Refer to Figure 3 for areas of disturbance.
Environmental and Cultural Setting:	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>The Los Osos area was first settled in 1769, and is currently dominated by residential development. Numerous prehistoric sites are located within the Los Osos area. No evidence of prehistoric use was observed on the site during biological surveys. A formal archaeological survey was conducted for the project in November 2011, by CRMS. The surface inventory survey conducted on the site found no evidence of archaeological materials, and no evidence of darkened soils. The report stated that "it is unlikely that subsurface remains are present..."</p> <p>The 1.25-acre parcel is bounded by residential properties, one of which (the former Gosnell property) has an incidental take permit and an area conserved for the snail. Vegetation on the site consists of a senescent stand of maritime chaparral, with some coastal dune scrub associates present, and a coast live oak (<i>Quercus agrifolia</i>) tree cluster. The maritime chaparral habitat and associated coastal dune scrub vegetation on the site is senescent and relatively undisturbed.</p>

Return Form and maps to: Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, California 93003
Questions: 805-644-1766 or fax 805-644-3958

Appendix D.
Photo Documentation



PHOTO 1:

View of the location for the proposed driveway. The photo is taken from the edge of Al Sereno Lane, looking north over the Moreno property.

Photo taken on November 8, 2011.



PHOTO 2:

View of the approximate location for the proposed residence. The photo is taken from the approximate location of the proposed guest house and is looking southwest toward the proposed main residence.

Photo taken on November 8, 2011.



PHOTO 3:

View looking north over the proposed conservation area. This photo is taken from the approximate location of the proposed guest house.

Photo taken on November 8, 2011.



PHOTO 4:

View looking north over the proposed conservation area. This photo is taken from the approximate center of the proposed conservation area.

Photo taken on November 8, 2011.

Appendix E.
CAL FIRE Letter



CAL FIRE
San Luis Obispo
County Fire Department

635 N. Santa Rosa • San Luis Obispo, CA 93405
Phone: 805-543-4244 • Fax: 805-543-4248
www.calfireslo.org



Robert Lewin, Fire Chief

September 14, 2011

Mr. Caytano D. Moreno
2482 Seahorse Lane
Los Osos, CA. 93402

Subject: Required setback for proposed development adjacent to Habitat Conservation Area/
Sensitive Resource Area

Mr. Moreno,

As per your request, CAL FIRE/San Luis Obispo County Fire Department provides the following comment regarding your proposal to place residential development upon A.P.N. 074-323-020 within Los Osos, CA.

The California Fire Code, as adopted by the Los Osos Community Services District with local amendments, takes in to consideration the need to account for Habitat Conservation Areas and/or Sensitive Resource Areas when requiring vegetation clearance around structures for purposes of providing defensible space from wildland fires.

This department recognizes the need to ensure that Mr. Moreno adheres to all requirements relative to maintaining proper setbacks for his proposed project(s). CAL FIRE/County Fire staff is confident that with proper building materials being utilized as mitigation, the required setbacks can be satisfied.

Please feel free to contact me at (805)543-4244, ext. 3425 should you have additional questions or concerns regarding this matter.

Sincerely,

Clinton I. Bullard
Fire Inspector

