

**FINAL HABITAT MITIGATION AND
MONITORING PLAN**

LONG POTRERO MITIGATION SITE

SUNRISE POWERLINK

**CORPS FILE NO. 2007-00704-SAS
SWRCB 401 CERTIFICATION FILE NO. SB090151N
CDFG STREAMBED ALTERATION AGREEMENT NO. 1600-2009-0365-R5**

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List of Acronyms

| | |
|---------|--|
| AA(s) | Assessment Area(s) |
| BMPs | Best Management Practices |
| BLM | Bureau of Land Management |
| BO | Biological Opinion |
| Cal-IPC | California Invasive Plant Council |
| CDFG | California Department of Fish and Game |
| CNF | Cleveland National Forest |
| Corps | U.S. Army Corps of Engineers |
| CRAM | California Rapid Assessment Method |
| CPUC | California Public Utilities Commission |
| CWA | Clean Water Act |
| EPA | Environmental Protection Agency |
| GIS | Geographic Information System |
| HAP/HMP | Habitat Acquisition Plan and Habitat Management Plan |
| HMMP | Habitat Mitigation and Monitoring Plan |
| HSA | Hydrologic Subarea |
| lf | linear feet |
| LSAA | Lake and Streambed Alteration Agreement |
| LMP | Land Management Plan |
| MSCR | Mitigation Monitoring, Compliance, and Reporting Program |
| MSCP | Multiple Species Conservation Program |
| OHV | Off-highway Vehicle |
| PAR | Property Analysis Record |
| PJD | Preliminary Jurisdictional Determination |
| ROW | Right-of-Way |
| SCCWRP | Southern California Coastal Water Research Project |
| SDG&E | San Diego Gas & Electric Company |
| SDRWQCB | San Diego Regional Water Quality Control Board |
| SWAMP | Surface Water Ambient Monitoring Program |
| SWPPP | Stormwater Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| USFWS | United States Fish and Wildlife Service |
| WOS | Waters of the State |
| WOUS | Waters of the United States |

1.0 INTRODUCTION AND PURPOSE

San Diego Gas and Electric Company (SDG&E) is constructing a new 500/230 kilovolt (kV) electric transmission line (Sunrise Powerlink, the Project) that will extend approximately 117 miles from the El Centro area of Imperial County to southwestern San Diego County, in southern California (Figure 1). Construction of the transmission line structures, access roads, and ancillary facilities will result in permanent and temporary impacts to “waters of the United States” (WOUS) and “waters of the State” (WOS). In compliance with federal and state regulations, SDG&E has applied for and received authorization for the impacts from the U.S. Army Corps of Engineers (Corps), the State Water Resources Control Board (SWRCB), and the California Department of Fish and Game (CDFG).

- The Corps has determined that the Project complies with its Nationwide Permit (NWP) No. 12 and No. 3 under section 404 of the Clean Water Act (CWA), as specified in the notification dated January 7, 2011 (File No. 2007-00704-SAS);
- SWRCB has issued a certification that the Project is in compliance with section 401 of the CWA, as specified in the notification dated November 10, 2010 (file No. SB090151N); and
- CDFG has approved a Streambed Alteration Agreement (SAA) for the Project in accordance with section 1600 of the California Fish and Game Code, as specified in agreement no. 1600-2009-0365-R5 dated November 29, 2010.

The authorizations are conditioned on implementation of the impact avoidance, minimization, monitoring, and mitigation measures identified in the Corps NWP notification letter, SWRCB 401 certification, and CDFG SAA. For permanent impacts to WOUS and WOS, the required mitigation includes the preservation, restoration, enhancement, and management of wetlands and waters at five mitigation sites (Chocolate Canyon, Desert Cahuilla, Lightner, Long Potrero, and Suckle) at the locations shown on Figure 2. This Final Habitat Management and Monitoring Plan (Final HMMP) identifies the mitigation for permanent impacts that will be implemented at the Long Potrero Mitigation Site in San Diego County, California. This Final HMMP describes the specific mitigation activities and plans, performance criteria to measure success, initial monitoring and management actions, long-term management activities, and estimated costs for the implementation of HMMP mitigation. It supplements the Conceptual HMMP (WRA 2010b) that was conditionally approved when the Corps, SWRCB, and CDFG issued their authorizations. A Final HMMP also has been prepared for each of the other mitigation sites.

1.1 Responsible Parties

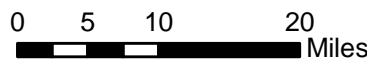
SDG&E is responsible for implementing mitigation for the (Project, including the measures identified in this Final HMMP. SDG&E also is the current owner of the Long Potrero Mitigation Site.

WRA, Inc. (WRA) is SDG&E's authorized agent; prepared SDG&E's applications to the Corps, SWRCB, and CDFG; and prepared this and the other four Final HMMPs. WRA also is the prime contractor for implementation of the restoration, enhancement, maintenance, and monitoring measures identified in the Final HMMPs, excluding the long-term (in perpetuity) management of the mitigation sites.



Figure 1. Project Area Location Map

Sunrise Powerlink
San Diego/Imperial County, California



Map Date: June 2010
 Map By: Derek Chan
 Base Source: ESRI
 Filepath: L:\Acad 2000 Files\17000\17128-3\GIS\ArcMap\Mitigation\
 Fig1_LocMap_20100630.mxd



ENVIRONMENTAL CONSULTANTS

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Sunrise Powerlink

San Diego/Imperial County,
California

Figure 2.

Overview of Mitigation
Area Locations

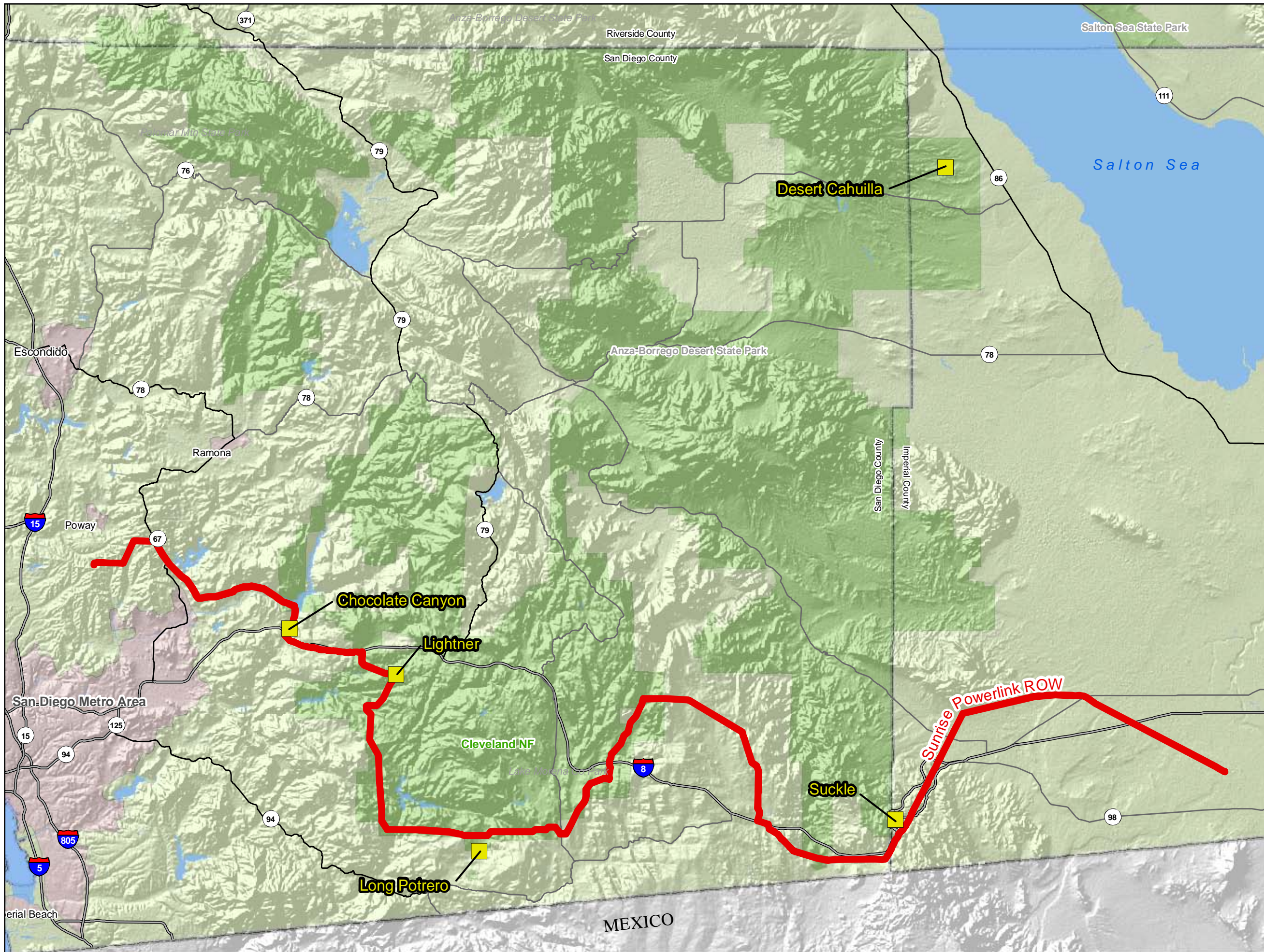
Legend

 Mitigation Area



0 5 10
Miles

Map Date: June 2010
Map By: Derek Chan
Base Source: ESRI
Filepath: L:\Acad 2000 Files\17000\17128-3\GIS\ArcMap\Mitigation\Fig2_MitigationSites_20100629.mxd



Long-term (in perpetuity) management of the Long Potrero Mitigation Site will be conducted by qualified land conservancy or government agency (see Section 4.0 for details). Ownership of the land will be conveyed to the designated land manager, who will protect and maintain the site as natural open space. The authorizations for impacts to WOUS and WOS require that the land manager, the provisions for permanent site protection, the long-term management plan for the site, and the financial commitments for management be approved by the Corps, SWRCB, and CDFG (see Sections 4, 11, and 13 for details).

Primary contact information for these parties is below:

Permittee: SDG&E
8315 Century Park Court, CP21G
San Diego, California 92123-1548
Contact: Alan Colton
Contact Phone: (858) 654-8727

Authorized Agent: WRA, Inc.
2169-G East Francisco Blvd.
San Rafael, CA 94901
Contact: Michael Josselyn, PhD, PWS
Contact Phone: (415) 454-8868

Entity Responsible for Long Term Management: Contact information will be provided when the entity has been approved by USFWS and CDFG.

1.2 Purpose and Organization

The purpose of this Final HMMP is to identify the compensatory mitigation measures that will be implemented on the Long Potrero Mitigation Site for the Project's impacts to WOUS and WOS. The impacts mitigated at the site include those resulting from Project activities that occur along a 19-mile segment of the 500 kV line (EP252-1 to EP173-1), extending west from the Jacumba Ranch area to McCain Valley.

The document generally is organized to follow the regulations set forth in the 2008 Clean Water Act (CWA) Section 404 Final Compensatory Mitigation Rule (33 CFR Parts 325 and 332), as well as 401 certification and SAA requirements. Because regulations from multiple agencies are addressed, the terminology and order of requirements sometimes differs from that in the 2004 Los Angeles District Final Mitigation Guidelines and Monitoring Requirements. However, all Corps requirements are addressed. In addition, as requested by the Los Angeles District Corps office and the SWRCB, the HMMP includes a function-based assessment of the impact areas and mitigation sites that was prepared using the California Rapid Assessment Method (CRAM).

The required content of the HMMP is listed below, with the location of the information within this document indicated in parentheses.

- Mitigation Goals and Objectives, including resource type, amounts, and methods of compensation and justification for inclusion of preservation as part of the compensatory mitigation (see Section 2.0)
- Site Selection, including key factors for providing mitigation at a site (see Section 3.0)

- Site Protection Instrument (see Section 4.0)
- Baseline Information, including the ecological characteristics of impact areas and mitigation sites and CRAM evaluation (see Section 5.0)
- Determination of Credits, including a description of how the mitigation will provide compensatory mitigation for impacts (see Section 6.0)
- Mitigation Work Plan, including detailed descriptions of the work to be performed in implementing mitigation (see Section 7.0)
- Ecologically-based Performance Standards (see Section 8.0)
- Monitoring Requirements and Methods (see Section 8.0)
- Maintenance Plan, including maintenance activities to ensure continued viability of the mitigation site (see Sections 9.0 and 10.0)
- Long-term Management Plan, (see Section 11.0)
- Adaptive Management Plan (see Section 12.0)
- Financial Assurances to ensure project mitigation will be effectively implemented and maintained (see Section 13.0)

Supplemental information is provided in five appendices:

- Appendix A. All CRAM Scores Collected for the Sunrise Powerlink Project
- Appendix B. Grading and Landscape Plans for the Long Potrero Mitigation Site
- Appendix C. PAR Analysis for the Long Potrero Mitigation Site from the September 2010 HAP/HMP
- Appendix D. Detailed Mitigation Implementation Cost Estimate to Support Financial Assurances
- Appendix E. Title Report, County Assessor's Parcel Map, Phase One Environmental Assessment Report, Plat Map, and Williams Act/Farmland Security Zone Contracts

Project impacts were described in the Pre-Construction Notification prepared for the Corps, as part of the LSAA Notification Package prepared for the CDFG, as part of the Water Quality Certification Application prepared for the SWRCB, and as modified by subsequent submittals. All permit application documents contain a complete project description. Project modifications have been made throughout the permit process to further reduce environmental impacts, including those to streams, wetlands, and desert dry washes. Mitigation for temporary impacts to streams, wetlands, and desert dry washes will occur through restoration within the temporary impact areas, as described in the Conceptual HMMP (WRA 2010b) and is therefore not addressed in this document.

1.3 Relationship to the Project's Habitat Acquisition Plan/Habitat Management Plan (HAP/HMP)

The measures in this Final HMMP for the acquisition, permanent protection, and long-term management of the entire mitigation site, including the areas where HMMP preservation, enhancement, and restoration measures will be implemented, are from the Project's Habitat Acquisition Plan/Habitat Management Plan (HAP/HMP). The HAP/HMP is required under the Project's Mitigation Monitoring, Compliance, and Reporting Program (MMCRP, Aspen 2010) and the 2010 Biological Opinion (BO, USFWS 2010) issued by the U.S. Fish and Wildlife Service (USFWS) to mitigate the Project's impacts on sensitive vegetation communities and

special status species. It is an appropriate vehicle for implementation of parts of the HMMP because:

1. The Chocolate Canyon, Desert Cahuilla, Lightner, Long Potrero, and Suckle Mitigation Sites in the Final HMMPs and the HAP/HMP are the same properties;
2. The requirements specified in the MMCRP and BO regarding mitigation land acquisition, management, site protection assurances, and funding guarantees are fundamentally the same as those specified by the Corps, SWRCB, and CDFG in the NWP conditions, 401 certification, and SAA; and
3. The HAP/HMP includes provisions for coordinating initial and long-term management of the entire mitigation property with implementation of HMMP measures on the site.

The HAP/HMP measures in this HMMP are from the HAP/HMP dated September 22, 2010 (SDG&E 2010a), which was developed by qualified biologists and conservation planners working in close coordination with USFWS and CDFG. The September 2010 HAP/HMP includes a management plan and Property Analysis Record (PAR) or PAR equivalent for each of the mitigation sites. The management plan:

- Identifies the mitigation function of the property,
- Identifies the proposed land manager and holder of the fee title or conservation easement,
- Describes the property and its biological resources,
- Identifies the biological resource and land stewardship tasks necessary to conserve and maintain the property's mitigation values,
- Summarizes the results of the PAR for each property in terms of funding required for the first five years of management and for a non-wasting endowment for ongoing management, and
- Indicates whether the property has been acquired.

The HAP/HMP also includes a description of the PAR assumptions, the PAR spreadsheets for each property, and legal descriptions of the properties.

As required by the MMCRP and BO, the HAP/HMP was submitted for approval to the CPUC, BLM, USFWS, and CDFG as the mitigation plan for vegetation and species' impacts outside CNF. A separate HAP/HMP was prepared for and has been approved by USFS to mitigate vegetation and species impacts within CNF independent of wetlands and waters. Consistent with their regulatory role, USFWS and CDFG took the lead in reviewing the September 2010 HAP/HMP. They issued a joint letter on December 2, 2010 (USFWS and CDFG 2010) indicating their approval for MMCRP purposes of several Project mitigation plans, including conditional approval of the HAP/HMP. Subsequently, the CPUC and BLM also approved the HAP/HMP for MMCRP purposes.

The conditional approval by the USFWS and CDFG requires that a final management plan and a final PAR be prepared for each mitigation site. As stated in the December 2, 2010, letter:

...the HMP will require further revisions once the mitigation lands have been acquired and land managers have been identified and approved by the Wildlife Agencies. Once the land managers are approved, San Diego Gas & Electric (SDG&E) will be required to provide a revised final HMP that will include revised Property Analysis Records, approved by the identified land managers, for Wildlife Agency review and approval. The final HMP must be implemented no later than 18 months from the initiation of construction activities.

To facilitate the final identification and approval of the land managers and the subsequent preparation of final management plans and PARs, USFWS and CDFG has initiated discussions with entities identified as potential land managers in the HAP/HMP. They also are preparing their recommended revisions to the individual management plans and PAR assumptions. For the five HMMP mitigation sites, the discussions with land managers and HMP/PAR revisions will be coordinated with and will include the Corps, SWRCB, and CDFG LSAA staff. SDG&E will be responsible for completing the revised final documents and submitting them back to the agencies for final review and approval. For MMCRP purposes, the CPUC and BLM also must approve the final plan and PAR.

When the revised final HMP/PAR is approved for the Long Potrero Mitigation Site, it will supersede the HAP/HMP tasks and estimates in Sections 10 and 11 of this Final HMMP.

1.4 Differentiation of the HMMP Mitigation Parcels within the Long Potrero Mitigation Site

In this HMMP, a distinction is made between the Long Potrero Mitigation Site as described in the HAP/HMP and the location where all HMMP measures will be implemented. The mitigation site as described in the HAP/HMP includes 10 parcels totaling approximately 1212 acres. as described in the HAP/HMP (see Section 3.0 for details). All HMMP measures will occur on five contiguous parcels totaling approximately 418 acres in the northern part of the mitigation site (Figure 3). The five parcels are cited hereafter as the "HMMP Mitigation Parcels."

In the sections that follow, the focus is on the HMMP Mitigation Parcels. Information about the entire mitigation site is included to provide a context for the preservation and management measures on the mitigation parcels.

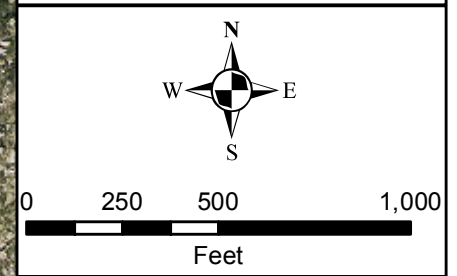
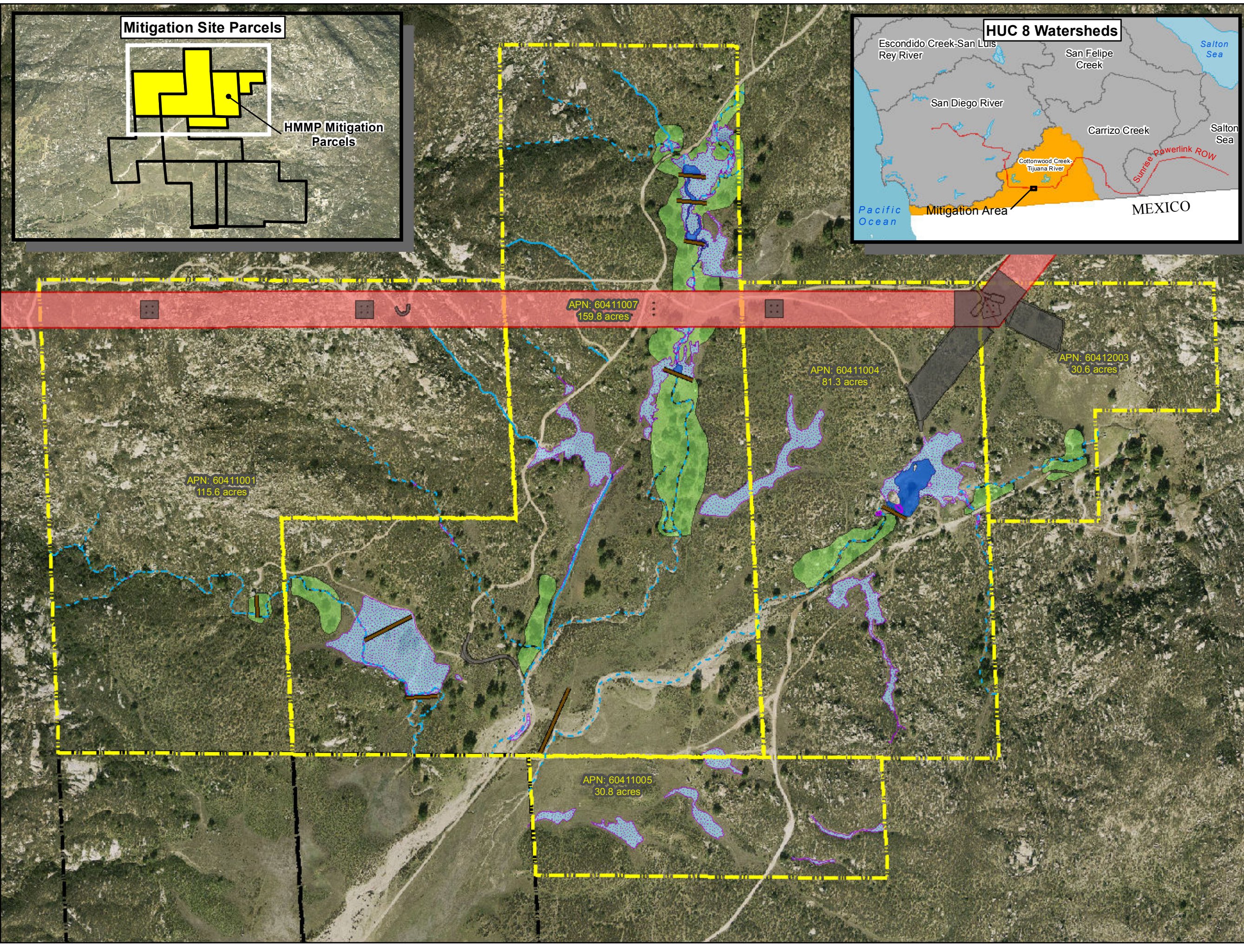
2.0 MITIGATION GOALS AND OBJECTIVES FOR THE HMMP MITIGATION PARCELS AT LONG POTRERO MITIGATION SITE

The goals of mitigation on the HMMP Mitigation Parcels at the Long Potrero Mitigation Site are to:

- Preserve and manage aquatic resources and associated uplands in perpetuity as a "watershed" approach to mitigation
- Enhance stream and wetland functions, including buffer and wildlife habitat functions
- Compensate for Project impacts on WOS beneficial uses
- Provide the legal structure and funding for long-term management of weeds, trash, vandalism, trespassing and any other human-induced disturbances in perpetuity through a non-wasting endowment

Figure 3

Existing Conditions at the Long Potrero HMMP Mitigation Parcels



Two types of mitigation approaches will be implemented: preservation and enhancement. These approaches are defined in accordance with the Corps 2008 Mitigation Rule (Corps 2008b) as follows:

- **Preservation:** The permanent protection of ecologically important wetlands or other aquatic resources through the implementation of appropriate legal and physical mechanisms (i.e. conservation easements, title transfers). Preservation may include protection of upland areas adjacent to wetlands as necessary to ensure protection or enhancement of the aquatic ecosystem. Preservation does not result in net gain of wetland acres and may only be used in certain circumstances, including when the resources to be preserved contribute significantly to the ecological sustainability of the watershed.
- **Enhancement:** Activities conducted within existing wetlands that heighten, intensify, or improve one or more wetland functions. Enhancement is often undertaken for a specific purpose such as to improve water quality, flood water retention or wildlife habitat. Enhancement results in a gain in wetland function but does not result in a net gain in wetland acres.

2.1 Resource Functions, Types, and Amounts

The HMMP Mitigation Parcels and the rest of the Long Potrero Mitigation Site support a mixture of ephemeral, intermittent, and perennial streams along with riparian and wetland habitat (see Figure 3). Preservation of the HMMP Mitigation Parcels will protect streams (including headwaters), riparian and wetland habitats, and adjacent upland areas by eliminating the potential re-introduction of cattle grazing, managing the site for natural resource functions and services.

As described in more detail in Section 7.0, the mitigation activities at Long Potrero will:

- Preserve 1.39 acres (16,857 linear feet [lf]) and enhance 0.96 acre (6,054 lf) of mountain ephemeral, intermittent and perennial streams;
- Preserve 9.92 acres and enhance 5.99 acres of wetlands; and
- Preserve 12.62 acres and enhance 3.95 acres of riparian habitat.

These preserved and enhanced resources occur within and will be managed in perpetuity as part of the overall Long Potrero Mitigation Site. As identified in September 2010 HAP/HMP, the Long Potrero site includes approximately 1212 acres that will be permanently conserved and managed as mitigation for impacts to sensitive vegetation communities and the habitat of three listed species: Quino checkerspot butterfly (*Euphydryas editha quino*), arroyo toad (*Bufo californicus*), and least Bell's vireo (*Vireo bellii pusillus*). In addition to the wetland and riparian resources identified in this HMMP, the site includes approximately 758 acres of chaparral, 176 acres of coastal and montane scrubs, 21 acres of grasslands, and 74 acres of woodlands and forest; the remainder includes approximately 122 acres of non-native habitat and disturbed lands. The Project ROW crosses the site on the HMMP Mitigation Parcels but is not counted as part of the mitigation acreage on HMMP parcels or the mitigation site as a whole.

2.2 Basis for Request to Include Preservation as Part of Compensatory Mitigation

As also discussed in the Conceptual HMMP, preservation of resources on the Long Potrero Mitigation Site is appropriate as part of the compensatory mitigation for the Project's impacts because the preservation meets the requirements from the Corps 2008 Mitigation Rule 332.3(h): (h) Preservation (Corps 2008b). Rule 332.3h states that:

(1) Preservation may be used to provide compensatory mitigation for activities authorized by [Corps] permits when all the following criteria are met:

- (i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed;*
- (ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available;*
- (iii) Preservation is determined by the district engineer to be appropriate and practicable;*
- (iv) The resources are under threat of destruction or adverse modifications; and*
- (v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust).*

(2) Where preservation is used to provide compensatory mitigation, to the extent appropriate and practicable the preservation shall be done in conjunction with aquatic resource restoration, establishment, and/or enhancement activities.

The justification for including preservation at the Long Potrero site as part of the compensatory mitigation for the Project is as follows:

- *Important watershed functions are preserved.* Headwaters of the watershed and extensive areas of upland vegetation surrounding the headwaters will be preserved, thereby protecting and providing the basis for enhancing hydrologic functions within the watershed. The preserved lands also are part of an important transition zone in San Diego County from desert to coastal ecosystems and are linked to two important wildlife corridors between the U.S. and Mexico – the Otay Mountain-Cerra San Ysidro linkage to the west and the La Posta linkage to the east.
- *Significantly contributes to ecological sustainability.* In addition to the contribution to sustainability stemming from the preservation of headwaters, preservation of the large complex of upland, wetland, and riparian resources on the HMMP Mitigation Parcel and entire mitigation site will contribute to protecting soils from erosion and landslide, regulating water flow, maintaining water quality, and supporting groundwater recharge in the watershed. The preserved resources also are important to the survival and recovery of three listed species: Quino checkerspot butterfly, arroyo toad, and least Bell's vireo. The CRAM analysis in Section 5.0 provides additional detail regarding the ecological function and importance of the mitigation site. In addition, the analysis conducted by the County of San Diego as part of the County's Multiple Species Conservation Program (MSCP) includes the Long Potrero property in the draft Focused Conservation Areas for the future East County MSCP. The County's analysis took into consideration known biological values (including wetland and riparian resources), ecological functions, and

connectivity to existing or proposed conserved habitat. The draft map of the Focused Conservation Area and other information about the East County MSCP are on the County's website at <http://www.sdcounty.ca.gov/dplu/mscp>.

- Preservation is appropriate and practicable. Preservation at the Long Potrero site is appropriate because the type of preserved resources is the same and the amount and quality of the preserved resources exceeds that of the impacts being mitigated. Preservation is practicable because the resources occur on one property that is one ownership and that will be managed in its entirety for its biological as well as its waters values. This circumstance increases the likelihood of maintaining and improving the condition of the preserved WOUS and WOS resources over time.
- Resources are under threat of destruction or adverse modification. The occurrence of listed species and regulated waters on the property limit but do not preclude development of the property, especially on parcels with mainly upland habitat. In addition, illegal dumping and illegal grading have occurred on the parts of the property in the recent past. Acquisition by SDG&E eliminated the immediate potential for development to be proposed for parts of the property. Preservation under the HMMP and HAP/HMP will permanently remove the threat of destruction and adverse modification from residential and other forms of rural development. In addition, the minimization and monitoring measures that apply to the Project are designed to avoid destruction or adverse modification of the preserved resources from activities in the Project ROW.
- Resources will be permanently protected. If a conservancy is identified as the land manager (as currently proposed), the resources will be permanently protected under a conservation easement and ongoing management will be funded through a non-wasting endowment. To meet HMMP requirements, the conservation easement will be subject to review and approval by the Corps and SWRCB as well as CDFG. The Corps, SWRCB, and CDFG also must approve the revised final HMP, PAR, and management funding arrangements for the site.
- Preservation is coordinated with restoration, establishment, and/or enhancement. As described in detail in Section 7.0, enhancement actions are proposed for the mitigation site in addition to preservation of existing waters and riparian/wetland habitat. Preservation of the WOUS and WOS resources also will be coordinated with the management of the upland habitats under the HAP/HMP.

3.0 SITE SELECTION

The Long Potrero Mitigation Site provides an opportunity to provide a variety of habitat protection for wetlands, riparian areas, and endangered species and to protect the headwaters of the watershed. Mountainous terrain to the north of the site is protected within the CNF, and the additional protection of this section of the watershed will help maintain watershed health for sensitive species. This area is extremely valuable in terms of a high mountain meadow area and supports emergent wetland (in the form of wet meadows), riparian areas, and streams. Because of its biological and cultural resource values, the property has been identified for several years as a conservation/acquisition priority by a wide range of entities, including San Diego County, USFWS, USFS, CDFG, several land conservancies, and Native American Tribes. It includes habitat for three listed species (Quino, arroyo toad, and least Bell's vireo)

and other special status wildlife such as southwestern pond turtle and a broad range of raptors. It also include multiple sensitive plant species, including populations of Tecate tarplant that will be preserved as mitigation for Project impacts.

Two wildlife corridors are situated on either side of this mitigation site linking the U.S. and Mexico. The Otay Mountain-Cerra San Ysidro linkage to the west and the La Posta linkage to the east serve as an important transition zone from desert to coastal ecosystems and will help maintain the integrity of the landscape fragmented by intense urbanization surrounding the mitigation site. In addition, the Otay Mountain-Cerra San Ysidro is the last cross-border coastal sage scrub linkage. Preservation of this corridor will help maintain the populations of the many endemic plant species found to occur along this corridor (SDG&E 2010). In addition, preservation of the site ensures that the upper portion of the watershed is preserved. The HAP/HMP proposed and USFWS and CDFG are currently considering having a land conservancy as the land manager. SDG&E would convey ownership of the Mitigation Site to the land manager and would convey a conservation easement over the site to CDFG.

Stream features on the site will be enhanced through invasive species removal, which will improve natural features downstream, in the lower watershed. This site is composed of a series of ephemeral, intermittent, and perennial streams, along with several freshwater marshes and emergent wetlands. There are a total of 22 wetlands and 18 streams present on the HMMP Mitigation Parcels; five streams are ephemeral, 12 are intermittent, and one is perennial.

3.1 Watershed Setting and Context

The mitigation parcels abut CNF, BLM lands, and privately owned lands. The site is within close proximity to the Hauser Mountain Wilderness Area. Most of the northern border is shared with CNF. BLM lands lie to the east, southeast, and west. The western half of the southern border is shared with private lands. The BLM lands are within the California Desert Conservation Area. As part of its land management activities, the BLM has designated some lands as sensitive. These designations do not necessarily preclude recreational use. Land uses on adjacent properties include any public access allowed by BLM which includes: target shooting, camping, biking, hiking, rock hounding (collecting), off-highway vehicle (OHV) use, and hunting. CNF has similar recreational uses including target shooting, camping, biking, hiking, designated OHV areas, and hunting (SDG&E 2010a). Specific information on the Long Potrero Mitigation Site Location is listed below in Table 1.

Table 1. Long Potrero Mitigation Site Location Details

| | |
|---------------------------------------|--|
| Mitigation Site Location | 11 miles south of Interstate 8 off of Potrero Valley Road |
| Mitigation Site Latitude/Longitude | 116° 34' 41" W 32° 39' 17" N |
| Name of Watershed and Hydrologic Unit | Long Potrero Watershed within the Cottonwood Creek-Tijuana River Watershed, Potrero Creek HSA (911.25) |
| Mitigation Site City and County | Unincorporated area , San Diego County |

3.2 Beneficial Uses Provided

Beneficial uses and water quality objectives are required to be established for all WOS, including both surface and ground waters. Beneficial uses of the surface and ground waters of the San Diego Region are discussed in the Water Quality Control Plan for the San Diego Basin

9 (SDRWQCB 1994). Beneficial uses for surface waters are designated under section 303 of the CWA (40 CFR 131) and under the Porter-Cologne Act (California Water Code section 13050[f]). The State is required to specify appropriate water uses to be achieved and protected. Definitions and abbreviations for beneficial uses provided by WOS are summarized in Table 2. Waters located within the Long Potrero Mitigation Site are part of the Potrero Creek Hydrologic Subarea (HSA) watershed and are considered inland surface waters as defined by the San Diego Regional Water Quality Control Board (SDRWQCB 1994). According to this document:

Beneficial uses of inland surface waters generally include REC-1 (swimmable) and WARM or COLD. Additionally, inland waters are usually designated as IND, PRO, REC-2, WILD, and are sometimes designated as BIOL and RARE. Inland surface waters that meet the criteria mandated by the Sources of Drinking Water Policy are designated MUN. Unless otherwise designated by the SDRWQCB, all inland surface waters in the Region are considered suitable or potentially suitable as a municipal and domestic water supply.

For the Potrero Creek HAS, located in the Cottonwood Creek-Tijuana River watershed in which the Long Potrero Mitigation Site occurs, the SDRWQCB has designated the following beneficial uses (Table 3): Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), Industrial Process Supply (PROC), Freshwater Replenishment (FRSH), Hydropower Generation (POW), , Water Contact Recreation (REC1), Noncontact Water Recreation (REC2), Preservation of Biological Habitats of Special Significance (BIOL), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE) and Spawning, Reproduction, and/or Early Development (SPWN). The Long Potrero Mitigation Site primarily contains headwaters of larger water bodies within its watershed, and the watershed as a whole provides the above-mentioned beneficial uses. Table 2 contains definitions of additional beneficial uses which have not been designated for this mitigation site, but they are included in the table as references for Table 3.

Table 2. Definitions for Beneficial Uses of WOS.

| State Recognized Beneficial Uses | Description |
|-------------------------------------|---|
| Municipal and Domestic Supply (MUN) | Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply. |
| Agricultural Supply (AGR) | Uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing. |
| Industrial Service Supply (IND) | Includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization. |
| Industrial Process Supply (PROC) | Uses of water for industrial activities that depend primarily on water quality. |
| Hydropower Generation (POW) | Uses of water for hydropower generation. |
| Freshwater Replenishment (FRSH) | Uses of water for natural or artificial maintenance of surface water quantity or quality. |
| Ground Water Recharge (GWR) | Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting salt water intrusion into fresh water aquifers. |

Table 2. Definitions for Beneficial Uses of WOS.

| State Recognized Beneficial Uses | Description |
|--|---|
| Water Contact Recreation (REC1) | Uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and uses of natural hot springs. |
| Noncontact Water Recreation (REC2) | Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where water ingestion is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities. |
| Preservation of Biological Habitats of Special Significance (BIOL) | Includes uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection. |
| Wildlife Habitat (WILD) | Uses of waters that support wildlife habitats, including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl. |
| Cold Freshwater Habitat (COLD) | Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates. |
| Warm Freshwater Habitat (WARM) | Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates. |
| Aquaculture (AQUA) | Includes the uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes. |
| Inland Saline Water Habitat (SAL) | Includes uses of water that support inland saline water ecosystems including, but not limited to, preservation or enhancement of aquatic saline habitats, vegetation, fish, or wildlife, including invertebrates. |
| Estuarine Habitat (EST) | Includes uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds). |
| Marine Habitat (MAR) | Includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds). |
| Rare, Threatened, or Endangered Species (RARE) | Includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered. |
| Migration of Aquatic Organisms (MIGR) | Includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish. |
| Spawning, Reproduction, and/or Early Development (SPWN) | Includes uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish. This use is applicable only for the protection of anadromous fish. |
| Shellfish Harvesting (SHELL) | Includes uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters and mussels) for human consumption, commercial, or sport purposes. |

One goal of the Final HMMP for the Long Potrero Mitigation Site is to compensate for Project-related impacts to WOS and their beneficial uses. Beneficial uses of WOS within the Long Potrero Mitigation Site will be preserved and/or enhanced to mitigate a portion of the beneficial uses affected by Project activities. The enhancement and preservation activities of wetlands, waters, and riparian habitat the Long Potrero Mitigation Site will contribute to beneficial uses within the Potrero Creek HAS and the Cottonwood Creek-Tijuana River watershed. Mitigation activities on the other four mitigation sites are intended to compensate for any remaining beneficial uses not provided by the Long Potrero Mitigation Site (i.e., there will be no net loss of beneficial use from any project activity).

The Project is expected to impact a total of 0.35 acre of stream habitat, 2.36 acres of riparian vegetation, and 0.08 acre of wetland. Though the impact sites do not directly support many of the beneficial uses listed for the San Diego River watershed due to their small size, some beneficial uses are expected to be impacted based on the contributions of impact sites to beneficial uses within the Cottonwood Creek-Tijuana River watershed. These beneficial uses include: MUN, AGR, PROC, FRSH, POW, REC1, REC2, BIOL, WARM, COLD, WILD, RARE, and SPWN. The Long Potrero HMMP Mitigation Parcels will provide 2.35 acres of stream mitigation habitat, 16.57 acres of stream with riparian vegetation mitigation habitat, and 15.91 acres of wetland mitigation habitat. Preservation and enhancement activities of these habitats will adequately compensate for the impacted beneficial uses described above by contributing to the improvement and preservation of beneficial uses within the Cottonwood Creek-Tijuana River watershed. The Long Potrero HMMP Mitigation Parcels provide a 6.7:1 mitigation to impact ratio for streams, 7:1 mitigation to impact ratio for riparian vegetation, and 199:1 mitigation to impact ratio for wetlands. In addition, all temporary impacts will be restored to pre-impact condition therefore resulting in no net loss of beneficial uses.

All designated beneficial uses of WOS potentially impacted by Project activities are summarized in Table 3; however, not all uses listed in Table 3 are necessarily affected by the Project. Only those that are marked as such have the potential to be affected.

4.0 LONG-TERM SITE PROTECTION

This section summarizes the requirements for long-term protection of the mitigation parcels as per the 404 NWP terms and conditions, 401 certification, LSAA, BO, and MMCRP and indicates the status of establishing the protection measures for the parcels and the entire Long Potrero site as of May 2011.

4.1 Long-Term Protection Requirements

The 404 NWP, 401 certification, LSAA, MMCRP, and BO specify the type and timing of the measures required to assure the long-term protection of the mitigation sites. Generally the requirements are the same in these documents, but there are differences in terminology used and/or the timeline for actions. Key requirements stated in all of the documents are summarized below, followed by the specific provisions in separate documents.

Table 3. Beneficial Uses of WOS That May Be Affected by the Sunrise Powerlink Project.

| SAN DIEGO REGION INLAND SURFACE WATERS | Hydrologic Unit Basin Number | M U N | A G R | I N D | P R O C | G W R S H | F R S H | P O W | R E C 1 | R E C 2 | B I O L | W A R M | C O L D | W I L D | R A R E | S P W N |
|---|-------------------------------------|--------------|--------------|--------------|----------------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| San Diego River Watershed | 907.31 | X | X | X | X | | | | X | X | | X | X | X | | |
| Conejos Creek 7.31 | 907.31 | X | X | X | X | | | | X | X | | X | X | X | | |
| Alpine Creek | 907.31 | X | X | X | X | | | | X | X | | X | X | X | | |
| Chocolate Canyon | 907.33 | X | X | X | X | | | | X | X | | X | X | X | | |
| Chocolate Canyon | 907.31 | X | X | X | X | | | | X | X | | X | X | X | | |
| Sweetwater River | 909.31 | X | X | X | X | | | | X | X | | X | X | X | | X |
| Viejas Creek | 909.31 | X | X | X | X | | | | X | X | | X | X | X | | |
| Viejas Creek | 909.33 | X | X | X | X | | | | X | X | | X | X | X | | |
| Taylor Creek | 909.31 | X | X | X | X | | | | X | X | | X | X | X | | |
| Tijuana Hydrologic Unit | 911 | | | | | | | | | | | | | | | |
| Cottonwood Creek | 911.23 | + | | | | | | | X | X | | X | | X | | |
| Dry Valley | 911.23 | + | | | | | | | X | X | | X | | X | | |
| Bob Owens Canyon | 911.23 | + | | | | | | | X | X | | X | | X | | |
| McAlmond Canyon | 911.24 | + | | | | | | | X | X | | X | | X | | |
| McAlmond Canyon | 911.23 | + | | | | | | | X | X | | X | | X | | |
| Rattlesnake Canyon | 911.23 | + | | | | | | | X | X | | X | | X | | |
| Potrero Creek | 911.25 | + | | | | | | | X | X | | X | | X | | |
| Potrero Creek | 911.23 | + | | | | | | | X | X | | X | | X | | |
| Bee Creek | 911.23 | + | | | | | | | X | X | | X | | X | | |
| Cottonwood Creek | 911.30 | X | X | X | X | | X | | X | X | | X | X | X | X | X |
| Hauser Creek | 911.30 | X | X | X | X | | X | | X | X | | X | X | X | X | X |
| Pine Valley Creek | 911.30 | X | X | X | X | | X | | X | X | | X | X | X | X | X |
| Wilson Creek | 911.30 | | | | | | | | | | | | | | | |
| Pats Canyon | 911.30 | | | | | | | | | | | | | | | |
| La Posta Creek | 911.70 | X | X | X | X | | X | | O | X | | X | X | X | | |
| Simmons Canyon | 911.70 | X | X | X | X | | X | | O | X | | X | X | X | | |
| Diablo Canyon | 911.84 | + | | | | | | | | | | | | | | |
| Reservoirs & Lakes | | | | | | | | | | | | | | | | |
| El Capitan Reservoir | 907.31 | X | X | X | X | | | X ¹ | X | X | X | X | | | | |
| Loveland Reservoir | 909.31 | X | X | X | X | | X | X | X | X | X | | | | | |
| Barrett Lake | 911.30 | X | X | X | X | | X | X | X | X | X | X | X | | | |
| San Vicente Reservoir | 907.20 | X | X | X | X | | X | X | X | X | X | X | | | | |

| COLORADO RIVER BASIN REGION | Water Board Hydrologic Unit Code | MUN | AGR | AQUA | FRESH | IND | GW | RECRE | RECRE | WATER | COLD | WILD | POL | RARE |
|---|----------------------------------|-----------------|-----|------|----------------------|-----|--------|-------------|--------|------------|------|--------|-----|----------------------|
| Tule Creek | 22.71, 22.72 | P | X | | | | X | X | X | X | | X | | |
| Unlisted Perennial and Intermittent Streams | | P ₁₁ | | | I X ₁₂ | | I X | I P X | I X | I X | | I X | | I X ₁₃ |
| Washes (Ephemeral Streams) | | | | | I ₁₂ | | I | | I | see note 7 | | I | | |

Key:
 X = Existing Beneficial Use
 0 = Potential Beneficial Use
 I = Intermittent Uses
 + = Exempted from MUN. The water body has been exempted by the Regional Board from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, *Sources of Drinking Water Policy*.)

Note 1: Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.)
 Note 2: Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

FOOTNOTES: Footnotes are numbered as found in the Basin Plan.
 7. Use, if any, to be determined on a case-by-case basis.
 11. Potential use designations will be determined on a case-by-case basis as necessary in accordance with the "Sources of Drinking Water Policy".
 12. Applies only to tributaries to Salton Sea.
 13. Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway(s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by-case basis is upon the CDFG on its own initiative and/or at the request of the Regional Board; and such substantiation must be provided within a reasonable time frame as approved by the Regional Board.

4.1.1 Summary of Site Protection Requirements

Long-term protection will occur through a combination of site documentation, management decisions, and legal agreements/actions involving the Corps, SWRCB, CDFG, USFWS, the entities selected to manage the sites, and SDG&E.

Site Documentation

The site documentation relevant to long-term protection includes a title report, County Assessor's parcel map, Phase One Environmental Assessment Report, plat map, and any Williams Act/Farmland Security Zone contracts for the site. These materials are compiled during the acquisition process and identify any existing easements, ROWs, agricultural contracts, mineral rights, and other conditions/constraints that come with the property. The information is directly or indirectly required by all of the agencies that must approve the long-term protection measures for the site. SDG&E also requires the information for company authorization to proceed with an acquisition.

Management Decisions

There are three key management decisions required for long-term site protection:

- Selection of a land manager qualified to own the property and manage it in accordance with the goals, objectives, and measures identified in the Final HMMP and in the final revised HMP with funding provided by SDG&E;
- Approval of the Final HMMP, revised final HMP, and revised final PAR for the site; and
- Approval of the funding arrangements for long-term management.

These decisions will be made by and/or with the approval of the Corps, SWRCB, CDFG, and USFWS for the HMMP mitigation sites. For MMCRP purposes, the CPUC and BLM also must approve the land manager, final HMP/PAR, and funding arrangement. The agencies also directly or indirectly require that the final PAR be approved by the selected land manager.

All of the agencies require that these decisions be made within a specific timeframe.

Legal Agreements/Actions

There are three legal agreements/actions relevant to the long-term protection of the mitigation sites:

1. Acquisition of the mitigation site;
2. Execution of a conservation easement agreement or its equivalent for the mitigation site. The agreement must be approved in advance by the agencies and also must be accepted by the land manager.
3. Conveyance of fee title and/or the conservation easement or its equivalent to one of the agencies or an entity approved by them (such as the land manager).

All of the agencies require that this step be complete prior to the line being energized. The agencies also acknowledge that federal and state agencies cannot accept fee title for lands subject to conservation easements.

4.1.2 *Site Protection Requirements by Source Document*

404 NWP

1. SDG&E will assure the five mitigation sites are protected as natural open space in perpetuity. SDG&E shall submit draft site-protection mechanisms to the Corps for approval in advance of or concurrent with impacts within waters of the U.S (Condition #10)
2. Permittee shall also submit a detailed timeframe and action plan addressing the progress for achieving site protection (e.g., steps in the land acquisition/transfer process, identification of land managers and site protection mechanisms, agency planning documentation) for each mitigation site within 30 days of the date of issuance of this permit verification letter (Condition #10)
3. The Permittee shall receive written notification from the Corps of the draft site-protection mechanism prior to them being executed and recorded (Condition #10)
4. The Corps shall require a Conservation Easement (CE) as site protection instrument for each mitigation site. Draft CE must include a 3rd party easement holder. The CE must provide that the 3rd party easement holder may enter upon and do any and all work to comply with special condition #1 in the event the permittee has failed to do so (Condition #10)
5. Corps must approve the use of alternative site-protection mechanism if a CE is not available or feasible (Condition #10)
6. Monthly progress reports for each mitigation site will be submitted to the Corps until the Corps approves the draft site-protection mechanism (Condition #10)
7. For any mitigation site where the Corps-approved third party land manager is a state or Federal agency, a qualified land specialist shall be retained by SDG&E to shepherd the transfer of the mitigation property to the designated agency. SDG&E shall include in the monthly progress reports required per Special Condition #10 the progress of the land transfer and document compliance. (Condition #11)
8. SDG&E must provide monies in the form of a non-wasting endowment (endowment amount to be determined by a revised PAR) to fulfill the land manager's long-term responsibilities, including maintenance activities, etc. (Condition #13)
9. The revised PAR must be submitted by Oct 31st of Year 2 of the mitigation and monitoring period for each mitigation site (Condition #13).
10. SDG&E will provide the endowment within 30 days of the Corps' approval of the revised PAR of the five mitigation sites (Condition #13).

401 Certification

1. Conduct, document, and report compensatory mitigation in compliance with the Final HMMPs. (Condition #7)
2. Full title and ownership or land transfer agreements for all compensatory mitigation properties shall be finalized before energization of the transmission line. (Condition #8)

LSAA

1. DFG has tentatively agreed to the mitigation activities described in the HMMP. Final approval of these sites will occur following DFG's receipt and review of the following, for each site: (1) current Preliminary Title Report, (2) County Assessor's Parcel Map, (3) Phase One Environmental Site Assessment Report, (4) Plat map showing pre-existing easements encumbering the mitigation areas, (5) copies of any Williamson Act contracts and Farmland Security Zone contracts that exist on the mitigation areas, and (6) identification of the long-term property owners and their written commitment to manage consistent with the conservation purposes of the mitigation sites. (Condition #3.7)
2. Within 120 days of signing this SAA agreement (i.e. March 29, 2011), provide to DFG the following for the proposed mitigation sites: (1) Preliminary Title Report, (2) Phase One Environmental Site Assessment Report, (3) Final Mitigation Plan, and (4) any required technical reports (e.g., hydrology studies) (Condition #3.8).
3. Prepare a Habitat Management Plan (HMP) for each mitigation property that follows the criteria in Biological Opinion Measure G-CM-17. (Condition #3.21)
4. Prepare a wildlife conservation easement or its equivalent on each mitigation site to protect existing fish and wildlife resources in perpetuity. Complete the easement or its equivalent prior to energizing the transmission line (Condition #3.22)
5. If a conservation easement is not possible due to a transfer of the property to federal, state, or local jurisdiction, notify DFG of the entity the property is being transferred to and the manner under which it will be held by that entity. Receive written approval from DFG (Condition #3.23).
6. SDG&E shall cause the conservation easement or its equivalent to be conveyed such that the easement's position in title shall not be inferior to any existing monetary liens on the land (e.g., deeds of trust are to be subordinate to the conservation easement). A plat drawn to scale that depicts the conservation easement and delineates the metes and bounds easement description shall be prepared by a professional certified land surveyor or civil engineer and the plat shall be attached as an exhibit. (Condition #3.24)
7. SDG&E shall include with the submission of the conservation easement for its equivalent: (1) a completed Proposed Land for Acquisition Form, (2) a County Assessor's Parcel Map for the subject property, (3) a site location map, (4) a Phase One Environmental Site Assessment Report (no more than 6 months old), (5) a current (no more than 6 months old) Preliminary Title Report, together with (5a) copies of documents supporting the title exceptions, (5b) copies of documents regarding title encumbrances and/or analysis of those encumbrances, and (5c) include a plat showing pre-existing easements encumbering the conservation easement area, (6) copies of any

Williamson Act contracts and Farmland Security Zone contracts that exist on the parcels and a copy of all Notification of Public Acquisition of Williamson Act Land memos, if applicable, (7) digital spatial data compatible with ESRI software or geo-referenced CAD files depicting the boundaries of the conservation easement area, and (8) the SAA permit number 1600-2009-0365-R5. (Condition #3.25)

8. DFG has the right to deny the proposed mitigation site/conservation easement if DFG determines the site does not have suitable conservation value. (Condition #3.26)
9. SDG&E is responsible for all land/easement acquisition costs, including title document cost, escrow fees, recording fees, title insurance premiums, Phase One Environmental Site Assessment Report, and any other escrow-related fees. If DFG becomes the grantee then DFG staff time will be charged to SDG&E. (Condition #3.27)

BO

General Conservation Measure (G-CM) #17 in the 2010 BO includes the long-term protection requirements specified by both USFWS and CDFG for the HAP/HMP. G-CM-17 also is the measure cited in the LSAA. It reads in its entirety as follows:

G-CM-17: *This conservation measure has been changed to reflect updated information and progress made in acquiring off-site conservation.*

(a) Prior to initiating ground- or vegetation-disturbing project activities, SDG&E will provide and implement the following assurance:

- *Unless already acquired, SDG&E will provide assurances (e.g., performance bond, letter of credit, or escrow account) to fund the acquisitions listed below in (c).*

(b) SDG&E will fully fund an endowment for in-perpetuity management of all parcels acquired in (c) within 3 months of the Wildlife Agencies' approval of the final endowment amounts.

(c) Unless otherwise authorized by the Wildlife Agencies, no later than 18 months from the date of the revised 2010 biological and conference opinion, SDG&E will acquire and permanently preserve the nine (9) parcels identified in the September 2010 Habitat Acquisition Plan and Habitat Management Plan (HAP/HMP; referenced by name as Nabi, Lakeside Ranch, Hamlet, El Capitan, Chocolate Canyon, Lightner, Long Potrero, Suckle, and Desert Cahuilla) in a manner consistent with the HAP/HMP and the following provisions:

- *The land-owner, land management entity, conservation easement grantee, and endowment fund manager for each property will be approved by the Wildlife Agencies. SDG&E will coordinate efforts with the Wildlife Agencies to identify potential candidates and review their qualifications to hold and manage lands and/or endowment funds. This task will be completed within 6 months of issuance of the 2010 revised biological and conference opinion.*

- *SDG&E will conduct a revised Property Analysis Record (PAR) or PAR-like analysis for each property once the land management entity for individual properties has been identified and approved by the Wildlife Agencies. This revised PAR will be used to determine the final endowment amount SDG&E will provide for in-perpetuity habitat management of each property.*
- *Conservation easement language, or its equivalent where an easement is not allowed by the land manager (State Parks), for all properties will be approved by the Wildlife Agencies prior to easement recordation; and*
- *SDG&E will complete the required acquisition, protection, and transfer of all properties and record the required conservation easements in favor of DFG, or other entity approved by the Wildlife Agencies, no later than 18 months after the start of the ground- or vegetation-disturbing activities.*

MMCRP

The MMCRP requirements regarding site protection are as follows:

1. A HAP/HMP must be prepared for offsite mitigation parcels (for impacts to sensitive vegetation and special status species), must be approved by the CPUC, BLM, USFWS, CDFG, and – for mitigation parcel for impacts to CNF – by USFS; and must include (among other items):
 - a. Legal descriptions of the parcels
 - b. Designation of a land management entity approved by the CPUC, BLM, USFWS, CDFG, and – for mitigation for impacts to CNF – USFS.
 - c. A PAR prepared by the designated land management entity that explains the amount of funding required to implement the HMP;
 - d. Designation of responsible parties and their roles (e.g., provision of endowment by the Applicant to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity)
 - e. Management specifications including, but not limited to, regular biological surveys; exotic, non-native species control; fence/sign replacement or repair, public education; trash removal; and annual reports (measures B-1a and elsewhere)
2. The HAP/HMP must be approved by CPUC, BLM, USFWS, CDFG, and – for mitigation parcel for impacts to CNF – by USFS prior to vegetation clearing activities
3. All offsite mitigation parcels shall be approved by the CPUC, BLM, USFWS, CDFG, and – for mitigation parcel for impacts to CNF – by USFS and must be acquired or their acquisition assured prior to the line being energized (measure B-1a and elsewhere)

The MMCRP also includes an earlier version of BO G-CM-17 on a table that summarizes USFWS measures. The G-CM-17 measure in the 2010 BO supersedes that in the April 2010 MMCRP.

4.2 Status of Site Protection Measures for the Long Potrero Mitigation Site

As of May 2011, the status of site protection measures for the Long Potrero Mitigation Site, including the HMMP Mitigation Parcels, is as follows:

- Acquisition. The mitigation site has been acquired by SDG&E.
- Site Documentation. The title report, County Assessor's parcel map, Phase One Environmental Assessment Report, plat map, and any Williams Act/Farmland Security Zone contracts have been completed and are included as Appendix E to this Final HMMP.
- HMP/PAR. A management plan and PAR were prepared for the site as part of the September 2010 HAP/HMP, were conditionally approved by USFWS, CDFG, BLM, and the CPUC for MMRP purposes, and are being revised in coordination with the Corps, SWRCB, CDFG, and USFWS. The September 2010 HAP/HMP management measures and PAR are included in Sections 10 and 11 of this Final HMMP and will be superseded by the revised final HMP/PAR approved by the agencies. The revised final HMP/PAR will be completed by May 2012 (18 months after the date of the BO).
- Selection of Land Manager. Land managers under consideration for the Long Potrero site include the Back Country Land Trust (BCLT), Kumeyaay-Diegueno Land Conservancy (KDLC), BLM, and – for the 40 acres within the Congressional boundaries of CNF – USFS. BCLT submitted a proposal for services to USFWS in early 2011. The KDLC submitted letters of interest to SDG&E and USFWS in late 2010. BLM has expressed an interest in the property, which is adjacent other BLM lands. USFS has expressed an interest in the 40 acres at the northernmost boundary. These communications are still preliminary in nature. No decision has been made by the agencies. Approval of the land manager by the Corps, SWRCB, CDFG, and USFWS must occur prior to or concurrent with approval of the final HMP/PAR.
- Conservation Easement or Equivalent Agreement. Preparation of a draft conservation easement or equivalent agreement will depend on who is selected as the land manager. If the manager is BLM or USFS, the "equivalent" option will be necessary. If a land conservancy is selected, a conservation easement agreement will be prepared. Pending the selection of the manager, SDG&E is preparing draft templates for both types of agreements.
- Funding Arrangements. If a conservancy is selected as the land manager, a non-wasting endowment would be established. USFWS and CDFG have indicated their interest in having the endowment managed by a third-party (versus having the land manager set up and manage the endowment). SDG&E has met with the San Diego Foundation and the California Wildlife Foundation to discuss their potential role as third-party managers of endowments. No decisions have been made on the endowment arrangements. The amount of the funding for long-term management will be determined in the final PAR based on the measures in the final HMP. If BLM or USFS is selected, the funds would be provided to the selected agency and placed in a designated account for management of the property.

Other. As required by the Corps, SDG&E has prepared and is implementing an action plan and schedule for ensuring progress on the long-term site protection requirements. The Corps, SWRCB, CDFG, and USFWS have conducted site visits at Long Potrero.

5.0 BASELINE INFORMATION

5.1 Preliminary Jurisdictional Determination and Function-Based Assessment of Impact Sites

A preliminary jurisdictional determination (PJD) of the extent of wetlands and waters along the Project ROW (WRA 2010a) has been approved by the Corps and is included in permit application packages for the Project. The PJD was used during project planning to avoid unnecessary impacts to WOUS and WOS and to quantify unavoidable impacts to wetlands and waters. Impacts to unvegetated waters included perennial, intermittent, and ephemeral streams. Ephemeral streams were described using two subcategories, including desert dry washes and mountain ephemeral streams. Vegetated wetlands delineated using the Corps three-parameter approach as outlined in the Corps Wetland Delineation Manual and the Regional Supplement to the Corps Wetland Delineation Manual: Arid West Region (Environmental Laboratory 1987, Corps 2008a) also occur at two impact sites along the margins of intermittent streams.

A function-based assessment of 30 impact sites along the Project ROW was performed using CRAM methodology, covering both existing conditions and projected post-project conditions. The Conceptual HMMP (WRA, 2010b) describes the results of the CRAM function-based assessment of impact sites in full detail. Combined average CRAM scores for impacted waters are summarized in Table 4. CRAM scores for existing conditions will be used as baseline data, while CRAM scores for post-project conditions were estimated as a means to predict the effects of impacts to wetland functions and services. An estimate of the reduction in functions and services provided by impacted WOUS and WOS was generated by comparing existing and projected post-project CRAM scores at impacted sites. All assessments of impact sites used the CRAM methodology for riverine wetlands, although ephemeral streams and Corps wetlands were also included in the assessments. Further detail on the assessments and CRAM methodology can be found in the Conceptual HMMP (WRA 2010b). Raw CRAM scores for all impact and mitigation assessment areas (AAs) are presented in Appendix A.

Table 4. Combined Average CRAM Scores for Existing and Post-Project Conditions at Impact Sites along the Project ROW.

| CRAM Index and Attributes | Existing (Baseline) Mean Scores | Projected Post-Project Mean Scores | Decrease Between Existing and Projected Post-Project Conditions (percentage points) |
|---------------------------|---------------------------------|------------------------------------|---|
| Overall Index Score | 72.3% | 69.3% | 3.0 |
| Landscape Context | 93.4% | 89.0% | 4.4 |
| Hydrology | 88.6% | 82.8% | 5.8 |
| Physical Structure | 47.5% | 46.3% | 1.2 |
| Biotic Structure | 59.7% | 59.3% | 0.4 |

As outlined in the Conceptual HMMP (WRA 2010b), the combined average CRAM score of representative impact sites for the Project is expected to decrease by an average of 3 percentage points from project implementation. This represents the average decrease in

functions and services resulting from impacts to WOUS and WOS from the Project. The CRAM score for the one perennial stream within the ROW is not expected to measurably decrease. The majority of individual projected impacts would result from aggradation/degradation of stream channels and degradation of wetland buffer areas.

While impacts to Buffer Condition and Channel Stability are likely to be common among desert dry wash and mountain ephemeral impact locations, these combined stream categories saw a decline of less than 2 percentage points in overall projected CRAM scores. The largest decline in CRAM score came from one intermittent stream on the Lightner Mitigation Site where the Suncrest Substation is proposed, causing a loss of both stream channel and adjacent riparian habitat. Where the stream is directly filled the CRAM score is reduced to zero (0) because the habitat is no longer present. The indirect effects of the Suncrest Substation on downstream areas is projected to be a drop of 38.7 percentage points in overall CRAM score. This is the most substantial single impact of the Project as reflected in projected CRAM scores. This indirect effect to functions and services also accounts for the substantial portion of the 11.6-point drop for all intermittent streams combined. Restoration and enhancement activities at the Lightner Mitigation Site, in combination with mitigation at other sites included in the overall mitigation package, are intended to offset these impacts to functions and services.

5.2 Baseline Condition and CRAM Assessment of the HMMP Mitigation Parcels

The Long Potrero HMMP Mitigation Parcels includes approximately 418 acres in the northern portion of the Long Potrero Watershed (HUC 12) within the central portion of the Cottonwood Creek-Tijuana River Watershed (HUC 8) (Figure 4), approximately 7.5 miles southwest of Interstate 8 off of Buckman Springs Road and Highway 94/Campo Road in San Diego County, California. This site is surrounded by mountainous terrain with no urban development nearby. Elevations on this site range from 2,420 to 2,690 feet National Geodetic Vertical Datum (NGVD). The acreage and length of streams and wetlands is outlined in Table 5 below.

Table 5. Waters at the Long Potrero Mitigation Site

| Resource | Area (acres) | Length (linear feet) |
|------------------------------------|---------------------|-----------------------------|
| Ephemeral Streams | 0.25 | 3,400 |
| Intermittent Streams | 1.67 | 15,603 |
| Perennial Streams | 0.43 | 3,908 |
| Freshwater Marsh/Emergent Wetlands | 15.91 | - |
| TOTAL | 18.26 | 22,911 |

Soils: There are seven native soil types mapped throughout the site. The two dominant soil types mapped are La Posta rocky loam coarse sand, 5 to 30 percent slopes and acid ingenious rock land. Additional soil types at the site consist of: Tollhouse rocky coarse sandy loam, 30 to 65 percent slopes; Fallbrook sandy loam, 5 to 9 percent slopes; Fallbrook sandy loam, 9 to 15 percent slopes; Visalia sandy loam, 0 to 2 percent slopes; and Mottsville loamy coarse sand, 2 to 9 percent slopes. Soils on this site are well to excessively drained and range from slow to medium runoff. The Fallbrook and Tollhouse soils have rapid to very rapid runoff (USDA 2010a). None of the soil series listed above appears on the San Diego County hydric soils list. The Visalia series does contain unnamed inclusions which are mapped as hydric (USDA 2010b).

Vegetation: The Long Potrero Mitigation Site is dominated by southern mixed chaparral, chamise chaparral, and flat-topped buckwheat scrub except in areas where riparian and emergent wetlands areas were observed. Dominant southern mixed chaparral species observed on the site include chamise (*Adenostoma fasciculatum*), California buckwheat (*Eriogonum fasciculatum*), redstem filaree (*Erodium cicutarium*), laurel sumac (*Malosma laurina*) and various bromes (*Bromus* spp.). Chamise chaparral habitats are dominated by chamise, while flat-topped buckwheat is dominated by California buckwheat. Northern mixed chaparral is also found in conjunction with southern mixed chaparral. Riparian areas consisted of southern coast live oak riparian forest. This habitat was typically found within coast live oak woodland habitat on the site and was dominated by coast live oak (*Quercus agrifolia*). A small patch of mulefat scrub can be found within the coast live oak woodland on the southeastern portion of this mitigation site. This patch is predominated by mulefat and interspersed with small willows (*Salix* spp.). Vernal marshes and emergent wetlands were dominated by Mariposa rush (*Juncus dubius*), common toad rush (*Juncus bufonius*), common spike rush (*Eleocharis macrostachya*) and little hogweed (*Portulaca oleracea*) with low densities of curly dock (*Rumex crispus*), willow dock (*Rumex salicifolius*), tarragon (*Artemisia dracuncululus*), and Douglas mugwort (*Artemisia douglasiana*) occurring throughout. Non-native grasslands are interspersed throughout the entire site, but mostly concentrated in the eastern half. Dominant species in this community include bromes (*Bromus* spp.), slender wild oat (*Avena barbata*), Italian ryegrass (*Lolium multiflorum*), black mustard (*Brassica nigra*), and sandysoil sun cup (*Camissonia strigulosa*). A fair amount of disturbed habitat is found in the center of the southern border and also in the northeastern portion. Areas where highly compacted roads exist are classified as developed habitat (SDG&E 2010a).

Hydrology: Precipitation and resulting runoff from adjacent lands are the main sources of hydrology for ephemeral streams at this site while intermittent and perennial streams are spring-fed. Rainfall for this region averages 15.4 inches per year (USDA 2010c). Numerous access roads and earthen dams/berms are present on site, impeding the flow of some streams on site. Wetlands are bisected and discontinuous due to access roads. In addition, several stock ponds, including one perennial pond, have formed in areas adjacent to the earthen dams/berms.

5.2.1 Baseline CRAM of the Long Potrero Mitigation Site

Function-based assessments were performed at four of the five proposed mitigation sites (not the Desert Cahuilla mitigation site) for the Project using CRAM methodology, covering both existing conditions and projected conditions following the implementation of mitigation activities. The assessments provide scores which quantify the existing conditions and functions and services of streams and wetlands being used as mitigation for impacts to WOUS and WOS along the Project ROW. The seven total mitigation CRAM assessments are representative of all proposed mitigation activities for the Project, and also provide insight on conditions at proposed mitigation sites where activities other than preservation will take place. Two CRAM assessments were performed at the Long Potrero Mitigation Site and are the focus of this report.

The Long Potrero mitigation parcels support a total of 12 intermittent streams and 22 wetland features, of which one intermittent stream and one seasonal wetland were chosen as representative features to be assessed using CRAM (Figure 5). Assessments were conducted at the Long Potrero Mitigation Site in September 2010.

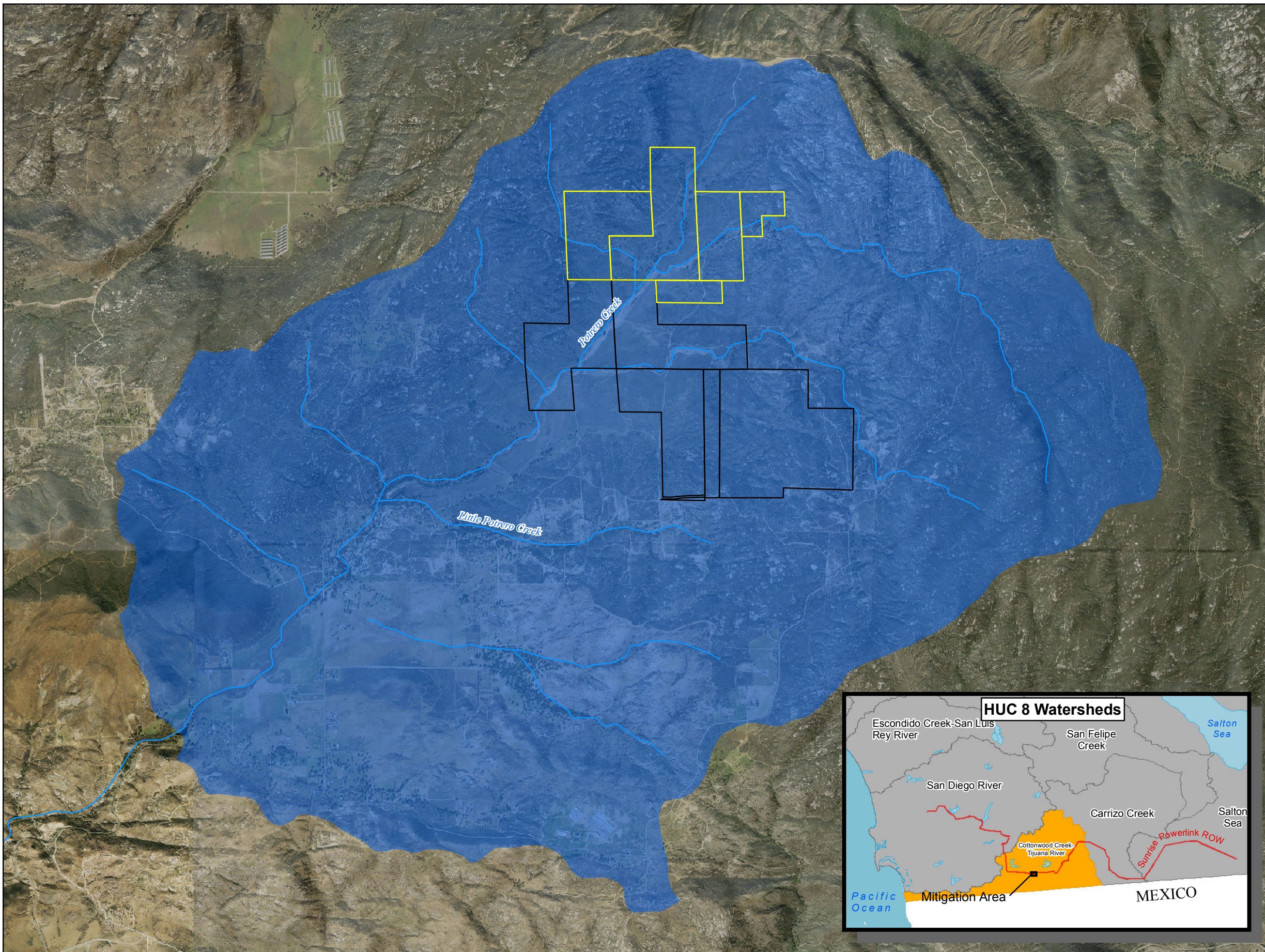
Sunrise Powerlink

San Diego County,
California





Figure 4

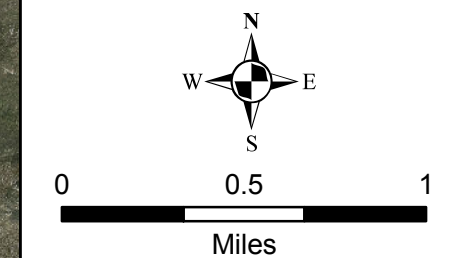
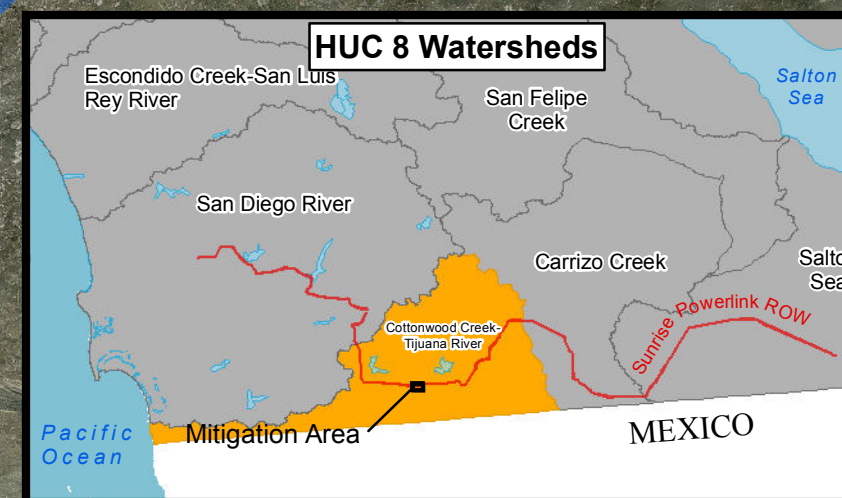
Long Potrero
Mitigation Site:

Long Potrero
Watershed



Legend

-  HMMP Mitigation Parcels
-  Other Parcels included in Mitigation Site
-  Long Potrero Watershed (HUC 12)
-  USGS Blueline Streams

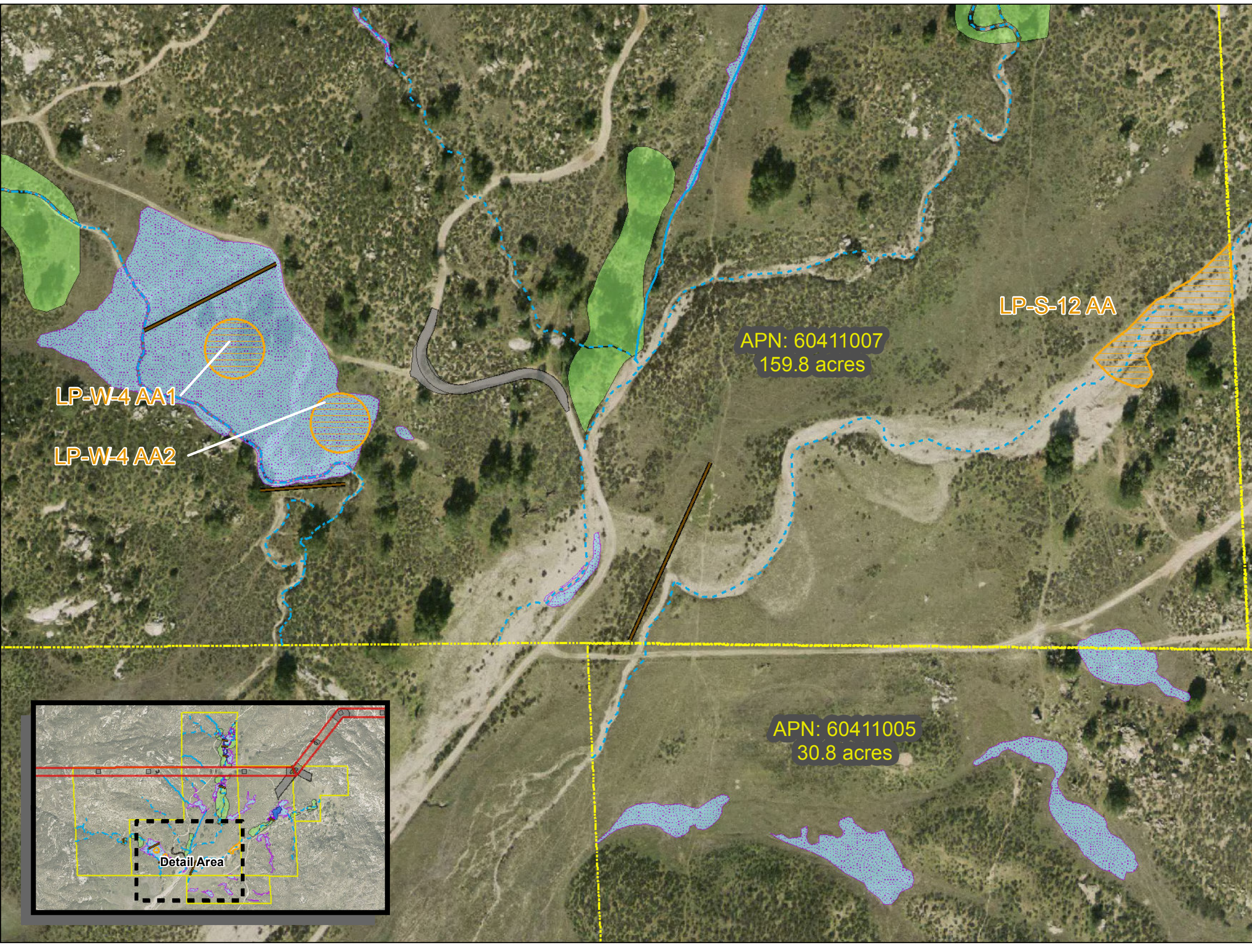


Sunrise Powerlink

San Diego County,
 California

Figure 5.

CRAM Assessment
 Areas within the
 Long Potrero
 Mitigation Site



APN: 60411007
 159.8 acres












APN: 60411005
 30.8 acres

LP-W-4 AA1

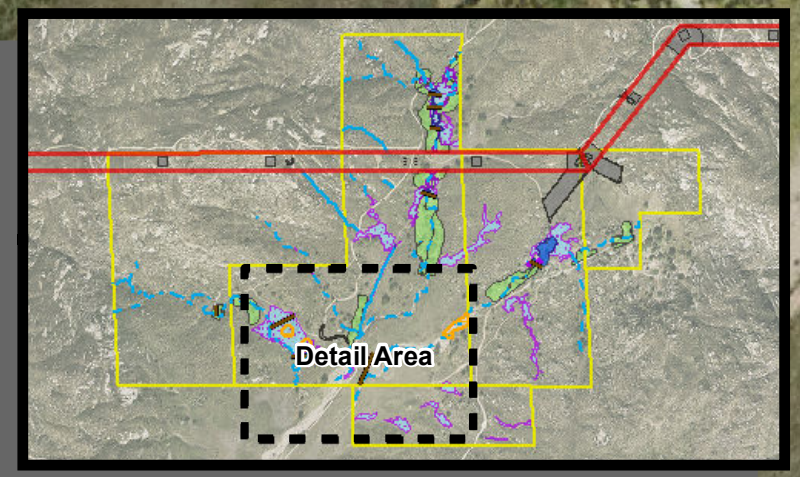
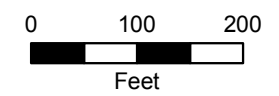
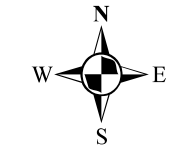
LP-W-4 AA2

LP-S-12 AA

Legend

-  Parcel Boundary
-  Sunrise Powerlink ROW
-  Construction Impact Area
-  CRAM Assessment Area
-  Earthen Dams/Berms
-  Mapped Riparian Habitat (16.57 acres)
-  Man-made Ponds (1.28 acres)
-  Wetlands (15.91 acres)
- Streams**
-  Ephemeral (0.25 ac.; 3,400 In. ft.)
-  Intermittent (1.67 ac.; 15,603 In. ft.)
-  Perennial (0.43 ac.; 3,908 In. ft.)

Note: Stream and Riparian acreage calculations do not include areas within the Sunrise Powerlink ROW or Construction Impact Areas. Stream acreages are based on OHWM width. Riparian areas are based on CDFG riparian dripline.



Only intermittent or perennial streams were used as representative stream function-based assessment sites on the Long Potrero, Lightner, and Chocolate Canyon mitigation sites. This decision was based on possible limitations of CRAM methodology in ephemeral stream systems. As described in the CRAM Technical Bulletin (CWMW 2009), seasonal wetlands and headwater streams often have naturally lower complexity [than higher-order streams or perennial wetlands] and may inherently produce lower scores under the current CRAM methodology. Or, as described in the CRAM User's Manual (Collins *et al.* 2008a), there may be a limit to the applicability of CRAM in low order (i.e., headwater) streams in very arid environments that tend not to support species-rich plant communities with complex horizontal and vertical structure. The decision to assess only intermittent or perennial streams on these sites was made in conjunction with staff from the Corps.

In following additional guidance received from the Corps, the seasonal wetland chosen for assessment on the Long Potrero Mitigation Site was examined by performing CRAM at two separate locations within the wetland. One AA was located in a deep portion of the wetland, where wetland indicators were strongest, while the other was located in a shallower area near the upland transition to account for edge effects. The scores from these two AAs were averaged, and these average scores are presented in this report as the single set of representative CRAM scores for this wetland.

While all Project impact site AAs and most mitigation site AAs were considered to be riverine wetlands according to CRAM definitions, the seasonal wetland AA at the Long Potrero Mitigation Site was considered to be a depressional wetland according to CRAM definition (Collins *et al.* 2008a). Depressional wetlands are distinctly different from riverine wetlands according to CRAM guidance, and must be assessed using specialized CRAM methodology (Collins *et al.* 2008b), which relies on a different statewide standard for wetland condition than other wetland types (CWMW 2009). For this reason, CRAM scores for depressional wetlands at Project mitigation sites should not be directly compared to riverine CRAM scores for Project impact and mitigation AAs. In addition, reference data for depressional wetlands are currently unavailable, so comparison to ambient or statewide conditions is not possible. However, CRAM data for depressional wetlands at mitigation sites are useful for comparing existing conditions to future conditions, using both projected scores and future monitoring data.

The intermittent stream assessed at the Long Potrero Mitigation Site, LP-S-12, had an overall CRAM score of 70.5 percent while the wetland, LP-W-4, had an overall CRAM score of 59.4 percent. CRAM attribute scores for these features under existing conditions are discussed below.

Buffer & Landscape Context

Stream LP-S-12 scored a 93.3 percent for the Buffer & Landscape Context attribute. This AA received an "A" in all areas, except the Buffer Condition submetric, which scored a "B" due to the presence of a number of mostly annual non-native, invasive plants in the buffer area.

Wetland LP-W-4 scored a 55.8 percent for the Buffer & Landscape Context attribute. This relatively low score was due to a score of "D" for the Landscape Connectivity metric. Although LP-W-4 is located in a fairly remote, undisturbed setting, a higher Landscape Connectivity score for a depressional wetland requires a large area of wetland habitat surrounding the AA. This is based on the assumption that wetlands close to each other have a greater potential to interact ecologically and hydrologically, and that such interactions are generally beneficial (Collins *et al.* 2008a). Since LP-W-4 is located in a fairly arid region, there is insufficient wetland habitat in its

surroundings to score higher than a “D.” For this reason, most depressional wetlands in arid environments would be likely to receive a low score for this metric. LP-W-4 received a “B” for Buffer Condition due to the presence of a number of mostly annual non-native, invasive plants in the buffer area. The wetland scored an “A” for the remaining submetrics.

Hydrology

Stream LP-S-12 scored a 91.7 percent for the Hydrology attribute. The stream received a “B” for the Channel Stability metric due to minor indications of aggradation and degradation, but received an “A” for the remaining metrics.

Wetland LP-W-4 scored a 95.8 percent for the Hydrology attribute. The wetland received a score of 10.5 (the average of one “A” and one “B”) for the Hydroperiod metric. This was due to the fact that the large wetland LP-W-4 includes man-made berms that capture water in some portions of the wetland, making the hydrology less natural than in other portions of the wetland. LP-W-4 received an “A” for the remaining Hydrology metrics.

Physical Structure

Stream LP-S-12 scored a 50.0 percent for the Physical Structure attribute. This stream had low Structural Patch Richness and Topographic Complexity and received a “C” for both metrics.

Wetland LP-W-4 scored a 37.5 percent for the Physical Structure attribute. This wetland received a “D” for Structural Patch Richness and a “C” for Topographic Complexity. As described above, low-order streams and seasonal wetlands are more likely to score low on CRAM structure attributes than higher-order or perennial features, thus the low Physical Structure scores at the Long Potrero Mitigation Site may be normal for the features assessed.

Biotic Structure

Stream LP-S-12 scored a 47.2 percent for the Biotic Structure attribute. The stream received a “B” for both the Number of Plant Layers and Percent Invasion submetrics, a “C” for Number of Co-dominant Species and Horizontal Interspersion, and a “D” for Vertical Biotic Structure.

Wetland LP-W-4 scored a 48.6 percent for the Biotic Structure attribute. The wetland received a “C” for Percent Invasion, Horizontal Interspersion, and Vertical Biotic Structure. It scored a 7.5 (an average of one “B” and one “C”) for Number of Plant Layers, and scored a “D” for Number of Co-dominant Species. As described above, relatively low Biotic Structure scores may be normal for the stream and wetland assessed at the Long Potrero Mitigation Site.

5.2.2 Projected CRAM Scores Following Mitigation Implementation at the Long Potrero Mitigation Site

Using proposed mitigation plans and data collected at mitigation sites for the Project, CRAM was used to predict how the representative sites described in Section 5.2.1 may improve following mitigation activities. These projected scores are based on conditions anticipated approximately 5 years after project implementation, as not all results of mitigation actions may be evident immediately upon completion.

Proposed mitigation at the Long Potrero Mitigation Site includes stream, wetland, and riparian enhancement through removal of non-native, invasive species (Figure 6). Due to the presence of the endangered Arroyo toad at the Long Potrero Mitigation Site, further mitigation possibilities involving dam removal or soil disturbance are currently not permitted. However, the proposed removal of non-native, invasive species is expected to improve the Biotic Structure attribute and in some cases the Buffer & Landscape Context Attribute for many of the streams and wetlands within the site.

The overall CRAM score for stream LP-S-12 increased from 70.5 percent under existing conditions to a 71.2 percent under projected future conditions, while LP-W-4 increased from a 59.4 percent to a 61.8percent. Individual attribute scores under projected future conditions are discussed below.

Buffer & Landscape Context

The CRAM score for the Buffer & Landscape Context attribute is not expected to change for stream LP-S-12 following mitigation implementation. Maintenance of roads through the site will continue to be a source of soil disturbance that will likely prevent the Buffer Condition submetric score for this AA from increasing within the projected 5-year period. However, streams in other locations within the Long Potrero Mitigation Site have the potential to increase their CRAM scores for this submetric due to the removal of non-native, invasive vegetation within stream and riparian areas.

Following mitigation activities at the Long Potrero Mitigation Site, the Buffer Condition submetric score for wetland LP-W-4 is expected to increase from a “B” to an “A” due to the removal of non-native, invasive species. This would increase the Buffer & Landscape Context attribute score for this AA from a 55.8 percent to a 62.5percent.

Hydrology

The CRAM score for the Hydrology attribute is not expected to change following mitigation implementation for stream LP-S-12 or wetland LP-W-4. In the case of stream LP-S-12, channel stability is unlikely to improve within the projected 5-year period due to the continued maintenance of roads through the site. Similarly, the channel stability scores for other streams at the site are not likely to change within the projected 5-year period.

Physical Structure

The CRAM score for the Physical Structure attribute is not expected to change following mitigation implementation for stream LP-S-12 or wetland LP-W-4.

Biotic Structure

Following mitigation implementation, stream LP-S-12 is expected to have its score for the Percent Invasion submetric increase from a “B” to an “A” due to the proposed removal of non-native, invasive species. The remaining aspects of the Biotic Structure attribute would remain unchanged. The increased score for Percent Invasion would raise the Biotic Structure attribute score for LP-S-12 from a 47.2 percent to a 50.0 percent. Similarly, the Percent Invasion score for wetland LP-W-4 is likely to increase by one letter grade, while other aspects of Biotic Structure would be unchanged. The increase in Percent Invasion score from a “C” to a “B” would raise the attribute score from a 48.6 percent to a 51.4 percent.

5.2.3 Conclusions of CRAM for Mitigation at the Long Potrero Mitigation Site

Comparing existing CRAM scores to projected scores, it is possible to consider the nature and magnitude of likely improvements to functions and services at the Long Potrero Mitigation Site AAs. CRAM scores for the Long Potrero Mitigation Site are summarized in Table 6. Raw scores for all AAs are presented in Appendix A, and further information on the CRAM assessments can be found in Appendix B of the Conceptual HMMP (WRA 2010b).

Table 6. CRAM Attribute and Overall Scores for Proposed Mitigation Sites at the Long Potrero Mitigation Site.

| CRAM Index and Attributes | INTERMITTENT STREAM | | | DEPRESSIONAL WETLAND | | |
|---------------------------|---------------------------------|------------------------------------|--|---------------------------------|------------------------------------|--|
| | Existing (Baseline) Mean Scores | Projected Post-Project Mean Scores | Projected Increase Following Mitigation Implementation (percentage points) | Existing (Baseline) Mean Scores | Projected Post-Project Mean Scores | Projected Increase Following Mitigation Implementation (percentage points) |
| Overall Index Score | 70.5% | 71.2% | 0.7 | 59.4% | 61.8% | 2.4 |
| Landscape Context | 93.3% | 93.3% | 0 | 55.8% | 62.5% | 6.7 |
| Hydrology | 91.7% | 91.7% | 0 | 95.8% | 95.8% | 0 |
| Physical Structure | 50.0% | 50.0% | 0 | 37.5% | 37.5% | 0 |
| Biotic Structure | 47.2% | 50.0% | 2.8 | 48.6% | 51.4% | 2.8 |

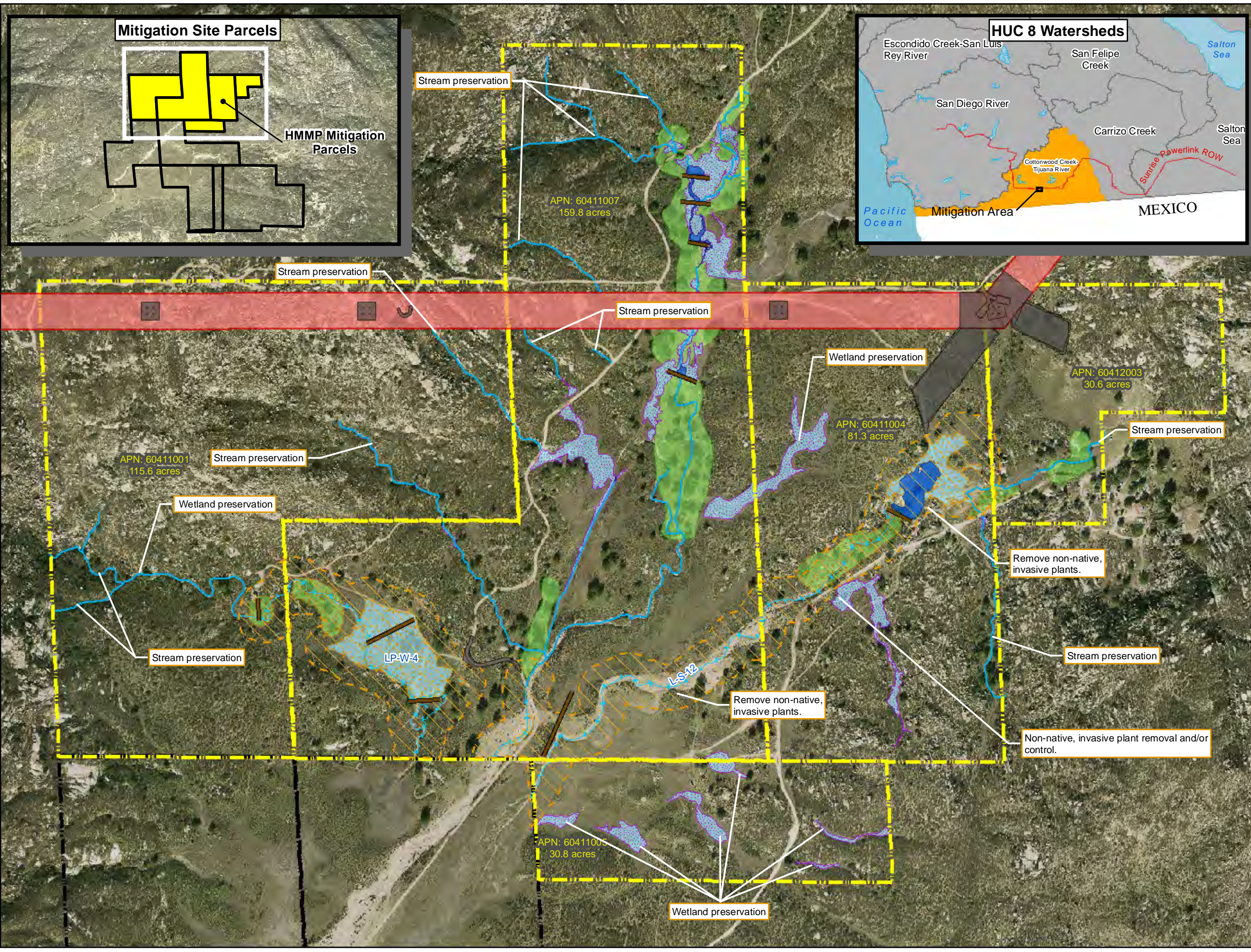
All CRAM attributes at impact sites had some level of average decrease as a result of the Project (Table 4). Mitigation actions at the Long Potrero Mitigation Site should allow improvements in the area of Biotic Structure that are apparent at stream AAs within 5 years of mitigation implementation. In addition, improvements to the Buffer & Landscape Context attribute are likely at depressional wetlands and other streams not included in CRAM assessments at the Long Potrero Mitigation Site. As seen in Figure 7, stream mitigation actions at the Long Potrero Mitigation Site will contribute to improvements in at least one area of stream impact along the ROW.

The proposed removal of non-native, invasive vegetation in stream, wetland, and riparian areas at the Long Potrero Mitigation Site is projected to result in improvements to the condition of these areas as reflected in CRAM scores. Removal of non-native, invasive herbaceous species including tocalote (*Centaurea melitensis*), curly dock, and shortpod mustard (*Hirschfeldia incana*) would eliminate the need for native vegetation to compete with these species, and increase habitat value for both vegetation and wildlife. Removal of salt cedar (*Tamarix ramosissima*), in particular, would be beneficial to surrounding habitats and downstream areas by eliminating a possible source for the spread of this problematic invasive species. Mitigation actions would therefore benefit not only the Long Potrero Mitigation Site but would also be beneficial to the greater Long Potrero watershed.

Sunrise Powerlink
 San Diego County,
 California

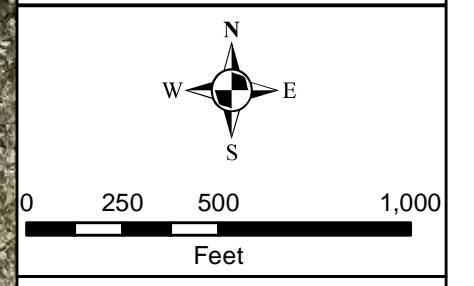
Figure 6

Mitigation Activities at the Long Potrero HMMP Mitigation Parcels



- Legend**
- HMMP Mitigation Parcels
 - Other Parcels included in Mitigation Site
 - Sunrise Powerlink ROW
 - Construction Impact Area
 - Earthen Dams/Berms
 - Man-made Ponds (1.28 acres)
 - Enhanced Riparian Habitat (3.95 acres)
 - Preserved Riparian Habitat (12.62 acres)
 - Enhanced Wetlands (5.99 acres)
 - Preserved Wetlands (9.92 acres)
 - Proposed Non-native, Invasive Species Removal
 - Enhanced Streams (0.96 ac.; 6,054 ln. ft.)
 - Preserved Streams (1.39 ac.; 16,857 ln. ft.)

Note: Stream and Riparian acreage calculations do not include areas within the Sunrise Powerlink ROW or Construction Impact Areas. Stream acreages are based on OHWM width. Riparian areas are based on CDFG riparian dipline.



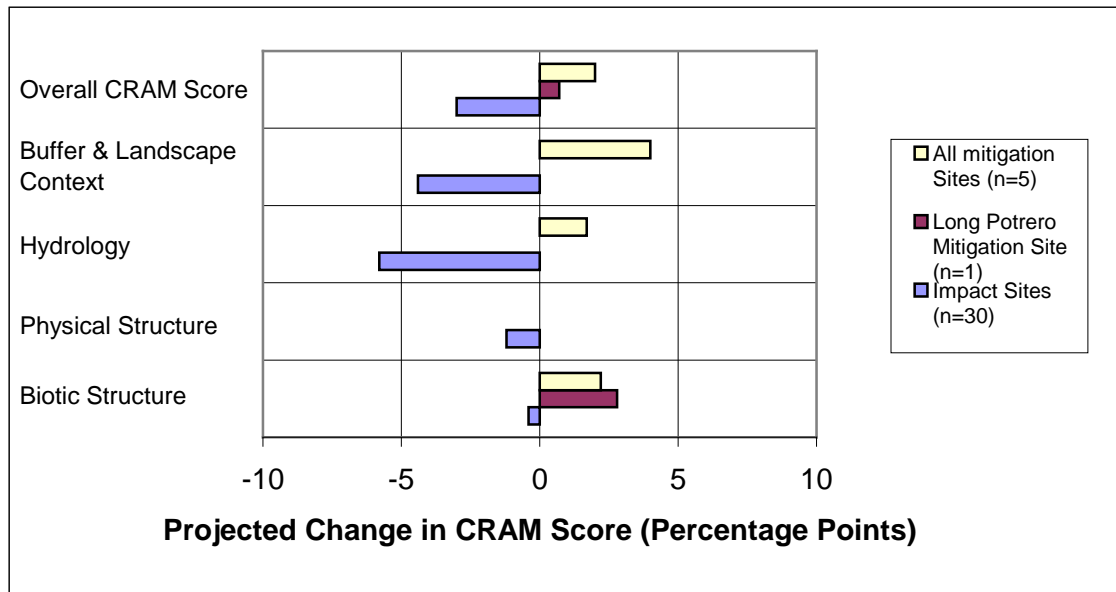


Figure 7. Projected Average Changes in CRAM Score at Stream Impact Sites and Stream Mitigation Sites 5 Years after Mitigation Implementation

In conclusion, CRAM provides a basis for comparing impacts along the Project ROW to proposed mitigation actions. Proposed mitigation actions at the Long Potrero Mitigation Site will contribute to the overall mitigation package to compensate for the areas of functionality that are impaired by the Project. These mitigation actions taking place at the Long Potrero Mitigation Site, in combination with other mitigation sites, demonstrate more than adequate compensation for impacts to waters occurring as a result of the Project.

6.0 DETERMINATION OF CREDITS

The Long Potrero HMMP Mitigation Parcels contain several habitat types which will contribute to the overall mitigation acreage contained in the five mitigation properties. Within this mitigation site, compensation for permanent impacts to ephemeral, intermittent, and perennial streams along with wetlands and riparian habitat will be provided. Mitigation acreages and credits are discussed in more detail in the following sections.

6.1 Mitigation Credits within the Long Potrero Mitigation Site

The Long Potrero property provides 54 percent of the total Project mitigation acreage for ephemeral, intermittent, and perennial streams, 85 percent of the project mitigation for wetlands, and 35 percent of the project mitigation for riparian habitat. Additional credits for these habitat types are provided by the Lightner, Chocolate Canyon, and Suckle mitigation sites. A summary of mitigation acres provided at the Long Potrero Mitigation Site is presented in Table 7 below. A summary of collective mitigation acres provided by the entire mitigation program at all five sites is presented in Section 6.2.

Table 7. Summary of Project Aquatic Resource Mitigation on the Long Potrero Mitigation Parcels

| Resource Type | Mitigation Area [acres; linear feet for streams] | | |
|--|---|-----------------|--------------|
| | Preservation | Enhancement | Total |
| Perennial, Intermittent, and Ephemeral Streams | 1.39 (16,857) | 0.96 (6,054) | 2.35 |
| Wetlands | 9.92 | 5.99 | 15.91 |
| Riparian | 12.62 | 3.95 | 16.57 |
| Totals | 23.93 | 10.9 | 34.83 |

6.2 Summary of Mitigation Credits for Entire Mitigation Program at all Sites

A summary of total mitigation for permanent impacts (Table 8) and temporary impacts (Table 9) for each resource type is detailed below. In addition, a summary of mitigation activities at each mitigation site for the Project is contained in Table 10. On an acreage basis, the Project provides more than adequate mitigation to compensate for unavoidable permanent impacts to waters. In addition, enhancement and restoration activities at four of the five mitigation sites will increase the functions and services provided by waters at the mitigation sites. Cumulatively, this provides ample mitigation to compensate for reduced functions and services in temporarily and permanently impacted waters.

Proposed mitigation activities for the Project will provide improvements in the same areas of functions and services that are likely to be impacted by the Project. Overall, the average projected decrease of 3 CRAM percentage points at stream impact sites will be offset by an average increase of 2 percentage points at stream mitigation sites at the end of the 5-year monitoring period, together with restoration, enhancement, and preservation of these areas at a cumulative 35:1 ratio by acreage for permanent impacts and 2:1 ratio for temporary impacts. CRAM scores for the Physical Structure and Biotic Structure attributes are likely to increase as the habitat areas develop over the long-term, thus raising average overall CRAM scores further than are indicated herein for the term of the 5-year monitoring program.

Projected CRAM data at mitigation sites is intended to serve as a guide for comparison of mitigation and impacts, and should not be directly applied to mitigation ratios. The results of multiplying CRAM score by any dimension of size, such as wetland area, length, or perimeter, might distort the scaling of some metrics, weight the values of other metrics in unintended ways, and thus lead to erroneous results (CWMW 2009). Furthermore, areas of habitat preservation were not included in the CRAM analyses, but are valuable in maintaining the overall condition of their watersheds and protecting the mitigation features from negative external stressors such as edge effects.

Table 8 Summary of Sunrise Powerlink Project Mitigation for Permanent Impacts to Waters of the U.S.

| Habitat Type | Permanent Impacts | Off-site Restored Mitigation Acreage | Off-site Enhanced Mitigation Acreage | Off-site Preservation Acreage | Total Mitigation Acreage for Permanent Impacts | Permanent Impact Mitigation Ratio |
|-------------------|-------------------|--------------------------------------|--------------------------------------|-------------------------------|--|-----------------------------------|
| Desert Dry Washes | 2.45 | 0 | 4.04 | 74.50 | 78.54 | 32.1:1 |
| Other Streams | 0.35 | 0.04 | 2.13 | 1.12 | 3.29 | 9.4:1 |
| Wetlands | 0.08 | 0 | 7.52 | 11.11 | 18.63 | 232.9:1 |
| Total | 2.88 | 0.04 | 13.69 | 86.73 | 100.46 | 34.9:1 |

Table 9. Summary of Sunrise Powerlink Project Mitigation for Temporary Impacts to Waters of the U.S.

| Habitat Type | Temporary Impacts | On-site Habitat Replacement Acreage | Temporary Impacts Replacement Ratio | Off-site Preservation Acreage | Off-site Mitigation Ratio |
|-------------------|-------------------|-------------------------------------|-------------------------------------|-------------------------------|---------------------------|
| Desert Dry Washes | 6.53 | 6.53 | 1:1 | 13.06 | 2:1 |
| Other Streams | 0.55 | 0.55 | 1:1 | 1.10 | 2:1 |
| Wetlands | 0 | NA | NA | NA | NA |
| Total | 7.08 | 7.08 | 1:1 | 14.16 | 2:1 |

Table 10. Summary of Project Aquatic Resource Mitigation

| Site | Resource Type | Mitigation Area [acres; linear feet for streams] | | | |
|-----------------|-------------------|---|-----------------|-------------|-------------------|
| | | Preservation | Enhancement | Restoration | Total |
| Desert Cahuilla | Desert Dry Washes | 84.13 (24,400) | | | 84.13 (24,400) |
| | Streams | | | | |
| | Wetlands | | | | |
| | Riparian | | | | |
| Suckle | Desert Dry Washes | 3.43 (7,000) | 4.04 (4,200) | | 7.47 (11,200) |
| | Streams | | | | |
| | Wetlands | 0.48 | 0.40 | | 0.88 |
| | Riparian | | | | |

| Site | Resource Type | Mitigation Area [acres; linear feet for streams] | | | |
|---------------------------|------------------------------------|---|--------------------------|-------------------------|--------------------------|
| | | Preservation | Enhancement | Restoration | Total |
| Lightner | Desert Washes Dry | | | | |
| | Intermittent and Ephemeral Streams | 0.55 (17,117) | 0.09 (2,751) | 0.04 (1,117) | 0.68 (20,985) |
| | Wetlands | 0.20 | 0.63 | | 0.83 |
| | Riparian | 15.83 | 0.63 | 3.43 | 19.89 |
| Long Potrero | Desert Washes Dry | | | | |
| | Intermittent and Ephemeral Streams | 1.39 (16,857) | 0.96 (6,054) | | 2.35 (22,911) |
| | Wetlands | 9.92 | 5.99 | | 15.91 |
| | Riparian | 12.62 | 3.95 | | 16.57 |
| Chocolate Canyon | Desert Washes Dry | | | | |
| | Perennial and Intermittent Streams | 0.28 (9,051) | 1.08 (3,162) | | 1.36 (12,213) |
| | Wetlands | 0.99 | 0.02 | | 1.01 |
| | Riparian | 10.25 | 0.30 | | 10.55 |
| Totals¹ | Desert Washes Dry | 87.56 | 4.04 | | 91.60 |
| | Streams | 2.22 (43,025) | 2.13 (11,967) | 0.04 (1,117) | 4.39 (56,109) |
| | Wetland | 11.11 | 7.52 | | 18.63 |
| | Riparian | 38.70 | 4.88 | 3.43 | 47.01 |

7.0 MITIGATION WORK PLAN

This section of the Final HMMP is divided into two parts. The first part provides a description of mitigation implemented for this mitigation site, with maps and tables showing acreages and locations of mitigation within the site. The second part describes implementation methods for general mitigation activities that will be performed at the mitigation site.

7.1 Activities Planned at the Long Potrero HMMP Mitigation Parcels

The following section describes the mitigation activities that will be performed at the Long Potrero HMMP Mitigation Parcels. These activities are summarized in the list below. Mitigation activities at the site are limited due to the presence of the federally endangered arroyo toad. No grading or significant earth disturbance will be permitted within the site to protect this species

¹ Totals reflect mitigation for both permanent and temporary impacts to Waters of the U.S.

and its habitat. In addition, driving on all roads should be limited to 2 hours after sunrise to 2 hours before sunset to prevent impacts to arroyo toad. Mitigation implementation proposed at the Long Potrero Mitigation Site includes:

1. Preservation of streams, wetlands, and riparian habitat
2. Enhancement of stream, wetland, and riparian habitat, including:
 - a. removal of non-native, invasive plant species
 - b. planting of native vegetation to improve vegetation diversity and structure

Mitigation acreage within the HMMP Mitigation Parcels is listed in Table 11 below. See Figure 6 and Appendix B for the location and site plans for the mitigation activities. Each activity is described further in the text below.

Table 11. Summary of Mitigation Activities, Long Potrero Mitigation Site

| Mitigation Action | Area (acres) | Length (linear feet) |
|---------------------------------------|--------------|----------------------|
| Streams | | |
| Stream Preservation | 1.39 | 16,857 |
| Stream Enhancement and Preservation | 0.96 | 6,054 |
| Total | 2.35 | 22,911 |
| Wetlands | | |
| Wetland Preservation | 9.92 | N/A |
| Wetland Enhancement and Preservation | 5.99 | N/A |
| Total | 15.91 | N/A |
| Riparian | | |
| Riparian Preservation | 12.62 | N/A |
| Riparian Enhancement and Preservation | 3.95 | N/A |
| Total | 16.57 | N/A |

7.1.1 Preservation

A total of 9.92 acres of wetlands, 1.39 acres of ephemeral, intermittent, and perennial streams, and 12.62 acres of riparian habitat on HMMP Mitigation Parcels will be preserved through this mitigation action. Land use restrictions and long-term financing mechanisms will ensure that these waters and their surrounding habitats are preserved in perpetuity.

7.1.2 Enhancement

A total of 5.99 acres of wetlands, 0.96 acre of ephemeral, intermittent, and perennial streams, and 3.95 acres of riparian habitat within the Long Potrero Mitigation Site will be enhanced through this mitigation action. Non-native, invasive plant species, or weeds, will be removed

from the site, as feasible, from within the stream channels, wetlands, and ponds. In addition, control of these species within 120 feet of the stream channels, wetlands, and ponds will occur to increase the functions and services of habitat for native wildlife and plant species, including special-status species.

In general, weed species are distributed throughout the upland areas that are adjacent to the streams, wetlands, and ponds at this site. In these areas, mostly annual weed species, particularly grass species, occur somewhat evenly distributed throughout the grasslands. Within the stream channels, weeds occur sporadically and are not currently having a significant adverse impact on the functions and resources of the streams. Within the wetland areas, weeds are more predominant within, surrounding, and outside of the wetlands. This is particularly true of areas within the wetlands that appear too deep for perennial seasonal wetland vegetation. The density of weed species within some of the wetland habitat degrades the functions and services of the wetlands to wildlife and to native plant species.

Removal of non-native, invasive species will focus on areas within the banks of the stream channels and within the wetlands and ponds. In addition, weeds will be controlled in the buffer areas adjacent to the stream channels and wetland areas to reduce the spread of weeds into the aquatic resources. As part of the mitigation activities, weed species will be controlled within a 120-foot buffer adjacent to stream channels and around wetlands and ponds. This buffer size was determined based on a balance between establishing a width large enough to effectively reduce the spread of weeds into the aquatic resources, while at the same time limiting the width based on practical limitations associated with managing weed species in remote areas.

In addition, there are several other areas where non-native, invasive plant species will be removed. Specifically, several salt cedar plants will be removed which occur within the eastern-most man-made pond and just below the dam of this pond. Lastly, the top of the dam and portions of the downstream slope of the dam at this pond is covered with tocalote, which will be removed. Other weed species will be controlled under the larger project-wide weed management plan.

Table 12 lists the non-native, invasive plant species that will be removed and controlled and the method(s) that will be used to control them.

Table 12. Non-native, Invasive Plant Species to be Controlled and the Method of Control

| Botanical Name | Common Name | Method of Control |
|-----------------------------|------------------|------------------------------------|
| <i>Centaurea melitensis</i> | tocalote | Hand/Mechanical Removal, Herbicide |
| <i>Hirschfeldia incana</i> | shortpod mustard | Hand/Mechanical Removal, Herbicide |
| <i>Rumex crispus</i> | curly dock | Hand/Mechanical Removal, Herbicide |
| <i>Tamarix ramosissima</i> | salt cedar | Salt Cedar Control Method |

Sequence and Timing

The sequence and timing for the mitigation activities will likely be concurrent with project construction for activities in mountain stream areas and are summarized below and in Table 13. Sequence and timing that is related to specific weed removal methods are described in Section 5.2.

All mitigation activity will be in conformance with applicable measures for special status species as outlined in the Project Final EIR/EIS and LSAA including:

- Qunio checkerspot butterfly
- Arroyo toad

The first removal of salt cedar will take place in Year 0 between August 1 and December 31. Removal of this species will occur at least once annually between August 1 and October 31 for Years 1 to 5. The contractor will coordinate with the consulting biologist to coordinate exact timing of salt cedar.

The timing of weed removal activities will vary depending on whether or not weeds are specified to be removed by manual or mechanical means or if the weeds are annual or perennial species. In all cases, the contractor will coordinate with the consulting biologist to determine the exact timing of weed removal activities. For all monitoring years (Years 1-5), annual weeds specified to be removed by manual means, including priority species tocalote, shortpod mustard, and curly dock, will be removed twice between February 1 and March 14.

Perennial weeds specified to be removed manually will be removed once a month between approximately February 1 to March 14 and August 1 to October 31, during Year 1. In Years 2 to 5, perennial weeds will be removed twice annually, once between February 1 to March 14 and once between August 1 to October 31.

Weed removal activities occurring by mechanical means, during Year 0, will take place once between approximately August 1 and August 31. During Years 2-5, mechanical weed removal activities will occur twice annually between February 1 to March 14.

Table 13. Sequence and Timing of Mitigation Activities at the Long Potrero Mitigation Site²

| | Monitoring Years | | | | | |
|---|----------------------------------|---|--|--|--|--|
| | Year 0 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| Salt Cedar Removal | Twice between Aug. 1 and Dec. 31 | A minimum of once between Aug. 1 and Oct. 31 | A minimum of once between Aug. 1 and Oct. 31 | A minimum of once between Aug. 1 and Oct. 31 | A minimum of once between Aug. 1 and Oct. 31 | A minimum of once between Aug. 1 and Oct. 31 |
| <u>Manual</u> removal of <i>annual</i> weeds | Once between Aug 1 and Aug 31. | Twice between Feb 1 and March 14. | Twice between Feb 1 and March 14. | Twice between Feb 1 and March 14. | Once between Aug. 1 and Oct. 31 | Twice between Feb 1 and March 14. |
| <u>Manual</u> removal of <i>perennial</i> weeds | Twice between Aug 1 and Oct 31. | Once a month between Feb 1 to Mar 14 AND Aug 1 to Oct 31. | Once between Feb 1 to Mar 14 AND once between Aug 1 to Oct 31. | Once between Feb 1 to Mar 14 AND once between Aug 1 to Oct 31. | Once between Feb 1 to Mar 14 AND once between Aug 1 to Oct 31. | Once between Feb 1 to Mar 14 AND once between Aug 1 to Oct 31. |
| <u>Mechanical</u> removal of weeds | Once between Aug. 1 and Aug. 31 | Twice between Feb. 1 and Mar. 14. | Twice between Feb. 1 and Mar. 14.. | Twice between Feb. 1 and Mar. 14. | Twice between Feb. 1 and Mar. 14. | Twice between Feb. 1 and Mar. 14. |

² All mitigation activity timing will be coordinated around special status species windows.

7.2 General Mitigation Implementation Methods and Best Management Practices

This section describes general methods for implementation of mitigation activities that would occur throughout all of the mitigation sites. These activities include site preparation, weed removal, and erosion control Best Management Practices (BMPs) that would be implemented as applicable to a given site. In addition, all mitigation activities will avoid impacts to nesting birds and will follow the breeding season dates listed in the Project Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (Aspen Environmental Group 2008).

7.2.1 Implementation Methods for Control of Non-native, Invasive Plant Species

Non-native, invasive plant species removal will be implemented as part of enhancement activities, during site preparation for restoration activities, and as part of long-term management activities throughout the project alignment (Recon Environmental Inc. 2010). Non-native, invasive plant species removal will target all California Invasive Plant Council (Cal-IPC; <http://www.cal-ipc.org/ip/inventory/weedlist.php>) non-native, invasive annual and perennial plant species listed as having a severe or moderate (A or B) invasive impact with the exception of annual grass species which are abundant within reference locations. Non-native, invasive plant species removal methods to be implemented for each species are indicated in each of the invasive plant species control table (Table 12) above. Specifics on the implementation of these methods are described in more detail below.

In general and when feasible, live reproductive plant materials such as seed and rhizomes, will be removed from the site. Some areas have extremely fragile habitats that could be damaged by attempting to remove large quantities of plant material. For these areas, the option of processing and disposing of plant material on-site in an appropriate manner will be determined by the land manager. In all cases, viable plant material will be processed and disposed of outside of the bed and banks of the channel. Plant material processing methods that may be proposed include:

- Cut into manageable size and dispose of on-site to create brush piles for wildlife
- Removal of material from the site

Weed Removal as Part of Site Preparation

Mowing will be one method used for initial removal of non-native, invasive plants to prepare enhancement areas, as appropriate. Based on the remoteness of the mitigation sites, mowing will be implemented using weed-eaters (or “weed-whackers”) or similar trimmers with string or metal blades. This method may be used to minimize the extent and height of non-native annual herbs and grasses. Mowing will be used only if it will not have a deleterious effect on native plant species that are interspersed with the weeds.

Removal of Priority Weed Species

The removal of the priority weed species at the Long Potrero Mitigation Site, including tocalote, shortpod mustard, and curly dock, will be removed by manual and mechanical methods. The removal methods of salt cedar, another priority species, are described later. Manual removal is the preferred method of removing weed species from the site since ground disturbance and adverse effects to sensitive wildlife species will be minimized. However, mechanical methods of

removal, such as mowing or the use of weed-whackers, are prescribed in appropriate areas of the site.

Removal of the annual species tocalote and shortpod mustard will be performed first during early winter when soils are moist enough to remove most plants without breaking the roots. A second weed removal effort will take place prior to December 31 to remove any re-sprouted weeds and ensure that the weed control area is weed free. Tocalote and shortpod mustard will be removed twice annually throughout the 5-year monitoring period. Removal of the perennial species curly dock will occur monthly between October and December during the first year. Curly dock will then be removed two times between October and December between monitoring Years 2 through 5. The timing and methods of weed removal may be adapted by the consulting biologist depending on the weed removal results from previous years.

Plant materials that are removed will be disposed of carefully to prevent regeneration or spread. Weeds will be removed before the species sets seed. When this is not feasible, seed heads will be removed from plants prior to removal of the remaining plant. Seed heads of non-native, invasive plant species will be placed in plastic trash bags and removed from the project site for proper disposal.

If manual and mechanical removal methods are tried and found to be ineffective after 2 years of repeated treatment, or if the problem is too widespread for these methods to be practical, then chemical controls may be implemented as described below. All of the methods described in this section will be adapted to each species based on its morphology and phenology.

Herbicides

Herbicides will be used when manual and mechanical removal methods are not effective and may be used in conjunction with these other methods for species that are known to be difficult to control. The project will use glyphosate-, triclopyr-, or imazapyr- based herbicides, such as Rodeo®, Habitat®, or other products that are Environmental Protection Agency (EPA)-approved for use near wetlands and streams. Herbicides will not be used when rain is predicted within 24 hours after application. The owner and applicator must comply with all state and local regulations regarding the application of herbicides.

Herbicides will be applied using a localized spot-treatment method and applied in a manner that will eliminate or reduce drift onto native plants. Herbicides may also be applied to cut stumps for large woody plants or large clumps of herbaceous weed that cannot be effectively removed. If the species has the ability to sprout from the cut trunk, then the cut stump will be treated with Garlon® 4 or other approved herbicide in accordance with the manufacturer's specifications to ensure that the cut stump will not sprout. Cut stumps will be subsequently monitored and repeatedly cut and treated with herbicide until the stump is dead. Except as described above, and for the remainder of the ROW, the above ground plant material shall be removed from the site and disposed at a municipal recycling center that is equipped to process and recycle green waste (Recon Environmental Inc. 2010). The removal shall be performed at a time when the plants do not have ripe seed. If this is not feasible, then seeds will be removed, placed in plastic bags and disposed off-site.

As an alternative to commercially manufactured herbicides, the project may use an organic alternative of horticultural vinegar (20 percent) spray or common household vinegar (5 percent) spray.

Salt Cedar Removal

Salt cedar may be removed by hand or by using an herbicide application, depending on the size of the plants. Removal of salt cedar plants will occur between October 1 and 31, and resprouts will be removed prior to December 31 following the first removal. When feasible, all biomass must be removed and disposed of at an appropriate off-site location. Follow up spraying of resprouts must be done on an annual basis between October 1 and 31 during the 5-year monitoring period and may be required multiple times each year between October and December to eliminate infestations.

When salt cedar plants are seedlings, hand pulling or a weed wrench can be used to remove individuals. Removing the entire plant, including the root system, ensures that plants do not resprout. For salt cedar saplings and trees, an herbicide treatment will be prescribed. A triclopyr-based herbicide such as Garlon®4 or Remedy™ or imazapyr-based herbicide such as Arsenal® or Habitat® or other herbicides approved by the EPA for aquatic settings will be used.

The cut-surface, girdle-spray, and basal bark methods of salt cedar removal involve the use of herbicide. The cut-surface method is the preferred method of salt cedar removal. Using this method, the salt cedar trees or saplings are cut within 6 inches of the ground surface. The stump surface is sprayed with herbicide immediately following the cuts. The dead plant biomass is then removed from the site if feasible or disposed of in locations on site approved by the land manager.

The girdle-spray and basal bark methods can be used in places where removal of the dead plant biomass is prohibitive due to site conditions and with approval by the consulting biologist. The girdle-spray method is used on salt cedar trees with trunk diameters of 4 inches or greater. The trees are girdled by the creation of shallow, overlapping cuts around the trunk. Herbicide is applied to the cut surface immediately following girdling. The basal bark method can be used on salt cedar trees with diameters of less than 4 inches. Using the basal bark treatment, an herbicide mixture is applied to the lowest 12 inches of the plant. Following the girdle-spray or basal bark treatments, the plants can be left in place to die and be retreated if necessary. Any seed heads on the plants will be removed and brought off-site, however.

7.2.2 Erosion Control Measures

Erosion control measures will be utilized in areas that involve any mitigation activities that result in bare ground. These areas will be covered with rice straw to protect the surface from erosion. In areas where the slope is greater than 3:1 (horizontal to vertical), straw wattles, straw bales, and/or silt fence may be installed to reduce the velocity of runoff and trap sediment. Wattles, bales, and silt fence will either be biodegradable or will be removed as part of the mitigation activities when they are no longer needed. In addition, as specified in the Storm Water Prevention and Protection Plan (SWPPP, SDG&E 2010b), reseeding will occur in areas that involve weed removal.

8.0 HMMP MONITORING AND PERFORMANCE CRITERIA

8.1 As-built Conditions Reporting

As-built conditions reporting will take place at the end of the 120-day establishment period which will serve to notify the agencies of the completion of construction. In addition, this will be reported as part of the first annual monitoring report for the Long Potrero Mitigation Site. As-built

conditions reporting will include descriptions of enhancement activities undertaken during mitigation implementation. If enhancement activities take place during consecutive years, the reporting will occur as part of the annual reporting the first year following implementation at the mitigation site.

8.2 Initial Mitigation Monitoring Activities and Performance Criteria

The purpose of the project's mitigation monitoring program is to assess the effects of enhancement activities, as well as to provide guidance for habitat management in the event of negative environmental stressors that may affect ecosystem function. Where possible, the monitoring program will implement the South Coast Index of Biological Integrity, a part of the SWQCB Surface Water Ambient Monitoring Program (SWAMP), in conjunction with CRAM, to determine ecosystem function. The project will use CRAM to provide quantitative evaluation of mitigation site waters during the initial monitoring period, as well as qualitative monitoring that will include monitoring and mapping of non-native, invasive species, excessive erosion, and other negative environmental stressors.

Monitoring at the mitigation site will occur for a minimum 5-year period, with Year 1 beginning following the completion of mitigation action (e.g., non-native, invasive species removal and replanting for enhancement activities) at the site and the completion of preservation agreements between SDG&E and the long-term land manager. Monitoring would continue on an annual basis until the site has met all performance criteria *and* all regulatory agencies have agreed in writing that the site has met performance criteria and is ready for transfer to the long-term manager. Monitoring methods are described below.

8.2.1 Quantitative CRAM Evaluation

Purpose: Provide quantitative evaluation of preserved streams to inform adaptive management through comparison of CRAM scores from throughout the monitoring period.

Methods: CRAM methodology will be applied to a subset of enhanced wetlands on the Long Potrero Mitigation Site. CRAM AAs will remain the same for all assessments during the monitoring period to enable consistent comparison of performance. Evaluation of wetlands using CRAM will be led by certified CRAM practitioners trained in the riverine and depressional CRAM modules or a more specific module for these areas, if developed in the future. CRAM assessments will be performed at Year 1, at Year 3, and at Year 5. The results of these wetland evaluations will be presented as part of the annual monitoring reports. CRAM will be conducted in conjunction with other Project monitoring activities, and will occur between February and June of each monitoring year, when plant species are most identifiable.

Performance Criteria: CRAM scores will be compared to baseline CRAM scores for enhanced stream reaches. CRAM scores are anticipated to increase compared to baseline conditions following enhancement. The rate and of increase will vary based on the baseline scores for each reach, and intensity of enhancement actions. If CRAM scores decrease, reasons for the decrease will be reported as part of the annual monitoring report and management actions will be implemented.

8.2.2 *Qualitative Monitoring for Non-native, Invasive Species*

Purpose: To monitor conditions for non-native, invasive plant species that may affect the ability of the mitigation site to continue to provide adequate habitat functions and to identify and retreat any re-growth or new colonies prior to spreading.

Methods: The mitigation site will be surveyed during each annual monitoring visit to map and describe the occurrence of negative environmental stressors. For invasive species, the site will be surveyed for the locations of non-native, invasive species populations designated as having a severe or moderate (A or B) invasive impact by Cal-IPC (with the exception of annual grass species). Non-native, annual grass species will be controlled within waters for the duration of the monitoring period, but are expected to be present due to their prolific nature within reference locations. For any observed non-native, invasive plant species, locations and extents of each population will be mapped, and estimates of population size (number of individuals) will be made. Other stressors to be evaluated include OHV use and anthropogenic sources of erosion and sedimentation. If environmental stressors are identified, the source of the stressor (for example, a cut fence resulting in OHV use, or off-site source population of invasive species) will be identified and described for management action. Weeds in other locations will follow the Weed Control Plan for the entire ROW (Recon Environmental Inc. 2010).

Performance Criteria: Non-native, invasive plant species listed as having a severe or moderate (A or B) invasive impact by the Cal-IPC (with the exception of annual grass species prevalent in the area) will be managed so they do not exceed more than 5 percent cover of annual species and 0 percent cover of perennial species within waters. Non-native, annual grass species will be controlled within waters for the duration of the monitoring period, but are expected to be present due to their prolific nature within reference locations. Monitoring reports in Years 2 through 5 will contain a description of management activities performed each year based on previous year's management recommendations. The success of management recommendations will also be evaluated as part of the adaptive management strategy for the site (see Section 12.0).

8.2.3 *Semiannual Wildlife Surveys*

A qualified biologist will conduct semiannual surveys of mitigation areas to document the bird, wildlife, and fish use of the enhanced habitats within the mitigation site. Wildlife surveys will be conducted in the spring and fall of each year; the exact timing will be determined by the consulting biologist. The surveys will be initiated after removal of non-native, invasive species removal has occurred and will continue through the initial 5-year monitoring period.

8.3 **Monitoring Schedule and Reporting Requirements**

With the exception of wildlife surveys, monitoring of the mitigation site for all mitigation activities will occur on a quarterly basis for the first year, bi-annually for the second year, and annually until performance criteria are met (minimum of five years). Quantitative monitoring (e.g. CRAM or other data collection methods) would occur biennially (e.g. Year 1, 3, and 5) while qualitative monitoring would be completed at the end of every year. Wildlife surveys will be conducted bi-annually throughout the 5-year monitoring period. Reporting will occur annually. Reports for quantitative monitoring years (Years 1, 3, and 5) will be a full report with analysis. Reports for qualitative years (Years 2 and 4) will consist of a memorandum discussing the general condition of the site and management actions implemented in that year and/or recommended for the following year. Each monitoring report will include a summary of the two wildlife surveys conducted in that year.

Monitoring at this mitigation site will be completed during the late spring or early summer of each monitoring year and will include CRAM assessments, non-native, invasive plant species monitoring, wildlife monitoring, and other monitoring, as required (see Table 14 below). A mitigation monitoring report will be prepared for the mitigation site to enable clear communication to the land manager at this location. The report will be submitted to the Corps, CDFG, and SWRCB by October 31 of each monitoring year. A summary of monitoring and reporting activities is outlined in Table 14 below.

Table 14. Monitoring and Reporting Activities at the Long Potrero Mitigation Site

| | Monitoring Years | | | | |
|------------------------------------|---|---|--|---|--|
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| Quantitative Monitoring | | | | | |
| CRAM | Annually (late spring or early summer) | | Annually (late spring or early summer) | | Annually (late spring or early summer) |
| Qualitative Monitoring | | | | | |
| Non-native, invasive plant species | Quarterly | Bi-annually | Annually (late spring or early summer) | Annually (late spring or early summer) | Annually (late spring or early summer) |
| Wildlife | Spring + Fall | Spring + Fall | Spring + Fall | Spring + Fall | Spring + Fall |
| Reporting | | | | | |
| Due by October 31 | Quantitative + 2 Wildlife Surveys Summary | Qualitative+ 2 Wildlife Surveys Summary | Quantitative+ 2 Wildlife Surveys Summary | Qualitative+ 2 Wildlife Surveys Summary | Quantitative+ 2 Wildlife Surveys Summary |

9.0 MAINTENANCE OF HMMP WETLANDS AND STREAMS DURING THE MONITORING PERIOD

Ongoing removal of non-native, invasive plant species will occur in the mitigation areas twice annually as stated in 7.2.1. Methods for control of invasive species will be selected based on the best available techniques as informed by practices of adaptive management through annual monitoring during the initial five year monitoring period.

10.0 INITIAL MANAGEMENT OF THE MITIGATION SITE UNDER THE HAP/HMP

As discussed in Section 1.3, management of the Long Potrero Mitigation Site as a whole will occur under the institutional and funding arrangements established under the revised final HMP and PAR for the site. This section presents the proposed management tasks for the site during the first five years of HMP implementation and indicates how the tasks would be coordinated with HMMP implementation and maintenance activities during that the period. This section also identifies the estimated funding requirements for initial HMP management of the site. The tasks and funding estimates are from the September 2010 HAP/HMP and are subject to change. Actual HMP management tasks and funding will be as specified in the revised final HMP approved by the agencies (see Section 1.3).

10.1 HAP/HMP Management Tasks

Table 15 identifies the initial HMP management tasks (i.e., tasks in years 1-5 of HMP implementation) identified in the HMP for all Project mitigation sites, the specific tasks proposed for the Long Potrero site, and the interface between HMMP and HMP activities during the initial

management period. During the first three years of HMP implementation (which will follow the final selection of a land manager), the land manager will prepare annual work plans and budgets that indicate which tasks will be implemented and how management funds will be allocated. The annual work plans will be replaced by a five-year work program developed by the land manager by year 3 of HMP implementation. The five-year work program will guide ongoing management activities and the completion of initial HMP-related tasks. Based on this time table, HMMP enhancement activities, including required monitoring and maintenance of HMMP wetlands, streams, and riparian areas, will have been initiated prior to or concurrent with the initial phase of HMP implementation.

10.2 Funding Requirements

Based on the PAR conducted for the September 2010 HAP/HMP, start-up management costs are estimated at \$527,356 for the five-year period (\$105,471 annually). The PAR assumptions and spreadsheet for initial management of the Long Potrero site are included as Appendix C. A revised PAR will be prepared with the designated land manager as part of the revised final HMP for the site.

11.0 LONG-TERM MANAGEMENT OF THE MITIGATION SITE UNDER THE HAP/HMP

In the September 2010 HAP/HMP, a distinction is made between initial (start-up) management and ongoing (long-term) management of the mitigation sites. Generally initial and long-term management include the same categories of management tasks and would be implemented by the same entity (the land manager). In this regard, long-term management of the site begins during the initial management period. The difference is that there are data collection, planning, and capital tasks and costs in the initial period that would not be required at the same level in subsequent years. This section presents the proposed management tasks for the site after the initial period (i.e., beginning year 6) and discusses the interface between HMMP activities and goals and the long-term management of the site under HMP. This section also identifies the estimated funding requirements for ongoing management of the site. The tasks and funding estimates are from the September 2010 HAP/HMP and are subject to change. Actual tasks and funding will be as specified in the revised final HMP approved by the agencies (see Section 1.3).

11.1 Proposed Management Tasks

Table 16 identifies the ongoing management tasks under the HAP/HMP at all mitigation sites, specific tasks proposed for the Long Potrero site, and the interface between the HMMP and HAP/HMP in terms of long-term management activities and goals. The transition from maintenance of areas under the HMMP to management under the HAP/HMP would occur following the final year of monitoring under the HMMP.

11.2 Funding Requirements

Based on the PAR conducted for the September 2010 HAP/HMP, ongoing long term management costs are estimated at approximately \$65,581 annually. The HAP/HMP assumes that funding for annual management tasks would be provided through a non-wasting endowment established for the site. To generate approximately \$65,581 annually, approximately \$3,279,064 is needed as the principal for a non-wasting endowment. The PAR assumptions and spreadsheet for ongoing management of and the management endowment for the Long Potrero site are included as Appendix C. A revised PAR and endowment estimate will be prepared as part of the revised final HMP for the site.

Table 15. Initial HAP/HMP Management Tasks and Interface with HMMP Measures at the Long Potrero Mitigation Site

| September 2010 HAP/HMP | | Interface with HMMP Tasks |
|---|---|---|
| Initial Management Tasks at All Sites | Initial Tasks at Long Potrero | |
| Access Controls | | |
| To control access and deter illegal uses, gates, fences and signs will be installed and property patrols will be conducted. Fencing will be used selectively where access to areas with highly sensitive resources or hazards needs to be precluded and where the fencing would not interfere with wildlife movement. Signs, gates, and fencing will be maintained and replaced as needed. | Approximately 20 signs and selective fencing will be installed and maintained over the period. Gates and vehicle barriers were not proposed. Illegal access and property damage is a known concern, and patrols may be required to deter such activities. | The primary purpose of the HMP task is to control access to the property and sensitive areas. Placement of access controls will be coordinated with any temporary access controls installed in connection with the HMMP enhancement activities. The HMP task also will address the need for permanent protection of the resources preserved under the HMMP. |
| General Conditions Monitoring and Wildlife Assessment | | |
| The land manager will patrol the property on an annual basis to monitor the general condition of the property and to identify areas of management concern. All areas that have signs of illegal activity (such as dumping, unauthorized access, off-road vehicle use, or other unauthorized actions), invasive species problems, erosion issues, or other habitat degradation problems will be mapped using Geographic Positioning System (GPS) technology. A general assessment of wildlife habitat conditions will be coordinated and reported with the general conditions monitoring. All properties will be assessed for the potential occurrence of listed and other special status species. | Same as for other sites, plus coordination with HMMP activities. | The annual inspections under the HMP will be coordinated with HMMP maintenance and monitoring tasks. HMMP areas will be included in the HMP assessments. Mitigation monitoring and recommendations for maintenance related to the HMMP areas will be coordinated with the designated land manager. |

Table 15. Initial HAP/HMP Management Tasks and Interface with HMMP Measures at the Long Potrero Mitigation Site

| September 2010 HAP/HMP | | Interface with HMMP Tasks |
|--|---|--|
| Initial Management Tasks at All Sites | Initial Tasks at Long Potrero | |
| Vegetation and Invasive Species Mapping | | |
| <p>A qualified biologist will map the type, species dominance, and boundaries of all vegetation communities using the vegetation classification system commonly used by the management entity, and note the overall quality of the habitat. Concurrently, invasive plant species will be mapped in a manner appropriate to the species and extent of infestation (e.g., individual plants or general extent of a population). Target invasives are those listed by the California Invasive Pest Council (CalIPC) as highly or moderately invasive (CalIPC 2006). Information from the wildlife assessment regarding the location of observed exotic wildlife that may be a threat to listed species (e.g., cowbirds, bullfrogs, feral pigs) also will be included on the invasive species map. The mapping will be completed by the third year of property management.</p> | <p>Same as for other sites, plus coordination with HMMP activities.</p> | <p>The HMP mapping is for the entire mitigation site and will be prepared over a three-year period. Data collected for HMP mapping will be shared with the HMMP team and vice versa. Data collection and mapping protocols described in the HMMP will be coordinated with the designated land manager.</p> |
| Species Surveys | | |
| <p>On properties identified as mitigation for impacts to a listed species, focused surveys for that species will be conducted during start-up management and repeated as part of ongoing management. The surveys will be conducted by a qualified biologist using established protocols. The purpose of the surveys is to establish baseline information about occurrence and conditions and the basis for ongoing monitoring. If other listed species are known or have a high likelihood to occur on the property, surveys also will be conducted for those species. Surveys for non-listed special status species will be planned on a property-by-property basis.</p> | <p>Surveys for Quino and arroyo toad will be conducted every three years.</p> | <p>HMP species surveys will be coordinated with the semi-annual HMMP surveys.</p> |

Table 15. Initial HAP/HMP Management Tasks and Interface with HMMP Measures at the Long Potrero Mitigation Site

| September 2010 HAP/HMP | | Interface with HMMP Tasks |
|---|--|---|
| Initial Management Tasks at All Sites | Initial Tasks at Long Potrero | |
| Invasive Species Control | | |
| <p>A vegetation management component will be prepared as part of the 5-yr work program. The component will (1) identify the location and extent of target invasive species, (2) determine the threat posed to sensitive vegetation communities, (3) prioritize remedial management actions based on the level of threat, (4) identify methods that will be used and (5) provide a schedule for the management actions.</p> <p>Annual work plans in years 1-3 (prior to 5-yr work program) may include weed control measures.</p> | <p>Invasive plant control measures will be initiated based on the results of the mapping effort and the priorities established in the 5-yr work program. Planning and implementation will be coordinated with HMMP activities on the site.</p> | <p>Weed control efforts undertaken as part of the HMMP implementation tasks will be communicated to the land manager. Weed control plans and measures under the HMP and HMMP will be coordinated once HMP management has commenced.</p> |
| Road Maintenance and Road Decommissioning | | |
| <p>As part of the conditions assessment and vegetation mapping, existing roads on the property will be mapped, and roads required for property management and emergency response will be identified.</p> <p>The 5-yr work program will identify existing roads not required for property management for decommissioning and establish an inspection and maintenance schedule for retained roads (excluding Project access roads, which will be maintained by SDG&E).</p> <p>On properties crossed by Project access roads, use of those roads for property management will be planned and coordinated with SDG&E.</p> | <p>Same as for other sites.</p> | <p>HMP planning and implementation of road maintenance and decommissioning will be coordinated with the HMMP road decommissioning measures. Use of the project access road for HMMP activities will be coordinated with SDG&E. Maintenance of retained internal roads that cross HMMP areas will occur under the HMP.</p> |

Table 15. Initial HAP/HMP Management Tasks and Interface with HMMP Measures at the Long Potrero Mitigation Site

| September 2010 HAP/HMP | | Interface with HMMP Tasks |
|---|--|---|
| Initial Management Tasks at All Sites | Initial Tasks at Long Potrero | |
| Erosion Control and Remedial Restoration | | |
| The land manager may be responsible for controlling minor erosion problems related to road use and invasive species removal. Erosion control activities may include minor earth work or the installation of gravel bags, silt fencing, or fiber rolls to control runoff and sedimentation. Hydroseeding and selective plantings also will be used where needed. The 5-yr work program will include an erosion control component. | Same as for other sites, plus coordination with HMMP activities and erosion control measures in the Project ROW. | HMMP erosion control at enhancement sites will be coordinated with HMP tasks as required. |
| Trash Removal | | |
| The land manager will monitor the property for illegal dumping and provide for the collection and disposal of trash on an as-needed basis. | Same as for other sites, plus coordination with HMMP maintenance activities. | Trash collection and monitoring under the HMP will be coordinated with the same efforts within the HMMP activity areas. |
| Fire Management | | |
| The 5-year work program will include a fire management component developed in cooperation with the responsible fire agencies and in compliance with applicable State and local policies and regulations. | Same as for other sites. | The fire management component will take into consideration the location and sensitivity of the resources covered by the HMMP. |
| GIS Database | | |
| The land manager will establish and maintain a GIS database for the property and management program. For properties in San Diego County, the database will be compatible with the MSCP regional database. | Same as for other sites in San Diego County. | Data collected for HMMP purposes will be provided to the land manager for inclusion in the site database. HMP data will be shared with the HMMP team. |

Table 15. Initial HAP/HMP Management Tasks and Interface with HMMP Measures at the Long Potrero Mitigation Site

| September 2010 HAP/HMP | | Interface with HMMP Tasks |
|---|---|---|
| Initial Management Tasks at All Sites | Initial Tasks at Long Potrero | |
| Planning and Coordination | | |
| <p>During years 1-5, the land manager will prepare a 5-year work program that identifies and prioritizes biological resource and land stewardship tasks for the period and includes a five-year staffing and materials budget. The 5-year work program will be completed no later than year 3 and updated every three years. Annual work plans and annual budgets will be based on the priorities set in the 5-year work program.</p> <p>Prior to year 3, management will be guided by annual work plans prepared by the land manager, The annual work plans will cover the general conditions assessment, surveys, mapping, and other data collection required to guide management of the property. The work plans also may include access control, invasive species control, and erosion control measures that the land manager determines are necessary.</p> | <p>Same as for other sites, plus coordination with HMMP plans and activities.</p> | <p>The 5-year work program for the HMP will take into consideration the location and status of any HMMP activities in progress during the period covered by the program; the 5-year program also will provide for the transition of management of the HMMP preserved waters and riparian habitat by the site land manager once the initial monitoring of HMMP areas has been completed.</p> <p>The interim work program will identify and provide for the coordination of the HMP and HMMP tasks.</p> |
| Annual Reporting | | |
| <p>The land manager will prepare annual reports that identify management activities conducted in the prior 12 months, activities planned for the upcoming 12-months, expenditures for the past 12 months, proposed allocation of funds for the next 12 months, performance of the endowment in the prior year (if applicable), and the balance of endowment at the end of the prior year (if applicable).</p> | <p>Same as for other sites, plus coordination with HMMP reporting.</p> | <p>The HMP annual report will include a section on HMMP activities. The land manager will provide the HMMP team with a status report on initial management activities for inclusion in the HMMP annual reports.</p> |
| Public Education/Information | | |
| <p>Web-ready public information/education materials regarding the property's resources and any restrictions that apply to public access will be prepared and posted on the land manager/owner's website during the start-up management phase.</p> | <p>Same as for other sites.</p> | <p>Information about the HMMP goals and activities will be included in the HMP education/information materials.</p> |

Table 16. Ongoing HAP/HMP Management Tasks and Interface with HMMP Tasks at the Long Potrero Mitigation Site

| September 2010 HAP/HMP | | Interface with HMMP Tasks |
|--|---|---|
| Ongoing Management Tasks at All Sites | Ongoing Tasks at Long Potrero | |
| Access Controls | | |
| Signs, gates, and fencing will be maintained and replaced as needed as part of property management. | Same as for other sites. | Any permanent access controls needed to protect the preserved waters would be installed and maintained as part of ongoing management under the HMP. |
| General Conditions Monitoring and Wildlife Assessment | | |
| Same as during initial management period (annual assessments), | Same as for other sites, plus coordination with implementation and completion of HMMP monitoring. | Same as during the initial management period (HMMP areas included in the annual HMP assessments). |
| Vegetation and Invasive Species Mapping | | |
| Vegetation and invasive species mapping will be updated every three years to five years. | Mapping will be updated every three years. | Same as during initial management period for as long as HMMP monitoring continues. |
| Species Surveys | | |
| Generally same as during initial management period, with frequency of surveys determined in the 5-yr work program based on site conditions and assessment results. | Surveys for Quino and arroyo toad will be conducted every three to five years. | HMP surveys would continue to be coordinated with the semiannual HMMP surveys for the duration of the HMMP monitoring period. |
| Invasive Species Control | | |
| Annual implementation of measures identified in vegetation management component of the 5-yr work program. | Same as for other sites, with coordination with HMMP maintenance activities. | Management transitioned to HMP following the final year of mitigation monitoring. |
| Road Maintenance and Road Decommissioning | | |
| Inspection and maintenance of retained internal roads and decommissioning of roads as per schedule in 5-yr work program. Ongoing coordination for use of Project access roads. | Same as for other sites. | It is anticipated that HMMP road decommissioning would be complete prior to transfer of management responsibilities to the land manager. |

Table 16. Ongoing HAP/HMP Management Tasks and Interface with HMMP Tasks at the Long Potrero Mitigation Site

| September 2010 HAP/HMP | | Interface with HMMP Tasks |
|--|--|---|
| Ongoing Management Tasks at All Sites | Ongoing Tasks at Long Potrero | |
| Erosion Control and Remedial Restoration | | |
| Implementation of erosion control as per measures and guidelines in the 5-yr work program. | Same as for other sites, plus coordination with HMMP activities and erosion control measures in the Project ROW. | HMMP erosion control at enhancement sites will be coordinated with HMP tasks as required. Management transitioned to HMP following the final year of HMMP monitoring. |
| Trash Removal | | |
| Generally the same as during the initial management phase but as specified in the 5-yr work program. | Same as for other sites. | Same as during initial period for duration of HMMP maintenance and monitoring period. Continued under HMP thereafter. |
| Fire Management | | |
| As specified in fire management component of 5-yr work program. | Same as for other sites. | The provisions of the 5-yr work program will apply to the HMMP areas during and after HMMP implementation. |
| GIS Database | | |
| Database maintained annually. | Same as for other sites. | Same as during initial management period. |
| Planning and Coordination | | |
| 5-yr work program updated every 3 years. | Same as for other sites, with coordination with HMMP activities. | The transition of management of areas from under the HMMP to under the HMP will be planned and accommodated in the updated to the 5-yr work programs. |
| Annual Reporting | | |
| Generally the same as during the initial management period, in format specified in 5-yr work program. | Same as for other sites, with coordination with HMMP activities. | Same as during initial management period for duration of HMMP reporting period. |
| Public Education/Information | | |
| The annual reports and any notices issued as part of access controls will be the primary vehicle for public information/education. | Same as for other sites. | Same as during initial management period for duration of HMMP reporting period. |

12.0 ADAPTIVE MANAGEMENT PLAN

SDG&E will be the responsible party for implementation of management activities during the initial monitoring period. Specific maintenance and management activities will be identified based on the results of each annual monitoring visit. Maintenance and monitoring recommendations will be developed by September 15 of each year to allow time for planning and mobilization of work crews prior to the rainy season. Maintenance activities that involve work in waters and wetlands will be conducted prior to the onset of winter rains. Other maintenance activities will be conducted prior to the annual monitoring in the year following the recommendation.

As part of each annual monitoring report, maintenance and management activities implemented during the previous year will be described and the results will be evaluated under the framework of adaptive management. If management and maintenance methods are not successful in addressing negative environmental stressors identified as part of annual monitoring reports, the methods will be examined and altered to increase the potential for success based on best professional judgment and management methods that are shown to be successful based on scientific research. In some cases, success of management and maintenance activities may not be evident over the course of only 1 year. This will be accounted for in annual monitoring reports through evaluation of whether or not management actions are contributing to progress towards the ultimate goal. In these cases, it may be necessary to wait for 2 years or more before altering methods as part of an adaptive management strategy. Each annual monitoring report will contain a section dedicated to evaluation of management and maintenance actions as part of the adaptive management strategy.

12.1 Incorporation within Habitat Mitigation Plan for the Long Potrero Mitigation Site

The principles of adaptive management are fully incorporated into the implementation, monitoring, maintenance, and long-term management of the Long Potrero Mitigation Site described in this Final HMMP.

12.2 Natural Occurrences

Contingencies have been included in the financial assurances (Section 13.0) to provide a cushion for any unforeseen costs of management activities to be carried out in the event that a fire, flood, or other natural disaster should have a negative impact on preserved and/or enhanced habitat during the initial monitoring period. The 5-year habitat management work programs, which prioritize biological resource and land stewardship tasks and include 5-year staffing and materials budget, include a fire management component developed in cooperation with the responsible fire agencies and in compliance with applicable State and local policies and regulations. In addition, the fire management component of the long-term management plan will be updated every 3 years. Remedial actions will be carried out during the initial monitoring period if habitat quality is reduced due to the occurrence of fire and/or other natural disasters. Remedial actions will also be carried out during long-term management if habitat quality is reduced due to management activities. These actions are described in the HAP/HMP (SDG&E 2010) and summarized in the following section.

12.3 Potential Remedial Actions

Habitat remediation consists of minor restoration of habitat from the effects of erosion, unauthorized access or removal of exotics; it is not considered ecological habitat restoration or

creation. This task may include seeding with native seeds, raking, or weed removal. Remedial restoration may also include the restoration of closed trails or roads. Due to the high level of disturbance and compaction, a closed road or trail can take a substantially greater amount of time to revert back to the surrounding native vegetation community without active seeding, weeding, and soil preparation. Therefore, remedial restoration for decommissioned roads and trails will be somewhat active (e.g., may include soil de-compaction, seeding with the imprinting method, more active exotic species control etc.). Habitat remediation is included during the initial monitoring (start-up) period for this mitigation site and is also an integral part of the habitat management in perpetuity.

13.0 FINANCIAL ASSURANCES

13.1 Estimated Costs for Mitigation Measures

The cost for mitigation measures for inclusion in the Financial Assurance mechanism was developed and submitted to the Corps of Engineers and a Performance Bond was purchased by SDG&E for these amounts on January 19, 2011. These specific costs for the Long Potrero Mitigation Site are provided in Appendix D. They include implementation of the HMMP, monitoring during the first five years, and long-term maintenance and remediation (covered under the endowment cost).

13.1.1 Land Acquisition

The Long Potrero Mitigation Site has already been purchased with funding from SDG&E. However, the Corps has required financial assurances adequate to cover acquisition of a replacement site if necessary.

13.1.2 Plan Implementation

Implementation costs for the Final HMMP are estimated to be \$217,666, as shown in Table 17 below. Implementation tasks include mobilization, removal of non-native, invasive species, and enhancement of riparian and wetland vegetation.

13.1.3 Monitoring and Maintenance for Performance Period

Monitoring costs for the Final HMMP are estimated to be \$216,167, as shown in Table 17 below. These costs represent the first 5 years of monitoring. In addition, maintenance costs from the HAP/HMP (SDG&E 2010a) are estimated to be \$87,000 for the first 5 years.

13.1.4 Long-Term Maintenance

Long-term endowment costs are estimated at \$3.8 million, as shown in Table 17 below. This endowment estimate is based on the amount of money needed to generate, on an annual basis, the annual maintenance costs (assuming a 5 percent return on the money and 3 percent inflation).

13.1.5 Remediation

Remediation costs are combined with maintenance costs in Table 17 below. Remediation efforts may include removal of non-native, invasive plants and minor stream habitat restoration, replanting and weed removal.

Table 17. Long Potrero Mitigation Costs

| Category | Cost |
|--|-------------|
| Acquisition | |
| "Replacement" Assurances ¹ | \$5,400,000 |
| HMMP Mitigation Activities | |
| Preservation, Restoration, Enhancement | \$217,666 |
| 5-year Monitoring Costs for HMMP | \$216,167 |
| Maintenance/Remediation | \$87,000 |
| Management of Mitigation Site under HAP/HMP | |
| Start-up and Long-term (In Perpetuity) | \$3,806,420 |

¹ SDG&E has acquired the entire Mitigation Site; the Corps has required financial assurances to cover acquisition of a replacement site if necessary.

13.2 Form of Assurance

Financial assurance has been guaranteed by SDG&E through a Performance Bond that covers the estimated costs for each of the five Final HMMPs. The bond calls out the amounts for HMMP implementation at the Long Potrero Mitigation Site as identified in Table 16 based on implementation costs detailed above.

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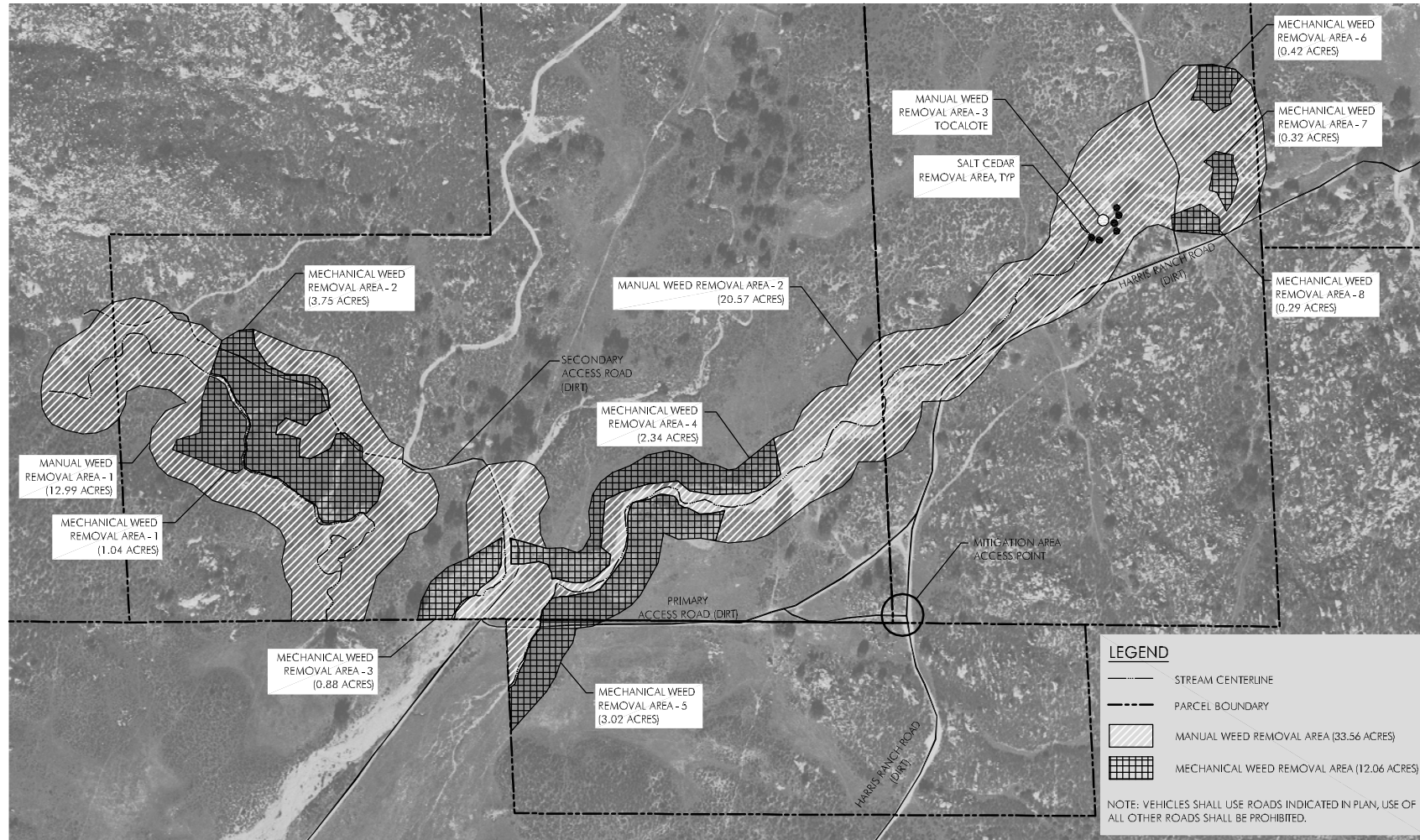
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Appendix A

All CRAM Scores Collected for the Sunrise Powerlink Project

Appendix B

Grading and Landscape Plans for the Long Potrero Mitigation Site



1 WEED REMOVAL PLAN
 1" = 250'

SALT CEDAR REMOVAL AREAS

- YEAR 1**
- ALL SALT CEDAR (*TAMARIX RAMOSSISSIMA*) TREES WITHIN THE SALT CEDAR REMOVAL AREAS SHALL BE TREATED AS DESCRIBED IN THE DRAWINGS.
 - THE FIRST REMOVAL OF SALT CEDAR TREES SHALL OCCUR BETWEEN AUGUST 1 AND OCTOBER 31. THE CONTRACTOR SHALL RETURN TO THE SITE TO TREAT ANY RESPROUTING STUMPS BY DECEMBER 31 FOLLOWING THE FIRST TREATMENT. EXACT TIMING OF REMOVAL ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT BIOLOGIST.
 - A TRICLOPYR-BASED HERBICIDE SUCH AS GARLON ® 4 OR IMAZAPYR-BASED HERBICIDE SUCH AS HABITAT ® OR APPROVED EQUIVALENT SHALL BE USED FOLLOWING THE LABEL DIRECTIONS AND REQUIREMENTS. CONTRACTOR SHALL SUBMIT HERBICIDE INFORMATION AND THE APPLICATION REGIME FOR APPROVAL BY THE PROJECT BIOLOGIST.
 - SALT CEDAR REMOVAL METHODS SHALL BE DETERMINED BASED ON SITE CONDITIONS AND CONSTRAINTS. THE CONTRACTOR SHALL SUBMIT A SALT CEDAR REMOVAL PLAN TO THE PROJECT BIOLOGIST FOR APPROVAL PRIOR TO ANY REMOVAL ACTIVITIES. THE CONTRACTOR SHALL USE THE FOLLOWING REMOVAL METHODS:
 - CUT-SURFACE METHOD:** THE CUT-SURFACE METHOD IS THE PREFERRED METHOD OF SALT CEDAR REMOVAL. SALT CEDAR TREES OR SAPLINGS SHALL BE CUT WITHIN SIX INCHES OF THE GROUND SURFACE. THE STUMP SURFACE SHALL BE SPRAYED WITH HERBICIDE IMMEDIATELY FOLLOWING CUTTING. SEEDINGS SHALL BE UPROOTED BY HAND SUCH THAT THE ENTIRE ROOT SYSTEM IS REMOVED.
 - GIRDLE-SPRAY METHOD:** THE GIRDLE-SPRAY METHOD MAY BE USED WITH APPROVAL BY THE PROJECT BIOLOGIST IN PLACES WHERE REMOVAL OF THE DEAD PLANT BIOMASS IS PROHIBITIVE DUE TO SITE CONDITIONS. SALT CEDAR TREES WITH TRUNK DIAMETERS OF OVER FOUR INCHES SHALL BE GIRDLED. THE CONTRACTOR SHALL MAKE SHALLOW, OVERLAPPING CUTS INTO THE BARK WITH A HATCHET OR CHAINSAW. HERBICIDE SHALL BE APPLIED TO THE ENTIRE CUT SURFACE IMMEDIATELY FOLLOWING THE CUTS. CONTRACTOR SHALL REMOVE SEED HEADS FROM SALT CEDAR TREES IF THE TREES HAVE SET SEED. THE REMAINING TREE BIOMASS SHALL BE LEFT IN PLACE AFTER THE HERBICIDE APPLICATION.
 - BASAL BARK METHOD:** THE BASAL BARK METHOD MAY BE USED WITH APPROVAL BY THE PROJECT BIOLOGIST IN PLACES WHERE REMOVAL OF THE DEAD PLANT BIOMASS IS PROHIBITIVE DUE TO SITE CONDITIONS. SALT CEDAR TREES WITH TRUNK DIAMETERS LESS THAN FOUR INCHES SHALL BE TREATED USING THE BASAL BARK METHOD. HERBICIDE SHALL BE APPLIED TO THE LOWEST 12 INCHES OF EACH TRUNK. CONTRACTOR SHALL REMOVE SEED HEADS FROM THE SALT CEDAR TREES OR SAPLINGS IF THE PLANTS HAVE SET SEED. THE REMAINING TREE BIOMASS SHALL BE LEFT IN PLACE AFTER THE HERBICIDE APPLICATION.
 - THE CONTRACTOR SHALL DISPOSE OF SEED HEADS AND PLANT BIOMASS WITH APPROVAL FROM THE PROJECT BIOLOGIST. THE CONTRACTOR SHALL CONTAIN SEEDS IN BAGS. THE METHOD OF ONSITE AND OFFSITE TRANSPORTATION OF REMOVING SEEDS AND PLANT BIOMASS SHALL BE DETERMINED BASED ON THE SITE TOPOGRAPHY AND REMOTENESS.

- YEARS 2 - 5**
- SALT CEDAR REMOVAL SHALL OCCUR ON AN ANNUAL BASIS DURING MONITORING YEARS 2-5, UNLESS OTHERWISE SPECIFIED BY THE PROJECT BIOLOGIST. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT BIOLOGIST TO DETERMINE THE TIMING OF THE REMOVAL.
 - ALL NEW SALT CEDAR TREES, WHICH HAVE ESTABLISHED ON THE SITE, AND ALL SALT CEDAR TREES, WHICH HAVE NOT RESPONDED TO HERBICIDE TREATMENT DURING THE PREVIOUS YEAR, SHALL BE TREATED WITH HERBICIDE USING THE SAME PARAMETERS DESCRIBED IN THE YEAR 1 TREATMENT GUIDELINES, UNLESS OTHERWISE SPECIFIED BY THE PROJECT BIOLOGIST.

MECHANICAL WEED REMOVAL AREAS

- YEAR 1**
- WEEDS WITHIN THE MECHANICAL WEED REMOVAL AREAS SHALL BE REMOVED AS DESCRIBED IN THE DRAWINGS.
 - WEED SPECIES DESIGNATED FOR MECHANICAL REMOVAL INCLUDE NON-NATIVE, INVASIVE PLANT SPECIES LISTED BY THE CAL-IPC AS HAVING A SEVERE OR MODERATE (A OR B) INVASIVE IMPACT. THESE WEED SPECIES SHALL BE DESCRIBED AND IDENTIFIED TO THE CONTRACTOR BY THE PROJECT BIOLOGIST. CONTRACTOR SHALL PROVIDE A WEED REMOVAL PLAN THAT ADDRESSES EACH WEED SPECIES AND WEED REMOVAL LOCATION FOR APPROVAL BY THE PROJECT BIOLOGIST PRIOR TO ANY REMOVAL ACTIVITIES.
 - WEED REMOVAL SHALL OCCUR TWO TIMES BETWEEN FEBRUARY 1 AND MARCH 14. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT BIOLOGIST TO DETERMINE THE EXACT TIMING OF THE WEED REMOVAL ACTIVITIES.
 - WEEDS SHALL BE REMOVED WITH A TRACTOR MOWER, WEED-EATER OR OTHER EQUIVALENT TOOL OR METHOD AS APPROVED BY THE PROJECT BIOLOGIST.
 - CONTRACTOR SHALL REMOVE SEED HEADS FROM PLANTS PRIOR TO REMOVING THE STEMS AND ROOTS IF THE PLANTS HAVE SET SEED.
 - THE CONTRACTOR SHALL DISPOSE OF SEEDS, WEED CLIPPINGS AND DEAD PLANT BIOMASS WITH APPROVAL FROM THE PROJECT BIOLOGIST. THE CONTRACTOR SHALL CONTAIN SEEDS, WEED CLIPPINGS, AND DEAD PLANT BIOMASS IN BAGS. THE CONTRACTOR SHALL DISPOSE OF WEED CLIPPINGS IN DESIGNATED AREAS WITHIN THE SITE, AS FEASIBLE. THE METHOD OF ONSITE AND OFFSITE TRANSPORTATION OF REMOVING SEEDS, WEED CLIPPINGS, AND DEAD PLANT BIOMASS SHALL BE DETERMINED BASED ON THE SITE TOPOGRAPHY AND REMOTENESS.
 - DISTURBANCE TO THE GROUND AND ADJACENT NATIVE SHRUBS AND TREES SHALL BE MINIMIZED.

- YEARS 2-5**
- WEEDS SHALL BE REMOVED TWICE ANNUALLY AT A MINIMUM DURING THE MONITORING YEARS 2-5. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT BIOLOGIST TO DETERMINE THE TIMING OF WEED REMOVAL ACTIVITIES.
 - WEED REMOVAL METHODS SHALL BE ADAPTED AS NECESSARY BASED ON ANNUAL MONITORING RESULTS. THE PROJECT BIOLOGIST SHALL SPECIFY CHANGES TO WEED REMOVAL METHODS BY SEPTEMBER 15 OF EACH MONITORING YEAR.

GENERAL SITE DESCRIPTION

- ACCESS ROADS LEAD TO ALL MITIGATION AREAS.
- THE MAJORITY OF THE VEGETATION IN THE MITIGATION AREAS AT THE LONG POTRERO PROPERTY IS NATIVE SOUTHERN MIXED CHAPARRAL, EXCEPT IN AREAS WHERE SENSITIVE RIPARIAN AND EMERGENT WETLAND HABITATS ARE PRESENT.
- THE LOCAL CLIMATE CAN VARY FROM MILD TO HOT. CONDITIONS MAY BE PHYSICALLY CHALLENGING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HEALTH AND SAFETY OF WORKERS AT THE SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING POTABLE WATER AND PORTABLE RESTROOM FACILITIES AT THE SITE. THE CONTRACTOR SHALL BE PROHIBITED FROM DISPOSING OF ANY HUMAN EXCREMENT AT THE SITE.

PROTECTION OF WILDLIFE, PLANT SPECIES AND NATURAL RESOURCES

- HABITAT ON THE SITE SUPPORTS THE FEDERALLY ENDANGERED ARROYO TOAD (*BUFO CALIFORNICUS*), QUINO CHECKERSPOT BUTTERFLY (*EUPHYDRYAS EDITHA QUINO*), LEAST BELLS VIREO (*VIREO BELUI PUSILLUS*), AND SOUTHWESTERN WILLOW FLYCATCHER (*EMPidonax traillii EXTIMUS*) AND POTENTIALLY SUPPORTS CALIFORNIA DEPARTMENT OF FISH AND GAME SPECIES OF SPECIAL CONCERN SPADEFOOT TOAD (*SCAPHIOPUS BOMBIFRONS*) AND SOUTHWESTERN POND TURTLE (*CLEMmys MARIMORATA PALLIDA*). MITIGATION ACTIVITIES SHALL NOT OCCUR DURING THE ARROYO TOAD BREEDING SEASON (MARCH 15 - JULY 31). DRIVING ON ALL ROADS IS LIMITED TO 2 HOURS AFTER SUNRISE AND 2 HOURS BEFORE SUNSET. ACCESS MAY NOT OCCUR THROUGH PONDED AREAS, EXCEPT UNDER THE SUPERVISION OF THE PROJECT BIOLOGIST. CONTRACTORS SHALL AVOID CONTACT WITH WILDLIFE AND NOTIFY THE PROJECT BIOLOGIST OF ANY OBSERVATIONS OF SPECIAL STATUS WILDLIFE SPECIES.
- NO FEDERAL OR STATE PROTECTED PLANT SPECIES ARE KNOWN TO OCCUR WITHIN THE SITE; HOWEVER, THE SITE MAY SUPPORT CALIFORNIA NATIVE PLANT SOCIETY (CNPS) LISTED PLANT SPECIES. THE MAJORITY OF PLANTS NOT TARGETED FOR WEED REMOVAL ARE NATIVE AND SHALL NOT TO BE DISTURBED DURING WEED REMOVAL ACTIVITIES. THE CONTRACTOR SHALL OBTAIN A LIST OF SENSITIVE SPECIES FROM THE PROJECT BIOLOGIST.
- WEED REMOVAL ACTIVITIES SHALL MINIMIZE DAMAGE TO THE NATIVE VEGETATION. DISTURBANCE TO SENSITIVE HABITAT OUTSIDE WEED REMOVAL AREAS SHALL BE PROHIBITED.
- DESIGNATED ACCESS ROADS SHALL BE CONFIRMED BY THE PROJECT BIOLOGIST. USE OF OTHER ROADS SHALL BE PROHIBITED.
- THE CONTRACTOR SHALL PROPOSE SUITABLE STAGING AREAS, WHICH SHALL BE APPROVED BY THE PROJECT BIOLOGIST.
- HERBICIDES SHALL BE SELECTED TO AVOID HARM TO SENSITIVE SPECIES AND SHALL BE APPROVED BY THE PROJECT BIOLOGIST.
- ALL WORK SHALL COMPLY WITH PROVISIONS LISTED IN THE PROJECT HABITAT MITIGATION AND MONITORING PLAN (HMMMP), FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT (FEIR/EIS), BIOLOGICAL ASSESSMENT, AND FINAL REGULATORY PERMITS.

DISTRIBUTION OF WEEDS

- WEED REMOVAL WILL FOCUS ON THE TREATMENT OF TOCALOTE, SHORTPOD MUSTARD, CURLY DOCK AND SALT CEDAR. ALL OF THE SPECIES OCCUR AT VARIOUS DENSITIES THROUGHOUT THE MITIGATION AREAS, WITH THE EXCEPTION OF SALT CEDAR, WHICH OCCURS SOLELY IN THE EASTERN MITIGATION AREA.
- WEED CONTROL IS LIMITED TO 120 FEET FROM STREAM CHANNELS.

BEST MANAGEMENT PRACTICES FOR WEED REMOVAL

- AVOID IMPACTS TO NATIVE TREES AND SHRUBS AND ALL SENSITIVE SPECIES ON THE SITE.
- AVOID DISTURBANCE AND DO NOT STAGE CONSTRUCTION ACTIVITIES IN WEED INFESTED AREAS.
- AVOID AND MINIMIZE GROUND DISTURBANCE. SELECT WEED REMOVAL EQUIPMENT WHICH WILL MINIMIZE DISTURBANCE TO THE SOIL AND NATIVE VEGETATION WHENEVER POSSIBLE.
- CLEAN VEHICLES BEFORE ENTERING OR LEAVING A WEED-INFESTED SITE OR CONSTRUCTION SITE TO PREVENT THE TRANSPORT OF SOIL AND PLANT MATERIAL.
- REMOVE SEEDS FROM CLOTHING, FOOTWEAR, VEHICLES, AND EQUIPMENT BEFORE ENTERING AREAS WITH NO WEED INFESTATION.
- COVER MATERIAL, INCLUDING DEAD WEED BIOMASS OR SOIL, SECURELY DURING TRANSPORT.

MANUAL WEED REMOVAL AREAS

- YEAR 1**
- WEEDS WITHIN THE MANUAL WEED REMOVAL AREAS SHALL BE REMOVED AS DESCRIBED IN THE DRAWINGS.
 - WEED SPECIES DESIGNATED FOR MANUAL REMOVAL INCLUDE NON-NATIVE, INVASIVE PLANT SPECIES LISTED BY THE CALIFORNIA INVASIVE PLANT COUNCIL (CAL-IPC) AS HAVING A SEVERE OR MODERATE (A OR B) INVASIVE IMPACT. THESE WEED SPECIES SHALL BE DESCRIBED AND IDENTIFIED TO THE CONTRACTOR BY THE PROJECT BIOLOGIST. CONTRACTOR SHALL PROVIDE A WEED REMOVAL PLAN WHICH ADDRESSES EACH WEED SPECIES AND WEED REMOVAL LOCATION FOR APPROVAL BY THE PROJECT BIOLOGIST PRIOR TO ANY REMOVAL ACTIVITIES.
 - THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT BIOLOGIST TO DETERMINE THE EXACT TIMING OF WEED REMOVAL ACTIVITIES. CONTRACTOR SHALL REMOVE SEED HEADS FROM PLANTS PRIOR TO REMOVING THE STEMS AND ROOTS, IF THE PLANTS HAVE SET SEED.
 - PERENNIAL WEEDS SHALL BE REMOVED ONCE A MONTH BETWEEN FEBRUARY 1 TO MARCH 14 AND AUGUST 1 TO OCTOBER 31. COMMON PERENNIAL WEEDS AT THE SITE INCLUDE SHORTPOD MUSTARD (*HIRSCHFELDIS INCANNA*), CASTOR BEAN (*RICINUS COMMUNIS*) AND CURLY DOCK (*RUMEX CRISPLIS*).
 - ANNUAL WEEDS SHALL BE REMOVED TWO TIMES BETWEEN FEBRUARY 1 AND MARCH 14. COMMON ANNUAL WEEDS AT THE SITE INCLUDE SAHARAN MUSTARD (*BRASSICA TOURNEFORTII*) AND TOCALOTE (*CENTAUREA MELITENSIS*).
 - WEEDS SHALL BE REMOVED WITH MANUAL TOOLS WHICH CAUSE MINIMAL GROUND DISTURBANCE. NATIVE SHRUBS OR TREES ADJACENT TO WEED REMOVAL AREAS SHALL NOT BE DISTURBED.
 - THE CONTRACTOR SHALL DISPOSE OF SEEDS, WEED CLIPPINGS AND DEAD PLANT BIOMASS WITH APPROVAL FROM THE PROJECT BIOLOGIST. THE CONTRACTOR SHALL CONTAIN SEEDS, WEED CLIPPINGS, AND DEAD PLANT BIOMASS IN BAGS. THE CONTRACTOR SHALL DISPOSE OF WEED CLIPPINGS IN DESIGNATED AREAS WITHIN THE SITE, AS FEASIBLE. THE METHOD OF ONSITE AND OFFSITE TRANSPORTATION OF REMOVING SEEDS, WEED CLIPPINGS, AND DEAD PLANT BIOMASS SHALL BE DETERMINED BASED ON THE SITE TOPOGRAPHY AND REMOTENESS.

- YEARS 2-5**
- YEAR 2: ANNUAL WEEDS SHALL BE REMOVED TWO TIMES BETWEEN FEBRUARY 1 AND MARCH 14. PERENNIAL WEEDS SHALL BE REMOVED FOUR TIMES BETWEEN FEBRUARY-MARCH 14 AND AUGUST 1-OCTOBER 31. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT BIOLOGIST TO DETERMINE THE EXACT TIMING OF WEED REMOVAL ACTIVITIES.
 - YEARS 3-5: WEEDS SHALL BE REMOVED TWICE ANNUALLY AT A MINIMUM. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT BIOLOGIST TO DETERMINE THE EXACT TIMING OF WEED REMOVAL ACTIVITIES.
 - WEED REMOVAL METHODS SHALL BE ADAPTED AS NECESSARY BASED ON ANNUAL MONITORING RESULTS. THE PROJECT BIOLOGIST SHALL SPECIFY CHANGES TO WEED REMOVAL METHODS BY SEPTEMBER 15 OF EACH MONITORING YEAR.

SUNRISE POWERLINK

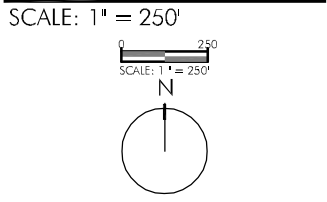
LONG POTRERO PROPERTY
 WATERS MITIGATION PLAN
 SAN DIEGO COUNTY, CALIFORNIA
 CORPS FILE NUMBER: 2007-00704-SAS

NOT FOR CONSTRUCTION



| Date | Issues And Revisions | No. |
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PROJECT #17128-3
 DRAWN BY: ICM, KET
 CHECKED BY: GIS
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LONG POTRERO PROPERTY MITIGATION PLAN

Sheet

L-2

Appendix C

PAR Analysis for the Long Potrero Property

Note: This appendix includes the PAR assumptions and PAR spreadsheets for the Lightner Mitigation Site from the September 2010 HAP/HMP. A discussion of the interest rate, inflation, and reinvestment assumptions for a non-wasting endowment also is included as an attachment to the PAR assumptions sections.

ASSUMPTIONS APPLIED IN THE PRELIMINARY PROPERTY ANALYSIS RECORD FOR THE MITIGATION SITES¹

INTRODUCTION

Because the properties are located in different ecoregions and support different sensitive vegetation communities and species, each mitigation property requires its own suite of management and monitoring tasks that will supplement the general management that will be performed at each site to mitigate project impacts. The costs to perform these management tasks are produced by a PAR, which identifies the individual tasks and assigns labor and materials costs for each task. Management is conducted in two phases. Phase 1 is a five-year start-up period during which initial access control measures are installed, baseline inventory surveys are conducted, and intensive management actions are taken to bring the property to a condition that provides the baseline for future monitoring. Phase 2 is ongoing management, which consists of annual maintenance in perpetuity. Phase 2 costs are given as an average annual estimate of implementation. The PAR then calculates an endowment amount that would yield enough interest (at a conservative rate) to cover the annual in-perpetuity management costs without having to use the principal (i.e., a non-wasting endowment).

GENERAL ASSUMPTIONS FOR COST ANALYSIS

The cost analysis incorporates several general. Any changes to these assumptions would require a re-evaluation of the cost estimate.

Land Assumptions

1. *Total Acreage* is the acreage of the mitigation land that will be managed on each property, which does not include permanent or temporary project impacts or the right-of-way, if they occur on the property. *Land Stewardship* activities will be conducted on this acreage in perpetuity.
2. Taxes, district fees and other levies are the responsibility of the land owner and are not included in this analysis.
3. Management of storm water conveyance structures will not be the responsibility of the Land Manager.

¹ This document is Part 3 of the September 2010 of Habitat Acquisition Plan/Habitat Management Plan for the Sunrise Powerlink Project. The assumptions are being refined and a revised Property Analysis Record (PAR) in connection with selection of the land manager and preparation of a revised final management plan for each mitigation site. Selection of the land manager and preparation of the revised final management plans and revised final PAR for the HMMP mitigation sites is subject to approval by the Corps, SWRCB, and CDFG.

Funding Assumptions

1. Funding will be through a one-time payment for five-year start-up costs and interest earned on endowments provided by SDG&E for annual ongoing management costs.
2. Management and monitoring tasks in this cost analysis are based on requirements outlined in the MMCRP and conditions of the BO issued by the USFWS.
3. A separate cost analysis has been conducted for each property, and reflects the specific mitigation requirements and property site conditions.

COST JUSTIFICATION AND LINE ITEM ASSUMPTIONS

The cost breakdown for biological management and monitoring is divided into the following sections: Facilities Maintenance and Access Control, Biological Inventory and Monitoring, Habitat and Land Management, Preserve Management Plan and Reporting, and Contingencies and Administration. As described in the individual HMPs, "land stewardship," which is the overall management of the property as a whole, consist of access control (Facilities Management and Access Control section of the PAR), general condition monitoring (a line item within Biological Inventory and Biological Monitoring sections of the PAR), and trash removal (a line item within the Habitat/Land Management section of the PAR). The dollar amount required for management is based on the analysis below.

Each PAR is presented in two components: Start-up Costs and Annual Costs in Perpetuity. Start-up costs cover the initial investment in infrastructure and surveys to begin monitoring and reporting, and maintenance, monitoring and reporting that would occur in the first 5 years of implementation. Annual Costs in Perpetuity provides an average annual estimate of implementation of the HMP. An annual inflation rate (3.0%) is applied to the annual cost which is used to generate an estimate of an endowment that would yield an amount, assuming a 5% return², to pay for the annual management and monitoring. To this endowment estimate the start-up cost is added to provide a total initial endowment estimate.

Facilities Maintenance and Access Control

Gates, fencing, and signs are included in the cost analysis as needed to protect mitigated species or habitats from unauthorized access. The HMP includes the start-up and long-term maintenance costs for facilities other than those provided by SDG&E for Operations and Maintenance (e.g., gates for maintenance access roads).

² The calculation of the endowment amount assumes that 3% of the return will be reinvested in endowment (to keep pace with inflation) and 2% would be allocated annually for management tasks. See Attachment for documentation that a 5% nominal interest rate and 2% real interest rate are consistent with historical experience and market data and comparable to values assumed by the Social Security Board of Trustees in their long-term analysis of Social Security funds.

Fencing

Fencing will be an important aspect of land management, since unauthorized use can destroy sensitive resources and undermine the biological value of the mitigation. Several assumptions have been made for the cost analysis. Some properties (e.g. Lightner and Long Potrero) will require fencing whereas others (e.g. Chocolate Canyon, Desert Cahuilla Land Transaction, El Capitan, Hamlet, Lakeside, Nabi and Suckle) will not. Fencing discussed in this section is limited to the perimeter or portions of the properties. The entire perimeter of each parcel will not need to be fenced as there is steep topography, adjacent protected land, vacant land or existing fencing associated with private property present at the property boundaries. Details for each property are provided in the individual PARs. A combination of smooth wire or chain link will be used for the mitigation sites. Fencing costs are estimated at \$15 per linear foot and based on the average cost of the two types of fencing. It is estimated that 10% of the fencing installed during the start-up period will need to be replaced annually.

Gates and Barriers

Gates will be required to block unauthorized access but allow access for the Land Managers and emergency services personnel. Gates will be installed on the perimeter at main access points into the property if needed. High quality 16-foot swinging arm gates firmly planted into the ground are recommended since they are most resistant to vandalism and destruction. A typical 16-foot swinging arm gate will cost about \$5,000 including installation. These gates will need to be serviced annually and replaced every 20 years.

Concrete bollards are fixed barriers to vehicular access that are firmly planted into the ground to resist being removed or pushed over by vehicles. They will be used to prevent vehicles from bypassing gates. Four bollards are expected to be needed at \$75 per bollard for each gate. Long-term maintenance consists of replacement every 10 years.

Signage

Signage will be used to indicate boundaries, cite regulations, and identify areas of habitat restoration. Signs are estimated at \$15 per sign, which is an average cost for small signs of this type (e.g., 8 in. by 13.5 in.). Signage is susceptible to vandalism and/or removal; therefore, in addition to initial installation, it is expected that an average of 20% of signs will need replacement each year.

Biological Monitoring

Monitoring costs include baseline inventory surveys to be conducted during the first five-years and long-term monitoring for mitigated species and habitats. For the purpose of this cost analysis, the following definitions are used. A *baseline survey* is conducted at a certain point in time and is used as the benchmark against which subsequent surveys will be compared. *Baseline surveys* can take place during a single year or can be conducted over a period of time to encompass the natural fluctuation in the density or distribution of a population or structure of a plant or animal community. *Monitoring surveys* are conducted over a given period of time or in perpetuity, and are compared to the baseline survey results to indicate changes in populations or habitat conditions over time. Negative changes over time (e.g., showing a more restricted sensitive species population distribution) will alert the land manager and may trigger specific remedial management actions. Note that long-term monitoring may be

conducted less frequently than surveys conducted during the five-year start-up period if appropriate for a given species.

Habitat-Related Monitoring

Habitat-related monitoring includes general condition monitoring, general wildlife habitat assessment, vegetation mapping, invasive species mapping, and species-specific habitat assessment. Some of these activities can be conducted concurrently as described below. Unless otherwise specified, the estimated survey rate (acres/hour) includes field preparation and travel time.

General Condition Monitoring and Wildlife Habitat Assessment

General condition monitoring will be conducted to identify threats to sensitive habitats and species. Threats may include invasive species, erosion problems, illegal trespass (e.g., off-road vehicles or graffiti, etc.), trash or illegal dumping. In addition, the general overall health a quality of wildlife habitat will be assessed during this effort. One visit will be conducted annually at an estimated rate of 10 acres/hour.

Vegetation Communities and Invasive Species Mapping

Baseline mapping of vegetation communities and invasive species will be conducted during the start-up period and updated annually for the remainder of this period. Updates will continue every three years thereafter. This effort is expected to be more intense than that described for general condition monitoring, in which general presence/absence information will be recorded for invasive species. Mapping will consist of defining boundaries and noting the density, species, and level of threat. This effort is estimated to be conducted at 7.5 acres/hour

Species-specific Habitat Assessments

Some species may require ongoing habitat assessments to inform species-specific monitoring. This type of assessment is more specific than that described for general condition monitoring, as it takes into consideration the particular habitat needs of a given species. For example, a habitat assessment for the least Bell's vireo and southwestern willow flycatcher might focus on such habitat characteristics as canopy structure or dominant plant species. This type of assessment is expected to be conducted concurrently with vegetation communities and invasive species mapping, as this is a more intense effort than general condition monitoring.

Information gathered from the general conditions monitoring and invasive species mapping will be used to prepare a vegetation management plan, which will include a list and assessment of threats to biological resources, management priorities, and a work plan for habitat management. The plan will be updated annually.

Focused Species Survey Methods

Surveys for mitigated species will be conducted according to established protocols (either USFWS presence/absence protocols or preserve-specific monitoring protocols³), USGS guidelines, or recommendations of species experts. A brief summary of each approach is provided below. Field preparation and travel time is built into the estimated number of acres covered per hour.

³ If not otherwise specified, preserve-specific monitoring protocols include USFWS presence/absence protocols that have been specifically modified to fulfill long-term preserve monitoring goals.

- Felt-leaved monardella, modified from McEarchen (in progress and 2009). Baseline surveys for felt-leaved monardella will be conducted on the Lightner property twice during the start-up period. The surveys will be conducted to assess the current condition and extent of the population, potential threats, and condition of the surrounding habitat. Each survey is expected to be conducted in 10 hours.
- Lakeside Ceanothus. Baseline surveys for Lakeside ceanothus will be conducted on the El Capitan property. The surveys will assess the current condition of the population, level of seedling recruitment, potential threats, and condition of the surrounding habitat. Each survey will take 30 hours, and be conducted twice during the start-up period.
- Quino: USFWS protocol (2002). Baseline surveys and long-term monitoring of the Quino checkerspot butterfly will be conducted every three years on the Long Potrero and Lightner properties. The Hermes butterfly will be surveyed on the Lightner property concurrently. Each flight season (usually between late February and late April) consists of five field visits which are conducted one week apart at 15 hours/acre. Surveys will occur within scrub and grassland habitats (the survey acreage may be reduced if a habitat assessment is conducted to determine excludible habitat.). A report will be prepared and submitted to the USFWS 45 days after the last survey.
- Arroyo Toad: USFWS MSCP Animal Survey Protocol (USFWS 2009) and USGS Monitoring Protocol for the arroyo toad (USGS 2003). Baseline surveys and long-term monitoring will be conducted for the arroyo toad on the Long Potrero property every three years. Three field visits per survey will be conducted during the breeding season (March through June) at an estimated 2.5 acres/hr of suitable habitat. Report due to USFWS 30 days after final surveys or positive sighting. To be conducted every three years during start-up and ongoing management periods.
- Barefoot banded gecko: CDFG protocol (in prep). Baseline surveys and long-term monitoring of the barefoot banded gecko will be conducted on the Suckle property. Surveys will consist of four visits between May 1 and July 31 at an estimated rate of 2.5 acres/hr. Ten percent of the site will be surveyed. Surveys will be conducted annually during the start-up period, and every three years thereafter.
- Gnatcatcher: modified USFWS survey protocol (1997). Focused species surveys will be conducted on the Lakeside property. Surveys will consist of one visit during the breeding season (February 15 – August 30) at an estimated rate of 10 acres/hr. A report is due to USFWS within 45 days of the final survey. Surveys will be conducted every three years during start-up and ongoing monitoring periods.
- Least Bell's vireo: USFWS Survey Guidelines (2001) as modified. Least Bell's vireo surveys will be conducted on the Chocolate Canyon property. Three survey visits will be conducted 10 days apart, between April 15 and July 31 at an estimated rate of 3 acres/hr in riparian scrub, forest, or woodland habitat. A report is due to USFWS 45 days after the last survey. Surveys will be conducted annually during the start-up period and every three years thereafter.
- Southwestern willow flycatcher: USFWS monitoring protocol (2010) as modified. To be conducted concurrently with least Bell's vireo surveys

- Peninsular Bighorn Sheep Project Monitoring will be conducted independently by California State Parks and is not part of this HMP. Surveyors will enter all the data into a spreadsheet or GIS database, analyze the data, and create survey reports for each survey season as required by the USFWS. The additional cost of reporting and data management is calculated at 25% of the total survey effort.

HABITAT/LAND MANAGEMENT

Habitat management consists of actions that are directed at maintaining habitat quality for mitigated species through invasive species control, erosion control, trash removal, and minor habitat remediation, as described below.

Invasive Species Control

Control of invasive plant species will be one of the most important aspects of habitat management. The common non-native plant species in the dominant habitats (coastal sage scrub, grassland and chaparral) are usually non-native grasses, mustards (*Brassica* spp and *Hirschfeldia incana*), star-thistle (*Centaurea melintensis*), fennel (*Foeniculum vulgare*) and many others. Non-native plant species that occur in riparian areas, such as arundo (*Arundo donax*), pampas (*Cortaderia selloana*) and tamarisk (*Tamarix* spp.), will be removed through the jurisdictional resources habitat mitigation Plan. This cost analysis assumes that there will be an initial intensive effort to remove the most damaging invasive species (as per California Invasive Plant Council (CalIPC)) recommendations, and that invasive species removal will most likely be a continual process in perpetuity. Although invasive species removal can be conducted by laborers, this activity must be supervised by a qualified biologist to ensure that sensitive species and habitats are not damaged during the removal process.

Difficult-to-remove or widespread invasive species:

The cost estimate assumes that a small staff of laborers will be needed for widespread and/or difficult to remove invasive species. Cost assumptions include: 25 acres/crew day, \$1,600 per crew day (5 laborers/crew, \$64/ hour labor cost plus equipment cost), on approximately one to ten percent of the total property in a given year. The activity may include mowing, herbicide treatment, hand removal, debris removal, etc. Equipment needed for this activity may include weed-whips, gardening tools, chain saws and other tools as well as rental equipment such as mowers for removal of non-native grasses. The frequency of treatment varies from annually to every five years depending on the local conditions of a given property.

Other invasive species:

Smaller scale infestations and/or species that are less difficult to remove can be conducted by laborers at an estimated cost of \$45/hour at an estimated rate of 0.25 acre per hour. Much of this work will likely be done by hand or with small equipment. Generally, this level of invasive species removal is expected to occur annually on one to five percent of the property depending on local conditions.

Erosion Control and Road Maintenance

Erosion control and road maintenance for this cost estimate is meant to cover minor problems, for example erosion repairs along degraded habitat or near unused or old trails. It does not include the construction of erosion control devices, such as cement berms or culverts, or any measures that would require permits, engineering or major contracting. In general, maintenance of roads is not the responsibility of the Land Manager, except for existing roads that are required for management access and not already maintained by SDG&E for access to the transmission line and related structures.

Erosion control materials are estimated to cost \$600 per acre. Materials will consist of gravel bags (250 bags at \$1.50/bag), fiber rolls and stakes (12 rolls at \$28/roll), and silt fencing (500 feet at \$25/100-ft roll). This management task can be conducted by laborers, and assumes \$45/hour at a rate of eight labor hours per acre on five percent of the property on an annual basis. As with invasive species removal, this activity must be supervised by a qualified biologist to ensure that sensitive species and habitats are not damaged during erosion control activities.

Trash Removal

Trash removal is a land steward task that is more important in open space areas that are more accessible to the public (e.g. Suckle) as compared to areas that are far from public facilities (e.g., El Capitan). Because the Sunrise mitigation parcels will not be open to the public, the need for trash removal is lower than for a property that has active recreation. Trash removal is based on a cost of \$100/acre for one percent to five percent of the property and will be conducted every one to five years depending on the property.

Habitat Remediation

Habitat remediation consists of minor rehabilitation of habitat from the effects of erosion, unauthorized access or removal of exotics; it is not considered ecological habitat restoration or creation. This task may include seeding with native seeds, raking, or weed removal. Remedial restoration may also include the restoration of closed trails or roads. Due to the high level of disturbance and compaction, a closed road or trail can take a substantially greater amount of time to revert back to the surrounding native vegetation community without active seeding, weeding, and soil preparation. Therefore, remedial restoration for decommissioned roads and trails will be somewhat active (e.g., may include soil decompaction, seeding with the imprinting method, more active exotic species control etc.), but will not include irrigation as part of this HMP. Major restoration, restoration for mitigation purposes (e.g., those identified in the Habitat Mitigation Monitoring Plan (HMMP) for this Project) and/or the development of restoration plans are not included in this HMP.

Habitat remediation is included during the start-up period for most properties and is also an integral part of the habitat management in perpetuity. Costs are estimated based on one percent to five percent of the total acreage of each property every two to five years. Remediation efforts, including

labor and materials, will vary in cost between \$300/acre for minor habitat repair and \$1,000/acre for a more active effort, which is required to restore decommissioned roads and trails.

PRESERVE MANAGEMENT PLANS AND REPORTING

Annual Reports

Annual reports will include a threats assessment, work plan, budget plan, and a financial summary (including the status of endowments). Reporting will be prepared annually and be submitted to the appropriate wildlife, or other public agency. Preparation of annual reports is expected to take approximately 20 hours during the start up period and 10 hours thereafter.

Five Year Work Programs

Using the results from the general condition monitoring, wildlife habitat assessments, vegetation communities mapping, invasive species mapping and species-specific habitat assessments, 50year work programs will be prepared and regularly updated. The plan will include a threats assessment, prioritization, monitoring protocols and schedules, and a work plan. The plan is expected to be completed in year three and updated annually thereafter. Some interim land management will occur during years one and two. Initial report preparation is estimated to take 30 to 60 hours during the start-up period, and updates will take 10 to 30 hours annually.

GIS Database Management

GIS tasks will include the management of survey data submitted by the surveyors (including GPS data), and the preparation of maps and graphics to assist in the data analysis, to be conducted by the land manager, and in the preparation of annual reports and preserve management plans. GIS-related activities are estimated to take 8 hours annually during the start up period and 4 hours thereafter.

CONTINGENCIES AND ADMINISTRATION

This cost estimate includes a provision for contingencies at a rate of 10% of the budgeted expenses to provide a cushion for extra and unforeseen costs. There is also a provision for administrative overhead at 15% to provide for the cost of maintaining an office, office supplies, and administrative staff to assist with paperwork and other administrative costs.

LABOR RATE ASSUMPTIONS

The following table summarizes the labor rate assumptions used for this cost analysis. Labor rates usually vary from organization to organization which should be considered during discussion of this cost analysis. The cost analysis is based on 'fully burdened' labor rates, which includes labor costs and overhead to allow for staffing, materials, and equipment.

| Position | Hourly Rate* |
|-----------------------|--------------|
| Land Manager | \$100 |
| Plant Ecologist | \$90 |
| Entomologist | \$90 |
| Herpetologist | \$90 |
| Ornithologist | \$90 |
| Mammalogist | \$90 |
| Biological Supervisor | \$160 |
| Laborer | \$45 |
| GIS Specialist | \$90 |

* Charge rates, not pay rates - includes benefits, including health care, 3% matching in a 401k, vacation (120 days), sick (40 hours) and paid holidays (72 hours).

ENDOWMENTS

SDG&E will establish “non-wasting” endowments for each mitigation property, based on this cost analysis, to provide for the management and monitoring of biological resource. Start-up costs will be provided through an initial one-time payment into the endowment account. Annual ongoing management costs will be funded through annual interest earned on the endowment principal. It is assumed that the cost of ongoing management will increase by approximately 3.0% annually, based on the average annual U.S. Bureau of Labor Statistics Consumer Price Index inflation rates over the last 20 years (e.g., between 1989 and 2009). The average annual rate of return is estimated to be 5%. The average estimated reinvestment is estimated at 3%.⁴

⁴ See footnote 2 and Attachment.

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November 1, 2010

Mr. Donald E. Haines
Environmental Resource Manager
Sunrise Environmental Services
Sunrise Powerlink Project
8315 Century Park Court, CP21G
San Diego, CA 92123-1548

Re: Sunrise Powerlink Project Environmental Mitigation — Interest Rate Assumptions for Calculating Endowment for On-Going Habitat Management

Dear Mr. Haines:

As requested, I have reviewed the assumptions used to calculate estimated endowment amounts in connection with the Sunrise Powerlink Project environmental mitigation — namely, nominal interest rate of 5% per year and inflation rate of 3%, which is also annual reinvestment rate of the endowment fund, resulting in real interest rate of 2%.^[1] This letter examines these assumptions in light of historical experience in the U.S. and in comparison to those employed by the Trustees of the Social Security trust funds in a 75-year actuarial study.

Nominal Interest Rate

Nominal interest rate represents the annual return on endowment investment, assumed to consist primarily of government bonds. Although other types of investment can generate higher returns over short time periods, they are subject to risks which over time will diminish those returns. Returns on bonds can also vary depending on risks associated with future inflation and borrower default. The U.S. Treasury bonds represent the least risk, or safest, investment in the financial market. Since the endowment principal will be kept intact, or only increased to keep pace with inflation, very long-term Treasury bonds can be used, such as 10-, 20-, and 30-year bonds.

From 1970 to 2009, interest rates on 30-year Treasury bonds, averaged over 10-year periods, varied from 5.0% (from 2000 to 2009) to 10.6% (from 1980 to 1989), as shown below. Interest rates on 10-year bonds, also averaged over 10-year periods, varied from 4.5% (from 2000 to 2009) to 10.6%

1. For a nominal interest rate, R_{nom} , and inflation rate, P_{infl} , the real interest rate, R_{real} , or net revenue from endowment after reinvestment for inflation, is $R_{real} = (1 + R_{nom}) / (1 + P_{infl}) - 1$, which may be approximated by $R_{real} \approx R_{nom} - P_{infl}$. To generate a constant annual revenue, M , for habitat management, the required endowment is $E = M / R_{real}$. This assumes that the endowment will grow through annual reinvestment of $\Delta E = E \times P_{infl}$.

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 November 1, 2010
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(from 1980 to 1989).[2] These rates clearly reflect prevailing economic conditions — high rates during periods of high inflation (which occurred roughly from 1973 to 1982) and low rates during recessions, of which there were two during the 2000s.

Average Interest Rates of 10- and 30-Year
 U.S. Treasury Bonds, 1970 to 2009 (Percent)

| | 1970-79 | 1980-89 | 1990-99 | 2000-09 |
|-----------------------------|------------|---------|---------|------------|
| 10-Year U.S. Treasury Bonds | 7.5 | 10.6 | 6.7 | 4.5 |
| 30-Year U.S. Treasury Bonds | 8.5 [1] | 10.6 | 7.0 | 5.0 [2] |

Source: Federal Reserve Board.

1. Average for 1977 through 1979.
2. No 30-year U.S. Treasury bonds were issued from 2003 to 2005.

The 5% nominal interest assumed in planning environmental mitigation for the Sunrise Powerlink Project is consistent with recent historical experience. It may be considered conservative (that is, low), since it is equal to the average interest rate on 30-year Treasury bonds from 2000 to 2002 and from 2006 to 2009, when the U.S. saw two national recessions.

The Board of Trustees of the Social Security trust funds [3] reports annually to the U.S. Congress on the funds' actuarial (financial) status. The latest report was issued in August 2010 (Trustees Report).[4] The actuarial analysis covers a 75-year projection period, over which it makes various assumptions on future demographics and economics, including inflation and interest rates. The Social Security funds are invested in special U.S. Government obligations, and the funds' nominal interest rate is the average interest rate of those securities. Historically, these rates have been very close to those of 10-year Treasury bonds, ranging from 4.5% (from 2000 to 2010) to 10.3% (from 1980 to 1990).

2. Interest rates on longer term bonds are usually higher than those with shorter terms, reflecting the higher inflation risk. Interest rates of 20-year bonds tend to fall in between those of 10- and 30-year bonds.

3. The two Social Security trust funds are the Old-Age, Survivors, and Disability Insurance (OASDI) Fund and the Disability Insurance (DI) Fund. The trustees include the Secretaries of the Treasury, Labor, and Health and Human Services, the Commissioner of Social Security, and others.

4. *2010 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, Washington, D.C.: USGPO, August 2010.

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For this year (2010), the Trustees Report expects the nominal interest rate to stay low (between 3.2% and 3.6% for the high- and low-cost assumptions, respectively).[5] However, it is expected that interest rates will recover by 2012 (to between 5.3% and 6.9%) and that the long-term average will be between 5.4% and 5.9% for the low- and high-cost assumptions, with intermediate-cost assumption of 5.7%. The Social Security funds will be expended as needed, when payroll tax receipts are not sufficient to meet benefit obligations. Accordingly, these funds have a mix of maturities, which allows for future drawdowns. For the environmental mitigation program (where no drawdowns from the endowment are planned to occur), nominal interest rates assumed for the Social Security programs can be considered to be conservative, or low, estimates. The 5% nominal rate assumed for the Sunrise Powerlink Project is even more conservative than those used in the analysis of Social Security funds.

Inflation Rate

Consumer price inflation has varied widely from 1970 to 2010. Inflation was very high by historical standards from 1973 to 1982, peaking at 13.5% on an annual basis in 1980. In response, the Federal Reserve tightened monetary policy and reduced inflation to 3.2% by 1983. Inflation for the 1980-90 period averaged 4.7% per year. It has declined further since then, averaging 2.8% in the 1990s and 2.5% from 2000 through the first half of 2010 (see table below).

Average Annual Inflation Rate by Decade, 1970 to 2010
(Percent)

| | 1970-80 | 1980-90 | 1990-2000 | 2000-10 |
|----------------------------------|---------|---------|-----------|------------|
| CPI (All Urban Consumers - U.S.) | 7.8 | 4.7 | 2.8 | 2.5 [1] |

Source: U.S. Bureau of Labor Statistics, Consumer Price Index (CPI)

1. Average through first half of 2010.

Over a nearly 40-year period from 1970 to the first half of 2010, inflation has averaged 4.1% per year. However, this is not necessarily a reliable guide to future inflation, which is caused by a combination of excess demand (demand for goods and services exceeding what the economy is capable of supplying) and excess liquidity (loose monetary policy).

An indication of the financial market's expectation of future inflation is shown by comparing the interest rate on long-term (30-year) Treasury bonds and the interest rate on the U.S. Treasury's inflation-indexed bonds, whose principal amount is adjusted to keep pace with inflation, thereby

5. The Trustees Report analyzes three projection scenarios—low-, intermediate-, and high-cost scenarios, with corresponding financial requirements on the Social Security funds.

Mr. Donald E. Haines
 November 1, 2010
 Page 4

eliminating the inflation risk. Between February and September 2010, expected long-term inflation rate varied from 2% to 2.6%, as indicated by this comparison.[6]

The Trustees Report on the financial status of Social Security funds also includes assumptions regarding future inflation, ranging from 1.8% to 3.8% per year for the low- and high-cost scenarios, with an intermediate-cost assumption of 2.9% per year.

Thus, the assumed inflation rate of 3% used for the Sunrise Powerlink Project environmental mitigation is higher than the average inflation for the past 20 years and higher than the current financial market's expectation of future inflation. However, it is consistent with the intermediate-cost assumption used for analysis of the Social Security funds.

Real Interest Rate

Although real interest rate can be derived from assumed values of nominal interest rate and inflation, it can also be examined using historical data. For the Social Security funds, the Trustees Report indicates that the real interest rate averaged 2.8% per year over a 40-year period from 1969 to 1998, varying from 0.3% in 1969-78 to 2.2% in 1999-2008.

Average Real Interest Rate on Social Security Trust Funds
 1969-2008 (Percent)

| | 1969-78 | 1979-88 | 1989-98 | 1999-2008 |
|---|---------|---------|---------|-----------|
| Real Interest Rate on Social Security Trust Funds | 0.3 | 4.5 | 4.3 | 2.2 |

Source: Social Security Board of Trustees, 2010 Annual Report.

It is interesting to note that, although average real interest rate was low during the first years of high inflation, it recovered quickly and was on average high for the next 20 years. More recently, real interest rate has remained below 2%, with a low of 0.6% in 2008, reflecting the substantial slowdown in economic activity.[7]

The Trustees Report projects that the real interest rate will remain low over the next several years. After this initial period, however, the Trustees project real interest rate to average 2.1% to 3.6% for the high- and low-cost scenarios, with intermediate-cost assumption of 2.9%.

6. Data for 30-Year Treasury inflation-indexed bonds are available only since February 2010.

7. Real interest rate for 2009, however, was 4.4%, reflecting additional return, or earnings, from negative inflation, or price deflation. That is, purchasing power of the trust funds increased due to lower consumer prices.

Mr. Donald E. Haines
November 1, 2010
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The real interest rate of 2% assumed in the Sunrise Powerlink Project environmental mitigation analysis is close to the recent experience of the Social Security trust funds. However, the Trustees Report does not expect that this condition will continue into the long-term future. That is, in relation to the assumed rate of long-term inflation (3% in the environmental mitigation analysis), assumed nominal interest rate is low, resulting in low real interest rate. It may be noted, however, that the 2% rate is close to that assumed for the high-cost scenario for the Social Security funds.

Summary Comments


In conclusion, the nominal interest rate and inflation rate assumed for the Sunrise Powerlink Project environmental mitigation analysis are consistent with historical experience and market data and comparable to values assumed in the long-term financial analysis of the Social Security funds. In fact, the resulting real interest rate, and the corresponding estimate of endowment is likely to be conservative, that is, it would have a large margin of safety.

It is understood that the Sunrise Powerlink Project would separately fund annual management expenses over an initial period of several years, prior to utilizing net interest income from the endowment fund (that is, after reinvestment for cost inflation). If the endowment were to be funded at the beginning of the initial period, then it would accumulate additional funds at the nominal interest rate. If, however, the endowment were to be funded at the end of the initial period, then it would need to reflect the annual management cost at the time of funding, including any effects of inflation in the intervening period.

If there any questions on the above or related issues, please feel free to contact me at 858-535-1420 or at onakaplanning@gmail.com.

Sincerely,

Onaka Planning & Economics [8]



Jun Onaka, Ph.D.

8. Onaka Planning & Economics (OP/E) prepared financing plans for the subregional habitat conservation plans of MSCP and MHCP in San Diego County, as well as several subarea plans. OP/E also assisted San Diego Association of Governments (SANDAG) in analyzing region-wide funding needs for habitat management and endowment.

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JUN ONAKA, Ph.D.

Fiscal and Economic Analysis and Public Finance

Jun Onaka has over 25 years' experience in conducting planning and economic studies, including fiscal and economic impact studies; demographic and socioeconomic analyses; and financing plans and feasibility studies for infrastructure improvements and public services. He has prepared fiscal and economic impact analyses of master-planned development, highways and public infrastructure improvements, and open space conservation. He has also prepared financing plans for public improvements, including transportation, water and wastewater facilities, education, parks, and open space. Dr. Onaka is the principal of Onaka Planning & Economics (OP/E), a consulting firm specializing in the economics and financing of urban development.

PROJECT EXPERIENCE — SUMMARY

Fiscal and Economic Impact Studies of Public and Private Projects — Onaka Planning & Economics (OP/E) has conducted numerous fiscal impact studies of private master plan developments, with focus on impacts to the general fund budget of the local government within whose jurisdiction the development is to take place. Studies were conducted for the Imperial County and its Local Agency Formation Commission (LAFCO), the cities of Carlsbad, Chula Vista, San Diego, and other jurisdictions.

OP/E has prepared socioeconomic projections and impact analyses pursuant to requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) for public service and infrastructure projects, such as highways, transmission lines, and correctional facilities. OP/E prepared socioeconomic impact and growth inducement studies for the California Department of Transportation (Caltrans) projects, including State Routes (SR) 54, 54/125, 56 and 76. Issues addressed included population, employment, housing, land use, community character, schools, other public services, and growth inducement. OP/E prepared socioeconomic impact analysis for a proposed electric transmission line from Lucerne Valley to Bear Valley in San Bernardino County, proposed by Southern California Edison. OP/E prepared socioeconomic analyses for construction and/or expansion of California Department of Corrections and Rehabilitation facilities in the counties of Kern, Riverside, Imperial and San Diego. OP/E also prepared socioeconomic impact studies for open space management plans (San Luis Obispo County; US Bureau of Land Management; see also regional habitat conservation plan, below).

OP/E assisted San Diego Association of Governments (SANDAG) in the preparation of a regional economic development plan, called Regional Economic Prosperity Strategy, with focus on regional income, employment, and business formation. OP/E has developed new methods of cluster analysis, a method of economic analysis regarding the structure of regional employment.

Regional Habitat Conservation Plans — OP/E prepared financing and economic analyses of regional habitat conservation plans, including the San Diego Multiple Species Conservation Program, the North San Diego County Multiple Habitat Conservation Program, and other plans prepared pursuant to the federal Endangered Species Act and the California Natural Community Conservation

JUN ONAKA, Ph.D.
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Planning Act. The San Diego Multiple Species Conservation Program (MSCP) is a cooperative regional habitat conservation program of the City of San Diego (Metropolitan Wastewater Department), County of San Diego, and other jurisdictions, covering a 500-square mile area in southwestern San Diego County. OP/E estimated impacts from forecast regional growth, need for public acquisition of habitat land, and costs of land acquisition and habitat management.

The North San Diego County Multiple Habitat Conservation Program (MHCP) is a cooperative regional habitat conservation program by local jurisdictions in north San Diego County and the San Diego Association of Governments. OP/E prepared a financing and acquisition plan and land use and socioeconomic impact analysis for the MHCP. OP/E also completed financing plans for Natural Community Conservation Planning (NCCP) programs for various public agencies, including a consortium of water agencies in San Diego County and the cities of Carlsbad, Oceanside and Rancho Palos Verdes. NCCP was enacted by the California Legislature to foster cooperative conservation efforts by public agencies and private landowners consistent with federal and state Endangered Species Acts.

Public Facility Financing Plans and Feasibility Studies — OP/E prepared financing plans for public facility improvements and feasibility studies for public financing districts (1913/1915 Act assessment districts, Mello-Roos community facilities districts, reimbursement programs for shared infrastructure improvements, and development fee programs) in the cities of Carlsbad, Escondido, and San Diego. Facilities addressed by these plans and studies include arterial streets, drainage, water, wastewater, school facilities, and habitat conservation. OP/E has worked primarily with private entities engaged in planning and construction of major offsite infrastructure facilities using public financing. OP/E has also worked extensively with those firms to implement the terms of public financing districts, including reimbursements of design, field, and construction costs expended for district improvements.

Infrastructure and Public Facilities Planning — OP/E prepared analysis and projections of regional infrastructure services needed to support forecast growth in the San Diego region, as part of the Regional Comprehensive Plan for San Diego, prepared by San Diego Association of Governments (SANDAG).

PROFESSIONAL HISTORY

Onaka Planning & Economics, La Jolla, CA — Principal — 1991-Present
P&D Technologies, Inc. (previously PRC Engineering; currently P&D Consultants, a company of TCB/AECOM), San Diego, CA — Senior Project Manager — 1983-1991
Carnegie-Mellon University, Pittsburgh, PA — Assistant Professor of Urban and Regional Planning — 1980-1983

EDUCATION

Ph.D., Urban Planning, University of California at Los Angeles
A.B. (Magna Cum Laude), Applied Mathematics in Economics, Harvard University

Long Potrero Start Up Costs (First Five Years)

* Acreage for parcel is exclusive of substation

Facilities Maintenance/Access Control

| | Specification | Unit | No. Units | Cost/Unit | Frequency (for 5 years) | Total 5-Yr Cost | Annual Cost (Total divided by 5 Yrs) | Assumptions | Comments |
|--------------------------------------|----------------------------------|------------|-----------|-----------|-------------------------|-------------------|--------------------------------------|--|---|
| Fencing | Smooth strand wire or chain link | Linear Ft. | 450 | \$15.00 | 1 | \$6,750.00 | \$1,350.00 | Cost per year estimated at approximately 1% of the total perimeter of the property | Formula: Total Cost = (total perimeter * 1%) * (cost per linear foot) * (number of years installation is needed) |
| Sign - initial installation | Boundary 8" x 13.5 | Item | 20 | \$15.00 | 1 | \$300.00 | \$60.00 | Average cost for signs. Sign types: boundary, regulations, habitat restoration. One-time cost for initial installation (10 signs). | |
| Sign - replacement | Boundary 8" x 13.5 | Item | 4 | \$15.00 | 4 | \$240.00 | \$48.00 | Average cost for signs. Sign types: boundary, regulations, habitat restoration. Replacement of 20% annually for the remaining 4 years. | Formula: Total Cost = (20% total number of signs per property) * (cost per sign) * (number of years installation is needed) |
| SUBTOTAL CAPITAL IMPROVEMENTS | | | | | | \$7,290.00 | \$1,458.00 | | |

Biological Inventory (Baseline Surveys)

| | Specification | Unit | No. Units | Labor rate | Frequency (for 5 years) | Total Cost | Annual Cost (Total divided by 5 Yrs) | Assumptions | Comments |
|---------------------------------------|--|-------|-----------|------------|-------------------------|---------------------|--------------------------------------|---|--|
| Land Manager | General condition monitoring and wildlife habitat assessment | Acres | 1212 | \$100.00 | 5 | \$60,600.00 | \$12,120.00 | One visit annually to identify threats to habitat and species (comprehensive). Total acreage = 393.4ac.; 100 acres/day, 10 hour days (=10 acres/hour) | Formula: Total Cost = (total acres/acres per hour) * (labor cost per hour) * (number of surveys in 5 year period). |
| Plant Ecologist | Vegetation communities and Invasive species mapping | Acres | 1212 | \$90.00 | 5 | \$72,720.00 | \$14,544.00 | Baseline mapping of vegetation communities and invasive species; to be conducted concurrently; 7.5 acres/hour | Formula: Total Cost = (total acres/acres per hour) * (labor cost per hour) * (number of surveys in 5 year period). |
| Entomologist | Quino Checkerspot | Acres | 197 | \$90.00 | 10 | \$11,820.00 | \$2,364.00 | Every three years to include weekly site visits for 5 weeks (5 visits) ; 15 acres/hour. Acreage based on upland scrub and grassland habitats. This acreage will drop if a habitat assessment is conducted to determine suitable habitat. | Formula: Total Cost = (total acres/acres per hour) * (labor cost per hour) * (frequency) |
| Herpetologist | Arroyo toad | Acres | 25 | \$90.00 | 6 | \$5,400.00 | \$1,080.00 | One survey every three years; 3 visits/survey; Acreage based on non-vegetated channel habitat, 2.5 acres/hr. | Formula: Total Cost = (total acres/acres per hour) * (labor cost per hour) * (number of visits in a 5 year period) |
| Surveyors | Data entry, analysis and reporting | N/A | N/A | N/A | N/A | \$37,635.00 | \$7,527.00 | (25%) * (total survey effort) | Formula: 25% of time spent for (general condition monitoring; mapping, and species surveys) |
| SUBTOTAL BIOLOGICAL MONITORING | | | | | | \$188,175.00 | \$37,635.00 | | |

Habitat/Land Management

| | Specification | Unit | No. Units | Labor rate* | Frequency (for 5 years) | Total Cost | Annual Cost (Total divided by 5 Yrs) | Assumptions | Comments |
|---------------------------------------|--|------------|-----------|-------------|-------------------------|---------------------|--------------------------------------|--|--|
| Exotic Plant Control | Difficult to remove species (palms, Eucalyptus trees, artichoke thistle) | Acres | 36 | \$64.00 | 5 | \$11,520.00 | \$2,304.00 | 25 acres/crew day; \$1,600 per crew day (5 laborers/crew, \$64/ hour labor cost; plus equipment cost); 3% of total property per year. Mowing, herbicide treatment, hand removal, debris removal, etc. Yearly treatment first 5 years. | Formula: Total Cost = (3% total acres/25 ac per crew day) * (labor cost per crew day) * (no. treatments in 5 year period). |
| Exotic Plant Control | Other species, labor | Acres | 60 | \$45.00 | 5 | \$54,000.00 | \$10,800.00 | Laborer; 0.25 acre/hour; 5% of total property per year. Cal-IPC high and moderate risk species. | Formula: Total Cost = (5% total acres/ac per hour) * (labor cost per hour) * (no. treatments in 5 year period). |
| Erosion Control | Materials | Acres | 12 | \$600.00 | 5 | \$36,000.00 | \$7,200.00 | Gravel bags (250 @ \$1/bag), fiber rolls and stakes (12 @ \$28/roll), silt fencing (500 ft @\$25/100 ft roll) = \$600/acre per 5 years, 1% property. | Formula: Total Cost = 1% total acres * cost per acre * no. treatments in 5 year period. |
| Erosion Control/Road Maintenance | Labor | Acres | 60 | \$45.00 | 5 | \$13,500.00 | \$2,700.00 | Laborer; 8 labor hrs/acre; 5% of property per 5 years | Formula: Total Cost = (5% total acres/acres per hr) * labor cost per acre * hrs/acre*no. treatments in 5 year period. |
| Habitat Remediation | Minor restoration due to decommissioned roads, erosion, etc. | Linear Ft. | 60 | \$1,000 | 1 | \$60,000.00 | \$12,000.00 | \$1000/acre; 5% of total property per 5 years (eg. minor habitat remediation may include decompacting, seeding by hand or imprinter, raking, soil preparation, etc.). Preparation of a restoration plan and project management is not included in this cost. | Formula: Total Cost = (acres/acres per hr) * (cost per hr) * no. treatments in 5 year period. |
| Habitat Management - all tasks | Supervision by qualified biologist | L. Hours | 10 | \$160.00 | 5 | \$8,000.00 | \$1,600.00 | A qualified biologist will monitor management activities in areas occupied by, or suitable for, listed species | Formula: Total Cost = (number of hours) *(labor cost per hour) * (annually for 5 year period). |
| SUBTOTAL BIOLOGICAL MANAGEMENT | | | | | | \$183,020.00 | \$36,604.00 | | |

Plan/Reporting

| | Specification | Unit | No. Units | Labor rate | Quantity (for 5 years) | Total Cost | Annual Cost (Total divided by 5 Yrs) | Assumptions | Comments |
|----------------------------------|------------------------------------|----------|-----------|------------|---------------------------|---------------------------|---|--|---|
| Land Manager | Annual Reporting and Coordination | L. Hours | 40 | \$100.00 | 5 | \$20,000.00 | \$4,000.00 | Preparation of annual report, to include threats assessment, work plan, budget plan, and status of endowment. | Formula: (hrs to prepare report) * labor rate * (frequency) |
| Land Manager | Prepare and update management plan | L. Hours | 60 | \$100.00 | 3 | \$18,000.00 | \$3,600.00 | Using results from general condition monitoring and invasive species mapping, prepare/update management plan. Will include threats assessment, prioritization, and work plan. Assumes plan completed in year 3 and updated in years 4 and 5. Some interim land management will occur in years 1 and 2. | Formula: (hrs to prepare plan) * labor rate * (frequency) |
| GIS Specialist | GIS Database Management | L. Hours | 12 | \$90.00 | 5 | \$5,400.00 | \$1,080.00 | Data management and produce figures for annual report. | Formula: Hrs to conduct GIS work* labor rate * (frequency) |
| <u>SUBTOTAL REPORTING</u> | | | | | | <u>\$43,400.00</u> | <u>\$8,680.00</u> | | |

| | | | | | | | | | |
|--------------|--|--|--|--|--|---------------------|--------------------|--|--|
| TOTAL | | | | | | \$421,885.00 | \$84,377.00 | | |
|--------------|--|--|--|--|--|---------------------|--------------------|--|--|

Contingencies/

| | Total costs | % of Total | Total Cost | Annual Cost (Total divided by 5 Yrs) | Assumptions | Comments |
|---|--------------|------------|----------------------------|---|--|----------|
| Administration | \$421,885.00 | 10 | \$42,188.50 | \$8,437.70 | | |
| Contingencies | \$421,885.00 | 15 | \$63,282.75 | \$12,656.55 | Accountants, technical, clerical, contract managers, lawyers, etc. | |
| Administrative Overhead | | | | | | |
| <u>SUBTOTAL CONTINGENCIES/ADMINISTRATION</u> | | | <u>\$105,471.25</u> | <u>\$21,094.25</u> | | |

| | Total Cost | Annual Cost (Total divided by 5 Yrs) |
|--------------------|---------------------|---|
| GRAND TOTAL | \$527,356.25 | \$105,471.25 |

Long Potrero Annual Cost In-Perpetuity

Facilities Maintenance/Access Control

| | Specification | Unit | No. Units | Cost/Unit | Quantity | Total Annual Cost | Assumptions | Comments |
|---|----------------------------------|------------|-----------|-----------|----------|------------------------|--|---|
| Fencing | Smooth strand wire or chain link | Linear Ft. | 45 | \$15.00 | 1 | \$675.00 | Annual replacement of 10% of fencing installed during start-up | Formula: Total Cost = (total perimeter * 1%) * (cost per linear foot) * (number of years installation is needed) |
| Sign | Boundary 8" x 13.5 | Item | 4 | \$15.00 | 1 | \$60.00 | Average cost for signs. Signs types: boundary, regulations, habitat restoration. Aprox. Replacement at 20% per year. | Formula: Total Cost = (20% total number of signs per property) * (cost per sign) * (number of years installation is needed) |
| <u>SUBTOTAL CAPITAL IMPROVEMENTS</u> | | | | | | <u>\$735.00</u> | | |

Biological Monitoring

| | Specification | Unit | No. Units | Cost/Unit | Frequency | Total Cost | Assumptions | Comments |
|--|--|-------|-----------|-----------|-----------|---------------------------|--|---|
| Land Manager | General condition monitoring and wildlife habitat assessment | Acres | 1212 | \$100.00 | 1 | \$12,120.00 | One visit annually to identify threats to habitat and species (comprehensive). Total acreage = 393.4 ac.; 100 acres/day; 10 hour days (=10 acres/hour) | Formula: Total Cost = (total acres/acres per hour) * (labor cost per hour) * (frequency). |
| Plant Ecologist | Uupdate of vegetation communities and Invasive species mapping | Acres | 1212 | \$90.00 | 0.33 | \$4,799.52 | Revise mapping for invasive species and vegetation communities every 3 years; 7.5 acres/hour | Formula: Total Cost = (total acres/acres per hour) * (labor cost per hour) * (frequency). |
| Entomologist | Quino Checkerspot | Acres | 197 | \$90.00 | 1.65 | \$1,950.30 | Every three years to include weekly site visits for 5 weeks (5 visits) ; 15 acres/hour. Acreage based on upland scrub and grassland habitats. This acreage will drop if a habitat assessment is conducted to determine suitable habitat . | Formula: Total Cost = (total acres/acres per hour) * (labor cost per hour) * (frequency), where frequency = 5 visits every three years (5*0.33) |
| Herpetologist | Arroyo toad | Acres | 25 | \$90.00 | 0.99 | \$891.00 | One survey every three years; 3 visits/survey; Acreage based on no nvegetated channel habitat; 5 acres/hr. | Formula: Total Cost = (total acres/acres per hour) * (labor cost per hour) * (frequency), where frequency = 3 visits every three years (3*.33) |
| Surveyors | Data entry, and analysis | N/A | N/A | N/A | N/A | \$4,565.21 | 25% of the total survey effort required for the property. | Formula: 25% of time spent for (general condition monitoring; mapping, and species surveys) |
| <u>SUBTOTAL BIOLOGICAL MONITORING</u> | | | | | | <u>\$24,326.03</u> | | |

Note: in general, these estimates do not include travel time or field prep

Habitat/Land Management

| | Specification | Unit | No. Units | Labor Rate | Frequency | Total Cost | Assumptions | Comments |
|--|--|----------|-----------|------------|-----------|---------------------------|--|--|
| Exotic Plant Control | Difficult to remove species (palms, Eucalyptus trees, artichoke thistle) | Acres | 36 | \$64.00 | 1 | \$2,304.00 | 25 acres/crew day; \$1,600 per crew day (5 laborers/crew, \$64/ hour labor cost; plus equipment cost); 3% of total property per year; Mowing, herbicide treatment, hand removal, debris removal, etc. Treatment every yr. | Formula: Total Cost = (3% total acres/25 ac per crew day) * (labor cost per crew day) * (frequency). |
| Exotic Plant Control | Other species, Removal by Laborers | Acres | 60 | \$45.00 | 1 | \$10,800.00 | Laborer 0.25 acre/hour; 5% of total property per year. Cal-IPC high and moderate risk species. | Formula: Total Cost = (5% total acres/0.25ac per hour) * (labor cost per hour) * (frequency). |
| Erosion Control | Materials | Acres | 12 | \$600.00 | 0.2 | \$1,440.00 | Gravel bags (250 @ \$1/bag), fiber rolls and stakes (12 @ \$28/roll), silt fencing (500 ft @\$25/100 ft roll) = \$600/acre per 5 years, 1% property. | Formula: Total Cost = 1% total acres * cost per acre * frequency. |
| Erosion Control/Road Maintenance | Labor | Acres | 60 | \$45.00 | 1 | \$2,700.00 | Laborer; 8 hrs/acre; 5% of property per 5 years | Formula: Total Cost = (5% total acres/acres per hr) * labor cost per acre * hrss/ac*frequency |
| Trash Removal | Trash Hauling | Acres | 12 | \$100.00 | 1 | \$1,200.00 | \$100/acre annually for 1% of total property | Formula: 1% total acres * cost per acre * frequency |
| Habitat Remediation | Minor restoration due to erosion, unauthorized access, etc. | Acre | 60 | \$300.00 | 0.20 | \$3,600.00 | \$300/acre; 5% of total property per 5 years (eg. minor habitat remediation may include seeding with native seeds, raking, soil preparation, etc.). Preparation of a restoration plan and project management is not included in this cost. | Formula: Total Cost = (acres/acres per hr) * (cost per hr) * frequency |
| Habitat Management - all tasks | Supervision by qualified biologist | L. Hours | 10 | \$160 | 1 | \$1,600.00 | A qualified biologist will monitor management activities in areas occupied by, or suitable for, listed species. | Formula: Total Cost = (number of hours) * (labor cost per hour) * (frequency). |
| <u>SUBTOTAL BIOLOGICAL MANAGEMENT</u> | | | | | | <u>\$23,644.00</u> | | |

Plan/Reporting

| | Specification | Unit | No. Units | Labor Rate | Frequency | Total Cost | Assumptions | Comments |
|----------------------------------|---------------------------------------|----------|-----------|------------|-----------|--------------------------|--|---|
| Land Manager | Annual Reporting and Coordination | L. Hours | 10 | \$100.00 | 1 | \$1,000.00 | Preparation of annual report, to include threats assessment, work plan, budget plan, and status of endowment. | Formula: (hrs to prepare report) * labor rate * (frequency) |
| Land Manager | Update management plan | L. Hours | 30 | \$100.00 | 1 | \$1,500.00 | Using results from general condition monitoring and invasive species mapping, update management plan. Will include threats assessment, prioritization, and work plan. Update annually. | Formula: (hrs to prepare plan) * labor rate * (frequency) |
| GIS Specialist | GIS Database Management and reporting | L. Hours | 14 | \$90.00 | 1 | \$1,260.00 | Data management and produce figures for annual report. | Formula: Hrs to conduct GIS work * labor rate * (frequency) |
| <i>SUBTOTAL REPORTING</i> | | | | | | <i>\$3,760.00</i> | | |

| | | | | | | | | |
|--------------|--|--|--|--|--|--------------------|--|--|
| TOTAL | | | | | | \$52,465.03 | | |
|--------------|--|--|--|--|--|--------------------|--|--|

Contingencies/

| | Total costs | % of Total | | | | Total Cost | Assumptions | Comments |
|---|-------------|------------|--|--|--|---------------------------|--|----------|
| Administration Contingencies | \$52,465.03 | 10 | | | | \$5,246.50 | | |
| Administrative Overhead | \$52,465.03 | 15 | | | | \$7,869.75 | Accountants, technical, clerical, contract managers, lawyers, etc. | |
| <i>SUBTOTAL CONTINGENCIES/ADMINISTRATION</i> | | | | | | <i>\$13,116.26</i> | | |

| | | | | | | | | |
|--------------------|--|--|--|--|--|--------------------|--|--|
| GRAND TOTAL | | | | | | \$65,581.28 | | |
|--------------------|--|--|--|--|--|--------------------|--|--|

ENDOWMENT NEEDED

\$3,279,064.06 Assume 5% return on investment and 3.0% inflation yearly

Appendix D

Detailed Mitigation Implementation Cost Estimate to Support Financial Assurances

| Implementation, Maintenance, and Monitoring Costs | | | Total Cost | 20% Contingency Cost per Item | |
|---|---|-----|---|-------------------------------|-----------------|
| Implementation Costs | | | | | |
| 1.0 | Mobilization | 1.1 | Mobilization | \$8,638 | \$1,728 |
| | | | Subtotal | \$8,638 | \$1,728 |
| 2.0 | Removal of Non-native, Invasive Plant Species | 2.1 | Removal of Salt Cedar | \$5,500 | \$1,100 |
| | | 2.2 | Removal of Non-native invasive plants within stream channels and wetlands | \$68,820 | \$13,764 |
| | | 2.3 | Removal of Non-native Invasive plants within Buffer Areas | \$98,430 | \$19,686 |
| | | | Subtotal | \$172,750 | \$34,550 |
| Maintenance Costs | | | | | |
| 3.0 | Interim Maintenance (1-5 Years) | 3.1 | Adaptive management - weed removal | \$72,500 | \$14,500 |
| | | | Subtotal | \$72,500 | \$14,500 |
| Monitoring Costs | | | | | |
| 4.0 | Monitoring (1-5 Years) | 4.1 | Monitoring | \$95,375 | NA |
| | | 4.2 | Wildlife Monitoring Biologist | \$120,792 | NA |
| | | | Subtotal | \$216,167 | \$0 |
| | | | Sum of all Subtotals | \$470,055 | \$50,778 |
| Ongoing Management of Entire Mitigation Property | | | | | |
| | Start-up Funding (5 years) | | Annual Labor and Materials | \$84,377 | \$21,094 |
| | | | Total for Start-up Management | \$527,356 | |
| 1.0 | Facilities Maintenance/Access Control | 1.1 | Fencing | \$675 | \$169 |
| | | 1.2 | Sign | \$60 | \$15 |
| | | | Subtotal | \$735 | \$184 |
| 2.0 | Biological Monitoring | 2.1 | Land Manager | \$12,120 | \$3,030 |
| | | 2.2 | Plant Ecologist | \$4,800 | \$1,200 |
| | | 2.3 | Entomologist | \$1,950 | \$488 |
| | | 2.4 | Herpetologist | \$891 | \$223 |
| | | 2.5 | Surveyors | \$4,565 | \$1,141 |
| | | | Subtotal | \$24,326 | \$6,082 |
| 3.0 | Habitat/Land Management | 3.1 | Exotic Plant Control - difficult spp. | \$2,304 | \$576 |

| | | | | | |
|-----|----------------|-----|--|--------------------|-----------------|
| | | 3.2 | Exotic Plant Control - other spp. | \$10,800 | \$2,700 |
| | | 3.3 | Erosion Control - materials | \$1,440 | \$360 |
| | | 3.4 | Erosion Control/Road Maintenance - labor | \$2,700 | \$675 |
| | | 3.5 | Trash Removal | \$1,200 | \$300 |
| | | 3.6 | Habitat Remediation | \$3,600 | \$900 |
| | | 3.7 | Habitat Management - all tasks | \$1,600 | \$400 |
| | | | Subtotal | \$23,644 | \$5,911 |
| 4.0 | Plan/Reporting | 4.1 | Land Manager-reporting/coordination | \$1,000 | \$250 |
| | | 4.2 | Land Manager -plan updates | \$1,500 | \$375 |
| | | 4.3 | GIS Specialist | \$1,260 | \$315 |
| | | | Subtotal | \$3,760 | \$940 |
| | | | Annual Management after Start-up | \$52,465 | \$13,116 |
| | | | Endowment* | \$3,279,604 | |
| | | | | | |
| | | | MANAGEMENT TOTAL | \$3,806,420 | |
| | | | | | |
| | | | | | |
| | | | | | |

* Total assumes 3% annual inflation, 3% annual reinvestment, and 2% annual actual return.

Appendix E

Title Report, County Assessor's Parcel Map, Phase One Environmental Assessment Report, Plat Map, and Williams Act/Farmland Security Zone Contracts

Provided in Hardcopy of HMMP